



Metallized Polypropylene Capacitor -Radial

MPPN



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.
 Ultra-miniature size(1).

Recommended Application:

Power factor correction(PFC)usage.

Electrical Characteristics:

| | | | | | |
|--|---|-----------|-------------------|---------|---------|
| Related Documents | IEC 60384-16 | | | | |
| Rated Voltage | 450VDC , 630VDC | | | | |
| Rated Temperature | -40°C ~ +85°C. | | | | |
| Usable upper category temperature | +110°C (Derating ratio of rated voltage to +85°C ~ +110°C: 1.5% per °C for Rated Voltage) | | | | |
| Capacitance Range | 0.022 μF ~ 2.2 μF. | | | | |
| Capacitance Tolerance | ± 3% (H) , ± 5% (J) , ± 10% (K) | | | | |
| Dissipation Factor | KHz | C ≤ 1.0uF | 1.0uF < C ≤ 2.2uF | | |
| | 1 | ≤ 0.1% | ≤ 0.1% | | |
| | 100 | ≤ 1.0% | ≤ 1.2% | | |
| Insulation Resistance | Terminal to Terminal: (at20°C± 5°C) , Voltage charge time : 1 minute. Voltage charge : 100VDC. ≥ 30000MΩ For C ≤ 0.33uF , ≥ 10000MΩ×uF For C > 0.33uF | | | | |
| Withstand Voltage | Terminal to Terminal: (at20°C± 5°C) 1.6 × V _R applied for 2sec. (cut off current 10mA) Slow-up voltage speed:100V/sec | | | | |
| Rated Voltage Pulse Slope dV/dt (V/μs) | Pitch | | | | |
| | V _R | 10m/m | 15m/m | 22.5m/m | 27.5m/m |
| | 450 VDC | 220 | 160 | 100 | - |
| 630 VDC | 350 | 250 | 160 | 115 | |



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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: ≥ limit 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 $\Delta C/C$ ≤ 3 % DF change $\Delta \tan \delta$: 0.1% at 1Khz IR: ≥ 50% limit value. |
| Electrical endurance IEC 60384-16” | Temperature: 85°C± 2°C Voltage applied: 1.25×Vr(DC) Duration : 1000 hours | Capacitance change $\Delta C/C$ ≤ 3 % DF change $\Delta \tan \delta$: 0.1% at 1Khz IR: ≥ 50% limit value. |

Cap. (μF)

Size unit: m/m

| R.V. Cap. / Size | 450VDC | | | | |
|---------------------|--------|------|------|------|-----|
| | W | H | T | P | dφ |
| 0.047 | 13.0 | 8 | 4.5 | 10 | 0.6 |
| 0.1 | 13.0 | 12 | 6.5 | 10 | 0.6 |
| 0.12 | 13.0 | 13 | 7 | 10 | 0.6 |
| 0.15 | 13.0 | 13.5 | 8 | 10 | 0.6 |
| 0.22 | 13.0 | 14 | 6.5 | 10 | 0.6 |
| 0.47 | 13.0 | 16.5 | 7 | 10 | 0.6 |
| 0.68 | 13.0 | 20.5 | 9.5 | 10 | 0.6 |
| 0.22 | 18.0 | 12 | 7 | 15 | 0.8 |
| 0.33 | 18.0 | 14 | 7 | 15 | 0.8 |
| 0.47 | 18.0 | 14.5 | 5.5 | 15 | 0.8 |
| 0.56 | 18.0 | 15.5 | 6.5 | 15 | 0.8 |
| 0.68 | 18.0 | 16 | 7 | 15 | 0.8 |
| 1.0 | 18.0 | 17.5 | 8.5 | 15 | 0.8 |
| 1.5 | 18.0 | 19 | 10.5 | 15 | 0.8 |
| 2.2 | 18.0 | 24.5 | 11 | 15 | 0.8 |
| 2.2 | 25.5 | 21.5 | 13.5 | 22.5 | 0.8 |



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Cap. (μF)

Size unit: m/m

| R.V. | 630VDC | | | | |
|--------------|---------------|-------------|-------------|-------------|---------------------------|
| Cap. \ Size | W | H | T | P | dϕ |
| 0.022 | 13.0 | 11 | 5 | 10 | 0.6 |
| 0.047 | 13.0 | 11 | 5.5 | 10 | 0.6 |
| 0.068 | 13.0 | 12 | 6 | 10 | 0.6 |
| 0.22 | 18.0 | 16 | 7.5 | 15 | 0.8 |
| 0.33 | 18.0 | 17.5 | 8.5 | 15 | 0.8 |
| 0.47 | 18.0 | 18 | 12 | 15 | 0.8 |
| 0.68 | 18.0 | 22 | 13 | 15 | 0.8 |
| 1.0 | 18.0 | 24 | 18.5 | 15 | 0.8 |
| 0.68 | 26.0 | 21.5 | 12 | 22.5 | 0.8 |
| 1.0 | 26.0 | 22 | 13 | 22.5 | 0.8 |
| 1.0 | 31.0 | 20 | 11 | 27.5 | 0.8 |
| 1.5 | 31.0 | 22.5 | 13 | 27.5 | 0.8 |
| 2.2 | 31.0 | 27.5 | 15 | 27.5 | 0.8 |