

**ORDERING INFORMATION (OBSOLETE\*)**

**CSR** **XX** **B** **565** **K** **M**

**TYPE**  
Capacitors, Fixed, Solid Electrolyte, Tantalum  
Established Reliability

**STYLE**  
Tubular Case — Always Sleeved

09 — Miniature — T222  
13 — Standard — T212  
21 — Standard, low ESR — T262  
23 — Extended Range — T242  
33 — Extended Range, Low Leakage — T252  
91 — Non-Polar — T213

**VOLTAGE**

**FAILURE RATE LEVEL  
IN % PER 1000 HOURS  
GRADED**

A — Not Applicable  
B — 0.1%/k hrs.  
C — 0.01%/k hrs.  
D — 0.001%/k hrs.

**EXPONENTIAL**

M — 1%/k hrs.  
P — 0.1%/k hrs.  
R — 0.01%/k hrs.  
S — 0.001%/k hrs.

**CAPACITANCE  
TOLERANCE**

J — ± 5%  
K — ± 10%  
M — ± 20%

**CAPACITANCE**

Expressed in picofarads (1 microfarad = 1,000,000 picofarads). First two digits represent significant figures. Last digit specifies the number of zeros to follow.

**Examples**

565 — 5,600,000 = 5.60 μF    563 — 56,000 = .056 μF  
564 — 560,000 = .56 μF

| Symbol | VDC Working |       | VDC Surge |       |
|--------|-------------|-------|-----------|-------|
|        | 85°C        | 125°C | 85°C      | 125°C |
| B      | 6           | 4     | 8         | 5     |
| C      | 10          | 7     | 13        | 9     |
| D      | 15          | 10    | 20        | 12    |
| E      | 20          | 13    | 26        | 16    |
| F      | 35          | 23    | 46        | 28    |
| G      | 50          | 33    | 65        | 40    |
| H      | 75          | 50    | 98        | 64    |
| J      | 100         | 67    | 130       | 86    |

\* This Military Part Numbering System is obsolete in accordance with the current specifications. The correct current designation for a CSR part number is the MIL Specification Number, followed by the Specification (slash) Sheet Number and Dash Number (i.e. — MIL-PRF-39003/01-2270). However, the part number breakdown shown above is still widely used and is shown for reference.

**MILITARY CAPACITOR APPROVED FAILURE RATE LEVELS AND MARKINGS PER MIL-PRF-39003 FOR CSR09 (T222 A & B CASE SIZES ONLY), CSR13 (T212), CSR21 (T262), CSR23 (T242) & CSR33 (T252) CAPACITORS**

**KEMET APPROVED FAILURE RATE LEVELS — MIL-PRF-39003/H (EXPONENTIAL)**

| STYLE | DESCRIPTION                         | KEMET SERIES | APPROVED FAILURE RATE LEVEL |
|-------|-------------------------------------|--------------|-----------------------------|
| CSR09 | Polar-Subminiature                  | T222         | S (0.001%/k hrs.)           |
| CSR13 | Polar-Standard<br>MIL Range         | T212         | S (0.001%/k hrs.)           |
| CSR21 | Polar-Standard Low ESR<br>MIL Range | T262         | S (0.001%/k hrs.)           |
| CSR23 | Polar-Extended Range                | T242         | S (0.001%/k hrs.)           |

| STYLE | DESCRIPTION                         | KEMET SERIES | APPROVED FAILURE RATE LEVEL |
|-------|-------------------------------------|--------------|-----------------------------|
| CSR33 | Polar-Extended Range<br>Low Leakage | T252         | S (0.001%/k hrs.)           |
| CSR91 | Non-Polar                           | T213         | S (0.001%/k hrs.)           |

**MILITARY MARKING**

**A CASE**

|        |  |
|--------|--|
| 39003  | — Military specification number  |
| 01 - K | — Specification sheet number and trademark   |
| 9002J  | — Military dash number and "J" for JAN   |
| +333   | — Polarity, date code (1st digit indicates year and the next two digits indicate the week) |
| XY     | — Lot symbol   |

**C & D CASES**

|            |   |
|------------|---|
| M39003     | — Military specification number                                     |
| 01 - 8222J | — Specification sheet number, Military dash number, and "J" for JAN |
| +8.2 μF    | — Positive terminal identifier and capacitance value                |
| 10% 50V    | — Capacitance tolerance and voltage                                 |
| 31433      | — Source code   |
| 0333 XY K  | — Date code, lot code, and trademark                                |

**B CASE**

|         |  |
|---------|--|
| M39003  | — Military specification number  |
| 01 -    | — Specification sheet number   |
| 8006J   | — Military dash number and "J" for JAN   |
| 31433   | — Source code  |
| +333 XY | — Polarity, date code (1st digit indicates year and the next two digits indicate the week), lot symbol |

**CSR91 (T213) CAPACITORS**

**A, B, C & D CASES**

|               |   |
|---------------|---|
| M39003        | — Military specification number                                     |
| 04 - 0980J    | — Specification sheet number, Military dash number, and "J" for JAN |
| 1 μF          | — Capacitance value   |
| 10% 20VNP     | — Capacitance tolerance and voltage rating                          |
| 0333 XY 31433 | — Date code, lot code, and source code                              |

(See page 38 for CSS Marking)

**KEMET APPROVED FAILURE RATE LEVELS — MIL-PRF-39003/H (GRADED)**

| STYLE   | DESCRIPTION                     | KEMET SERIES | APPROVED FAILURE RATE LEVEL* |
|---------|---------------------------------|--------------|------------------------------|
| CSR09   | Polar-Subminiature              | T222         | D (0.001%/k hrs.)            |
| CSR13*  | Polar-Standard MIL Case         | T212         | D (0.001%/k hrs.)            |
| CSS13** | Polar-Standard MIL Case         | T216         | C (0.01%/k hrs.)             |
| CSR21   | Polar-Standard Low ESR MIL Case | T262         | D (0.001%/k hrs.)            |
| CSR23*  | Polar-Extended Range            | T242         | D (0.001%/k hrs.)            |

\*Not approved to 'D' Failure Rate Level on all voltages and capacitance values.

\*\*MIL-PRF-39003/10 for space applications.

| STYLE   | DESCRIPTION                      | KEMET SERIES | APPROVED FAILURE RATE LEVEL* |
|---------|----------------------------------|--------------|------------------------------|
| CSR33*  | Polar-Extended Range Low Leakage | T252         | D (0.001%/k hrs.)            |
| CSS33** | Polar-Extended Range Low Leakage | T256         | C (0.01%/k hrs.)             |
| CSR91*  | Non-Polar                        | T213         | D (0.001%/k hrs.)            |

\*Not approved to 'D' Failure Rate Level on all voltages and capacitance values.

\*\*MIL-PRF-39003/10 for space applications.

Tantalum Hermetically Sealed

**PERFORMANCE CHARACTERISTICS**

- **CAPACITANCE/VOLTAGE RANGE:** .0023-1200µF, 6-125 Volts.
- **CAPACITANCE TOLERANCE:** Available in standard EIA values with ±20%, ±10% and ±5% tolerances.
- **DISSIPATION FACTOR:** Maximum DF limits are shown in corresponding series part number listings on pages 7-41. See Application Notes Section, page 76 for additional description.
- **DC LEAKAGE CURRENT:** Each corresponding part number table lists maximum leakage current for each capacitor on pages 7-41. See Application Notes Section, page 76 for additional description.
- **RATED VOLTAGE; WORKING VOLTAGE; SURGE VOLTAGE; REVERSE VOLTAGE:** See Application Notes Section, Pages 76 & 77 for description.
- **IMPEDANCE and ESR:** See Application Notes Section, pages 77 & 78 for description. Reference ESR values are shown for commercial hermetically sealed capacitors on page 19.

- **AC RIPPLE VOLTAGE:** Permissible AC ripple voltage is related to the ESR of the capacitor and the power dissipation capabilities of a particular case size. Thermal capacities for the various case sizes have been determined empirically and are listed below. For additional description see page 78.

| Standard Case Size | Watts | T222 |
|--------------------|-------|------|
| A                  | .09   | .070 |
| B                  | .100  | .090 |
| C                  | .125  | —    |
| D                  | .180  | —    |

Maximum Power Dissipation: 25°C Ambient

- **ENVIRONMENTAL CONSIDERATIONS:**
  - Shock Test: MIL-STD-202, Method 213
  - Thermal Shock, MIL-STD-202, Method 107, Condition B.
  - Moisture Resistance: MIL-STD-202, Method 106.
  - Solderability: MIL-STD-202, Method 208

For additional Environmental Test Information see pages 80, 81 and 82.

- **LEAD MATERIAL:** Standard leads are solder-coated nickel per MIL-STD-1276.
- **INSULATING SLEEVES:** The standard insulating material used in transparent high temperature plastic, having 2000 volt dielectric strength, excellent dimensional stability and chemical and cold flow resistance.
- **LEAD TAPE and REEL:** Reeling per specification RS-296. See pages 71 and 73 for additional information.

KEMET standard hermetic sealed T110 Series are desirable for use in high humidity environments. They are ruggedly built, designed for miniaturized circuitry, and are especially suited for coupling, bypass, filtering and R-C timing circuits. They exhibit excellent stability, extremely low DC leakage current, dissipation factor, and ESR/impedance over a wide temperature and frequency range.

Available in standard EIA capacitance values from .0047-330  $\mu\text{F}$  in  $\pm 20\%$ ,  $\pm 10\%$ , and  $\pm 5\%$  tolerances and working voltages from 6-125 VDC.

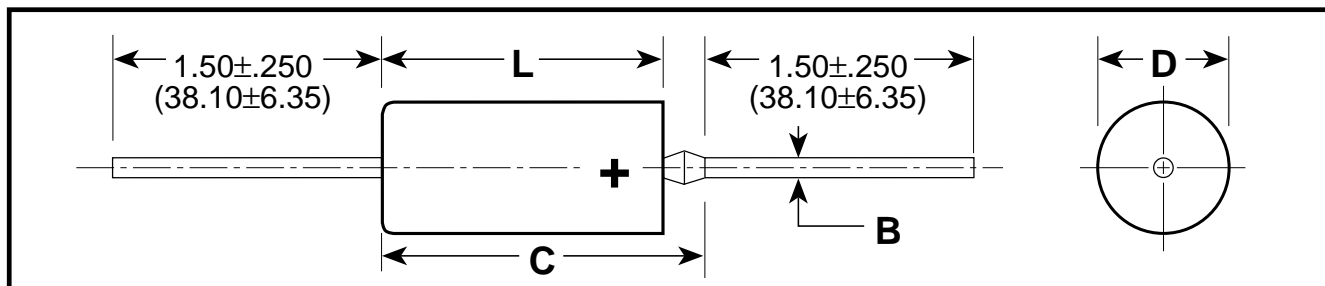
Higher CV values in comparable case sizes are available in KEMET T140 Series. Refer to page 27.

Included in the following Series table is a complete listing of CSR13 qualified MIL-PRF-39003 capacitors. KEMET is approved to manufacture the S (0.001%/k hrs.) Exponential & D (0.001%/k hrs.) Graded failure rate levels.

KEMET is now offering low ESR limits in the T110 Series. See ESR chart on page 19. You may order the lower ESR by using Customer Specification 2864 as the last four digits of the part number.

**Effective September 30, 2005, the KEMET T110 Series is RoHS Compliant.**

### CAPACITOR OUTLINE DRAWINGS



### DIMENSIONS — INCHES & (MILLIMETERS)

| CASE SIZE | UNINSULATED                     |                                 | INSULATED                       |                                 | B<br>$\pm 0.002$<br>$\pm (.05)$ | C<br>MAX.        |
|-----------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|------------------|
|           | D<br>$\pm 0.005$<br>$\pm (.13)$ | L<br>$\pm 0.031$<br>$\pm (.79)$ | D<br>$\pm 0.010$<br>$\pm (.25)$ | L<br>$\pm 0.031$<br>$\pm (.79)$ |                                 |                  |
| A         | 0.125<br>(3.18)                 | 0.250<br>(6.35)                 | 0.135<br>(3.43)                 | 0.286<br>(7.26)                 | 0.020<br>(.51)                  | 0.422<br>(10.72) |
| B         | 0.175<br>(4.45)                 | 0.438<br>(11.13)                | 0.185<br>(4.70)                 | 0.474<br>(12.04)                | 0.020<br>(.51)                  | 0.610<br>(15.49) |
| C         | 0.279<br>(7.09)                 | 0.650<br>(16.51)                | 0.289<br>(7.34)                 | 0.686<br>(17.42)                | 0.025<br>(.64)                  | 0.822<br>(20.88) |
| D         | 0.341<br>(8.66)                 | 0.750<br>(19.05)                | 0.351<br>(8.92)                 | 0.786<br>(19.96)                | 0.025<br>(.64)                  | 0.922<br>(23.42) |

### ORDERING INFORMATION\*

**TANTALUM** — T

**SERIES** — XXX  
T110, T212 (CSR13)  
T111, T213 (CSR91)  
T140, T242 (CSR23)

**CASE SIZE** — A  
A / B / C / D

**PICOFARAD CODE** — 105  
First two digits represent significant figures.  
Third digit specifies number of zeros to follow.

**CAPACITANCE TOLERANCE** — K  
M —  $\pm 20\%$     K —  $\pm 10\%$     J —  $\pm 5\%$

**VOLTAGE** — 050  
At 85°C

**LEAD MATERIAL** — S  
S — Standard  
T — 100% Tin (T110, T140 Series only)

**FAILURE RATE\*\***  
**GRADED**  
A — Not Applicable  
B — 0.1%/k hrs.  
C — 0.01%/k hrs.  
D — 0.001%/k hrs.

**EXponential**  
M — 1%/k hrs.  
P — 0.1%/k hrs.  
R — 0.01%/k hrs.  
S — 0.001%/k hrs.

**SPECIFICATION**  
All capacitors are sleeved unless specified.

**\*\*Failure Rates apply only to military products.**

**\*\*Part Number Example: T110A105K050AS (14 digits - no spaces)**  
**\*For Military Ordering Information, see page 4.**

### MARKING INFORMATION

Marking: Unless otherwise specified by special order, standard marking of T110 Series capacitor consists of the following:

#### A, B, C & D CASES

|                   |   |
|-------------------|---|
| +K 10%            | — Polarity, Manufacturer's Identification and Capacitance Tol.    |
| R56 $\mu\text{F}$ | — Nominal Capacitance — ( $\mu\text{F}$ ) ("R" indicates decimal) |
| 100V              | — Voltage   |
| 0312              | — Date Code (e.g.: 0312)  |

\* For Military Marking, see page 4.



RATINGS & PART NUMBER REFERENCE

T110/T212 Series Tantalum  
Hermetically Sealed

| CAPACITANCE<br>µF                                      | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110             |                                    |   | MIL-PRF-39003 (CSR13) CAPACITORS                          |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
|--|--------------|--------------------------------|------------------------|------------------------------------|---|---|-------------|-------------|--------------|----------------------------|-------------|--------------|-------------------------|--|--|--|--|--|--|--|
|  |              |                                | KEMET<br>PART NUMBER   | D.C.<br>LEAKAGE<br>µA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |             |             |              |                            |             |              |                         | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |  |  |  |  |  |  |
|  |              |                                |                        |                                    |   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |             |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                         |  |  |  |  |  |  |  |
|  |              |                                |                        |                                    |   | M<br>(1.0)  | P<br>(0.1)  | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                         |  |  |  |  |  |  |  |
| <b>6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C</b>  |              |                                |                        |                                    |   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 2.2  | A            | 5,10,20                        | T110A225(1)006AS       | 0.3                                | 4   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 2.7  | A            | 5,10,20                        | T110A275(1)006AS       | 0.3                                | 4   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 3.3  | A            | 5,10,20                        | T110A335(1)006AS       | 0.3                                | 4   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 3.9  | A            | 5,10,20                        | T110A395(1)006AS       | 0.3                                | 4   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 4.7  | A            | 5,10,20                        | T110A475(1)006AS       | 0.3                                | 4   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 5.6  | A            | 5                              | T110A565J006AS         | 0.3                                | 4   | 5001  | 5201        | 5401        | 5601         | 6001                       | 7001        | 8001         | T212A565J006(2)S        |  |  |  |  |  |  |  |
| 5.6  | A            | 10                             | T110A565K006AS         | 0.3                                | 4   | 2241  | 2481        | 2721        | 2961         | 6002                       | 7002        | 8002         | T212A565K006(2)S        |  |  |  |  |  |  |  |
| 5.6  | A            | 20                             | T110A565M006AS         | 0.3                                | 4   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| <b>6.8</b>   | <b>A</b>     | <b>5</b>                       | <b>T110A685J006AS</b>  | <b>0.3</b>                         | <b>6</b>  | <b>5002</b>   | <b>5202</b> | <b>5402</b> | <b>5602</b>  | <b>6003</b>                | <b>7003</b> | <b>8003</b>  | <b>T212A685J006(2)S</b> |  |  |  |  |  |  |  |
| <b>6.8</b>   | <b>A</b>     | <b>10</b>                      | <b>T110A685K006AS</b>  | <b>0.3</b>                         | <b>6</b>  | <b>2242</b>   | <b>2482</b> | <b>2722</b> | <b>2962</b>  | <b>6004</b>                | <b>7004</b> | <b>8004</b>  | <b>T212A685K006(2)S</b> |  |  |  |  |  |  |  |
| <b>6.8</b>   | <b>A</b>     | <b>20</b>                      | <b>T110A685M006AS</b>  | <b>0.3</b>                         | <b>6</b>  | <b>2243</b>   | <b>2483</b> | <b>2723</b> | <b>2963</b>  | <b>6005</b>                | <b>7005</b> | <b>8005</b>  | <b>T212A685M006(2)S</b> |  |  |  |  |  |  |  |
| 8.2  | B            | 5,10,20                        | T110B825(1)006AS       | 0.3                                | 6   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 10.0   | B            | 5,10,20                        | T110B106(1)006AS       | 0.3                                | 6   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 12.0   | B            | 5,10,20                        | T110B126(1)006AS       | 0.5                                | 6   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 15.0   | B            | 5,10,20                        | T110B156(1)006AS       | 0.9                                | 6   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 18.0   | B            | 5,10,20                        | T110B186(1)006AS       | 0.9                                | 6   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 22.0   | B            | 5,10,20                        | T110B226(1)006AS       | 0.9                                | 6   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 27.0   | B            | 5,10,20                        | T110B276(1)006AS       | 0.9                                | 6   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 33.0   | B            | 5,10,20                        | T110B336(1)006AS       | 0.9                                | 6   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 39.0   | B            | 5,10,20                        | T110B396(1)006AS       | 0.9                                | 6   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| <b>47.0</b>  | <b>B</b>     | <b>5</b>                       | <b>T110B476J006AS</b>  | <b>1.5</b>                         | <b>6</b>  | <b>5003</b>   | <b>5203</b> | <b>5403</b> | <b>5603</b>  | <b>6006</b>                | <b>7006</b> | <b>8006</b>  | <b>T212B476J006(2)S</b> |  |  |  |  |  |  |  |
| <b>47.0</b>  | <b>B</b>     | <b>10</b>                      | <b>T110B476K006AS</b>  | <b>1.5</b>                         | <b>6</b>  | <b>2244</b>   | <b>2484</b> | <b>2724</b> | <b>2964</b>  | <b>6007</b>                | <b>7007</b> | <b>8007</b>  | <b>T212B476K006(2)S</b> |  |  |  |  |  |  |  |
| <b>47.0</b>  | <b>B</b>     | <b>20</b>                      | <b>T110B476M006AS</b>  | <b>1.5</b>                         | <b>6</b>  | <b>2245</b>   | <b>2485</b> | <b>2725</b> | <b>2965</b>  | <b>6008</b>                | <b>7008</b> | <b>8008</b>  | <b>T212B476M006(2)S</b> |  |  |  |  |  |  |  |
| <b>56.0</b>  | <b>B</b>     | <b>5</b>                       | <b>T110B566J006AS</b>  | <b>1.5</b>                         | <b>6</b>  | <b>5004</b>   | <b>5204</b> | <b>5404</b> | <b>5604</b>  | <b>6009</b>                | <b>7009</b> | <b>8009</b>  | <b>T212B566J006(2)S</b> |  |  |  |  |  |  |  |
| <b>56.0</b>  | <b>B</b>     | <b>10</b>                      | <b>T110B566K006AS</b>  | <b>1.5</b>                         | <b>6</b>  | <b>2246</b>   | <b>2486</b> | <b>2726</b> | <b>2966</b>  | <b>6010</b>                | <b>7010</b> | <b>8010</b>  | <b>T212B566K006(2)S</b> |  |  |  |  |  |  |  |
| <b>56.0</b>  | <b>B</b>     | <b>20</b>                      | <b>T110B566M006AS</b>  | <b>1.5</b>                         | <b>6</b>  |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 68.0   | C            | 5,10,20                        | T110C686(1)006AS       | 3.0                                | 6   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 82.0   | C            | 5,10,20                        | T110C826(1)006AS       | 3.0                                | 6   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 100.0  | C            | 5,10,20                        | T110C107(1)006AS       | 3.0                                | 6   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 120.0  | C            | 5,10,20                        | T110C127(1)006AS       | 3.0                                | 6   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 150.0  | C            | 5                              | T110C157J006AS         | 4.5                                | 6   | 5005  | 5205        | 5405        | 5605         | 6011                       | 7011        | 8011         | T212C157J006(2)S        |  |  |  |  |  |  |  |
| 150.0  | C            | 10                             | T110C157K006AS         | 4.5                                | 6   | 2247  | 2487        | 2727        | 2967         | 6012                       | 7012        | 8012         | T212C157K006(2)S        |  |  |  |  |  |  |  |
| 150.0  | C            | 20                             | T110C157M006AS         | 4.5                                | 6   | 2248  | 2488        | 2728        | 2968         | 6013                       | 7013        | 8013         | T212C157M006(2)S        |  |  |  |  |  |  |  |
| 180.0  | C            | 5                              | T110C187J006AS         | 5.5                                | 6   | 5006  | 5206        | 5406        | 5606         | 6014                       | 7014        | 8014         | T212C187J006(2)S        |  |  |  |  |  |  |  |
| 180.0  | C            | 10                             | T110C187K006AS         | 5.5                                | 6   | 2249  | 2489        | 2729        | 2969         | 6015                       | 7015        | 8015         | T212C187K006(2)S        |  |  |  |  |  |  |  |
| 180.0  | C            | 20                             | T110C187M006AS         | 5.5                                | 6   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 220.0  | D            | 5,10,20                        | T110D227(1)006AS       | 6.0                                | 8   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 270.0  | D            | 5                              | T110D277J006AS         | 6.0                                | 8   | 5007  | 5207        | 5407        | 5607         | 6016                       | 7016        | 8016         | T212D277J006(2)S        |  |  |  |  |  |  |  |
| 270.0  | D            | 10                             | T110D277K006AS         | 6.0                                | 8   | 2250  | 2490        | 2730        | 2970         | 6017                       | 7017        | 8017         | T212D277K006(2)S        |  |  |  |  |  |  |  |
| 270.0  | D            | 20                             | T110D277M006AS         | 6.0                                | 8   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| <b>330.0</b>   | <b>D</b>     | <b>5</b>                       | <b>T110D337J006AS</b>  | <b>7.5</b>                         | <b>8</b>  | <b>5008</b>   | <b>5208</b> | <b>5408</b> | <b>5608</b>  | <b>6018</b>                | <b>7018</b> | <b>8018</b>  | <b>T212D337J006(2)S</b> |  |  |  |  |  |  |  |
| <b>330.0</b>   | <b>D</b>     | <b>10</b>                      | <b>T110D337K006AS</b>  | <b>7.5</b>                         | <b>8</b>  | <b>2251</b>   | <b>2491</b> | <b>2731</b> | <b>2971</b>  | <b>6019</b>                | <b>7019</b> | <b>8019</b>  | <b>T212D337K006(2)S</b> |  |  |  |  |  |  |  |
| <b>330.0</b>   | <b>D</b>     | <b>20</b>                      | <b>T110D337M006AS</b>  | <b>7.5</b>                         | <b>8</b>  | <b>2252</b>   | <b>2492</b> | <b>2732</b> | <b>2972</b>  | <b>6020</b>                | <b>7020</b> | <b>8020</b>  | <b>T212D337M006(2)S</b> |  |  |  |  |  |  |  |
| <b>10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C</b> |              |                                |                        |                                    |   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 1.0  | A            | 5,10,20                        | T110A105(1)010AS       | 0.3                                | 3   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 1.2  | A            | 5,10,20                        | T110A125(1)010AS       | 0.3                                | 4   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 1.5  | A            | 5,10,20                        | T110A155(1)010AS       | 0.3                                | 4   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 1.8  | A            | 5,10,20                        | T110A185(1)010AS       | 0.3                                | 4   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 2.2  | A            | 5,10,20                        | T110A225(1)010AS       | 0.3                                | 4   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 2.7  | A            | 5,10,20                        | T110A275(1)010AS       | 0.3                                | 4   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 3.3  | A            | 5,10,20                        | T110A335(1)010AS       | 0.3                                | 4   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| 3.9  | A            | 5                              | T110A395J 010AS        | 0.3                                | 4   | 5009  | 5209        | 5409        | 5609         | 6021                       | 7021        | 8021         | T212A395J010(2)S        |  |  |  |  |  |  |  |
| 3.9  | A            | 10                             | T110A395K 010AS        | 0.3                                | 4   | 2253  | 2493        | 2733        | 2973         | 6022                       | 7022        | 8022         | T212A395K010(2)S        |  |  |  |  |  |  |  |
| 3.9  | A            | 20                             | T110A395M 010AS        | 0.3                                | 4   |   |             |             |              |                            |             |              |                         |  |  |  |  |  |  |  |
| <b>4.7</b>   | <b>A</b>     | <b>5</b>                       | <b>T110A475J 010AS</b> | <b>0.4</b>                         | <b>4</b>  | <b>5010</b>   | <b>5210</b> | <b>5410</b> | <b>5610</b>  | <b>6023</b>                | <b>7023</b> | <b>8023</b>  | <b>T212A475J010(2)S</b> |  |  |  |  |  |  |  |
| <b>4.7</b>   | <b>A</b>     | <b>10</b>                      | <b>T110A475K 010AS</b> | <b>0.4</b>                         | <b>4</b>  | <b>2254</b>   | <b>2494</b> | <b>2734</b> | <b>2974</b>  | <b>6024</b>                | <b>7024</b> | <b>8024</b>  | <b>T212A475K010(2)S</b> |  |  |  |  |  |  |  |
| <b>4.7</b>   | <b>A</b>     | <b>20</b>                      | <b>T110A475M010AS</b>  | <b>0.4</b>                         | <b>4</b>  | <b>2255</b>   | <b>2495</b> | <b>2735</b> | <b>2975</b>  | <b>6025</b>                | <b>7025</b> | <b>8025</b>  | <b>T212A475M010(2)S</b> |  |  |  |  |  |  |  |

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

**RATINGS & PART NUMBER REFERENCE**

| CAPACITANCE<br>μF   | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |  |  |
|---|--------------|--------------------------------|----------------------|------------------------------------|---|---|------------|-------------|--------------|----------------------------|-------------|--------------|--|--|--|--|
|   |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |  |  |  |  |
|   |              |                                |                      |                                    |   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |  |  |  |  |
|   |              |                                |                      |                                    |   | M<br>(1.0)  | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |  |  |  |  |
| <b>10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C (Cont'd)</b> |              |                                |                      |                                    |   |   |            |             |              |                            |             |              |  |  |  |  |
| 5.6   | B            | 5,10,20                        | T110B565(1)010AS     | 0.4                                | 4   |   |            |             |              |                            |             |              |  |  |  |  |
| 6.8   | B            | 5,10,20                        | T110B685(1)010AS     | 1.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 8.2   | B            | 5,10,20                        | T110B825(1)010AS     | 1.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 10.0  | B            | 5,10,20                        | T110B106(1)010AS     | 1.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 12.0  | B            | 5,10,20                        | T110B126(1)010AS     | 1.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 15.0  | B            | 5,10,20                        | T110B156(1)010AS     | 1.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 18.0  | B            | 5,10,20                        | T110B186(1)010AS     | 1.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 22.0  | B            | 5,10,20                        | T110B226(1)010AS     | 2.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 27.0  | B            | 5                              | T110B276J010AS       | 2.0                                | 6   | 5011  | 5211       | 5411        | 5611         | 6026                       | 7026        | 8026         |  | T212B276J010(2)S                               |  |  |
| 27.0  | B            | 10                             | T110B276K010AS       | 2.0                                | 6   | 2256  | 2496       | 2736        | 2976         | 6027                       | 7027        | 8027         |  | T212B276K010(2)S                               |  |  |
| 27.0  | B            | 20                             | T110B276M010AS       | 2.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 33.0  | B            | 5                              | T110B336J010AS       | 2.0                                | 6   | 5012  | 5212       | 5412        | 5612         | 6028                       | 7028        | 8028         |  | T212B336J010(2)S                               |  |  |
| 33.0  | B            | 10                             | T110B336K010AS       | 2.0                                | 6   | 2257  | 2497       | 2737        | 2977         | 6029                       | 7029        | 8029         |  | T212B336K010(2)S                               |  |  |
| 33.0  | B            | 20                             | T110B336M010AS       | 2.0                                | 6   | 2258  | 2498       | 2738        | 2978         | 6030                       | 7030        | 8030         |  | T212B336M010(2)S                               |  |  |
| 39.0  | B            | 5                              | T110B396J010AS       | 2.0                                | 6   | 5013  | 5213       | 5413        | 5613         | 6031                       | 7031        | 8031         |  | T212B396J010(2)S                               |  |  |
| 39.0  | B            | 10                             | T110B396K010AS       | 2.0                                | 6   | 2259  | 2499       | 2739        | 2979         | 6032                       | 7032        | 8032         |  | T212B396K010(2)S                               |  |  |
| 39.0  | B            | 20                             | T110B396M010AS       | 2.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 47.0  | C            | 5,10,20                        | T110C476(1)010AS     | 3.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 56.0  | C            | 5,10,20                        | T110C566(1)010AS     | 3.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 68.0  | C            | 5,10,20                        | T110C686(1)010AS     | 3.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 82.0  | C            | 5                              | T110C826J010AS       | 3.0                                | 6   | 5014  | 5214       | 5414        | 5614         | 6033                       | 7033        | 8033         |  | T212C826J010(2)S                               |  |  |
| 82.0  | C            | 10                             | T110C826K010AS       | 3.0                                | 6   | 2260  | 2500       | 2740        | 2980         | 6034                       | 7034        | 8034         |  | T212C826K010(2)S                               |  |  |
| 82.0  | C            | 20                             | T110C826M010AS       | 3.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 100.0   | C            | 5                              | T110C107J010AS       | 5.0                                | 6   | 5015  | 5215       | 5415        | 5615         | 6035                       | 7035        | 8035         |  | T212C107J010(2)S                               |  |  |
| 100.0   | C            | 10                             | T110C107K010AS       | 5.0                                | 6   | 2261  | 2501       | 2741        | 2981         | 6036                       | 7036        | 8036         |  | T212C107K010(2)S                               |  |  |
| 100.0   | C            | 20                             | T110C107M010AS       | 5.0                                | 6   | 2262  | 2502       | 2742        | 2982         | 6037                       | 7037        | 8037         |  | T212C107M010(2)S                               |  |  |
| 120.0   | C            | 5                              | T110C127J010AS       | 6.0                                | 6   | 5016  | 5216       | 5416        | 5616         | 6038                       | 7038        | 8038         |  | T212C127J010(2)S                               |  |  |
| 120.0   | C            | 10                             | T110C127K010AS       | 6.0                                | 6   | 2263  | 2503       | 2743        | 2983         | 6039                       | 7039        | 8039         |  | T212C127K010(2)S                               |  |  |
| 120.0   | C            | 20                             | T110C127M010AS       | 6.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 150.0   | D            | 5,10,20                        | T110D157(1)010AS     | 9.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 180.0   | D            | 5                              | T110D187J010AS       | 9.0                                | 6   | 5017  | 5217       | 5417        | 5617         | 6040                       | 7040        | 8040         |  | T212D187J010(2)S                               |  |  |
| 180.0   | D            | 10                             | T110D187K010AS       | 9.0                                | 6   | 2264  | 2504       | 2744        | 2984         | 6041                       | 7041        | 8041         |  | T212D187K010(2)S                               |  |  |
| 180.0   | D            | 20                             | T110D187M010AS       | 9.0                                | 6   |   |            |             |              |                            |             |              |  |  |  |  |
| 220.0   | D            | 5                              | T110D227J010AS       | 10.0                               | 8   | 5018  | 5218       | 5418        | 5618         | 6042                       | 7042        | 8042         |  | T212D227J010(2)S                               |  |  |
| 220.0   | D            | 10                             | T110D227K010AS       | 10.0                               | 8   | 2265  | 2505       | 2745        | 2985         | 6043                       | 7043        | 8043         |  | T212D227K010(2)S                               |  |  |
| 220.0   | D            | 20                             | T110D227M010AS       | 10.0                               | 8   | 2266  | 2506       | 2746        | 2986         | 6044                       | 7044        | 8044         |  | T212D227M010(2)S                               |  |  |
| <b>15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C</b>         |              |                                |                      |                                    |   |   |            |             |              |                            |             |              |  |  |  |  |
| 0.33  | A            | 5,10,20                        | T110A334(1)015AS     | 0.3                                | 3   |   |            |             |              |                            |             |              |  |  |  |  |
| 0.39  | A            | 5,10,20                        | T110A394(1)015AS     | 0.3                                | 3   |   |            |             |              |                            |             |              |  |  |  |  |
| 0.47  | A            | 5,10,20                        | T110A474(1)015AS     | 0.3                                | 3   |   |            |             |              |                            |             |              |  |  |  |  |
| 0.56  | A            | 5,10,20                        | T110A564(1)015AS     | 0.3                                | 3   |   |            |             |              |                            |             |              |  |  |  |  |
| 0.68  | A            | 5,10,20                        | T110A684(1)015AS     | 0.3                                | 3   |   |            |             |              |                            |             |              |  |  |  |  |
| 0.82  | A            | 5,10,20                        | T110A824(1)015AS     | 0.3                                | 3   |   |            |             |              |                            |             |              |  |  |  |  |
| 1.0   | A            | 5,10,20                        | T110A105(1)015AS     | 0.3                                | 3   |   |            |             |              |                            |             |              |  |  |  |  |
| 1.2   | A            | 5,10,20                        | T110A125(1)015AS     | 0.3                                | 4   |   |            |             |              |                            |             |              |  |  |  |  |
| 1.5   | A            | 5,10,20                        | T110A155(1)015AS     | 0.3                                | 4   |   |            |             |              |                            |             |              |  |  |  |  |
| 1.8   | A            | 5,10,20                        | T110A185(1)015AS     | 0.3                                | 4   |   |            |             |              |                            |             |              |  |  |  |  |
| 2.2   | A            | 5,10,20                        | T110A225(1)015AS     | 0.3                                | 4   |   |            |             |              |                            |             |              |  |  |  |  |
| 2.7   | A            | 5                              | T110A275J015AS       | 0.3                                | 4   | 5019  | 5219       | 5419        | 5619         | 6045                       | 7045        | 8045         |  | T212A275J015(2)S                               |  |  |
| 2.7   | A            | 10                             | T110A275K015AS       | 0.3                                | 4   | 2267  | 2507       | 2747        | 2987         | 6046                       | 7046        | 8046         |  | T212A275K015(2)S                               |  |  |
| 2.7   | A            | 20                             | T110A275M015AS       | 0.3                                | 4   |   |            |             |              |                            |             |              |  |  |  |  |
| 3.3   | A            | 5                              | T110A335J015AS       | 0.4                                | 4   | 5020  | 5220       | 5420        | 5620         | 6047                       | 7047        | 8047         |  | T212A335J015(2)S                               |  |  |
| 3.3   | A            | 10                             | T110A335K015AS       | 0.4                                | 4   | 2268  | 2508       | 2748        | 2988         | 6048                       | 7048        | 8048         |  | T212A335K015(2)S                               |  |  |
| 3.3   | A            | 20                             | T110A335M015AS       | 0.4                                | 4   | 2269  | 2509       | 2749        | 2989         | 6049                       | 7049        | 8049         |  | T212A335M015(2)S                               |  |  |
| 3.9   | B            | 5,10,20                        | T110B395(1)015AS     | 0.4                                | 4   |   |            |             |              |                            |             |              |  |  |  |  |
| 4.7   | B            | 5,10,20                        | T110B475(1)015AS     | 0.7                                | 4   |   |            |             |              |                            |             |              |  |  |  |  |
| 5.6   | B            | 5,10,20                        | T110B565(1)015AS     | 0.7                                | 4   |   |            |             |              |                            |             |              |  |  |  |  |

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.





**RATINGS & PART NUMBER REFERENCE**

| CAPACITANCE<br>μF  | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110            |                                    |   | MIL-PRF-39003 (CSR13) CAPACITORS                          |             |             |              |                            |             |              |                         | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|--|--------------|--------------------------------|-----------------------|------------------------------------|---|---|-------------|-------------|--------------|----------------------------|-------------|--------------|-------------------------|--|
|  |              |                                | KEMET<br>PART NUMBER  | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |             |             |              |                            |             |              |                         |  |
|  |              |                                |                       |                                    |   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |             |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                         |  |
|  |              |                                |                       |                                    |   | M<br>(1.0)  | P<br>(0.1)  | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                         |  |
| <b>20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C (Cont'd)</b> |              |                                |                       |                                    |   |   |             |             |              |                            |             |              |                         |  |
| 2.7  | B            | 5,10,20                        | T110B275(1)020AS      | 0.5                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 3.3  | B            | 5,10,20                        | T110B335(1)020AS      | 1.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 3.9  | B            | 5,10,20                        | T110B395(1)020AS      | 1.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 4.7  | B            | 5,10,20                        | T110B475(1)020AS      | 1.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 5.6  | B            | 5,10,20                        | T110B565(1)020AS      | 1.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 6.8  | B            | 5,10,20                        | T110B685(1)020AS      | 1.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 8.2  | B            | 5                              | T110B825J020AS        | 1.0                                | 6   | 5031  | 5231        | 5431        | 5631         | 6075                       | 7075        | 8075         | T212B825J020(2)S        |  |
| 8.2  | B            | 10                             | T110B825K020AS        | 1.0                                | 6   | 2285  | 2525        | 2765        | 3005         | 6076                       | 7076        | 8076         | T212B825K020(2)S        |  |
| 8.2  | B            | 20                             | T110B825M020AS        | 1.0                                | 6   |   |             |             |              |                            |             |              |                         |  |
| <b>10.0</b>  | <b>B</b>     | <b>5</b>                       | <b>T110B106J020AS</b> | <b>1.0</b>                         | <b>6</b>  | <b>5032</b>   | <b>5232</b> | <b>5432</b> | <b>5632</b>  | <b>6077</b>                | <b>7077</b> | <b>8077</b>  | <b>T212B106J020(2)S</b> |  |
| <b>10.0</b>  | <b>B</b>     | <b>10</b>                      | <b>T110B106K020AS</b> | <b>1.0</b>                         | <b>6</b>  | <b>2286</b>   | <b>2526</b> | <b>2766</b> | <b>3006</b>  | <b>6078</b>                | <b>7078</b> | <b>8078</b>  | <b>T212B106K020(2)S</b> |  |
| <b>10.0</b>  | <b>B</b>     | <b>20</b>                      | <b>T110B106M020AS</b> | <b>1.0</b>                         | <b>6</b>  | <b>2287</b>   | <b>2527</b> | <b>2767</b> | <b>3007</b>  | <b>6079</b>                | <b>7079</b> | <b>8079</b>  | <b>T212B106M020(2)S</b> |  |
| 12.0   | B            | 5                              | T110B126J020AS        | 1.0                                | 6   | 5033  | 5233        | 5433        | 5633         | 6080                       | 7080        | 8080         | T212B126J020(2)S        |  |
| 12.0   | B            | 10                             | T110B126K020AS        | 1.0                                | 6   | 2288  | 2528        | 2768        | 3008         | 6081                       | 7081        | 8081         | T212B126K020(2)S        |  |
| 12.0   | B            | 20                             | T110B126M020AS        | 1.0                                | 6   |   |             |             |              |                            |             |              |                         |  |
| <b>15.0</b>  | <b>B</b>     | <b>5</b>                       | <b>T110B156J020AS</b> | <b>2.0</b>                         | <b>6</b>  | <b>5034</b>   | <b>5234</b> | <b>5434</b> | <b>5634</b>  | <b>6082</b>                | <b>7082</b> | <b>8082</b>  | <b>T212B156J020(2)S</b> |  |
| <b>15.0</b>  | <b>B</b>     | <b>10</b>                      | <b>T110B156K020AS</b> | <b>2.0</b>                         | <b>6</b>  | <b>2289</b>   | <b>2529</b> | <b>2769</b> | <b>3009</b>  | <b>6083</b>                | <b>7083</b> | <b>8083</b>  | <b>T212B156K020(2)S</b> |  |
| <b>15.0</b>  | <b>B</b>     | <b>20</b>                      | <b>T110B156M020AS</b> | <b>2.0</b>                         | <b>6</b>  | <b>2290</b>   | <b>2530</b> | <b>2770</b> | <b>3010</b>  | <b>6084</b>                | <b>7084</b> | <b>8084</b>  | <b>T212B156M020(2)S</b> |  |
| 18.0   | C            | 5,10,20                        | T110C186(1)020AS      | 2.0                                | 6   |   |             |             |              |                            |             |              |                         |  |
| 22.0   | C            | 5,10,20                        | T110C226(1)020AS      | 2.5                                | 6   |   |             |             |              |                            |             |              |                         |  |
| 27.0   | C            | 5                              | T110C276J020AS        | 2.5                                | 6   | 5035  | 5235        | 5435        | 5635         | 6085                       | 7085        | 8085         | T212C276J020(2)S        |  |
| 27.0   | C            | 10                             | T110C276K020AS        | 2.5                                | 6   | 2291  | 2531        | 2771        | 3011         | 6086                       | 7086        | 8086         | T212C276K020(2)S        |  |
| 27.0   | C            | 20                             | T110C276M020AS        | 2.5                                | 6   |   |             |             |              |                            |             |              |                         |  |
| 33.0   | C            | 5                              | T110C336J020AS        | 3.0                                | 6   | 5036  | 5236        | 5436        | 5636         | 6087                       | 7087        | 8087         | T212C336J020(2)S        |  |
| 33.0   | C            | 10                             | T110C336K020AS        | 3.0                                | 6   | 2292  | 2532        | 2772        | 3012         | 6088                       | 7088        | 8088         | T212C336K020(2)S        |  |
| 33.0   | C            | 20                             | T110C336M020AS        | 3.0                                | 6   | 2293  | 2533        | 2773        | 3013         | 6089                       | 7089        | 8089         | T212C336M020(2)S        |  |
| 39.0   | C            | 5                              | T110C396J020AS        | 3.0                                | 6   | 5037  | 5237        | 5437        | 5637         | 6090                       | 7090        | 8090         | T212C396J020(2)S        |  |
| 39.0   | C            | 10                             | T110C396K020AS        | 3.0                                | 6   | 2294  | 2534        | 2774        | 3014         | 6091                       | 7091        | 8091         | T212C396K020(2)S        |  |
| 39.0   | C            | 20                             | T110C396M020AS        | 3.0                                | 6   |   |             |             |              |                            |             |              |                         |  |
| <b>47.0</b>  | <b>C</b>     | <b>5</b>                       | <b>T110C476J020AS</b> | <b>4.5</b>                         | <b>6</b>  | <b>5038</b>   | <b>5238</b> | <b>5438</b> | <b>5638</b>  | <b>6092</b>                | <b>7092</b> | <b>8092</b>  | <b>T212C476J020(2)S</b> |  |
| <b>47.0</b>  | <b>C</b>     | <b>10</b>                      | <b>T110C476K020AS</b> | <b>4.5</b>                         | <b>6</b>  | <b>2295</b>   | <b>2535</b> | <b>2775</b> | <b>3015</b>  | <b>6093</b>                | <b>7093</b> | <b>8093</b>  | <b>T212C476K020(2)S</b> |  |
| <b>47.0</b>  | <b>C</b>     | <b>20</b>                      | <b>T110C476M020AS</b> | <b>4.5</b>                         | <b>6</b>  | <b>2296</b>   | <b>2536</b> | <b>2776</b> | <b>3016</b>  | <b>6094</b>                | <b>7094</b> | <b>8094</b>  | <b>T212C476M020(2)S</b> |  |
| 56.0   | D            | 5                              | T110D566J020AS        | 5.5                                | 6   | 5039  | 5239        | 5439        | 5639         | 6095                       | 7095        | 8095         | T212D566J020(2)S        |  |
| 56.0   | D            | 10                             | T110D566K020AS        | 5.5                                | 6   | 2297  | 2537        | 2777        | 3017         | 6096                       | 7096        | 8096         | T212D566K020(2)S        |  |
| 56.0   | D            | 20                             | T110D566M020AS        | 5.5                                | 6   |   |             |             |              |                            |             |              |                         |  |
| 68.0   | D            | 5                              | T110D686J020AS        | 6.0                                | 6   | 5040  | 5240        | 5440        | 5640         | 6097                       | 7097        | 8097         | T212D686J020(2)S        |  |
| 68.0   | D            | 10                             | T110D686K020AS        | 6.0                                | 6   | 2298  | 2538        | 2778        | 3018         | 6098                       | 7098        | 8098         | T212D686K020(2)S        |  |
| 68.0   | D            | 20                             | T110D686M020AS        | 6.0                                | 6   | 2299  | 2539        | 2779        | 3019         | 6099                       | 7099        | 8099         | T212D686M020(2)S        |  |
| 82.0   | D            | 5                              | T110D826J020AS        | 6.0                                | 6   | 5041  | 5241        | 5441        | 5641         | 6100                       | 7100        | 8100         | T212D826J020(2)S        |  |
| 82.0   | D            | 10                             | T110D826K020AS        | 6.0                                | 6   | 2300  | 2540        | 2780        | 3020         | 6101                       | 7101        | 8101         | T212D826K020(2)S        |  |
| 82.0   | D            | 20                             | T110D826M020AS        | 6.0                                | 6   |   |             |             |              |                            |             |              |                         |  |
| <b>100.0</b>   | <b>D</b>     | <b>5</b>                       | <b>T110D107J020AS</b> | <b>10.0</b>                        | <b>6</b>  | <b>5042</b>   | <b>5242</b> | <b>5442</b> | <b>5642</b>  | <b>6102</b>                | <b>7102</b> | <b>8102</b>  | <b>T212D107J020(2)S</b> |  |
| <b>100.0</b>   | <b>D</b>     | <b>10</b>                      | <b>T110D107K020AS</b> | <b>10.0</b>                        | <b>6</b>  | <b>2301</b>   | <b>2541</b> | <b>2781</b> | <b>3021</b>  | <b>6103</b>                | <b>7103</b> | <b>8103</b>  | <b>T212D107K020(2)S</b> |  |
| <b>100.0</b>   | <b>D</b>     | <b>20</b>                      | <b>T110D107M020AS</b> | <b>10.0</b>                        | <b>6</b>  | <b>2302</b>   | <b>2542</b> | <b>2782</b> | <b>3022</b>  | <b>6104</b>                | <b>7104</b> | <b>8104</b>  | <b>T212D107M020(2)S</b> |  |
| <b>35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C</b>          |              |                                |                       |                                    |   |   |             |             |              |                            |             |              |                         |  |
| 0.0047   | A            | 5,10,20                        | T110A472(1)035AS      | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.0056   | A            | 5,10,20                        | T110A562(1)035AS      | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.0068   | A            | 5,10,20                        | T110A682(1)035AS      | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.0082   | A            | 5,10,20                        | T110A822(1)035AS      | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.01   | A            | 5,10,20                        | T110A103(1)035AS      | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.012  | A            | 5,10,20                        | T110A123(1)035AS      | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.015  | A            | 5,10,20                        | T110A153(1)035AS      | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.018  | A            | 5,10,20                        | T110A183(1)035AS      | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.022  | A            | 5,10,20                        | T110A223(1)035AS      | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.027  | A            | 5,10,20                        | T110A273(1)035AS      | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.033  | A            | 5,10,20                        | T110A333(1)035AS      | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.039  | A            | 5,10,20                        | T110A393(1)035AS      | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.047  | A            | 5,10,20                        | T110A473(1)035AS      | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.056  | A            | 5,10,20                        | T110A563(1)035AS      | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |

(1) To complete T110 Series part number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.  
 (2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.  
**Bold Face** lines indicate popular part types and values.

RATINGS & PART NUMBER REFERENCE

T110/T212 Series Tantalum  
Hermetically Sealed

| CAPACITANCE<br>µF   | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110              |                                    |   | MIL-PRF-39003 (CSR13) CAPACITORS                          |             |             |              |                            |             |              |                         | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|---|--------------|--------------------------------|-------------------------|------------------------------------|---|---|-------------|-------------|--------------|----------------------------|-------------|--------------|-------------------------|--|
|   |              |                                | KEMET<br>PART NUMBER    | D.C.<br>LEAKAGE<br>µA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |             |             |              |                            |             |              |                         |  |
|   |              |                                |                         |                                    |   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |             |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                         |  |
|   |              |                                |                         |                                    |   | M<br>(1.0)  | P<br>(0.1)  | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                         |  |
| <b>35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125° (Cont'd)</b> |              |                                |                         |                                    |   |   |             |             |              |                            |             |              |                         |  |
| 0.068   | A            | 5,10,20                        | T110A683(1)035AS        | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.082   | A            | 5,10,20                        | T110A823(1)035AS        | 0.1                                | 3   |   |             |             |              |                            |             |              |                         |  |
| <b>0.1</b>  | <b>A</b>     | <b>5,10,20</b>                 | <b>T110A104(1)035AS</b> | <b>0.5</b>                         | <b>3</b>  |   |             |             |              |                            |             |              |                         |  |
| 0.12  | A            | 5,10,20                        | T110A124(1)035AS        | 0.5                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.15  | A            | 5,10,20                        | T110A154(1)035AS        | 0.5                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.18  | A            | 5,10,20                        | T110A184(1)035AS        | 0.5                                | 3   |   |             |             |              |                            |             |              |                         |  |
| <b>0.22</b>   | <b>A</b>     | <b>5,10,20</b>                 | <b>T110A224(1)035AS</b> | <b>0.5</b>                         | <b>3</b>  |   |             |             |              |                            |             |              |                         |  |
| 0.27  | A            | 5,10,20                        | T110A274(1)035AS        | 0.5                                | 3   |   |             |             |              |                            |             |              |                         |  |
| <b>0.33</b>   | <b>A</b>     | <b>5,10,20</b>                 | <b>T110A334(1)035AS</b> | <b>0.5</b>                         | <b>3</b>  |   |             |             |              |                            |             |              |                         |  |
| 0.39  | A            | 5,10,20                        | T110A394(1)035AS        | 0.5                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.47  | A            | 5,10,20                        | T110A474(1)035AS        | 0.5                                | 3   |   |             |             |              |                            |             |              |                         |  |
| 0.56  | A            | 5,10,20                        | T110A564(1)035AS        | 0.5                                | 3   |   |             |             |              |                            |             |              |                         |  |
| <b>0.68</b>   | <b>A</b>     | <b>5,10,20</b>                 | <b>T110A684(1)035AS</b> | <b>0.5</b>                         | <b>3</b>  |   |             |             |              |                            |             |              |                         |  |
| 0.82  | A            | 5,10,20                        | T110A824(1)035AS        | 0.5                                | 3   |   |             |             |              |                            |             |              |                         |  |
| <b>1.0</b>  | <b>A</b>     | <b>5,10,20</b>                 | <b>T110A105(1)035AS</b> | <b>0.5</b>                         | <b>3</b>  |   |             |             |              |                            |             |              |                         |  |
| 1.2   | B            | 5,10,20                        | T110B125(1)035AS        | 0.5                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 1.5   | B            | 5,10,20                        | T110B155(1)035AS        | 0.5                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 1.8   | B            | 5,10,20                        | T110B185(1)035AS        | 0.5                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 2.2   | B            | 5,10,20                        | T110B225(1)035AS        | 1.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 2.7   | B            | 5,10,20                        | T110B275(1)035AS        | 1.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| <b>3.3</b>  | <b>B</b>     | <b>5,10,20</b>                 | <b>T110B335(1)035AS</b> | <b>1.0</b>                         | <b>4</b>  |   |             |             |              |                            |             |              |                         |  |
| 3.9   | B            | 5,10,20                        | T110B395(1)035AS        | 1.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| <b>4.7</b>  | <b>B</b>     | <b>5,10,20</b>                 | <b>T110B475(1)035AS</b> | <b>1.0</b>                         | <b>4</b>  |   |             |             |              |                            |             |              |                         |  |
| 5.6   | B            | 5                              | T110B565J035AS          | 1.0                                | 4   | 5043  | 5243        | 5443        | 5643         | 6105                       | 7105        | 8105         | T212B565J035(2)S        |  |
| 5.6   | B            | 10                             | T110B565K035AS          | 1.0                                | 4   | 2303  | 2543        | 2783        | 3023         | 6106                       | 7106        | 8106         | T212B565K035(2)S        |  |
| 5.6   | B            | 20                             | T110B565M035AS          | 1.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| <b>6.8</b>  | <b>B</b>     | <b>5</b>                       | <b>T110B685J035AS</b>   | <b>1.5</b>                         | <b>4</b>  | <b>5044</b>   | <b>5244</b> | <b>5444</b> | <b>5644</b>  | <b>6107</b>                | <b>7107</b> | <b>8107</b>  | <b>T212B685J035(2)S</b> |  |
| <b>6.8</b>  | <b>B</b>     | <b>10</b>                      | <b>T110B685K035AS</b>   | <b>1.5</b>                         | <b>4</b>  | <b>2304</b>   | <b>2544</b> | <b>2784</b> | <b>3024</b>  | <b>6108</b>                | <b>7108</b> | <b>8108</b>  | <b>T212B685K035(2)S</b> |  |
| <b>6.8</b>  | <b>B</b>     | <b>20</b>                      | <b>T110B685M035AS</b>   | <b>1.5</b>                         | <b>4</b>  | <b>2305</b>   | <b>2545</b> | <b>2785</b> | <b>3025</b>  | <b>6109</b>                | <b>7109</b> | <b>8109</b>  | <b>T212B685M035(2)S</b> |  |
| 8.2   | C            | 5,10,20                        | T110C825(1)035AS        | 3.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 10.0  | C            | 5,10,20                        | T110C106(1)035AS        | 3.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 12.0  | C            | 5,10,20                        | T110C126(1)035AS        | 3.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 15.0  | C            | 5,10,20                        | T110C156(1)035AS        | 3.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 18.0  | C            | 5,10,20                        | T110C186(1)035AS        | 3.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| <b>22.0</b>   | <b>C</b>     | <b>5</b>                       | <b>T110C226J035AS</b>   | <b>4.0</b>                         | <b>4</b>  | <b>5045</b>   | <b>5245</b> | <b>5445</b> | <b>5645</b>  | <b>6110</b>                | <b>7110</b> | <b>8110</b>  | <b>T212C226J035(2)S</b> |  |
| <b>22.0</b>   | <b>C</b>     | <b>10</b>                      | <b>T110C226K035AS</b>   | <b>4.0</b>                         | <b>4</b>  | <b>2306</b>   | <b>2546</b> | <b>2786</b> | <b>3026</b>  | <b>6111</b>                | <b>7111</b> | <b>8111</b>  | <b>T212C226K035(2)S</b> |  |
| <b>22.0</b>   | <b>C</b>     | <b>20</b>                      | <b>T110C226M035AS</b>   | <b>4.0</b>                         | <b>4</b>  | <b>2307</b>   | <b>2547</b> | <b>2787</b> | <b>3027</b>  | <b>6112</b>                | <b>7112</b> | <b>8112</b>  | <b>T212C226M035(2)S</b> |  |
| 27.0  | D            | 5                              | T110D276J035AS          | 4.5                                | 4   | 5046  | 5246        | 5446        | 5646         | 6113                       | 7113        | 8113         | T212D276J035(2)S        |  |
| 27.0  | D            | 10                             | T110D276K035AS          | 4.5                                | 4   | 2308  | 2548        | 2788        | 3028         | 6114                       | 7114        | 8114         | T212D276K035(2)S        |  |
| 27.0  | D            | 20                             | T110D276M035AS          | 4.5                                | 4   |   |             |             |              |                            |             |              |                         |  |
| <b>33.0</b>   | <b>D</b>     | <b>5</b>                       | <b>T110D336J035AS</b>   | <b>5.5</b>                         | <b>4</b>  | <b>5047</b>   | <b>5247</b> | <b>5447</b> | <b>5647</b>  | <b>6115</b>                | <b>7115</b> | <b>8115</b>  | <b>T212D336J035(2)S</b> |  |
| <b>33.0</b>   | <b>D</b>     | <b>10</b>                      | <b>T110D336K035AS</b>   | <b>5.5</b>                         | <b>4</b>  | <b>2309</b>   | <b>2549</b> | <b>2789</b> | <b>3029</b>  | <b>6116</b>                | <b>7116</b> | <b>8116</b>  | <b>T212D336K035(2)S</b> |  |
| <b>33.0</b>   | <b>D</b>     | <b>20</b>                      | <b>T110D336M035AS</b>   | <b>5.5</b>                         | <b>4</b>  | <b>2310</b>   | <b>2550</b> | <b>2790</b> | <b>3030</b>  | <b>6117</b>                | <b>7117</b> | <b>8117</b>  | <b>T212D336M035(2)S</b> |  |
| 39.0  | D            | 5                              | T110D396J035AS          | 6.0                                | 4   | 5048  | 5248        | 5448        | 5648         | 6118                       | 7118        | 8118         | T212D396J035(2)S        |  |
| 39.0  | D            | 10                             | T110D396K035AS          | 6.0                                | 4   | 2311  | 2551        | 2791        | 3031         | 6119                       | 7119        | 8119         | T212D396K035(2)S        |  |
| 39.0  | D            | 20                             | T110D396M035AS          | 6.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| <b>47.0</b>   | <b>D</b>     | <b>5</b>                       | <b>T110D476J035AS</b>   | <b>8.0</b>                         | <b>4</b>  | <b>5049</b>   | <b>5249</b> | <b>5449</b> | <b>5649</b>  | <b>6120</b>                | <b>7120</b> | <b>8120</b>  | <b>T212D476J035(2)S</b> |  |
| <b>47.0</b>   | <b>D</b>     | <b>10</b>                      | <b>T110D476K035AS</b>   | <b>8.0</b>                         | <b>4</b>  | <b>2312</b>   | <b>2552</b> | <b>2792</b> | <b>3032</b>  | <b>6121</b>                | <b>7121</b> | <b>8121</b>  | <b>T212D476K035(2)S</b> |  |
| <b>47.0</b>   | <b>D</b>     | <b>20</b>                      | <b>T110D476M035AS</b>   | <b>8.0</b>                         | <b>4</b>  | <b>2313</b>   | <b>2553</b> | <b>2793</b> | <b>3033</b>  | <b>6122</b>                | <b>7122</b> | <b>8122</b>  | <b>T212D476M035(2)S</b> |  |
| <b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°</b>          |              |                                |                         |                                    |   |   |             |             |              |                            |             |              |                         |  |
| 0.0047  | A            | 5                              | T110A472J050AS          | 0.1                                | 2   | 5050  | 5250        | 5450        | 5650         | 6123                       | 7123        | 8123         | T212A472J050(2)S        |  |
| 0.0047  | A            | 10                             | T110A472K050AS          | 0.1                                | 2   | 2314  | 2554        | 2794        | 3034         | 6124                       | 7124        | 8124         | T212A472K050(2)S        |  |
| 0.0047  | A            | 20                             | T110A472M050AS          | 0.1                                | 2   | 2315  | 2555        | 2795        | 3035         | 6125                       | 7125        | 8125         | T212A472M050(2)S        |  |
| 0.0056  | A            | 5                              | T110A562J050AS          | 0.1                                | 2   | 5051  | 5251        | 5451        | 5651         | 6126                       | 7126        | 8126         | T212A562J050(2)S        |  |
| 0.0056  | A            | 10                             | T110A562K050AS          | 0.1                                | 2   | 2316  | 2556        | 2796        | 3036         | 6127                       | 7127        | 8127         | T212A562K050(2)S        |  |
| 0.0056  | A            | 20                             | T110A562M050AS          | 0.1                                | 2   |   |             |             |              |                            |             |              |                         |  |
| 0.0068  | A            | 5                              | T110A682J050AS          | 0.1                                | 2   | 5052  | 5252        | 5452        | 5652         | 6128                       | 7128        | 8128         | T212A682J050(2)S        |  |
| 0.0068  | A            | 10                             | T110A682K050AS          | 0.1                                | 2   | 2317  | 2557        | 2797        | 3037         | 6129                       | 7129        | 8129         | T212A682K050(2)S        |  |
| 0.0068  | A            | 20                             | T110A682M050AS          | 0.1                                | 2   | 2318  | 2558        | 2798        | 3038         | 6130                       | 7130        | 8130         | T212A682M050(2)S        |  |

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.  
(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.  
**Bold Face** lines indicate popular part types and values.



RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF  | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|--|--------------|--------------------------------|----------------------|------------------------------------|---|---|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|--|
|  |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |  |
|  |              |                                |                      |                                    |   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                  |  |
|  |              |                                |                      |                                    |   | M<br>(1.0)  | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |  |
| <b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C (Cont'd)</b> |              |                                |                      |                                    |   |   |            |             |              |                            |             |              |                  |  |
| 0.0082   | A            | 5                              | T110A822J050AS       | 0.1                                | 2   | 5053  | 5253       | 5453        | 5653         | 6131                       | 7131        | 8131         | T212A822J050(2)S |  |
| 0.0082   | A            | 10                             | T110A822K050AS       | 0.1                                | 2   | 2319  | 2559       | 2799        | 3039         | 6132                       | 7132        | 8132         | T212A822K050(2)S |  |
| 0.0082   | A            | 20                             | T110A822M050AS       | 0.1                                | 2   |   |            |             |              |                            |             |              |                  |  |
| 0.01   | A            | 5                              | T110A103J050AS       | 0.1                                | 2   | 5054  | 5254       | 5454        | 5654         | 6133                       | 7133        | 8133         | T212A103J050(2)S |  |
| 0.01   | A            | 10                             | T110A103K050AS       | 0.1                                | 2   | 2320  | 2560       | 2800        | 3040         | 6134                       | 7134        | 8134         | T212A103K050(2)S |  |
| 0.01   | A            | 20                             | T110A103M050AS       | 0.1                                | 2   | 2321  | 2561       | 2801        | 3041         | 6135                       | 7135        | 8135         | T212A103M050(2)S |  |
| 0.012  | A            | 5                              | T110A123J050AS       | 0.1                                | 2   | 5055  | 5255       | 5455        | 5655         | 6136                       | 7136        | 8136         | T212A123J050(2)S |  |
| 0.012  | A            | 10                             | T110A123K050AS       | 0.1                                | 2   | 2322  | 2562       | 2802        | 3042         | 6137                       | 7137        | 8137         | T212A123K050(2)S |  |
| 0.012  | A            | 20                             | T110A123M050AS       | 0.1                                | 2   |   |            |             |              |                            |             |              |                  |  |
| 0.015  | A            | 5                              | T110A153J050AS       | 0.1                                | 2   | 5056  | 5256       | 5456        | 5656         | 6138                       | 7138        | 8138         | T212A153J050(2)S |  |
| 0.015  | A            | 10                             | T110A153K050AS       | 0.1                                | 2   | 2323  | 2563       | 2803        | 3043         | 6139                       | 7139        | 8139         | T212A153K050(2)S |  |
| 0.015  | A            | 20                             | T110A153M050AS       | 0.1                                | 2   | 2324  | 2564       | 2804        | 3044         | 6140                       | 7140        | 8140         | T212A153M050(2)S |  |
| 0.018  | A            | 5                              | T110A183J050AS       | 0.1                                | 2   | 5057  | 5257       | 5457        | 5657         | 6141                       | 7141        | 8141         | T212A183J050(2)S |  |
| 0.018  | A            | 10                             | T110A183K050AS       | 0.1                                | 2   | 2325  | 2565       | 2805        | 3045         | 6142                       | 7142        | 8142         | T212A183K050(2)S |  |
| 0.018  | A            | 20                             | T110A183M050AS       | 0.1                                | 2   |   |            |             |              |                            |             |              |                  |  |
| 0.022  | A            | 5                              | T110A223J050AS       | 0.1                                | 2   | 5058  | 5258       | 5458        | 5658         | 6143                       | 7143        | 8143         | T212A223J050(2)S |  |
| 0.022  | A            | 10                             | T110A223K050AS       | 0.1                                | 2   | 2326  | 2566       | 2806        | 3046         | 6144                       | 7144        | 8144         | T212A223K050(2)S |  |
| 0.022  | A            | 20                             | T110A223M050AS       | 0.1                                | 2   | 2327  | 2567       | 2807        | 3047         | 6145                       | 7145        | 8145         | T212A223M050(2)S |  |
| 0.027  | A            | 5                              | T110A273J050AS       | 0.1                                | 2   | 5059  | 5259       | 5459        | 5659         | 6146                       | 7146        | 8146         | T212A273J050(2)S |  |
| 0.027  | A            | 10                             | T110A273K050AS       | 0.1                                | 2   | 2328  | 2568       | 2808        | 3048         | 6147                       | 7147        | 8147         | T212A273K050(2)S |  |
| 0.027  | A            | 20                             | T110A273M050AS       | 0.1                                | 2   |   |            |             |              |                            |             |              |                  |  |
| 0.033  | A            | 5                              | T110A333J050AS       | 0.1                                | 2   | 5060  | 5260       | 5460        | 5660         | 6148                       | 7148        | 8148         | T212A333J050(2)S |  |
| 0.033  | A            | 10                             | T110A333K050AS       | 0.1                                | 2   | 2329  | 2569       | 2809        | 3049         | 6149                       | 7149        | 8149         | T212A333K050(2)S |  |
| 0.033  | A            | 20                             | T110A333M050AS       | 0.1                                | 2   | 2330  | 2570       | 2810        | 3050         | 6150                       | 7150        | 8150         | T212A333M050(2)S |  |
| 0.039  | A            | 5                              | T110A393J050AS       | 0.1                                | 2   | 5061  | 5261       | 5461        | 5661         | 6151                       | 7151        | 8151         | T212A393J050(2)S |  |
| 0.039  | A            | 10                             | T110A393K050AS       | 0.1                                | 2   | 2331  | 2571       | 2811        | 3051         | 6152                       | 7152        | 8152         | T212A393K050(2)S |  |
| 0.039  | A            | 20                             | T110A393M050AS       | 0.1                                | 2   |   |            |             |              |                            |             |              |                  |  |
| 0.047  | A            | 5                              | T110A473J050AS       | 0.1                                | 2   | 5062  | 5262       | 5462        | 5662         | 6153                       | 7153        | 8153         | T212A473J050(2)S |  |
| 0.047  | A            | 10                             | T110A473K050AS       | 0.1                                | 2   | 2332  | 2572       | 2812        | 3052         | 6154                       | 7154        | 8154         | T212A473K050(2)S |  |
| 0.047  | A            | 20                             | T110A473M050AS       | 0.1                                | 2   | 2333  | 2573       | 2813        | 3053         | 6155                       | 7155        | 8155         | T212A473M050(2)S |  |
| 0.056  | A            | 5                              | T110A563J050AS       | 0.1                                | 2   | 5063  | 5263       | 5463        | 5663         | 6156                       | 7156        | 8156         | T212A563J050(2)S |  |
| 0.056  | A            | 10                             | T110A563K050AS       | 0.1                                | 2   | 2334  | 2574       | 2814        | 3054         | 6157                       | 7157        | 8157         | T212A563K050(2)S |  |
| 0.056  | A            | 20                             | T110A563M050AS       | 0.1                                | 2   |   |            |             |              |                            |             |              |                  |  |
| 0.068  | A            | 5                              | T110A683J050AS       | 0.1                                | 2   | 5064  | 5264       | 5464        | 5664         | 6158                       | 7158        | 8158         | T212A683J050(2)S |  |
| 0.068  | A            | 10                             | T110A683K050AS       | 0.1                                | 2   | 2335  | 2575       | 2815        | 3055         | 6159                       | 7159        | 8159         | T212A683K050(2)S |  |
| 0.068  | A            | 20                             | T110A683M050AS       | 0.1                                | 2   | 2336  | 2576       | 2816        | 3056         | 6160                       | 7160        | 8160         | T212A683M050(2)S |  |
| 0.082  | A            | 5                              | T110A823J050AS       | 0.1                                | 2   | 5065  | 5265       | 5465        | 5665         | 6161                       | 7161        | 8161         | T212A823J050(2)S |  |
| 0.082  | A            | 10                             | T110A823K050AS       | 0.1                                | 2   | 2337  | 2577       | 2817        | 3057         | 6162                       | 7162        | 8162         | T212A823K050(2)S |  |
| 0.082  | A            | 20                             | T110A823M050AS       | 0.1                                | 2   |   |            |             |              |                            |             |              |                  |  |
| 0.1  | A            | 5                              | T110A104J050AS       | 0.3                                | 2   | 5066  | 5266       | 5466        | 5666         | 6163                       | 7163        | 8163         | T212A104J050(2)S |  |
| 0.1  | A            | 10                             | T110A104K050AS       | 0.3                                | 2   | 2338  | 2578       | 2818        | 3058         | 6164                       | 7164        | 8164         | T212A104K050(2)S |  |
| 0.1  | A            | 20                             | T110A104M050AS       | 0.3                                | 2   | 2339  | 2579       | 2819        | 3059         | 6165                       | 7165        | 8165         | T212A104M050(2)S |  |
| 0.12   | A            | 5                              | T110A124J050AS       | 0.3                                | 2   | 5067  | 5267       | 5467        | 5667         | 6166                       | 7166        | 8166         | T212A124J050(2)S |  |
| 0.12   | A            | 10                             | T110A124K050AS       | 0.3                                | 2   | 2340  | 2580       | 2820        | 3060         | 6167                       | 7167        | 8167         | T212A124K050(2)S |  |
| 0.12   | A            | 20                             | T110A124M050AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |                  |  |
| 0.15   | A            | 5                              | T110A154J050AS       | 0.3                                | 2   | 5068  | 5268       | 5468        | 5668         | 6168                       | 7168        | 8168         | T212A154J050(2)S |  |
| 0.15   | A            | 10                             | T110A154K050AS       | 0.3                                | 2   | 2341  | 2581       | 2821        | 3061         | 6169                       | 7169        | 8169         | T212A154K050(2)S |  |
| 0.15   | A            | 20                             | T110A154M050AS       | 0.3                                | 2   | 2342  | 2582       | 2822        | 3062         | 6170                       | 7170        | 8170         | T212A154M050(2)S |  |
| 0.18   | A            | 5                              | T110A184J050AS       | 0.3                                | 2   | 5069  | 5269       | 5469        | 5669         | 6171                       | 7171        | 8171         | T212A184J050(2)S |  |
| 0.18   | A            | 10                             | T110A184K050AS       | 0.3                                | 2   | 2343  | 2583       | 2823        | 3063         | 6172                       | 7172        | 8172         | T212A184K050(2)S |  |
| 0.18   | A            | 20                             | T110A184M050AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |                  |  |
| 0.22   | A            | 5                              | T110A224J050AS       | 0.3                                | 2   | 5070  | 5270       | 5470        | 5670         | 6173                       | 7173        | 8173         | T212A224J050(2)S |  |
| 0.22   | A            | 10                             | T110A224K050AS       | 0.3                                | 2   | 2344  | 2584       | 2824        | 3064         | 6174                       | 7174        | 8174         | T212A224K050(2)S |  |
| 0.22   | A            | 20                             | T110A224M050AS       | 0.3                                | 2   | 2345  | 2585       | 2825        | 3065         | 6175                       | 7175        | 8175         | T212A224M050(2)S |  |
| 0.27   | A            | 5                              | T110A274J050AS       | 0.3                                | 2   | 5071  | 5271       | 5471        | 5671         | 6176                       | 7176        | 8176         | T212A274J050(2)S |  |
| 0.27   | A            | 10                             | T110A274K050AS       | 0.3                                | 2   | 2346  | 2586       | 2826        | 3066         | 6177                       | 7177        | 8177         | T212A274K050(2)S |  |
| 0.27   | A            | 20                             | T110A274M050AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |                  |  |
| 0.33   | A            | 5                              | T110A334J050AS       | 0.3                                | 2   | 5072  | 5272       | 5472        | 5672         | 6178                       | 7178        | 8178         | T212A334J050(2)S |  |
| 0.33   | A            | 10                             | T110A334K050AS       | 0.3                                | 2   | 2347  | 2587       | 2827        | 3067         | 6179                       | 7179        | 8179         | T212A334K050(2)S |  |
| 0.33   | A            | 20                             | T110A334M050AS       | 0.3                                | 2   | 2348  | 2588       | 2828        | 3068         | 6180                       | 7180        | 8180         | T212A334M050(2)S |  |
| 0.39   | A            | 5                              | T110A394J050AS       | 0.3                                | 2   | 5073  | 5273       | 5473        | 5673         | 6181                       | 7181        | 8181         | T212A394J050(2)S |  |

(1) To complete T110 Series part number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>µF  | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110            |                                    |   | MIL-PRF-39003 (CSR13) CAPACITORS                          |             |             |              |                            |             |              |                         | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|--|--------------|--------------------------------|-----------------------|------------------------------------|---|---|-------------|-------------|--------------|----------------------------|-------------|--------------|-------------------------|--|
|  |              |                                | KEMET<br>PART NUMBER  | D.C.<br>LEAKAGE<br>µA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |             |             |              |                            |             |              |                         |  |
|  |              |                                |                       |                                    |   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |             |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                         |  |
|  |              |                                |                       |                                    |   | M<br>(1.0)  | P<br>(0.1)  | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                         |  |
| <b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C (Cont'd)</b> |              |                                |                       |                                    |   |   |             |             |              |                            |             |              |                         |  |
| 0.39   | A            | 10                             | T110A394K050AS        | 0.3                                | 2   | 2349  | 2589        | 2829        | 3069         | 6182                       | 7182        | 8182         | T212A394K050(2)S        |  |
| 0.39   | A            | 20                             | T110A394M050AS        | 0.3                                | 2   |   |             |             |              |                            |             |              |                         |  |
| <b>0.47</b>  | <b>A</b>     | <b>5</b>                       | <b>T110A474J050AS</b> | <b>0.3</b>                         | <b>2</b>  | <b>5074</b>   | <b>5274</b> | <b>5474</b> | <b>5674</b>  | <b>6183</b>                | <b>7183</b> | <b>8183</b>  | <b>T212A474J050(2)S</b> |  |
| <b>0.47</b>  | <b>A</b>     | <b>10</b>                      | <b>T110A474K050AS</b> | <b>0.3</b>                         | <b>2</b>  | <b>2350</b>   | <b>2590</b> | <b>2830</b> | <b>3070</b>  | <b>6184</b>                | <b>7184</b> | <b>8184</b>  | <b>T212A474K050(2)S</b> |  |
| <b>0.47</b>  | <b>A</b>     | <b>20</b>                      | <b>T110A474M050AS</b> | <b>0.3</b>                         | <b>2</b>  | <b>2351</b>   | <b>2591</b> | <b>2831</b> | <b>3071</b>  | <b>6185</b>                | <b>7185</b> | <b>8185</b>  | <b>T212A474M050(2)S</b> |  |
| 0.56   | A            | 5                              | T110A564J050AS        | 0.3                                | 2   | 5075  | 5275        | 5475        | 5675         | 6186                       | 7186        | 8186         | T212A564J050(2)S        |  |
| 0.56   | A            | 10                             | T110A564K050AS        | 0.3                                | 2   | 2352  | 2592        | 2832        | 3072         | 6187                       | 7187        | 8187         | T212A564K050(2)S        |  |
| 0.56   | A            | 20                             | T110A564M050AS        | 0.3                                | 2   |   |             |             |              |                            |             |              |                         |  |
| <b>0.68</b>  | <b>A</b>     | <b>5</b>                       | <b>T110A684J050AS</b> | <b>0.3</b>                         | <b>2</b>  | <b>5076</b>   | <b>5276</b> | <b>5476</b> | <b>5676</b>  | <b>6188</b>                | <b>7188</b> | <b>8188</b>  | <b>T212A684J050(2)S</b> |  |
| <b>0.68</b>  | <b>A</b>     | <b>10</b>                      | <b>T110A684K050AS</b> | <b>0.3</b>                         | <b>2</b>  | <b>2353</b>   | <b>2593</b> | <b>2833</b> | <b>3073</b>  | <b>6189</b>                | <b>7189</b> | <b>8189</b>  | <b>T212A684K050(2)S</b> |  |
| <b>0.68</b>  | <b>A</b>     | <b>20</b>                      | <b>T110A684M050AS</b> | <b>0.3</b>                         | <b>2</b>  | <b>2354</b>   | <b>2594</b> | <b>2834</b> | <b>3074</b>  | <b>6190</b>                | <b>7190</b> | <b>8190</b>  | <b>T212A684M050(2)S</b> |  |
| 0.82   | A            | 5                              | T110A824J050AS        | 0.3                                | 2   | 5077  | 5277        | 5477        | 5677         | 6191                       | 7191        | 8191         | T212A824J050(2)S        |  |
| 0.82   | A            | 10                             | T110A824K050AS        | 0.3                                | 2   | 2355  | 2595        | 2835        | 3075         | 6192                       | 7192        | 8192         | T212A824K050(2)S        |  |
| 0.82   | A            | 20                             | T110A824M050AS        | 0.3                                | 2   |   |             |             |              |                            |             |              |                         |  |
| <b>1.0</b>   | <b>A</b>     | <b>5</b>                       | <b>T110A105J050AS</b> | <b>0.4</b>                         | <b>2</b>  | <b>5078</b>   | <b>5278</b> | <b>5478</b> | <b>5678</b>  | <b>6193</b>                | <b>7193</b> | <b>8193</b>  | <b>T212A105J050(2)S</b> |  |
| <b>1.0</b>   | <b>A</b>     | <b>10</b>                      | <b>T110A105K050AS</b> | <b>0.4</b>                         | <b>2</b>  | <b>2356</b>   | <b>2596</b> | <b>2836</b> | <b>3076</b>  | <b>6194</b>                | <b>7194</b> | <b>8194</b>  | <b>T212A105K050(2)S</b> |  |
| <b>1.0</b>   | <b>A</b>     | <b>20</b>                      | <b>T110A105M050AS</b> | <b>0.4</b>                         | <b>2</b>  | <b>2357</b>   | <b>2597</b> | <b>2837</b> | <b>3077</b>  | <b>6195</b>                | <b>7195</b> | <b>8195</b>  | <b>T212A105M050(2)S</b> |  |
| 1.2  | B            | 5                              | T110B125J050AS        | 0.4                                | 4   | 5079  | 5279        | 5479        | 5679         | 6196                       | 7196        | 8196         | T212B125J050(2)S        |  |
| 1.2  | B            | 10                             | T110B125K050AS        | 0.4                                | 4   | 2358  | 2598        | 2838        | 3078         | 6197                       | 7197        | 8197         | T212B125K050(2)S        |  |
| 1.2  | B            | 20                             | T110B125M050AS        | 0.4                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 1.5  | B            | 5                              | T110B155J050AS        | 0.5                                | 4   | 5080  | 5280        | 5480        | 5680         | 6198                       | 7198        | 8198         | T212B155J050(2)S        |  |
| 1.5  | B            | 10                             | T110B155K050AS        | 0.5                                | 4   | 2359  | 2599        | 2839        | 3079         | 6199                       | 7199        | 8199         | T212B155K050(2)S        |  |
| 1.5  | B            | 20                             | T110B155M050AS        | 0.5                                | 4   | 2360  | 2600        | 2840        | 3080         | 6200                       | 7200        | 8200         | T212B155M050(2)S        |  |
| 1.8  | B            | 5                              | T110B185J050AS        | 0.5                                | 4   | 5081  | 5281        | 5481        | 5681         | 6201                       | 7201        | 8201         | T212B185J050(2)S        |  |
| 1.8  | B            | 10                             | T110B185K050AS        | 0.5                                | 4   | 2361  | 2601        | 2841        | 3081         | 6202                       | 7202        | 8202         | T212B185K050(2)S        |  |
| 1.8  | B            | 20                             | T110B185M050AS        | 0.5                                | 4   |   |             |             |              |                            |             |              |                         |  |
| <b>2.2</b>   | <b>B</b>     | <b>5</b>                       | <b>T110B225J050AS</b> | <b>0.8</b>                         | <b>4</b>  | <b>5082</b>   | <b>5282</b> | <b>5482</b> | <b>5682</b>  | <b>6203</b>                | <b>7203</b> | <b>8203</b>  | <b>T212B225J050(2)S</b> |  |
| <b>2.2</b>   | <b>B</b>     | <b>10</b>                      | <b>T110B225K050AS</b> | <b>0.8</b>                         | <b>4</b>  | <b>2362</b>   | <b>2602</b> | <b>2842</b> | <b>3082</b>  | <b>6204</b>                | <b>7204</b> | <b>8204</b>  | <b>T212B225K050(2)S</b> |  |
| <b>2.2</b>   | <b>B</b>     | <b>20</b>                      | <b>T110B225M050AS</b> | <b>0.8</b>                         | <b>4</b>  | <b>2363</b>   | <b>2603</b> | <b>2843</b> | <b>3083</b>  | <b>6205</b>                | <b>7205</b> | <b>8205</b>  | <b>T212B225M050(2)S</b> |  |
| 2.7  | B            | 5                              | T110B275J050AS        | 0.8                                | 4   | 5083  | 5283        | 5483        | 5683         | 6206                       | 7206        | 8206         | T212B275J050(2)S        |  |
| 2.7  | B            | 10                             | T110B275K050AS        | 0.8                                | 4   | 2364  | 2604        | 2844        | 3084         | 6207                       | 7207        | 8207         | T212B275K050(2)S        |  |
| 2.7  | B            | 20                             | T110B275M050AS        | 0.8                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 3.3  | B            | 5                              | T110B335J050AS        | 1.2                                | 4   | 5084  | 5284        | 5484        | 5684         | 6208                       | 7208        | 8208         | T212B335J050(2)S        |  |
| 3.3  | B            | 10                             | T110B335K050AS        | 1.2                                | 4   | 2365  | 2605        | 2845        | 3085         | 6209                       | 7209        | 8209         | T212B335K050(2)S        |  |
| 3.3  | B            | 20                             | T110B335M050AS        | 1.2                                | 4   | 2366  | 2606        | 2846        | 3086         | 6210                       | 7210        | 8210         | T212B335M050(2)S        |  |
| 3.9  | B            | 5                              | T110B395J050AS        | 1.5                                | 4   | 5085  | 5285        | 5485        | 5685         | 6211                       | 7211        | 8211         | T212B395J050(2)S        |  |
| 3.9  | B            | 10                             | T110B395K050AS        | 1.5                                | 4   | 2367  | 2607        | 2847        | 3087         | 6212                       | 7212        | 8212         | T212B395K050(2)S        |  |
| 3.9  | B            | 20                             | T110B395M050AS        | 1.5                                | 4   |   |             |             |              |                            |             |              |                         |  |
| <b>4.7</b>   | <b>B</b>     | <b>5</b>                       | <b>T110B475J050AS</b> | <b>1.7</b>                         | <b>4</b>  | <b>5086</b>   | <b>5286</b> | <b>5486</b> | <b>5686</b>  | <b>6213</b>                | <b>7213</b> | <b>8213</b>  | <b>T212B475J050(2)S</b> |  |
| <b>4.7</b>   | <b>B</b>     | <b>10</b>                      | <b>T110B475K050AS</b> | <b>1.7</b>                         | <b>4</b>  | <b>2368</b>   | <b>2608</b> | <b>2848</b> | <b>3088</b>  | <b>6214</b>                | <b>7214</b> | <b>8214</b>  | <b>T212B475K050(2)S</b> |  |
| <b>4.7</b>   | <b>B</b>     | <b>20</b>                      | <b>T110B475M050AS</b> | <b>1.7</b>                         | <b>4</b>  | <b>2369</b>   | <b>2609</b> | <b>2849</b> | <b>3089</b>  | <b>6215</b>                | <b>7215</b> | <b>8215</b>  | <b>T212B475M050(2)S</b> |  |
| 5.6  | C            | 5                              | T110C565J050AS        | 2.2                                | 4   | 5087  | 5287        | 5487        | 5687         | 6216                       | 7216        | 8216         | T212C565J050(2)S        |  |
| 5.6  | C            | 10                             | T110C565K050AS        | 2.2                                | 4   | 2370  | 2610        | 2850        | 3090         | 6217                       | 7217        | 8217         | T212C565K050(2)S        |  |
| 5.6  | C            | 20                             | T110C565M050AS        | 2.2                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 6.8  | C            | 5                              | T110C685J050AS        | 2.2                                | 4   | 5088  | 5288        | 5488        | 5688         | 6218                       | 7218        | 8218         | T212C685J050(2)S        |  |
| 6.8  | C            | 10                             | T110C685K050AS        | 2.2                                | 4   | 2371  | 2611        | 2851        | 3091         | 6219                       | 7219        | 8219         | T212C685K050(2)S        |  |
| 6.8  | C            | 20                             | T110C685M050AS        | 2.2                                | 4   | 2372  | 2612        | 2852        | 3092         | 6220                       | 7220        | 8220         | T212C685M050(2)S        |  |
| 8.2  | C            | 5                              | T110C825J050AS        | 2.5                                | 4   | 5089  | 5289        | 5489        | 5689         | 6221                       | 7221        | 8221         | T212C825J050(2)S        |  |
| 8.2  | C            | 10                             | T110C825K050AS        | 2.5                                | 4   | 2373  | 2613        | 2853        | 3093         | 6222                       | 7222        | 8222         | T212C825K050(2)S        |  |
| 8.2  | C            | 20                             | T110C825M050AS        | 2.5                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 10.0   | C            | 5                              | T110C106J050AS        | 2.5                                | 4   | 5090  | 5290        | 5490        | 5690         | 6223                       | 7223        | 8223         | T212C106J050(2)S        |  |
| 10.0   | C            | 10                             | T110C106K050AS        | 2.5                                | 4   | 2374  | 2614        | 2854        | 3094         | 6224                       | 7224        | 8224         | T212C106K050(2)S        |  |
| 10.0   | C            | 20                             | T110C106M050AS        | 2.5                                | 4   | 2375  | 2615        | 2855        | 3095         | 6225                       | 7225        | 8225         | T212C106M050(2)S        |  |
| 12.0   | C            | 5                              | T110C126J050AS        | 3.0                                | 4   | 5091  | 5291        | 5491        | 5691         | 6226                       | 7226        | 8226         | T212C126J050(2)S        |  |
| 12.0   | C            | 10                             | T110C126K050AS        | 3.0                                | 4   | 2376  | 2616        | 2856        | 3096         | 6227                       | 7227        | 8227         | T212C126K050(2)S        |  |
| 12.0   | C            | 20                             | T110C126M050AS        | 3.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 15.0   | C            | 5                              | T110C156J050AS        | 4.0                                | 4   | 5092  | 5292        | 5492        | 5692         | 6228                       | 7228        | 8228         | T212C156J050(2)S        |  |
| 15.0   | C            | 10                             | T110C156K050AS        | 4.0                                | 4   | 2377  | 2617        | 2857        | 3097         | 6229                       | 7229        | 8229         | T212C156K050(2)S        |  |
| 15.0   | C            | 20                             | T110C156M050AS        | 4.0                                | 4   | 2378  | 2618        | 2858        | 3098         | 6230                       | 7230        | 8230         | T212C156M050(2)S        |  |
| 18.0   | C            | 5                              | T110C186J050AS        | 4.5                                | 4   | 5093  | 5293        | 5493        | 5693         | 6231                       | 7231        | 8231         | T212C186J050(2)S        |  |

(1) To complete T110 Series part number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.  
(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.  
**Bold Face** lines indicate popular part type and values.



**TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003**  
**T110 SERIES — POLAR TYPE & T212 (CSR13)**

**RATINGS & PART NUMBER REFERENCE**

| CAPACITANCE<br>µF  | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110            |                                    |   | MIL-PRF-39003 (CSR13) CAPACITORS                          |             |              |              |                            |             |              |                         | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|--|--------------|--------------------------------|-----------------------|------------------------------------|---|---|-------------|--------------|--------------|----------------------------|-------------|--------------|-------------------------|--|
|  |              |                                | KEMET<br>PART NUMBER  | D.C.<br>LEAKAGE<br>µA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |             |              |              |                            |             |              |                         |  |
|  |              |                                |                       |                                    |   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |             |              |              | MIL-PRF-39003/1H<br>GRADED |             |              |                         |  |
|  |              |                                |                       |                                    |   | M<br>(1.0)  | P<br>(0.1)  | R<br>(0.001) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                         |  |
| <b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C (Cont'd)</b> |              |                                |                       |                                    |   |   |             |              |              |                            |             |              |                         |  |
| 18.0   | C            | 10                             | T110C186K050AS        | 4.5                                | 4   | 2379  | 2619        | 2859         | 3099         | 6232                       | 7232        | 8232         | T212C186K050(2)S        |  |
| 18.0   | C            | 20                             | T110C186M050AS        | 4.5                                | 4   |   |             |              |              |                            |             |              |                         |  |
| <b>22.0</b>  | <b>D</b>     | <b>5</b>                       | <b>T110D226J050AS</b> | <b>5.5</b>                         | <b>4</b>  | <b>5094</b>   | <b>5294</b> | <b>5494</b>  | <b>5694</b>  | <b>6233</b>                | <b>7233</b> | <b>8233</b>  | <b>T212D226J050(2)S</b> |  |
| <b>22.0</b>  | <b>D</b>     | <b>10</b>                      | <b>T110D226K050AS</b> | <b>5.5</b>                         | <b>4</b>  | <b>2380</b>   | <b>2620</b> | <b>2860</b>  | <b>3100</b>  | <b>6234</b>                | <b>7234</b> | <b>8234</b>  | <b>T212D226K050(2)S</b> |  |
| <b>22.0</b>  | <b>D</b>     | <b>20</b>                      | <b>T110D226M050AS</b> | <b>5.5</b>                         | <b>4</b>  | <b>2381</b>   | <b>2621</b> | <b>2861</b>  | <b>3101</b>  | <b>6235</b>                | <b>7235</b> | <b>8235</b>  | <b>T212D226M050(2)S</b> |  |
| <b>60 VOLT RATING AT 85°C — 40 VOLT RATING AT 125°C</b>          |              |                                |                       |                                    |   |   |             |              |              |                            |             |              |                         |  |
| 0.0047   | A            | 5,10,20                        | T110A472(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.0056   | A            | 5,10,20                        | T110A562(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.0068   | A            | 5,10,20                        | T110A682(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.0082   | A            | 5,10,20                        | T110A822(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.01   | A            | 5,10,20                        | T110A103(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.012  | A            | 5,10,20                        | T110A123(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.015  | A            | 5,10,20                        | T110A153(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.018  | A            | 5,10,20                        | T110A183(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.022  | A            | 5,10,20                        | T110A223(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.027  | A            | 5,10,20                        | T110A273(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.033  | A            | 5,10,20                        | T110A333(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.039  | A            | 5,10,20                        | T110A393(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.047  | A            | 5,10,20                        | T110A473(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.056  | A            | 5,10,20                        | T110A563(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.068  | A            | 5,10,20                        | T110A683(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.082  | A            | 5,10,20                        | T110A823(1)060AS      | 0.3                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.1  | A            | 5,10,20                        | T110A104(1)060AS      | 0.5                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.12   | A            | 5,10,20                        | T110A124(1)060AS      | 0.5                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.15   | A            | 5,10,20                        | T110A154(1)060AS      | 0.5                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.18   | A            | 5,10,20                        | T110A184(1)060AS      | 0.5                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.22   | A            | 5,10,20                        | T110A224(1)060AS      | 0.5                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.27   | A            | 5,10,20                        | T110A274(1)060AS      | 0.5                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.33   | A            | 5,10,20                        | T110A334(1)060AS      | 0.5                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.39   | A            | 5,10,20                        | T110A394(1)060AS      | 0.5                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.47   | A            | 5,10,20                        | T110A474(1)060AS      | 0.5                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.56   | A            | 5,10,20                        | T110A564(1)060AS      | 0.5                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.68   | A            | 5,10,20                        | T110A684(1)060AS      | 0.5                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 0.82   | B            | 5,10,20                        | T110B824(1)060AS      | 0.5                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 1.0  | B            | 5,10,20                        | T110B105(1)060AS      | 0.5                                | 3   |   |             |              |              |                            |             |              |                         |  |
| 1.2  | B            | 5,10,20                        | T110B125(1)060AS      | 0.5                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 1.5  | B            | 5,10,20                        | T110B155(1)060AS      | 0.5                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 1.8  | B            | 5,10,20                        | T110B185(1)060AS      | 0.5                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 2.2  | B            | 5,10,20                        | T110B225(1)060AS      | 1.0                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 2.7  | B            | 5,10,20                        | T110B275(1)060AS      | 1.0                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 3.3  | B            | 5,10,20                        | T110B335(1)060AS      | 1.5                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 3.9  | B            | 5,10,20                        | T110B395(1)060AS      | 1.5                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 4.7  | C            | 5,10,20                        | T110C475(1)060AS      | 2.0                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 5.6  | C            | 5,10,20                        | T110C565(1)060AS      | 2.0                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 6.8  | C            | 5,10,20                        | T110C685(1)060AS      | 3.0                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 8.2  | C            | 5,10,20                        | T110C825(1)060AS      | 4.0                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 10.0   | C            | 5,10,20                        | T110C106(1)060AS      | 5.0                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 12.0   | C            | 5,10,20                        | T110C126(1)060AS      | 5.0                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 15.0   | D            | 5,10,20                        | T110D156(1)060AS      | 4.0                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 18.0   | D            | 5,10,20                        | T110D186(1)060AS      | 5.0                                | 4   |   |             |              |              |                            |             |              |                         |  |
| 22.0   | D            | 5,10,20                        | T110D226(1)060AS      | 6.0                                | 4   |   |             |              |              |                            |             |              |                         |  |
| <b>75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C</b>          |              |                                |                       |                                    |   |   |             |              |              |                            |             |              |                         |  |
| 0.0047   | A            | 5,10,20                        | T110A472(1)075AS      | 0.3                                | 2   |   |             |              |              |                            |             |              |                         |  |
| 0.0056   | A            | 5,10,20                        | T110A562(1)075AS      | 0.3                                | 2   |   |             |              |              |                            |             |              |                         |  |
| 0.0068   | A            | 5,10,20                        | T110A682(1)075AS      | 0.3                                | 2   |   |             |              |              |                            |             |              |                         |  |
| 0.0082   | A            | 5,10,20                        | T110A822(1)075AS      | 0.3                                | 2   |   |             |              |              |                            |             |              |                         |  |
| 0.01   | A            | 5,10,20                        | T110A103(1)075AS      | 0.3                                | 2   |   |             |              |              |                            |             |              |                         |  |

(1) To complete T110 Series part number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.  
(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.  
**Bold Face** lines indicate popular part types and values.





**RATINGS & PART NUMBER REFERENCE**

| CAPACITANCE<br>μF  | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|--|--------------|--------------------------------|----------------------|------------------------------------|---|---|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|--|
|  |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |  |
|  |              |                                |                      |                                    |   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                  |  |
|  |              |                                |                      |                                    |   | M<br>(1.0)  | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |  |
| <b>75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C (Cont'd)</b> |              |                                |                      |                                    |   |   |            |             |              |                            |             |              |                  |  |
| 2.2  | B            | 20                             | T110B225M075AS       | 0.8                                | 4   | 2407  | 2647       | 2887        | 3127         | 6278                       | 7278        | 8278         | T212B225M075(2)S |  |
| 2.7  | B            | 5                              | T110B275J075AS       | 1.0                                | 4   | 5112  | 5312       | 5512        | 5712         | 6279                       | 7279        | 8279         | T212B275J075(2)S |  |
| 2.7  | B            | 10                             | T110B275K075AS       | 1.0                                | 4   | 2408  | 2648       | 2888        | 3128         | 6280                       | 7280        | 8280         | T212B275K075(2)S |  |
| 2.7  | B            | 20                             | T110B275M075AS       | 1.2                                | 4   |   |            |             |              |                            |             |              |                  |  |
| 3.3  | B            | 5                              | T110B335J075AS       | 1.2                                | 4   | 5113  | 5313       | 5513        | 5713         | 6281                       | 7281        | 8281         | T212B335J075(2)S |  |
| 3.3  | B            | 10                             | T110B335K075AS       | 1.2                                | 4   | 2409  | 2649       | 2889        | 3129         | 6282                       | 7282        | 8282         | T212B335K075(2)S |  |
| 3.3  | B            | 20                             | T110B335M075AS       | 1.2                                | 4   | 2410  | 2650       | 2890        | 3130         | 6283                       | 7283        | 8283         | T212B335M075(2)S |  |
| 3.9  | B            | 5                              | T110B395J075AS       | 1.5                                | 4   | 5114  | 5314       | 5514        | 5714         | 6284                       | 7284        | 8284         | T212B395J075(2)S |  |
| 3.9  | B            | 10                             | T110B395K075AS       | 1.5                                | 4   | 2411  | 2651       | 2891        | 3131         | 6285                       | 7285        | 8285         | T212B395K075(2)S |  |
| 3.9  | B            | 20                             | T110B395M075AS       | 1.5                                | 4   |   |            |             |              |                            |             |              |                  |  |
| 4.7  | C            | 5                              | T110C475J075AS       | 3.0                                | 4   | 5115  | 5315       | 5515        | 5715         | 6286                       | 7286        | 8286         | T212C475J075(2)S |  |
| 4.7  | C            | 10                             | T110C475K075AS       | 3.0                                | 4   | 2412  | 2652       | 2892        | 3132         | 6287                       | 7287        | 8287         | T212C475K075(2)S |  |
| 4.7  | C            | 20                             | T110C475M075AS       | 3.0                                | 4   | 2413  | 2653       | 2893        | 3133         | 6288                       | 7288        | 8288         | T212C475M075(2)S |  |
| 5.6  | C            | 5                              | T110C565J075AS       | 3.0                                | 4   | 5116  | 5316       | 5516        | 5716         | 6289                       | 7289        | 8289         | T212C565J075(2)S |  |
| 5.6  | C            | 10                             | T110C565K075AS       | 3.0                                | 4   | 2414  | 2654       | 2894        | 3134         | 6290                       | 7290        | 8290         | T212C565K075(2)S |  |
| 5.6  | C            | 20                             | T110C565M075AS       | 3.0                                | 4   |   |            |             |              |                            |             |              |                  |  |
| 6.8  | C            | 5                              | T110C685J075AS       | 5.0                                | 4   | 5117  | 5317       | 5517        | 5717         | 6291                       | 7291        | 8291         | T212C685J075(2)S |  |
| 6.8  | C            | 10                             | T110C685K075AS       | 5.0                                | 4   | 2415  | 2655       | 2895        | 3135         | 6292                       | 7292        | 8292         | T212C685K075(2)S |  |
| 6.8  | C            | 20                             | T110C685M075AS       | 5.0                                | 4   | 2416  | 2656       | 2896        | 3136         | 6293                       | 7293        | 8293         | T212C685M075(2)S |  |
| 8.2  | C            | 5                              | T110C825J075AS       | 5.0                                | 4   | 5118  | 5318       | 5518        | 5718         | 6294                       | 7294        | 8294         | T212C825J075(2)S |  |
| 8.2  | C            | 10                             | T110C825K075AS       | 5.0                                | 4   | 2417  | 2657       | 2897        | 3137         | 6295                       | 7295        | 8295         | T212C825K075(2)S |  |
| 8.2  | C            | 20                             | T110C825M075AS       | 5.0                                | 4   |   |            |             |              |                            |             |              |                  |  |
| 10.0   | C            | 5                              | T110C106J075AS       | 5.0                                | 4   | 5119  | 5319       | 5519        | 5719         | 6296                       | 7296        | 8296         | T212C106J075(2)S |  |
| 10.0   | C            | 10                             | T110C106K075AS       | 5.0                                | 4   | 2418  | 2658       | 2898        | 3138         | 6297                       | 7297        | 8297         | T212C106K075(2)S |  |
| 10.0   | C            | 20                             | T110C106M075AS       | 5.0                                | 4   | 2419  | 2659       | 2899        | 3139         | 6298                       | 7298        | 8298         | T212C106M075(2)S |  |
| 12.0   | D            | 5                              | T110D126J075AS       | 5.0                                | 4   | 5120  | 5320       | 5520        | 5720         | 6299                       | 7299        | 8299         | T212D126J075(2)S |  |
| 12.0   | D            | 10                             | T110D126K075AS       | 5.0                                | 4   | 2420  | 2660       | 2900        | 3140         | 6300                       | 7300        | 8300         | T212D126K075(2)S |  |
| 12.0   | D            | 20                             | T110D126M075AS       | 5.0                                | 4   |   |            |             |              |                            |             |              |                  |  |
| 15.0   | D            | 5                              | T110D156J075AS       | 7.0                                | 4   | 5121  | 5321       | 5521        | 5721         | 6301                       | 7301        | 8301         | T212D156J075(2)S |  |
| 15.0   | D            | 10                             | T110D156K075AS       | 7.0                                | 4   | 2421  | 2661       | 2901        | 3141         | 6302                       | 7302        | 8302         | T212D156K075(2)S |  |
| 15.0   | D            | 20                             | T110D156M075AS       | 7.0                                | 4   | 2422  | 2662       | 2902        | 3142         | 6303                       | 7303        | 8303         | T212D156M075(2)S |  |
| <b>100 VOLT RATING AT 85°C — 67 VOLT RATING AT 125°</b>          |              |                                |                      |                                    |   |   |            |             |              |                            |             |              |                  |  |
| 0.0047   | A            | 5                              | T110A472J100AS       | 0.3                                | 2   | 5122  | 5322       | 5522        | 5722         | 6304                       | 7304        | *            | T212A472J100(2)S |  |
| 0.0047   | A            | 10                             | T110A472K100AS       | 0.3                                | 2   | 2423  | 2663       | 2903        | 3143         | 6305                       | 7305        | *            | T212A472K100(2)S |  |
| 0.0047   | A            | 20                             | T110A472M100AS       | 0.3                                | 2   | 2424  | 2664       | 2904        | 3144         | 6306                       | 7306        | *            | T212A472M100(2)S |  |
| 0.0056   | A            | 5                              | T110A562J100AS       | 0.3                                | 2   | 5123  | 5323       | 5523        | 5723         | 6307                       | 7307        | *            | T212A562J100(2)S |  |
| 0.0056   | A            | 10                             | T110A562K100AS       | 0.3                                | 2   | 2425  | 2665       | 2905        | 3145         | 6308                       | 7308        | *            | T212A562K100(2)S |  |
| 0.0056   | A            | 20                             | T110A562M100AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |                  |  |
| 0.0068   | A            | 5                              | T110A682J100AS       | 0.3                                | 2   | 5124  | 5324       | 5524        | 5724         | 6309                       | 7309        | *            | T212A682J100(2)S |  |
| 0.0068   | A            | 10                             | T110A682K100AS       | 0.3                                | 2   | 2426  | 2666       | 2906        | 3146         | 6310                       | 7310        | *            | T212A682K100(2)S |  |
| 0.0068   | A            | 20                             | T110A682M100AS       | 0.3                                | 2   | 2427  | 2667       | 2907        | 3147         | 6311                       | 7311        | *            | T212A682M100(2)S |  |
| 0.0082   | A            | 5                              | T110A822J100AS       | 0.3                                | 2   | 5125  | 5325       | 5525        | 5725         | 6312                       | 7312        | *            | T212A822J100(2)S |  |
| 0.0082   | A            | 10                             | T110A822K100AS       | 0.3                                | 2   | 2428  | 2668       | 2908        | 3148         | 6313                       | 7313        | *            | T212A822K100(2)S |  |
| 0.0082   | A            | 20                             | T110A822M100AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |                  |  |
| 0.01   | A            | 5                              | T110A103J100AS       | 0.3                                | 2   | 5126  | 5326       | 5526        | 5726         | 6314                       | 7314        | *            | T212A103J100(2)S |  |
| 0.01   | A            | 10                             | T110A103K100AS       | 0.3                                | 2   | 2429  | 2669       | 2909        | 3149         | 6315                       | 7315        | *            | T212A103K100(2)S |  |
| 0.01   | A            | 20                             | T110A103M100AS       | 0.3                                | 2   | 2430  | 2670       | 2910        | 3150         | 6316                       | 7316        | *            | T212A103M100(2)S |  |
| 0.012  | A            | 5                              | T110A123J100AS       | 0.3                                | 2   | 5127  | 5327       | 5527        | 5727         | 6317                       | 7317        | *            | T212A123J100(2)S |  |
| 0.012  | A            | 10                             | T110A123K100AS       | 0.3                                | 2   | 2431  | 2671       | 2911        | 3151         | 6318                       | 7318        | *            | T212A123K100(2)S |  |
| 0.012  | A            | 20                             | T110A123M100AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |                  |  |
| 0.015  | A            | 5                              | T110A153J100AS       | 0.3                                | 2   | 5128  | 5328       | 5528        | 5728         | 6319                       | 7319        | *            | T212A153J100(2)S |  |
| 0.015  | A            | 10                             | T110A153K100AS       | 0.3                                | 2   | 2432  | 2672       | 2912        | 3152         | 6320                       | 7320        | *            | T212A153K100(2)S |  |
| 0.015  | A            | 20                             | T110A153M100AS       | 0.3                                | 2   | 2433  | 2673       | 2913        | 3153         | 6321                       | 7321        | *            | T212A153M100(2)S |  |
| 0.018  | A            | 5                              | T110A183J100AS       | 0.3                                | 2   | 5129  | 5329       | 5529        | 5729         | 6322                       | 7322        | *            | T212A183J100(2)S |  |
| 0.018  | A            | 10                             | T110A183K100AS       | 0.3                                | 2   | 2434  | 2674       | 2914        | 3154         | 6323                       | 7323        | *            | T212A183K100(2)S |  |
| 0.018  | A            | 20                             | T110A183M100AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |                  |  |
| 0.022  | A            | 5                              | T110A223J100AS       | 0.3                                | 2   | 5130  | 5330       | 5530        | 5730         | 6324                       | 7324        | *            | T212A223J100(2)S |  |
| 0.022  | A            | 10                             | T110A223K100AS       | 0.3                                | 2   | 2435  | 2675       | 2915        | 3155         | 6325                       | 7325        | *            | T212A223K100(2)S |  |

(1) To complete T110 Series part number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

\*Note: D Failure Rate — Not QPL for -8304 thru -8401.



RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>µF   | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    | MIL-PRF-39003 (CSR13) CAPACITORS                  |   |            |             |              |                            |             |              | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |  |
|---|--------------|--------------------------------|----------------------|------------------------------------|---|---|------------|-------------|--------------|----------------------------|-------------|--------------|--|--|
|   |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>µA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |  |  |
|   |              |                                |                      |                                    |   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |  |  |
|   |              |                                |                      |                                    |   | M<br>(1.0)  | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |  |  |
| <b>100 VOLT RATING AT 85°C — 67 VOLT RATING AT 125°C (Cont'd)</b> |              |                                |                      |                                    |   |   |            |             |              |                            |             |              |  |  |
| 0.022   | A            | 20                             | T110A223M100AS       | 0.3                                | 2   | 2436  | 2676       | 2916        | 3156         | 6326                       | 7326        | *            | T212A223M100(2)S                               |  |
| 0.027   | A            | 5                              | T110A273J100AS       | 0.3                                | 2   | 5131  | 5331       | 5531        | 5731         | 6327                       | 7327        | *            | T212A273J100(2)S                               |  |
| 0.027   | A            | 10                             | T110A273K100AS       | 0.3                                | 2   | 2437  | 2677       | 2917        | 3157         | 6328                       | 7328        | *            | T212A273K100(2)S                               |  |
| 0.027   | A            | 20                             | T110A273M100AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |  |  |
| 0.033   | A            | 5                              | T110A333J100AS       | 0.3                                | 2   | 5132  | 5332       | 5532        | 5732         | 6329                       | 7329        | *            | T212A333J100(2)S                               |  |
| 0.033   | A            | 10                             | T110A333K100AS       | 0.3                                | 2   | 2438  | 2678       | 2918        | 3158         | 6330                       | 7330        | *            | T212A333K100(2)S                               |  |
| 0.033   | A            | 20                             | T110A333M100AS       | 0.3                                | 2   | 2439  | 2679       | 2919        | 3159         | 6331                       | 7331        | *            | T212A333M100(2)S                               |  |
| 0.039   | A            | 5                              | T110A393J100AS       | 0.3                                | 2   | 5133  | 5333       | 5533        | 5733         | 6332                       | 7332        | *            | T212A393J100(2)S                               |  |
| 0.039   | A            | 10                             | T110A393K100AS       | 0.3                                | 2   | 2440  | 2680       | 2920        | 3160         | 6333                       | 7333        | *            | T212A393K100(2)S                               |  |
| 0.039   | A            | 20                             | T110A393M100AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |  |  |
| 0.047   | A            | 5                              | T110A473J100AS       | 0.3                                | 2   | 5134  | 5334       | 5534        | 5734         | 6334                       | 7334        | *            | T212A473J100(2)S                               |  |
| 0.047   | A            | 10                             | T110A473K100AS       | 0.3                                | 2   | 2441  | 2681       | 2921        | 3161         | 6335                       | 7335        | *            | T212A473K100(2)S                               |  |
| 0.047   | A            | 20                             | T110A473M100AS       | 0.3                                | 2   | 2442  | 2682       | 2922        | 3162         | 6336                       | 7336        | *            | T212A473M100(2)S                               |  |
| 0.056   | A            | 5                              | T110A563J100AS       | 0.3                                | 2   | 5135  | 5335       | 5535        | 5735         | 6337                       | 7337        | *            | T212A563J100(2)S                               |  |
| 0.056   | A            | 10                             | T110A563K100AS       | 0.3                                | 2   | 2443  | 2683       | 2923        | 3163         | 6338                       | 7338        | *            | T212A563K100(2)S                               |  |
| 0.056   | A            | 20                             | T110A563M100AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |  |  |
| 0.068   | A            | 5                              | T110A683J100AS       | 0.3                                | 2   | 5136  | 5336       | 5536        | 5736         | 6339                       | 7339        | *            | T212A683J100(2)S                               |  |
| 0.068   | A            | 10                             | T110A683K100AS       | 0.3                                | 2   | 2444  | 2684       | 2924        | 3164         | 6340                       | 7340        | *            | T212A683K100(2)S                               |  |
| 0.068   | A            | 20                             | T110A683M100AS       | 0.3                                | 2   | 2445  | 2685       | 2925        | 3165         | 6341                       | 7341        | *            | T212A683M100(2)S                               |  |
| 0.082   | A            | 5                              | T110A823J100AS       | 0.3                                | 2   | 5137  | 5337       | 5537        | 5737         | 6342                       | 7342        | *            | T212A823J100(2)S                               |  |
| 0.082   | A            | 10                             | T110A823K100AS       | 0.3                                | 2   | 2446  | 2686       | 2926        | 3166         | 6343                       | 7343        | *            | T212A823K100(2)S                               |  |
| 0.082   | A            | 20                             | T110A823M100AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |  |  |
| 0.1   | A            | 5                              | T110A104J100AS       | 0.3                                | 2   | 5138  | 5338       | 5538        | 5738         | 6344                       | 7344        | *            | T212A104J100(2)S                               |  |
| 0.1   | A            | 10                             | T110A104K100AS       | 0.3                                | 2   | 2447  | 2687       | 2927        | 3167         | 6345                       | 7345        | *            | T212A104K100(2)S                               |  |
| 0.1   | A            | 20                             | T110A104M100AS       | 0.3                                | 2   | 2448  | 2688       | 2928        | 3168         | 6346                       | 7346        | *            | T212A104M100(2)S                               |  |
| 0.12  | A            | 5                              | T110A124J100AS       | 0.3                                | 2   | 5139  | 5339       | 5539        | 5739         | 6347                       | 7347        | *            | T212A124J100(2)S                               |  |
| 0.12  | A            | 10                             | T110A124K100AS       | 0.3                                | 2   | 2449  | 2689       | 2929        | 3169         | 6348                       | 7348        | *            | T212A124K100(2)S                               |  |
| 0.12  | A            | 20                             | T110A124M100AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |  |  |
| 0.15  | A            | 5                              | T110A154J100AS       | 0.3                                | 2   | 5140  | 5340       | 5540        | 5740         | 6349                       | 7349        | *            | T212A154J100(2)S                               |  |
| 0.15  | A            | 10                             | T110A154K100AS       | 0.3                                | 2   | 2450  | 2690       | 2930        | 3170         | 6350                       | 7350        | *            | T212A154K100(2)S                               |  |
| 0.15  | A            | 20                             | T110A154M100AS       | 0.3                                | 2   | 2451  | 2691       | 2931        | 3171         | 6351                       | 7351        | *            | T212A154M100(2)S                               |  |
| 0.18  | A            | 5                              | T110A184J100AS       | 0.3                                | 2   | 5141  | 5341       | 5541        | 5741         | 6352                       | 7352        | *            | T212A184J100(2)S                               |  |
| 0.18  | A            | 10                             | T110A184K100AS       | 0.3                                | 2   | 2452  | 2692       | 2932        | 3172         | 6353                       | 7353        | *            | T212A184K100(2)S                               |  |
| 0.18  | A            | 20                             | T110A184M100AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |  |  |
| 0.22  | A            | 5                              | T110A224J100AS       | 0.3                                | 2   | 5142  | 5342       | 5542        | 5742         | 6354                       | 7354        | *            | T212A224J100(2)S                               |  |
| 0.22  | A            | 10                             | T110A224K100AS       | 0.3                                | 2   | 2453  | 2693       | 2933        | 3173         | 6355                       | 7355        | *            | T212A224K100(2)S                               |  |
| 0.22  | A            | 20                             | T110A224M100AS       | 0.3                                | 2   | 2454  | 2694       | 2934        | 3174         | 6356                       | 7356        | *            | T212A224M100(2)S                               |  |
| 0.27  | A            | 5                              | T110A274J100AS       | 0.3                                | 2   | 5143  | 5343       | 5543        | 5743         | 6357                       | 7357        | *            | T212A274J100(2)S                               |  |
| 0.27  | A            | 10                             | T110A274K100AS       | 0.3                                | 2   | 2455  | 2695       | 2935        | 3175         | 6358                       | 7358        | *            | T212A274K100(2)S                               |  |
| 0.27  | A            | 20                             | T110A274M100AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |  |  |
| 0.33  | A            | 5                              | T110A334J100AS       | 0.3                                | 2   | 5144  | 5344       | 5544        | 5744         | 6359                       | 7359        | *            | T212A334J100(2)S                               |  |
| 0.33  | A            | 10                             | T110A334K100AS       | 0.3                                | 2   | 2456  | 2696       | 2936        | 3176         | 6360                       | 7360        | *            | T212A334K100(2)S                               |  |
| 0.33  | A            | 20                             | T110A334M100AS       | 0.3                                | 2   | 2457  | 2697       | 2937        | 3177         | 6361                       | 7361        | *            | T212A334M100(2)S                               |  |
| 0.39  | A            | 5                              | T110A394J100AS       | 0.3                                | 2   | 5145  | 5345       | 5545        | 5745         | 6362                       | 7362        | *            | T212A394J100(2)S                               |  |
| 0.39  | A            | 10                             | T110A394K100AS       | 0.3                                | 2   | 2458  | 2698       | 2938        | 3178         | 6363                       | 7363        | *            | T212A394K100(2)S                               |  |
| 0.39  | A            | 20                             | T110A394M100AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |  |  |
| 0.47  | A            | 5                              | T110A474J100AS       | 0.3                                | 2   | 5146  | 5346       | 5546        | 5746         | 6364                       | 7364        | *            | T212A474J100(2)S                               |  |
| 0.47  | A            | 10                             | T110A474K100AS       | 0.3                                | 2   | 2459  | 2699       | 2939        | 3179         | 6365                       | 7365        | *            | T212A474K100(2)S                               |  |
| 0.47  | A            | 20                             | T110A474M100AS       | 0.3                                | 2   | 2460  | 2700       | 2940        | 3180         | 6366                       | 7366        | *            | T212A474M100(2)S                               |  |
| 0.56  | A            | 5                              | T110A564J100AS       | 0.3                                | 2   | 5147  | 5347       | 5547        | 5747         | 6367                       | 7367        | *            | T212A564J100(2)S                               |  |
| 0.56  | A            | 10                             | T110A564K100AS       | 0.3                                | 2   | 2461  | 2701       | 2941        | 3181         | 6368                       | 7368        | *            | T212A564K100(2)S                               |  |
| 0.56  | A            | 20                             | T110A564M100AS       | 0.3                                | 2   |   |            |             |              |                            |             |              |  |  |
| 0.68  | B            | 5                              | T110B684J100AS       | 0.3                                | 2   | 5148  | 5348       | 5548        | 5748         | 6369                       | 7369        | *            | T212B684J100(2)S                               |  |
| 0.68  | B            | 10                             | T110B684K100AS       | 0.3                                | 2   | 2462  | 2702       | 2942        | 3182         | 6370                       | 7370        | *            | T212B684K100(2)S                               |  |
| 0.68  | B            | 20                             | T110B684M100AS       | 0.3                                | 2   | 2463  | 2703       | 2943        | 3183         | 6371                       | 7371        | *            | T212B684M100(2)S                               |  |
| 0.82  | B            | 5                              | T110B824J100AS       | 0.4                                | 2   | 5149  | 5349       | 5549        | 5749         | 6372                       | 7372        | *            | T212B824J100(2)S                               |  |
| 0.82  | B            | 10                             | T110B824K100AS       | 0.4                                | 2   | 2464  | 2704       | 2944        | 3184         | 6373                       | 7373        | *            | T212B824K100(2)S                               |  |
| 0.82  | B            | 20                             | T110B824M100AS       | 0.4                                | 2   |   |            |             |              |                            |             |              |  |  |
| 1.0   | B            | 5                              | T110B105J100AS       | 0.5                                | 2   | 5150  | 5350       | 5550        | 5750         | 6374                       | 7374        | *            | T212B105J100(2)S                               |  |
| 1.0   | B            | 10                             | T110B105K100AS       | 0.5                                | 2   | 2465  | 2705       | 2945        | 3185         | 6375                       | 7375        | *            | T212B105K100(2)S                               |  |
| 1.0   | B            | 20                             | T110B105M100AS       | 0.5                                | 2   | 2466  | 2706       | 2946        | 3186         | 6376                       | 7376        | *            | T212B105M100(2)S                               |  |

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.  
 (2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.  
**Bold Face** lines indicate popular part types and values.  
 \*Note: D Failure Rate — Not QPL for -8304 thru -8401.

T110/T212 Series Tantalum  
Hermetically Sealed

**RATINGS & PART NUMBER REFERENCE**

| CAPACITANCE<br>µF   | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|---|--------------|--------------------------------|----------------------|------------------------------------|---|---|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|--|
|   |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>µA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |  |
|   |              |                                |                      |                                    |   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                  |  |
|   |              |                                |                      |                                    |   | M<br>(1.0)  | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |  |
| <b>100 VOLT RATING AT 85°C — 67 VOLT RATING AT 125°C (Cont'd)</b> |              |                                |                      |                                    |   |   |            |             |              |                            |             |              |                  |  |
| 1.2   | B            | 5                              | T110B125J100AS       | 0.5                                | 3   | 5151  | 5351       | 5551        | 5751         | 6377                       | 7377        | *            | T212B125J100(2)S |  |
| 1.2   | B            | 10                             | T110B125K100AS       | 0.5                                | 3   | 2467  | 2707       | 2947        | 3187         | 6378                       | 7378        | *            | T212B125K100(2)S |  |
| 1.2   | B            | 20                             | T110B125M100AS       | 0.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 1.5   | B            | 5                              | T110B155J100AS       | 0.7                                | 3   | 5152  | 5352       | 5552        | 5752         | 6379                       | 7379        | *            | T212B155J100(2)S |  |
| 1.5   | B            | 10                             | T110B155K100AS       | 0.7                                | 3   | 2468  | 2708       | 2948        | 3188         | 6380                       | 7380        | *            | T212B155K100(2)S |  |
| 1.5   | B            | 20                             | T110B155M100AS       | 0.7                                | 3   | 2469  | 2709       | 2949        | 3189         | 6381                       | 7381        | *            | T212B155M100(2)S |  |
| 1.8   | B            | 5                              | T110B185J100AS       | 0.7                                | 3   | 5153  | 5353       | 5553        | 5753         | 6382                       | 7382        | *            | T212B185J100(2)S |  |
| 1.8   | B            | 10                             | T110B185K100AS       | 0.7                                | 3   | 2470  | 2710       | 2950        | 3190         | 6383                       | 7383        | *            | T212B185K100(2)S |  |
| 1.8   | B            | 20                             | T110B185M100AS       | 0.7                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 2.2   | B            | 5                              | T110B225J100AS       | 0.9                                | 3   | 5154  | 5354       | 5554        | 5754         | 6384                       | 7384        | *            | T212B225J100(2)S |  |
| 2.2   | B            | 10                             | T110B225K100AS       | 0.9                                | 3   | 2471  | 2711       | 2951        | 3191         | 6385                       | 7385        | *            | T212B225K100(2)S |  |
| 2.2   | B            | 20                             | T110B225M100AS       | 0.9                                | 3   | 2472  | 2712       | 2952        | 3192         | 6386                       | 7386        | *            | T212B225M100(2)S |  |
| 2.7   | B            | 5                              | T110B275J100AS       | 1.1                                | 3   | 5155  | 5355       | 5555        | 5755         | 6387                       | 7387        | *            | T212B275J100(2)S |  |
| 2.7   | B            | 10                             | T110B275K100AS       | 1.1                                | 3   | 2473  | 2713       | 2953        | 3193         | 6388                       | 7388        | *            | T212B275K100(2)S |  |
| 2.7   | B            | 20                             | T110B275M100AS       | 1.1                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 3.3   | C            | 5                              | T110C335J100AS       | 1.5                                | 3   | 5156  | 5356       | 5556        | 5756         | 6389                       | *           | *            | T212C335J100(2)S |  |
| 3.3   | C            | 10                             | T110C335K100AS       | 1.5                                | 3   | 5157  | 5357       | 5557        | 5757         | 6390                       | *           | *            | T212C335K100(2)S |  |
| 3.3   | C            | 20                             | T110C335M100AS       | 1.5                                | 3   | 5158  | 5358       | 5558        | 5758         | 6391                       | *           | *            | T212C335M100(2)S |  |
| 3.9   | C            | 5                              | T110C395J100AS       | 1.5                                | 3   | 5159  | 5359       | 5559        | 5759         | 6392                       | *           | *            | T212C395J100(2)S |  |
| 3.9   | C            | 10                             | T110C395K100AS       | 1.5                                | 3   | 5160  | 5360       | 5560        | 5760         | 6393                       | *           | *            | T212C395K100(2)S |  |
| 4.7   | C            | 5                              | T110C475J100AS       | 2.5                                | 3   | 5161  | 5361       | 5561        | 5761         | 6394                       | *           | *            | T212C475J100(2)S |  |
| 4.7   | C            | 10                             | T110C475K100AS       | 2.5                                | 3   | 5162  | 5362       | 5562        | 5762         | 6395                       | *           | *            | T212C475K100(2)S |  |
| 4.7   | C            | 20                             | T110C475M100AS       | 2.5                                | 3   | 5163  | 5363       | 5563        | 5763         | 6396                       | *           | *            | T212C475M100(2)S |  |
| 5.6   | C            | 5                              | T110C565J100AS       | 2.5                                | 3   | 5164  | 5364       | 5564        | 5764         | 6397                       | *           | *            | T212C565J100(2)S |  |
| 5.6   | C            | 10                             | T110C565K100AS       | 2.5                                | 3   | 5165  | 5365       | 5565        | 5765         | 6398                       | *           | *            | T212C565K100(2)S |  |
| 6.8   | C            | 5                              | T110C685J100AS       | 2.5                                | 3   | 5166  | 5366       | 5566        | 5766         | 6399                       | *           | *            | T212C685J100(2)S |  |
| 6.8   | C            | 10                             | T110C685K100AS       | 2.5                                | 3   | 5167  | 5367       | 5567        | 5767         | 6400                       | *           | *            | T212C685K100(2)S |  |
| 6.8   | C            | 20                             | T110C685M100AS       | 2.5                                | 3   | 5168  | 5368       | 5568        | 5768         | 6401                       | *           | *            | T212C685M100(2)S |  |
| 8.2   | D            | 5,10,20                        | T110D825(1)100AS     | 5.0                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 10.0  | D            | 5,10,20                        | T110D106(1)100AS     | 5.0                                | 3   |   |            |             |              |                            |             |              |                  |  |
| <b>125 VOLT RATING AT 85°C — 82 VOLT RATING AT 125°</b>           |              |                                |                      |                                    |   |   |            |             |              |                            |             |              |                  |  |
| 0.0047  | A            | 5,10,20                        | T110A472(1)125AS     | 0.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.0056  | A            | 5,10,20                        | T110A562(1)125AS     | 0.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.0068  | A            | 5,10,20                        | T110A682(1)125AS     | 0.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.0082  | A            | 5,10,20                        | T110A822(1)125AS     | 0.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.01  | A            | 5,10,20                        | T110A103(1)125AS     | 0.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.012   | A            | 5,10,20                        | T110A123(1)125AS     | 0.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.015   | A            | 5,10,20                        | T110A153(1)125AS     | 0.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.018   | A            | 5,10,20                        | T110A183(1)125AS     | 0.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.022   | A            | 5,10,20                        | T110A223(1)125AS     | 0.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.027   | A            | 5,10,20                        | T110A273(1)125AS     | 0.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.033   | A            | 5,10,20                        | T110A333(1)125AS     | 0.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.039   | A            | 5,10,20                        | T110A393(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.047   | A            | 5,10,20                        | T110A473(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.056   | A            | 5,10,20                        | T110A563(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.068   | A            | 5,10,20                        | T110A683(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.082   | A            | 5,10,20                        | T110A823(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.1   | A            | 5,10,20                        | T110A104(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.12  | A            | 5,10,20                        | T110A124(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.15  | A            | 5,10,20                        | T110A154(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.18  | A            | 5,10,20                        | T110A184(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.22  | A            | 5,10,20                        | T110A224(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.27  | A            | 5,10,20                        | T110A274(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.33  | A            | 5,10,20                        | T110A334(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.39  | B            | 5,10,20                        | T110B394(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.47  | B            | 5,10,20                        | T110B474(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.56  | B            | 5,10,20                        | T110B564(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.68  | B            | 5,10,20                        | T110B684(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |
| 0.82  | B            | 5,10,20                        | T110B824(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |                  |  |

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

\*Note: C failure rate — Not QPL for 7389 thru 7401.

D failure rate — Not QPL for -8304 thru -8401.



RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF  | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|--|--------------|--------------------------------|----------------------|------------------------------------|---|---|------------|-------------|--------------|----------------------------|-------------|--------------|--|
|  |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |  |
|  |              |                                |                      |                                    |   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |  |
|  |              |                                |                      |                                    |   | M<br>(1.0)  | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |  |
| <b>125 VOLT RATING AT 85°C — 82 VOLT RATING AT 125°C</b> |              |                                |                      |                                    |   |   |            |             |              |                            |             |              |  |
| 1.0  | B            | 5,10,20                        | T110B105(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |  |
| 1.2  | B            | 5,10,20                        | T110B125(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |  |
| 1.5  | B            | 5,10,20                        | T110B155(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |  |
| 1.8  | B            | 5,10,20                        | T110B185(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |  |
| 2.2  | B            | 5,10,20                        | T110B225(1)125AS     | 1.5                                | 3   |   |            |             |              |                            |             |              |  |
| 2.7  | C            | 5,10,20                        | T110C275(1)125AS     | 2.0                                | 3   |   |            |             |              |                            |             |              |  |
| 3.3  | C            | 5,10,20                        | T110C335(1)125AS     | 2.0                                | 3   |   |            |             |              |                            |             |              |  |
| 3.9  | C            | 5,10,20                        | T110C395(1)125AS     | 2.0                                | 3   |   |            |             |              |                            |             |              |  |
| 4.7  | C            | 5,10,20                        | T110C475(1)125AS     | 3.0                                | 3   |   |            |             |              |                            |             |              |  |
| 5.6  | C            | 5,10,20                        | T110C565(1)125AS     | 3.0                                | 3   |   |            |             |              |                            |             |              |  |
| 6.8  | C            | 5,10,20                        | T110C685(1)125AS     | 3.0                                | 3   |   |            |             |              |                            |             |              |  |
| 8.2  | D            | 5,10,20                        | T110D825(1)125AS     | 6.0                                | 3   |   |            |             |              |                            |             |              |  |
| 10.0   | D            | 5,10,20                        | T110D106(1)125AS     | 6.0                                | 3   |   |            |             |              |                            |             |              |  |

- (1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.  
 (2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.  
**Bold Face** lines indicate popular part types and values.

T110/T212 Series Tantalum  
Hermetically Sealed

**T110/T140 Herm Seal ESR (OHMS) at 100 kHz @ +25°C**  
 (The ESR values provided below are for reference only. No warranty, as stated on page 3 and reincorporated here, is made as to the accuracy of these values for any particular T110/T140 Series product.)

**T110 Herm Seal LOW ESR (OHMS) at 100 kHz @ +25°C**  
 The ESR values provided below may be ordered using  
 KEMET Customer Specification 2864.

| Cap<br>μF | 6<br>Volt | 10<br>Volt | 15<br>Volt | 20<br>Volt | 30<br>Volt | 35<br>Volt | 50<br>Volt | 60<br>Volt | 75<br>Volt | 100<br>Volt | 125<br>Volt |
|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|
| 0.10      |           |            |            | 37.0       |            | 26.0       | 26.0       | 26.0       | 26.0       | 25.0        | 25.0        |
| 0.12      |           |            |            | 37.0       |            | 26.0       | 26.0       | 26.0       | 26.0       | 25.0        | 25.0        |
| 0.15      |           |            |            | 32.0       |            | 21.0       | 21.0       | 21.0       | 21.0       | 20.0        | 20.0        |
| 0.18      |           |            |            | 32.0       |            | 21.0       | 21.0       | 21.0       | 21.0       | 20.0        | 20.0        |
| 0.22      |           |            |            | 27.0       |            | 17.0       | 17.0       | 17.0       | 17.0       | 16.0        | 16.0        |
| 0.27      |           |            |            | 25.0       |            | 17.0       | 17.0       | 17.0       | 17.0       | 16.0        | 16.0        |
| 0.33      |           |            | 28.0       | 22.0       |            | 15.0       | 15.0       | 15.0       | 15.0       | 14.0        | 14.0        |
| 0.39      |           |            | 28.0       | 22.0       |            | 15.0       | 15.0       | 15.0       | 15.0       | 14.0        | 14.0        |
| 0.47      |           |            | 26.0       | 20.0       |            | 13.0       | 13.0       | 13.0       | 13.0       | 12.0        | 12.0        |
| 0.56      |           |            | 26.0       | 18.0       |            | 13.0       | 13.0       | 13.0       | 13.0       | 12.0        | 12.0        |
| 0.68      |           |            | 24.0       | 16.0       |            | 10.0       | 10.0       | 10.0       | 10.0       | 9.0         | 9.0         |
| 0.82      |           |            | 24.0       | 16.0       |            | 10.0       | 10.0       | 10.0       | 10.0       | 9.0         | 9.0         |
| 1.0       | 20.0      | 17.0       | 10.0       |            |            | 8.0        | 8.0        | 8.0        | 8.0        | 7.0         | 7.0         |
| 1.2       | 20.0      | 17.0       | 10.0       |            | 9.0        | 8.0        | 8.0        | 8.0        | 8.0        | 7.0         | 7.0         |
| 1.5       | 14.0      | 10.0       | 9.0        | 8.0        |            | 6.0        | 5.0        | 5.0        | 5.0        | 4.0         | 4.0         |
| 1.8       | 14.0      | 10.0       | 9.0        | 8.0        | 6.0        | 5.0        | 5.0        | 5.0        | 5.0        | 4.0         | 4.0         |
| 2.2       | 14.0      | 13.0       | 8.0        | 7.0        | 6.0        | 5.0        | 3.5        | 3.5        | 3.5        | 3.0         | 3.0         |
| 2.7       | 14.0      | 13.0       | 8.0        | 7.0        | 6.0        | 5.0        | 3.5        | 3.5        | 3.5        | 3.0         | 3.0         |
| 3.3       | 13.0      | 10.0       | 6.0        | 5.5        |            | 4.0        | 3.0        | 3.0        | 3.0        | 2.5         | 2.5         |
| 3.9       | 13.0      | 10.0       | 6.0        | 5.5        |            | 4.0        | 3.0        | 3.0        | 3.0        | 2.5         | 2.5         |
| 4.7       | 10.0      | 8.0        | 5.0        | 4.5        |            | 3.0        | 2.5        | 2.5        | 2.5        | 2.0         | 2.0         |
| 5.6       | 10.0      | 8.0        | 5.0        | 4.5        |            | 3.0        | 2.5        | 2.5        | 2.5        | 2.0         | 2.0         |
| 6.8       | 8.0       | 6.0        | 4.0        | 3.6        |            | 2.5        | 2.0        | 2.0        | 2.0        | 1.5         | 1.5         |
| 8.2       | 8.0       | 6.0        | 4.0        | 3.6        |            | 2.5        | 2.0        | 2.0        | 2.0        | 1.5         | 1.5         |
| 10.0      | 6.0       | 5.0        | 3.2        | 2.9        |            | 2.0        | 1.6        | 1.6        | 1.6        | 1.0         | 1.0         |
| 12.0      | 6.0       | 5.0        | 3.2        | 2.9        | 2.5        | 2.0        | 1.6        | 1.6        | 1.6        |             |             |
| 15.0      | 5.0       | 3.7        | 2.5        | 2.3        | 2.0        | 1.6        | 1.2        | 1.2        | 1.2        |             |             |
| 18.0      | 5.0       | 3.7        | 2.5        | 2.3        | 2.0        | 1.6        | 1.2        | 1.2        | 1.2        |             |             |
| 22.0      | 3.7       | 2.7        | 2.0        | 1.8        |            | 1.3        | 1.0        | 1.0        |            |             |             |
| 27.0      | 3.7       | 2.7        | 2.0        | 1.8        |            | 1.3        | 1.0        | 1.0        |            |             |             |
| 33.0      | 3.0       | 2.1        | 1.6        | 1.4        | 1.2        | 1.0        | 0.8        | 0.8        |            |             |             |
| 39.0      | 3.0       | 2.1        | 1.6        | 1.4        | 1.2        | 1.0        | 0.8        |            |            |             |             |
| 47.0      | 2.0       | 1.7        | 1.3        | 1.2        | 1.0        | 0.8        | 0.6        |            |            |             |             |
| 56.0      | 2.0       | 1.7        | 1.3        | 1.2        | 1.0        | 0.8        |            |            |            |             |             |
| 68.0      | 1.8       | 1.3        | 1.0        | 0.9        | 0.8        | 0.6        |            |            |            |             |             |
| 82.0      | 1.8       | 1.3        | 1.0        | 0.9        | 0.8        | 0.6        |            |            |            |             |             |
| 100.0     | 1.6       | 1.0        | 0.8        | 0.6        | 0.5        |            |            |            |            |             |             |
| 120.0     | 1.6       | 1.0        | 0.8        | 0.6        |            |            |            |            |            |             |             |
| 150.0     | 0.9       | 0.8        | 0.6        | 0.5        |            |            |            |            |            |             |             |
| 180.0     | 0.9       | 0.8        | 0.6        | 0.5        |            |            |            |            |            |             |             |
| 220.0     | 0.9       | 0.6        | 0.5        |            |            |            |            |            |            |             |             |
| 270.0     | 0.9       | 0.6        | 0.5        |            |            |            |            |            |            |             |             |
| 330.0     | 0.7       | 0.5        | 0.4        |            |            |            |            |            |            |             |             |
| 390.0     | 0.7       | 0.5        |            |            |            |            |            |            |            |             |             |
| 470.0     | 0.5       | 0.5        |            |            |            |            |            |            |            |             |             |
| 560.0     | 0.5       | 0.5        |            |            |            |            |            |            |            |             |             |
| 680.0     | 0.3       |            |            |            |            |            |            |            |            |             |             |
| 820.0     | 0.3       |            |            |            |            |            |            |            |            |             |             |
| 1000.0    | 0.12      |            |            |            |            |            |            |            |            |             |             |
| 1200.0    | 0.12      |            |            |            |            |            |            |            |            |             |             |

| Cap<br>μF | 6<br>Volt | 10<br>Volt | 15<br>Volt | 20<br>Volt | 35<br>Volt | 50<br>Volt |
|-----------|-----------|------------|------------|------------|------------|------------|
| 5.6       |           |            |            |            |            | 0.300      |
| 6.8       |           |            |            |            |            | 0.275      |
| 8.2       |           |            |            |            | 0.250      | 0.250      |
| 10.0      |           |            |            |            | 0.230      | 0.230      |
| 12.0      |           |            |            |            | 0.210      | 0.210      |
| 15.0      |           |            |            |            | 0.190      | 0.190      |
| 18.0      |           |            |            |            | 0.175      | 0.175      |
| 22.0      |           |            |            |            | 0.160      | 0.160      |
| 27.0      |           |            |            | 0.145      | 0.145      |            |
| 33.0      |           |            |            | 0.130      | 0.130      |            |
| 39.0      |           |            |            | 0.120      | 0.120      |            |
| 47.0      |           |            |            | 0.110      | 0.110      |            |
| 56.0      |           |            | 0.100      | 0.100      |            |            |
| 68.0      |           |            | 0.095      | 0.095      |            |            |
| 82.0      |           | 0.085      | 0.085      | 0.085      |            |            |
| 100.0     |           | 0.075      | 0.075      | 0.075      |            |            |
| 120.0     |           | 0.070      | 0.070      |            |            |            |
| 150.0     | 0.065     | 0.065      |            |            |            |            |
| 180.0     | 0.060     | 0.060      |            |            |            |            |
| 220.0     | 0.055     | 0.055      |            |            |            |            |
| 270.0     | 0.050     |            |            |            |            |            |
| 330.0     | 0.045     |            |            |            |            |            |

Primarily designed for use in tuned low frequency circuits, phasing low voltage AC motors, servo systems and other applications where reversal of polarity is a primary consideration. The T111 unit consists of two polar T110 Series hermetically sealed tantalum capacitors, electrically and mechanically connected back-to-back and supported by an outer

corrosion-resistant metal sleeve. They exhibit comparable electrical and performance characteristics of T110 Series. Available in capacitance values ranging from .0023 to 160  $\mu\text{F}$  in  $\pm 20\%$ ,  $\pm 10\%$ , and  $\pm 5\%$  tolerances in working voltages from 6 to 100 VDC at  $+85^\circ\text{C}$ . Also, the following table includes M39003/4 QPL Product.

### DIMENSIONS — INCHES & (MILLIMETERS)

| CASE SIZE | B<br>$\pm 0.002 (\pm .05)$ | UNINSULATED                |                            | INSULATED                                  |                            | C<br>MAX.     |
|-----------|----------------------------|----------------------------|----------------------------|--|----------------------------|---------------|
|           |                            | D<br>$\pm 0.010 (\pm .25)$ | L<br>$\pm 0.031 (\pm .79)$ | D<br>$\pm 0.010 (+.25)$<br>$-0.015 (-.38)$ | L<br>$\pm 0.031 (\pm .79)$ |               |
| A         | 0.020 (.51)                | 0.147 (3.73)               | 0.565 (14.35)              | 0.161 (4.09)                               | 0.575 (14.61)              | 0.750 (19.05) |
| B         | 0.020 (.51)                | 0.194 (4.93)               | 0.916 (23.27)              | 0.207 (5.26)                               | 0.955 (24.26)              | 1.130 (28.70) |
| C         | 0.025 (.64)                | 0.300 (7.62)               | 1.340 (34.04)              | 0.314 (7.98)                               | 1.350 (34.29)              | 1.525 (38.74) |
| D         | 0.025 (.64)                | 0.362 (9.19)               | 1.540 (39.12)              | 0.376 (9.55)                               | 1.550 (39.37)              | 1.725 (43.82) |

### MARKING INFORMATION\* A, B, C & D CASES

|                   |  |
|-------------------|--|
| K 10%             | — Manufacturer's Classification and Tolerance                    |
| 6R0 $\mu\text{F}$ | — Normal Capacitance — ( $\mu\text{F}$ ) ("R" indicates decimal) |
| 20V               | — Voltage  |
| 0325AB            | — Date Code and Batch Code                                       |

### CAPACITOR OUTLINE DRAWINGS



\* For Military Marking, see page 4.

### RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>$\mu\text{F}$                           | CASE SIZE | CAPACITANCE TOLERANCE<br>$\pm\%$ | KEMET T111 SERIES |  |   | MIL-PRF-39003 (CSR91) CAPACITORS                       |      |      |      |                         |      |      | KEMET EQUIVALENT MILITARY PART NUMBER |
|--|-----------|----------------------------------|-------------------|--|---|--|------|------|------|-------------------------|------|------|---------------------------------------|
|  |           |                                  | KEMET PART NUMBER | D.C. LEAKAGE<br>$\mu\text{A}@25^\circ\text{C}$<br>MAX. | MAX. DISSIPATION FACTOR<br>$\%@25^\circ\text{C}$ ,<br>120Hz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) |      |      |      | MIL-PRF-39003/4C GRADED |      |      |                                       |
|  |           |                                  |                   |  |   | MIL-PRF-39003/4C EXPONENTIAL                           |      |      |      | M                       | P    | R    |                                       |
| <b>6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C</b>  |           |                                  |                   |  |   |  |      |      |      |                         |      |      |                                       |
| 2.8  | A         | 10                               | T111A285K006AS    | 0.3  | 4   | 0221   | 0441 | 0661 | 0881 | 3001                    | 4001 | 5001 | T213A285K006(1)S                      |
| 3.4  | A         | 10                               | T111A345K006AS    | 0.3  | 6   | 0222   | 0442 | 0662 | 0882 | 3002                    | 4002 | 5002 | T213A345K006(1)S                      |
| 3.4  | A         | 20                               | T111A345M006AS    | 0.3  | 6   | 0223   | 0443 | 0663 | 0883 | 3003                    | 4003 | 5003 | T213A345M006(1)S                      |
| 23.0   | B         | 10                               | T111B236K006AS    | 1.5  | 6   | 0224   | 0444 | 0664 | 0884 | 3004                    | 4004 | 5004 | T213B236K006(1)S                      |
| 23.0   | B         | 20                               | T111B236M006AS    | 1.5  | 6   | 0225   | 0445 | 0665 | 0885 | 3005                    | 4005 | 5005 | T213B236M006(1)S                      |
| 28.0   | B         | 10                               | T111B286K006AS    | 1.5  | 6   | 0226   | 0446 | 0666 | 0886 | 3006                    | 4006 | 5006 | T213B286K006(1)S                      |
| 75.0   | C         | 10                               | T111C756K006AS    | 4.5  | 6   | 0227   | 0447 | 0667 | 0887 | 3007                    | 4007 | 5007 | T213C756K006(1)S                      |
| 75.0   | C         | 20                               | T111C756M006AS    | 4.5  | 6   | 0228   | 0448 | 0668 | 0888 | 3008                    | 4008 | 5008 | T213C756M006(1)S                      |
| 90.0   | C         | 10                               | T111C906K006AS    | 4.5  | 6   | 0229   | 0449 | 0669 | 0889 | 3009                    | 4009 | 5009 | T213C906K006(1)S                      |
| 90.0   | C         | 20                               | T111C906M006AS    | 5.5  | 6   | 0230   | 0450 | 0670 | 0890 |                         |      |      | T213C906M006(1)S                      |
| 130.0  | D         | 10                               | T111D137K006AS    | 6.0  | 8   | 0231   | 0451 | 0671 | 0891 | 3010                    | 4010 | 5010 | T213D137K006(1)S                      |
| 130.0  | D         | 20                               | T111D137M006AS    | 6.0  | 8   | 0232   | 0452 | 0672 | 0892 |                         |      |      | T213D137M006(1)S                      |
| 160.0  | D         | 10                               | T111D167K006AS    | 7.5  | 8   | 0233   | 0453 | 0673 | 0893 | 3011                    | 4011 | 5011 | T213D167K006(1)S                      |
| 160.0  | D         | 20                               | T111D167M006AS    | 7.5  | 8   | 0234   | 0454 | 0674 | 0894 | 3012                    | 4012 | 5012 | T213D167M006(1)S                      |
| <b>10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C</b> |           |                                  |                   |  |   |  |      |      |      |                         |      |      |                                       |
| 1.9  | A         | 10                               | T111A195K010AS    | 0.3  | 4   | 0235   | 0455 | 0675 | 0895 | 3013                    | 4013 | 5013 | T213A195K010(1)S                      |
| 2.3  | A         | 10                               | T111A235K010AS    | 0.4  | 4   | 0236   | 0456 | 0676 | 0896 | 3014                    | 4014 | 5014 | T213A235K010(1)S                      |
| 2.3  | A         | 20                               | T111A235M010AS    | 0.4  | 4   | 0237   | 0457 | 0677 | 0897 | 3015                    | 4015 | 5015 | T213A235M010(1)S                      |
| 13.0   | B         | 10                               | T111B136K010AS    | 2.0  | 6   | 0238   | 0458 | 0678 | 0898 | 3016                    | 4016 | 5016 | T213B136K010(1)S                      |
| 16.0   | B         | 10                               | T111B166K010AS    | 2.0  | 6   | 0239   | 0459 | 0679 | 0899 | 3017                    | 4017 | 5017 | T213B166K010(1)S                      |
| 16.0   | B         | 20                               | T111B166M010AS    | 2.0  | 6   | 0240   | 0460 | 0680 | 0900 | 3018                    | 4018 | 5018 | T213B166M010(1)S                      |
| 19.0   | B         | 10                               | T111B196K010AS    | 2.0  | 6   | 0241   | 0461 | 0681 | 0901 | 3019                    | 4019 | 5019 | T213B196K010(1)S                      |
| 41.0   | C         | 10                               | T111C416K010AS    | 3.0  | 6   | 0242   | 0462 | 0682 | 0902 | 3020                    | 4020 | 5020 | T213C416K010(1)S                      |
| 50.0   | C         | 10                               | T111C506K010AS    | 5.0  | 6   | 0243   | 0463 | 0683 | 0903 | 3021                    | 4021 | 5021 | T213C506K010(1)S                      |
| 50.0   | C         | 20                               | T111C506M010AS    | 5.0  | 6   | 0244   | 0464 | 0684 | 0904 | 3022                    | 4022 | 5022 | T213C506M010(1)S                      |
| 60.0   | C         | 10                               | T111C606K010AS    | 6.0  | 6   | 0245   | 0465 | 0685 | 0905 | 3023                    | 4023 | 5023 | T213C606K010(1)S                      |
| 60.0   | C         | 20                               | T111C606M010AS    | 6.0  | 6   | 0246   | 0466 | 0686 | 0906 |                         |      |      | T213C606M010(1)S                      |
| 90.0   | D         | 10                               | T111D906K010AS    | 9.0  | 6   | 0247   | 0467 | 0687 | 0907 | 3024                    | 4024 | 5024 | T213D906K010(1)S                      |
| 110.0  | D         | 10                               | T111D117K010AS    | 10.0   | 8   | 0248   | 0468 | 0688 | 0908 | 3025                    | 4025 | 5025 | T213D117K010(1)S                      |
| 110.0  | D         | 20                               | T111D117M010AS    | 10.0   | 8   | 0249   | 0469 | 0689 | 0909 | 3026                    | 4026 | 5026 | T213D117M010(1)S                      |

(1) To complete T213 Series Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 6.

\*For ordering information see page 4 (military) and page 6.



RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>µF                                       | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T111 SERIES    |                                    |   | MIL-PRF-39003 (CSR91) CAPACITORS                          |            |              |              |                            |             |              |                  |  |
|---|--------------|--------------------------------|----------------------|------------------------------------|---|---|------------|--------------|--------------|----------------------------|-------------|--------------|------------------|--|
|   |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>µA@25°C<br>MAX. | MAX.<br>DISS-<br>PATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |              |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|   |              |                                |                      |                                    |   | MIL-PRF-39003/4C<br>EXPONENTIAL                           |            |              |              | MIL-PRF-39003/4C<br>GRADED |             |              |                  |  |
|   |              |                                |                      |                                    |   | M<br>(1.0)  | P<br>(0.1) | R<br>(0.001) | S<br>(0.001) | (B<br>0.1)                 | (C<br>0.01) | (D<br>0.001) |                  |  |
| <b>15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C</b> |              |                                |                      |                                    |   |   |            |              |              |                            |             |              |                  |  |
| 1.3   | A            | 10                             | T111A135K015AS       | 0.3                                | 4   | 0250  | 0470       | 0690         | 0910         | 3027                       | 4027        | 5027         | T213A135K015(1)S |  |
| 1.6   | A            | 10                             | T111A165K015AS       | 0.4                                | 4   | 0251  | 0471       | 0691         | 0911         | 3028                       | 4028        | 5028         | T213A165K015(1)S |  |
| 1.6   | A            | 20                             | T111A165M015AS       | 0.4                                | 4   | 0252  | 0472       | 0692         | 0912         | 3029                       | 4029        | 5029         | T213A165M015(1)S |  |
| 9.0   | B            | 10                             | T111B905K015AS       | 2.0                                | 6   | 0253  | 0473       | 0693         | 0913         | 3030                       | 4030        | 5030         | T213B905K015(1)S |  |
| 11.0  | B            | 10                             | T111B116K015AS       | 2.0                                | 6   | 0254  | 0474       | 0694         | 0914         | 3031                       | 4031        | 5031         | T213B116K015(1)S |  |
| 11.0  | B            | 20                             | T111B116M015AS       | 2.0                                | 6   | 0255  | 0475       | 0695         | 0915         | 3032                       | 4032        | 5032         | T213B116M015(1)S |  |
| 28.0  | C            | 10                             | T111C286K015AS       | 4.0                                | 6   | 0256  | 0476       | 0696         | 0916         | 3033                       | 4033        | 5033         | T213C286K015(1)S |  |
| 34.0  | C            | 10                             | T111C346K015AS       | 5.0                                | 6   | 0257  | 0477       | 0697         | 0917         | 3034                       | 4034        | 5034         | T213C346K015(1)S |  |
| 34.0  | C            | 20                             | T111C346M015AS       | 5.0                                | 6   | 0258  | 0478       | 0698         | 0918         | 3035                       | 4035        | 5035         | T213C346M015(1)S |  |
| 60.0  | D            | 10                             | T111D606K015AS       | 6.0                                | 6   | 0259  | 0479       | 0699         | 0919         | 3036                       | 4036        | 5036         | T213D606K015(1)S |  |
| 75.0  | D            | 10                             | T111D756K015AS       | 10.0                               | 6   | 0260  | 0480       | 0700         | 0920         | 3037                       | 4037        | 5037         | T213D756K015(1)S |  |
| 75.0  | D            | 20                             | T111D756M015AS       | 10.0                               | 6   | 0261  | 0481       | 0701         | 0921         | 3038                       | 4038        | 5038         | T213D756M015(1)S |  |
| <b>20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C</b> |              |                                |                      |                                    |   |   |            |              |              |                            |             |              |                  |  |
| 0.6   | A            | 10                             | T111A604K020AS       | 0.3                                | 4   | 0262  | 0482       | 0702         | 0922         | 3039                       | 4039        | 5039         | T213A604K020(1)S |  |
| 0.75  | A            | 10                             | T111A754K020AS       | 0.3                                | 4   | 0263  | 0483       | 0703         | 0923         | 3040                       | 4040        | 5040         | T213A754K020(1)S |  |
| 0.75  | A            | 20                             | T111A754M020AS       | 0.3                                | 4   | 0264  | 0484       | 0704         | 0924         | 3041                       | 4041        | 5041         | T213A754M020(1)S |  |
| 0.9   | A            | 10                             | T111A904K020AS       | 0.3                                | 4   | 0265  | 0485       | 0705         | 0925         | 3042                       | 4042        | 5042         | T213A904K020(1)S |  |
| 1.1   | A            | 10                             | T111A115K020AS       | 0.4                                | 4   | 0266  | 0486       | 0706         | 0926         | 3043                       | 4043        | 5043         | T213A115K020(1)S |  |
| 1.1   | A            | 20                             | T111A115M020AS       | 0.4                                | 4   | 0267  | 0487       | 0707         | 0927         | 3044                       | 4044        | 5044         | T213A115M020(1)S |  |
| 4.1   | B            | 10                             | T111B415K020AS       | 1.0                                | 6   | 0268  | 0488       | 0708         | 0928         | 3045                       | 4045        | 5045         | T213B415K020(1)S |  |
| 5.0   | B            | 10                             | T111B505K020AS       | 1.0                                | 6   | 0269  | 0489       | 0709         | 0929         | 3046                       | 4046        | 5046         | T213B505K020(1)S |  |
| 5.0   | B            | 20                             | T111B505M020AS       | 1.0                                | 6   | 0270  | 0490       | 0710         | 0930         | 3047                       | 4047        | 5047         | T213B505M020(1)S |  |
| 6.0   | B            | 10                             | T111B605K020AS       | 1.0                                | 6   | 0271  | 0491       | 0711         | 0931         | 3048                       | 4048        | 5048         | T213B605K020(1)S |  |
| 7.5   | B            | 10                             | T111B755K020AS       | 2.0                                | 6   | 0272  | 0492       | 0712         | 0932         | 3049                       | 4049        | 5049         | T213B755K020(1)S |  |
| 7.5   | B            | 20                             | T111B755M020AS       | 2.0                                | 6   | 0273  | 0493       | 0713         | 0933         | 3050                       | 4050        | 5050         | T213B755M020(1)S |  |
| 13.0  | C            | 10                             | T111C136K020AS       | 2.5                                | 6   | 0274  | 0494       | 0714         | 0934         | 3051                       | 4051        | 5051         | T213C136K020(1)S |  |
| 16.0  | C            | 10                             | T111C166K020AS       | 3.0                                | 6   | 0275  | 0495       | 0715         | 0935         | 3052                       | 4052        | 5052         | T213C166K020(1)S |  |
| 16.0  | C            | 20                             | T111C166M020AS       | 3.0                                | 6   | 0276  | 0496       | 0716         | 0936         | 3053                       | 4053        | 5053         | T213C166M020(1)S |  |
| 19.0  | C            | 10                             | T111C196K020AS       | 3.0                                | 6   | 0277  | 0497       | 0717         | 0937         | 3054                       | 4054        | 5054         | T213C196K020(1)S |  |
| 23.0  | C            | 10                             | T111C236K020AS       | 4.5                                | 6   | 0278  | 0498       | 0718         | 0938         | 3055                       | 4055        | 5055         | T213C236K020(1)S |  |
| 23.0  | C            | 20                             | T111C236M020AS       | 4.5                                | 6   | 0279  | 0499       | 0719         | 0939         | 3056                       | 4056        | 5056         | T213C236M020(1)S |  |
| 28.0  | D            | 10                             | T111D286K020AS       | 5.5                                | 6   | 0280  | 0500       | 0720         | 0940         | 3057                       | 4057        | 5057         | T213D286K020(1)S |  |
| 34.0  | D            | 10                             | T111D346K020AS       | 6.0                                | 6   | 0281  | 0501       | 0721         | 0941         | 3058                       | 4058        | 5058         | T213D346K020(1)S |  |
| 34.0  | D            | 20                             | T111D346M020AS       | 6.0                                | 6   | 0282  | 0502       | 0722         | 0942         | 3059                       | 4059        | 5059         | T213D346M020(1)S |  |
| 41.0  | D            | 10                             | T111D416K020AS       | 6.0                                | 6   | 0283  | 0503       | 0723         | 0943         | 3060                       | 4060        | 5060         | T213D416K020(1)S |  |
| 50.0  | D            | 10                             | T111D506K020AS       | 10.0                               | 6   | 0284  | 0504       | 0724         | 0944         | 3061                       | 4061        | 5061         | T213D506K020(1)S |  |
| 50.0  | D            | 20                             | T111D506M020AS       | 10.0                               | 6   | 0285  | 0505       | 0725         | 0945         | 3062                       | 4062        | 5062         | T213D506M020(1)S |  |
| <b>35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C</b> |              |                                |                      |                                    |   |   |            |              |              |                            |             |              |                  |  |
| 2.8   | B            | 10                             | T111B285K035AS       | 1.0                                | 4   | 0289  | 0509       | 0729         | 0949         | 3063                       | 4063        | 5063         | T213B285K035(1)S |  |
| 3.4   | B            | 10                             | T111B345K035AS       | 1.5                                | 4   | 0290  | 0510       | 0730         | 0950         | 3064                       | 4064        | 5064         | T213B345K035(1)S |  |
| 3.4   | B            | 20                             | T111B345M035AS       | 1.5                                | 4   | 0291  | 0511       | 0731         | 0951         | 3065                       | 4065        | 5065         | T213B345M035(1)S |  |
| 11.0  | C            | 10                             | T111C116K035AS       | 4.0                                | 4   | 0292  | 0512       | 0732         | 0952         | 3066                       | 4066        | 5066         | T213C116K035(1)S |  |
| 11.0  | C            | 20                             | T111C116M035AS       | 4.0                                | 4   | 0293  | 0513       | 0733         | 0953         | 3067                       | 4067        | 5067         | T213C116M035(1)S |  |
| 13.0  | D            | 10                             | T111D136K035AS       | 4.5                                | 4   | 0294  | 0514       | 0734         | 0954         | 3068                       | 4068        | 5068         | T213D136K035(1)S |  |
| 16.0  | D            | 10                             | T111D166K035AS       | 5.5                                | 4   | 0295  | 0515       | 0735         | 0955         | 3069                       | 4069        | 5069         | T213D166K035(1)S |  |
| 16.0  | D            | 20                             | T111D166M035AS       | 5.5                                | 4   | 0296  | 0516       | 0736         | 0956         | 3070                       | 4070        | 5070         | T213D166M035(1)S |  |
| 19.0  | D            | 10                             | T111D196K035AS       | 6.0                                | 4   | 0297  | 0517       | 0737         | 0957         | 3071                       | 4071        | 5071         | T213D196K035(1)S |  |
| 23.0  | D            | 10                             | T111D236K035AS       | 8.0                                | 4   | 0298  | 0518       | 0738         | 0958         | 3072                       | 4072        | 5072         | T213D236K035(1)S |  |
| 23.0  | D            | 20                             | T111D236M035AS       | 8.0                                | 4   | 0299  | 0519       | 0739         | 0959         | 3073                       | 4073        | 5073         | T213D236M035(1)S |  |
| <b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C</b> |              |                                |                      |                                    |   |   |            |              |              |                            |             |              |                  |  |
| 0.0023  | A            | 10                             | T111A232K050AS       | 0.1                                | 2   | 1171  | 1241       | 1311         | 1381         | 3074                       | 4074        | 5074         | T213A232K050(1)S |  |
| 0.0023  | A            | 20                             | T111A232M050AS       | 0.1                                | 2   | 1172  | 1242       | 1312         | 1382         | 3075                       | 4075        | 5075         | T213A232M050(1)S |  |
| 0.0028  | A            | 10                             | T111A282K050AS       | 0.1                                | 2   | 1173  | 1243       | 1313         | 1383         | 3076                       | 4076        | 5076         | T213A282K050(1)S |  |
| 0.0034  | A            | 10                             | T111A342K050AS       | 0.1                                | 2   | 1174  | 1244       | 1314         | 1384         | 3077                       | 4077        | 5077         | T213A342K050(1)S |  |
| 0.0034  | A            | 20                             | T111A342M050AS       | 0.1                                | 2   | 1175  | 1245       | 1315         | 1385         | 3078                       | 4078        | 5078         | T213A342M050(1)S |  |
| 0.0041  | A            | 10                             | T111A412K050AS       | 0.1                                | 2   | 1176  | 1246       | 1316         | 1386         | 3079                       | 4079        | 5079         | T213A412K050(1)S |  |
| 0.005   | A            | 10                             | T111A502K050AS       | 0.1                                | 2   | 1177  | 1247       | 1317         | 1387         | 3080                       | 4080        | 5080         | T213A502K050(1)S |  |
| 0.005   | A            | 20                             | T111A502M050AS       | 0.1                                | 2   | 1178  | 1248       | 1318         | 1388         | 3081                       | 4081        | 5081         | T213A502M050(1)S |  |
| 0.006   | A            | 10                             | T111A602K050AS       | 0.1                                | 2   | 1179  | 1249       | 1319         | 1389         | 3082                       | 4082        | 5082         | T213A602K050(1)S |  |
| 0.0075  | A            | 10                             | T111A752K050AS       | 0.1                                | 2   | 1180  | 1250       | 1320         | 1390         | 3083                       | 4083        | 5083         | T213A752K050(1)S |  |
| 0.0075  | A            | 20                             | T111A752M050AS       | 0.1                                | 2   | 1181  | 1251       | 1321         | 1391         | 3084                       | 4084        | 5084         | T213A752M050(1)S |  |
| 0.009   | A            | 10                             | T111A902K050AS       | 0.1                                | 2   | 1182  | 1252       | 1322         | 1392         | 3085                       | 4085        | 5085         | T213A902K050(1)S |  |
| 0.011   | A            | 10                             | T111A113K050AS       | 0.1                                | 2   | 1183  | 1253       | 1323         | 1393         | 3086                       | 4086        | 5086         | T213A113K050(1)S |  |
| 0.011   | A            | 20                             | T111A113M050AS       | 0.1                                | 2   | 1184  | 1254       | 1324         | 1394         | 3087                       | 4087        | 5087         | T213A113M050(1)S |  |
| 0.013   | A            | 10                             | T111A133K050AS       | 0.1                                | 2   | 1185  | 1255       | 1325         | 1395         | 3088                       | 4088        | 5088         | T213A133K050(1)S |  |
| 0.016   | A            | 10                             | T111A163K050AS       | 0.1                                | 2   | 1186  | 1256       | 1326         | 1396         | 3089                       | 4089        | 5089         | T213A163K050(1)S |  |

(1) To complete T213 Series Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 6.

T111/T213 Series Tantalum  
Hermetically Sealed



**RATINGS & PART NUMBER REFERENCE**

| CAPACITANCE<br>μF  | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T111 SERIES    |                                    |  | MIL-PRF-39003 (CSR91) CAPACITORS                          |            |             |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|--|--------------|--------------------------------|----------------------|------------------------------------|--|---|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|--|
|  |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSI-<br>PATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |  |
|  |              |                                |                      |                                    |  | MIL-PRF-39003/4C<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/4C<br>GRADED |             |              |                  |  |
|  |              |                                |                      |                                    |  | M<br>(1.0)  | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |  |
| <b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C (Cont'd)</b> |              |                                |                      |                                    |  |   |            |             |              |                            |             |              |                  |  |
| 0.016  | A            | 20                             | T111A163M050AS       | 0.1                                | 2  | 1187  | 1257       | 1327        | 1397         | 3090                       | 4090        | 5090         | T213A163M050(1)S |  |
| 0.019  | A            | 10                             | T111A193K050AS       | 0.1                                | 2  | 1188  | 1258       | 1328        | 1398         | 3091                       | 4091        | 5091         | T213A193K050(1)S |  |
| 0.023  | A            | 10                             | T111A233K050AS       | 0.1                                | 2  | 1189  | 1259       | 1329        | 1399         | 3092                       | 4092        | 5092         | T213A233K050(1)S |  |
| 0.023  | A            | 20                             | T111A233M050AS       | 0.1                                | 2  | 1190  | 1260       | 1330        | 1400         | 3093                       | 4093        | 5093         | T213A233M050(1)S |  |
| 0.028  | A            | 10                             | T111A283K050AS       | 0.1                                | 2  | 1191  | 1261       | 1331        | 1401         | 3094                       | 4094        | 5094         | T213A283K050(1)S |  |
| 0.034  | A            | 10                             | T111A343K050AS       | 0.1                                | 2  | 1192  | 1262       | 1332        | 1402         | 3095                       | 4095        | 5095         | T213A343K050(1)S |  |
| 0.034  | A            | 20                             | T111A343M050AS       | 0.1                                | 2  | 1193  | 1263       | 1333        | 1403         | 3096                       | 4096        | 5096         | T213A343M050(1)S |  |
| 0.041  | A            | 10                             | T111A413K050AS       | 0.1                                | 2  | 1194  | 1264       | 1334        | 1404         | 3097                       | 4097        | 5097         | T213A413K050(1)S |  |
| 0.05   | A            | 10                             | T111A503K050AS       | 0.3                                | 2  | 1195  | 1265       | 1335        | 1405         | 3098                       | 4098        | 5098         | T213A503K050(1)S |  |
| 0.05   | A            | 20                             | T111A503M050AS       | 0.3                                | 2  | 1196  | 1266       | 1336        | 1406         | 3099                       | 4099        | 5099         | T213A503M050(1)S |  |
| 0.06   | A            | 10                             | T111A603K050AS       | 0.3                                | 2  | 1197  | 1267       | 1337        | 1407         | 3100                       | 4100        | 5100         | T213A603K050(1)S |  |
| 0.075  | A            | 10                             | T111A753K050AS       | 0.3                                | 2  | 1198  | 1268       | 1338        | 1408         | 3101                       | 4101        | 5101         | T213A753K050(1)S |  |
| 0.075  | A            | 20                             | T111A753M050AS       | 0.3                                | 2  | 1199  | 1269       | 1339        | 1409         | 3102                       | 4102        | 5102         | T213A753M050(1)S |  |
| 0.09   | A            | 10                             | T111A903K050AS       | 0.3                                | 2  | 1200  | 1270       | 1340        | 1410         | 3103                       | 4103        | 5103         | T213A903K050(1)S |  |
| 0.11   | A            | 10                             | T111A114K050AS       | 0.3                                | 2  | 1201  | 1271       | 1341        | 1411         | 3104                       | 4104        | 5104         | T213A114K050(1)S |  |
| 0.11   | A            | 20                             | T111A114M050AS       | 0.3                                | 2  | 1202  | 1272       | 1342        | 1412         | 3105                       | 4105        | 5105         | T213A114M050(1)S |  |
| 0.13   | A            | 10                             | T111A134K050AS       | 0.3                                | 2  | 1203  | 1273       | 1343        | 1413         | 3106                       | 4106        | 5106         | T213A134K050(1)S |  |
| 0.16   | A            | 10                             | T111A164K050AS       | 0.3                                | 2  | 1204  | 1274       | 1344        | 1414         | 3107                       | 4107        | 5107         | T213A164K050(1)S |  |
| 0.16   | A            | 20                             | T111A164M050AS       | 0.3                                | 2  | 1205  | 1275       | 1345        | 1415         | 3108                       | 4108        | 5108         | T213A164M050(1)S |  |
| 0.19   | A            | 10                             | T111A194K050AS       | 0.3                                | 2  | 1206  | 1276       | 1346        | 1416         | 3109                       | 4109        | 5109         | T213A194K050(1)S |  |
| 0.23   | A            | 10                             | T111A234K050AS       | 0.3                                | 2  | 1207  | 1277       | 1347        | 1417         | 3110                       | 4110        | 5110         | T213A234K050(1)S |  |
| 0.23   | A            | 20                             | T111A234M050AS       | 0.3                                | 2  | 1208  | 1278       | 1348        | 1418         | 3111                       | 4111        | 5111         | T213A234M050(1)S |  |
| 0.28   | A            | 10                             | T111A284K050AS       | 0.3                                | 2  | 1209  | 1279       | 1349        | 1419         | 3112                       | 4112        | 5112         | T213A284K050(1)S |  |
| 0.34   | A            | 10                             | T111A344K050AS       | 0.3                                | 2  | 1210  | 1280       | 1350        | 1420         | 3113                       | 4113        | 5113         | T213A344K050(1)S |  |
| 0.34   | A            | 20                             | T111A344M050AS       | 0.3                                | 2  | 1211  | 1281       | 1351        | 1421         | 3114                       | 4114        | 5114         | T213A344M050(1)S |  |
| 0.41   | A            | 10                             | T111A414K050AS       | 0.3                                | 2  | 0300  | 0520       | 0740        | 0960         | 3115                       | 4115        | 5115         | T213A414K050(1)S |  |
| 0.5  | A            | 10                             | T111A504K050AS       | 0.4                                | 2  | 0301  | 0521       | 0741        | 0961         | 3116                       | 4116        | 5116         | T213A504K050(1)S |  |
| 0.5  | A            | 20                             | T111A504M050AS       | 0.4                                | 2  | 0302  | 0522       | 0742        | 0962         | 3117                       | 4117        | 5117         | T213A504M050(1)S |  |
| 0.6  | B            | 10                             | T111B604K050AS       | 0.4                                | 4  | 1212  | 1282       | 1352        | 1422         | 3118                       | 4118        | 5118         | T213B604K050(1)S |  |
| 0.6  | B            | 20                             | T111B604M050AS       | 0.4                                | 4  |   |            |             |              |                            |             |              |                  |  |
| 0.75   | B            | 10                             | T111B754K050AS       | 0.5                                | 4  | 2001  | 2101       | 2201        | 2301         | 3119                       | 4119        | 5119         | T213B754K050(1)S |  |
| 0.75   | B            | 20                             | T111B754M050AS       | 0.5                                | 4  | 2002  | 2102       | 2202        | 2302         | 3120                       | 4120        | 5120         | T213B754M050(1)S |  |
| 0.9  | B            | 10                             | T111B904K050AS       | 0.5                                | 4  | 1215  | 1285       | 1355        | 1425         | 3121                       | 4121        | 5121         | T213B904K050(1)S |  |
| 0.9  | B            | 20                             | T111B904M050AS       | 0.5                                | 4  |   |            |             |              |                            |             |              |                  |  |
| 1.1  | B            | 10                             | T111B115K050AS       | 0.8                                | 4  | 1216  | 1286       | 1356        | 1426         | 3122                       | 4122        | 5122         | T213B115K050(1)S |  |
| 1.1  | B            | 20                             | T111B115M050AS       | 0.8                                | 4  | 1217  | 1287       | 1357        | 1427         | 3123                       | 4123        | 5123         | T213B115M050(1)S |  |
| 1.3  | B            | 10                             | T111B135K050AS       | 1.0                                | 4  | 1218  | 1288       | 1358        | 1428         | 3124                       | 4124        | 5124         | T213B135K050(1)S |  |
| 1.3  | B            | 20                             | T111B135M050AS       | 1.0                                | 4  |   |            |             |              |                            |             |              |                  |  |
| 1.6  | B            | 10                             | T111B165K050AS       | 1.2                                | 4  | 1219  | 1289       | 1359        | 1429         | 3125                       | 4125        | 5125         | T213B165K050(1)S |  |
| 1.6  | B            | 20                             | T111B165M050AS       | 1.2                                | 4  | 1220  | 1290       | 1360        | 1430         | 3126                       | 4126        | 5126         | T213B165M050(1)S |  |
| 1.9  | B            | 10                             | T111B195K050AS       | 1.5                                | 4  | 1221  | 1291       | 1361        | 1431         | 3127                       | 4127        | 5127         | T213B195K050(1)S |  |
| 1.9  | B            | 20                             | T111B195M050AS       | 1.5                                | 4  |   |            |             |              |                            |             |              |                  |  |
| 2.3  | B            | 10                             | T111B235K050AS       | 1.7                                | 4  | 1222  | 1292       | 1362        | 1432         | 3128                       | 4128        | 5128         | T213B235K050(1)S |  |
| 2.3  | B            | 20                             | T111B235M050AS       | 1.7                                | 4  | 1223  | 1293       | 1363        | 1433         | 3129                       | 4129        | 5129         | T213B235M050(1)S |  |
| 2.8  | C            | 10                             | T111C285K050AS       | 2.2                                | 4  | 1224  | 1294       | 1364        | 1434         | 3130                       | 4130        | 5130         | T213C285K050(1)S |  |
| 2.8  | C            | 20                             | T111C285M050AS       | 2.2                                | 4  |   |            |             |              |                            |             |              |                  |  |
| 3.4  | C            | 10                             | T111C345K050AS       | 2.2                                | 4  | 1225  | 1295       | 1365        | 1435         | 3131                       | 4131        | 5131         | T213C345K050(1)S |  |
| 3.4  | C            | 20                             | T111C345M050AS       | 2.2                                | 4  | 1226  | 1296       | 1366        | 1436         | 3132                       | 4132        | 5132         | T213C345M050(1)S |  |
| 4.1  | C            | 10                             | T111C415K050AS       | 2.5                                | 4  | 1227  | 1297       | 1367        | 1437         | 3133                       | 4133        | 5133         | T213C415K050(1)S |  |
| 4.1  | C            | 20                             | T111C415M050AS       | 2.5                                | 4  |   |            |             |              |                            |             |              |                  |  |
| 5.0  | C            | 10                             | T111C505K050AS       | 2.5                                | 4  | 1228  | 1298       | 1368        | 1438         | 3134                       | 4134        | 5134         | T213C505K050(1)S |  |
| 5.0  | C            | 20                             | T111C505M050AS       | 2.5                                | 4  | 1229  | 1299       | 1369        | 1439         | 3135                       | 4135        | 5135         | T213C505M050(1)S |  |
| 6.0  | C            | 10                             | T111C605K050AS       | 3.0                                | 4  | 0303  | 0523       | 0743        | 0963         | 3136                       | 4136        | 5136         | T213C605K050(1)S |  |
| 6.0  | C            | 20                             | T111C605M050AS       | 3.0                                | 4  |   |            |             |              |                            |             |              |                  |  |
| 7.5  | C            | 10                             | T111C755K050AS       | 4.1                                | 4  | 0304  | 0524       | 0744        | 0964         | 3137                       | 4137        | 5137         | T213C755K050(1)S |  |
| 7.5  | C            | 20                             | T111C755M050AS       | 4.1                                | 4  | 0305  | 0525       | 0745        | 0965         | 3138                       | 4138        | 5138         | T213C755M050(1)S |  |
| 9.0  | C            | 10                             | T111C905K050AS       | 4.5                                | 4  | 0306  | 0526       | 0746        | 0966         | 3139                       | 4139        | 5139         | T213C905K050(1)S |  |
| 9.0  | C            | 20                             | T111C905M050AS       | 4.5                                | 4  |   |            |             |              |                            |             |              |                  |  |
| 11.0   | D            | 10                             | T111D116K050AS       | 5.5                                | 4  | 0307  | 0527       | 0747        | 0967         | 3140                       | 4140        | 5140         | T213D116K050(1)S |  |
| 11.0   | D            | 20                             | T111D116M050AS       | 5.5                                | 4  | 0308  | 0528       | 0748        | 0968         | 3141                       | 4141        | 5141         | T213D116M050(1)S |  |
| <b>75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C</b>          |              |                                |                      |                                    |  |   |            |             |              |                            |             |              |                  |  |
| 0.34   | A            | 10                             | T111A344K075AS       | 0.3                                | 2  | 0309  | 0529       | 0749        | 0969         | 3142                       | 4142        | 5142         | T213A344K075(1)S |  |
| 0.34   | A            | 20                             | T111A344M075AS       | 0.3                                | 2  | 0310  | 0530       | 0750        | 0970         | 3143                       | 4143        | 5143         | T213A344M075(1)S |  |
| 0.41   | B            | 10                             | T111B414K075AS       | 0.3                                | 2  | 2008  | 2108       | 2208        | 2308         | 3144                       | 4144        | 5144         | T213B414K075(1)S |  |
| 0.5  | B            | 10                             | T111B504K075AS       | 0.4                                | 2  | 2009  | 2109       | 2209        | 2309         | 3145                       | 4145        | 5145         | T213B504K075(1)S |  |
| 0.5  | B            | 20                             | T111B504M075AS       | 0.4                                | 2  | 2010  | 2110       | 2210        | 2310         | 3146                       | 4146        | 5146         | T213B504M075(1)S |  |
| 0.6  | B            | 10                             | T111B604K075AS       | 0.4                                | 4  | 2011  | 2111       | 2211        | 2311         | 3147                       | 4147        | 5147         | T213B604K075(1)S |  |
| 0.75   | B            | 10                             | T111B754K075AS       | 0.6                                | 4  | 2012  | 2112       | 2212        | 2312         | 3148                       | 4148        | 5148         | T213B754K075(1)S |  |
| 0.75   | B            | 20                             | T111B754M075AS       | 0.6                                | 4  | 2013  | 2113       | 2213        | 2313         | 3149                       | 4149        | 5149         | T213B754M075(1)S |  |

(1) To complete T213 Series Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 6.



RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>µF  | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T111 SERIES    |                                    |   | MIL-PRF-39003 (CSR91) CAPACITORS                          |            |             |              |                            |             |              |                  |  |  |
|--|--------------|--------------------------------|----------------------|------------------------------------|---|---|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|--|--|
|  |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>µA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|  |              |                                |                      |                                    |   | MIL-PRF-39003/4C<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/4C<br>GRADED |             |              |                  |  |  |
|  |              |                                |                      |                                    |   | M<br>(1.0)  | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | (B<br>1)                   | (C<br>0.01) | (D<br>0.001) |                  |  |  |
| <b>75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C (Cont'd)</b> |              |                                |                      |                                    |   |   |            |             |              |                            |             |              |                  |  |  |
| 0.9  | B            | 10                             | T111B904K075AS       | 0.7                                | 4   | 2014  | 2114       | 2214        | 2314         | 3150                       | 4150        | 5150         | T213B904K075(1)S |  |  |
| 1.1  | B            | 10                             | T111B115K075AS       | 0.8                                | 4   | 2015  | 2115       | 2215        | 2315         | 3151                       | 4151        | 5151         | T213B115K075(1)S |  |  |
| 1.1  | B            | 20                             | T111B115M075AS       | 0.8                                | 4   | 2016  | 2116       | 2216        | 2316         | 3152                       | 4152        | 5152         | T213B115M075(1)S |  |  |
| 1.3  | B            | 10                             | T111B135K075AS       | 1.0                                | 4   | 2017  | 2117       | 2217        | 2317         | 3153                       | 4153        | 5153         | T213B135K075(1)S |  |  |
| 1.6  | B            | 10                             | T111B165K075AS       | 1.2                                | 4   | 0311  | 0531       | 0751        | 0971         | 3154                       | 4154        | 5154         | T213B165K075(1)S |  |  |
| 1.6  | B            | 20                             | T111B165M075AS       | 1.2                                | 4   | 0312  | 0532       | 0752        | 0972         | 3155                       | 4155        | 5155         | T213B165M075(1)S |  |  |
| 1.9  | B            | 10                             | T111B195K075AS       | 1.5                                | 4   | 0313  | 0533       | 0753        | 0973         | 3156                       | 4156        | 5156         | T213B195K075(1)S |  |  |
| 2.3  | C            | 10                             | T111C235K075AS       | 3.0                                | 4   | 2003  | 2103       | 2203        | 2303         | 3157                       | 4157        | 5157         | T213C235K075(1)S |  |  |
| 2.3  | C            | 20                             | T111C235M075AS       | 3.0                                | 4   | 2004  | 2104       | 2204        | 2304         | 3158                       | 4158        | 5158         | T213C235M075(1)S |  |  |
| 2.8  | C            | 10                             | T111C285K075AS       | 3.0                                | 4   | 2005  | 2105       | 2205        | 2305         | 3159                       | 4159        | 5159         | T213C285K075(1)S |  |  |
| 3.4  | C            | 10                             | T111C345K075AS       | 5.0                                | 4   | 2006  | 2106       | 2206        | 2306         | 3160                       | 4160        | 5160         | T213C345K075(1)S |  |  |
| 3.4  | C            | 20                             | T111C345M075AS       | 5.0                                | 4   | 2007  | 2107       | 2207        | 2307         | 3161                       | 4161        | 5161         | T213C345M075(1)S |  |  |
| 4.1  | C            | 10                             | T111C415K075AS       | 5.0                                | 4   | 0314  | 0534       | 0754        | 0974         | 3162                       | 4162        | 5162         | T213C415K075(1)S |  |  |
| 5.0  | C            | 10                             | T111C505K075AS       | 5.0                                | 4   | 0315  | 0535       | 0755        | 0975         | 3163                       | 4163        | 5163         | T213C505K075(1)S |  |  |
| 5.0  | C            | 20                             | T111C505M075AS       | 5.0                                | 4   | 0316  | 0536       | 0756        | 0976         | 3164                       | 4164        | 5164         | T213C505M075(1)S |  |  |
| 6.0  | D            | 10                             | T111D605K075AS       | 5.0                                | 4   | 0317  | 0537       | 0757        | 0977         | 3165                       | 4165        | 5165         | T213D605K075(1)S |  |  |
| 7.5  | D            | 10                             | T111D755K075AS       | 7.0                                | 4   | 0318  | 0538       | 0758        | 0978         | 3166                       | 4166        | 5166         | T213D755K075(1)S |  |  |
| 7.5  | D            | 20                             | T111D755M075AS       | 7.0                                | 4   | 0319  | 0539       | 0759        | 0979         | 3167                       | 4167        | 5167         | T213D755M075(1)S |  |  |
| <b>100 VOLT RATING AT 85°C — 67 VOLT RATING AT 125°C</b>         |              |                                |                      |                                    |   |   |            |             |              |                            |             |              |                  |  |  |
| 0.0023   | A            | 10                             | T111A232K100AS       | 0.3                                | 2   | 0320  | 0540       | 0760        | 0980         | 3168                       | 4168        | *            | T213A232K100(1)S |  |  |
| 0.0023   | A            | 20                             | T111A232M100AS       | 0.3                                | 2   | 0321  | 0541       | 0761        | 0981         | 3169                       | 4169        | *            | T213A232M100(1)S |  |  |
| 0.0028   | A            | 10                             | T111A282K100AS       | 0.3                                | 2   | 0322  | 0542       | 0762        | 0982         | 3170                       | 4170        | *            | T213A282K100(1)S |  |  |
| 0.0034   | A            | 10                             | T111A342K100AS       | 0.3                                | 2   | 0323  | 0543       | 0763        | 0983         | 3171                       | 4171        | *            | T213A342K100(1)S |  |  |
| 0.0034   | A            | 20                             | T111A342M100AS       | 0.3                                | 2   | 0324  | 0544       | 0764        | 0984         | 3172                       | 4172        | *            | T213A342M100(1)S |  |  |
| 0.0041   | A            | 10                             | T111A412K100AS       | 0.3                                | 2   | 0325  | 0545       | 0765        | 0985         | 3173                       | 4173        | *            | T213A412K100(1)S |  |  |
| 0.005  | A            | 10                             | T111A502K100AS       | 0.3                                | 2   | 0326  | 0546       | 0766        | 0986         | 3174                       | 4174        | *            | T213A502K100(1)S |  |  |
| 0.005  | A            | 20                             | T111A502M100AS       | 0.3                                | 2   | 0327  | 0547       | 0767        | 0987         | 3175                       | 4175        | *            | T213A502M100(1)S |  |  |
| 0.006  | A            | 10                             | T111A602K100AS       | 0.3                                | 2   | 0328  | 0548       | 0768        | 0988         | 3176                       | 4176        | *            | T213A602K100(1)S |  |  |
| 0.0075   | A            | 10                             | T111A752K100AS       | 0.3                                | 2   | 0329  | 0549       | 0769        | 0989         | 3177                       | 4177        | *            | T213A752K100(1)S |  |  |
| 0.0075   | A            | 20                             | T111A752M100AS       | 0.3                                | 2   | 0330  | 0550       | 0770        | 0990         | 3178                       | 4178        | *            | T213A752M100(1)S |  |  |
| 0.009  | A            | 10                             | T111A902K100AS       | 0.3                                | 2   | 0331  | 0551       | 0771        | 0991         | 3179                       | 4179        | *            | T213A902K100(1)S |  |  |
| 0.011  | A            | 10                             | T111A113K100AS       | 0.3                                | 2   | 0332  | 0552       | 0772        | 0992         | 3180                       | 4180        | *            | T213A113K100(1)S |  |  |
| 0.011  | A            | 20                             | T111A113M100AS       | 0.3                                | 2   | 0333  | 0553       | 0773        | 0993         | 3181                       | 4181        | *            | T213A113M100(1)S |  |  |
| 0.013  | A            | 10                             | T111A133K100AS       | 0.3                                | 2   | 0334  | 0554       | 0774        | 0994         | 3182                       | 4182        | *            | T213A133K100(1)S |  |  |
| 0.016  | A            | 10                             | T111A163K100AS       | 0.3                                | 2   | 0335  | 0555       | 0775        | 0995         | 3183                       | 4183        | *            | T213A163K100(1)S |  |  |
| 0.016  | A            | 20                             | T111A163M100AS       | 0.3                                | 2   | 0336  | 0556       | 0776        | 0996         | 3184                       | 4184        | *            | T213A163M100(1)S |  |  |
| 0.019  | A            | 10                             | T111A193K100AS       | 0.3                                | 2   | 0337  | 0557       | 0777        | 0997         | 3185                       | 4185        | *            | T213A193K100(1)S |  |  |
| 0.023  | A            | 10                             | T111A233K100AS       | 0.3                                | 2   | 0338  | 0558       | 0778        | 0998         | 3186                       | 4186        | *            | T213A233K100(1)S |  |  |
| 0.023  | A            | 20                             | T111A233M100AS       | 0.3                                | 2   | 0339  | 0559       | 0779        | 0999         | 3187                       | 4187        | *            | T213A233M100(1)S |  |  |
| 0.028  | A            | 10                             | T111A283K100AS       | 0.3                                | 2   | 0340  | 0560       | 0780        | 1000         | 3188                       | 4188        | *            | T213A283K100(1)S |  |  |
| 0.034  | A            | 10                             | T111A343K100AS       | 0.3                                | 2   | 0341  | 0561       | 0781        | 1001         | 3189                       | 4189        | *            | T213A343K100(1)S |  |  |
| 0.034  | A            | 20                             | T111A343M100AS       | 0.3                                | 2   | 0342  | 0562       | 0782        | 1002         | 3190                       | 4190        | *            | T213A343M100(1)S |  |  |
| 0.041  | A            | 10                             | T111A413K100AS       | 0.3                                | 2   | 0343  | 0563       | 0783        | 1003         | 3191                       | 4191        | *            | T213A413K100(1)S |  |  |
| 0.05   | A            | 10                             | T111A503K100AS       | 0.3                                | 2   | 0344  | 0564       | 0784        | 1004         | 3192                       | 4192        | *            | T213A503K100(1)S |  |  |
| 0.05   | A            | 20                             | T111A503M100AS       | 0.3                                | 2   | 0345  | 0565       | 0785        | 1005         | 3193                       | 4193        | *            | T213A503M100(1)S |  |  |
| 0.06   | A            | 10                             | T111A603K100AS       | 0.3                                | 2   | 0346  | 0566       | 0786        | 1006         | 3194                       | 4194        | *            | T213A603K100(1)S |  |  |
| 0.075  | A            | 10                             | T111A753K100AS       | 0.3                                | 2   | 0347  | 0567       | 0787        | 1007         | 3195                       | 4195        | *            | T213A753K100(1)S |  |  |
| 0.075  | A            | 20                             | T111A753M100AS       | 0.3                                | 2   | 0348  | 0568       | 0788        | 1008         | 3196                       | 4196        | *            | T213A753M100(1)S |  |  |
| 0.09   | A            | 10                             | T111A903K100AS       | 0.3                                | 2   | 0349  | 0569       | 0789        | 1009         | 3197                       | 4197        | *            | T213A903K100(1)S |  |  |
| 0.11   | A            | 10                             | T111A114K100AS       | 0.3                                | 2   | 0350  | 0570       | 0790        | 1010         | 3198                       | 4198        | *            | T213A114K100(1)S |  |  |
| 0.11   | A            | 20                             | T111A114M100AS       | 0.3                                | 2   | 0351  | 0571       | 0791        | 1011         | 3199                       | 4199        | *            | T213A114M100(1)S |  |  |
| 0.13   | A            | 10                             | T111A134K100AS       | 0.3                                | 2   | 0352  | 0572       | 0792        | 1012         | 3200                       | 4200        | *            | T213A134K100(1)S |  |  |
| 0.16   | A            | 10                             | T111A164K100AS       | 0.3                                | 2   | 0353  | 0573       | 0793        | 1013         | 3201                       | 4201        | *            | T213A164K100(1)S |  |  |
| 0.16   | A            | 20                             | T111A164M100AS       | 0.3                                | 2   | 0354  | 0574       | 0794        | 1014         | 3202                       | 4202        | *            | T213A164M100(1)S |  |  |
| 0.19   | A            | 10                             | T111A194K100AS       | 0.3                                | 2   | 0355  | 0575       | 0795        | 1015         | 3203                       | 4203        | *            | T213A194K100(1)S |  |  |
| 0.23   | A            | 10                             | T111A234K100AS       | 0.3                                | 2   | 0356  | 0576       | 0796        | 1016         | 3204                       | 4204        | *            | T213A234K100(1)S |  |  |
| 0.23   | A            | 20                             | T111A234M100AS       | 0.3                                | 2   | 0357  | 0577       | 0797        | 1017         | 3205                       | 4205        | *            | T213A234M100(1)S |  |  |
| 0.28   | A            | 10                             | T111A284K100AS       | 0.3                                | 2   | 0358  | 0578       | 0798        | 1018         | 3206                       | 4206        | *            | T213A284K100(1)S |  |  |
| 0.34   | B            | 10                             | T111B344K100AS       | 0.3                                | 2   | 0359  | 0579       | 0799        | 1019         | 3207                       | 4207        | *            | T213B344K100(1)S |  |  |
| 0.34   | B            | 20                             | T111B344M100AS       | 0.3                                | 2   | 0360  | 0580       | 0800        | 1020         | 3208                       | 4208        | *            | T213B344M100(1)S |  |  |
| 0.41   | B            | 10                             | T111B414K100AS       | 0.4                                | 2   | 0361  | 0581       | 0801        | 1021         | 3209                       | 4209        | *            | T213B414K100(1)S |  |  |
| 0.5  | B            | 10                             | T111B504K100AS       | 0.5                                | 2   | 0362  | 0582       | 0802        | 1022         | 3210                       | 4210        | *            | T213B504K100(1)S |  |  |
| 0.5  | B            | 20                             | T111B504M100AS       | 0.5                                | 2   | 0363  | 0583       | 0803        | 1023         | 3211                       | 4211        | *            | T213B504M100(1)S |  |  |
| 0.6  | B            | 10                             | T111B604K100AS       | 0.5                                | 3   | 0364  | 0584       | 0804        | 1024         | 3212                       | 4212        | *            | T213B604K100(1)S |  |  |
| 0.75   | B            | 10                             | T111B754K100AS       | 0.7                                | 3   | 0365  | 0585       | 0805        | 1025         | 3213                       | 4213        | *            | T213B754K100(1)S |  |  |
| 0.75   | B            | 20                             | T111B754M100AS       | 0.7                                | 3   | 0366  | 0586       | 0806        | 1026         | 3214                       | 4214        | *            | T213B754M100(1)S |  |  |
| 0.9  | B            | 10                             | T111B904K100AS       | 0.7                                | 3   | 0367  | 0587       | 0807        | 1027         | 3215                       | 4215        | *            | T213B904K100(1)S |  |  |
| 1.1  | B            | 10                             | T111B115K100AS       | 0.9                                | 3   | 0368  | 0588       | 0808        | 1028         | 3216                       | 4216        | *            | T213B115K100(1)S |  |  |
| 1.1  | B            | 20                             | T111B115M100AS       | 0.9                                | 3   | 0369  | 0589       | 0809        | 1029         | 3217                       | 4217        | *            | T213B115M100(1)S |  |  |
| 1.3  | B            | 10                             | T111B135K100AS       | 1.1                                | 3   | 0370  | 0590       | 0810        | 1030         | 3218                       | 4218        | *            | T213B135K100(1)S |  |  |

T111/T213 Series Tantalum Hermetically Sealed

(1) To complete T213 Series Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 6. \*Note: D failure rate — Not QPL for 5168 thru 5218

KEMET ultra-miniature T222 Series solid tantalum capacitors are designed especially for miniaturization.

The T222 Series capacitors employ a unique glass-to-metal compression end seal which has no protruding eyelet. This flush end seal construction makes T222 Series capacitors ideally suited for all miniature high density packaging applications. The capacitors con-

sist of a dry porous tantalum pellet hermetically sealed in a solder coated metal case with solder coated alloy 52 and solder coated nickel leads.

The T222 series is approved to MIL-PRF-39003/2, all ratings and failure rates.

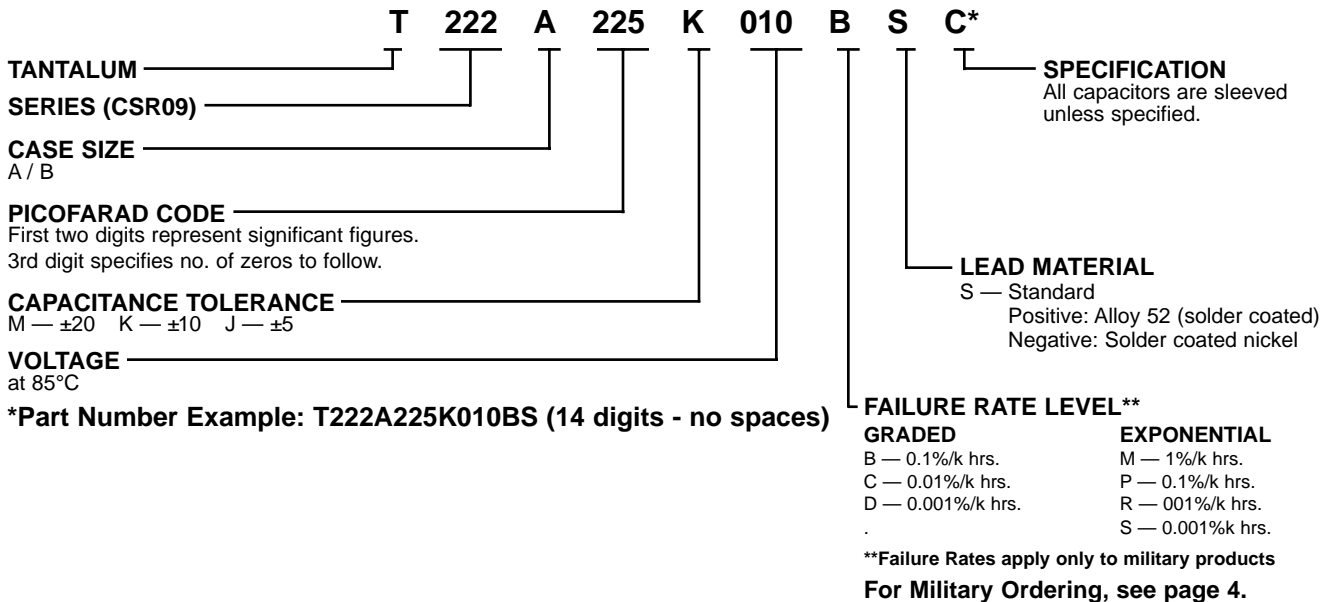
### CAPACITOR OUTLINE DRAWINGS



### DIMENSIONS — INCHES & (MILLIMETERS)

| CASE SIZE | UNINSULATED           |   | INSULATED                |   | B<br>WIRE<br>DIAMETER                    |
|-----------|-----------------------|---|--------------------------|---|--|
|           | D<br>±0.005<br>(±.13) | L   | D                        | L   |  |
| A         | .085 (2.16)           | .245 + .015 (6.22 + .38)<br>- .010 (-.25) | .090 ± .009 (2.29 ± .23) | .250 + .031 (6.35 + .79)<br>- .015 (-.38) | .016 + .005 (.41 + .13)<br>- .001 (-.03) |
| B         | .127 (3.23)           | .375 ± .015 (.53 ± .38)                   | .138 ± .010 (3.51 ± .25) | .390 ± .015 (9.91 ± .38)                  | .016 + .005 (.41 + .13)<br>- .001 (-.03) |

### ORDERING INFORMATION



### CSR09 CAPACITOR MARKINGS PER MIL-PRF-39003

|        |  |
|--------|--|
| 39003  | — Military specification number  |
| 02 - K | — Specification sheet number and trademark   |
| 2961J  | — Nonsignificant dash number and "J" for JAN   |
| +333   | — Polarity, date code (1st digit indicates year and the next two digits indicate the week) |
| XX     | — and lot symbol   |

RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF   | CASE<br>SIZE  | CAPACITANCE<br>TOLERANCE<br>±%                             | KEMET T222 SERIES   |   |   | MIL-PRF-39003 (CSR09) CAPACITORS  |   |   |   |   |   |   |
|---|---|--|---|---|---|---|---|---|---|---|---|---|
|   |   |  | KEMET<br>PART NUMBER  | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX.  | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz     | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.)                           |   |   |   |   |   |   |
|   |   |  |   |   |   | MIL-PRF-39003/2D<br>EXPONENTIAL   |   |   |   | MIL-PRF-39003/2D<br>GRADED  |   |   |
|   |   |  |   |   |   | M<br>(1.0)  | P<br>(0.1)  | R<br>(0.01)   | S<br>(0.001)  | B<br>(0.1)  | C<br>(0.01)   | D<br>(0.001)  |
| <b>6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C</b>                     |   |  |   |   |   |   |   |   |   |   |   |   |
| 2.7<br><b>2.7</b>   | A<br><b>A</b>   | 5<br><b>10</b>   | T222A275J006(1)S<br><b>T222A275K006(1)S</b>   | 0.6<br><b>0.6</b>   | 6<br><b>6</b>   | 1001<br><b>0001</b>   | 1061<br><b>0061</b>   | 1121<br><b>0121</b>   | 1181<br><b>0181</b>   | 2001<br><b>2002</b>   | 3001<br><b>3002</b>   | 4001<br><b>4002</b>   |
| 18.0<br>18.0  | B<br>B  | 5<br>10  | T222B186J006(1)S<br>T222B186K006(1)S  | 1.4<br>1.4  | 6<br>6  | 1002<br>0002  | 1062<br>0062  | 1122<br>0122  | 1182<br>0182  | 2003<br>2004  | 3003<br>3004  | 4003<br>4004  |
| <b>10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C</b>                    |   |  |   |   |   |   |   |   |   |   |   |   |
| 1.8<br>1.8<br>2.2<br><b>2.2</b>   | A<br>A<br>A<br><b>A</b>                               | 5<br>10<br>5<br><b>10</b>                                  | T222A185J010(1)S<br>T222A185K010(1)S<br>T222A225J010(1)S<br><b>T222A225K010(1)S</b>   | 0.6<br>0.6<br>0.6<br><b>0.6</b>   | 6<br>6<br>6<br><b>6</b>                               | 1007<br>0007<br>1008<br><b>0008</b>   | 1067<br>0067<br>1068<br><b>0068</b>   | 1127<br>0127<br>1128<br><b>0128</b>   | 1187<br>0187<br>1188<br><b>0188</b>   | 2005<br>2006<br>2007<br><b>2008</b>   | 3005<br>3006<br>3007<br><b>3008</b>   | 4005<br>4006<br>4007<br><b>4008</b>   |
| 10.0<br>10.0<br>12.0<br>12.0<br>15.0<br>15.0                              | B<br>B<br>B<br>B<br>B<br>B                            | 5<br>10<br>5<br>10<br>5<br>10                              | T222B106J010(1)S<br>T222B106K010(1)S<br>T222B126J010(1)S<br>T222B126K010(1)S<br>T222B156J010(1)S<br>T222B156K010(1)S  | 2.0<br>2.0<br>2.0<br>2.0<br>2.0<br>2.0                                    | 6<br>6<br>6<br>6<br>6<br>6                            | 1009<br>0009<br>1010<br>0010<br>1011<br>0011  | 1069<br>0069<br>1070<br>0070<br>1071<br>0071  | 1129<br>0129<br>1130<br>0130<br>1131<br>0131  | 1189<br>0189<br>1190<br>0190<br>1191<br>0191  | 2009<br>2010<br>2011<br>2012<br>2013<br>2014  | 3009<br>3010<br>3011<br>3012<br>3013<br>3014  | 4009<br>4010<br>4011<br>4012<br>4013<br>4014  |
| <b>15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C</b>                   |   |  |   |   |   |   |   |   |   |   |   |   |
| 1.0<br>1.0<br>1.2<br>1.2<br>1.5<br><b>1.5</b>                             | A<br>A<br>A<br>A<br>A<br><b>A</b>                     | 5<br>10<br>5<br>10<br>5<br><b>10</b>                       | T222A105J015(1)S<br>T222A105K015(1)S<br>T222A125J015(1)S<br>T222A125K015(1)S<br>T222A155J015(1)S<br><b>T222A155K015(1)S</b>   | 0.6<br>0.6<br>0.6<br>0.6<br>0.6<br><b>0.6</b>                             | 6<br>6<br>6<br>6<br>6<br><b>6</b>                     | 1012<br>0012<br>1013<br>0013<br>1014<br><b>0014</b>                                 | 1072<br>0072<br>1073<br>0073<br>1074<br><b>0074</b>                                 | 1132<br>0132<br>1133<br>0133<br>1134<br><b>0134</b>                                 | 1192<br>0192<br>1193<br>0193<br>1194<br><b>0194</b>                                 | 2015<br>2016<br>2017<br>2018<br>2019<br><b>2020</b>                                 | 3015<br>3016<br>3017<br>3018<br>3019<br><b>3020</b>                                 | 4015<br>4016<br>4017<br>4018<br>4019<br><b>4020</b>                                 |
| 8.2<br>8.2  | B<br>B  | 5<br>10  | T222B825J015(1)S<br>T222B825K015(1)S  | 1.8<br>1.8  | 6<br>6  | 1015<br>0015  | 1075<br>0075  | 1135<br>0135  | 1195<br>0195  | 2021<br>2022  | 3021<br>3022  | 4021<br>4022  |
| <b>20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C</b>                   |   |  |   |   |   |   |   |   |   |   |   |   |
| 0.56<br>0.56<br>0.68<br>0.68<br>0.82<br>0.82<br>1.0<br><b>1.0</b>         | A<br>A<br>A<br>A<br>A<br>A<br>A<br><b>A</b>           | 5<br>10<br>5<br>10<br>5<br>10<br>5<br><b>10</b>            | T222A564J020(1)S<br>T222A564K020(1)S<br>T222A684J020(1)S<br>T222A684K020(1)S<br>T222A824J020(1)S<br>T222A824K020(1)S<br>T222A105J020(1)S<br><b>T222A105K020(1)S</b>   | 0.6<br>0.6<br>0.6<br>0.6<br>0.6<br>0.6<br>0.6<br><b>0.6</b>               | 3<br>3<br>3<br>3<br>3<br>3<br>3<br><b>3</b>           | 1016<br>0016<br>1017<br>0017<br>1018<br>0018<br>1019<br><b>0019</b>                 | 1076<br>0076<br>1077<br>0077<br>1078<br>0078<br>1079<br><b>0079</b>                 | 1136<br>0136<br>1137<br>0137<br>1138<br>0138<br>1139<br><b>0139</b>                 | 1196<br>0196<br>1197<br>0197<br>1198<br>0198<br>1199<br><b>0199</b>                 | 2023<br>2024<br>2025<br>2026<br>2027<br>2028<br>2029<br><b>2030</b>                 | 3023<br>3024<br>3025<br>3026<br>3027<br>3028<br>3029<br><b>3030</b>                 | 4023<br>4024<br>4025<br>4026<br>4027<br>4028<br>4029<br><b>4030</b>                 |
| 3.3<br>3.3<br>3.9<br>3.9<br>4.7<br><b>4.7</b><br>5.6<br>5.6<br>6.8<br>6.8 | B<br>B<br>B<br>B<br>B<br><b>B</b><br>B<br>B<br>B<br>B | 5<br>10<br>5<br>10<br>5<br><b>10</b><br>5<br>10<br>5<br>10 | T222B335J020(1)S<br>T222B335K020(1)S<br>T222B395J020(1)S<br>T222B395K020(1)S<br>T222B475J020(1)S<br><b>T222B475K020(1)S</b><br>T222B565J020(1)S<br>T222B565K020(1)S<br>T222B685J020(1)S<br>T222B685K020(1)S | 1.0<br>1.0<br>2.0<br>2.0<br>2.0<br><b>2.0</b><br>2.0<br>2.0<br>2.0<br>2.0 | 3<br>3<br>3<br>3<br>3<br><b>3</b><br>3<br>3<br>3<br>3 | 1020<br>0020<br>1021<br>0021<br>1022<br><b>0022</b><br>1023<br>0023<br>1024<br>0024 | 1080<br>0080<br>1081<br>0081<br>1082<br><b>0082</b><br>1083<br>0083<br>1084<br>0084 | 1140<br>0140<br>1141<br>0141<br>1142<br><b>0142</b><br>1143<br>0143<br>1144<br>0144 | 1200<br>0200<br>1201<br>0201<br>1202<br><b>0202</b><br>1203<br>0203<br>1204<br>0204 | 2031<br>2032<br>2033<br>2034<br>2035<br><b>2036</b><br>2037<br>2038<br>2039<br>2040 | 3031<br>3032<br>3033<br>3034<br>3035<br><b>3036</b><br>3037<br>3038<br>3039<br>3040 | 4031<br>4032<br>4033<br>4034<br>4035<br><b>4036</b><br>4037<br>4038<br>4039<br>4040 |
| <b>35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C</b>                   |   |  |   |   |   |   |   |   |   |   |   |   |
| 0.33<br>0.33<br>0.39<br>0.39<br>0.47<br><b>0.47</b>                       | A<br>A<br>A<br>A<br>A<br><b>A</b>                     | 5<br>10<br>5<br>10<br>5<br><b>10</b>                       | T222A334J035(1)S<br>T222A334K035(1)S<br>T222A394J035(1)S<br>T222A394K035(1)S<br>T222A474J035(1)S<br><b>T222A474K035(1)S</b>   | 0.6<br>0.6<br>0.6<br>0.6<br>0.6<br><b>0.6</b>                             | 3<br>3<br>3<br>3<br>3<br><b>3</b>                     | 1025<br>0025<br>1026<br>0026<br>1027<br><b>0027</b>                                 | 1085<br>0085<br>1086<br>0086<br>1087<br><b>0087</b>                                 | 1145<br>0145<br>1146<br>0146<br>1147<br><b>0147</b>                                 | 1205<br>0205<br>1206<br>0206<br>1207<br><b>0207</b>                                 | 2041<br>2042<br>2043<br>2044<br>2045<br><b>2046</b>                                 | 3041<br>3042<br>3043<br>3044<br>3045<br><b>3046</b>                                 | 4041<br>4042<br>4043<br>4044<br>4045<br><b>4046</b>                                 |
| 2.2<br><b>2.2</b><br>2.7<br>2.7   | B<br><b>B</b><br>B<br>B                               | 5<br><b>10</b><br>5<br>10                                  | T222B225J035(1)S<br><b>T222B225K035(1)S</b><br>T222B275J035(1)S<br>T222B275K035(1)S   | 1.4<br><b>1.4</b><br>1.4<br>1.4   | 3<br><b>3</b><br>3<br>3                               | 1028<br><b>0028</b><br>1029<br>0029   | 1088<br><b>0088</b><br>1089<br>0089   | 1148<br><b>0148</b><br>1149<br>0149   | 1208<br><b>0208</b><br>1209<br>0209   | 2047<br><b>2048</b><br>2049<br>2050   | 3047<br><b>3048</b><br>3049<br>3050   | 4047<br><b>4048</b><br>4049<br>4050   |

T222 Series Tantalum  
Hermetically Sealed

(1) To complete Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 24.  
Bold Face lines indicate popular part types and values

RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                       | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T222 SERIES       |                                    |   | MIL-PRF-39003 (CSR09) CAPACITORS                          |             |             |              |                            |             |              |
|---|--------------|--------------------------------|-------------------------|------------------------------------|---|---|-------------|-------------|--------------|----------------------------|-------------|--------------|
|   |              |                                | KEMET<br>PART NUMBER    | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISS-<br>PATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |             |             |              |                            |             |              |
|   |              |                                |                         |                                    |   | MIL-PRF-39003/2D<br>EXPONENTIAL                           |             |             |              | MIL-PRF-39003/2D<br>GRADED |             |              |
|   |              |                                |                         |                                    |   | M<br>(1.0)  | P<br>(0.1)  | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |
| <b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C</b> |              |                                |                         |                                    |   |   |             |             |              |                            |             |              |
| 0.22  | A            | 5                              | T222A224J050(1)S        | 0.6                                | 3   | 1030  | 1090        | 1150        | 1210         | 2051                       | 3051        | 4051         |
| 0.22  | A            | 10                             | T222A224K050(1)S        | 0.6                                | 3   | 0030  | 0090        | 0150        | 0210         | 2052                       | 3052        | 4052         |
| 0.27  | A            | 5                              | T222A274J050(1)S        | 0.6                                | 3   | 1031  | 1091        | 1151        | 1211         | 2053                       | 3053        | 4053         |
| <b>0.27</b>   | <b>A</b>     | <b>10</b>                      | <b>T222A274K050(1)S</b> | <b>0.6</b>                         | <b>3</b>  | <b>0031</b>   | <b>0091</b> | <b>0151</b> | <b>0211</b>  | <b>2054</b>                | <b>3054</b> | <b>4054</b>  |
| 1.5   | B            | 5                              | T222B155J050(1)S        | 1.4                                | 3   | 1032  | 1092        | 1152        | 1212         | 2055                       | 3055        | 4055         |
| 1.5   | B            | 10                             | T222B155K050(1)S        | 1.4                                | 3   | 0032  | 0092        | 0152        | 0212         | 2056                       | 3056        | 4056         |
| 1.8   | B            | 5                              | T222B185J050(1)S        | 1.4                                | 3   | 1033  | 1093        | 1153        | 1213         | 2057                       | 3057        | 4057         |
| <b>1.8</b>  | <b>B</b>     | <b>10</b>                      | <b>T222B185K050(1)S</b> | <b>1.4</b>                         | <b>3</b>  | <b>0033</b>   | <b>0093</b> | <b>0153</b> | <b>0213</b>  | <b>2058</b>                | <b>3058</b> | <b>4058</b>  |
| <b>75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C</b> |              |                                |                         |                                    |   |   |             |             |              |                            |             |              |
| 0.047   | A            | 5                              | T222A473J075(1)S        | 0.6                                | 3   | 1034  | 1094        | 1154        | 1214         | 2059                       | 3059        | 4059         |
| 0.047   | A            | 10                             | T222A473K075(1)S        | 0.6                                | 3   | 0034  | 0094        | 0154        | 0214         | 2060                       | 3060        | 4060         |
| 0.056   | A            | 5                              | T222A563J075(1)S        | 0.6                                | 3   | 1035  | 1095        | 1155        | 1215         | 2061                       | 3061        | 4061         |
| 0.056   | A            | 10                             | T222A563K075(1)S        | 0.6                                | 3   | 0035  | 0095        | 0155        | 0215         | 2062                       | 3062        | 4062         |
| 0.068   | A            | 5                              | T222A683J075(1)S        | 0.6                                | 3   | 1036  | 1096        | 1156        | 1216         | 2063                       | 3063        | 4063         |
| 0.068   | A            | 10                             | T222A683K075(1)S        | 0.6                                | 3   | 0036  | 0096        | 0156        | 0216         | 2064                       | 3064        | 4064         |
| 0.082   | A            | 5                              | T222A823J075(1)S        | 0.6                                | 3   | 1037  | 1097        | 1157        | 1217         | 2065                       | 3065        | 4065         |
| 0.082   | A            | 10                             | T222A823K075(1)S        | 0.6                                | 3   | 0037  | 0097        | 0157        | 0217         | 2066                       | 3066        | 4066         |
| 0.10  | A            | 5                              | T222A104J075(1)S        | 0.6                                | 3   | 1038  | 1098        | 1158        | 1218         | 2067                       | 3067        | 4067         |
| <b>0.10</b>   | <b>A</b>     | <b>10</b>                      | <b>T222A104K075(1)S</b> | <b>0.6</b>                         | <b>3</b>  | <b>0038</b>   | <b>0098</b> | <b>0158</b> | <b>0218</b>  | <b>2068</b>                | <b>3068</b> | <b>4068</b>  |
| 0.12  | A            | 5                              | T222A124J075(1)S        | 0.6                                | 3   | 1039  | 1099        | 1159        | 1219         | 2069                       | 3069        | 4069         |
| 0.12  | A            | 10                             | T222A124K075(1)S        | 0.6                                | 3   | 0039  | 0099        | 0159        | 0219         | 2070                       | 3070        | 4070         |
| 0.15  | A            | 5                              | T222A154J075(1)S        | 0.6                                | 3   | 1040  | 1100        | 1160        | 1220         | 2071                       | 3071        | 4071         |
| 0.15  | A            | 10                             | T222A154K075(1)S        | 0.6                                | 3   | 0040  | 0100        | 0160        | 0220         | 2072                       | 3072        | 4072         |
| 0.18  | A            | 5                              | T222A184J075(1)S        | 0.6                                | 3   | 1041  | 1101        | 1161        | 1221         | 2073                       | 3073        | 4073         |
| 0.18  | A            | 10                             | T222A184K075(1)S        | 0.6                                | 3   | 0041  | 0101        | 0161        | 0221         | 2074                       | 3074        | 4074         |
| 0.22  | B            | 5                              | T222B224J075(1)S        | 0.6                                | 3   | 1042  | 1102        | 1162        | 1222         | 2075                       | 3075        | 4075         |
| 0.22  | B            | 10                             | T222B224K075(1)S        | 0.6                                | 3   | 0042  | 0102        | 0162        | 0222         | 2076                       | 3076        | 4076         |
| 0.27  | B            | 5                              | T222B274J075(1)S        | 0.6                                | 3   | 1043  | 1103        | 1163        | 1223         | 2077                       | 3077        | 4077         |
| 0.27  | B            | 10                             | T222B274K075(1)S        | 0.6                                | 3   | 0043  | 0103        | 0163        | 0223         | 2078                       | 3078        | 4078         |
| 0.33  | B            | 5                              | T222B334J075(1)S        | 0.6                                | 3   | 1044  | 1104        | 1164        | 1224         | 2079                       | 3079        | 4079         |
| 0.33  | B            | 10                             | T222B334K075(1)S        | 0.6                                | 3   | 0044  | 0104        | 0164        | 0224         | 2080                       | 3080        | 4080         |
| 0.39  | B            | 5                              | T222B394J075(1)S        | 0.6                                | 3   | 1045  | 1105        | 1165        | 1225         | 2081                       | 3081        | 4081         |
| 0.39  | B            | 10                             | T222B394K075(1)S        | 0.6                                | 3   | 0045  | 0105        | 0165        | 0225         | 2082                       | 3082        | 4082         |
| 0.47  | B            | 5                              | T222B474J075(1)S        | 0.6                                | 3   | 1046  | 1106        | 1166        | 1226         | 2083                       | 3083        | 4083         |
| 0.47  | B            | 10                             | T222B474K075(1)S        | 0.6                                | 3   | 0046  | 0106        | 0166        | 0226         | 2084                       | 3084        | 4084         |
| 0.56  | B            | 5                              | T222B564J075(1)S        | 0.6                                | 3   | 1047  | 1107        | 1167        | 1227         | 2085                       | 3085        | 4085         |
| 0.56  | B            | 10                             | T222B564K075(1)S        | 0.6                                | 3   | 0047  | 0107        | 0167        | 0227         | 2086                       | 3086        | 4086         |
| 0.68  | B            | 5                              | T222B684J075(1)S        | 0.6                                | 3   | 1048  | 1108        | 1168        | 1228         | 2087                       | 3087        | 4087         |
| 0.68  | B            | 10                             | T222B684K075(1)S        | 0.6                                | 3   | 0048  | 0108        | 0168        | 0228         | 2088                       | 3088        | 4088         |
| 0.82  | B            | 5                              | T222B824J075(1)S        | 0.7                                | 3   | 1049  | 1109        | 1169        | 1229         | 2089                       | 3089        | 4089         |
| 0.82  | B            | 10                             | T222B824K075(1)S        | 0.7                                | 3   | 0049  | 0109        | 0169        | 0229         | 2090                       | 3090        | 4090         |
| 1.0   | B            | 5                              | T222B105J075(1)S        | 0.9                                | 3   | 1050  | 1110        | 1170        | 1230         | 2091                       | 3091        | 4091         |
| 1.0   | B            | 10                             | T222B105K075(1)S        | 0.9                                | 3   | 0050  | 0110        | 0170        | 0230         | 2092                       | 3092        | 4092         |
| 1.2   | B            | 5                              | T222B125J075(1)S        | 0.9                                | 3   | 1051  | 1111        | 1171        | 1231         | 2093                       | 3093        | 4093         |
| 1.2   | B            | 10                             | T222B125K075(1)S        | 0.9                                | 3   | 0051  | 0111        | 0171        | 0231         | 2094                       | 3094        | 4094         |

(1) To complete Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 24.  
Bold Face lines indicate popular part types and values



KEMET standard MIL case hermetically sealed T140 Series (Extended Capacitance Range) are compact, ruggedly built, designed for miniaturized circuitry, and are especially suited for coupling, bypass, filtering and R-C timing circuits. They exhibit excellent stability, low DC leakage current, dissipation factor, and ESR/impedance over a wide temperature and frequency range.

Available in standard EIA capacitance values from .82-1200  $\mu\text{F}$  in  $\pm 20\%$ ,  $\pm 10\%$ , and  $\pm 5\%$  tolerances and working voltages from 6-60 VDC.

Included in the following Series table is a complete listing of CSR23 qualified MIL-C-39003/3 capacitors.

**DIMENSIONS — INCHES & (MILLIMETERS)**

| CASE SIZE | UNINSULATED               |                           | INSULATED                 |                           | B<br>$\pm 0.002$<br>(.05) | C<br>MAX.        |
|-----------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------|
|           | D<br>$\pm 0.005$<br>(.13) | L<br>$\pm 0.031$<br>(.79) | D<br>$\pm 0.010$<br>(.25) | L<br>$\pm 0.031$<br>(.79) |                           |                  |
| A         | 0.125<br>(3.18)           | 0.250<br>(6.35)           | 0.135<br>(3.43)           | 0.286<br>(7.26)           | 0.020<br>(.51)            | 0.422<br>(10.72) |
| B         | 0.175<br>(4.45)           | 0.438<br>(11.13)          | 0.185<br>(4.70)           | 0.474<br>(12.04)          | 0.020<br>(.51)            | 0.610<br>(15.49) |
| C         | 0.279<br>(7.09)           | 0.650<br>(16.51)          | 0.289<br>(7.34)           | 0.686<br>(17.42)          | 0.025<br>(.64)            | 0.822<br>(20.88) |
| D         | 0.341<br>(8.66)           | 0.750<br>(19.05)          | 0.351<br>(8.92)           | 0.786<br>(19.96)          | 0.025<br>(.64)            | 0.922<br>(23.42) |

**MARKING INFORMATION\*  
A, B, C & D CASES**

|                   |  |
|-------------------|--|
| +K 10%            | — Polarity, Manufacturer's Identification and Capacitance Tol.   |
| 5R6 $\mu\text{F}$ | — Normal Capacitance — ( $\mu\text{F}$ ) ("R" indicates decimal) |
| 10V               | — Voltage  |
| 0312              | — Date Code (e.g.: 0312)   |

\* For Military Marking, see page 4.

**CAPACITOR OUTLINE DRAWINGS**



Effective September 30, 2005, the KEMET T140 Series is RoHS compliant by ordering the "T" (100% tin) end termination in the 14th position of the part number.

**RATINGS & PART NUMBER REFERENCE**

| CAPACITANCE<br>$\mu\text{F}$                          | CASE SIZE | CAPACITANCE TOLERANCE<br>$\pm\%$ | KEMET T140            |  |   | MIL-PRF-39003 (CSR23) CAPACITORS                          |                            |             |             |                                       |             |             | KEMET EQUIVALENT MILITARY PART NUMBER |   |   |  |
|---|-----------|----------------------------------|-----------------------|--|---|---|----------------------------|-------------|-------------|---------------------------------------|-------------|-------------|---------------------------------------|---|---|--|
|   |           |                                  | KEMET PART NUMBER     | D.C. LEAKAGE<br>$\mu\text{A}@25^\circ\text{C}$<br>MAX. | MAX. DISSIPATION FACTOR<br>$\%@25^\circ\text{C}$ ,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |                            |             |             | KEMET EQUIVALENT MILITARY PART NUMBER |             |             |                                       |   |   |  |
|   |           |                                  |                       |  |   | MIL-PRF-39003/3F<br>EXPONENTIAL                           | MIL-PRF-39003/3F<br>GRADED | M           | P           | R                                     | S           | B           |                                       | C | D |  |
| <b>6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C</b> |           |                                  |                       |  |   |   |                            |             |             |                                       |             |             |                                       |   |   |  |
| 8.2   | A         | 10, 20                           | T140A825(1)006AS      | 0.9  | 6   |   |                            |             |             |                                       |             |             |                                       |   |   |  |
| <b>10.0</b>   | <b>A</b>  | <b>10</b>                        | <b>T140A106K006AS</b> | <b>0.9</b>   | <b>6</b>  | <b>0101</b>   | <b>0201</b>                | <b>0301</b> | <b>0401</b> | <b>2001</b>                           | <b>3001</b> | <b>4001</b> | <b>T242A106K006(2)S</b>               |   |   |  |
| <b>10.0</b>   | <b>A</b>  | <b>20</b>                        | <b>T140A106M006AS</b> | <b>0.9</b>   | <b>6</b>  | <b>0102</b>   | <b>0202</b>                | <b>0302</b> | <b>0402</b> | <b>2002</b>                           | <b>3002</b> | <b>4002</b> | <b>T242A106M006(2)S</b>               |   |   |  |
| 12.0  | A         | 10                               | T140A126K006AS        | 1.0  | 6   | 0103  | 0203                       | 0303        | 0403        | 2003                                  | 3003        | 4003        | T242A126K006(2)S                      |   |   |  |
| 12.0  | A         | 20                               | T140A126M006AS        | 1.0  | 6   |   |                            |             |             |                                       |             |             |                                       |   |   |  |
| 68.0  | B         | 10, 20                           | T140B686(1)006AS      | 3.0  | 6   |   |                            |             |             |                                       |             |             |                                       |   |   |  |
| 82.0  | B         | 10, 20                           | T140B826(1)006AS      | 3.0  | 6   |   |                            |             |             |                                       |             |             |                                       |   |   |  |
| <b>100.0</b>  | <b>B</b>  | <b>10</b>                        | <b>T140B107K006AS</b> | <b>6.0</b>   | <b>6</b>  | <b>0104</b>   | <b>0204</b>                | <b>0304</b> | <b>0404</b> | <b>2004</b>                           | <b>3004</b> | <b>4004</b> | <b>T242B107K006(2)S</b>               |   |   |  |
| <b>100.0</b>  | <b>B</b>  | <b>20</b>                        | <b>T140B107M006AS</b> | <b>6.0</b>   | <b>6</b>  | <b>0105</b>   | <b>0205</b>                | <b>0305</b> | <b>0405</b> | <b>2005</b>                           | <b>3005</b> | <b>4005</b> | <b>T242B107M006(2)S</b>               |   |   |  |
| 220.0   | C         | 10, 20                           | T140C227(1)006AS      | 10.0   | 8   |   |                            |             |             |                                       |             |             |                                       |   |   |  |
| 270.0   | C         | 10, 20                           | T140C277(1)006AS      | 10.0   | 8   |   |                            |             |             |                                       |             |             |                                       |   |   |  |
| 330.0   | C         | 10                               | T140C337K006AS        | 10.0   | 8   | 0106  | 0206                       | 0306        | 0406        | 2006                                  | 3006        | 4006        | T242C337K006(2)S                      |   |   |  |
| 330.0   | C         | 20                               | T140C337M006AS        | 10.0   | 8   | 0107  | 0207                       | 0307        | 0407        | 2007                                  | 3007        | 4007        | T242C337M006(2)S                      |   |   |  |
| 390.0   | C         | 10                               | T140C397K006AS        | 10.0   | 10  | 0108  | 0208                       | 0308        | 0408        | 2008                                  | 3008        | 4008        | T242C397K006(2)S                      |   |   |  |
| 390.0   | C         | 20                               | T140C397M006AS        | 10.0   | 10  |   |                            |             |             |                                       |             |             |                                       |   |   |  |
| <b>470.0</b>  | <b>C</b>  | <b>10</b>                        | <b>T140C477K006AS</b> | <b>10.0</b>  | <b>10</b>   | <b>0109</b>   | <b>0209</b>                | <b>0309</b> | <b>0409</b> | <b>2009</b>                           | <b>3009</b> | <b>4009</b> | <b>T242C477K006(2)S</b>               |   |   |  |
| <b>470.0</b>  | <b>C</b>  | <b>20</b>                        | <b>T140C477M006AS</b> | <b>10.0</b>  | <b>10</b>   | <b>0110</b>   | <b>0210</b>                | <b>0310</b> | <b>0410</b> | <b>2010</b>                           | <b>3010</b> | <b>4010</b> | <b>T242C477M006(2)S</b>               |   |   |  |
| 560.0   | D         | 10, 20                           | T140D567(1)006AS      | 20.0   | 10  |   |                            |             |             |                                       |             |             |                                       |   |   |  |
| 680.0   | D         | 10                               | T140D687K006AS        | 20.0   | 10  | 0111  | 0211                       | 0311        | 0411        | 2011                                  | 3011        | 4011        | T242D687K006(2)S                      |   |   |  |
| 680.0   | D         | 20                               | T140D687M006AS        | 20.0   | 10  | 0112  | 0212                       | 0312        | 0412        | 2012                                  | 3012        | 4012        | T242D687M006(2)S                      |   |   |  |
| 820.0   | D         | 10                               | T140D827K006AS        | 20.0   | 10  | 0113  | 0213                       | 0313        | 0413        | 2013                                  | 3013        | 4013        | T242D827K006(2)S                      |   |   |  |
| 820.0   | D         | 20                               | T140D827M006AS        | 20.0   | 10  |   |                            |             |             |                                       |             |             |                                       |   |   |  |
| <b>1000.0</b>   | <b>D</b>  | <b>10</b>                        | <b>T140D108K006AS</b> | <b>20.0</b>  | <b>10</b>   | <b>0114</b>   | <b>0214</b>                | <b>0314</b> | <b>0414</b> | <b>2014</b>                           | <b>3014</b> | <b>4014</b> | <b>T242D108K006(2)S</b>               |   |   |  |
| <b>1000.0</b>   | <b>D</b>  | <b>20</b>                        | <b>T140D108M006AS</b> | <b>20.0</b>  | <b>10</b>   | <b>0115</b>   | <b>0215</b>                | <b>0315</b> | <b>0415</b> | <b>2015</b>                           | <b>3015</b> | <b>4015</b> | <b>T242D108M006(2)S</b>               |   |   |  |
| 1200.0  | D         | 20                               | T140D128M006AS        | 20.0   | 10  |   |                            |             |             |                                       |             |             |                                       |   |   |  |

(1) To complete T140 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.  
(2) To complete the T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.  
**Bold Face** lines indicate popular part types and values.  
For ordering information, see page 4 (Military) and Page 6.

T140/T242 Series Tantalum  
Hermetically Sealed



RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                       | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T140              |                                    |   | MIL-PRF-39003 (CSR23) CAPACITORS                          |             |             |              |                            |             |              |                         | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|---|--------------|--------------------------------|-------------------------|------------------------------------|---|---|-------------|-------------|--------------|----------------------------|-------------|--------------|-------------------------|--|
|   |              |                                | KEMET<br>PART NUMBER    | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |             |             |              |                            |             |              |                         |  |
|   |              |                                |                         |                                    |   | MIL-PRF-39003/3F<br>EXPONENTIAL                           |             |             |              | MIL-PRF-39003/3F<br>GRADED |             |              |                         |  |
|   |              |                                |                         |                                    |   | M<br>(1.0)  | P<br>(0.1)  | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                         |  |
| <b>20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C</b> |              |                                |                         |                                    |   |   |             |             |              |                            |             |              |                         |  |
| 2.7   | A            | 10                             | T140A275K020AS          | 0.8                                | 4   | 0146  | 0246        | 0346        | 0446         | 2046                       | 3046        | 4046         | T242A275K020(2)S        |  |
| 2.7   | A            | 20                             | T140A275M020AS          | 0.8                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 3.3   | A            | 10                             | T140A335K020AS          | 1.0                                | 4   | 0147  | 0247        | 0347        | 0447         | 2047                       | 3047        | 4047         | T242A335K020(2)S        |  |
| 3.3   | A            | 20                             | T140A335M020AS          | 1.0                                | 4   | 0148  | 0248        | 0348        | 0448         | 2048                       | 3048        | 4048         | T242A335M020(2)S        |  |
| 3.9   | A            | 10                             | T140A395K020AS          | 1.2                                | 4   | 0149  | 0249        | 0349        | 0449         | 2049                       | 3049        | 4049         | T242A395K020(2)S        |  |
| 3.9   | A            | 20                             | T140A395M020AS          | 1.2                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 18.0  | B            | 10                             | T140B186K020AS          | 3.0                                | 6   | 0150  | 0250        | 0350        | 0450         | 2050                       | 3050        | 4050         | T242B186K020(2)S        |  |
| 18.0  | B            | 20                             | T140B186M020AS          | 3.0                                | 6   |   |             |             |              |                            |             |              |                         |  |
| <b>22.0</b>   | <b>B</b>     | <b>10</b>                      | <b>T140B226K020AS</b>   | <b>3.0</b>                         | <b>6</b>  | <b>0151</b>   | <b>0251</b> | <b>0351</b> | <b>0451</b>  | <b>2051</b>                | <b>3051</b> | <b>4051</b>  | <b>T242B226K020(2)S</b> |  |
| <b>22.0</b>   | <b>B</b>     | <b>20</b>                      | <b>T140B226M020AS</b>   | <b>3.0</b>                         | <b>6</b>  | <b>0152</b>   | <b>0252</b> | <b>0352</b> | <b>0452</b>  | <b>2052</b>                | <b>3052</b> | <b>4052</b>  | <b>T242B226M020(2)S</b> |  |
| <b>27.0</b>   | <b>B</b>     | <b>10</b>                      | <b>T140B276K020AS</b>   | <b>4.0</b>                         | <b>6</b>  | <b>0153</b>   | <b>0253</b> | <b>0353</b> | <b>0453</b>  | <b>2053</b>                | <b>3053</b> | <b>4053</b>  | <b>T242B276K020(2)S</b> |  |
| <b>27.0</b>   | <b>B</b>     | <b>20</b>                      | <b>T140B276M020AS</b>   | <b>4.0</b>                         | <b>6</b>  |   |             |             |              |                            |             |              |                         |  |
| 56.0  | C            | 10                             | T140C566K020AS          | 7.0                                | 6   | 0154  | 0254        | 0354        | 0454         | 2054                       | 3054        | 4054         | T242C566K020(2)S        |  |
| 56.0  | C            | 20                             | T140C566M020AS          | 7.0                                | 6   |   |             |             |              |                            |             |              |                         |  |
| 68.0  | C            | 10                             | T140C686K020AS          | 8.0                                | 6   | 0155  | 0255        | 0355        | 0455         | 2055                       | 3055        | 4055         | T242C686K020(2)S        |  |
| 68.0  | C            | 20                             | T140C686M020AS          | 8.0                                | 6   | 0156  | 0256        | 0356        | 0456         | 2056                       | 3056        | 4056         | T242C686M020(2)S        |  |
| 82.0  | C            | 10                             | T140C826K020AS          | 10.0                               | 6   | 0157  | 0257        | 0357        | 0457         | 2057                       | 3057        | 4057         | T242C826K020(2)S        |  |
| 82.0  | C            | 20                             | T140C826M020AS          | 10.0                               | 6   |   |             |             |              |                            |             |              |                         |  |
| <b>100.0</b>  | <b>C</b>     | <b>10</b>                      | <b>T140C107K020AS</b>   | <b>12.0</b>                        | <b>6</b>  | <b>0158</b>   | <b>0258</b> | <b>0358</b> | <b>0458</b>  | <b>2058</b>                | <b>3058</b> | <b>4058</b>  | <b>T242C107K020(2)S</b> |  |
| <b>100.0</b>  | <b>C</b>     | <b>20</b>                      | <b>T140C107M020AS</b>   | <b>12.0</b>                        | <b>6</b>  | <b>0159</b>   | <b>0259</b> | <b>0359</b> | <b>0459</b>  | <b>2059</b>                | <b>3059</b> | <b>4059</b>  | <b>T242C107M020(2)S</b> |  |
| 120.0   | C            | 10                             | T140C127K020AS          | 12.0                               | 6   | 0160  | 0260        | 0360        | 0460         | 2060                       | 3060        | 4060         | T242C127K020(2)S        |  |
| 120.0   | C            | 20                             | T140C127M020AS          | 12.0                               | 6   |   |             |             |              |                            |             |              |                         |  |
| 150.0   | D            | 10                             | T140D157K020AS          | 15.0                               | 8   | 0161  | 0261        | 0361        | 0461         | 2061                       | 3061        | 4061         | T242D157K020(2)S        |  |
| 150.0   | D            | 20                             | T140D157M020AS          | 15.0                               | 8   | 0162  | 0262        | 0362        | 0462         | 2062                       | 3062        | 4062         | T242D157M020(2)S        |  |
| <b>180.0</b>  | <b>D</b>     | <b>10</b>                      | <b>T140D187K020AS</b>   | <b>15.0</b>                        | <b>8</b>  | <b>0163</b>   | <b>0263</b> | <b>0363</b> | <b>0463</b>  | <b>2063</b>                | <b>3063</b> | <b>4063</b>  | <b>T242D187K020(2)S</b> |  |
| <b>180.0</b>  | <b>D</b>     | <b>20</b>                      | <b>T140D187M020AS</b>   | <b>15.0</b>                        | <b>8</b>  |   |             |             |              |                            |             |              |                         |  |
| <b>30 VOLT RATING AT 85°C — 20 VOLT RATING AT 125°C</b> |              |                                |                         |                                    |   |   |             |             |              |                            |             |              |                         |  |
| 1.2   | A            | 10, 20                         | T140A125(1)030AS        | 1.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 1.5   | A            | 10, 20                         | T140A155(1)030AS        | 1.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 1.8   | A            | 10, 20                         | T140A185(1)030AS        | 1.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| <b>2.2</b>  | <b>A</b>     | <b>10, 20</b>                  | <b>T140A225(1)030AS</b> | <b>1.0</b>                         | <b>4</b>  |   |             |             |              |                            |             |              |                         |  |
| <b>2.7</b>  | <b>A</b>     | <b>10, 20</b>                  | <b>T140A275(1)030AS</b> | <b>1.0</b>                         | <b>4</b>  |   |             |             |              |                            |             |              |                         |  |
| 12.0  | B            | 10, 20                         | T140B126(1)030AS        | 3.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| 15.0  | B            | 10, 20                         | T140B156(1)030AS        | 3.0                                | 4   |   |             |             |              |                            |             |              |                         |  |
| <b>18.0</b>   | <b>B</b>     | <b>10, 20</b>                  | <b>T140B186(1)030AS</b> | <b>3.0</b>                         | <b>4</b>  |   |             |             |              |                            |             |              |                         |  |
| <b>33.0</b>   | <b>C</b>     | <b>10, 20</b>                  | <b>T140C336(1)030AS</b> | <b>6.0</b>                         | <b>6</b>  |   |             |             |              |                            |             |              |                         |  |
| <b>39.0</b>   | <b>C</b>     | <b>10, 20</b>                  | <b>T140C396(1)030AS</b> | <b>6.0</b>                         | <b>6</b>  |   |             |             |              |                            |             |              |                         |  |
| <b>47.0</b>   | <b>C</b>     | <b>10, 20</b>                  | <b>T140C476(1)030AS</b> | <b>7.0</b>                         | <b>6</b>  |   |             |             |              |                            |             |              |                         |  |
| <b>56.0</b>   | <b>C</b>     | <b>10, 20</b>                  | <b>T140C566(1)030AS</b> | <b>7.0</b>                         | <b>6</b>  |   |             |             |              |                            |             |              |                         |  |
| <b>68.0</b>   | <b>C</b>     | <b>10, 20</b>                  | <b>T140C686(1)030AS</b> | <b>7.0</b>                         | <b>6</b>  |   |             |             |              |                            |             |              |                         |  |
| 82.0  | D            | 10, 20                         | T140D826(1)030AS        | 10.0                               | 6   |   |             |             |              |                            |             |              |                         |  |
| <b>100.0</b>  | <b>D</b>     | <b>10, 20</b>                  | <b>T140D107(1)030AS</b> | <b>10.0</b>                        | <b>8</b>  |   |             |             |              |                            |             |              |                         |  |

(1) To complete T140 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

T140/T242 Series Tantalum  
Hermetically Sealed

**RATINGS & PART NUMBER REFERENCE**

| CAPACITANCE<br>μF                                       | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T140              |                                    |   | MIL-PRF-39003 (CSR23) CAPACITORS                          |             |             |              |                            |             |              |  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |  |                         |  |
|---|--------------|--------------------------------|-------------------------|------------------------------------|---|---|-------------|-------------|--------------|----------------------------|-------------|--------------|--|--|--|-------------------------|--|
|   |              |                                | KEMET<br>PART NUMBER    | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |             |             |              |                            |             |              |  |  |  |                         |  |
|   |              |                                |                         |                                    |   | MIL-PRF-39003/3F<br>EXPONENTIAL                           |             |             |              | MIL-PRF-39003/3F<br>GRADED |             |              |  |  |  |                         |  |
|   |              |                                |                         |                                    |   | M<br>(1.0)  | P<br>(0.1)  | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |  |  |  |                         |  |
| <b>35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C</b> |              |                                |                         |                                    |   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 1.2   | A            | 10, 20                         | T140A125(1)035AS        | 0.6                                | 4   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 1.5   | A            | 10, 20                         | T140A155(1)035AS        | 0.8                                | 4   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 1.8   | A            | 10                             | T140A185K035AS          | 1.0                                | 4   | 0164  | 0264        | 0364        | 0464         | 2064                       | 3064        | 4064         |  |  |  | T242A185K035(2)S        |  |
| 1.8   | A            | 20                             | T140A185M035AS          | 1.0                                | 4   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 8.2   | B            | 10                             | T140B825K035AS          | 3.0                                | 4   | 0165  | 0265        | 0365        | 0465         | 2065                       | 3065        | 4065         |  |  |  | T242B825K035(2)S        |  |
| 8.2   | B            | 20                             | T140B825M035AS          | 3.0                                | 4   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| <b>10.0</b>   | <b>B</b>     | <b>10</b>                      | <b>T140B106K035AS</b>   | <b>3.0</b>                         | <b>4</b>  | <b>0166</b>   | <b>0266</b> | <b>0366</b> | <b>0466</b>  | <b>2066</b>                | <b>3066</b> | <b>4066</b>  |  |  |  | <b>T242B106K035(2)S</b> |  |
| <b>10.0</b>   | <b>B</b>     | <b>20</b>                      | <b>T140B106M035AS</b>   | <b>3.0</b>                         | <b>4</b>  | <b>0167</b>   | <b>0267</b> | <b>0367</b> | <b>0467</b>  | <b>2067</b>                | <b>3067</b> | <b>4067</b>  |  |  |  | <b>T242B106M035(2)S</b> |  |
| 27.0  | C            | 10, 20                         | T140C276(1)035AS        | 7.0                                | 6   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 33.0  | C            | 10                             | T140C336K035AS          | 8.0                                | 6   | 0168  | 0268        | 0368        | 0468         | 2068                       | 3068        | 4068         |  |  |  | T242C336K035(2)S        |  |
| 33.0  | C            | 20                             | T140C336M035AS          | 8.0                                | 6   | 0169  | 0269        | 0369        | 0469         | 2069                       | 3069        | 4069         |  |  |  | T242C336M035(2)S        |  |
| 39.0  | C            | 10                             | T140C396K035AS          | 10.0                               | 6   | 0170  | 0270        | 0370        | 0470         | 2070                       | 3070        | 4070         |  |  |  | T242C396K035(2)S        |  |
| 39.0  | C            | 20                             | T140C396M035AS          | 10.0                               | 6   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| <b>47.0</b>   | <b>C</b>     | <b>10</b>                      | <b>T140C476K035AS</b>   | <b>10.0</b>                        | <b>6</b>  | <b>0171</b>   | <b>0271</b> | <b>0371</b> | <b>0471</b>  | <b>2071</b>                | <b>3071</b> | <b>4071</b>  |  |  |  | <b>T242C476K035(2)S</b> |  |
| <b>47.0</b>   | <b>C</b>     | <b>20</b>                      | <b>T140C476M035AS</b>   | <b>10.0</b>                        | <b>6</b>  | <b>0172</b>   | <b>0272</b> | <b>0372</b> | <b>0472</b>  | <b>2072</b>                | <b>3072</b> | <b>4072</b>  |  |  |  | <b>T242C476M035(2)S</b> |  |
| 56.0  | D            | 10                             | T140D566K035AS          | 12.0                               | 6   | 0173  | 0273        | 0373        | 0473         | 2073                       | 3073        | 4073         |  |  |  | T242D566K035(2)S        |  |
| 56.0  | D            | 20                             | T140D566M035AS          | 12.0                               | 6   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| <b>68.0</b>   | <b>D</b>     | <b>10</b>                      | <b>T140D686K035AS</b>   | <b>12.0</b>                        | <b>6</b>  | <b>0174</b>   | <b>0274</b> | <b>0374</b> | <b>0474</b>  | <b>2074</b>                | <b>3074</b> | <b>4074</b>  |  |  |  | <b>T242D686K035(2)S</b> |  |
| <b>68.0</b>   | <b>D</b>     | <b>20</b>                      | <b>T140D686M035AS</b>   | <b>12.0</b>                        | <b>6</b>  | <b>0175</b>   | <b>0275</b> | <b>0375</b> | <b>0475</b>  | <b>2075</b>                | <b>3075</b> | <b>4075</b>  |  |  |  | <b>T242D686M035(2)S</b> |  |
| 82.0  | D            | 10, 20                         | T140D826(1)035AS        | 20.0                               | 8   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 100.0   | D            | 10, 20                         | T140D107(1)035AS        | 20.0                               | 8   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| <b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C</b> |              |                                |                         |                                    |   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 1.2   | A            | 10                             | T140A125K050AS          | 0.6                                | 4   | 0176  | 0276        | 0376        | 0476         | 2076                       | 3076        | 4076         |  |  |  | T242A125K050(2)S        |  |
| 1.2   | A            | 20                             | T140A125M050AS          | 0.6                                | 4   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 1.5   | A            | 10                             | T140A155K050AS          | 0.8                                | 4   | 0177  | 0277        | 0377        | 0477         | 2077                       | 3077        | 4077         |  |  |  | T242A155K050(2)S        |  |
| 1.5   | A            | 20                             | T140A155M050AS          | 0.8                                | 4   | 0178  | 0278        | 0378        | 0478         | 2078                       | 3078        | 4078         |  |  |  | T242A155M050(2)S        |  |
| 5.6   | B            | 10                             | T140B565K050AS          | 2.5                                | 4   | 0179  | 0279        | 0379        | 0479         | 2079                       | 3079        | 4079         |  |  |  | T242B565K050(2)S        |  |
| 5.6   | B            | 20                             | T140B565M050AS          | 2.5                                | 4   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| <b>6.8</b>  | <b>B</b>     | <b>10</b>                      | <b>T140B685K050AS</b>   | <b>2.5</b>                         | <b>4</b>  | <b>0180</b>   | <b>0280</b> | <b>0380</b> | <b>0480</b>  | <b>2080</b>                | <b>3080</b> | <b>4080</b>  |  |  |  | <b>T242B685K050(2)S</b> |  |
| <b>6.8</b>  | <b>B</b>     | <b>20</b>                      | <b>T140B685M050AS</b>   | <b>2.5</b>                         | <b>4</b>  | <b>0181</b>   | <b>0281</b> | <b>0381</b> | <b>0481</b>  | <b>2081</b>                | <b>3081</b> | <b>4081</b>  |  |  |  | <b>T242B685M050(2)S</b> |  |
| <b>22.0</b>   | <b>C</b>     | <b>10</b>                      | <b>T140C226K050AS</b>   | <b>7.0</b>                         | <b>6</b>  | <b>0182</b>   | <b>0282</b> | <b>0382</b> | <b>0482</b>  | <b>2082</b>                | <b>3082</b> | <b>4082</b>  |  |  |  | <b>T242C226K050(2)S</b> |  |
| <b>22.0</b>   | <b>C</b>     | <b>20</b>                      | <b>T140C226M050AS</b>   | <b>7.0</b>                         | <b>6</b>  | <b>0183</b>   | <b>0283</b> | <b>0383</b> | <b>0483</b>  | <b>2083</b>                | <b>3083</b> | <b>4083</b>  |  |  |  | <b>T242C226M050(2)S</b> |  |
| <b>27.0</b>   | <b>C</b>     | <b>10</b>                      | <b>T140C276K050AS</b>   | <b>8.0</b>                         | <b>6</b>  | <b>0184</b>   | <b>0284</b> | <b>0384</b> | <b>0484</b>  | <b>2084</b>                | <b>3084</b> | <b>4084</b>  |  |  |  | <b>T242C276K050(2)S</b> |  |
| <b>27.0</b>   | <b>C</b>     | <b>20</b>                      | <b>T140C276M050AS</b>   | <b>8.0</b>                         | <b>6</b>  |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 33.0  | D            | 10                             | T140D336K050AS          | 10.0                               | 6   | 0185  | 0285        | 0385        | 0485         | 2085                       | *           | *            |  |  |  | T242D336K050(2)S        |  |
| 33.0  | D            | 20                             | T140D336M050AS          | 10.0                               | 6   | 0186  | 0286        | 0386        | 0486         | 2086                       | *           | *            |  |  |  | T242D336M050(2)S        |  |
| <b>39.0</b>   | <b>D</b>     | <b>10</b>                      | <b>T140D396K050AS</b>   | <b>10.0</b>                        | <b>6</b>  | <b>0187</b>   | <b>0287</b> | <b>0387</b> | <b>0487</b>  | <b>2087</b>                | *           | *            |  |  |  | <b>T242D396K050(2)S</b> |  |
| <b>39.0</b>   | <b>D</b>     | <b>20</b>                      | <b>T140D396M050AS</b>   | <b>10.0</b>                        | <b>6</b>  |   |             |             |              |                            | *           | *            |  |  |  |                         |  |
| 47.0  | D            | 20                             | T140D476M050AS          | 10.0                               | 6   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| <b>60 VOLT RATING AT 85°C — 40 VOLT RATING AT 125°C</b> |              |                                |                         |                                    |   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 0.82  | A            | 10, 20                         | T140A824(1)060AS        | 0.5                                | 4   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 1.0   | A            | 10, 20                         | T140A105(1)060AS        | 0.5                                | 4   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 4.7   | B            | 10, 20                         | T140B475(1)060AS        | 3.0                                | 4   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 5.6   | B            | 10, 20                         | T140B565(1)060AS        | 3.0                                | 4   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 15.0  | C            | 10, 20                         | T140C156(1)060AS        | 5.0                                | 6   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 18.0  | C            | 10, 20                         | T140C186(1)060AS        | 6.0                                | 6   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| <b>22.0</b>   | <b>C</b>     | <b>10, 20</b>                  | <b>T140C226(1)060AS</b> | <b>7.0</b>                         | <b>6</b>  |   |             |             |              |                            |             |              |  |  |  |                         |  |
| 27.0  | D            | 10, 20                         | T140D276(1)060AS        | 10.0                               | 6   |   |             |             |              |                            |             |              |  |  |  |                         |  |
| <b>33.0</b>   | <b>D</b>     | <b>10, 20</b>                  | <b>T140D336(1)060AS</b> | <b>10.0</b>                        | <b>6</b>  |   |             |             |              |                            |             |              |  |  |  |                         |  |

(1) To complete T140 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.

\*Note: C Failure Rate not QPL for -3085 thru 3087

D Failure Rate not QPL for -4085 thru 4087

**Bold Face** lines indicate popular part types and values.

Available from 1.2  $\mu\text{F}$  to 1000  $\mu\text{F}$ , 6VDC to 50 VDC, these high capacitance-to-volume ratio, hermetically sealed solid tantalum capacitors are offered in standard MIL style A, B, C, and D cases. They meet or exceed the environmental and mechanical requirements of MIL-C-39003. Designed to operate from  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ , they exhibit

exceptionally low DC leakage, dissipation factor and impedance characteristics. They are ideal for coupling, bypass, filtering and timing circuits, and are excellent substitutes for wet tantalums in low voltage applications. They are available in style CSR33 (T252 Series) per MIL-PRF-39003/06.

T252 Series Tantalum  
Hermetically Sealed

**CAPACITOR OUTLINE DRAWINGS**



**DIMENSIONS — INCHES & (MILLIMETERS)**

| CASE SIZE | UNINSULATED                       |                                   | INSULATED                         |                                   | B<br>$\pm 0.002$<br>( $\pm .05$ ) | C<br>MAX.     |
|-----------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------|
|           | D<br>$\pm 0.005$<br>( $\pm .13$ ) | L<br>$\pm 0.031$<br>( $\pm .79$ ) | D<br>$\pm 0.010$<br>( $\pm .25$ ) | L<br>$\pm 0.031$<br>( $\pm .79$ ) |                                   |               |
| A         | 0.125 (3.18)                      | 0.250 (6.35)                      | 0.135 (3.43)                      | 0.286 (7.26)                      | 0.020 (.51)                       | 0.422 (10.72) |
| B         | 0.175 (4.45)                      | 0.438 (11.13)                     | 0.185 (4.70)                      | 0.474 (12.04)                     | 0.020 (.51)                       | 0.610 (15.49) |
| C         | 0.279 (7.09)                      | 0.650 (16.51)                     | 0.289 (7.34)                      | 0.686 (17.42)                     | 0.025 (.64)                       | 0.822 (20.88) |
| D         | 0.341 (8.66)                      | 0.750 (19.05)                     | 0.351 (8.92)                      | 0.786 (19.96)                     | 0.025 (.64)                       | 0.922 (23.42) |

**ORDERING INFORMATION**



For Military Marking Information, see page 4.





# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003 T252 (CSR33) SERIES

## RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>µF             | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T252 SERIES                  |  |   |            | MIL-PRF-39003 (CSR33) CAPACITORS |              |                            |             |              |  |
|-------------------------------|--------------|--------------------------------|------------------------------------|--|---|------------|----------------------------------|--------------|----------------------------|-------------|--------------|--|
|                               |              |                                | D.C.<br>LEAKAGE<br>µA@25°C<br>MAX. | MAX.<br>DISSI-<br>PATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |                                  |              | MIL-PRF-39003/6C<br>GRADED |             |              | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|                               |              |                                |                                    |  | MIL-PRF-39003/6C<br>EXPONENTIAL                           |            |                                  |              |                            |             |              |  |
|                               |              |                                |                                    |  | M<br>(1.0)  | P<br>(0.1) | R<br>(0.01)                      | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |  |
| <b>6 VOLT RATING AT 85°C</b>  |              |                                |                                    |  |   |            |                                  |              |                            |             |              |  |
| 10.0                          | A            | 10                             | 0.5                                | 6  | 0001  | 0101       | 0201                             | 0301         | 2001                       | 3001        | 4001         | T252A106K006(1)S                               |
| 10.0                          | A            | 20                             | 0.5                                | 6  | 0002  | 0102       | 0202                             | 0302         | 2002                       | 3002        | 4002         | T252A106M006(1)S                               |
| 12.0                          | A            | 10                             | 0.5                                | 6  | 0003  | 0103       | 0203                             | 0303         | 2003                       | 3003        | 4003         | T252A126K006(1)S                               |
| 100.0                         | B            | 10                             | 1.0                                | 8  | 0004  | 0104       | 0204                             | 0304         | 2004                       | 3004        | 4004         | T252B107K006(1)S                               |
| 100.0                         | B            | 20                             | 1.0                                | 8  | 0005  | 0105       | 0205                             | 0305         | 2005                       | 3005        | 4005         | T252B107M006(1)S                               |
| 330.0                         | C            | 10                             | 2.0                                | 8  | 0006  | 0106       | 0206                             | 0306         | 2006                       | 3006        | 4006         | T252C337K006(1)S                               |
| 330.0                         | C            | 20                             | 2.0                                | 8  | 0007  | 0107       | 0207                             | 0307         | 2007                       | 3007        | 4007         | T252C337M006(1)S                               |
| 390.0                         | C            | 10                             | 2.0                                | 10   | 0008  | 0108       | 0208                             | 0308         | 2008                       | 3008        | 4008         | T252C397K006(1)S                               |
| 470.0                         | C            | 10                             | 2.0                                | 10   | 0009  | 0109       | 0209                             | 0309         | 2009                       | 3009        | 4009         | T252C477K006(1)S                               |
| 470.0                         | C            | 20                             | 2.0                                | 10   | 0010  | 0110       | 0210                             | 0310         | 2010                       | 3010        | 4010         | T252C477M006(1)S                               |
| 680.0                         | D            | 10                             | 5.0                                | 10   | 0011  | 0111       | 0211                             | 0311         | 2011                       | 3011        | 4011         | T252D687K006(1)S                               |
| 680.0                         | D            | 20                             | 5.0                                | 10   | 0012  | 0112       | 0212                             | 0312         | 2012                       | 3012        | 4012         | T252D687M006(1)S                               |
| 820.0                         | D            | 10                             | 5.0                                | 10   | 0013  | 0113       | 0213                             | 0313         | 2013                       | 3013        | 4013         | T252D827K006(1)S                               |
| 1000.0                        | D            | 10                             | 5.0                                | 10   | 0014  | 0114       | 0214                             | 0314         | 2014                       | 3014        | 4014         | T252D108K006(1)S                               |
| 1000.0                        | D            | 20                             | 5.0                                | 10   | 0015  | 0115       | 0215                             | 0315         | 2015                       | 3015        | 4015         | T252D108M006(1)S                               |
| <b>10 VOLT RATING AT 85°C</b> |              |                                |                                    |  |   |            |                                  |              |                            |             |              |  |
| 6.8                           | A            | 10                             | .5                                 | 6  | 0016  | 0116       | 0216                             | 0316         | 2016                       | 3016        | 4016         | T252A685K010(1)S                               |
| 6.8                           | A            | 20                             | .5                                 | 6  | 0017  | 0117       | 0217                             | 0317         | 2017                       | 3017        | 4017         | T252A685M010(1)S                               |
| 8.2                           | A            | 10                             | .5                                 | 6  | 0018  | 0118       | 0218                             | 0318         | 2018                       | 3018        | 4018         | T252A825K010(1)S                               |
| 47.0                          | B            | 10                             | 1.0                                | 6  | 0019  | 0119       | 0219                             | 0319         | 2019                       | 3019        | 4019         | T252B476K010(1)S                               |
| 47.0                          | B            | 20                             | 1.0                                | 6  | 0020  | 0120       | 0220                             | 0320         | 2020                       | 3020        | 4020         | T252B476M010(1)S                               |
| 56.0                          | B            | 10                             | 1.0                                | 6  | 0021  | 0121       | 0221                             | 0321         | 2021                       | 3021        | 4021         | T252B566K010(1)S                               |
| 68.0                          | B            | 10                             | 1.0                                | 6  | 0022  | 0122       | 0222                             | 0322         | 2022                       | 3022        | 4022         | T252B686K010(1)S                               |
| 68.0                          | B            | 20                             | 1.0                                | 6  | 0023  | 0123       | 0223                             | 0323         | 2023                       | 3023        | 4023         | T252B686M010(1)S                               |
| 82.0                          | B            | 10                             | 1.0                                | 6  | 0024  | 0124       | 0224                             | 0324         | 2024                       | 3024        | 4024         | T252B826K010(1)S                               |
| 220.0                         | C            | 10                             | 1.0                                | 8  | 0025  | 0125       | 0225                             | 0325         | 2025                       | 3025        | 4025         | T252C227K010(1)S                               |
| 220.0                         | C            | 20                             | 1.0                                | 8  | 0026  | 0126       | 0226                             | 0326         | 2026                       | 3026        | 4026         | T252C227M010(1)S                               |
| 270.0                         | C            | 10                             | 2.0                                | 8  | 0027  | 0127       | 0227                             | 0327         | 2027                       | 3027        | 4027         | T252C277K010(1)S                               |
| 390.0                         | D            | 10                             | 2.0                                | 10   | 0028  | 0128       | 0228                             | 0328         | 2028                       | 3028        | 4028         | T252D397K010(1)S                               |
| 470.0                         | D            | 10                             | 4.0                                | 10   | 0029  | 0129       | 0229                             | 0329         | 2029                       | 3029        | 4029         | T252D477K010(1)S                               |
| 470.0                         | D            | 20                             | 4.0                                | 10   | 0030  | 0130       | 0230                             | 0330         | 2030                       | 3030        | 4030         | T252D477M010(1)S                               |
| 560.0                         | D            | 10                             | 4.0                                | 10   | 0031  | 0131       | 0231                             | 0331         | 2031                       | 3031        | 4031         | T252D567K010(1)S                               |
| <b>15 VOLT RATING AT 85°C</b> |              |                                |                                    |  |   |            |                                  |              |                            |             |              |  |
| 4.7                           | A            | 10                             | .5                                 | 4  | 0032  | 0132       | 0232                             | 0332         | 2032                       | 3032        | 4032         | T252A475K015(1)S                               |
| 4.7                           | A            | 20                             | .5                                 | 4  | 0033  | 0133       | 0233                             | 0333         | 2033                       | 3033        | 4033         | T252A475M015(1)S                               |
| 5.6                           | A            | 10                             | .5                                 | 4  | 0034  | 0134       | 0234                             | 0334         | 2034                       | 3034        | 4034         | T252A565K015(1)S                               |
| 33.0                          | B            | 10                             | 1.0                                | 6  | 0035  | 0135       | 0235                             | 0335         | 2035                       | 3035        | 4035         | T252B336K015(1)S                               |
| 33.0                          | B            | 20                             | 1.0                                | 6  | 0036  | 0136       | 0236                             | 0336         | 2036                       | 3036        | 4036         | T252B336M015(1)S                               |
| 39.0                          | B            | 10                             | 1.0                                | 6  | 0037  | 0137       | 0237                             | 0337         | 2037                       | 3037        | 4037         | T252B396K015(1)S                               |
| 150.0                         | C            | 10                             | 1.0                                | 8  | 0038  | 0138       | 0238                             | 0338         | 2038                       | 3038        | 4038         | T252C157K015(1)S                               |
| 150.0                         | C            | 20                             | 1.0                                | 8  | 0039  | 0139       | 0239                             | 0339         | 2039                       | 3039        | 4039         | T252C157M015(1)S                               |
| 180.0                         | C            | 10                             | 2.0                                | 8  | 0040  | 0140       | 0240                             | 0340         | 2040                       | 3040        | 4040         | T252C187K015(1)S                               |
| 220.0                         | D            | 10                             | 2.0                                | 8  | 0041  | 0141       | 0241                             | 0341         | 2041                       | 3041        | 4041         | T252D227K015(1)S                               |
| 220.0                         | D            | 20                             | 2.0                                | 8  | 0042  | 0142       | 0242                             | 0342         | 2042                       | 3042        | 4042         | T252D227M015(1)S                               |
| 270.0                         | D            | 10                             | 2.0                                | 8  | 0043  | 0143       | 0243                             | 0343         | 2043                       | 3043        | 4043         | T252D277K015(1)S                               |
| 330.0                         | D            | 10                             | 2.0                                | 8  | 0044  | 0144       | 0244                             | 0344         | 2044                       | 3044        | 4044         | T252D337K015(1)S                               |
| 330.0                         | D            | 20                             | 2.0                                | 8  | 0045  | 0145       | 0245                             | 0345         | 2045                       | 3045        | 4045         | T252D337M015(1)S                               |

(1) To complete Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 31.

**RATINGS & PART NUMBER REFERENCE**

| CAPACITANCE<br>µF             | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T252 SERIES                  |  |   |            | MIL-PRF-39003 (CSR33) CAPACITORS |              |                            |             |              |                  |  |
|-------------------------------|--------------|--------------------------------|------------------------------------|--|---|------------|----------------------------------|--------------|----------------------------|-------------|--------------|------------------|--|
|                               |              |                                | D.C.<br>LEAKAGE<br>µA@25°C<br>MAX. | MAX.<br>DISSI-<br>PATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |                                  |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|                               |              |                                |                                    |  | MIL-PRF-39003/6C<br>EXPONENTIAL                           |            |                                  |              | MIL-PRF-39003/6C<br>GRADED |             |              |                  |  |
|                               |              |                                |                                    |  | M<br>(1.0)  | P<br>(0.1) | R<br>(0.01)                      | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |  |
| <b>20 VOLT RATING AT 85°C</b> |              |                                |                                    |  |   |            |                                  |              |                            |             |              |                  |  |
| 2.7                           | A            | 10                             | .5                                 | 4  | 0046  | 0146       | 0246                             | 0346         | 2046                       | 3046        | 4046         | T252A275K020(1)S |  |
| 3.3                           | A            | 10                             | .5                                 | 4  | 0047  | 0147       | 0247                             | 0347         | 2047                       | 3047        | 4047         | T252A335K020(1)S |  |
| 3.3                           | A            | 20                             | .5                                 | 4  | 0048  | 0148       | 0248                             | 0348         | 2048                       | 3048        | 4048         | T252A335M020(1)S |  |
| 3.9                           | A            | 10                             | .5                                 | 4  | 0049  | 0149       | 0249                             | 0349         | 2049                       | 3049        | 4049         | T252A395K020(1)S |  |
| 18.0                          | B            | 10                             | 1.0                                | 6  | 0050  | 0150       | 0250                             | 0350         | 2050                       | 3050        | 4050         | T252B186K020(1)S |  |
| 22.0                          | B            | 10                             | 1.0                                | 6  | 0051  | 0151       | 0251                             | 0351         | 2051                       | 3051        | 4051         | T252B226K020(1)S |  |
| 22.0                          | B            | 20                             | 1.0                                | 6  | 0052  | 0152       | 0252                             | 0352         | 2052                       | 3052        | 4052         | T252B226M020(1)S |  |
| 27.0                          | B            | 10                             | 1.0                                | 6  | 0053  | 0153       | 0253                             | 0353         | 2053                       | 3053        | 4053         | T252B276K020(1)S |  |
| 56.0                          | C            | 10                             | 1.0                                | 6  | 0054  | 0154       | 0254                             | 0354         | 2054                       | 3054        | 4054         | T252C566K020(1)S |  |
| 68.0                          | C            | 10                             | 1.0                                | 6  | 0055  | 0155       | 0255                             | 0355         | 2055                       | 3055        | 4055         | T252C686K020(1)S |  |
| 68.0                          | C            | 20                             | 1.0                                | 6  | 0056  | 0156       | 0256                             | 0356         | 2056                       | 3056        | 4056         | T252C686M020(1)S |  |
| 82.0                          | C            | 10                             | 1.0                                | 6  | 0057  | 0157       | 0257                             | 0357         | 2057                       | 3057        | 4057         | T252C826K020(1)S |  |
| 100.0                         | C            | 10                             | 1.0                                | 6  | 0058  | 0158       | 0258                             | 0358         | 2058                       | 3058        | 4058         | T252C107K020(1)S |  |
| 100.0                         | C            | 20                             | 1.0                                | 6  | 0059  | 0159       | 0259                             | 0359         | 2059                       | 3059        | 4059         | T252C107M020(1)S |  |
| 120.0                         | C            | 10                             | 1.0                                | 6  | 0060  | 0160       | 0260                             | 0360         | 2060                       | 3060        | 4060         | T252C127K020(1)S |  |
| 150.0                         | D            | 10                             | 2.0                                | 8  | 0061  | 0161       | 0261                             | 0361         | 2061                       | 3061        | 4061         | T252D157K020(1)S |  |
| 150.0                         | D            | 20                             | 2.0                                | 8  | 0062  | 0162       | 0262                             | 0362         | 2062                       | 3062        | 4062         | T252D157M020(1)S |  |
| 180.0                         | D            | 10                             | 2.0                                | 8  | 0063  | 0163       | 0263                             | 0363         | 2063                       | 3063        | 4063         | T252D187K020(1)S |  |
| <b>35 VOLT RATING AT 85°C</b> |              |                                |                                    |  |   |            |                                  |              |                            |             |              |                  |  |
| 1.8                           | A            | 10                             | .5                                 | 4  | 0064  | 0164       | 0264                             | 0364         | 2064                       | 3064        | 4064         | T252A185K035(1)S |  |
| 8.2                           | B            | 10                             | 1.0                                | 6  | 0065  | 0165       | 0265                             | 0365         | 2065                       | 3065        | 4065         | T252B825K035(1)S |  |
| 10.0                          | B            | 10                             | 1.0                                | 6  | 0066  | 0166       | 0266                             | 0366         | 2066                       | 3066        | 4066         | T252B106K035(1)S |  |
| 10.0                          | B            | 20                             | 1.0                                | 6  | 0067  | 0167       | 0267                             | 0367         | 2067                       | 3067        | 4067         | T252B106M035(1)S |  |
| 33.0                          | C            | 10                             | 1.0                                | 6  | 0068  | 0168       | 0268                             | 0368         | 2068                       | 3068        | 4068         | T252C336K035(1)S |  |
| 33.0                          | C            | 20                             | 1.0                                | 6  | 0069  | 0169       | 0269                             | 0369         | 2069                       | 3069        | 4069         | T252C336M035(1)S |  |
| 39.0                          | C            | 10                             | 1.0                                | 6  | 0070  | 0170       | 0270                             | 0370         | 2070                       | 3070        | 4070         | T252C396K035(1)S |  |
| 47.0                          | C            | 10                             | 1.0                                | 6  | 0071  | 0171       | 0271                             | 0371         | 2071                       | 3071        | 4071         | T252C476K035(1)S |  |
| 47.0                          | C            | 20                             | 1.0                                | 6  | 0072  | 0172       | 0272                             | 0372         | 2072                       | 3072        | 4072         | T252C476M035(1)S |  |
| 56.0                          | D            | 10                             | 2.0                                | 6  | 0073  | 0173       | 0273                             | 0373         | 2073                       | 3073        | 4073         | T252D566K035(1)S |  |
| 68.0                          | D            | 10                             | 2.0                                | 6  | 0074  | 0174       | 0274                             | 0374         | 2074                       | 3074        | 4074         | T252D686K035(1)S |  |
| 68.0                          | D            | 20                             | 2.0                                | 6  | 0075  | 0175       | 0275                             | 0375         | 2075                       | 3075        | 4075         | T252D686M035(1)S |  |
| <b>50 VOLT RATING AT 85°C</b> |              |                                |                                    |  |   |            |                                  |              |                            |             |              |                  |  |
| 1.2                           | A            | 10                             | .5                                 | 4  | 0076  | 0176       | 0276                             | 0376         | 2076                       | 3076        | 4076         | T252A125K050(1)S |  |
| 1.5                           | A            | 10                             | .5                                 | 4  | 0077  | 0177       | 0277                             | 0377         | 2077                       | 3077        | 4077         | T252A155K050(1)S |  |
| 1.5                           | A            | 20                             | .5                                 | 4  | 0078  | 0178       | 0278                             | 0378         | 2078                       | 3078        | 4078         | T252A155M050(1)S |  |
| 5.6                           | B            | 10                             | 1.0                                | 4  | 0079  | 0179       | 0279                             | 0379         | 2079                       | 3079        | 4079         | T252B565K050(1)S |  |
| 6.8                           | B            | 10                             | 1.0                                | 6  | 0080  | 0180       | 0280                             | 0380         | 2080                       | 3080        | 4080         | T252B685K050(1)S |  |
| 6.8                           | B            | 20                             | 1.0                                | 6  | 0081  | 0181       | 0281                             | 0381         | 2081                       | 3081        | 4081         | T252B685M050(1)S |  |
| 22.0                          | C            | 10                             | 1.0                                | 6  | 0082  | 0182       | 0282                             | 0382         | 2082                       | 3082        | 4082         | T252C226K050(1)S |  |
| 22.0                          | C            | 20                             | 1.0                                | 6  | 0083  | 0183       | 0283                             | 0383         | 2083                       | 3083        | 4083         | T252C226M050(1)S |  |
| 27.0                          | C            | 10                             | 1.0                                | 6  | 0084  | 0184       | 0284                             | 0384         | 2084                       | 3084        | 4084         | T252C276K050(1)S |  |
| 33.0                          | D            | 10                             | 1.0                                | 6  | 0085  | 0185       | 0285                             | 0385         | 2085                       | *           | *            | T252D336K050(1)S |  |
| 33.0                          | D            | 20                             | 1.0                                | 6  | 0086  | 0186       | 0286                             | 0386         | 2086                       | *           | *            | T252D336M050(1)S |  |
| 39.0                          | D            | 10                             | 1.0                                | 6  | 0087  | 0187       | 0287                             | 0387         | 2087                       | *           | *            | T252D396K050(1)S |  |

(1) To complete Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 31.  
\*NOTE: C Failure rate not QPL for -3085 thru 3087.  
D Failure rate not QPL for -4085 thru 4087.

T252 Series Tantalum  
Hermetically Sealed

KEMET's T262 (CSR21) per MIL-C-39003/09 hermetically sealed solid tantalum capacitors are similar to KEMET's popular T212 (CSR13 per MIL-PRF-39003/01) capacitors shown on page 6, but offer higher ripple current handling capability and exhibit exceptionally low Equivalent Series Resistance (ESR).

The T262 Series is ideal for filtering applications and in military power supplies where low ESR is essential. T262s are 100% surge current tested and their dissipation factor is screened at 1kHz. Available in C & D case sizes only, 5.6 to 330  $\mu$ F, 6 to 50 VDC.

## CAPACITOR OUTLINE DRAWINGS



## DIMENSIONS — INCHES & (MILLIMETERS)

| CASE SIZE | UNINSULATED                       |                                   | INSULATED                         |                                   | B<br>$\pm 0.002$<br>( $\pm .05$ ) | C<br>MAX.     |
|-----------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------|
|           | D<br>$\pm 0.005$<br>( $\pm .13$ ) | L<br>$\pm 0.031$<br>( $\pm .79$ ) | D<br>$\pm 0.010$<br>( $\pm .25$ ) | L<br>$\pm 0.031$<br>( $\pm .79$ ) |                                   |               |
| C         | 0.279 (7.09)                      | 0.650 (16.51)                     | 0.289 (7.34)                      | 0.686 (17.42)                     | 0.025 (.64)                       | 0.822 (20.88) |
| D         | 0.341 (8.66)                      | 0.750 (19.05)                     | 0.351 (8.92)                      | 0.786 (19.96)                     | 0.025 (.64)                       | 0.922 (23.42) |

## ORDERING INFORMATION



For Military Marking Information, see page 4.

RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                       | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T262 SERIES                  |   |                                |   | MIL-PRF-39003/09 (CSR21) CAPACITORS                       |            |             |              |                            |             |              | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|---|--------------|--------------------------------|------------------------------------|---|--------------------------------|---|---|------------|-------------|--------------|----------------------------|-------------|--------------|--|
|   |              |                                | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX. DISSI-<br>PATION<br>FACTOR<br>%@25°C,<br>1 kHz | MAX. ESR<br>Ω@25°C,<br>100 kHz | MAX. RIPPLE<br>CURRENT<br>Arms@25°C<br>40 kHz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |  |
|   |              |                                |                                    |   |                                |   | MIL-PRF-39003/9D<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/9D<br>GRADED |             |              |  |
|   |              |                                |                                    |   |                                |   | M<br>(1.0)  | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |  |
| <b>6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C</b>   |              |                                |                                    |   |                                |   |   |            |             |              |                            |             |              |  |
| 150.0   | C            | 5                              | 4.5                                | 10  | .065                           | 3.3   | 0001  | 0101       | 0201        | 0301         | 2001                       | 3001        | 4001         | T262C157J006(1)S                               |
| 150.0   | C            | 10                             | 4.5                                | 10  | .065                           | 3.3   | 0002  | 0102       | 0202        | 0302         | 2002                       | 3002        | 4002         | T262C157K006(1)S                               |
| 150.0   | C            | 20                             | 4.5                                | 10  | .065                           | 3.3   | 0003  | 0103       | 0203        | 0303         | 2003                       | 3003        | 4003         | T262C157M006(1)S                               |
| 180.0   | C            | 5                              | 5.5                                | 10  | .060                           | 3.4   | 0004  | 0104       | 0204        | 0304         | 2004                       | 3004        | 4004         | T262C187J006(1)S                               |
| 180.0   | C            | 10                             | 5.5                                | 10  | .060                           | 3.4   | 0005  | 0105       | 0205        | 0305         | 2005                       | 3005        | 4005         | T262C187K006(1)S                               |
| 270.0   | D            | 5                              | 6.5                                | 10  | .050                           | 4.1   | 0006  | 0106       | 0206        | 0306         | 2006                       | 3006        | 4006         | T262D277J006(1)S                               |
| 270.0   | D            | 10                             | 6.5                                | 10  | .050                           | 4.1   | 0007  | 0107       | 0207        | 0307         | 2007                       | 3007        | 4007         | T262D277K006(1)S                               |
| 330.0   | D            | 5                              | 7.5                                | 12  | .045                           | 4.3   | 0008  | 0108       | 0208        | 0308         | 2008                       | 3008        | 4008         | T262D337J006(1)S                               |
| 330.0   | D            | 10                             | 7.5                                | 12  | .045                           | 4.3   | 0009  | 0109       | 0209        | 0309         | 2009                       | 3009        | 4009         | T262D337K006(1)S                               |
| 330.0   | D            | 20                             | 7.5                                | 12  | .045                           | 4.3   | 0010  | 0110       | 0210        | 0310         | 2010                       | 3010        | 4010         | T262D337M006(1)S                               |
| <b>10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C</b>  |              |                                |                                    |   |                                |   |   |            |             |              |                            |             |              |  |
| 82.0  | C            | 5                              | 4.0                                | 8   | .085                           | 2.9   | 0011  | 0111       | 0211        | 0311         | 2011                       | 3011        | 4011         | T262C826J010(1)S                               |
| 82.0  | C            | 10                             | 4.0                                | 8   | .085                           | 2.9   | 0012  | 0112       | 0212        | 0312         | 2012                       | 3012        | 4012         | T262C826K010(1)S                               |
| 100.0   | C            | 5                              | 5.0                                | 8   | .075                           | 3.0   | 0013  | 0113       | 0213        | 0313         | 2013                       | 3013        | 4013         | T262C107J010(1)S                               |
| 100.0   | C            | 10                             | 5.0                                | 8   | .075                           | 3.0   | 0014  | 0114       | 0214        | 0314         | 2014                       | 3014        | 4014         | T262C107K010(1)S                               |
| 100.0   | C            | 20                             | 5.0                                | 8   | .075                           | 3.0   | 0015  | 0115       | 0215        | 0315         | 2015                       | 3015        | 4015         | T262C107M010(1)S                               |
| 120.0   | C            | 5                              | 6.0                                | 8   | .070                           | 3.2   | 0016  | 0116       | 0216        | 0316         | 2016                       | 3016        | 4016         | T262C127J010(1)S                               |
| 120.0   | C            | 10                             | 6.0                                | 8   | .070                           | 3.2   | 0017  | 0117       | 0217        | 0317         | 2017                       | 3017        | 4017         | T262C127K010(1)S                               |
| 180.0   | D            | 5                              | 9.0                                | 8   | .060                           | 3.7   | 0018  | 0118       | 0218        | 0318         | 2018                       | 3018        | 4018         | T262D187J010(1)S                               |
| 180.0   | D            | 10                             | 9.0                                | 8   | .060                           | 3.7   | 0019  | 0119       | 0219        | 0319         | 2019                       | 3019        | 4019         | T262D187K010(1)S                               |
| 220.0   | D            | 5                              | 10.0                               | 10  | .055                           | 3.9   | 0020  | 0120       | 0220        | 0320         | 2020                       | 3020        | 4020         | T262D227J010(1)S                               |
| 220.0   | D            | 10                             | 10.0                               | 10  | .055                           | 3.9   | 0021  | 0121       | 0221        | 0321         | 2021                       | 3021        | 4021         | T262D227K010(1)S                               |
| 220.0   | D            | 20                             | 10.0                               | 10  | .055                           | 3.9   | 0022  | 0122       | 0222        | 0322         | 2022                       | 3022        | 4022         | T262D227M010(1)S                               |
| <b>15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C</b> |              |                                |                                    |   |                                |   |   |            |             |              |                            |             |              |  |
| 56.0  | C            | 5                              | 4.0                                | 6   | .100                           | 2.6   | 0023  | 0123       | 0223        | 0323         | 2023                       | 3023        | 4023         | T262C566J015(1)S                               |
| 56.0  | C            | 10                             | 4.0                                | 6   | .100                           | 2.6   | 0024  | 0124       | 0224        | 0324         | 2024                       | 3024        | 4024         | T262C566K015(1)S                               |
| 68.0  | C            | 5                              | 5.0                                | 6   | .095                           | 2.7   | 0025  | 0125       | 0225        | 0325         | 2025                       | 3025        | 4025         | T262C686J015(1)S                               |
| 68.0  | C            | 10                             | 5.0                                | 6   | .095                           | 2.7   | 0026  | 0126       | 0226        | 0326         | 2026                       | 3026        | 4026         | T262C686K015(1)S                               |
| 68.0  | C            | 20                             | 5.0                                | 6   | .095                           | 2.7   | 0027  | 0127       | 0227        | 0327         | 2027                       | 3027        | 4027         | T262C686M015(1)S                               |
| 120.0   | D            | 5                              | 9.0                                | 8   | .070                           | 3.5   | 0028  | 0128       | 0228        | 0328         | 2028                       | 3028        | 4028         | T262D127J015(1)S                               |
| 120.0   | D            | 10                             | 9.0                                | 8   | .070                           | 3.5   | 0029  | 0129       | 0229        | 0329         | 2029                       | 3029        | 4029         | T262D127K015(1)S                               |
| 150.0   | D            | 5                              | 10.0                               | 8   | .065                           | 3.6   | 0030  | 0130       | 0230        | 0330         | 2030                       | 3030        | 4030         | T262D157J015(1)S                               |
| 150.0   | D            | 10                             | 10.0                               | 8   | .065                           | 3.6   | 0031  | 0131       | 0231        | 0331         | 2031                       | 3031        | 4031         | T262D157K015(1)S                               |
| 150.0   | D            | 20                             | 10.0                               | 8   | .065                           | 3.6   | 0032  | 0132       | 0232        | 0332         | 2032                       | 3032        | 4032         | T262D157M015(1)S                               |
| <b>20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C</b> |              |                                |                                    |   |                                |   |   |            |             |              |                            |             |              |  |
| 27.0  | C            | 5                              | 2.5                                | 5   | .145                           | 2.2   | 0033  | 0133       | 0233        | 0333         | 2033                       | 3033        | 4033         | T262C276J020(1)S                               |
| 27.0  | C            | 10                             | 2.5                                | 5   | .145                           | 2.2   | 0034  | 0134       | 0234        | 0334         | 2034                       | 3034        | 4034         | T262C276K020(1)S                               |
| 33.0  | C            | 5                              | 3.5                                | 5   | .130                           | 2.3   | 0035  | 0135       | 0235        | 0335         | 2035                       | 3035        | 4035         | T262C336J020(1)S                               |
| 33.0  | C            | 10                             | 3.5                                | 5   | .130                           | 2.3   | 0036  | 0136       | 0236        | 0336         | 2036                       | 3036        | 4036         | T262C336K020(1)S                               |
| 33.0  | C            | 20                             | 3.5                                | 5   | .130                           | 2.3   | 0037  | 0137       | 0237        | 0337         | 2037                       | 3037        | 4037         | T262C336M020(1)S                               |
| 39.0  | C            | 5                              | 4.0                                | 5   | .120                           | 2.4   | 0038  | 0138       | 0238        | 0338         | 2038                       | 3038        | 4038         | T262C396J020(1)S                               |
| 39.0  | C            | 10                             | 4.0                                | 5   | .120                           | 2.4   | 0039  | 0139       | 0239        | 0339         | 2039                       | 3039        | 4039         | T262C396K020(1)S                               |
| 47.0  | C            | 5                              | 4.5                                | 6   | .110                           | 2.5   | 0040  | 0140       | 0240        | 0340         | 2040                       | 3040        | 4040         | T262C476J020(1)S                               |
| 47.0  | C            | 10                             | 4.5                                | 6   | .110                           | 2.5   | 0041  | 0141       | 0241        | 0341         | 2041                       | 3041        | 4041         | T262C476K020(1)S                               |
| 47.0  | C            | 20                             | 4.5                                | 6   | .110                           | 2.5   | 0042  | 0142       | 0242        | 0342         | 2042                       | 3042        | 4042         | T262C476M020(1)S                               |
| 56.0  | D            | 5                              | 5.5                                | 6   | .100                           | 2.9   | 0043  | 0143       | 0243        | 0343         | 2043                       | 3043        | 4043         | T262D566J020(1)S                               |
| 56.0  | D            | 10                             | 5.5                                | 6   | .100                           | 2.9   | 0044  | 0144       | 0244        | 0344         | 2044                       | 3044        | 4044         | T262D566K020(1)S                               |
| 68.0  | D            | 5                              | 7.0                                | 6   | .095                           | 3.0   | 0045  | 0145       | 0245        | 0345         | 2045                       | 3045        | 4045         | T262D686J020(1)S                               |
| 68.0  | D            | 10                             | 7.0                                | 6   | .095                           | 3.0   | 0046  | 0146       | 0246        | 0346         | 2046                       | 3046        | 4046         | T262D686K020(1)S                               |
| 68.0  | D            | 20                             | 7.0                                | 6   | .095                           | 3.0   | 0047  | 0147       | 0247        | 0347         | 2047                       | 3047        | 4047         | T262D686M020(1)S                               |
| 82.0  | D            | 5                              | 8.0                                | 6   | .085                           | 3.1   | 0048  | 0148       | 0248        | 0348         | 2048                       | 3048        | 4048         | T262D826J020(1)S                               |
| 82.0  | D            | 10                             | 8.0                                | 6   | .085                           | 3.1   | 0049  | 0149       | 0249        | 0349         | 2049                       | 3049        | 4049         | T262D826K020(1)S                               |
| 100.0   | D            | 5                              | 10.0                               | 8   | .075                           | 3.3   | 0050  | 0150       | 0250        | 0350         | 2050                       | 3050        | 4050         | T262D107J020(1)S                               |
| 100.0   | D            | 10                             | 10.0                               | 8   | .075                           | 3.3   | 0051  | 0151       | 0251        | 0351         | 2051                       | 3051        | 4051         | T262D107K020(1)S                               |
| 100.0   | D            | 20                             | 10.0                               | 8   | .075                           | 3.3   | 0052  | 0152       | 0252        | 0352         | 2052                       | 3052        | 4052         | T262D107M020(1)S                               |

(1) To complete the T262 Series Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 34.

T262 Series Tantalum  
Hermetically Sealed

**RATINGS & PART NUMBER REFERENCE**

| CAPACITANCE<br>μF                                       | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T262 SERIES                  |  |                                |   | MIL-PRF-39003/09 (CSR21) CAPACITORS                       |            |             |              |                            |             |              | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|---|--------------|--------------------------------|------------------------------------|--|--------------------------------|---|---|------------|-------------|--------------|----------------------------|-------------|--------------|--|
|   |              |                                | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSI-<br>PATION<br>FACTOR<br>%@25°C,<br>1 kHz | MAX. ESR<br>Ω@25°C,<br>100 kHz | MAX. RIPPLE<br>CURRENT<br>Arms@25°C<br>40 kHz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |  |
|   |              |                                |                                    |  |                                |   | MIL-PRF-39003/9D<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/9D<br>GRADED |             |              |  |
|   |              |                                |                                    |  |                                |   | M<br>(1.0)  | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |  |
| <b>35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C</b> |              |                                |                                    |  |                                |   |   |            |             |              |                            |             |              |  |
| 22.0  | C            | 5                              | 4.0                                | 4  | .160                           | 2.1   | 0053  | 0153       | 0253        | 0353         | 2053                       | 3053        | 4053         | T262C226J035(1)S                               |
| 22.0  | C            | 10                             | 4.0                                | 4  | .160                           | 2.1   | 0054  | 0154       | 0254        | 0354         | 2054                       | 3054        | 4054         | T262C226K035(1)S                               |
| 22.0  | C            | 20                             | 4.0                                | 4  | .160                           | 2.1   | 0055  | 0155       | 0255        | 0355         | 2055                       | 3055        | 4055         | T262C226M035(1)S                               |
| 27.0  | D            | 5                              | 4.5                                | 4  | .145                           | 2.4   | 0056  | 0156       | 0256        | 0356         | 2056                       | 3056        | 4056         | T262D276J035(1)S                               |
| 27.0  | D            | 10                             | 4.5                                | 4  | .145                           | 2.4   | 0057  | 0157       | 0257        | 0357         | 2057                       | 3057        | 4057         | T262D276K035(1)S                               |
| 33.0  | D            | 5                              | 5.5                                | 5  | .130                           | 2.5   | 0058  | 0158       | 0258        | 0358         | 2058                       | 3058        | 4058         | T262D336J035(1)S                               |
| 33.0  | D            | 10                             | 5.5                                | 5  | .130                           | 2.5   | 0059  | 0159       | 0259        | 0359         | 2059                       | 3059        | 4059         | T262D336K035(1)S                               |
| 33.0  | D            | 20                             | 5.5                                | 5  | .130                           | 2.5   | 0060  | 0160       | 0260        | 0360         | 2060                       | 3060        | 4060         | T262D336M035(1)S                               |
| 39.0  | D            | 5                              | 7.0                                | 5  | .120                           | 2.6   | 0061  | 0161       | 0261        | 0361         | 2061                       | 3061        | 4061         | T262D396J035(1)S                               |
| 39.0  | D            | 10                             | 7.0                                | 5  | .120                           | 2.6   | 0062  | 0162       | 0262        | 0362         | 2062                       | 3062        | 4062         | T262D396K035(1)S                               |
| 47.0  | D            | 5                              | 8.0                                | 5  | .110                           | 2.7   | 0063  | 0163       | 0263        | 0363         | 2063                       | 3063        | 4063         | T262D476J035(1)S                               |
| 47.0  | D            | 10                             | 8.0                                | 5  | .110                           | 2.7   | 0064  | 0164       | 0264        | 0364         | 2064                       | 3064        | 4064         | T262D476K035(1)S                               |
| 47.0  | D            | 20                             | 8.0                                | 5  | .110                           | 2.7   | 0065  | 0165       | 0265        | 0365         | 2065                       | 3065        | 4065         | T262D476M035(1)S                               |
| <b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C</b> |              |                                |                                    |  |                                |   |   |            |             |              |                            |             |              |  |
| 5.6   | C            | 5                              | 2.2                                | 3  | .300                           | 1.5   | 0066  | 0166       | 0266        | 0366         | 2066                       | 3066        | 4066         | T262C565J050(1)S                               |
| 5.6   | C            | 10                             | 2.2                                | 3  | .300                           | 1.5   | 0067  | 0167       | 0267        | 0367         | 2067                       | 3067        | 4067         | T262C565K050(1)S                               |
| 6.8   | C            | 5                              | 2.2                                | 3  | .275                           | 1.6   | 0068  | 0168       | 0268        | 0368         | 2068                       | 3068        | 4068         | T262C685J050(1)S                               |
| 6.8   | C            | 10                             | 2.2                                | 3  | .275                           | 1.6   | 0069  | 0169       | 0269        | 0369         | 2069                       | 3069        | 4069         | T262C685K050(1)S                               |
| 6.8   | C            | 20                             | 2.2                                | 3  | .275                           | 1.6   | 0070  | 0170       | 0270        | 0370         | 2070                       | 3070        | 4070         | T262C685M050(1)S                               |
| 8.2   | C            | 5                              | 2.5                                | 3  | .250                           | 1.6   | 0071  | 0171       | 0271        | 0371         | 2071                       | 3071        | 4071         | T262C825J050(1)S                               |
| 8.2   | C            | 10                             | 2.5                                | 3  | .250                           | 1.6   | 0072  | 0172       | 0272        | 0372         | 2072                       | 3072        | 4072         | T262C825K050(1)S                               |
| 10.0  | C            | 5                              | 2.5                                | 3  | .230                           | 1.7   | 0073  | 0173       | 0273        | 0373         | 2073                       | 3073        | 4073         | T262C106J050(1)S                               |
| 10.0  | C            | 10                             | 2.5                                | 3  | .230                           | 1.7   | 0074  | 0174       | 0274        | 0374         | 2074                       | 3074        | 4074         | T262C106K050(1)S                               |
| 10.0  | C            | 20                             | 2.5                                | 3  | .230                           | 1.7   | 0075  | 0175       | 0275        | 0375         | 2075                       | 3075        | 4075         | T262C106M050(1)S                               |
| 12.0  | C            | 5                              | 3.0                                | 3  | .210                           | 1.8   | 0076  | 0176       | 0276        | 0376         | 2076                       | 3076        | 4076         | T262C126J050(1)S                               |
| 12.0  | C            | 10                             | 3.0                                | 3  | .210                           | 1.8   | 0077  | 0177       | 0277        | 0377         | 2077                       | 3077        | 4077         | T262C126K050(1)S                               |
| 15.0  | C            | 5                              | 4.0                                | 3  | .190                           | 1.9   | 0078  | 0178       | 0278        | 0378         | 2078                       | 3078        | 4078         | T262C156J050(1)S                               |
| 15.0  | C            | 10                             | 4.0                                | 3  | .190                           | 1.9   | 0079  | 0179       | 0279        | 0379         | 2079                       | 3079        | 4079         | T262C156K050(1)S                               |
| 15.0  | C            | 20                             | 4.0                                | 3  | .190                           | 1.9   | 0080  | 0180       | 0280        | 0380         | 2080                       | 3080        | 4080         | T262C156M050(1)S                               |
| 18.0  | C            | 5                              | 4.5                                | 4  | .175                           | 2.0   | 0081  | 0181       | 0281        | 0381         | 2081                       | 3081        | 4081         | T262C186J050(1)S                               |
| 18.0  | C            | 10                             | 4.5                                | 4  | .175                           | 2.0   | 0082  | 0182       | 0282        | 0382         | 2082                       | 3082        | 4082         | T262C186K050(1)S                               |
| 22.0  | D            | 5                              | 5.5                                | 4  | .160                           | 2.3   | 0083  | 0183       | 0283        | 0383         | 2083                       | 3083        | 4083         | T262D226J050(1)S                               |
| 22.0  | D            | 10                             | 5.5                                | 4  | .160                           | 2.3   | 0084  | 0184       | 0284        | 0384         | 2084                       | 3084        | 4084         | T262D226K050(1)S                               |
| 22.0  | D            | 20                             | 5.5                                | 4  | .160                           | 2.3   | 0085  | 0185       | 0285        | 0385         | 2085                       | 3085        | 4085         | T262D226M050(1)S                               |

(1) To complete the T262 Series Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 34.



T216 and T256 are KEMET's new designation for MIL-Style CSS13 and CSS33 capacitors. The T216/T256 Series is qualified to all failure rates per MIL-PRF-39003/10. Products meeting this specification have passed rigorous test requirements and are used in space applications or other equally demanding environments.

The T216 is available in capacitance ratings from .15 µF to 330 µF; voltage ratings from 6 VDC to 75 VDC. The T256 is available in capacitance ratings from 1.2 µF to 1000 µF with voltage ratings of 6 VDC to 50 VDC.

These capacitors provide circuit designers an excellent choice for blocking, bypass, decoupling, filtering and timing applications.

**CAPACITOR OUTLINE DRAWINGS**



**DIMENSIONS — INCHES & (MILLIMETERS)**

| CASE SIZE | UNINSULATED           |                       | INSULATED             |                       | B<br>±0.002<br>(±.05) | C<br>MAX.     |
|-----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
|           | D<br>±0.005<br>(±.13) | L<br>±0.031<br>(±.79) | D<br>±0.010<br>(±.25) | L<br>±0.031<br>(±.79) |                       |               |
| A         | 0.125 (3.18)          | 0.250 (6.35)          | 0.135 (3.43)          | 0.286 (7.26)          | 0.020 (.51)           | 0.422 (10.72) |
| B         | 0.175 (4.45)          | 0.438 (11.13)         | 0.185 (4.70)          | 0.474 (12.04)         | 0.020 (.51)           | 0.610 (15.49) |
| C         | 0.279 (7.09)          | 0.650 (16.51)         | 0.289 (7.34)          | 0.686 (17.42)         | 0.025 (.64)           | 0.822 (20.88) |
| D         | 0.341 (8.66)          | 0.750 (19.05)         | 0.351 (8.92)          | 0.786 (19.96)         | 0.025 (.64)           | 0.922 (23.42) |

**ORDERING INFORMATION**



\*Part Number Example: T216A105K050CS (14 digits – no spaces)

T216/T256 Series Tantalum  
Hermetically Sealed

### MIL-PRF-39003/10 ORDERING INFORMATION

#### M39003/10 — 3078S



### MARKING INFORMATION

#### A CASE

|        |  |
|--------|--|
| 39003  | Military specification number  |
| 10 - K | Specification sheet number and trademark   |
| 3078S  | Military dash number and "S" for sleeved   |
| +J310  | Polarity, "J" for JAN date code (1st digit indicates year and the next two digits indicate the week) |
| XYA    | Lot, unique lot code   |

#### C & D CASE

|            |   |
|------------|---|
| M39003     | Military specification number                                     |
| 10-2049SJ  | Specification sheet number, military dash number and "J" for Jan. |
| +6.8 μF    | Positive terminal identifier and capacitance value                |
| 10% 35V    | Capacitance tolerance and voltage rating                          |
| 31433      | Source code   |
| 0310 NAB K | Date code, lot code, unique lot code, and trademark               |

#### B CASE

|        |  |
|--------|--|
| M39003 | Military specification number  |
| 10 -   | Specification sheet number   |
| 3082SJ | Military dash number and "J" for JAN   |
| 31433  | Source code  |
| +310   | Polarity, date code (1st digit indicates year and the next two digits indicate the week) |
| NABK   | Lot code, unique lot code and trademark.   |

NOTE: Marking will include S or U after the MIL dash number, a third letter following lot symbol or lot code designates a unique lot identifier, and a black band on negative end of case.

■ Black band on negative end.

### T216/(CSS13) RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF              | KEMET T216 SERIES |   |                |                |                 |                         |                       |                            | MIL-PRF-39003 (CSS13) CAPACITORS  |          |
|--------------------------------|-------------------|---|----------------|----------------|-----------------|-------------------------|-----------------------|----------------------------|---|----------|
|                                | CASE SIZE         | KEMET EQUIVALENT PART NUMBER FOR CSS13 CAPACITORS | DC LEAKAGE     |                |                 | MAX. DISSIPATION FACTOR |                       | MAX. ESR Ω @ 25°C, 100 kHz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS) MIL-PRF-39003/10 GRADED |          |
|                                |                   |   | μA @ +25° MAX. | μA @ +85° MAX. | μA @ +125° MAX. | % @ -55°C +25°C MAX.    | % @ -85°C +125°C MAX. |                            | B (0.1)   | C (0.01) |
| <b>6 VOLT RATING AT 85° C</b>  |                   |   |                |                |                 |                         |                       |                            |   |          |
| 5.6                            | A                 | T216A565K006CS                                    | 0.3            | 6.0            | 7.5             | 4                       | 4                     | 0.90                       | 2001(1)   | 3001(1)  |
| 6.8                            | A                 | T216A685K006CS                                    | 0.3            | 6.0            | 7.5             | 6                       | 6                     | 0.80                       | 2002(1)   | 3002(1)  |
| 47.0                           | B                 | T216B476K006CS                                    | 1.5            | 24.0           | 30.0            | 6                       | 6                     | 0.24                       | 2003(1)   | 3003(1)  |
| 56.0                           | B                 | T216B566K006CS                                    | 1.5            | 24.0           | 30.0            | 6                       | 6                     | 0.24                       | 3004(1)   | 3004(1)  |
| 150.0                          | C                 | T216C157K006CS                                    | 4.5            | 90.0           | 113.0           | 8                       | 8                     | 0.09                       | 2005(1)   | 3005(1)  |
| 180.0                          | C                 | T216C187K006CS                                    | 5.5            | 110.0          | 138.0           | 8                       | 8                     | 0.08                       | 3206(1)   | 3006(1)  |
| 270.0                          | D                 | T216D277K006CS                                    | 6.5            | 130.0          | 163.0           | 8                       | 8                     | 0.07                       | 2007(1)   | 3007(1)  |
| 330.0                          | D                 | T216D337K006CS                                    | 7.5            | 150.0          | 188.0           | 8                       | 8                     | 0.06                       | 2008(1)   | 3008(1)  |
| <b>10 VOLT RATING AT 85° C</b> |                   |   |                |                |                 |                         |                       |                            |   |          |
| 3.9                            | A                 | T216A395K010CS                                    | 0.3            | 6.0            | 7.5             | 4                       | 4                     | 1.00                       | 2009(1)   | 3009(1)  |
| 4.7                            | A                 | T216A475K010CS                                    | 0.4            | 7.0            | 8.8             | 4                       | 4                     | 0.90                       | 2010(1)   | 3010(1)  |
| 27.0                           | B                 | T216B276K010CS                                    | 2.0            | 40.0           | 50.0            | 6                       | 6                     | 0.25                       | 2011(1)   | 3011(1)  |
| 33.0                           | B                 | T216B336K010CS                                    | 2.5            | 50.0           | 63.0            | 6                       | 6                     | 0.24                       | 2012(1)   | 3012(1)  |
| 39.0                           | B                 | T216B396K010CS                                    | 2.5            | 50.0           | 63.0            | 6                       | 6                     | 0.24                       | 2013(1)   | 3013(1)  |
| 82.0                           | C                 | T216C826K010CS                                    | 4.0            | 80.0           | 100.0           | 6                       | 6                     | 0.12                       | 2014(1)   | 3014(1)  |
| 100.0                          | C                 | T216C107K010CS                                    | 5.0            | 100.0          | 125.0           | 8                       | 8                     | 0.11                       | 2015(1)   | 3015(1)  |
| 120.0                          | C                 | T216C127K010CS                                    | 6.0            | 120.0          | 150.0           | 8                       | 8                     | 0.10                       | 2016(1)   | 3016(1)  |
| 180.0                          | D                 | T216D187K010CS                                    | 9.0            | 180.0          | 226.0           | 8                       | 8                     | 0.08                       | 2017(1)   | 3017(1)  |
| 220.0                          | D                 | T216D227K010CS                                    | 10.0           | 200.0          | 250.0           | 8                       | 8                     | 0.07                       | 2018(1)   | 3018(1)  |

(1) To complete, insert S for sleeved or U for unsleeved, if "U" ordered also use C-0100.

**RATINGS & PART NUMBER REFERENCE T216/(CSS13) (Cont'd)**

| CAPACITANCE<br>µF              | KEMET T216 SERIES |   |                |                |                 |                         |                       |                            | MIL-PRF-39003 (CSS13) CAPACITORS  |          |
|--------------------------------|-------------------|---|----------------|----------------|-----------------|-------------------------|-----------------------|----------------------------|---|----------|
|                                | CASE SIZE         | KEMET EQUIVALENT PART NUMBER FOR CSS13 CAPACITORS | DC LEAKAGE     |                |                 | MAX. DISSIPATION FACTOR |                       | MAX. ESR Ω @ 25°C, 100 kHz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS) MIL-PRF-39003/10 GRADED |          |
|                                |                   |   | µA @ +25° MAX. | µA @ +85° MAX. | µA @ +125° MAX. | % @ -55°C +25°C MAX.    | % @ -85°C +125°C MAX. |                            | B (0.1)   | C (0.01) |
| <b>15 VOLT RATING AT 85° C</b> |                   |   |                |                |                 |                         |                       |                            |   |          |
| 2.7                            | A                 | T216A275K015CS                                    | 0.3            | 6.0            | 7.5             | 4                       | 4                     | 1.20                       | 2019(1)   | 3019(1)  |
| 3.3                            | A                 | T216A335K015CS                                    | 0.4            | 8.0            | 10.0            | 4                       | 4                     | 1.00                       | 2020(1)   | 3020(1)  |
| 18.0                           | B                 | T216B186K015CS                                    | 2.0            | 35.0           | 44.0            | 6                       | 6                     | 0.27                       | 2021(1)   | 3021(1)  |
| 22.0                           | B                 | T216B226K015CS                                    | 2.0            | 40.0           | 50.0            | 6                       | 6                     | 0.26                       | 2022(1)   | 3022(1)  |
| 56.0                           | C                 | T216C566K015CS                                    | 4.0            | 80.0           | 100.0           | 6                       | 6                     | 0.15                       | 2023(1)   | 3023(1)  |
| 68.0                           | C                 | T216C686K015CS                                    | 5.0            | 100.0          | 125.0           | 6                       | 6                     | 0.13                       | 2024(1)   | 3024(1)  |
| 120.0                          | D                 | T216D127K015CS                                    | 9.0            | 180.0          | 226.0           | 8                       | 8                     | 0.09                       | 2025(1)   | 3025(1)  |
| 150.0                          | D                 | T216D157K015CS                                    | 10.0           | 220.0          | 250.0           | 8                       | 8                     | 0.09                       | 2026(1)   | 3026(1)  |
| <b>20 VOLT RATING AT 85° C</b> |                   |   |                |                |                 |                         |                       |                            |   |          |
| 1.2                            | A                 | T216A125K020CS                                    | 0.3            | 6.0            | 7.5             | 4                       | 4                     | 1.40                       | 2027(1)   | 3027(1)  |
| 1.5                            | A                 | T216A155K020CS                                    | 0.3            | 6.0            | 7.5             | 4                       | 4                     | 1.30                       | 2028(1)   | 3028(1)  |
| 1.8                            | A                 | T216A185K020CS                                    | 0.3            | 6.0            | 7.5             | 4                       | 4                     | 1.25                       | 2029(1)   | 3029(1)  |
| 2.2                            | A                 | T216A225K020CS                                    | 0.4            | 8.0            | 10.0            | 4                       | 4                     | 1.20                       | 2030(1)   | 3030(1)  |
| 8.2                            | B                 | T216B825K020CS                                    | 1.0            | 20.0           | 25.0            | 6                       | 6                     | 0.39                       | 2031(1)   | 3031(1)  |
| 10.0                           | B                 | T216B106K020CS                                    | 1.5            | 30.0           | 38.0            | 6                       | 6                     | 0.35                       | 2032(1)   | 3032(1)  |
| 12.0                           | B                 | T216B126K020CS                                    | 1.8            | 35.0           | 44.0            | 6                       | 6                     | 0.32                       | 2033(1)   | 3033(1)  |
| 15.0                           | B                 | T216B156K020CS                                    | 2.0            | 40.0           | 50.0            | 6                       | 6                     | 0.29                       | 2034(1)   | 3034(1)  |
| 27.0                           | C                 | T216C276K020CS                                    | 2.5            | 50.0           | 63.0            | 6                       | 6                     | 0.21                       | 2035(1)   | 3035(1)  |
| 33.0                           | C                 | T216C336K020CS                                    | 3.5            | 70.0           | 88.0            | 6                       | 6                     | 0.19                       | 2036(1)   | 3036(1)  |
| 39.0                           | C                 | T216C396K020CS                                    | 4.0            | 80.0           | 100.0           | 6                       | 6                     | 0.17                       | 2037(1)   | 3037(1)  |
| 47.0                           | C                 | T216C476K020CS                                    | 4.5            | 90.0           | 113.0           | 6                       | 6                     | 0.16                       | 2038(1)   | 3038(1)  |
| 56.0                           | D                 | T216D566K020BS                                    | 5.5            | 110.0          | 138.0           | 6                       | 6                     | 0.13                       | 2039(1)   | 3039(1)  |
| 68.0                           | D                 | T216D686K020BS                                    | 7.0            | 140.0          | 175.0           | 6                       | 6                     | 0.12                       | 2040(1)   | 3040(1)  |
| 82.0                           | D                 | T216D826K020BS                                    | 8.0            | 160.0          | 200.0           | 6                       | 6                     | 0.11                       | 2041(1)   | 3041(1)  |
| 100.0                          | D                 | T216D107K020BS                                    | 10.0           | 200.0          | 250.0           | 8                       | 8                     | 0.10                       | 2042(1)   | 3042(1)  |
| <b>35 VOLT RATING AT 85° C</b> |                   |   |                |                |                 |                         |                       |                            |   |          |
| 5.6                            | B                 | T216B565K035BS                                    | 1.3            | 25.0           | 32.0            | 4                       | 4                     | 0.47                       | 2043(1)   | 3043(1)  |
| 6.8                            | B                 | T216B685K035BS                                    | 1.5            | 30.0           | 38.0            | 6                       | 6                     | 0.43                       | 2044(1)   | 3044(1)  |
| 22.0                           | C                 | T216C226K035BS                                    | 4.0            | 40.0           | 100.0           | 6                       | 6                     | 0.25                       | 2045(1)   | 3045(1)  |
| 27.0                           | D                 | T216D276K035BS                                    | 4.5            | 90.0           | 113.0           | 6                       | 6                     | 0.18                       | 2046(1)   | 3046(1)  |
| 33.0                           | D                 | T216D336K035BS                                    | 5.5            | 110.0          | 138.0           | 6                       | 6                     | 0.17                       | 2047(1)   | 3047(1)  |
| 39.0                           | D                 | T216D396K035BS                                    | 7.0            | 140.0          | 175.0           | 6                       | 6                     | 0.15                       | 2048(1)   | 3048(1)  |
| 47.0                           | D                 | T216D476K035BS                                    | 8.0            | 160.0          | 200.0           | 6                       | 6                     | 0.14                       | 2049(1)   | 3049(1)  |
| <b>50 VOLT RATING AT 85° C</b> |                   |   |                |                |                 |                         |                       |                            |   |          |
| 0.12                           | A                 | T216A124K050CS                                    | 0.3            | 5.0            | 6.3             | 2                       | 4                     | 6.50                       | 2067(1)   | 3067(1)  |
| 0.15                           | A                 | T216A154K050CS                                    | 0.3            | 5.0            | 6.3             | 2                       | 4                     | 5.50                       | 2068(1)   | 3068(1)  |
| 0.18                           | A                 | T216A184K050CS                                    | 0.3            | 5.0            | 6.3             | 2                       | 4                     | 5.00                       | 2069(1)   | 3069(1)  |
| 0.22                           | A                 | T216A224K050CS                                    | 0.3            | 5.0            | 6.3             | 2                       | 4                     | 4.00                       | 2070(1)   | 3070(1)  |
| 0.27                           | A                 | T216A274K050CS                                    | 0.3            | 5.0            | 6.3             | 2                       | 4                     | 3.50                       | 2071(1)   | 3071(1)  |
| 0.33                           | A                 | T216A334K050CS                                    | 0.3            | 5.0            | 6.3             | 2                       | 4                     | 3.30                       | 2072(1)   | 3072(1)  |
| 0.39                           | A                 | T216A394K050CS                                    | 0.3            | 5.0            | 6.3             | 2                       | 4                     | 3.20                       | 2073(1)   | 3073(1)  |
| 0.47                           | A                 | T216A474K050CS                                    | 0.3            | 5.0            | 6.3             | 2                       | 4                     | 3.00                       | 2074(1)   | 3074(1)  |
| 0.56                           | A                 | T216A564K050CS                                    | 0.3            | 5.0            | 6.3             | 2                       | 4                     | 2.50                       | 2075(1)   | 3075(1)  |
| 0.68                           | A                 | T216A684K050CS                                    | 0.3            | 5.0            | 6.3             | 2                       | 4                     | 1.80                       | 2076(1)   | 3076(1)  |
| 0.82                           | A                 | T216A824K050CS                                    | 0.3            | 5.0            | 6.3             | 2                       | 4                     | 1.60                       | 2077(1)   | 3077(1)  |
| 1.0                            | A                 | T216A105K050CS                                    | 0.4            | 8.0            | 10.0            | 2                       | 4                     | 1.40                       | 2078(1)   | 3078(1)  |
| 1.2                            | B                 | T216B125K050CS                                    | 0.4            | 9.0            | 11.0            | 4                       | 4                     | 1.20                       | 2079(1)   | 3079(1)  |
| 1.5                            | B                 | T216B155K050CS                                    | 0.6            | 12.0           | 15.0            | 4                       | 4                     | 1.10                       | 2080(1)   | 3080(1)  |
| 1.8                            | B                 | T216B185K050CS                                    | 0.7            | 14.0           | 18.0            | 4                       | 4                     | 0.92                       | 2081(1)   | 3081(1)  |
| 2.2                            | B                 | T216B225K050CS                                    | 0.8            | 17.0           | 22.0            | 4                       | 4                     | 0.80                       | 2082(1)   | 3082(1)  |
| 2.7                            | B                 | T216B275K050CS                                    | 1.0            | 20.0           | 25.0            | 4                       | 4                     | 0.68                       | 2083(1)   | 3083(1)  |
| 3.3                            | B                 | T216B335K050CS                                    | 1.2            | 25.0           | 32.0            | 4                       | 4                     | 0.62                       | 2084(1)   | 3084(1)  |
| 3.9                            | B                 | T216B395K050CS                                    | 1.5            | 30.0           | 38.0            | 4                       | 4                     | 0.56                       | 2085(1)   | 3085(1)  |
| 4.7                            | B                 | T216B475K050CS                                    | 1.7            | 35.0           | 44.0            | 4                       | 4                     | 0.51                       | 2086(1)   | 3086(1)  |
| 5.6                            | C                 | T216C565K050CS                                    | 2.2            | 45.0           | 56.0            | 4                       | 4                     | 0.44                       | 2087(1)   | 3087(1)  |
| 6.8                            | C                 | T216C685K050CS                                    | 2.2            | 45.0           | 56.0            | 6                       | 6                     | 0.40                       | 2088(1)   | 3088(1)  |
| 8.2                            | C                 | T216C825K050CS                                    | 2.5            | 50.0           | 63.0            | 6                       | 6                     | 0.36                       | 2089(1)   | 3089(1)  |
| 10.0                           | C                 | T216C106K050CS                                    | 2.5            | 50.0           | 63.0            | 6                       | 6                     | 0.33                       | 2090(1)   | 3090(1)  |
| 12.0                           | C                 | T216C126K050BS                                    | 3.0            | 60.0           | 75.0            | 6                       | 6                     | 0.30                       | 2091(1)   | 3091(1)  |
| 15.0                           | C                 | T216C156K050BS                                    | 4.0            | 80.0           | 100.0           | 6                       | 6                     | 0.27                       | 2092(1)   | 3092(1)  |
| 18.0                           | C                 | T216C186K050BS                                    | 4.5            | 90.0           | 113.0           | 6                       | 6                     | 0.25                       | 2093(1)   | 3093(1)  |
| 22.0                           | D                 | T216D226K050BS                                    | 5.5            | 100.0          | 138.0           | 6                       | 6                     | 0.20                       | 2094(1)   | 3094(1)  |

(1) To complete, insert S for sleeved or U for unsleeved, if "U" ordered also use C-0100.

T216/T256 Series Tantalum  
Hermetically Sealed

**RATINGS & PART NUMBER REFERENCE T216/(CSS13) (Cont'd)**

| CAPACITANCE<br>µF              | KEMET T216 SERIES |   |                         |                |                 |                         |                       |                            | MIL-PRF-39003 (CSS13) CAPACITORS |         |
|--------------------------------|-------------------|---|-------------------------|----------------|-----------------|-------------------------|-----------------------|----------------------------|----------------------------------|---------|
|                                | CASE SIZE         | KEMET EQUIVALENT PART NUMBER FOR CSS13 CAPACITORS | DC LEAKAGE              |                |                 | MAX. DISSIPATION FACTOR |                       | MAX. ESR Ω @ 25°C, 100 kHz | DASH NUMBER REFERENCE            |         |
|                                |                   |   | µA @ +25° MAX.          | µA @ +85° MAX. | µA @ +125° MAX. | % @ -55°C +25°C MAX.    | % @ -85°C +125°C MAX. |                            | FAILURE RATE LEVEL (%/1000 HRS)  |         |
|                                |                   |   | MIL-PRF-39003/10 GRADED |                |                 |                         |                       |                            |                                  |         |
|                                |                   |   |                         |                |                 |                         |                       | B (0.1)                    | C (0.01)                         |         |
| <b>75 VOLT RATING AT 85° C</b> |                   |   |                         |                |                 |                         |                       |                            |                                  |         |
| 0.15                           | A                 | T216A154K075CS                                    | 0.3                     | 5.0            | 6.3             | 2                       | 4                     | 4.4                        | 2097(1)                          | 3097(1) |
| 0.18                           | A                 | T216A184K075CS                                    | 0.3                     | 5.0            | 6.3             | 2                       | 4                     | 4.0                        | 2098(1)                          | 3098(1) |
| 0.22                           | A                 | T216A224K075CS                                    | 0.3                     | 5.0            | 6.3             | 2                       | 4                     | 3.5                        | 2099(1)                          | 3099(1) |
| 0.27                           | A                 | T216A274K075CS                                    | 0.3                     | 5.0            | 6.3             | 2                       | 4                     | 3.1                        | 2100(1)                          | 3100(1) |
| 0.33                           | A                 | T216A334K075CS                                    | 0.3                     | 5.0            | 6.3             | 2                       | 4                     | 2.8                        | 2101(1)                          | 3101(1) |
| 0.39                           | A                 | T216A394K075CS                                    | 0.3                     | 5.0            | 6.3             | 2                       | 4                     | 2.6                        | 2102(1)                          | 3102(1) |
| 0.47                           | A                 | T216A474K075CS                                    | 0.3                     | 5.0            | 6.3             | 2                       | 4                     | 2.4                        | 2103(1)                          | 3103(1) |
| 0.56                           | A                 | T216A564K075CS                                    | 0.3                     | 5.0            | 6.3             | 2                       | 4                     | 2.25                       | 2104(1)                          | 3104(1) |
| 0.68                           | A                 | T216A684K075CS                                    | 0.3                     | 5.0            | 6.3             | 2                       | 4                     | 2.10                       | 2105(1)                          | 3105(1) |
| 0.82                           | B                 | T216B824K075CS                                    | 0.3                     | 5.0            | 6.3             | 2                       | 4                     | 1.47                       | 2106(1)                          | 3106(1) |
| 1.0                            | B                 | T216B105K075CS                                    | 0.4                     | 5.0            | 6.3             | 2                       | 4                     | 1.40                       | 2107(1)                          | 3107(1) |
| 1.2                            | B                 | T216B125K075CS                                    | 0.4                     | 5.0            | 6.3             | 4                       | 4                     | 1.33                       | 2108(1)                          | 3108(1) |
| 1.5                            | B                 | T216B155K075CS                                    | 0.6                     | 10.0           | 13.0            | 4                       | 4                     | 1.06                       | 2109(1)                          | 3109(1) |
| 1.8                            | B                 | T216B185K075CS                                    | 0.7                     | 10.0           | 13.0            | 4                       | 4                     | 0.92                       | 2110(1)                          | 3110(1) |
| 2.2                            | B                 | T216B225K075CS                                    | 0.8                     | 15.0           | 19.0            | 4                       | 4                     | 0.80                       | 2111(1)                          | 3111(1) |
| 2.7                            | B                 | T216B275K075BS                                    | 1.0                     | 15.0           | 19.0            | 4                       | 4                     | 0.68                       | 2112(1)                          | 3112(1) |
| 3.3                            | B                 | T216B335K075BS                                    | 1.2                     | 20.0           | 25.0            | 4                       | 4                     | 0.62                       | 2113(1)                          | 3113(1) |
| 3.9                            | B                 | T216B395K075BS                                    | 1.5                     | 20.0           | 25.0            | 4                       | 4                     | 0.56                       | 2114(1)                          | 3114(1) |
| 4.7                            | C                 | T216C475K075BS                                    | 3.0                     | 60.0           | 75.0            | 4                       | 4                     | 0.47                       | 2115(1)                          | 3115(1) |
| 5.6                            | C                 | T216C565K075BS                                    | 3.0                     | 60.0           | 75.0            | 4                       | 4                     | 0.44                       | 2116(1)                          | 3116(1) |
| 6.8                            | C                 | T216C685K075BS                                    | 5.0                     | 100.0          | 125.0           | 6                       | 6                     | 0.44                       | 2117(1)                          | 3117(1) |
| 8.2                            | C                 | T216C825K075BS                                    | 5.0                     | 100.0          | 125.0           | 6                       | 6                     | 0.36                       | 2118(1)                          | 3118(1) |
| 10.0                           | C                 | T216C106K075BS                                    | 5.0                     | 100.0          | 125.0           | 6                       | 6                     | 0.33                       | 2119(1)                          | 3119(1) |
| 12.0                           | D                 | T216D126K075BS                                    | 5.0                     | 100.0          | 125.0           | 6                       | 6                     | 0.26                       | 2120(1)                          | 3120(1) |
| 15.0                           | D                 | T216D156K075BS                                    | 7.0                     | 140.0          | 175.0           | 6                       | 6                     | 0.23                       | 2121(1)                          | 3121(1) |

**T256/(CSS33)**  
**RATINGS AND PART NUMBER REFERENCE**

| CAPACITANCE<br>µF              | KEMET T256 SERIES |   |                         |                |                 |                         |                       |                            | MIL-PRF-39003 (CSS33) CAPACITORS |         |
|--------------------------------|-------------------|---|-------------------------|----------------|-----------------|-------------------------|-----------------------|----------------------------|----------------------------------|---------|
|                                | CASE SIZE         | KEMET EQUIVALENT PART NUMBER FOR CSS33 CAPACITORS | DC LEAKAGE              |                |                 | MAX. DISSIPATION FACTOR |                       | MAX. ESR Ω @ 25°C, 100 kHz | DASH NUMBER REFERENCE            |         |
|                                |                   |   | µA @ +25° MAX.          | µA @ +85° MAX. | µA @ +125° MAX. | % @ -55°C +25°C MAX.    | % @ -85°C +125°C MAX. |                            | FAILURE RATE LEVEL (%/1000 HRS)  |         |
|                                |                   |   | MIL-PRF-39003/10 GRADED |                |                 |                         |                       |                            |                                  |         |
|                                |                   |   |                         |                |                 |                         |                       | B (0.1)                    | C (0.01)                         |         |
| <b>6 VOLT RATING AT 85° C</b>  |                   |   |                         |                |                 |                         |                       |                            |                                  |         |
| 10.0                           | A                 | T256A106K006CS                                    | 0.5                     | 2.0            | 2.0             | 6                       | 6                     | 0.70                       | 2500(1)                          | 3500(1) |
| 12.0                           | A                 | T256A126K006CS                                    | 0.5                     | 2.0            | 2.0             | 6                       | 6                     | 0.60                       | 2501(1)                          | 3501(1) |
| 100.0                          | B                 | T256B107K006CS                                    | 1.0                     | 3.0            | 3.0             | 8                       | 8                     | 0.20                       | 2502(1)                          | 3502(1) |
| 330.0                          | C                 | T256B107K006CS                                    | 2.0                     | 8.0            | 8.0             | 8                       | 8                     | 0.065                      | 2503(1)                          | 3503(1) |
| 390.0                          | C                 | T256C337K006BS                                    | 2.0                     | 8.0            | 8.0             | 10                      | 10                    | 0.065                      | 2504(1)                          | 3504(1) |
| 470.0                          | C                 | T256C397K006BS                                    | 2.0                     | 8.0            | 8.0             | 10                      | 10                    | 0.060                      | 2505(1)                          | 3505(1) |
| 680.0                          | D                 | T256D687K006CS                                    | 5.0                     | 10.0           | 10.0            | 10                      | 10                    | 0.060                      | 2506(1)                          | 3506(1) |
| 820.0                          | D                 | T256D827K006CS                                    | 5.0                     | 10.0           | 10.0            | 10                      | 10                    | 0.055                      | 2507(1)                          | 3507(1) |
| 1000.0                         | D                 | T256D108K006CS                                    | 5.0                     | 10.0           | 10.0            | 10                      | 10                    | 0.050                      | 2508(1)                          | 3508(1) |
| <b>10 VOLT RATING AT 85° C</b> |                   |   |                         |                |                 |                         |                       |                            |                                  |         |
| 6.8                            | A                 | T256A685K010CS                                    | 0.5                     | 2.0            | 2.0             | 6                       | 6                     | 0.80                       | 2509(1)                          | 3509(1) |
| 8.2                            | A                 | T256A825K010CS                                    | 0.5                     | 2.0            | 2.0             | 6                       | 6                     | 0.70                       | 2510(1)                          | 3510(1) |
| 47.0                           | B                 | T256B476K010CS                                    | 1.0                     | 2.0            | 2.0             | 6                       | 6                     | 0.22                       | 2511(1)                          | 3511(1) |
| 56.0                           | B                 | T256B566K010CS                                    | 1.0                     | 4.0            | 4.0             | 6                       | 6                     | 0.20                       | 2512(1)                          | 3512(1) |
| 68.0                           | B                 | T256B686K010CS                                    | 1.0                     | 4.0            | 4.0             | 6                       | 6                     | 0.18                       | 2513(1)                          | 3513(1) |
| 82.0                           | B                 | T256B826K010CS                                    | 1.0                     | 4.0            | 4.0             | 6                       | 6                     | 0.15                       | 2514(1)                          | 3514(1) |
| 220.0                          | C                 | T256C227K010BS                                    | 1.0                     | 7.0            | 7.0             | 2                       | 2                     | 0.090                      | 2515(1)                          | 3515(1) |
| 270.0                          | C                 | T256C277K010BS                                    | 2.0                     | 10.0           | 10.0            | 2                       | 2                     | 0.075                      | 2516(1)                          | 3516(1) |
| 390.0                          | D                 | T256D397K010CS                                    | 2.0                     | 16.0           | 16.0            | 10                      | 10                    | 0.070                      | 2517(1)                          | 3517(1) |
| 470.0                          | D                 | T256D477K010CS                                    | 4.0                     | 16.0           | 16.0            | 10                      | 10                    | 0.065                      | 2518(1)                          | 3518(1) |
| 560.0                          | D                 | T256D567K010CS                                    | 4.0                     | 16.0           | 16.0            | 10                      | 10                    | 0.060                      | 2519(1)                          | 3519(1) |

(1) To complete, insert S for sleeved or U for unsleeved, if "U" ordered also use C-0100.

RATINGS AND PART NUMBER REFERENCE T256/(CSS33) (Cont'd)

| CAP<br>μF                      | CASE<br>SIZE | KEMET EQUIVALENT<br>PART NUMBER FOR<br>CSS33 CAPACITORS | KEMET T256 SERIES    |                      |                       |                         |                          |            | MIL-PRF-39003 (CSS33) CAPACITORS    |   |  |
|--------------------------------|--------------|---|----------------------|----------------------|-----------------------|-------------------------|--------------------------|------------|-------------------------------------|---|--|
|                                |              |   | DC LEAKAGE           |                      |                       | MAX. DISSIPATION FACTOR |                          |            | MAX.<br>ESR Ω @<br>25°C, 100<br>kHz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS)<br>MIL-PRF-39003/10 GRADED |  |
|                                |              |   | μA @<br>+25°<br>MAX. | μA @<br>+85°<br>MAX. | μA @<br>+125°<br>MAX. | % @ -55°C<br>+25°C MAX. | % @ -85°C +125°C<br>MAX. | B<br>(0.1) |                                     | C<br>(0.01)   |  |
|                                |              |   |                      |                      |                       |                         |                          |            |                                     |   |  |
| <b>15 VOLT RATING AT 85° C</b> |              |   |                      |                      |                       |                         |                          |            |                                     |   |  |
| 4.7                            | A            | T256A475K015CS  | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 0.90       | 2520(1)                             | 3520(1)   |  |
| 5.6                            | A            | T256A565K015CS  | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 0.80       | 2521(1)                             | 3521(1)   |  |
| 33.0                           | B            | T256B336K015CS  | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.24       | 2522(1)                             | 3522(1)   |  |
| 39.0                           | B            | T256B396K015CS  | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.22       | 2523(1)                             | 3523(1)   |  |
| 150.0                          | C            | T256C157K015BS  | 1.0                  | 7.0                  | 7.0                   | 8                       | 8                        | 0.10       | 2524(1)                             | 3524(1)   |  |
| 180.0                          | C            | T256C187K015BS  | 2.0                  | 10.0                 | 10.0                  | 8                       | 8                        | 0.09       | 2525(1)                             | 3525(1)   |  |
| 220.0                          | D            | T256D227K015BS  | 2.0                  | 10.0                 | 10.0                  | 8                       | 8                        | 0.07       | 2526(1)                             | 3526(1)   |  |
| 270.0                          | D            | T256D277K015BS  | 2.0                  | 16.0                 | 16.0                  | 8                       | 8                        | 0.065      | 2527(1)                             | 3527(1)   |  |
| 330.0                          | D            | T256D337K015BS  | 2.0                  | 16.0                 | 16.0                  | 8                       | 8                        | 0.060      | 2528(1)                             | 3528(1)   |  |
| <b>20 VOLT RATING AT 85° C</b> |              |   |                      |                      |                       |                         |                          |            |                                     |   |  |
| 2.7                            | A            | T256A275K020CS  | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 1.15       | 2529(1)                             | 3529(1)   |  |
| 3.3                            | A            | T256A335K020CS  | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 0.95       | 2530(1)                             | 3530(1)   |  |
| 3.9                            | A            | T256A395K020CS  | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 0.90       | 2531(1)                             | 3531(1)   |  |
| 18.0                           | B            | T256B186K020CS  | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.27       | 2532(1)                             | 3532(1)   |  |
| 22.0                           | B            | T256B226K020BS  | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.26       | 2533(1)                             | 3533(1)   |  |
| 27.0                           | B            | T256B276K020BS  | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.24       | 2534(1)                             | 3534(1)   |  |
| 56.0                           | C            | T256C566K020CS  | 1.0                  | 1.0                  | 10.0                  | 6                       | 6                        | 0.15       | 2535(1)                             | 3535(1)   |  |
| 68.0                           | C            | T256C686K020CS  | 1.0                  | 10.0                 | 10.0                  | 6                       | 6                        | 0.14       | 2536(1)                             | 3536(1)   |  |
| 82.0                           | C            | T256C826K020BS  | 1.0                  | 10.0                 | 10.0                  | 6                       | 6                        | 0.12       | 2537(1)                             | 3537(1)   |  |
| 100.0                          | C            | T256C107K020BS  | 1.0                  | 10.0                 | 10.0                  | 6                       | 6                        | 0.10       | 2538(1)                             | 3538(1)   |  |
| 120.0                          | C            | T256C127K020BS  | 1.0                  | 10.0                 | 10.0                  | 6                       | 6                        | 0.09       | 2539(1)                             | 3539(1)   |  |
| 150.0                          | D            | T256D157K020BS  | 2.0                  | 10.0                 | 10.0                  | 8                       | 8                        | 0.08       | 2540(1)                             | 3540(1)   |  |
| 180.0                          | D            | T256D187K020BS  | 2.0                  | 10.0                 | 10.0                  | 8                       | 8                        | 0.07       | 2541(1)                             | 3541(1)   |  |
| <b>35 VOLT RATING AT 85° C</b> |              |   |                      |                      |                       |                         |                          |            |                                     |   |  |
| 1.8                            | A            | T256A185K035BS  | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 0.20       | 2542(1)                             | 3542(1)   |  |
| 8.2                            | B            | T256B825K035BS  | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.40       | 2543(1)                             | 3543(1)   |  |
| 10.0                           | B            | T256B106K035BS  | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.35       | 2544(1)                             | 3544(1)   |  |
| 33.0                           | C            | T256C336K035BS  | 1.0                  | 5.0                  | 5.0                   | 6                       | 6                        | 0.19       | 2545(1)                             | 3545(1)   |  |
| 39.0                           | C            | T256C396K035BS  | 1.0                  | 5.0                  | 5.0                   | 6                       | 6                        | 0.17       | 2546(1)                             | 3546(1)   |  |
| 47.0                           | C            | T256C476K035BS  | 1.0                  | 5.0                  | 5.0                   | 6                       | 6                        | 0.15       | 2547(1)                             | 3547(1)   |  |
| 56.0                           | D            | T256D566K035BS  | 2.0                  | 10.0                 | 10.0                  | 6                       | 6                        | 0.13       | 2548(1)                             | 3548(1)   |  |
| 68.0                           | D            | T256D686K035BS  | 2.0                  | 10.0                 | 10.0                  | 6                       | 6                        | 0.12       | 2549(1)                             | 3549(1)   |  |
| <b>50 VOLT RATING AT 85° C</b> |              |   |                      |                      |                       |                         |                          |            |                                     |   |  |
| 1.2                            | A            | T256A125K050BS  | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 1.30       | 2550(1)                             | 3550(1)   |  |
| 1.5                            | A            | T256A155KL050BS   | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 1.20       | 2551(1)                             | 3551(1)   |  |
| 5.6                            | B            | T256B565K050BS  | 1.0                  | 2.0                  | 2.0                   | 4                       | 4                        | 0.47       | 2552(1)                             | 3552(1)   |  |
| 6.8                            | B            | T256B685K050BS  | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.43       | 2553(1)                             | 3553(1)   |  |
| 22.0                           | C            | T256C226K050BS  | 1.0                  | 5.0                  | 5.0                   | 6                       | 6                        | 0.22       | 2554(1)                             | 3554(1)   |  |
| 27.0                           | C            | T256C276K050BS  | 1.0                  | 5.0                  | 5.0                   | 6                       | 6                        | 0.20       | 2555(1)                             | 3555(1)   |  |
| 33.0                           | D            | T256D336K050BS  | 1.0                  | 9.0                  | 9.0                   | 6                       | 6                        | 0.18       | 2556(1)                             | 3556(1)   |  |
| 39.0                           | D            | T256D396K050BS  | 1.0                  | 9.0                  | 9.0                   | 6                       | 6                        | 0.16       | 2557(1)                             | 3557(1)   |  |

T216/T256 Series Tantalum  
Hermetically Sealed

(1) To complete, insert S for sleeved or U for unsleeved, if "U" ordered also use C-0100.