

## Metallized Polyester Film Capacitors

### Related Document: IEC 60384-2

**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

**OPERATING TEMPERATURE RANGE:**

- 55°C to + 100°C

**CAPACITANCE RANGE:**

1000pF to 1.0µF

**CAPACITANCE TOLERANCES:**

± 20% (M), ± 10% (K), ± 5% (J)

**RATED VOLTAGES (U<sub>R</sub>):**

63 VDC, 100 VDC, 250 VDC, 400 VDC

**PERMISSIBLE AC VOLTAGES (RMS) UP TO 60Hz:**

40 VAC, 63 VAC, 160 VAC, 200 VAC

**TEST VOLTAGE (ELECTRODE/ELECTRODE):**

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

**INSULATION RESISTANCE:**

Measured with 100 VDC

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

**For C ≤ 0.33µF and U<sub>R</sub> > 100 VDC:**

7500 MΩ minimum value (100,000 MΩ typical value)

**For C ≤ 0.33µF and U<sub>R</sub> ≤ 100 VDC:**

3750 MΩ minimum value (50,000 MΩ typical value)

**MAXIMUM PULSE RISE TIME**

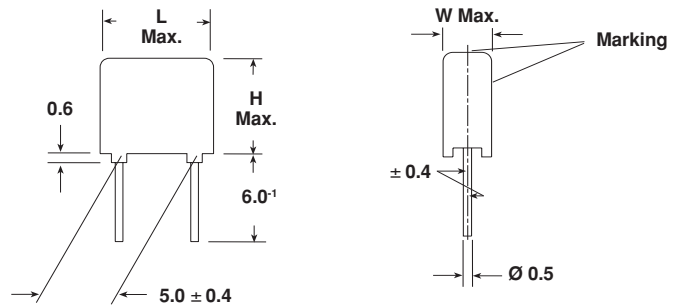
PCM (mm)	Maximum pulse rise time $d_v/d_t$ [V/µs]			
	63 VDC	100 VDC	250 VDC	400 VDC
5	15	24	44	100

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

**DISSIPATION FACTOR TAN δ**

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

Dimensions in millimeters



**TIME CONSTANT:**

Measured with 50 VDC after one minute

**For C > 0.33µF:**

1250 s minimum value (10,000 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:**

~ 6nH measured with 2mm long leads

**PULL TEST ON LEADS:**

≥ 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 x U<sub>R</sub>)

For further details, please refer to the general information provided in this catalog.



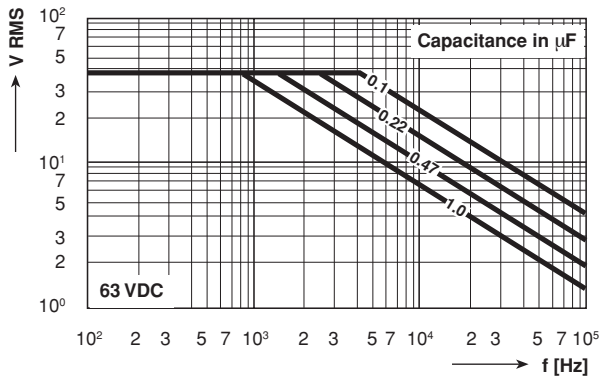
CAPACITANCE	CAPACITANCE CODE	VOLTAGE CODE 06 63 VDC/ 40 VAC			VOLTAGE CODE 01 100 VDC/ 63 VAC			VOLTAGE CODE 25 250 VDC/ 160 VAC			VOLTAGE CODE 40 400 VDC/ 200 VAC		
		W	H	L	W	H	L	W	H	L	W	H	L
1000 pF	- 210	—	—	—	—	—	—	—	—	—	2.5	6.0	7.5
1500 pF	- 215	—	—	—	—	—	—	—	—	—	2.5	6.0	7.5
2200 pF	- 222	—	—	—	—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

Further values upon request. For C-values > 1.0 $\mu$ F please refer to type MKT 1826.

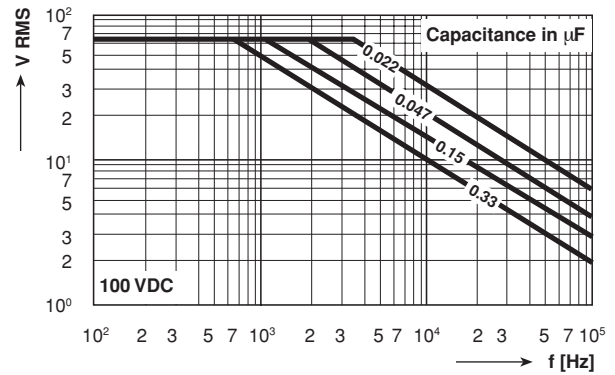
## RECOMMENDED PACKAGING

LETTER CODE	TYPE OF PACKAGING	HEIGHT (H) (mm)	REEL DIAMETER (mm)	ORDERING CODE EXAMPLE	PCM 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

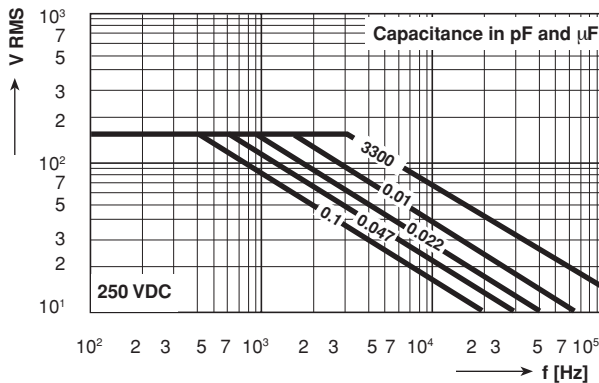
\*S = box size 55 x 210 x 340mm (W x H x L)



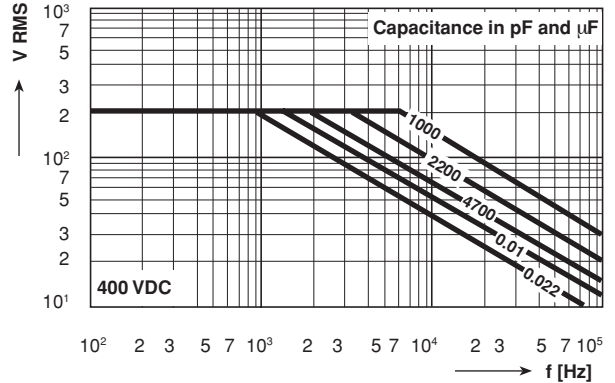
Permissible AC Voltage versus Frequency



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