

MKT 050 SERIES
Formerly MKT 1.85 series

INTRODUCTION

The MKT 050 Series Metallized Polyester Film Capacitors are miniature capacitors with 5 mm lead spacing. This series covers a wide range of values and voltages and exhibit excellent high frequency characteristics. In addition to specific applications such as Blocking, Bypassing and Coupling, this series is widely used in all General Purpose applications.

FEATURES

- Wide value and Voltage range
- Ultra miniature size
- Flame retardant case and potting
- Consistent dimensions and surface finish due to molded case construction
- Available in tape & reel form for automatic insertion
- Self healing capability

GENERAL SPECIFICATIONS:

Dissipation factor: For capacitance $\leq 0.1 \mu\text{F} = 0.010$ max at 1 KHz, 0.015 max at 10 KHz, 0.030 max at 100 KHz. For capacitance $> 0.1 \mu\text{F} = 0.0010$ max at 1 KHz, 0.0015 max at 10 KHz. **Insulation resistance:** For nominal voltage $< 100 \text{ V DC}$; $\geq 10,000 \text{ M Ohms}$ for $C \leq 0.10 \mu\text{F}$, $\geq 1,000$ seconds for $C > 0.10 \mu\text{F}$. For nominal voltage $\leq 100 \text{ V DC}$; $\geq 30,000 \text{ M Ohms}$ for $C \leq 0.10 \mu\text{F}$, $\geq 1,000$ seconds for $C > 0.10 \mu\text{F}$ at a temperature of $25 \pm 5^\circ\text{C}$.

Capacitance tolerance: $\pm 5\%$ (J), $\pm 10\%$ (K) and $\pm 20\%$ (M) **Voltage Test:** 1.6 times the rated voltage applied between terminals for 2 seconds at a temperature of $25 \pm 5^\circ\text{C}$

Temperature range: -55 to 100 °C with derating above 85 °C **Climatic category:** F M D

LIFE TEST DETAILS:

Capacitors shall withstand 125% DC rated voltage or 100% AC rated voltage applied at 85 °C for 1000 hours. After the test:

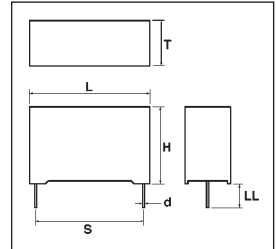
1. Capacitance change shall remain within $\pm 5\%$.
2. Dissipation Factor shall be within 1.5 times the original limits.
3. Insulation Resistance shall be above 50% of the initial limits.
4. There shall be no remarkable change in the appearance and the marking shall remain legible.

DIMENSIONS AND TOLERANCES:

"d" = 0.5 to 0.6 mm (0.020 to 0.024") for dimension "T" ≤ 3.5 mm (0.138")

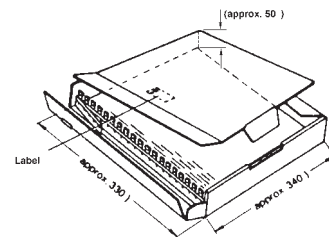
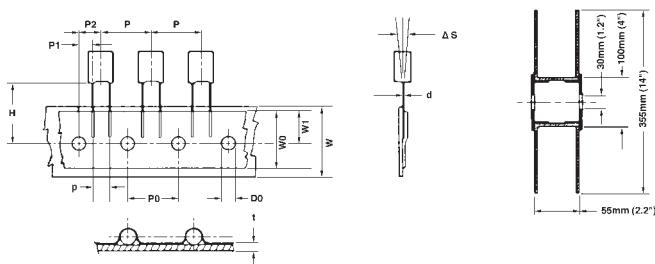
"d" = 0.6 mm (0.024") for dimension "T" > 3.5 mm (0.138")

"LL" = 4.0 +1.5 mm (0.16 +0.06") for Bulk Supply



PULSE RISE TIME (dv/dt) Volts per μsec .

RATED VOLTAGE	Capacitance Range μF	dv/dt value
50	0.001-1.0	4
63	0.001-1.0	8
100	> 0.0068	10
100	0.0033-0.0068	15
100	> 0.0033	30
250	0.001-1.0	20
400	0.001-1.0	40



Taping Dimensions for MKT 050 Series (5mm Pitch)

DESCRIPTION	DIMENSION		TOLERANCES	
	mm	Inches	mm	Inches
d Leadwire dia.	0.5 to 0.6	0.020 to 0.024	± 0.05	± 0.002
P Taping pitch	12.7	0.500	± 1	± 0.039
P0 Sprocket hole pitch	12.7	0.500	± 0.2	± 0.008
P1 Centering of leadwire	3.85	0.152	± 0.7	± 0.028
P2 Centering of the body	6.35	0.250	± 1.3	± 0.051
p Lead spacing	5	0.197	+0.6 / -1.1	+0.024 / -0.043
dS Component alignment	0	0.000	± 2	± 0.079
H Height from Sprocket Center to component body	16.0, 16.5 or 18.5	0.630, 0.650 or 0.728	± 0.5	± 0.020
w Tape width	18	0.709	+1.0 / -0.5	+0.039 / -0.020
W0 Width of adhesive tape	6 min.	0.236 min.		
W1 Sprocket hole alignment	9	0.354	± 0.5	± 0.020
D0 Position hole diameter	4	0.157	± 0.2	± 0.008
t Tap thickness	0.7	0.028	± 0.2	± 0.008

Packaging Specifications
Bulk, Tape/Reel & Ammo Pack

BOX SIZE T x H x L	BULK CARTON	TAPED	
		REEL PACK	AMMO PACK
2.5 x 6.5 x 7.2	3000	2500	3500
3.0 x 6.5 x 7.2	3000	2100	2900
3.5 x 7.5 x 7.2	2000	1800	2500
4.5 x 9.5 x 7.2	1500	1400	1900
5.0 x 10.0 x 7.2	1000	1200	NA
6.0 x 11.0 x 7.2	2000	1000	NA
7.2 x 13.0 x 7.2	1500	800	NA

MKT 050 SERIES CASE DIMENSIONS

Case Dimensions in Millimeters 50V • 63V • 100V • 250V • 400V

Voltage	50 V DC / 30 V AC				63 V DC / 40 V AC				100 V DC / 63 V AC				250 V DC / 160 V AC				400 V DC / 200 V AC			
	Dimensions in MM				Dimensions in MM				Dimensions in MM				DIMENSIONS IN MM				DIMENSIONS IN MM			
Cap Value in μ F	L	H	T	S	L	H	T	S	L	H	T	S	L	H	T	S	L	H	T	S
0.001									7.2	6.5	2.5	5.0					7.2	6.5	2.5	5.0
0.0015									7.2	6.5	2.5	5.0					7.2	6.5	2.5	5.0
0.0022									7.2	6.5	2.5	5.0					7.2	6.5	2.5	5.0
0.0033									7.2	6.5	2.5	5.0					7.2	6.5	2.5	5.0
0.0047									7.2	6.5	2.5	5.0					7.2	6.5	2.5	5.0
0.0068									7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0	7.2	6.5	3.0	5.0
0.01									7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0	7.2	7.5	3.5	5.0
0.015									7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0	7.2	9.5	4.5	5.0
0.022									7.2	6.5	2.5	5.0	7.2	6.5	3.0	5.0	7.2	9.5	4.5	5.0
0.033									7.2	6.5	2.5	5.0	7.2	7.5	3.5	5.0	7.2	10.0	5.0	5.0
0.047					7.2	6.5	2.5	5.0	7.2	6.5	3.0	5.0	7.2	9.5	4.5	5.0	7.2	11.0	6.0	5.0
0.068					7.2	6.5	2.5	5.0	7.2	7.5	3.5	5.0	7.2	9.5	4.5	5.0				
0.1	7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0	7.2	9.5	4.5	5.0	7.2	11.0	6.0	5.0				
0.15	7.2	6.5	3.0	5.0	7.2	7.5	3.5	5.0	7.2	10.0	5.0	5.0	7.2	13.0	7.2	5.0				
0.22	7.2	7.5	3.5	5.0	7.2	7.5	3.5	5.0	7.2	11.0	6.0	5.0	7.2	13.0	7.2	5.0				
0.33	7.2	7.5	3.5	5.0	7.2	9.5	4.5	5.0												
0.47	7.2	9.5	4.5	5.0	7.2	10.0	5.0	5.0												
0.68	7.2	10.0	5.0	5.0	7.2	11.0	6.0	5.0												
1.0	7.2	11.0	6.0	5.0																

Case Dimensions in Inches 50V • 63V • 100V • 250V • 400V

Voltage	50 V DC / 30 V AC				63 V DC / 40 V AC				100 V DC / 63 V AC				250 V DC / 160 V AC				400 V DC / 200 V AC			
	Dimensions in Inches				Dimensions in Inches				Dimensions in Inches				Dimensions in Inches				Dimensions in Inches			
Cap Value in μ F	L	H	T	S	L	H	T	S	L	H	T	S	L	H	T	S	L	H	T	S
0.001									0.283	0.256	0.098	0.197					0.283	0.256	0.098	0.197
0.0015									0.283	0.256	0.098	0.197					0.283	0.256	0.098	0.197
0.0022									0.283	0.256	0.098	0.197					0.283	0.256	0.098	0.197
0.0033									0.283	0.256	0.098	0.197					0.283	0.256	0.098	0.197
0.0047									0.283	0.256	0.098	0.197					0.283	0.256	0.098	0.197
0.0068									0.283	0.256	0.098	0.197	0.283	0.256	0.098	0.197	0.283	0.256	0.118	0.197
0.01									0.283	0.256	0.098	0.197	0.283	0.256	0.098	0.197	0.283	0.295	0.138	0.197
0.015									0.283	0.256	0.098	0.197	0.283	0.256	0.098	0.197	0.283	0.374	0.177	0.197
0.022									0.283	0.256	0.098	0.197	0.283	0.256	0.118	0.197	0.283	0.374	0.177	0.197
0.033									0.283	0.256	0.098	0.197	0.283	0.295	0.138	0.197	0.283	0.394	0.197	0.197
0.047					0.283	0.256	0.098	0.197	0.283	0.256	0.118	0.197	0.283	0.374	0.177	0.197	0.283	0.433	0.236	0.197
0.068					0.283	0.256	0.098	0.197	0.283	0.295	0.138	0.197	0.283	0.374	0.177	0.197				
0.1	0.283	0.256	0.098	0.197	0.283	0.256	0.098	0.197	0.283	0.374	0.177	0.197	0.283	0.433	0.236	0.197				
0.15	0.283	0.256	0.118	0.197	0.283	0.295	0.138	0.197	0.283	0.394	0.197	0.197	0.283	0.512	0.283	0.197				
0.22	0.283	0.295	0.138	0.197	0.283	0.295	0.138	0.197	0.283	0.433	0.236	0.197	0.283	0.512	0.283	0.197				
0.33	0.283	0.295	0.138	0.197	0.283	0.374	0.177	0.197												
0.47	0.283	0.374	0.177	0.197	0.283	0.394	0.197	0.197												
0.68	0.283	0.394	0.197	0.197	0.283	0.433	0.236	0.197												
1.0	0.283	0.433	0.236	0.197																