WIMA Snubber MKP

Snubber MKP Capacitors for Pulse Applications with Double-Sided Metallized Electrodes, Schoopage Contacts and Internal Series Connection

Special Features

- **Pulse duty construction**
- **Self-healing**
- **Particularly reliable contact-configurations: 4-lead versions and screwable plate connections**
- **Internal series connection from 400 VAC**
- **Very low dissipation factor**
- **Negative capacitance change versus temperature**
- **According to RoHS 2002/95/EC**

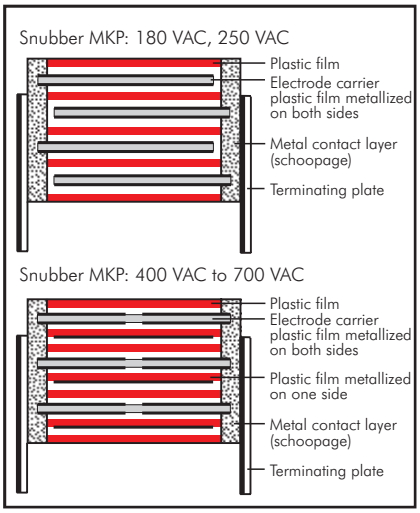
Typical Applications

For high pulse and high frequency applications requiring extremely reliable contacts e.g.

- **IGBT-applications**

Construction

Dielectric:
Polypropylene (PP) film
Capacitor electrodes:
Double-sided metallized plastic film
Internal construction:



Encapsulation:
Solvent-resistant, flame-retardent plastic case with epoxy resin seal, UL 94 V-0
Terminations:
Tinned wire or plates.
Marking:
Colour: Red. Marking: Black.
Epoxy resin seal: Red

Electrical Data

Capacitance range:
0.047 µF to 25 µF
Rated voltages:
250 VDC, 400 VDC, 630 VDC, 1000 VDC, 1600 VDC, 2000 VDC, 3000 VDC
Capacitance tolerances:
±20%, ±10%, ±5% (other tolerances are available subject to special enquiry)
Operating temperature range:
–55° C to +100° C
Climatic test category:
55/100/56 in accordance with IEC
Insulation resistance at +20° C:
C ⩽ 0.33 µF: ⩾ 1 x 10^5 MΩ
(mean value: 5 x 10^5 MΩ)
C > 0.33 µF: ⩾ 30 000 sec (MΩ x µF)
(mean value: 100 000 sec)
Measuring voltage: 100 V/1 min.
Dissipation factors at + 20° C: tan δ

at f	C ⩽ 0.1 µF	0.1 µF < C ⩽ 1.0 µF	C > 1.0 µF
1 kHz	⩽ 3 x 10^{-4}	⩽ 3 x 10^{-4}	⩽ 3 x 10^{-4}
10 kHz	⩽ 4 x 10^{-4}	⩽ 6 x 10^{-4}	–
100 kHz	⩽ 15 x 10^{-4}	–	–

Test voltage:
L < 41.5: 1.6 U_r, 2 sec
L = 41.5: 1.4 U_r, 2 sec
L = 56 : 1.2 U_r, 2 sec
Voltage derating:
A voltage derating factor of 1.35 % per K must be applied from +85° C for DC voltages and from +75° C for AC voltages
Reliability:
Operating life > 300 000 hours
Failure rate < 1 fit (0.5 x U_r and 40° C)

Maximum pulse rise time:

Capacitance µF	max. pulse rise time V/µsec at T_A < 40° C						
	250 VDC	400 VDC	630 VDC	1000 VDC	1600 VDC	2000 VDC	3000 VDC
0.047 ... 0.22	500	500	900	1400	1400	1400	1400
0.33 ... 0.68	300	400	700	900	900	900	900
1.0 ... 2.2	200	200	400	400	500	500	500
2.5 ... 6,0	80	100	150	300	400	–	–
7.0 ... 10	50	70	75	–	–	–	–
15 ... 25	10	20	–	–	–	–	–

for pulses equal to the rated voltage

Mounting Recommendation

Excessive mechanical strain, e.g. pressure or shock onto the capacitor body, is to be avoided during mounting and usage of the capacitors. When fixing the plates the screw torque is to be limited to max. 5 Nm.

Packing

Transportation-safe packing in cardboard boxes.

For further details and graphs please refer to Technical Information.