

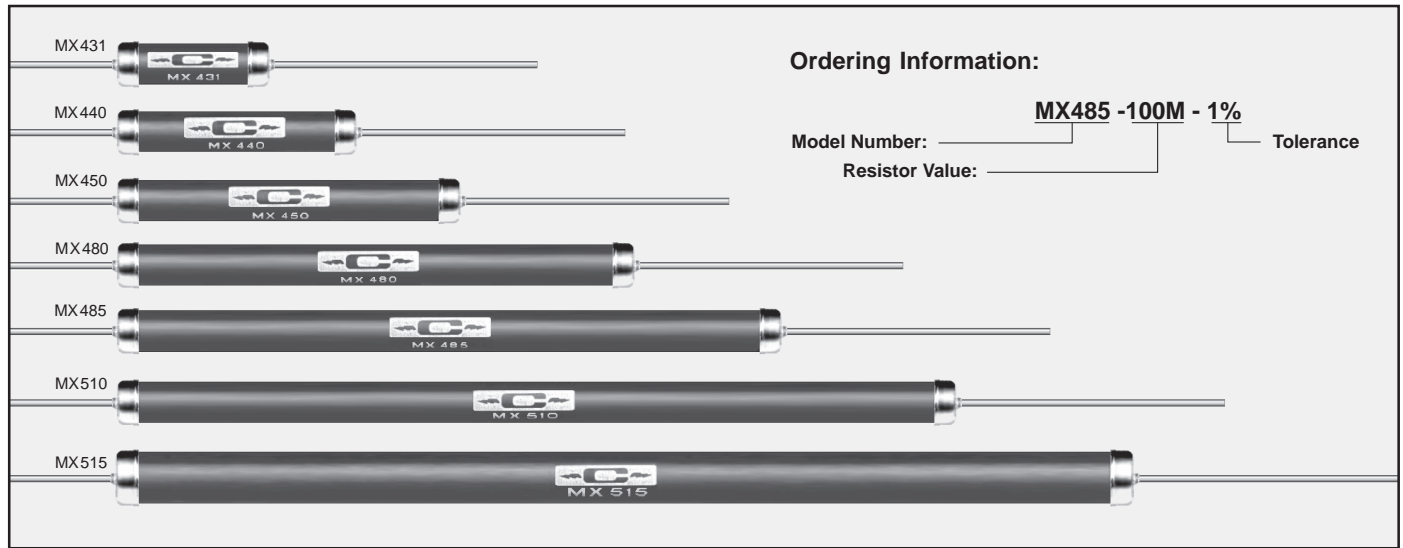
Type MX Lab Grade Precision High Voltage Resistors

High Voltage Resistors for Laboratory and Industrial Applications

The Type MX Lab Grade Precision High Voltage Resistors were specifically developed for use in high performance laboratory and industrial high voltage systems. These resistors combine the proven performance of Caddock's Micronox® resistance system with new cost efficient design elements. These resistors are intended for the design of high voltage systems where the system is not exposed to full military or space grade operating conditions. For full military or space grade operating conditions, we recommend Caddock's **Type TG Low TC Precision High Voltage Resistors** or **Type MG Precision High Voltage Resistors**.

The performance features of the Type MX Lab Grade Precision High Voltage Resistors are:

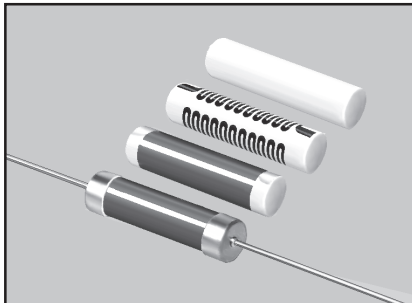
- Seven Models with Voltage Ratings from 7.5 KV to 48 KV.
- Temperature Coefficient: 80 ppm/°C from 0°C to +70°C.
- Load Life Stability of 0.50% per 1,000 hours.
- Resistance Tolerance from ±0.1% to ±10%.
- Non-Inductive Design.
- Resistance Range from 1 Megohm to 2,000 Megohms.



| Model No. | Watt-age | Max. Continuous Oper. Volt. | TC ppm/°C | Resistance | | Dimensions in inches and (millimeters) | | |
|-----------|----------|-----------------------------|-----------|------------|-----------|--|---------------------------|---------------------------|
| | | | | Min. | Max. | A | B | C |
| MX431 | 2.0 | 7,500 | 80 | 1 Meg | 150 Meg | .940 ±.040 (23.88 ±1.02) | .270 ±.020 (6.86 ±.51) | .040 ±.002 (1.02 ±.05) |
| MX440 | 3.5 | 11,000 | 80 | 1.5 Meg | 300 Meg | 1.450 ±.040 (36.83 ±1.02) | .270 ±.020 (6.86 ±.51) | .040 ±.002 (1.02 ±.05) |
| MX450 | 5.0 | 16,000 | 80 | 2 Meg | 500 Meg | 2.080 ±.040 (52.83 ±1.02) | .270 ±.020 (6.86 ±.51) | .040 ±.002 (1.02 ±.05) |
| MX480 | 7.5 | 24,000 | 80 | 3 Meg | 750 Meg | 3.080 ±.050 (78.23 ±1.27) | .270 ±.020 (6.86 ±.51) | .040 ±.002 (1.02 ±.05) |
| MX485 | 10.0 | 32,000 | 80 | 4 Meg | 1,000 Meg | 3.940 ±.050 (100.08 ±1.27) | .270 ±.020 (6.86 ±.51) | .040 ±.002 (1.02 ±.05) |
| MX510 | 12.5 | 40,000 | 80 | 5 Meg | 1,250 Meg | 4.940 ±.080 (125.48 ±2.03) | .270 ±.020 (6.86 ±.51) | .040 ±.002 (1.02 ±.05) |
| MX515 | 15.0 | 48,000 | 80 | 6 Meg | 2,000 Meg | 5.940 ±.080 (150.88 ±2.03) | .330 ±.020 (8.38 ±.51) | .040 ±.002 (1.02 ±.05) |

Type MX Resistors Utilize Caddock's Patented Coating Design

Type MX Lab Grade Precision High Voltage Resistors combine Caddock's Non-Inductive serpentine pattern with a patented, high thru-put screen printed silicone coating. The alignment of the gap in the coating pattern with the gap in the serpentine resistor pattern provides a complete encapsulation of the resistor element. The cap and lead assemblies are pressed onto the resistor core, finishing the resistor and providing rugged terminal attachment.



Specifications:

Resistance Tolerance: ±1%, ±2%, ±5% or ±10% (tolerance to ±0.5%, ±0.25% or ±0.1% on special order).

Temperature Coefficient: 80 ppm/°C referenced to +25°C, ΔR taken at 0°C and +70°C.

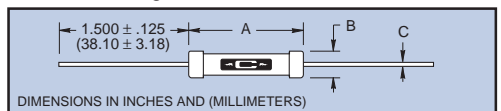
Thermal Shock: Mil-Std-202, Method 107, Cond. A, ΔR, 0.20% max.

Moisture Resistance: Mil-Std-202, Method 106, ΔR, 0.40% max.

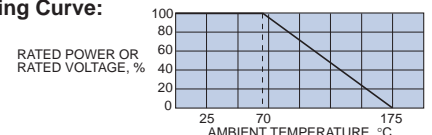
Load Life: 1,000 hours at rated voltage at +70°C, not to exceed rated power, ΔR, 0.50% max.

Lead Material: Tinned copper clad steel, solderable.

Encapsulation: Screen printed high temperature silicone coating over resistor element.



Derating Curve:



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