

Super Mox Series

High Voltage



High-voltage Super Mox resistors have been developed to meet the precision temperature stability requirements of high-accuracy and high-voltage systems. Super Mox combines proprietary non-inductive resistance system and design to achieve low temperature coefficient, low voltage coefficients, high stability and increased high operating voltages. These resistors are designed to meet the demanding



Uncoated resistor element pictured for demonstration purposes only. Finished product is coated with silicone.

requirements of high voltage power supplies, electron microscopes, X-ray systems, high resolution CRT displays and geophysical instruments.

SERIES SPECIFICATIONS

Series	Power Rating (W)	Max. Oper. Voltage	Res. Range† (Ω)	VCR*
MOX910	3.9	9.4Kv	600Ω-500M	0.40
			500M-10G	0.75
MOX920	4.6	13.8Kv	500Ω-1G	0.20
			1G-50G	0.40
MOX930	7.8	20Kv	400Ω-1G5	0.15
			1G5-50G	0.30
MOX940	11.7	30Kv	600Ω-2G5	0.10
			2G5-50G	0.15
MOX950	12.5	40Kv	800Ω-3G	0.08
			3G-50G	0.12
MOX960	15.5	50Kv	1M-4G	0.06
			4G-50G	0.10
MOX970	19.4	60Kv	1M-5G	0.04
			5G-50G	0.08

* typical values, contact factory for details

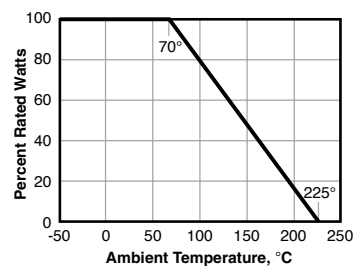
† Contact factory for values outside of the listed resistance range

CHARACTERISTICS

Tolerances	0.10%, 0.25%, 0.5%, 1% (others on request)
Temperature Coefficients	5, 10, 25, 50 and 100ppm/°C (5ppm available from 20K to 10G, except MOX910, other on on request). Temperature coefficient referenced to 25°C, ΔR taken at +85°C.
Encapsulation	Silicone Conformal Coating
Terminal Material	Gold Plated
Core Material	Al ₂ O ₃ (96%)
Resistor Material	Ruthenium Oxide
Operating Temperature	-55°C to 225°C

Insulation Resistance	>10,000 MΩ	500 Volt 25 °C 75% relative humidity
Dielectric Strength	>1,000 Volt	25 °C 75% relative humidity
Thermal Shock	Δ R/R < 0.1% typ., 0.20% max.	MIL Std. 202, method 107 Cond. C (IEC 68 -2 -14)
Overload	Δ R/R < 0.1% typ., 0.25% max.	1,5 x P _{nom} , 5 sec (do not exceed max. voltage)
Moisture Resistance	Δ R/R < 0.1% typ., 0.25% max.	MIL Std. 202, method 106 (IEC 68 -2 -3)
Load Life	Δ R/R < 0.2% typ., 0.5% max.	1000 hours at rated power (IEC 115 -1)

Derating



(continued)

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DIMENSIONS

(in./mm ±0.5mm)



Series	L
MOX910	1.07" / 27.2mm
MOX920	1.56" / 39.5mm
MOX930	2.05" / 52mm
MOX940	3.06" / 77.6mm
MOX950	4.06" / 103.2mm
MOX960	4.87" / 123.7mm
MOX970	6.05" / 153.7mm

ORDERING INFORMATION

	Coating 2 = conformal silicone standard		E = RoHS compliant
MOX91021006JTE			
Super Mox Series see chart for wattage	Ohms First 3 digits are significant; 4th digit is multiplier (# of zeroes to follow). Examples: 1001 = 1000Ω 1503 = 150,000Ω 1006 = 100 MΩ	Tolerance* B = 0.10% C = 0.25% D = 0.5% F = 1%	TCR* T = 100ppm V = 50ppm W = 25ppm X = 15ppm Y = 10ppm Z = 5ppm
*Extremely tight tolerances and TCRs not available across the full resistance range. Consult factory.			

Part Number	Watts	Ohms 1% tol.	TCR
MOX91021004FVE	3.9W	1M	50ppm
MOX91025004FVE	3.9W	5M	50ppm
MOX91021005FVE	3.9W	10M	50ppm
MOX91022505FTE	3.9W	25M	100ppm
MOX92021005FVE	4.6W	10M	50ppm
MOX92025005FVE	4.6W	50M	50ppm
MOX92021006FVE	4.6W	100M	50ppm
MOX92021007FTE	4.6W	1000M	100ppm
MOX93021004FVE	7.8W	1M	50ppm
MOX93025004FVE	7.8W	5M	50ppm
MOX93021005FVE	7.8W	10M	50ppm
MOX93022505FTE	7.8W	25M	100ppm
MOX94021005FVE	11.7W	10M	50ppm
MOX94025005FVE	11.7W	50M	50ppm
MOX94021006FVE	11.7W	100M	50ppm
MOX94021007FTE	11.7W	1000M	100ppm
MOX95021004FVE	12.5W	1M	50ppm
MOX95025004FVE	12.5W	5M	50ppm
MOX95021005FVE	12.5W	10M	50ppm
MOX95022505FTE	12.5W	25M	100ppm
MOX96021005FVE	15.5W	10M	50ppm
MOX96025005FVE	15.5W	50M	50ppm
MOX96021006FVE	15.5W	100M	50ppm
MOX96021007FTE	15.5W	1000M	100ppm
MOX97021004FVE	19.4W	1M	50ppm
MOX97025004FVE	19.4W	5M	50ppm
MOX97021005FVE	19.4W	10M	50ppm
MOX97022505FTE	19.4W	25M	100ppm