

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* This Military Part Numbering System is obsolete in accordance with the current specifications.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 MIL Range | T212 | S (0.001%/k hrs.) |
| CSR21 | Polar-Standard Low ESR 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 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:**
 - A. Shock Test: MIL-STD-202, Method 213
 - B. Thermal Shock, MIL-STD-202, Method 107, Condition B.
 - C. Moisture Resistance: MIL-STD-202, Method 106.
 - D. 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 μF 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 ± 0.002 (.05) | C MAX. |
|-----------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------|
| | D ± 0.005 (.13) | L ± 0.031 (.79) | D ± 0.010 (.25) | L ± 0.031 (.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*

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 — A
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 μF | — Nominal Capacitance — (μF) ("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 μF | CASE SIZE | CAPACITANCE TOLERANCE ±% | KEMET T110 | | | MIL-PRF-39003 (CSR13) CAPACITORS | | | | | | | | | KEMET EQUIVALENT MILITARY PART NUMBER | | |
|--|--------------|--------------------------------|------------------------|------------------------------------|---|---|-------------|-------------|--------------|----------------------------|-------------|--------------|-------------------------|--|--|--|--|
| | | | KEMET PART NUMBER | D.C. LEAKAGE μA@25°C MAX. | MAX. DISSIPATION FACTOR %@25°C, 120Hz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) | | | | | | | | | | | |
| | | | | | | MIL-PRF-39003/1H EXPONENTIAL | | | | MIL-PRF-39003/1H GRADED | | | | | | | |
| | | | | | | M (1.0) | P (0.1) | R (0.01) | S (0.001) | B (0.1) | C (0.01) | D (0.001) | | | | | |
| 6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | |
| 6.8 | A | 5 | T110A685J006AS | 0.3 | 6 | 5002 | 5202 | 5402 | 5602 | 6003 | 7003 | 8003 | T212A685J006(2)S | | | | |
| 6.8 | A | 10 | T110A685K006AS | 0.3 | 6 | 2242 | 2482 | 2722 | 2962 | 6004 | 7004 | 8004 | T212A685K006(2)S | | | | |
| 6.8 | A | 20 | T110A685M006AS | 0.3 | 6 | 2243 | 2483 | 2723 | 2963 | 6005 | 7005 | 8005 | T212A685M006(2)S | | | | |
| 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 | | | | | | | | | | | | |
| 47.0 | B | 5 | T110B476J006AS | 1.5 | 6 | 5003 | 5203 | 5403 | 5603 | 6006 | 7006 | 8006 | T212B476J006(2)S | | | | |
| 47.0 | B | 10 | T110B476K006AS | 1.5 | 6 | 2244 | 2484 | 2724 | 2964 | 6007 | 7007 | 8007 | T212B476K006(2)S | | | | |
| 47.0 | B | 20 | T110B476M006AS | 1.5 | 6 | 2245 | 2485 | 2725 | 2965 | 6008 | 7008 | 8008 | T212B476M006(2)S | | | | |
| 56.0 | B | 5 | T110B566J006AS | 1.5 | 6 | 5004 | 5204 | 5404 | 5604 | 6009 | 7009 | 8009 | T212B566J006(2)S | | | | |
| 56.0 | B | 10 | T110B566K006AS | 1.5 | 6 | 2246 | 2486 | 2726 | 2966 | 6010 | 7010 | 8010 | T212B566K006(2)S | | | | |
| 56.0 | B | 20 | T110B566M006AS | 1.5 | 6 | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | |
| 330.0 | D | 5 | T110D337J006AS | 7.5 | 8 | 5008 | 5208 | 5408 | 5608 | 6018 | 7018 | 8018 | T212D337J006(2)S | | | | |
| 330.0 | D | 10 | T110D337K006AS | 7.5 | 8 | 2251 | 2491 | 2731 | 2971 | 6019 | 7019 | 8019 | T212D337K006(2)S | | | | |
| 330.0 | D | 20 | T110D337M006AS | 7.5 | 8 | 2252 | 2492 | 2732 | 2972 | 6020 | 7020 | 8020 | T212D337M006(2)S | | | | |
| 10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | |
| 4.7 | A | 5 | T110A475J 010AS | 0.4 | 4 | 5010 | 5210 | 5410 | 5610 | 6023 | 7023 | 8023 | T212A475J010(2)S | | | | |
| 4.7 | A | 10 | T110A475K 010AS | 0.4 | 4 | 2254 | 2494 | 2734 | 2974 | 6024 | 7024 | 8024 | T212A475K010(2)S | | | | |
| 4.7 | A | 20 | T110A475M010AS | 0.4 | 4 | 2255 | 2495 | 2735 | 2975 | 6025 | 7025 | 8025 | T212A475M010(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 µF | CASE SIZE | CAPACITANCE TOLERANCE ±% | KEMET T110 | | | MIL-PRF-39003 (CSR13) CAPACITORS | | | | | | | |
|---|--------------|--------------------------------|----------------------|------------------------------------|---|---|-------|--------|---------|----------------------------|--------|---------|--|
| | | | KEMET PART NUMBER | D.C. LEAKAGE µA@25°C MAX. | MAX. DISSIPATION FACTOR %@25°C, 120Hz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) | | | | | | | |
| | | | | | | MIL-PRF-39003/1H EXPONENTIAL | | | | MIL-PRF-39003/1H GRADED | | | |
| | | | | | | M | P | R | S | B | C | D | KEMET EQUIVALENT MILITARY PART NUMBER |
| | | | | | | (1.0) | (0.1) | (0.01) | (0.001) | (0.1) | (0.01) | (0.001) | |
| 10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C (Cont'd) | | | | | | | | | | | | | |
| 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 |
| 15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C | | | | | | | | | | | | | |
| 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 µF | CASE SIZE | CAPACITANCE TOLERANCE ±% | KEMET T110 | | | MIL-PRF-39003 (CSR13) CAPACITORS | | | | | | | | KEMET EQUIVALENT MILITARY PART NUMBER | | |
|--|--------------|--------------------------------|-----------------------|------------------------------------|---|---|------------|-------------|--------------|----------------------------|-------------|--------------|--|--|--|--|
| | | | KEMET PART NUMBER | D.C. LEAKAGE µA@25°C MAX. | MAX. DISSIPATION FACTOR %@25°C, 120Hz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) | | | | | | | | | | |
| | | | | | | MIL-PRF-39003/1H EXPONENTIAL | | | | MIL-PRF-39003/1H GRADED | | | | | | |
| | | | | | | M (1.0) | P (0.1) | R (0.01) | S (0.001) | B (0.1) | C (0.01) | D (0.001) | | | | |
| 15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C (Cont'd) | | | | | | | | | | | | | | | | |
| 6.8 | B | 5,10,20 | T110B685(1)015AS | 0.7 | 6 | | | | | | | | | | | |
| 8.2 | B | 5,10,20 | T110B825(1)015AS | 0.7 | 6 | | | | | | | | | | | |
| 10.0 | B | 5,10,20 | T110B106(1)015AS | 1.0 | 6 | | | | | | | | | | | |
| 12.0 | B | 5,10,20 | T110B126(1)015AS | 1.0 | 6 | | | | | | | | | | | |
| 15.0 | B | 5,10,20 | T110B156(1)015AS | 2.0 | 6 | | | | | | | | | | | |
| 18.0 | B | 5 | T110B186J015AS | 2.0 | 6 | 5021 | 5221 | 5421 | 5621 | 6050 | 7050 | 8050 | | T212B186J015(2)S | | |
| 18.0 | B | 10 | T110B186K015AS | 2.0 | 6 | 2270 | 2510 | 2750 | 2990 | 6051 | 7051 | 8051 | | T212B186K015(2)S | | |
| 18.0 | B | 20 | T110B186M015AS | 2.0 | 6 | | | | | | | | | | | |
| 22.0 | B | 5 | T110B226J015AS | 2.0 | 6 | 5022 | 5222 | 5422 | 5622 | 6052 | 7052 | 8052 | | T212B226J015(2)S | | |
| 22.0 | B | 10 | T110B226K015AS | 2.0 | 6 | 2271 | 2511 | 2751 | 2991 | 6053 | 7053 | 8053 | | T212B226K015(2)S | | |
| 22.0 | B | 20 | T110B226M015AS | 2.0 | 6 | 2272 | 2512 | 2752 | 2992 | 6054 | 7054 | 8054 | | T212B226M015(2)S | | |
| 27.0 | C | 5,10,20 | T110C276(1)015AS | 3.0 | 6 | | | | | | | | | | | |
| 33.0 | C | 5,10,20 | T110C336(1)015AS | 3.0 | 6 | | | | | | | | | | | |
| 39.0 | C | 5,10,20 | T110C396(1)015AS | 3.0 | 6 | | | | | | | | | | | |
| 47.0 | C | 5,10,20 | T110C476(1)015AS | 4.0 | 6 | | | | | | | | | | | |
| 56.0 | C | 5 | T110C566J015AS | 4.0 | 6 | 5023 | 5223 | 5423 | 5623 | 6055 | 7055 | 8055 | | T212C566J015(2)S | | |
| 56.0 | C | 10 | T110C566K015AS | 4.0 | 6 | 2273 | 2513 | 2753 | 2993 | 6056 | 7056 | 8056 | | T212C566K015(2)S | | |
| 56.0 | C | 20 | T110C566M015AS | 4.0 | 6 | | | | | | | | | | | |
| 68.0 | C | 5 | T110C686J015AS | 5.0 | 6 | 5024 | 5224 | 5424 | 5624 | 6057 | 7057 | 8057 | | T212C686J015(2)S | | |
| 68.0 | C | 10 | T110C686K015AS | 5.0 | 6 | 2274 | 2514 | 2754 | 2994 | 6058 | 7058 | 8058 | | T212C686K015(2)S | | |
| 68.0 | C | 20 | T110C686M015AS | 5.0 | 6 | 2275 | 2515 | 2755 | 2995 | 6059 | 7059 | 8059 | | T212C686M015(2)S | | |
| 82.0 | D | 5,10,20 | T110D826(1)015AS | 6.0 | 6 | | | | | | | | | | | |
| 100.0 | D | 5,10,20 | T110D107(1)015AS | 6.0 | 6 | | | | | | | | | | | |
| 120.0 | D | 5 | T110D127J015AS | 6.0 | 6 | 5025 | 5225 | 5425 | 5625 | 6060 | 7060 | 8060 | | T212D127J015(2)S | | |
| 120.0 | D | 10 | T110D127K015AS | 6.0 | 6 | 2276 | 2516 | 2756 | 2996 | 6061 | 7061 | 8061 | | T212D127K015(2)S | | |
| 120.0 | D | 20 | T110D127M015AS | 6.0 | 6 | | | | | | | | | | | |
| 150.0 | D | 5 | T110D157J015AS | 8.0 | 6 | 5026 | 5226 | 5426 | 5626 | 6062 | 7062 | 8062 | | T212D157J015(2)S | | |
| 150.0 | D | 10 | T110D157K015AS | 8.0 | 6 | 2277 | 2517 | 2757 | 2997 | 6063 | 7063 | 8063 | | T212D157K015(2)S | | |
| 150.0 | D | 20 | T110D157M015AS | 8.0 | 6 | 2278 | 2518 | 2758 | 2998 | 6064 | 7064 | 8064 | | T212D157M015(2)S | | |
| 20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C | | | | | | | | | | | | | | | | |
| 0.047 | A | 5,10,20 | T110A473(1)020AS | 0.1 | 3 | | | | | | | | | | | |
| 0.056 | A | 5,10,20 | T110A563(1)020AS | 0.1 | 3 | | | | | | | | | | | |
| 0.068 | A | 5,10,20 | T110A683(1)020AS | 0.1 | 3 | | | | | | | | | | | |
| 0.082 | A | 5,10,20 | T110A823(1)020AS | 0.1 | 3 | | | | | | | | | | | |
| 0.1 | A | 5,10,20 | T110A104(1)020AS | 0.3 | 3 | | | | | | | | | | | |
| 0.12 | A | 5,10,20 | T110A124(1)020AS | 0.3 | 3 | | | | | | | | | | | |
| 0.15 | A | 5,10,20 | T110A154(1)020AS | 0.3 | 3 | | | | | | | | | | | |
| 0.18 | A | 5,10,20 | T110A184(1)020AS | 0.3 | 3 | | | | | | | | | | | |
| 0.22 | A | 5,10,20 | T110A224(1)020AS | 0.3 | 3 | | | | | | | | | | | |
| 0.27 | A | 5,10,20 | T110A274(1)020AS | 0.3 | 3 | | | | | | | | | | | |
| 0.33 | A | 5,10,20 | T110A334(1)020AS | 0.3 | 3 | | | | | | | | | | | |
| 0.39 | A | 5,10,20 | T110A394(1)020AS | 0.3 | 3 | | | | | | | | | | | |
| 0.47 | A | 5,10,20 | T110A474(1)020AS | 0.3 | 3 | | | | | | | | | | | |
| 0.56 | A | 5,10,20 | T110A564(1)020AS | 0.3 | 3 | | | | | | | | | | | |
| 0.68 | A | 5,10,20 | T110A684(1)020AS | 0.3 | 3 | | | | | | | | | | | |
| 0.82 | A | 5,10,20 | T110A824(1)020AS | 0.3 | 3 | | | | | | | | | | | |
| 1.0 | A | 5,10,20 | T110A105(1)020AS | 0.3 | 3 | | | | | | | | | | | |
| 1.2 | A | 5 | T110A125J020AS | 0.3 | 4 | 5027 | 5227 | 5427 | 5627 | 6065 | 7065 | 8065 | | T212A125J020(2)S | | |
| 1.2 | A | 10 | T110A125K020AS | 0.3 | 4 | 2279 | 2519 | 2759 | 2999 | 6066 | 7066 | 8066 | | T212A125K020(2)S | | |
| 1.2 | A | 20 | T110A125M020AS | 0.3 | 4 | | | | | | | | | | | |
| 1.5 | A | 5 | T110A155J020AS | 0.3 | 4 | 5028 | 5228 | 5428 | 5628 | 6067 | 7067 | 8067 | | T212A155J020(2)S | | |
| 1.5 | A | 10 | T110A155K020AS | 0.3 | 4 | 2280 | 2520 | 2760 | 3000 | 6068 | 7068 | 8068 | | T212A155K020(2)S | | |
| 1.5 | A | 20 | T110A155M020AS | 0.3 | 4 | 2281 | 2521 | 2761 | 3001 | 6069 | 7069 | 8069 | | T212A155M020(2)S | | |
| 1.8 | A | 5 | T110A185J020AS | 0.3 | 4 | 5029 | 5229 | 5429 | 5629 | 6070 | 7070 | 8070 | | T212A185J020(2)S | | |
| 1.8 | A | 10 | T110A185K020AS | 0.3 | 4 | 2282 | 2522 | 2762 | 3002 | 6071 | 7071 | 8071 | | T212A185K020(2)S | | |
| 1.8 | A | 20 | T110A185M020AS | 0.3 | 4 | | | | | | | | | | | |
| 2.2 | A | 5 | T110A225J020AS | 0.4 | 4 | 5010 | 5230 | 5430 | 5630 | 6072 | 7072 | 8072 | | T212A225J020(2)S | | |
| 2.2 | A | 10 | T110A225K020AS | 0.4 | 4 | 2283 | 2523 | 2763 | 3003 | 6073 | 7073 | 8073 | | T212A225K020(2)S | | |
| 2.2 | A | 20 | T110A225M020AS | 0.4 | 4 | 2284 | 2524 | 2764 | 3004 | 6074 | 7074 | 8074 | | T212A225M020(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.

T110/T212 Series Tantalum
Hermetically Sealed

RATINGS & PART NUMBER REFERENCE

| CAPACITANCE μ F | CASE SIZE | CAPACITANCE TOLERANCE \pm % | KEMET T110 | | | MIL-PRF-39003 (CSR13) CAPACITORS | | | | | | | KEMET EQUIVALENT MILITARY PART NUMBER | |
|--|--------------|-------------------------------------|-----------------------|---|---|---|-------------|-------------|--------------|----------------------------|-------------|--------------|--|-------------------------|
| | | | KEMET PART NUMBER | D.C. LEAKAGE μ A@25°C MAX. | MAX. DISSIPATION FACTOR %@25°C, 120Hz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) | | | | | | | | |
| | | | | | | MIL-PRF-39003/1H EXPONENTIAL | | | | MIL-PRF-39003/1H GRADED | | | | |
| | | | | | | M (1.0) | P (0.1) | R (0.01) | S (0.001) | B (0.1) | C (0.01) | D (0.001) | | |
| 20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C (Cont'd) | | | | | | | | | | | | | | |
| 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 | | | | | | | | | |
| 10.0 | B | 5 | T110B106J020AS | 1.0 | 6 | 5032 | 5232 | 5432 | 5632 | 6077 | 7077 | 8077 | | T212B106J020(2)S |
| 10.0 | B | 10 | T110B106K020AS | 1.0 | 6 | 2286 | 2526 | 2766 | 3006 | 6078 | 7078 | 8078 | | T212B106K020(2)S |
| 10.0 | B | 20 | T110B106M020AS | 1.0 | 6 | 2287 | 2527 | 2767 | 3007 | 6079 | 7079 | 8079 | | T212B106M020(2)S |
| 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 | | | | | | | | | |
| 15.0 | B | 5 | T110B156J020AS | 2.0 | 6 | 5034 | 5234 | 5434 | 5634 | 6082 | 7082 | 8082 | | T212B156J020(2)S |
| 15.0 | B | 10 | T110B156K020AS | 2.0 | 6 | 2289 | 2529 | 2769 | 3009 | 6083 | 7083 | 8083 | | T212B156K020(2)S |
| 15.0 | B | 20 | T110B156M020AS | 2.0 | 6 | 2290 | 2530 | 2770 | 3010 | 6084 | 7084 | 8084 | | T212B156M020(2)S |
| 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 | | | | | | | | | |
| 47.0 | C | 5 | T110C476J020AS | 4.5 | 6 | 5038 | 5238 | 5438 | 5638 | 6092 | 7092 | 8092 | | T212C476J020(2)S |
| 47.0 | C | 10 | T110C476K020AS | 4.5 | 6 | 2295 | 2535 | 2775 | 3015 | 6093 | 7093 | 8093 | | T212C476K020(2)S |
| 47.0 | C | 20 | T110C476M020AS | 4.5 | 6 | 2296 | 2536 | 2776 | 3016 | 6094 | 7094 | 8094 | | T212C476M020(2)S |
| 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 | | | | | | | | | |
| 100.0 | D | 5 | T110D107J020AS | 10.0 | 6 | 5042 | 5242 | 5442 | 5642 | 6102 | 7102 | 8102 | | T212D107J020(2)S |
| 100.0 | D | 10 | T110D107K020AS | 10.0 | 6 | 2301 | 2541 | 2781 | 3021 | 6103 | 7103 | 8103 | | T212D107K020(2)S |
| 100.0 | D | 20 | T110D107M020AS | 10.0 | 6 | 2302 | 2542 | 2782 | 3022 | 6104 | 7104 | 8104 | | T212D107M020(2)S |
| 35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C | | | | | | | | | | | | | | |
| 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

| CAPACITANCE µF | CASE SIZE | CAPACITANCE TOLERANCE ±% | KEMET T110 | | | MIL-PRF-39003 (CSR13) CAPACITORS | | | | | | | | | |
|---|--------------|--------------------------------|-------------------------|------------------------------------|---|---|-------------|-------------|--------------|----------------------------|-------------|--------------|--|--|--|
| | | | KEMET PART NUMBER | D.C. LEAKAGE µA@25°C MAX. | MAX. DISSIPATION FACTOR %@25°C, 120Hz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) | | | | | | | | | |
| | | | | | | MIL-PRF-39003/1H EXPONENTIAL | | | | MIL-PRF-39003/1H GRADED | | | | | |
| | | | | | | M (1.0) | P (0.1) | R (0.01) | S (0.001) | B (0.1) | C (0.01) | D (0.001) | KEMET EQUIVALENT MILITARY PART NUMBER | | |
| 35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125° (Cont'd) | | | | | | | | | | | | | | | |
| 0.068 | A | 5,10,20 | T110A683(1)035AS | 0.1 | 3 | | | | | | | | | | |
| 0.082 | A | 5,10,20 | T110A823(1)035AS | 0.1 | 3 | | | | | | | | | | |
| 0.1 | A | 5,10,20 | T110A104(1)035AS | 0.5 | 3 | | | | | | | | | | |
| 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 | | | | | | | | | | |
| 0.22 | A | 5,10,20 | T110A224(1)035AS | 0.5 | 3 | | | | | | | | | | |
| 0.27 | A | 5,10,20 | T110A274(1)035AS | 0.5 | 3 | | | | | | | | | | |
| 0.33 | A | 5,10,20 | T110A334(1)035AS | 0.5 | 3 | | | | | | | | | | |
| 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 | | | | | | | | | | |
| 0.68 | A | 5,10,20 | T110A684(1)035AS | 0.5 | 3 | | | | | | | | | | |
| 0.82 | A | 5,10,20 | T110A824(1)035AS | 0.5 | 3 | | | | | | | | | | |
| 1.0 | A | 5,10,20 | T110A105(1)035AS | 0.5 | 3 | | | | | | | | | | |
| 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 | | | | | | | | | | |
| 3.3 | B | 5,10,20 | T110B335(1)035AS | 1.0 | 4 | | | | | | | | | | |
| 3.9 | B | 5,10,20 | T110B395(1)035AS | 1.0 | 4 | | | | | | | | | | |
| 4.7 | B | 5,10,20 | T110B475(1)035AS | 1.0 | 4 | | | | | | | | | | |
| 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 | | | | | | | | | | |
| 6.8 | B | 5 | T110B685J035AS | 1.5 | 4 | 5044 | 5244 | 5444 | 5644 | 6107 | 7107 | 8107 | T212B685J035(2)S | | |
| 6.8 | B | 10 | T110B685K035AS | 1.5 | 4 | 2304 | 2544 | 2784 | 3024 | 6108 | 7108 | 8108 | T212B685K035(2)S | | |
| 6.8 | B | 20 | T110B685M035AS | 1.5 | 4 | 2305 | 2545 | 2785 | 3025 | 6109 | 7109 | 8109 | T212B685M035(2)S | | |
| 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 | | | | | | | | | | |
| 22.0 | C | 5 | T110C226J035AS | 4.0 | 4 | 5045 | 5245 | 5445 | 5645 | 6110 | 7110 | 8110 | T212C226J035(2)S | | |
| 22.0 | C | 10 | T110C226K035AS | 4.0 | 4 | 2306 | 2546 | 2786 | 3026 | 6111 | 7111 | 8111 | T212C226K035(2)S | | |
| 22.0 | C | 20 | T110C226M035AS | 4.0 | 4 | 2307 | 2547 | 2787 | 3027 | 6112 | 7112 | 8112 | T212C226M035(2)S | | |
| 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 | | | | | | | | | | |
| 33.0 | D | 5 | T110D336J035AS | 5.5 | 4 | 5047 | 5247 | 5447 | 5647 | 6115 | 7115 | 8115 | T212D336J035(2)S | | |
| 33.0 | D | 10 | T110D336K035AS | 5.5 | 4 | 2309 | 2549 | 2789 | 3029 | 6116 | 7116 | 8116 | T212D336K035(2)S | | |
| 33.0 | D | 20 | T110D336M035AS | 5.5 | 4 | 2310 | 2550 | 2790 | 3030 | 6117 | 7117 | 8117 | T212D336M035(2)S | | |
| 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 | | | | | | | | | | |
| 47.0 | D | 5 | T110D476J035AS | 8.0 | 4 | 5049 | 5249 | 5449 | 5649 | 6120 | 7120 | 8120 | T212D476J035(2)S | | |
| 47.0 | D | 10 | T110D476K035AS | 8.0 | 4 | 2312 | 2552 | 2792 | 3032 | 6121 | 7121 | 8121 | T212D476K035(2)S | | |
| 47.0 | D | 20 | T110D476M035AS | 8.0 | 4 | 2313 | 2553 | 2793 | 3033 | 6122 | 7122 | 8122 | T212D476M035(2)S | | |
| 50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125° | | | | | | | | | | | | | | | |
| 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.

T110/T212 Series Tantalum
Hermetically Sealed



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

RATINGS & PART NUMBER REFERENCE

| CAPACITANCE μF | CASE SIZE | CAPACITANCE TOLERANCE ±% | KEMET T110 | | | MIL-PRF-39003 (CSR13) CAPACITORS | | | | | | | | KEMET EQUIVALENT MILITARY PART NUMBER |
|--|--------------|--------------------------------|-----------------------|------------------------------------|---|---|-------------|--------------|--------------|----------------------------|-------------|--------------|-------------------------|--|
| | | | KEMET PART NUMBER | D.C. LEAKAGE μA@25°C MAX. | MAX. DISSIPATION FACTOR %@25°C, 120Hz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) | | | | | | | | |
| | | | | | | MIL-PRF-39003/1H EXPONENTIAL | | | | MIL-PRF-39003/1H GRADED | | | | |
| | | | | | | M (1.0) | P (0.1) | R (0.001) | S (0.001) | B (0.1) | C (0.01) | D (0.001) | | |
| 50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C (Cont'd) | | | | | | | | | | | | | | |
| 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 | | | | | | | | | |
| 22.0 | D | 5 | T110D226J050AS | 5.5 | 4 | 5094 | 5294 | 5494 | 5694 | 6233 | 7233 | 8233 | T212D226J050(2)S | |
| 22.0 | D | 10 | T110D226K050AS | 5.5 | 4 | 2380 | 2620 | 2860 | 3100 | 6234 | 7234 | 8234 | T212D226K050(2)S | |
| 22.0 | D | 20 | T110D226M050AS | 5.5 | 4 | 2381 | 2621 | 2861 | 3101 | 6235 | 7235 | 8235 | T212D226M050(2)S | |
| 60 VOLT RATING AT 85°C — 40 VOLT RATING AT 125°C | | | | | | | | | | | | | | |
| 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 | | | | | | | | | |
| 75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C | | | | | | | | | | | | | | |
| 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.



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

RATINGS & PART NUMBER REFERENCE

| CAPACITANCE μF | CASE SIZE | CAPACITANCE TOLERANCE ±% | KEMET T110 | | | MIL-PRF-39003 (CSR13) CAPACITORS | | | | | | | | KEMET EQUIVALENT MILITARY PART NUMBER |
|---|--------------|--------------------------------|----------------------|------------------------------------|---|---|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|--|
| | | | KEMET PART NUMBER | D.C. LEAKAGE μA@25°C MAX. | MAX. DISSIPATION FACTOR %@25°C, 120Hz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) | | | | | | | | |
| | | | | | | MIL-PRF-39003/1H EXPONENTIAL | | | | MIL-PRF-39003/1H GRADED | | | | |
| | | | | | | M (1.0) | P (0.1) | R (0.01) | S (0.001) | B (0.1) | C (0.01) | D (0.001) | | |
| 100 VOLT RATING AT 85°C — 67 VOLT RATING AT 125°C (Cont'd) | | | | | | | | | | | | | | |
| 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 | | | | | | | | | |
| 125 VOLT RATING AT 85°C — 82 VOLT RATING AT 125° | | | | | | | | | | | | | | |
| 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.

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

ORDERING INFORMATION

TANTALUM — T

SERIES (CSR09) — 222

CASE SIZE — A / B

PICOFARAD CODE — A 225
First two digits represent significant figures.
3rd digit specifies no. of zeros to follow.

CAPACITANCE TOLERANCE — K
M — ±20 K — ±10 J — ±5

VOLTAGE — 010
at 85°C

SPECIFICATION — C*
All capacitors are sleeved unless specified.

LEAD MATERIAL — S
S — Standard
Positive: Alloy 52 (solder coated)
Negative: Solder coated nickel

FAILURE RATE LEVEL**

| | |
|-------------------|--------------------|
| GRADED | EXPONENTIAL |
| B — 0.1%/k hrs. | M — 1%/k hrs. |
| C — 0.01%/k hrs. | P — 0.1%/k hrs. |
| D — 0.001%/k hrs. | R — 0.01%/k hrs. |
| . | S — 0.001%/k hrs. |

*Part Number Example: T222A225K010BS (14 digits - no spaces)

**Failure Rates apply only to military products
For Military Ordering, see page 4.

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 |

TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003

T140 SERIES — POLAR TYPE & T242 (CSR23)



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 μ 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)

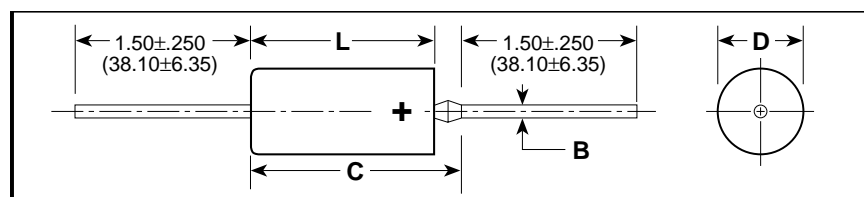
| CASE SIZE | UNINSULATED | | INSULATED | | B ± 0.002 (.05) | C MAX. |
|-----------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------|
| | D ± 0.005 (.13) | L ± 0.031 (.79) | D ± 0.010 (.25) | L ± 0.031 (.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) |

MARKING INFORMATION* A, B, C & D CASES

| | |
|-------------|--|
| +K 10% | Polarity, Manufacturer's Identification and Capacitance Tol. |
| 5R6 μ F | Normal Capacitance — (μ 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 μ F | CASE SIZE | CAPACITANCE TOLERANCE $\pm\%$ | KEMET T140 | | | MIL-PRF-39003 (CSR23) CAPACITORS | | | | | | | | KEMET EQUIVALENT MILITARY PART NUMBER |
|---|--|--|--|--|--|---|--|--|---|-------------------------|---|---|---|---------------------------------------|
| | | | KEMET PART NUMBER | D.C. LEAKAGE μ A@25°C MAX. | MAX. DISSIPATION FACTOR %@25°C, 120Hz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) | | | | MIL-PRF-39003/3F GRADED | | | | |
| | | | | | | MIL-PRF-39003/3F EXponential | MIL-PRF-39003/3F GRADED | M | P | R | S | B | C | |
| 6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C | | | | | | | | | | | | | | |
| 8.2 10.0 10.0 12.0 12.0 | A A A A A | 10, 20 10 20 10 20 | T140A825(1)006AS T140A106K006AS T140A106M006AS T140A126K006AS T140A126M006AS | 0.9 0.9 0.9 1.0 1.0 | 6 6 6 6 6 | 0101 0201 0301 0401 0102 0202 0302 0402 0103 0203 0303 0403 | 2001 3001 4001 2002 3002 4002 2003 3003 4003 | T242A106K006(2)S T242A106M006(2)S T242A126K006(2)S | | | | | | |
| 68.0 82.0 100.0 100.0 | B B B B | 10, 20 10, 20 10 20 | T140B686(1)006AS T140B826(1)006AS T140B107K006AS T140B107M006AS | 3.0 3.0 6.0 6.0 | 6 6 6 6 | 0104 0204 0304 0404 0105 0205 0305 0405 | 2004 3004 4004 2005 3005 4005 | T242B107K006(2)S T242B107M006(2)S | | | | | | |
| 220.0 270.0 330.0 330.0 390.0 390.0 470.0 470.0 | C C C C C C C C | 10, 20 10, 20 10 20 10 20 10 20 | T140C227(1)006AS T140C277(1)006AS T140C337K006AS T140C337M006AS T140C397K006AS T140C397M006AS T140C477K006AS T140C477M006AS | 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 | 8 8 8 8 8 10 10 10 | 0106 0206 0306 0406 0107 0207 0307 0407 0108 0208 0308 0408 0109 0209 0309 0409 0110 0210 0310 0410 | 2006 3006 4006 2007 3007 4007 2008 3008 4008 2009 3009 4009 2010 3010 4010 | T242C337K006(2)S T242C337M006(2)S T242C397K006(2)S T242C477K006(2)S T242C477M006(2)S | | | | | | |
| 560.0 680.0 680.0 820.0 820.0 1000.0 1000.0 1200.0 | D D D D D D D D | 10, 20 10 20 10 20 10 20 20 | T140D567(1)006AS T140D687K006AS T140D687M006AS T140D827K006AS T140D827M006AS T140D108K006AS T140D108M006AS T140D128M006AS | 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 | 10 10 10 10 10 10 10 10 | 0111 0211 0311 0411 0112 0212 0312 0412 0113 0213 0313 0413 0114 0214 0314 0414 0115 0215 0315 0415 | 2011 3011 4011 2012 3012 4012 2013 3013 4013 2014 3014 4014 2015 3015 4015 | T242D687K006(2)S T242D687M006(2)S T242D827K006(2)S T242D108K006(2)S T242D108M006(2)S | | | | | | |

(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.

RATINGS & PART NUMBER REFERENCE

| CAPACITANCE µF | CASE SIZE | CAPACITANCE TOLERANCE ±% | KEMET T140 | | | MIL-PRF-39003 (CSR23) CAPACITORS | | | | | | | | KEMET EQUIVALENT MILITARY PART NUMBER |
|---|--------------|--------------------------------|-----------------------|------------------------------------|---|---|-------------|-------------|--------------|----------------------------|-------------|--------------|-------------------------|--|
| | | | KEMET PART NUMBER | D.C. LEAKAGE µA@25°C MAX. | MAX. DISSIPATION FACTOR %@25°C, 120Hz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) | | | | | | | | |
| | | | | | | MIL-PRF-39003/3F EXPONENTIAL | | | | MIL-PRF-39003/3F GRADED | | | | |
| | | | | | | M (1.0) | P (0.1) | R (0.01) | S (0.001) | B (0.1) | C (0.01) | D (0.001) | | |
| 10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C | | | | | | | | | | | | | | |
| 5.6 | A | 10, 20 | T140A565(1)010AS | 1.0 | 4 | | | | | | | | | |
| 6.8 | A | 10 | T140A685K010AS | 1.0 | 6 | 0116 | 0216 | 0316 | 0416 | 2016 | 3016 | 4016 | T242A685K010(2)S | |
| 6.8 | A | 20 | T140A685M010AS | 1.0 | 6 | 0117 | 0217 | 0317 | 0417 | 2017 | 3017 | 4017 | T242A685M010(2)S | |
| 8.2 | A | 10 | T140A825K010AS | 1.2 | 6 | 0118 | 0218 | 0318 | 0418 | 2018 | 3018 | 4018 | T242A825K010(2)S | |
| 8.2 | A | 20 | T140A825M010AS | 1.2 | 6 | | | | | | | | | |
| 47.0 | B | 10 | T140B476K010AS | 4.0 | 6 | 0119 | 0219 | 0319 | 0419 | 2019 | 3019 | 4019 | T242B476K010(2)S | |
| 47.0 | B | 20 | T140B476M010AS | 4.0 | 6 | 0120 | 0220 | 0320 | 0420 | 2020 | 3020 | 4020 | T242B476M010(2)S | |
| 56.0 | B | 10 | T140B566K010AS | 5.0 | 6 | 0121 | 0221 | 0321 | 0421 | 2021 | 3021 | 4021 | T242B566K010(2)S | |
| 56.0 | B | 20 | T140B566M010AS | 5.0 | 6 | | | | | | | | | |
| 68.0 | B | 10 | T140B686K010AS | 6.0 | 6 | 0122 | 0222 | 0322 | 0422 | 2022 | 3022 | 4022 | T242B686K010(2)S | |
| 68.0 | B | 20 | T140B686M010AS | 6.0 | 6 | 0123 | 0223 | 0323 | 0423 | 2023 | 3023 | 4023 | T242B686M010(2)S | |
| 82.0 | B | 10 | T140B826K010AS | 7.0 | 6 | 0124 | 0224 | 0324 | 0424 | 2024 | 3024 | 4024 | T242B826K010(2)S | |
| 82.0 | B | 20 | T140B826M010AS | 7.0 | 6 | | | | | | | | | |
| 150.0 | C | 10, 20 | T140C157(1)010AS | 8.0 | 8 | | | | | | | | | |
| 180.0 | C | 10, 20 | T140C187(1)010AS | 8.0 | 8 | | | | | | | | | |
| 220.0 | C | 10 | T140C227K010AS | 12.0 | 8 | 0125 | 0225 | 0325 | 0425 | 2025 | 3025 | 4025 | T242C227K010(2)S | |
| 220.0 | C | 20 | T140C227M010AS | 12.0 | 8 | 0126 | 0226 | 0326 | 0426 | 2026 | 3026 | 4026 | T242C227M010(2)S | |
| 270.0 | C | 10 | T140C277K010AS | 13.0 | 8 | 0127 | 0227 | 0327 | 0427 | 2027 | 3027 | 4027 | T242C277K010(2)S | |
| 270.0 | C | 20 | T140C277M010AS | 13.0 | 8 | | | | | | | | | |
| 330.0 | D | 10, 20 | T140D337(1)010AS | 16.0 | 8 | | | | | | | | | |
| 390.0 | D | 10 | T140D397K010AS | 16.0 | 10 | 0128 | 0228 | 0328 | 0428 | 2028 | 3028 | 4028 | T242D397K010(2)S | |
| 390.0 | D | 20 | T140D397M010AS | 16.0 | 10 | | | | | | | | | |
| 470.0 | D | 10 | T140D477K010AS | 16.0 | 10 | 0129 | 0229 | 0329 | 0429 | 2029 | 3029 | 4029 | T242D477K010(2)S | |
| 470.0 | D | 20 | T140D477M010AS | 16.0 | 10 | 0130 | 0230 | 0330 | 0430 | 2030 | 3030 | 4030 | T242D477M010(2)S | |
| 560.0 | D | 10 | T140D567K010AS | 20.0 | 10 | 0131 | 0231 | 0331 | 0431 | 2031 | 3031 | 4031 | T242D567K010(2)S | |
| 560.0 | D | 20 | T140D567M010AS | 20.0 | 10 | | | | | | | | | |
| 15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C | | | | | | | | | | | | | | |
| 3.9 | A | 10, 20 | T140A395(1)015AS | 1.0 | 4 | | | | | | | | | |
| 4.7 | A | 10 | T140A475K015AS | 1.0 | 4 | 0132 | 0232 | 0332 | 0432 | 2032 | 3032 | 4032 | T242A475K015(2)S | |
| 4.7 | A | 20 | T140A475M015AS | 1.0 | 4 | 0133 | 0233 | 0333 | 0433 | 2033 | 3033 | 4033 | T242A475M015(2)S | |
| 5.6 | A | 10 | T140A565K015AS | 1.3 | 4 | 0134 | 0234 | 0334 | 0434 | 2034 | 3034 | 4034 | T242A565K015(2)S | |
| 5.6 | A | 20 | T140A565M015AS | 1.3 | 4 | | | | | | | | | |
| 27.0 | B | 10, 20 | T140B276(1)015AS | 3.0 | 6 | | | | | | | | | |
| 33.0 | B | 10 | T140B336K015AS | 5.0 | 6 | 0135 | 0235 | 0335 | 0435 | 2035 | 3035 | 4035 | T242B336K015(2)S | |
| 33.0 | B | 20 | T140B336M015AS | 5.0 | 6 | 0136 | 0236 | 0336 | 0436 | 2036 | 3036 | 4036 | T242B336M015(2)S | |
| 39.0 | B | 10 | T140B396K015AS | 5.3 | 6 | 0137 | 0237 | 0337 | 0437 | 2037 | 3037 | 4037 | T242B396K015(2)S | |
| 39.0 | B | 20 | T140B396M015AS | 5.3 | 6 | | | | | | | | | |
| 82.0 | C | 10, 20 | T140C826(1)015AS | 8.0 | 6 | | | | | | | | | |
| 100.0 | C | 10, 20 | T140C107(1)015AS | 10.0 | 6 | | | | | | | | | |
| 120.0 | C | 10, 20 | T140C127(1)015AS | 10.0 | 6 | | | | | | | | | |
| 150.0 | C | 10 | T140C157K015AS | 15.0 | 8 | 0138 | 0238 | 0338 | 0438 | 2038 | 3038 | 4038 | T242C157K015(2)S | |
| 150.0 | C | 20 | T140C157M015AS | 15.0 | 8 | 0139 | 0239 | 0339 | 0439 | 2039 | 3039 | 4039 | T242C157M015(2)S | |
| 180.0 | C | 10 | T140C187K015AS | 15.0 | 8 | 0140 | 0240 | 0340 | 0440 | 2040 | 3040 | 4040 | T242C187K015(2)S | |
| 180.0 | C | 20 | T140C187M015AS | 15.0 | 8 | | | | | | | | | |
| 220.0 | D | 10 | T140D227K015AS | 20.0 | 8 | 0141 | 0241 | 0341 | 0441 | 2041 | 3041 | 4041 | T242D227K015(2)S | |
| 220.0 | D | 20 | T140D227M015AS | 20.0 | 8 | 0142 | 0242 | 0342 | 0442 | 2042 | 3042 | 4042 | T242D227M015(2)S | |
| 270.0 | D | 10 | T140D277K015AS | 20.0 | 8 | 0143 | 0243 | 0343 | 0443 | 2043 | 3043 | 4043 | T242D277K015(2)S | |
| 270.0 | D | 20 | T140D277M015AS | 20.0 | 8 | | | | | | | | | |
| 330.0 | D | 10 | T140D337K015AS | 20.0 | 8 | 0144 | 0244 | 0344 | 0444 | 2044 | 3044 | 4044 | T242D337K015(2)S | |
| 330.0 | D | 20 | T140D337M015AS | 20.0 | 8 | 0145 | 0245 | 0345 | 0445 | 2045 | 3045 | 4045 | T242D337M015(2)S | |

(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.

RATINGS & PART NUMBER REFERENCE

| CAPACITANCE μF | CASE SIZE | CAPACITANCE TOLERANCE ±% | KEMET T140 | | | MIL-PRF-39003 (CSR23) CAPACITORS | | | | | | | | KEMET EQUIVALENT MILITARY PART NUMBER |
|---|--------------|--------------------------------|-------------------------|------------------------------------|---|---|-------------|-------------|--------------|----------------------------|-------------|--------------|-------------------------|--|
| | | | KEMET PART NUMBER | D.C. LEAKAGE μA@25°C MAX. | MAX. DISSIPATION FACTOR %@25°C, 120Hz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) | | | | | | | | |
| | | | | | | MIL-PRF-39003/3F EXPONENTIAL | | | | MIL-PRF-39003/3F GRADED | | | | |
| | | | | | | M (1.0) | P (0.1) | R (0.01) | S (0.001) | B (0.1) | C (0.01) | D (0.001) | | |
| 20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C | | | | | | | | | | | | | | |
| 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 | | | | | | | | | |
| 22.0 | B | 10 | T140B226K020AS | 3.0 | 6 | 0151 | 0251 | 0351 | 0451 | 2051 | 3051 | 4051 | T242B226K020(2)S | |
| 22.0 | B | 20 | T140B226M020AS | 3.0 | 6 | 0152 | 0252 | 0352 | 0452 | 2052 | 3052 | 4052 | T242B226M020(2)S | |
| 27.0 | B | 10 | T140B276K020AS | 4.0 | 6 | 0153 | 0253 | 0353 | 0453 | 2053 | 3053 | 4053 | T242B276K020(2)S | |
| 27.0 | B | 20 | T140B276M020AS | 4.0 | 6 | | | | | | | | | |
| 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 | | | | | | | | | |
| 100.0 | C | 10 | T140C107K020AS | 12.0 | 6 | 0158 | 0258 | 0358 | 0458 | 2058 | 3058 | 4058 | T242C107K020(2)S | |
| 100.0 | C | 20 | T140C107M020AS | 12.0 | 6 | 0159 | 0259 | 0359 | 0459 | 2059 | 3059 | 4059 | T242C107M020(2)S | |
| 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 | |
| 180.0 | D | 10 | T140D187K020AS | 15.0 | 8 | 0163 | 0263 | 0363 | 0463 | 2063 | 3063 | 4063 | T242D187K020(2)S | |
| 180.0 | D | 20 | T140D187M020AS | 15.0 | 8 | | | | | | | | | |
| 30 VOLT RATING AT 85°C — 20 VOLT RATING AT 125°C | | | | | | | | | | | | | | |
| 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 | | | | | | | | | |
| 2.2 | A | 10, 20 | T140A225(1)030AS | 1.0 | 4 | | | | | | | | | |
| 2.7 | A | 10, 20 | T140A275(1)030AS | 1.0 | 4 | | | | | | | | | |
| 12.0 | B | 10, 20 | T140B126(1)030AS | 3.0 | 4 | | | | | | | | | |
| 15.0 | B | 10, 20 | T140B156(1)030AS | 3.0 | 4 | | | | | | | | | |
| 18.0 | B | 10, 20 | T140B186(1)030AS | 3.0 | 4 | | | | | | | | | |
| 33.0 | C | 10, 20 | T140C336(1)030AS | 6.0 | 6 | | | | | | | | | |
| 39.0 | C | 10, 20 | T140C396(1)030AS | 6.0 | 6 | | | | | | | | | |
| 47.0 | C | 10, 20 | T140C476(1)030AS | 7.0 | 6 | | | | | | | | | |
| 56.0 | C | 10, 20 | T140C566(1)030AS | 7.0 | 6 | | | | | | | | | |
| 68.0 | C | 10, 20 | T140C686(1)030AS | 7.0 | 6 | | | | | | | | | |
| 82.0 | D | 10, 20 | T140D826(1)030AS | 10.0 | 6 | | | | | | | | | |
| 100.0 | D | 10, 20 | T140D107(1)030AS | 10.0 | 8 | | | | | | | | | |

(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 μF | CASE SIZE | CAPACITANCE TOLERANCE ±% | KEMET T140 | | | MIL-PRF-39003 (CSR23) CAPACITORS | | | | | | | | KEMET EQUIVALENT MILITARY PART NUMBER | | | |
|---|--------------|--------------------------------|-------------------------|------------------------------------|---|---|-------------|-------------|--------------|----------------------------|-------------|--------------|--|--|--|-------------------------|--|
| | | | KEMET PART NUMBER | D.C. LEAKAGE μA@25°C MAX. | MAX. DISSIPATION FACTOR %@25°C, 120Hz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) | | | | | | | | | | | |
| | | | | | | MIL-PRF-39003/3F EXPONENTIAL | | | | MIL-PRF-39003/3F GRADED | | | | | | | |
| | | | | | | M (1.0) | P (0.1) | R (0.01) | S (0.001) | B (0.1) | C (0.01) | D (0.001) | | | | | |
| 35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | |
| 10.0 | B | 10 | T140B106K035AS | 3.0 | 4 | 0166 | 0266 | 0366 | 0466 | 2066 | 3066 | 4066 | | | | T242B106K035(2)S | |
| 10.0 | B | 20 | T140B106M035AS | 3.0 | 4 | 0167 | 0267 | 0367 | 0467 | 2067 | 3067 | 4067 | | | | T242B106M035(2)S | |
| 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 | | | | | | | | | | | | |
| 47.0 | C | 10 | T140C476K035AS | 10.0 | 6 | 0171 | 0271 | 0371 | 0471 | 2071 | 3071 | 4071 | | | | T242C476K035(2)S | |
| 47.0 | C | 20 | T140C476M035AS | 10.0 | 6 | 0172 | 0272 | 0372 | 0472 | 2072 | 3072 | 4072 | | | | T242C476M035(2)S | |
| 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 | | | | | | | | | | | | |
| 68.0 | D | 10 | T140D686K035AS | 12.0 | 6 | 0174 | 0274 | 0374 | 0474 | 2074 | 3074 | 4074 | | | | T242D686K035(2)S | |
| 68.0 | D | 20 | T140D686M035AS | 12.0 | 6 | 0175 | 0275 | 0375 | 0475 | 2075 | 3075 | 4075 | | | | T242D686M035(2)S | |
| 82.0 | D | 10, 20 | T140D826(1)035AS | 20.0 | 8 | | | | | | | | | | | | |
| 100.0 | D | 10, 20 | T140D107(1)035AS | 20.0 | 8 | | | | | | | | | | | | |
| 50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | |
| 6.8 | B | 10 | T140B685K050AS | 2.5 | 4 | 0180 | 0280 | 0380 | 0480 | 2080 | 3080 | 4080 | | | | T242B685K050(2)S | |
| 6.8 | B | 20 | T140B685M050AS | 2.5 | 4 | 0181 | 0281 | 0381 | 0481 | 2081 | 3081 | 4081 | | | | T242B685M050(2)S | |
| 22.0 | C | 10 | T140C226K050AS | 7.0 | 6 | 0182 | 0282 | 0382 | 0482 | 2082 | 3082 | 4082 | | | | T242C226K050(2)S | |
| 22.0 | C | 20 | T140C226M050AS | 7.0 | 6 | 0183 | 0283 | 0383 | 0483 | 2083 | 3083 | 4083 | | | | T242C226M050(2)S | |
| 27.0 | C | 10 | T140C276K050AS | 8.0 | 6 | 0184 | 0284 | 0384 | 0484 | 2084 | 3084 | 4084 | | | | T242C276K050(2)S | |
| 27.0 | C | 20 | T140C276M050AS | 8.0 | 6 | | | | | | | | | | | | |
| 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 | |
| 39.0 | D | 10 | T140D396K050AS | 10.0 | 6 | 0187 | 0287 | 0387 | 0487 | 2087 | * | * | | | | T242D396K050(2)S | |
| 39.0 | D | 20 | T140D396M050AS | 10.0 | 6 | | | | | | * | * | | | | | |
| 47.0 | D | 20 | T140D476M050AS | 10.0 | 6 | | | | | | | | | | | | |
| 60 VOLT RATING AT 85°C — 40 VOLT RATING AT 125°C | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | |
| 22.0 | C | 10, 20 | T140C226(1)060AS | 7.0 | 6 | | | | | | | | | | | | |
| 27.0 | D | 10, 20 | T140D276(1)060AS | 10.0 | 6 | | | | | | | | | | | | |
| 33.0 | D | 10, 20 | T140D336(1)060AS | 10.0 | 6 | | | | | | | | | | | | |

(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 μF to 1000 μF , 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°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 ± 0.002 ($\pm .05$) | C MAX. |
|-----------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------|
| | D ± 0.005 ($\pm .13$) | L ± 0.031 ($\pm .79$) | D ± 0.010 ($\pm .25$) | L ± 0.031 ($\pm .79$) | | |
| 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.

RATINGS & PART NUMBER REFERENCE

| CAPACITANCE µF | CASE SIZE | CAPACITANCE TOLERANCE ±% | KEMET T252 SERIES | | | | MIL-PRF-39003 (CSR33) CAPACITORS | | | | | |
|-------------------------------|--------------|--------------------------------|------------------------------------|--|---|------------|----------------------------------|--------------|--|-------------|--------------|------------------|
| | | | D.C. LEAKAGE µA@25°C MAX. | MAX. DISSI- PATION FACTOR %@25°C, 120Hz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) | | | | KEMET EQUIVALENT MILITARY PART NUMBER | | | |
| | | | | | MIL-PRF-39003/6C EXPONENTIAL | | MIL-PRF-39003/6C GRADED | | | | | |
| | | | | | M (1.0) | P (0.1) | R (0.01) | S (0.001) | B (0.1) | C (0.01) | D (0.001) | |
| 6 VOLT RATING AT 85°C | | | | | | | | | | | | |
| 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 |
| 10 VOLT RATING AT 85°C | | | | | | | | | | | | |
| 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 |
| 15 VOLT RATING AT 85°C | | | | | | | | | | | | |
| 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 µF | CASE SIZE | CAPACITANCE TOLERANCE ±% | KEMET T252 SERIES | | | | MIL-PRF-39003 (CSR33) CAPACITORS | | | | | |
|-------------------------------|--------------|--------------------------------|------------------------------------|--|---|------------|----------------------------------|--------------|----------------------------|-------------|--------------|--|
| | | | D.C. LEAKAGE µA@25°C MAX. | MAX. DISSI- PATION FACTOR %@25°C, 120Hz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) | | | | MIL-PRF-39003/6C GRADED | | | KEMET EQUIVALENT MILITARY PART NUMBER |
| | | | | | MIL-PRF-39003/6C EXPONENTIAL | | | | | | | |
| | | | | | M (1.0) | P (0.1) | R (0.01) | S (0.001) | B (0.1) | C (0.01) | D (0.001) | |
| 20 VOLT RATING AT 85°C | | | | | | | | | | | | |
| 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 |
| 35 VOLT RATING AT 85°C | | | | | | | | | | | | |
| 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 |
| 50 VOLT RATING AT 85°C | | | | | | | | | | | | |
| 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 μ F, 6 to 50 VDC.

CAPACITOR OUTLINE DRAWINGS



DIMENSIONS — INCHES & (MILLIMETERS)

| CASE SIZE | UNINSULATED | | INSULATED | | B ± 0.002 ($\pm .05$) | C MAX. |
|-----------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------|
| | D ± 0.005 ($\pm .13$) | L ± 0.031 ($\pm .79$) | D ± 0.010 ($\pm .25$) | L ± 0.031 ($\pm .79$) | | |
| 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 μF | CASE SIZE | CAPACITANCE TOLERANCE ±% | KEMET T262 SERIES | | | | MIL-PRF-39003/09 (CSR21) CAPACITORS | | | | | | | | KEMET EQUIVALENT MILITARY PART NUMBER |
|---|--------------|--------------------------------|------------------------------------|--|--------------------------------|---|---|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|--|
| | | | D.C. LEAKAGE μA@25°C MAX. | MAX. DISSI- PATION FACTOR %@25°C, 1 kHz | MAX. ESR Ω@25°C, 100 kHz | MAX. RIPPLE CURRENT Arms@25°C 40 kHz | DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.) | | | | | | | | |
| | | | | | | | MIL-PRF-39003/9D EXPONENTIAL | | | | MIL-PRF-39003/9D GRADED | | | | |
| | | | | | | | M (1.0) | P (0.1) | R (0.01) | S (0.001) | B (0.1) | C (0.01) | D (0.001) | | |
| 35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C | | | | | | | | | | | | | | | |
| 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 | |
| 50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C | | | | | | | | | | | | | | | |
| 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 ±0.002 (±.05) | C MAX. |
|-----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
| | D ±0.005 (±.13) | L ±0.031 (±.79) | D ±0.010 (±.25) | L ±0.031 (±.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



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 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) |
| 6 VOLT RATING AT 85° C | | | | | | | | | | |
| 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) |
| 10 VOLT RATING AT 85° C | | | | | | | | | | |
| 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 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) | |
| | | | | | | | | | B (0.1) | C (0.01) |
| 75 VOLT RATING AT 85° C | | | | | | | | | | |
| 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 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) | |
| | | | | | | | | | B (0.1) | C (0.01) |
| 6 VOLT RATING AT 85° C | | | | | | | | | | |
| 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) |
| 10 VOLT RATING AT 85° C | | | | | | | | | | |
| 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 μF | CASE SIZE | KEMET EQUIVALENT PART NUMBER FOR CSS33 CAPACITORS | KEMET T256 SERIES | | | | | | MIL-PRF-39003 (CSS33) 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) | |
| | | | | | | | | | | | |
| 15 VOLT RATING AT 85° C | | | | | | | | | | | |
| 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) | |
| 20 VOLT RATING AT 85° C | | | | | | | | | | | |
| 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) | |
| 35 VOLT RATING AT 85° C | | | | | | | | | | | |
| 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) | |
| 50 VOLT RATING AT 85° C | | | | | | | | | | | |
| 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) | |

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