CAPACITORS – Model MKT1826

PRODUCT SHEET

Metallized Polyester Film Capacitor

FEATURES

- **Package Size**: 2.5 mm x 7.2 mm x 6.5 mm to 7.2 mm x 7.2 mm x 13.0 mm
- **Capacitance:** 1000 pF to 4.7 µF
- **Tolerance:** ± 5%, ± 10%, and ± 20%
- **Voltage:** 40 VDC, 50 VDC, 63 VDC, 100 VDC, and 250 VDC
- **Operating Temperature:** - 55 °C to + 125 °C, or – 55 °C to + 100 °C
- **Pulse Rise Time:** 120 V/µs to 350 V/µs
- **Related Document:** IEC 60384-2, CECC 30400
- Environmentally friendly lead (Pb)-free schooping layers and terminals

APPLICATIONS

- **Telecommunications:** Line cards
- **Automotive:** Motor management
- **Consumer:** Audio/video (including TV sets and monitors)
- **Industry:** Control circuits, E-ballasts

The datasheet for Model MKT1826 is available on our web site at www.vishay.com/doc?26007

www.vishay.com

Metallized Polyester Film Capacitor
Related Document: IEC 60384-2

MAIN APPLICATIONS:
Blocking, bypassing, filtering and timing, high frequency coupling and decoupling of fast digital circuits. Interference suppression in low voltage applications. High pulse load. High temperature operations.

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:
Stacked metallized polyester film

LEADS:
Tinned wire

IEC TEST CLASSIFICATION:
55/125/56, according to IEC 60068
55/100/21 (for 4.7µF/40 VDC)

OPERATING TEMPERATURE RANGE:
- 55°C to + 125°C
- 55°C to + 100°C (for 4.7µF/40 VDC)

CAPACITANCE RANGE:
1000pF to 4.7µF

CAPACITANCE TOLERANCES:
± 20% (M), ± 10% (K), ± 5% (J)

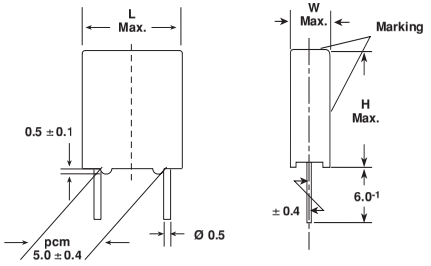
RATED VOLTAGES (U_R):
40 VDC, 50 VDC, 63 VDC, 100 VDC, 250 VDC

PERMISSIBLE AC VOLTAGES (RMS) UP TO 60Hz:
25 VAC, 30 VAC, 40 VAC, 63 VAC, 160 VAC

TEST VOLTAGE (ELECTRODE/ELECTRODE):
1.6 x U_R for 2 sec.

INSULATION RESISTANCE:
Measured at 100 VDC (50 VDC and 63 VDC series measured at 50 VDC) after one minute
For C ≤ 0.33µF and U_R > 100 VDC:
30,000 MΩ minimum value (100,000 MΩ typical value)
For C ≤ 0.33µF and U_R ≤ 100 VDC:
15,000 MΩ minimum value (100,000 MΩ typical value)

Dimensions in millimeters



TIME CONSTANT:
Measured at 100 VDC (50 VDC and 63 VDC series measured at 50 VDC, 40 VDC measured with U_R) after one minute
For 0.33µF < C ≤ 3.3µF and U_R ≤ 100 VDC:
5000 s minimum value (15,000 s typical value)
For C > 3.3µF and U_R ≤ 100 VDC:
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_C:
At + 85°C: U_C = 1.0 U_R
At + 100°C: U_C = 0.8 U_R
At + 125°C: U_C = 0.5 U_R (maximum 1000 h)

SELF INDUCTANCE:
~ 6 nH measured with 2mm long leads

PULL TEST ON LEADS:
≥ 30 N in direction of leads according to IEC 60068-2-21

RELIABILITY:
Operational life > 300,000 hz
Failure rate < 2 FIT (40°C and 0.5 x U_R)

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

MAXIMUM PULSE RISE TIME

PCM	Maximum pulse rise time d_v/d_t [V/µs]				
(mm)	40 VDC	50 VDC	63 VDC	100 VDC	250 VDC
5.0	120	160	200	240	350

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	C > 1.0µF
1kHz	8 x 10^{-3}	8 x 10^{-3}	10 x 10^{-3}
10kHz	15 x 10^{-3}	15 x 10^{-3}	—
100kHz	25 x 10^{-3}	—	—
	Maximum values		

CAPACITANCE	CAPACITANCE CODE	VOLTAGE CODE 04 40 VDC/ 25 VAC			VOLTAGE CODE 05 50 VDC/ 30 VAC			VOLTAGE CODE 06 63 VDC/ 40 VAC			VOLTAGE CODE 01 100 VDC/ 63 VAC			VOLTAGE CODE 25* 250 VDC/ 160 VAC		
		W	H	L	W	H	L	W	H	L	W	H	L	W	H	L
1000 pF	- 210	—	—	—	—	—	—	—	—	—	2.5	6.5	7.2	2.5	6.5	7.2
1500 pF	- 215	—	—	—	—	—	—	—	—	—	2.5	6.5	7.2	2.5	6.5	7.2
2200 pF	- 222	—	—	—	—	—	—	—	—	—	2.5	6.5	7.2	2.5	6.5	7.2
3300 pF	- 233	—	—	—	—	—	—	—	—	—	2.5	6.5	7.2	2.5	6.5	7.2
4700 pF	- 247	—	—	—	—	—	—	—	—	—	2.5	6.5	7.2	2.5	6.5	7.2
6800 pF	- 268	—	—	—	—	—	—	—	—	—	2.5	6.5	7.2	2.5	6.5	7.2
0.01 µF	- 310	—	—	—	—	—	—	—	—	—	2.5	6.5	7.2	2.5	6.5	7.2
0.015 µF	- 315	—	—	—	—	—	—	—	—	—	2.5	6.5	7.2	2.5	6.5	7.2
0.022 µF	- 322	—	—	—	—	—	—	—	—	—	2.5	6.5	7.2	2.5	6.5	7.2
0.033 µF	- 333	—	—	—	—	—	—	—	—	—	2.5	6.5	7.2	3.0	7.5	7.2
0.047 µF	- 347	—	—	—	—	—	—	—	—	—	2.5	6.5	7.2	3.5	8.5	7.2
0.068 µF	- 368	—	—	—	—	—	—	—	—	—	2.5	6.5	7.2	4.5	9.5	7.2
0.10 µF	- 410	—	—	—	—	—	—	2.5	6.5	7.2	2.5	6.5	7.2	4.5	9.5	7.2
0.15 µF	- 415	—	—	—	—	—	—	2.5	6.5	7.2	3.0	7.5	7.2	5.5	11.5	7.2
0.22 µF	- 422	—	—	—	—	—	—	2.5	6.5	7.2	3.5	8.5	7.2	—	—	—
0.33 µF	- 433	—	—	—	—	—	—	3.0	7.5	7.2	4.5	9.5	7.2	—	—	—
0.47 µF	- 447	—	—	—	—	—	—	3.5	8.5	7.2	4.5	9.5	7.2	—	—	—
0.68 µF	- 468	—	—	—	—	—	—	4.5	9.5	7.2	5.5	11.5	7.2	—	—	—
1.0 µF	- 510	—	—	—	—	—	—	5.0	10.5	7.2	7.2	13.0	7.2	—	—	—
1.5 µF	- 515	—	—	—	5.5	11.5	7.2	—	—	—	—	—	—	—	—	—
2.2 µF	- 522	—	—	—	7.2	13.0	7.2	—	—	—	—	—	—	—	—	—
3.3 µF	- 533	—	—	—	7.2	13.0	7.2	—	—	—	—	—	—	—	—	—
4.7 µF*	- 547	7.2	13.0	7.2	—	—	—	—	—	—	—	—	—	—	—	—

Further C-values on request.
*CECC approval in preparation.

RECOMMENDED PACKAGING

LETTER CODE	TYPE OF PACKAGING	HEIGHT (H) (mm)	REEL DIAMETER (mm)	ORDERING CODE EXAMPLE	PCM 5
D	AMMO	16.5	S*	MKT 1826-533-055-D	X
G	AMMO	18.5	S*	MKT 1826-533-055-G	X
F	REEL	16.5	350	MKT 1826-533-055-F	X
W	REEL	18.5	350	MKT 1826-533-055-W	X
—	BULK	—	—	MKT 1826-533-055	X

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

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