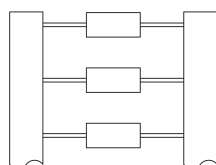
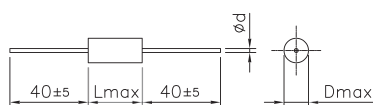


Loose

Taped



METALLIZED POLYPROPYLENE CAPACITOR

Typical applications: timing, LC-filters
(i.e.:TELECOM, measurement equipment)

PRODUCT CODE: A48

D max	≤5	>5≤7	>7
Ø d	0.5	0.6	0.8

All dimensions are in mm.

GENERAL TECHNICAL DATA

Dielectric: metallized polypropylene film.

Plates: aluminium layer deposited by evaporation under vacuum.

Winding: non-inductive type.

Leads: tinned wire.

Protection: polyester tape wrapping and thermosetting resin end fill.

Marking: manufacturer's logo, series (1.48), capacitance, tolerance, D.C. rated voltage, manufacturing date code.

Climatic category: 55/085/56 IEC 60068-1

Technical terms and test: IEC 60384-16

Rated Capacitance (µF)	160Vdc		Rated Capacitance (µF)	250Vdc	
	D _{max} (mm)	L _{max} (mm)		D _{max} (mm)	L _{max} (mm)
0.022 to 0.067	5.5	11.0	0.005 to 0.0218	5.5	11.0
0.068 to 0.147	6.0	14.0	0.022 to 0.0287	5.5	14.0
0.148 to 0.220	7.0	14.0	0.0289 to 0.047	6.0	14.0
0.221 to 0.270	6.0	20.5	0.0471 to 0.056	6.5	14.0
0.271 to 0.315	6.5	20.5	0.0561 to 0.068	7.0	14.0
0.316 to 0.421	7.5	20.5	0.0681 to 0.090	8.0	14.0
0.422 to 0.560	8.5	20.5	0.091 to 0.100	8.5	14.0
0.561 to 0.750	8.0	28.0	0.101 to 0.120	6.5	20.5
0.751 to 1.000	9.0	28.0	0.121 to 0.150	7.0	20.5
1.010 to 1.200	10.0	28.0	0.151 to 0.195	8.0	20.5
1.210 to 1.330	10.5	28.0	0.196 to 0.220	9.0	20.5
1.340 to 1.500	11.0	28.0	0.221 to 0.260	7.5	28.0
1.510 to 1.800	11.5	28.0	0.261 to 0.315	8.0	28.0
1.810 to 2.200	11.5	33.0	0.316 to 0.347	8.5	28.0
2.210 to 2.600	12.5	33.0	0.348 to 0.470	9.5	28.0
2.610 to 3.160	13.5	33.0	0.471 to 0.560	10.5	28.0
3.170 to 3.900	15.0	33.0	0.561 to 0.680	11.0	28.0
3.910 to 4.700	16.5	33.0	0.681 to 0.820	12.0	28.0
			0.821 to 1.000	12.0	33.0
			1.010 to 1.200	13.0	33.0
			1.210 to 1.500	14.5	33.0
			1.510 to 1.800	15.5	33.0
			1.810 to 2.200	17.0	33.0

All dimensions are in mm.

METALLIZED POLYPROPYLENE CAPACITOR

PRODUCT CODE: A48

ELECTRICAL CHARACTERISTICS

Rated voltage (V_R): 160 Vdc - 250Vdc

Category voltage (V_c): up to +85°C $V_c = V_R$

Capacitance range:

0.022µF to 4.7µF at 160Vdc

0.005µF to 2.2µF at 250Vdc

Capacitance values:

E192 series (IEC 60063 Norm).

Capacitance tolerances:

±1% (F); ±1.25% (A); ±2% (G); ±2.5% (H).

Total self inductance:

max 1 nH per 1 mm lead and capacitor length.

Temperature coefficient:

-(220±70) ppm/°C 0 ... + 70°C

-(235±85) ppm/°C -40 ... + 85°C

Dissipation factor (DF):

$tg\delta \times 10^{-4}$ at +25°C ±5°C

10kHz	$C \leq 0.27 \mu F$	≤ 10
	$0.271 \leq C \leq 0.82 \mu F$	≤ 15
	$0.821 \leq C \leq 1.5 \mu F$	≤ 20
	$1.51 \leq C \leq 4.7 \mu F$	≤ 30

Insulation resistance:

Test conditions

Temperature: +25°C±5°C

Voltage charge time: 1 min

Voltage charge: 100Vdc

Performance

$\geq 1 \times 10^5 M\Omega$ for C $\leq 0.33\mu F$

$\geq 30000 s$ for C $> 0.33\mu F$

Test voltage between terminations:

1.6xV_R applied for 2 s at +25°C±5°C

TEST METHOD AND PERFORMANCE

Damp heat, steady state:

Test conditions

Temperature: +40°C±2°C

Relative humidity (RH): 93%

Test duration: 56 days

Performance

Capacitance change $|\Delta C/C|$: $\leq 0.3\%$

Insulation resistance: $\geq 5 \times 10^4 M\Omega$ for C $\leq 120nF$

$\geq 6000 s$ for C $> 120nF$

Endurance:

Test conditions

Temperature: +85°C±2°C

Test duration: 2000 h

Voltage applied: 1.25xV_R

Performance

Capacitance change $|\Delta C/C|$: $\leq 0.5\%$

DF change ($\Delta tg\delta$): $\leq 20 \times 10^{-4}$ at 1kHz for C $> 1\mu F$

$\leq 30 \times 10^{-4}$ at 10kHz for C $\leq 1\mu F$

Resistance to soldering heat:

Test conditions

Solder bath temperature: +260°C±5°C

Dipping time (with heat screen): 5 s±1 s

Performance

Capacitance change $|\Delta C/C|$: $\leq 0.2\%$

Thermal shock:

Test conditions

Temperature: -40°C ... +85°C

Cycles: nr. 5

Performance

Capacitance change $|\Delta C/C|$: $\leq 0.3\%$

Long term stability:

Test conditions

Temperature: +40°C±2°C

Relative humidity (RH): 70% max

Test duration: 2 years

Performance

Capacitance change $|\Delta C/C|$: $\leq 0.5\%$

RELIABILITY:

MKP
ZR
Z = 20 FIT
R = 10 ⁵ hours

1 FIT = 1x10⁻⁹ failure/comp.x h.