MPM20 Kool-Tab® Power Film Resistors

“Pure Tin Free” design for High Performance Industrial and Military Applications

TO-220 Style Power Package with Metal Mounting Tab

MPM20 Kool-Tab® Power Film Resistors introduce a “Pure Tin Free” design for High Performance Applications. Our proven Micronox® resistance film system is utilized in the widely accepted TO-220 Power Package to provide a compact 20 watt heat sink mountable resistor. The non-inductive design makes this resistor ideal in high frequency communications, power switching circuits and snubbers. The special performance features of the series MPM20 Kool-Tab® Power Film Resistors include:

- Up to 20 Watt power rating at +25°C case temperature.
- Resistance values as low as 0.020 ohm for current sense applications.
- Non-Inductive Design.
- Single screw mounting simplifies resistor attachment to the heat sink.
- Low profile provides an easier fit in tight places.
- A molded case for environmental protection.
- Resistor element is electrically isolated from the metal heat sink tab.

Use your thermal design experience with power semiconductors in TO-220 style power packages. This experience will help you get the most out of this unique family of power resistors. The thermal design issues are the same where power handling capability is based on the case temperature which is maintained in your design.

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Specifications:

Temperature Coefficient:
TC referenced to +25°C, ∆R taken at +175°C
5.00 ohms and above, -20 to +50 ppm/°C
1.00 ohm to 4.99 ohms, -20 to +80 ppm/°C
0.050 ohm to 0.99 ohm, 0 to +200 ppm/°C
0.020 ohm to 0.049 ohm, 0 to +300 ppm/°C

Resistance Tolerance: ±1% (±0.5% is available for most resistance values).

Insulation Resistance: 10,000 Megohms, min. Resistor element is electrically isolated from the mounting surface.

Terminal Strength: Mil-Std-202, Method 211, Cond. A (Pull Test) 5 lbs., ∆R ±0.2 percent + 0.001 ohm max.

Thermal Shock: Mil-Std-202, Method 107, Cond.F, ∆R ±(0.3 percent + 0.001 ohm) max.

Momentary Overload: 2 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds, ∆R ±(0.3 percent + 0.001 ohm) max.

Moisture Resistance: Mil-Std-202, Method 106, ∆R ±(0.5 percent + 0.001 ohm) max.

Load Life: 2,000 hours at rated power, ∆R ±(1.0 percent + 0.001 ohm) max. Power rating dependent upon case temperature. See derating curve.

Shock: 100G, Mil-Std-202, Method 213, Cond. F, ∆R ±(0.2 percent + 0.001 ohm) max.

Vibration, High Frequency: Mil-Std-202, Method 204, Cond. D, ∆R ±(0.2 percent + 0.001 ohm) max.

Ordering Information:

Model Number: MPM20 - 50.0 - 1%

Resistor Value: 50.0 ±1%