

# MP820 and MP821 Kool-Tab® Power Film Resistors

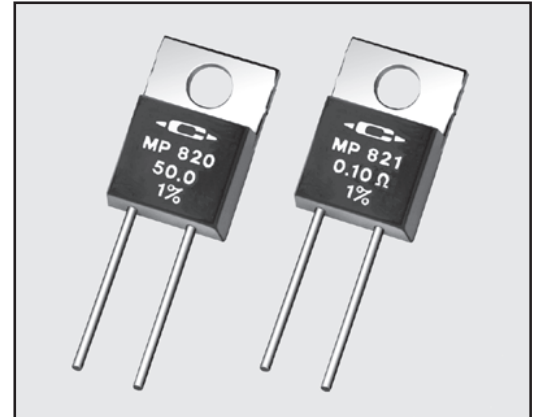
## TO-220 Power Package with Metal Mounting Tab - 0.020 Ohm to 10.0 Kohm

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.

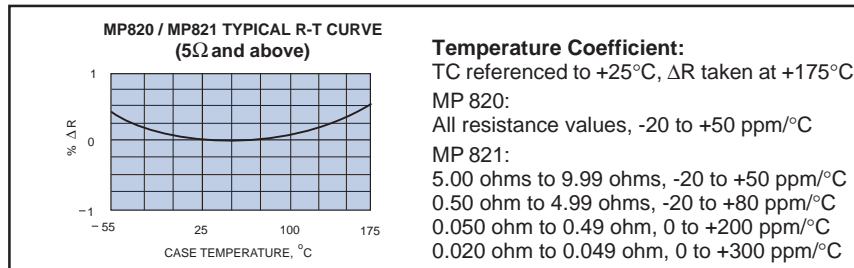
MP820/821 Kool-Tab® Power Film Resistors introduce our proven Micronox® resistance film system in the widely accepted TO-220 Power Package to provide a compact 20 watt heat sink mountable resistor. The non-inductive design makes this resistor ideal in high frequency communications, power switching circuits and snubbers.

The special performance features of the series MP 820/821 Kool-Tab® Power Film Resistors include:

- Up to 20 Watt power rating at +25°C case temperature.
- Resistance values to 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.

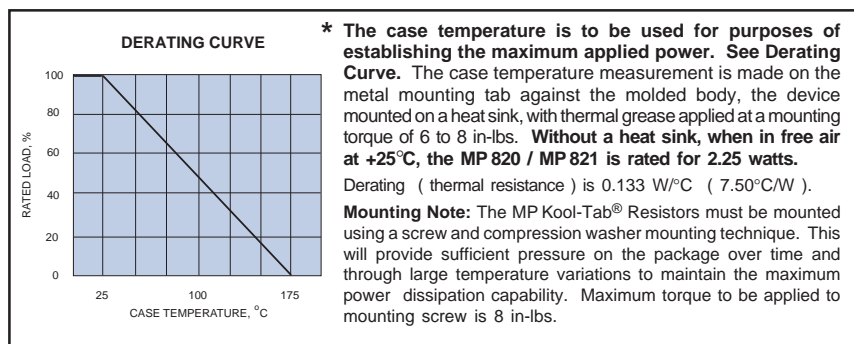


Model No.	Power Rating	Dielect. Strength V <sub>RMS</sub> AC	Max. Voltage	Resistance		Leadwire
				Min.	Max.	
MP820	20 Watts *	1,500	300	10.0 Ω	10.0 K	Solderable
MP821	20 Watts *	1,500	Power Limited	0.020 Ω	9.99 Ω	Solderable



## Non-Inductive Design

MP 820/821 Kool-Tab® Power Film Resistors are constructed with our Micronox® resistance film fired onto a flat substrate which is thermally bonded to the copper heat sink tab. The resistor body is then molded to finish the TO-220 package. The lead wire attachment and resistance element geometry are configured to provide outstanding non-inductive performance.



## Ordering Information:

Model Number: MP820 - 50.0 - 1% Tolerance  
 Resistor Value: \_\_\_\_\_

## Specifications:

**Resistance Tolerance:** ±1% (0.5%, 2%, 5%, 10% and 20% are 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., ΔR ±(0.2 percent + 0.001 ohm) max.

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

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

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

**Shock:** 100G, Mil-Std-202, Method 213, Cond. I, ΔR ±(0.2 percent + 0.001 ohm) max.

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

Measurement Note: For these specifications, resistance measurement shall be made at a point 0.2 inch (5.08 mm) from the resistor body.

