## 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

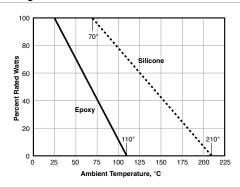
Resistance Range (Ohms)	Power	Voltage Rating	Available Tolerances*	Capacitance (pf)
<ul> <li>High-temperature (silicone coated)</li> </ul>				
500Ω to 300,000M	0.35W	2,500V	1% to 20%	1.00
750Ω to 600,000M	0.70W	5,000V	1% to 20%	0.75
1K to 1,000,000M	1.40W	7,500V	1% to 20%	0.25
Standard (epoxy coated)				
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 $500\Omega$ to 300,000M0.35W2,500V1% to 20% $750\Omega$ to 600,000M0.70W5,000V1% to 20%1K to 1,000,000M1.40W7,500V1% to 20%coated)@25°C $500\Omega$ 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
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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	

<sup>\*</sup>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.

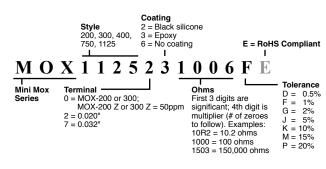
DIMENSIONS

### (in./mm)

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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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MHR0844SA107F70 MHR0317SA507F70 MHR0844SA507F70 MHR0844SA106F70 MHR0844SA108G70 MP821-7.5-1%
MHR0422SA106F70 MHR0422SA107F70 MHR0424SA106F70 MHR0424SA107F70 MHR0422SA506F70 MHR0422SA507F70
MHR0624SA108G70 MHR0624SA106F70 MHR0624SA107F70 MOX300002206FE