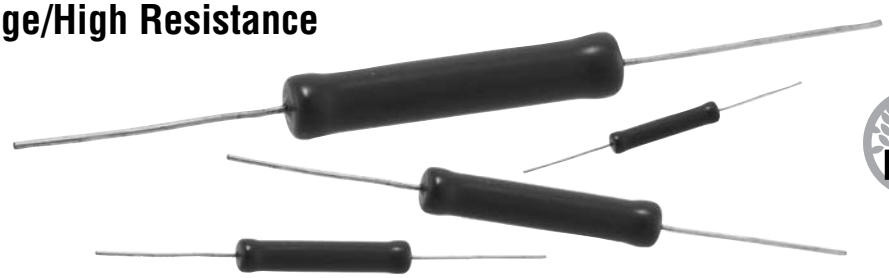
# Maxi-Mox

## Precision Thick Film Axial Terminal
## High Voltage/High Resistance



RoHS Compliant

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
- Non-inductive available

### APPLICATIONS

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

### SERIES SPECIFICATIONS

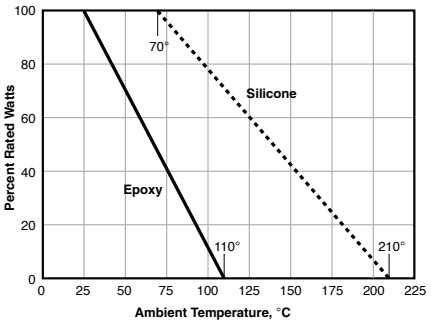
| Ohmite Series | Resistance Range (Ω) | Power @70°C | Voltage Rating | Available Tolerances* | Capacitance (pf) |
|---|---|---|---|---|---|
| **• High-temperature (silicone coated)** | | | | | |
| MOX-1-12 | 250Ω to 300,000M | 2.5W | 10.0KV | 1% to 20% | 0.75 |
| MOX-2-12 | 500Ω to 700,000M | 5.0W | 20.0KV | 1% to 20% | 0.60 |
| MOX-3-12 | 750Ω to 1,000,000M | 7.5W | 30.0KV | 1% to 20% | 0.50 |
| MOX-4-12 | 1K to 1,000,000M | 10.0W | 40.0KV | 1% to 20% | 0.40 |
| MOX-5-12 | 1.25K to 1,000,000M | 12.5W | 50.0KV | 1% to 20% | 0.30 |
| **• Standard (epoxy coated)** | | **@25°C** | | | |
| MOX-1-13 | 250Ω to 300,000M | 2.0W | 10.0KV | 0.1% to 20% | 0.75 |
| MOX-2-13 | 500Ω to 700,000M | 3.0W | 20.0KV | 0.1% to 20% | 0.60 |
| MOX-3-13 | 750Ω to 1,000,000M | 4.0W | 30.0KV | 0.1% to 20% | 0.50 |
| MOX-4-13 | 1K to 1,000,000M | 5.0W | 40.0KV | 0.1% to 20% | 0.40 |
| MOX-5-13 | 1.25K to 1,000,000M | 6.0W | 50.0KV | 0.1% to 20% | 0.30 |

*Some tolerances are not available over the entire resistance range.

### CHARACTERISTICS

| | |
|---|---|
| **Core** | Alumina |
| **Resistor** | Thick Film |
| **Terminal** | RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu |
| **Resistance Range** | 250Ω to 1 Teraohm |
| **Power Rating** | 2.0W to 12.5W |
| **Voltage Rating** | 10KV to 50KV |
| **Tolerance** | 0.5% to 20%; not all tolerances available in all values |
| **Operating Temperature** | -55°C to +210°C |
| **Temperature Coefficient** | 25ppm/°C 0° to 85°C available |

### DERATING



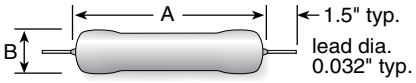

(continued)

# Maxi-Mox

## Precision Thick Film Axial Terminal
## High Voltage/High Resistance

## DIMENSIONS

| Ohmite Series | Power | A max. (in/mm) | B max. (in/mm) |
|---|---|---|---|
| • High-temperature (silicone coated) | | | |
| MOX-1-12 | 2.5W | 1.120” / 28.45 | 0.310” / 7.87 |
| MOX-2-12 | 5.0W | 2.120” / 53.85 | 0.310” / 7.87 |
| MOX-3-12 | 7.5W | 3.120” / 79.24 | 0.310” / 7.87 |
| MOX-4-12 | 10.0W | 4.120” / 104.65 | 0.310” / 7.87 |
| MOX-5-12 | 12.5W | 5.120” / 130.05 | 0.310” / 7.87 |
| • Standard (epoxy coated) | | | |
| MOX-1-13 | 2.0W | 1.140” / 28.96 | 0.345” / 8.76 |
| MOX-2-13 | 3.0W | 2.140” / 54.36 | 0.345” / 8.76 |
| MOX-3-13 | 4.0W | 3.140” / 79.76 | 0.345” / 8.76 |
| MOX-4-13 | 5.0W | 4.140” / 105.16 | 0.345” / 8.76 |
| MOX-5-13 | 6.0W | 5.140” / 130.56 | 0.345” / 8.76 |




## 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 |

## TEMP. AND VOLTAGE COEFFICIENTS OF RESISTANCE

| Resistor Series | Temp. Coeff. of Resistance* 25 PPM/°C | 50 PPM/°C | 100 PPM/°C | Voltage Coeff. of Resistance** < 2PPM/Volt | < 5PPM/Volt |
|---|---|---|---|---|---|
| MOX-1 | 1K-99M | 100M-450M | 451M-30,000M | 250Ω-1,000M | 1,001M-100,000M |
| MOX-2 | 1K-199M | 200M-1,000M | 1,001M-60,000M | 500Ω-2,600M | 2,601M-200,000M |
| MOX-3 | 1K-299M | 300M-1,500M | 1,501M-90,000M | 750Ω-4,000M | 4,001M-300,000M |
| MOX-4 | 1K-399M | 400M-2,000M | 2,001M-120,000M | 1K-5,300M | 5,301M-400,000M |
| MOX-5 | 1K-499M | 500M-2,500M | 2,501M-150,000M | 1.25K-6,700M | 6,701M-500,000M |

*TCR of 25ppm for temperature range of 0°C-85°C. TCR of 50ppm and 100ppm for -55°C to 125°C. Consult factory for TCR values operating higher than 125°C

**For tighter VCs please contact Ohmite.

## ORDERING INFORMATION

**Coating**
2 = Black silicone
3 = Epoxy
6 = No coating

**Non-inductive** *optional*

**RoHS Compliant**

**M O X - 1 N - 1 3 1 0 0 6 F E**

**Maxi Mox Series**

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

**Terminal** 1 = 0.032"

**Ohms** First 3 digits are significant; 4th digit is multiplier (# of zeroes to follow). Examples:
1000 = 100Ω
1503 = 150,000Ω
5005 = 50,000,000Ω

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

Not all tolerances available in all values.