

Precision Thick Film Axial Terminal High Voltage/High Resistance



Maxi-Mox resistors are also versatile. Suitable for industrial applications requiring still more power for high voltage switching, industrial control, and high voltage current limiting.

FEATURES

- Wide resistance ranges
- Voltage rating to 50KV
- Power rating to 12.5 watts
- Silicone or epoxy coating

APPLICATIONS

- HV power supplies
- Power distribution
- Medical instrumentation
- Avionics

SPECIFICATIONS

Material

Core: Alumina

Resistor: Thick Film

Terminal: RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu

Electrical

Resistance Range:

250Ω to 1 Teraohm

Power Rating: 2.0W to 12.5W

Voltage Rating: 10KV to 50KV

Tolerance: 0.5% to 20%

Operating Temperature:

-55°C to +210°C

Temperature Coefficient:

25ppm/°C 0° to 85°C available

Ohmite Series	Resistance Range (Ohms)	Power @70°C	Voltage Rating	Available Tolerances*	A ± 0.015" (in/mm)	B max. (in/mm)	Capacitance (pf)
• High-temperature (silicone coated)							
MOX-1-12	250 ohms to 300,000M	2.5W	10.0KV	1% to 20%	1.120" / 28.45	0.310" / 7.87	0.75
MOX-2-12	500 ohms to 700,000M	5.0W	20.0KV	1% to 20%	2.120" / 53.85	0.310" / 7.87	0.60
MOX-3-12	750 ohms to 1,000,000M	7.5W	30.0KV	1% to 20%	3.120" / 79.24	0.310" / 7.87	0.50
MOX-4-12	1K to 1,000,000M	10.0W	40.0KV	1% to 20%	4.120" / 104.65	0.310" / 7.87	0.40
MOX-5-12	1.25K to 1,000,000M	12.5W	50.0KV	1% to 20%	5.120" / 130.05	0.310" / 7.87	0.30
*Some tolerances are not available over the entire resistance range.							
• Standard (epoxy coated) @25°C							
MOX-1-13	250 ohms to 300,000M	2.0W	10.0KV	0.1% to 20%	1.140" / 28.96	0.345" / 8.76	0.75
MOX-2-13	500 ohms to 700,000M	3.0W	20.0KV	0.1% to 20%	2.140" / 54.36	0.345" / 8.76	0.60
MOX-3-13	750 ohms to 1,000,000M	4.0W	30.0KV	0.1% to 20%	3.140" / 79.76	0.345" / 8.76	0.50
MOX-4-13	1K to 1,000,000M	5.0W	40.0KV	0.1% to 20%	4.140" / 105.16	0.345" / 8.76	0.40
MOX-5-13	1.25K to 1,000,000M	6.0W	50.0KV	0.1% to 20%	5.140" / 130.56	0.345" / 8.76	0.30

TEMPERATURE/VOLTAGE COEFFICIENTS OF RESISTANCE

Resistor Series	Temp. Coeff. of Resistance*			Voltage Coeff. of Resistance**	
	25 PPM/°C	50 PPM/°C	100 PPM/°C	< 2PPM/Volt	< 5PPM/Volt
MOX-1	1K-1,500M	1K-450M	451M-30,000M	250Ω-1,000M	1,001M-100,000M
MOX-2	1K-1,500M	1K-1,000M	1,001M-60,000M	500Ω-2,600M	2,601M-200,000M
MOX-3	1K-1,500M	1K-1,500M	1,501M-90,000M	750Ω-4,000M	4,001M-300,000M
MOX-4	1K-1,500M	1K-2,000M	2,001M-120,000M	1K-5,300M	5,301M-400,000M
MOX-5	1K-1,500M	1K-2,500M	2,501M-150,000M	1.25K-6,700M	6,701M-500,000M

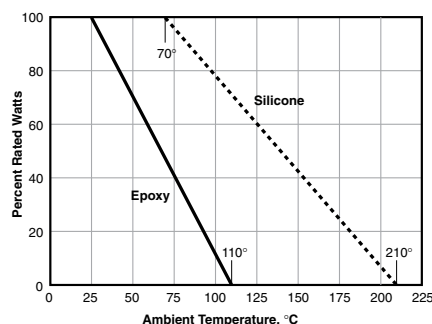
*Epoxy: -55°C to 110°C; High Temp. Silicone: -55°C to 210°C

**For tighter VCs please contact Ohmite.

PERFORMANCE DATA

Characteristic	Test Method	Specification
Humidity	MIL-STD-202, Method 103B, Condition B	±0.25%
Dielectric Withstanding Voltage	MIL-STD-202, Method 301, 750V	±0.25%
Insulation Resistance	MIL-STD-202, Method 302, Condition A or B	>10,000 M or greater dry
Thermal Shock	MIL-STD-202, Method 107G, Condition B, B-1, or F	±0.20%
Load Life	MIL-STD-202, Method 108A, Condition D	±1.0%
Resistance to Solvents	MIL-STD-202, Method 215G	Acceptable for High Reliability Series only
Terminal Strength	MIL-STD-202, Method 211A, Condition A or B	±0.25%
Shock (Specified Pulse)	MIL-STD-202, Method 213B, Condition I	±0.25%
Vibration High Frequency	MIL-STD-202, Method 204D, Condition D	±0.20%
Power Conditioning	MIL-R-49462A, Par 4.8	±0.50%
Solderability	MIL-STD-202, Method 208F	>95% Coverage

DERATING



ORDERING INFORMATION

Coating
2 = Black silicone
3 = Epoxy
6 = No coating
E = RoHS Compliant

Style
1,2,3,4,5,8

MOX-1-131006FE

Maxi Mox Series
Terminal
1 = 0.032"

Ohms
First 3 digits are significant; 4th digit is multiplier (# of zeroes to follow). Examples:
10R2 = 10.2 ohms
1000 = 100 ohms
1503 = 150,000 ohms

Tolerance
D = 0.5%
F = 1%
G = 2%
J = 5%
K = 10%
M = 15%
P = 20%

Check product availability at www.ohmite.com