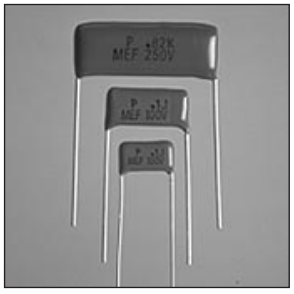
Rev: 6/98

MES Series
Metallized Polyester Film
Non-inductive, Radial



Plastic Film Capacitor

An ISO 9002
Registered Company

PACCOM® ELECTRONICS
Resistors | Capacitors | Inductors

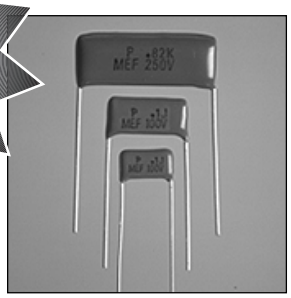
MES Series

Small Metallized Polyester Film ▼ Non-Inductive Winding ▼ Radial

Features:

- Electrically equivalent to MEF series
- High component density applications
- Excellent self-healing characteristics
- Wide range of voltages and capacitances
- High insulation resistance and low dissipation factor
- Superior solvent and moisture resistance
- Available in bulk or on tape with formed or straight leads

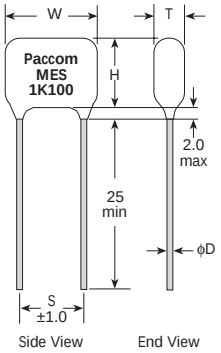
NEW Series



Reduced Size From MEF Series

Summary of Specifications:

- Metallized Polyester Film
- Nominal capacitance range: 0.01µF to 10µF
- Capacitance tolerances: ±5%, ±10%, ±20%
- Rated working voltage range: 100 Vdc to 630 Vdc
- Operating temperature range: -40°C to +85°C
- Dissipation factor: 1.0%max @ 1KHz @ 25ºC



Part Numbering System

MES	104	K	250	B	10	S	25
Series Code	Capacitance	Tolerance	Voltage	Package	Lead Space	Lead Form	Lead Length
	0.01µF to 6.8µF (Expressed in pF where the first two digits identify the first and second significant figures of capacitance and the third digit identifies the multiplier)	J = ±5% K = ±10% M = ±20%	100 = 100Vdc 250 = 250Vdc 400 = 400Vdc 630 = 630Vdc	A = Tape/Box B = Bulk/Bag	10 = 10mm 15 = 15mm 22.5 = 22.5mm 27.5 = 27.5mm	I = Formed-ln S = Straight	5 = 5mm 7 = 7mm 10 = 10mm 15 = 15mm 25 = 25mm

MES Series

No	Item	Performance Characteristics
1	Nominal Capacitance Range	0.01µF ~ 10µF
2	Rated Working Voltage	100 Vdc ~ 630 Vdc
3	Operating Temperature Range	-40°C ~ +85°C (DC Voltage Derate 1.5% / °C for 85°C > temp < 105°C)
4	Capacitance Tolerance	±5%, ±10%, ±20% (J, K, M)
5	Dissipation Factor tan δ (max %)	1.0% max at 1KHz @ 25°C
6	Insulation Resistance	C< 0.33µF, R ≥ 9,000 MegΩ @ 25°C C≥ 0.33µF, RC ≥ 3,000 MegΩ x µF
7	Dielectric Strength	150% of working voltage for 5 seconds min

Maximum Pulse Rise Time

dv/dt V/µsec

Working Voltage	Lead Space (mm)			
	10.0	15.0	22.5	27.5
100 Vdc	6.0	3.0	2.0	1.0
250 Vdc	11.0	7.0	4.0	3.0
400 Vdc	20.0	10.0	5.5	5.0
630 Vdc	30.0	15.0	8.0	7.0

Mechanical Specifications

Dimensions in mm

Body Width (W)	12.5	18.5	26.0	31.0
Lead Space (S) ±1.0	10.0	15.0	22.5	27.5
Lead Diameter (φd) ±0.05	0.6	0.8	0.8	0.8

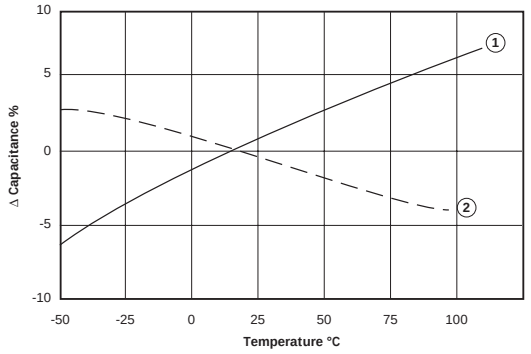
Size Specification

Dimensions in mm (max)

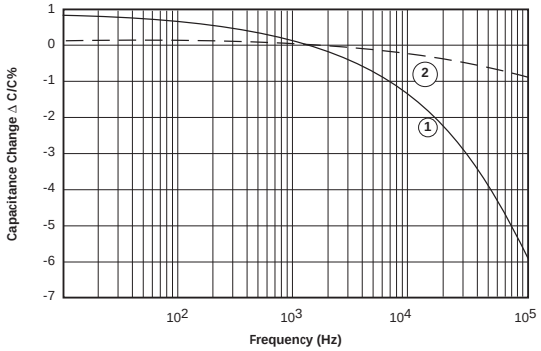
Working Voltage		100 Vdc			250 Vdc			400 Vdc			630 Vdc		
Capacitance (µF)	Capacitance Code	Width (W)	Thickness (T)	Height (H)	Width (W)	Thickness (T)	Height (H)	Width (W)	Thickness (T)	Height (H)	Width (W)	Thickness (T)	Height (H)
0.01	103	-	-	-	-	-	-	-	-	-	12.5	5.0	8.5
0.015	153	-	-	-	-	-	-	-	-	-	12.5	5.5	8.5
0.018	183	-	-	-	-	-	-	-	-	-	12.5	5.5	10.0
0.022	223	-	-	-	-	-	-	-	-	-	12.5	5.5	10.5
0.033	333	-	-	-	-	-	-	-	-	-	12.5	6.5	11.0
0.047	473	-	-	-	-	-	-	12.5	5.5	8.5	12.5	7.5	12.0
0.056	563	-	-	-	-	-	-	12.5	5.5	9.5	18.5	6.0	11.0
0.068	683	-	-	-	-	-	-	12.5	6.0	10.0	18.5	6.5	11.5
0.082	823	-	-	-	-	-	-	12.5	6.5	10.5	18.5	7.0	12.0
0.1	104	-	-	-	-	-	-	12.5	7.0	11.0	18.5	7.0	13.5
0.15	154	-	-	-	-	-	-	18.5	5.5	12.0	18.5	8.0	16.0
0.18	184	-	-	-	12.5	5.0	10.5	18.5	5.5	12.5	18.5	8.0	16.0
0.22	224	-	-	-	12.5	6.5	10.5	18.5	6.5	13.0	18.5	9.5	17.5
0.33	334	-	-	-	12.5	7.0	12.0	18.5	7.5	14.0	26.0	8.5	18.0
0.47	474	-	-	-	18.5	6.0	13.0	18.5	8.5	16.5	26.0	10.5	18.5
0.56	564	12.5	6.0	10.0	18.5	6.5	13.5	26.0	7.0	15.0	26.0	11.0	20.5
0.68	684	12.5	6.5	10.5	18.5	7.0	15.0	26.0	7.5	17.0	26.0	12.0	22.0
0.82	824	12.5	6.5	11.5	18.5	7.0	16.0	26.0	8.0	17.5	31.0	12.0	20.5
1.0	105	12.5	7.0	12.0	18.5	8.0	17.5	26.0	8.5	18.5	31.0	13.5	22.0
1.5	155	18.5	6.5	13.0	18.5	9.5	15.5	31.0	9.5	19.0	31.0	16.5	25.0
1.8	185	18.5	6.5	14.5	26.0	7.5	17.5	31.0	11.0	20.5	31.0	17.0	27.0
2.2	225	18.5	7.5	15.5	26.0	9.0	15.5	31.0	11.5	21.5	31.0	20.0	29.0
2.7	275	18.5	8.0	16.0	26.0	10.5	17.5	-	-	-	-	-	-
3.3	335	18.5	9.0	16.5	26.0	11.0	17.5	-	-	-	-	-	-
4.7	475	26.0	8.0	16.5	26.0	12.5	19.5	-	-	-	-	-	-
5.6	565	26.0	9.0	17.0	31.0	13.0	21.5	-	-	-	-	-	-
6.8	685	26.0	9..5	17.5	31.0	14.0	22.5	-	-	-	-	-	-
8.2	825	26.0	10.0	20.0	31.0	15.5	24.0	-	-	-	-	-	-
10	106	26.0	11.0	21.0	31.0	16.0	26.5	-	-	-	-	-	-

Plastic Film Capacitor Graphs

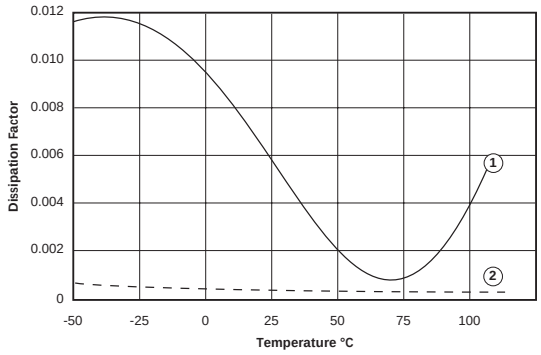
■ Capacitance / Temperature



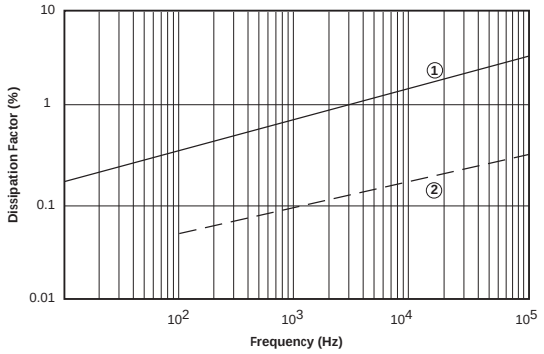
■ Capacitance / Frequency



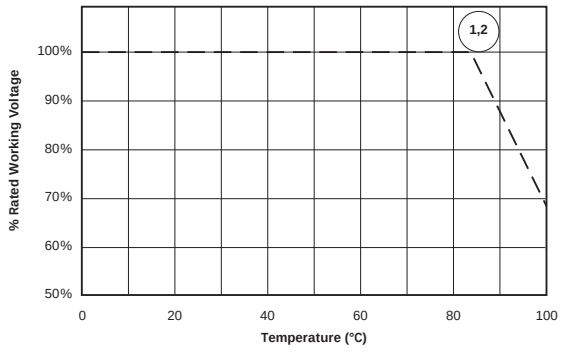
■ Dissipation Factor / Temperature



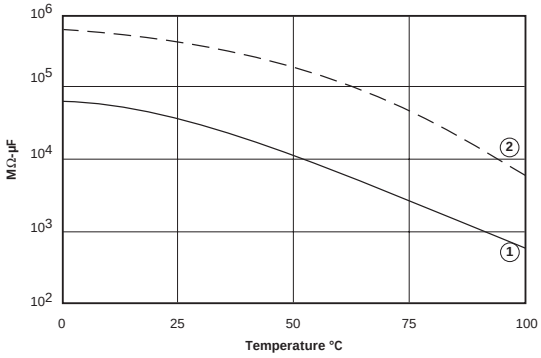
■ Dissipation Factor / Frequency



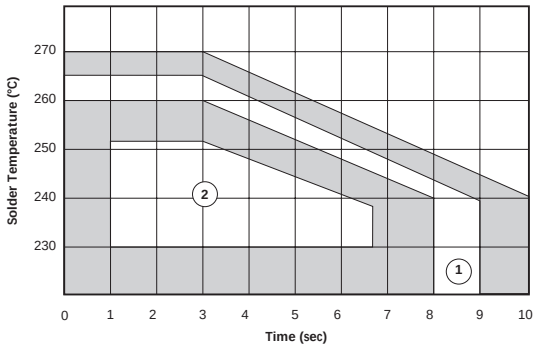
■ Voltage Derating / Temperature



■ Insulation Resistance / Temperature



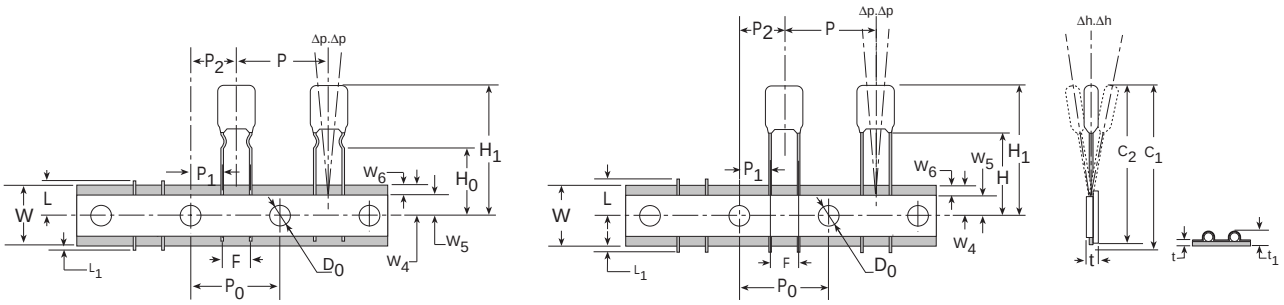
■ Soldering Temperature / Time



① Polyester Dielectric
② Polypropylene Dielectric

Leaded Plastic Film Capacitors

Radial Metallized Film Bulk Package Quantities by Leadspace						
Series	10mm	15mm	22mm	22.5mm	27.5mm	30mm
MEF	500	250	--	100	100	--
MES	500	250	--	100	100	--
PPM	500	200/250*	--	100	50/100*	
PPH	--	250	100	--	--	50
* Varies by the thickness of the capacitor						



Radial Lead Taping Specifications

Dimensions in mm

Description	Symbol	Dimensions
Lead Space	F	5.08 (+0.6/-0.2)
Overall Width With Lead Protrusion	C_1	43.2 max
Overall Width Without Lead Protrusion	C_2	42.5 max
Sprocket Hole Diameter	D_0	4.0±0.2
Height To Seating Plane (Formed Leads)	H_0	16.0±0.5
Height To Seating Plane (Straight Leads)	H	16.0-21.0
Overall Height Above Abscissa	H_1	32.2 max
Front To Back Deviation	Δh	0±1.0
Cut Out Length	L	11.0 max
Lead Protrusion	L_1	1.0 max
Ordinate to Adjacent Component Lead	P_1	3.85±0.5
Sprocket Hole Pitch	P_0	12.7±0.3
Plane Deviation	Δp	0±1.3 max
Composite Tape Thickness	t	0.9 max
Overall Tape and Lead Thickness	t_1	1.5 max
Carrier Tape Width	W	18.0 +1.0/ -0.5
Hold Down Tape Width	W_4	5.0 min
Sprocket Hole Position	W_5	9.0 +0.75/ -0.5
Hold Down Tape Position	W_6	3.0 max
Meets Specification EIA-468-B		

Plastic Film and Ceramic Disc Cross Reference

Plastic Film Capacitors

Paccom	Cornell Dubillier	Illinois Capacitor	Mallory	NIC	Nichicon	Nissei	Panasonic	Roederstein
CHE	—	—	—	NSPC	—	CHE	ECHU	MKT 1824
CPE	—	—	—	—	—	LDE	ECWU	MKN 1802
PQ92	DLR DLM	UMR	—	NEM	—	AMZ	—	—
PEI	—	—	—	—	YX	AMC	—	—
MEF	DMM	MSR	—	NRM	XJ	MMH	ECQ-E	—
MES	—	—	—	—	XN	MMH MMC	—	—
MET	MMWA	MWR	150	NTM	AS	R50	—	MKT 1813
MMT	—	—	—	—	—	MMT	ECQ-V	—
60	—	—	160	—	—	R60	—	MKT 1822
67 / 84	—	—	167/184	—	—	R67/R84	—	MKT 1818
68 / 85	—	—	168/185	—	—	R68/R85	—	MKT 1817
R40	—	—	—	—	EW	R40	ECQ-UV	—
R41	—	—	—	—	XB	R41	ECQ-UY	—
76	—	—	—	—	—	R76	—	—
PPI	—	—	—	—	—	APS	—	—
PPH	—	—	—	—	—	MPV	—	—
PPM	—	MPR	—	—	XF	—	—	—

Ceramic Disc Capacitors

Paccom Series	Illinois Capacitor	Mallory	Murata	NIC	Panasonic	Phillips
PC	BCR	GE (Class I) GH (Class I) GM (Class I)	—	NCD (Class I)	ECC	D DTZ
PK	GCR GHR	—	—	NCD (Class II)	ECK	DD
PS	GMR GQR	LC LE	—	NCD (Class III)	ECF	DD
PY	—	UN	DE7	—	—	—