

# 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

Ohmite Series	Resistance Range (Ohms)	Power	Voltage Rating	Available Tolerances*	Capacitance (pf)
<b>• High-temperature (silicone coated)</b>		<b>@70°C</b>			
MOX-400-22	500Ω to 300,000M	0.35W	2,500V	1% to 20%	1.00
MOX-750-22	750Ω to 600,000M	0.70W	5,000V	1% to 20%	0.75
MOX1125-22	1K to 1,000,000M	1.40W	7,500V	1% to 20%	0.25
<b>• Standard (epoxy coated)</b>		<b>@25°C</b>			
MOX-400-23	500Ω to 300,000M	0.75W	2,500V	0.5% to 20%	1.00
MOX-750-23	1K to 600,000M	1.00W	5,000V	0.5% to 20%	0.75
MOX1125-23	1K to 1,000,000M	1.50W	7,500V	0.5% to 20%	0.25

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

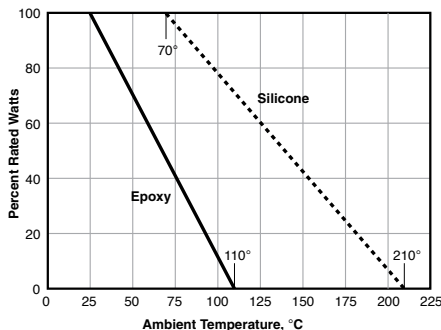
### CHARACTERISTICS

<b>Resistor</b>	Metal Oxide
<b>Coating</b>	Silicone or Epoxy
<b>Core</b>	Alumina
<b>Terminals</b>	Solder-coated axial. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu
<b>Resistance Range</b>	500Ω to 1 Teraohm
<b>Power Rating</b>	0.35W to 1.5W
<b>Voltage Rating</b>	2500V to 7.5KV
<b>Tolerance</b>	0.5% to 20%; not all tolerances available in all values
<b>Operating Temperature</b>	-55°C to +210°C
<b>Temp. Coefficient</b>	25ppm/°C 0° to 85°C available

### 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	>10,000M 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	±2.0%
<b>Resistance to Solvents</b>	MIL-STD-202, Method 215G	Acceptable for the Standard 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

### Derating



(continued)

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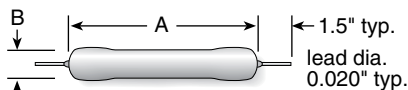
### STANDARD TEMP./VOLTAGE COEFFICIENTS OF RESISTANCE

Resistor Series	Temp. Coeff. of Resistance		Voltage Coeff. of Resistance**		
	25 PPM/°C	50 PPM/°C	100 PPM/°C	< 2PPM/Volt	< 5PPM/Volt
MOX-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.
<b>• High-temperature (silicone coated) @70°C</b>			
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
<b>• Standard (epoxy coated) @25°C</b>			
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

	<b>Style</b> 200, 300, 400, 750, 1125	<b>Coating</b> 2 = Black silicone 3 = Epoxy 6 = No coating	<b>E = RoHS Compliant</b>
<b>MOX</b>	<b>1125</b>	<b>23</b>	<b>1006FE</b>
<b>Mini Mox Series</b>	<b>Terminal</b> 0 = MOX-200 or 300; MOX-200 Z or 300 Z = 50ppm 2 = 0.020" 7 = 0.032"	<b>Ohms</b> 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	<b>Tolerance</b> D = 0.5% F = 1% G = 2% J = 5% K = 10% M = 15% P = 20%

Not all tolerances available in all values.