



# Metallized Polypropylene Capacitor -Radial

MPN3



## Construction:

Dielectric : Metallized Polypropylene Film .  
 Winding : non-inductive type.  
 Leads : Tinned Wire.  
 Outer coating : Flame retarding epoxy resin.

## Feature:

Self-healing property.  
 Low noise  
 Materials conform to RoHs  
 Smaller version of MPBN type.

## Recommended Application:

Power factor correction(PFC)usage.

## Electrical Characteristics:

Related Documents	IEC 60384-16		
Rated Voltage	450VDC		
Rated Temperature	-40°C ~ +85°C.		
Usable upper category temperature	+110°C (Derating ratio of rated voltage to +85°C ~ +110°C: 1.0% per °C for Rated Voltage )		
Capacitance Range	0.22 $\mu$ F ~ 1.5 $\mu$ F.		
Capacitance Tolerance	$\pm$ 5% (J) , $\pm$ 10% (K)		
Dissipation Factor	KHz	$C \leq 1.0\mu F$	$1.0\mu F < C \leq 2.2\mu F$
	1	$\leq 0.1\%$	$\leq 0.1\%$
	100	$\leq 1.2\%$	$\leq 2.0\%$
Insulation Resistance	Terminal to Terminal: (at20°C $\pm$ 5°C) , Voltage charge time : 1 minute. Voltage charge : 100VDC. $\geq 20000M\Omega$ For $C \leq 0.33\mu F$ , $\geq 9000M\Omega \times \mu F$ For $C > 0.33\mu F$		
Withstand Voltage	Terminal to Terminal: (at20°C $\pm$ 5°C) $1.6 \times V_R$ applied for 2sec. (cut off current 10mA) Slow-up voltage speed:100V/sec		
Rated Voltage Pulse Slope dV/dt (V/ $\mu$ s)	Pitch		
	$V_R$	10m/m	15m/m
	450 VDC	130	100



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## Reliability Test :

Item	Test Method	Requirements
Resistance to soldering heat IEC 60068-2-20”	Solder bath: 260°C± 5°C Immersion time: 10sec± 1sec	Capacitance change   $\Delta C/C$   ≤ 1 % DF change $\Delta \tan \delta$ : 0.1% at 1Khz IR: ≥ spec. value.
Resistance to vibration IEC 60068-2-6 ”	Frequency range: 10hz to 55hz Amplitude: 1.5 m/m Duration : 6 hours	There shall be no visible damage, no intermittent contact, no open or short circuit
Damp heat ,steady state IEC 60068-2-3”	Temperature: 40°C± 2°C Relative humidity: 90% to 95% Duration : 1000 hours	Capacitance change   $\Delta C/C$   ≤ 5 % DF change $\Delta \tan \delta$ : 0.1% at 1Khz IR: ≥ 50% spec. value.
Electrical endurance IEC 60384-16”	Temperature: 85°C± 2°C Voltage applied: 1.1×Vr(DC) Duration : 1000 hours	Capacitance change   $\Delta C/C$   ≤ 5 % DF change $\Delta \tan \delta$ : 0.1% at 1Khz IR: ≥ 50% spec. value.

Cap. (μF)

Size unit: m/m

		MPN3				
Cap.	Size	W	H	T	P	dφ
0.22		13.0	11.0	5.0	10	0.6
0.33		13.0	12.0	6.0	10	0.6
0.47		13.0	13.0	7.0	10	0.6
0.68		13.0	15.5	8.0	10	0.6
0.47		18.0	12.0	6.0	15	0.8
0.68		18.0	13.0	7.0	15	0.8
1.0		18.0	15.5	7.5	15	0.8
1.5		18.0	18.0	9.0	15	0.8

Maximum dimensions (mm): W max = W+0.2