

# Maxi-Mox

## 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
- Non-inductive available

### APPLICATIONS

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

### SERIES SPECIFICATIONS

| Ohmite Series                               | Resistance Range ( $\Omega$ ) | Power @70°C | Voltage Rating | Available Tolerances* | Capacitance (pf) |
|---|-------------------------------|-------------|----------------|-----------------------|------------------|
| <b>• High-temperature (silicone coated)</b> |                               |             |                |                       |                  |
| MOX-1-12                                    | 250 $\Omega$ to 300,000M      | 2.5W        | 10.0KV         | 1% to 20%             | 0.75             |
| MOX-2-12                                    | 500 $\Omega$ to 700,000M      | 5.0W        | 20.0KV         | 1% to 20%             | 0.60             |
| MOX-3-12                                    | 750 $\Omega$ 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             |
| <b>• Standard (epoxy coated) @25°C</b>      |                               |             |                |                       |                  |
| MOX-1-13                                    | 250 $\Omega$ to 300,000M      | 2.0W        | 10.0KV         | 0.1% to 20%           | 0.75             |
| MOX-2-13                                    | 500 $\Omega$ to 700,000M      | 3.0W        | 20.0KV         | 0.1% to 20%           | 0.60             |
| MOX-3-13                                    | 750 $\Omega$ 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

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

### DERATING



(continued)

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### DIMENSIONS

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

### TEMP. AND 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-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

**MOX-1N-131006FE**

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%

Coating: 2 = Black silicone, 3 = Epoxy, 6 = No coating  
 Non-inductive optional  
 RoHS Compliant

Not all tolerances available in all values.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
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- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.