



CAPACITORS – Model MKT1826

PRODUCT SHEET



- **Pb-FREE**
- **STACKED FILM TECHNOLOGY**

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

www.vishay.com

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



Metalized Polyester Film Capacitor Related Document: IEC 60384-2

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

MARKING:
Manufacturer's logotype/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

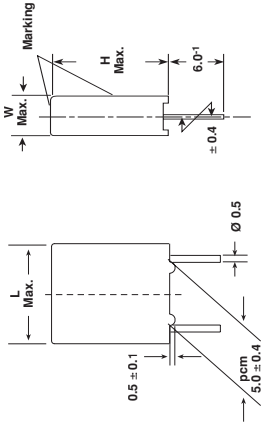
TEST VOLTAGE (ELECTRODE/ELECTRODE):
1,6 x U_R for 2 sec.

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)

PCM	Maximum pulse rise time d _v /d _t [V/µs]		
	40 VDC	50 VDC	250 VDC
(mm)	120	160	350
5.0	120	200	350

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

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.

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—

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
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).

Revision: 02-Dec-03