



**THE DATASHEET OF
MOX92021005FVE**



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

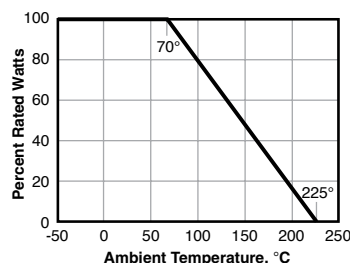
† Contact factory for values outside of the listed resistance range

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. A (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



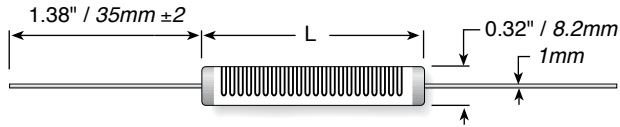
(continued)

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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 |

Looking for pricing, stock, or lifecycle information?

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 [Ohmite Information](#)

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