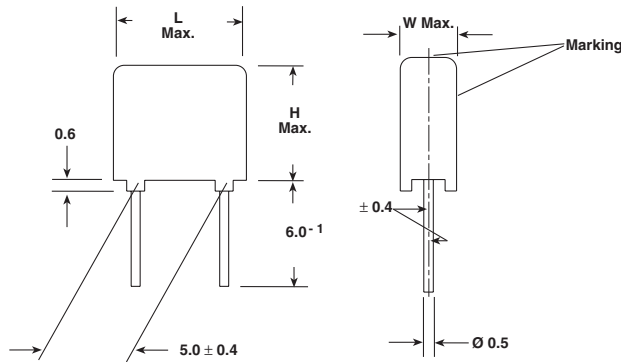


## Metallized Polyester Film Capacitors

### Related Document: IEC 60384-2

Dimensions in millimeters



#### MAIN APPLICATIONS

Blocking, bypassing, filtering and timing, high frequency coupling and decoupling for fast digital and analog ICs, interference suppression in low voltage applications.

#### MARKING

Manufacturer's logo/type/C-value/rated voltage/tolerance/date of manufacture

#### DIELECTRIC

Polyester film

#### ELECTRODES

Vacuum deposited aluminum

#### COATING

Flame retardant plastic case (UL-class 94 V-0), green, epoxy resin sealed

#### CONSTRUCTION

Extended metallized film (refer to general information)

#### LEADS

Tinned wire

#### IEC TEST CLASSIFICATION

55/100/56, according to IEC 60068

#### TEST VOLTAGE (ELECTRODE/ELECTRODE)

$1.6 \times U_R$  for 2 s

#### OPERATING TEMPERATURE RANGE

-55°C to +100°C

#### MAXIMUM PULSE RISE TIME

| PCM (mm) | Maximum Pulse Rise Time $d_v/d_t$ [V/ $\mu$ s] |         |         |         |
|----------|--|---------|---------|---------|
|          | 63 VDC   | 100 VDC | 250 VDC | 400 VDC |
| 5        | 15   | 24      | 44      | 100     |

If the maximum pulse voltage is less than the rated voltage higher  $d_v/d_t$  values can be permitted.

#### DISSIPATION FACTOR $\tan \delta$

| MEASURED AT    | $C \leq 0.1\mu F$   | $0.1\mu F < C \leq 1.0\mu F$ |
|----------------|---------------------|------------------------------|
| 1kHz           | $8 \times 10^{-3}$  | $8 \times 10^{-3}$           |
| 10kHz          | $15 \times 10^{-3}$ | $15 \times 10^{-3}$          |
| 100kHz         | $25 \times 10^{-3}$ | —                            |
| Maximum values |                     |                              |

#### FEATURES

Product is completely lead (Pb)-free.  
Product is RoHS compliant.

#### CAPACITANCE RANGE

1000pF to 1.0 $\mu$ FF

#### CAPACITANCE TOLERANCES

$\pm 20\%$  (M),  $\pm 10\%$  (K),  $\pm 5\%$  (J)

#### RATED VOLTAGES (UR)

63 VDC, 100 VDC, 250 VDC, 400 VDC

#### PERMISSIBLE AC VOLTAGES (RMS) UP TO 60HZ

40 VAC, 63 VAC, 160 VAC, 200 VAC

#### INSULATION RESISTANCE

Measured with 100 VDC

(63 VDC series measured at 50 VDC) after one minute

**For  $C \leq 0.33\mu F$  and  $U_R > 100$  VDC:**

7500 M $\Omega$  minimum value (100,000 M $\Omega$  typical value)

**For  $C \leq 0.33\mu F$  and  $U_R \leq 100$  VDC:**

3750 M $\Omega$  minimum value (50,000 M $\Omega$  typical value)

#### TIME CONSTANT

Measured with 50 VDC after one minute

**For  $C > 0.33\mu F$ :**

1250 s minimum value (10,000 s typical value)

#### CAPACITANCE DRIFT

Up to +40°C,  $\pm 1.5\%$  for a period of two years

#### DERATING FOR DC AND AC. CATEGORY VOLTAGE $U_C$

At +85°C:  $U_C = 1.0 U_R$

At +100°C:  $U_C = 0.8 U_R$

#### SELF INDUCTANCE

~6nH measured with 2mm long leads

#### PULL TEST ON LEADS

$\geq 30$  N in direction of leads according to IEC 60068-2-21

#### RELIABILITY

Operational life > 300,000h

Failure rate < 2 FIT (40°C and  $0.5 \times U_R$ )

For further details, please refer to the general information available at [www.vishay.com/doc?26033](http://www.vishay.com/doc?26033).



**RoHS**  
COMPLIANT

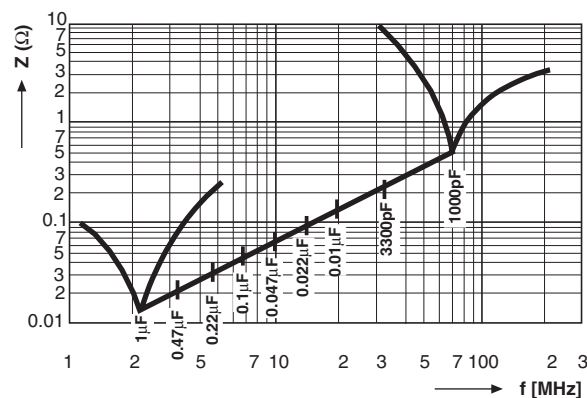
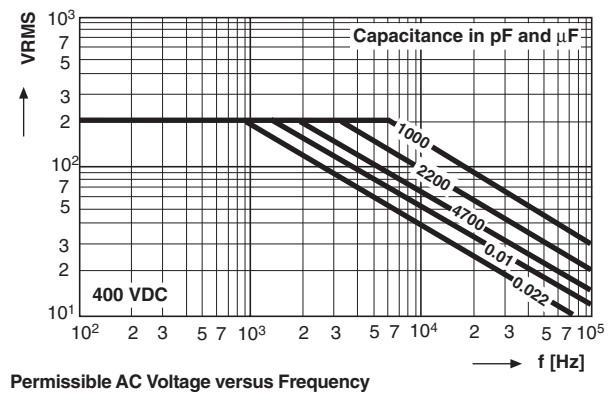
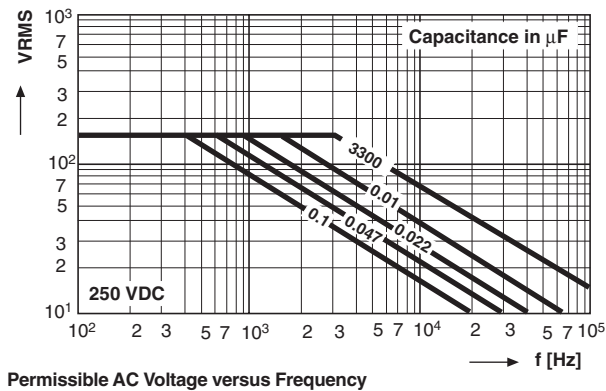
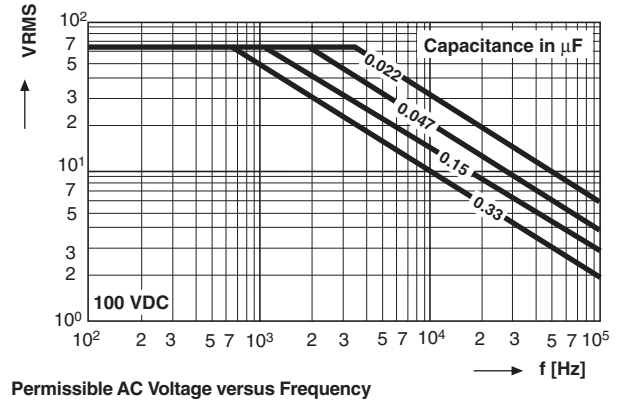
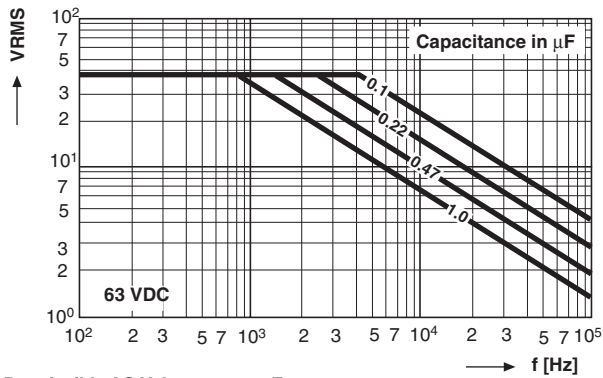
| CAPACITANCE | CAPACITANCE CODE | VOLTAGE CODE 06<br>63 VDC/40 VAC |      |     | VOLTAGE CODE 01<br>100 VDC/63 VAC |      |      | VOLTAGE CODE 25<br>250 VDC/160 VAC |      |     | VOLTAGE CODE 40<br>400 VDC/200 VAC |      |     |
|-------------|------------------|----------------------------------|------|-----|-----------------------------------|------|------|------------------------------------|------|-----|------------------------------------|------|-----|
|             |                  | W                                | H    | L   | W                                 | H    | L    | W                                  | H    | L   | W                                  | H    | L   |
| 1000pF      | - 210            | —                                | —    | —   | —                                 | —    | —    | —                                  | —    | —   | 2.5                                | 6.0  | 7.5 |
| 1500pF      | - 215            | —                                | —    | —   | —                                 | —    | —    | —                                  | —    | —   | 2.5                                | 6.0  | 7.5 |
| 2200pF      | - 222            | —                                | —    | —   | —                                 | —    | —    | —                                  | —    | —   | 2.5                                | 6.0  | 7.5 |
| 3300pF      | - 233            | —                                | —    | —   | —                                 | —    | —    | 2.5                                | 6.0  | 7.5 | 3.0                                | 6.5  | 7.5 |
| 4700pF      | - 247            | —                                | —    | —   | —                                 | —    | —    | 2.5                                | 6.0  | 7.5 | 3.5                                | 8.5  | 7.5 |
| 6800pF      | - 268            | —                                | —    | —   | —                                 | —    | —    | 2.5                                | 6.0  | 7.5 | 3.5                                | 8.5  | 7.5 |
| 0.01μF      | - 310            | —                                | —    | —   | —                                 | —    | —    | 2.5                                | 6.0  | 7.5 | 4.5                                | 9.5  | 7.5 |
| 0.015μF     | - 315            | —                                | —    | —   | —                                 | —    | —    | 2.5                                | 6.0  | 7.5 | 5.0                                | 10.0 | 7.5 |
| 0.022μF     | - 322            | —                                | —    | —   | 2.5                               | 6.0  | 7.5  | 3.0                                | 6.5  | 7.5 | 5.5                                | 11.5 | 7.5 |
| 0.033μF     | - 333            | —                                | —    | —   | 2.5                               | 6.0  | 7.5  | 3.5                                | 8.5  | 7.5 | —                                  | —    | —   |
| 0.047μF     | - 347            | —                                | —    | —   | 2.5                               | 6.0  | 7.5  | 4.5                                | 9.5  | 7.5 | —                                  | —    | —   |
| 0.068μF     | - 368            | —                                | —    | —   | 2.5                               | 6.0  | 7.5  | 4.5                                | 9.5  | 7.5 | —                                  | —    | —   |
| 0.1μF       | - 410            | 2.5                              | 6.0  | 7.5 | 3.5                               | 8.5  | 7.5  | 5.5                                | 11.5 | 7.5 | —                                  | —    | —   |
| 0.15μF      | - 415            | 3.5                              | 8.5  | 7.5 | 4.5                               | 9.5  | 7.5  | —                                  | —    | —   | —                                  | —    | —   |
| 0.22μF      | - 422            | 3.5                              | 8.5  | 7.5 | 5.0                               | 10.0 | 7.5  | —                                  | —    | —   | —                                  | —    | —   |
| 0.33μF      | - 433            | 4.5                              | 9.5  | 7.5 | 5.5                               | 9.0  | 11.5 | 7.5                                | —    | —   | —                                  | —    | —   |
| 0.47μF      | - 447            | 5.0                              | 10.0 | 7.5 | —                                 | —    | —    | —                                  | —    | —   | —                                  | —    | —   |
| 0.68μF      | -468             | 5.0                              | 10.5 | 7.5 | —                                 | —    | —    | —                                  | —    | —   | —                                  | —    | —   |
| 1.0μF       | - 510            | 5.5                              | 11.5 | 7.5 | —                                 | —    | —    | —                                  | —    | —   | —                                  | —    | —   |

Further values upon request. For C-values > 1.0μF please refer to type MKT 1826.

### RECOMMENDED PACKAGING

| LETTER CODE | TYPE OF PACKAGING | HEIGHT (H)<br>(mm) | REEL DIAMETER<br>(mm) | ORDERING CODE<br>EXAMPLES | PCM<br>5 |
|-------------|-------------------|--------------------|-----------------------|---------------------------|----------|
| D           | AMMO              | 16.5               | S*                    | MKT 1817-233-255-D        | X        |
| G           | AMMO              | 18.5               | S*                    | MKT 1817-233-255-G        | X        |
| F           | REEL              | 16.5               | 350                   | MKT 1817-233-255-F        | X        |
| W           | REEL              | 18.5               | 350                   | MKT 1817-233-255-W        | X        |
| —           | BULK              | —                  | —                     | MKT 1817-233-255          | X        |

\*S = box size 55 x 210 x 340mm (W x H x L)





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