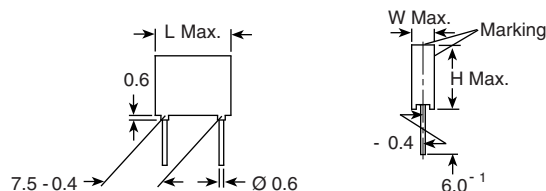


# Metallized Polyester Film Capacitors Related Document: IEC 60384-2

Dimensions in millimeters



## MAIN APPLICATIONS

Blocking, bypassing, filtering and timing, high frequency coupling and decoupling. 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), epoxy resin sealed

## CONSTRUCTION

Extended metallized film (refer to general information)

## LEADS

Tinned wire

## IEC TEST CLASSIFICATION

55/100/56, according to IEC 60068

## OPERATING TEMPERATURE RANGE

- 55 °C to + 100 °C

## CAPACITANCE RANGE

1000 pF to 1.0 µF

## CAPACITANCE TOLERANCES

± 20 % (M), ± 10 % (K), ± 5 % (J)

## RATED VOLTAGES (U<sub>R</sub>)

63 V<sub>DC</sub>, 100 V<sub>DC</sub>, 250 V<sub>DC</sub>, 400 V<sub>DC</sub>, 630 V<sub>DC</sub>

## FEATURES

- Compliant to RoHS directive 2002/95/EC

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

40 V<sub>AC</sub>, 63 V<sub>AC</sub>, 160 V<sub>AC</sub>, 200 V<sub>AC</sub>, 220 V<sub>AC</sub>

## TEST VOLTAGE (ELECTRODE/ELECTRODE)

1.6 x U<sub>R</sub> for 2 s

## INSULATION RESISTANCE

Measured with 100 V<sub>DC</sub> (63 V<sub>DC</sub> series at 50 V<sub>DC</sub>) after one minute

For C ≤ 0.33 µF and U<sub>R</sub> > 100 V<sub>DC</sub>:

30 000 MΩ minimum value (100,000 MΩ typical value)

For C ≤ 0.33 µF and U<sub>R</sub> ≤ 100 V<sub>DC</sub>:

15 000 MΩ minimum value (50 000 MΩ typical value)

## TIME CONSTANT

Measured at 100 V<sub>DC</sub> (63 V<sub>DC</sub> series measured at 50 V<sub>DC</sub>) after one minute

For C > 0.33 µF and U<sub>R</sub> ≤ 100 V<sub>DC</sub>:

5000 s minimum value (15 000 s typical value)

## CAPACITANCE DRIFT

Up to + 40 °C, ± 1.5 % for a period of two years

## DERATING FOR DC AND AC. CATEGORY VOLTAGE U<sub>C</sub>

At + 85 °C: U<sub>C</sub> = 1.0 U<sub>R</sub>

At + 100 °C: U<sub>C</sub> = 0.8 U<sub>R</sub>

## SELF INDUCTANCE

~ 6 nH measured with 2 mm long leads

## PULL TEST ON LEADS

≥ 30 N in direction of leads according to IEC 60068-2-21

## RELIABILITY

Operational life > 300 000 Hz

Failure rate < 2 FIT (40 °C and 0.5 x U<sub>R</sub>)



**RoHS**  
COMPLIANT

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

**MAXIMUM PULSE RISE TIME**

| PCM<br>(mm) | Maximum Pulse Rise Time dV/dt [V/μs] |                     |                     |                     |                     |
|-------------|--------------------------------------|---------------------|---------------------|---------------------|---------------------|
|             | 63 V <sub>DC</sub>                   | 100 V <sub>DC</sub> | 250 V <sub>DC</sub> | 400 V <sub>DC</sub> | 630 V <sub>DC</sub> |
| 7.5         | 12                                   | 20                  | 32                  | 41                  | 70                  |

**Note**

If the maximum pulse voltage is less than the rated voltage higher dV/dt values can be permitted.

**DISSIPATION FACTOR TAN δ**

| MEASURED AT    | C ≤ 0.1 μF            | 0.1 μF < C ≤ 1.0 μF   |
|----------------|-----------------------|-----------------------|
| 1 kHz          | 8 x 10 <sup>-3</sup>  | 8 x 10 <sup>-3</sup>  |
| 10 kHz         | 15 x 10 <sup>-3</sup> | 15 x 10 <sup>-3</sup> |
| 100 kHz        | 25 x 10 <sup>-3</sup> | -                     |
| Maximum values |                       |                       |

| CAPACITANCE | CAPACITANCE CODE | VOLTAGE CODE 06<br>63 V <sub>DC</sub> /40 V <sub>AC</sub> |      |      | VOLTAGE CODE 01<br>100 V <sub>DC</sub> /63 V <sub>AC</sub> |      |      | VOLTAGE CODE 25<br>250 V <sub>DC</sub> /160 V <sub>AC</sub> |      |      | VOLTAGE CODE 40<br>400 V <sub>DC</sub> /200 V <sub>AC</sub> |     |      | VOLTAGE CODE 63 <sup>(1)</sup><br>630 V <sub>DC</sub> /220 V <sub>AC</sub> |     |      |
|-------------|------------------|-----------------------------------------------------------|------|------|------------------------------------------------------------|------|------|-------------------------------------------------------------|------|------|-------------------------------------------------------------|-----|------|----------------------------------------------------------------------------|-----|------|
|             |                  | W                                                         | H    | L    | W                                                          | H    | L    | W                                                           | H    | L    | W                                                           | H   | L    | W                                                                          | H   | L    |
| 1000 pF     | -210             | -                                                         | -    | -    | -                                                          | -    | -    | -                                                           | -    | -    | -                                                           | -   | -    | 2.5                                                                        | 7.5 | 10.0 |
| 1500 pF     | -215             | -                                                         | -    | -    | -                                                          | -    | -    | -                                                           | -    | -    | -                                                           | -   | -    | 2.5                                                                        | 7.5 | 10.0 |
| 2200 pF     | -222             | -                                                         | -    | -    | -                                                          | -    | -    | -                                                           | -    | -    | -                                                           | -   | -    | 2.5                                                                        | 7.5 | 10.0 |
| 3300 pF     | -233             | -                                                         | -    | -    | -                                                          | -    | -    | -                                                           | -    | -    | 2.5                                                         | 7.5 | 10.0 | 3.0                                                                        | 8.5 | 10.0 |
| 4700 pF     | -247             | -                                                         | -    | -    | -                                                          | -    | -    | -                                                           | -    | -    | 2.5                                                         | 7.5 | 10.0 | -                                                                          | -   | -    |
| 6800 pF     | -268             | -                                                         | -    | -    | -                                                          | -    | -    | -                                                           | -    | -    | 2.5                                                         | 7.5 | 10.0 | -                                                                          | -   | -    |
| 0.01 μF     | -310             | -                                                         | -    | -    | -                                                          | -    | -    | 2.5                                                         | 7.5  | 10.0 | 3.0                                                         | 8.5 | 10.0 | -                                                                          | -   | -    |
| 0.015 μF    | -315             | -                                                         | -    | -    | -                                                          | -    | -    | 2.5                                                         | 7.5  | 10.0 | -                                                           | -   | -    | -                                                                          | -   | -    |
| 0.022 μF    | -322             | -                                                         | -    | -    | 2.5                                                        | 7.5  | 10.0 | 3.0                                                         | 8.5  | 10.0 | -                                                           | -   | -    | -                                                                          | -   | -    |
| 0.033 μF    | -333             | -                                                         | -    | -    | 2.5                                                        | 7.5  | 10.0 | 3.0                                                         | 8.5  | 10.0 | -                                                           | -   | -    | -                                                                          | -   | -    |
| 0.047 μF    | -347             | -                                                         | -    | -    | 2.5                                                        | 7.5  | 10.0 | 4.0                                                         | 9.0  | 10.0 | -                                                           | -   | -    | -                                                                          | -   | -    |
| 0.068 μF    | -368             | -                                                         | -    | -    | 2.5                                                        | 7.5  | 10.0 | 4.5                                                         | 9.5  | 10.0 | -                                                           | -   | -    | -                                                                          | -   | -    |
| 0.1 μF      | -410             | 2.5                                                       | 7.5  | 10.0 | 3.0                                                        | 8.5  | 10.0 | 5.0                                                         | 10.5 | 10.3 | -                                                           | -   | -    | -                                                                          | -   | -    |
| 0.15 μF     | -415             | 2.5                                                       | 7.5  | 10.0 | 3.0                                                        | 8.5  | 10.0 | -                                                           | -    | -    | -                                                           | -   | -    | -                                                                          | -   | -    |
| 0.22 μF     | -422             | 3.0                                                       | 8.5  | 10.0 | 4.0                                                        | 9.0  | 10.0 | -                                                           | -    | -    | -                                                           | -   | -    | -                                                                          | -   | -    |
| 0.33 μF     | -433             | 4.0                                                       | 9.0  | 10.0 | 5.0                                                        | 10.5 | 10.3 | -                                                           | -    | -    | -                                                           | -   | -    | -                                                                          | -   | -    |
| 0.47 μF     | -447             | 4.5                                                       | 9.5  | 10.0 | 5.7                                                        | 11.5 | 10.3 | -                                                           | -    | -    | -                                                           | -   | -    | -                                                                          | -   | -    |
| 0.68 μF     | -468             | 5.0                                                       | 10.5 | 10.3 | -                                                          | -    | -    | -                                                           | -    | -    | -                                                           | -   | -    | -                                                                          | -   | -    |
| 1.0 μF      | -510             | 5.7                                                       | 11.5 | 10.3 | -                                                          | -    | -    | -                                                           | -    | -    | -                                                           | -   | -    | -                                                                          | -   | -    |

**Notes**

- Further values upon request

<sup>(1)</sup> Not suitable for mains applications.

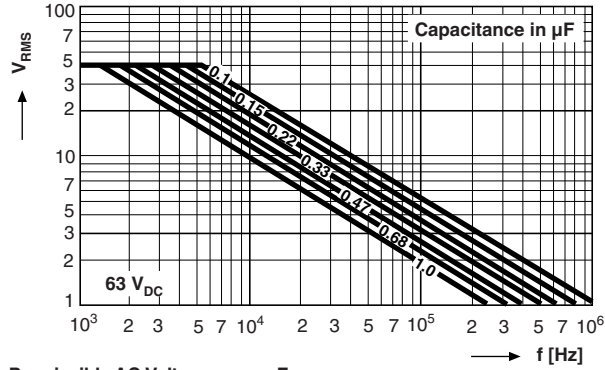
Please refer to X-capacitors in our catalog "RFI Suppression Components".

**RECOMMENDED PACKAGING**

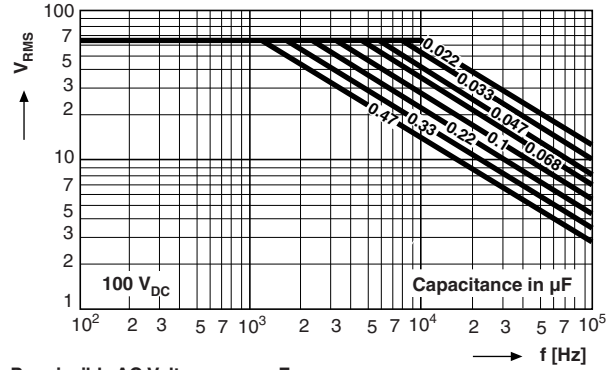
| LETTER CODE | TYPE OF PACKAGING | HEIGHT (H) (mm) | REEL DIAMETER (mm) | ORDERING CODE EXAMPLE | PCM 7.5 |
|-------------|-------------------|-----------------|--------------------|-----------------------|---------|
| D           | Ammo              | 16.5            | S <sup>(1)</sup>   | MKT 1818-310-255-D    | X       |
| G           | Ammo              | 18.5            | S <sup>(1)</sup>   | MKT 1818-310-255-G    | X       |
| F           | Reel              | 16.5            | 350                | MKT 1818-310-255-F    | X       |
| W           | Reel              | 18.5            | 350                | MKT 1818-310-255-W    | X       |
| -           | Bulk              | -               | -                  | MKT 1818-310-255      | X       |

**Note**

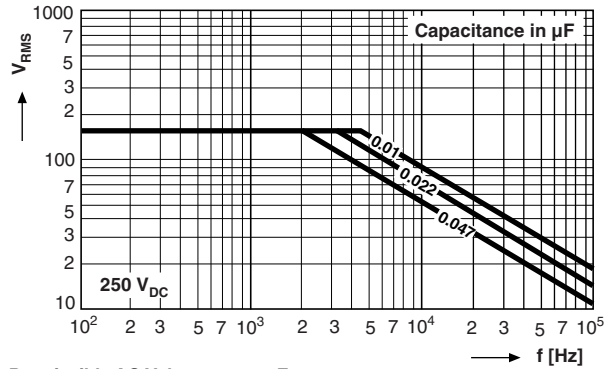
<sup>(1)</sup> S = box size 55 mm x 210 mm x 340 mm (W x H x L)



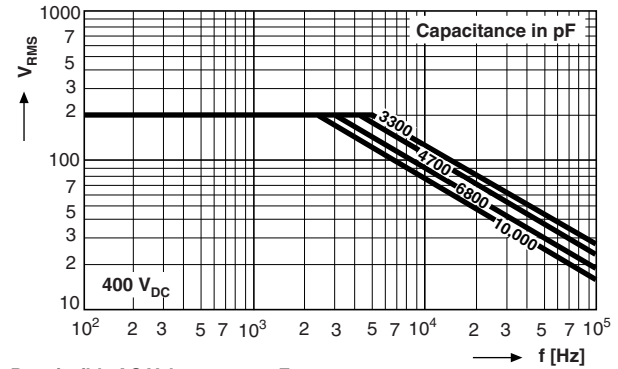
Permissible AC Voltage versus Frequency



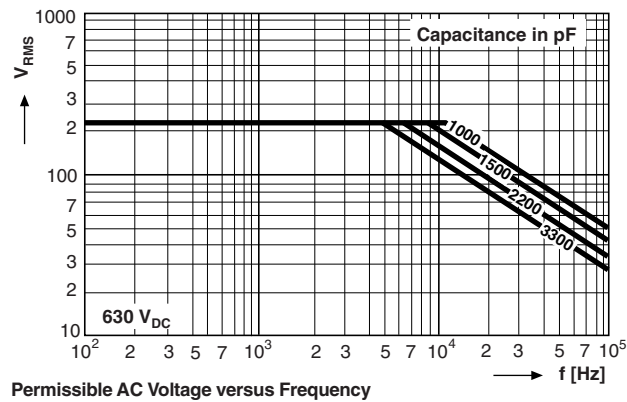
Permissible AC Voltage versus Frequency



Permissible AC Voltage versus Frequency



Permissible AC Voltage versus Frequency



Permissible AC Voltage versus Frequency



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