Mini-Mox

Precision Thick Film Axial Terminal High Voltage/High Resistance





FEATURES

- Wide resistance ranges
- Silicone or epoxy coating
- Metal oxide resistive element

APPLICATIONS

- Avionics
- Medical electronics
- · High gain feedback applications
- Current pulse limiters
- Vacuum and space application

The Mini-Mox resistor is very versatile, covering a wide resistance range as well as a wide range of operating voltages. Provided with tolerances down to 0.5%, the Mini-Mox resistor works well in precision circuits.

SERIES SPECIFICATIONS

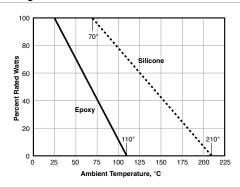
| Resistance Range (Ohms) | Power | Voltage Rating | Available Tolerances* | Capacitance (pf) |
|--|---|---|---|--|
| High-temperature (silicone coated) | | | | |
| 500Ω to 300,000M | 0.35W | 2,500V | 1% to 20% | 1.00 |
| 750Ω to 600,000M | 0.70W | 5,000V | 1% to 20% | 0.75 |
| 1K to 1,000,000M | 1.40W | 7,500V | 1% to 20% | 0.25 |
| Standard (epoxy coated) | | | | |
| 500Ω to 300,000M | 0.75W | 2,500V | 0.5% to 20% | 1.00 |
| 1K to 600,000M | 1.00W | 5,000V | 0.5% to 20% | 0.75 |
| 1K to 1,000,000M | 1.50W | 7,500V | 0.5% to 20% | 0.25 |
| | Range (Ohms) (silicone coated) 500Ω to 300,000M 750Ω to 600,000M 1K to 1,000,000M coated) 500Ω to 300,000M 1K to 600,000M | Range (Ohms) Power e (silicone coated) @70°C 500Ω to 300,000M 0.35W 750Ω to 600,000M 0.70W 1K to 1,000,000M 1.40W coated) @25°C 500Ω to 300,000M 0.75W 1K to 600,000M 1.00W | Range (0hms) Power (silicone coated) Rating ε (silicone coated) @70°C 500Ω to 300,000M 0.35W 2,500V 750Ω to 600,000M 0.70W 5,000V 1K to 1,000,000M 1.40W 7,500V coated) @25°C 500Ω to 300,000M 0.75W 2,500V 1K to 600,000M 1.00W 5,000V | Range (0hms)PowerRatingTolerances* \mathbf{c} (silicone coated)@70°C 500Ω to 300,000M0.35W2,500V1% to 20% 750Ω to 600,000M0.70W5,000V1% to 20%1K to 1,000,000M1.40W7,500V1% to 20%coated)@25°C 500Ω to 300,000M0.75W2,500V0.5% to 20%1K to 600,000M1.00W5,000V0.5% to 20% |

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

CHARACTERISTICS

| Resistor | Metal Oxide | |
|--------------------------|--|--|
| Coating | Silicone or Epoxy | |
| Core | Alumina | |
| Terminals | Solder-coated axial. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu | |
| Resistance Range | 500Ω to 1 Teraohm | |
| Power Rating | 0.35W to 1.5W | |
| Voltage Rating | 2500V to 7.5KV | |
| Tolerance | 0.5% to 20%; not all tolerances available in all values | |
| Operating Temperature | -55°C to +220°C | |
| Temp. Coefficient | 25ppm/°C 0° to 85°C available | |

Derating



| Perto | rmance | Data |
|-------|--------|------|
|-------|--------|------|

| remoninance 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 | >10,000M 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 | ±2.0% |
| Resistance to Solvents | MIL-STD-202, Method 215G | Acceptable for the Standard 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 | ±.020% |
| Power Conditioning | MIL-R-49462A, Par 4.8 | ±0.50% |
| Solderability | MIL-STD-202, Method 208F | >95% Coverage |
| | | |

(continued)





Precision Thick Film Axial Terminal High Voltage/High Resistance

STANDARD TEMP./VOLTAGE COEFFICIENTS OF RESISTANCE

| | Temp. Coeff | . of Resistance | Volta | Voltage Coeff. of Resistance** | | |
|-----------------|-------------|-----------------|-----------------|--------------------------------|-----------------|--|
| Resistor Series | 25 PPM/°C | 50 PPM/°C | 100 PPM/°C | < 2PPM/Volt | < 5PPM/Volt | |
| MOX-400 | 1K-99M | 100M-450M | 451M-30,000M | 1K-1,000M | 1,001M-100,000M | |
| MOX-750 | 1K-199M | 200M-900M | 901M-70,000M | 1K-2,000M | 2,001M-100,000M | |
| MOX1125 | 1K-299M | 300M-1,350M | 1,351M-100,000M | 1K-3,000M | 3,001M-100,000M | |

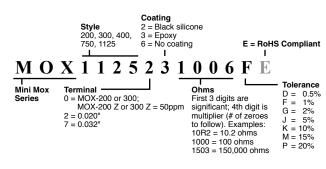
^{*}TCR of 25ppm for temperature range of 0°C-85°C. TCR of 50ppm and 100ppm for -55°C to 125°C. Consult factory for TCR values operating higher than 125°C **For tighter VCs please contact Ohmite.

DIMENSIONS

(in./mm)

| Series | Power | A max. | B max. |
|---------------------------|-----------|----------------|---------------|
| High-temperature (silicon | e coated) | @70°C | |
| MOX-400-22 | 0.35W | 0.510" / 12.95 | 0.140" / 3.56 |
| MOX-750-22 | 0.70W | 0.820" / 20.83 | 0.140" / 3.56 |
| MOX1125-22 | 1.40W | 1.210" / 30.73 | 0.140" / 3.56 |
| Standard (epoxy coated) | | @25°C | |
| MOX-400-23 | 0.75W | 0.580" / 14.78 | 0.165" / 4.19 |
| MOX-750-23 | 1.00W | 0.880" / 22.35 | 0.165" / 4.19 |
| MOX1125-23 | 1.50W | 1.270" / 32.26 | 0.165" / 4.19 |
| | | | |

HOW TO ORDER



Not all tolerances available in all values.

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805F10K 805F250 805F2K5 805F75R 80FR499 810F20KE 83FR121 850F250 MOX-5-122002JE MOX-750232506FE MOX-H-021004J

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