

# MP312 and MP330 Power Film Resistors

## Chassis Mounted Precision Power Film Resistors with Center Screw Mounting

Type MP Chassis Mounted Power Film Resistors are made with Micronox® resistance films fired onto a ceramic substrate which is thermally bonded to an anodized aluminum base. By mounting this assembly directly to a metal surface for improved heat transfer, the high power capabilities of these unique resistors can provide increased packaging densities in many types of electronic equipment.

The special performance features of these Type MP Chassis Mounted Power Film Resistors include:

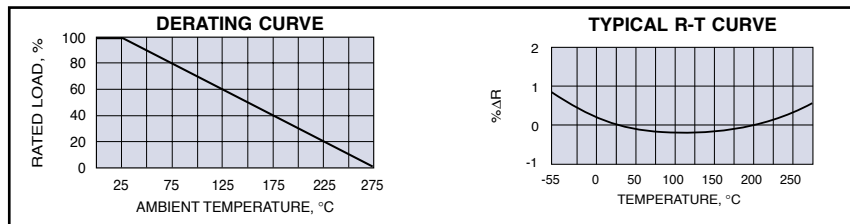
- Two case sizes that provide 15 Watt and 30 Watt ratings.
- Operation up to 275°C.
- Single screw mounting to simplify attachment to the chassis or other heat conducting surface.
- A molded silicone case that encapsulates the resistor assembly to meet stringent environmental specifications.
- Extended life stability better than 0.01% per 1,000 hours has been demonstrated through a 5½ year, 50,000 hour program of continuous load life testing.



Model No.	Wattage †	Max. Voltage	Dielect. Strength	High Temp TC ††	Resistance		Dimensions in inches and (millimeters)			
					Min.	Max.	A	B	C	D
MP312	15	300	600	50	10 Ω	200 K	.600 (15.24)	.188 (4.78)	.185 (4.70)	.092 (2.34)
MP330	30	450	1,000	50	10 Ω	200 K	.850 (21.59)	.250 (6.35)	.250 (6.35)	.142 (3.61)

† MP312 15 Watt power rating based on chassis mounting on a 6" X 4" X 2" X .040" aluminum chassis, MP312 free air rating is 2.5 Watts at 25°C. MP330 30 Watt power rating based on chassis mounting on a 7" X 5" X 2" X .040" aluminum chassis, MP330 free air rating is 5.0 Watts at 25°C.

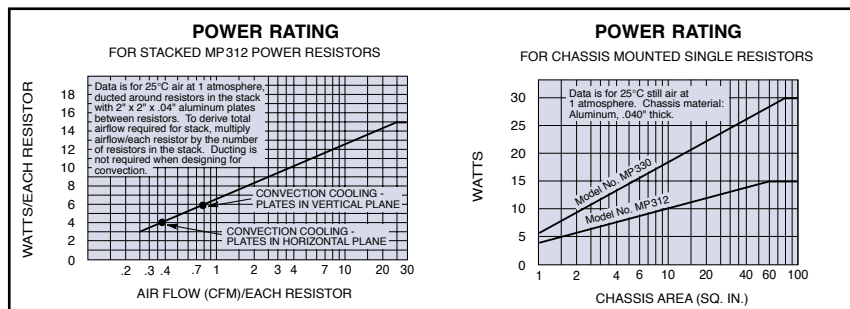
†† TC: 50 ppm/°C referenced to +25°C, ΔR taken at +150°C and +275°C. (Low temp. TC will be nominally -85 ppm/°C at -55°C. See typical R-T curve.)



## Stacked Type MP Power Film Resistor Assemblies

Stacked Type MP assemblies - constructed by bolting resistors between aluminum heat dissipating plates - provide a simple means of further improving packaging densities.

These charts of power ratings versus air flow and chassis area show the high power levels that can be achieved with forced air cooling and with convection cooling in either vertical or horizontal orientation.



## Specifications:

**Resistance Tolerance:** ±1% (other tolerances on special order).

**Insulation Resistance:** 10,000 Megohms min.

**Terminal Strength:** Mil-Std-202, Method 211, Cond. A (Pull Test) 5 lbs., and Cond. B (Bend Test), ΔR 0.2% max. or 0.2 ohm max., whichever is greater.

**Thermal Shock:** Mil-R-39009, ΔR 0.5% max. or 0.2 ohm max., whichever is greater.

**Momentary Overload:** 2 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds, ΔR 0.5% max. or 0.2 ohm max., whichever is greater.

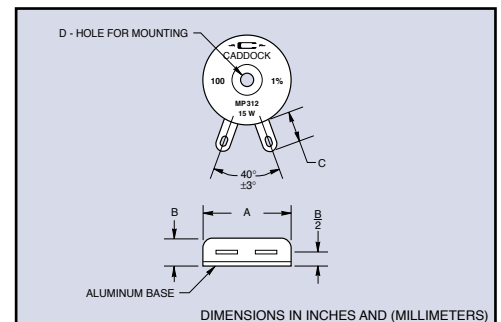
**Moisture Resistance:** Mil-Std-202, Method 106, ΔR 0.5% max. or 0.2 ohm max., whichever is greater.

**Load Life:** Mil-R-39009, 1,000 hours at rated power, ΔR 1% max. or 0.2 ohm max., whichever is greater. Power rating dependent upon chassis area. See power rating graphs.

**Shock, Medium Impact:** 50G, Mil-Std-202, Method 205, Cond. C.

**Vibration, High Frequency:** Mil-Std-202, Method 204, Cond. B, ΔR 0.2% max. or 0.2 ohm max., whichever is greater, through shock and vibration sequence.

**Terminals:** Gold Plated Solder Lugs.



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