



CAPACITORS – Model MKT1826



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 μ F
- **Tolerance:** \pm 5%, \pm 10%, and \pm 20%
- **Voltage:** 40 VDC, 50 VDC, 63 VDC, 100 VDC, and 250 VDC
- **Operating Temperature:** - 55 $^{\circ}$ C to + 125 $^{\circ}$ C, or - 55 $^{\circ}$ C to + 100 $^{\circ}$ C
- **Pulse Rise Time:** 120 V/ μ s to 350 V/ μ s
- **Related Document:** IEC 60384-2, CECC 30400
- Environmentally friendly lead (Pb)-free sintering layers and terminals

APPLICATIONS

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

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 (for 4.7µF/40 VDC)
-55°C to +100°C (for 4.7µF/250 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

25 VAC, 30 VAC, 40 VAC, 63 VAC, 160 VAC

PERMISSIBLE AC VOLTAGES (RMS) UP TO 60Hz:

25 VAC, 30 VAC, 40 VAC, 63 VAC, 160 VAC

TEST VOLTAGE (ELECTRODE/ELECTRODE):

1.6 × 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)

MAXIMUM PULSE RISE TIME

PCM (mm)	Maximum pulse rise time d_v/dt [V/µs]		
	40 VDC	50 VDC	250 VDC
5.0	120	160	350

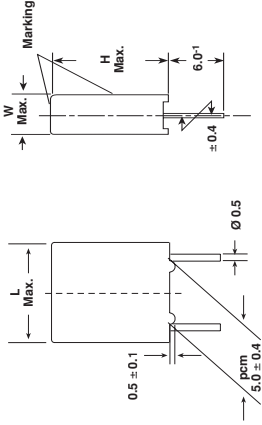
If the maximum pulse voltage is less than the rated voltage higher d_v/d_t values can be permitted.

DISSIPATION FACTOR TAN δ

MEASURED AT	C ≤ 0.1µF	0.1µF < C ≤ 1.0µF	C > 1.0µF
1kHz	8 × 10 ⁻³	8 × 10 ⁻³	10 × 10 ⁻³
10kHz	15 × 10 ⁻³	15 × 10 ⁻³	—
100kHz	25 × 10 ⁻³	—	—

Maximum values

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 × U_R)

RECOMMENDED PACKAGING

Further C-values on request.

*CECC approval in preparation.

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

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1500 pF	-215	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2200 pF	-222	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3300 pF	-233	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4700 pF	-247	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6800 pF	-268	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0.01 µF	-310	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0.015 µF	-315	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0.022 µF	-322	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0.033 µF	-333	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0.047 µF	-347	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0.068 µF	-368	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0.10 µF	-410	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0.15 µF	-415	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0.22 µF	-422	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0.33 µF	-433	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0.47 µF	-447	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0.68 µF	-468	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1.0 µF	-510	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1.5 µF	-515	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2.2 µF	-522	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3.3 µF	-533	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4.7 µF*	-547	7.2	13.0	7.2	—	—	—	—	—	—	—	—	—	—	—	—

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

Revision: 02-Dec-03