PRECISION POWER RESISTORS TO 140WATT
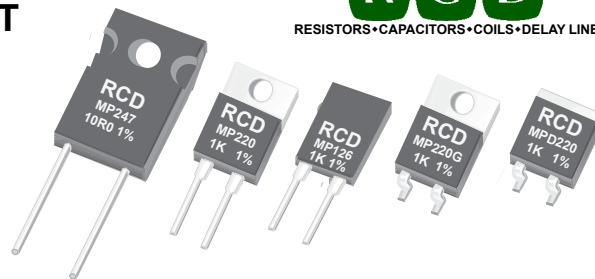
MP SERIES

RESISTORS•CAPACITORS•COILS•DELAY LINES

❐ Industry's widest range of TO-style power resistors!
❐ Standard resistance range: 0.01Ω to 56KΩ
❐ Standard tolerance: ±1%, ±2%, ±5% (±.025%, 2PPM avail.)
❐ Non-Inductive design enables high surge capability
❐ Military Group A/B screening available

OPTIONS
❐ Option V: Increased operating temp (+175°C)
❐ Option P: Increased pulse capability
❐ Option G: Gull-wing lead formation for surface mounting
❐ Option B: Increased power design
❐ Numerous design modifications are available (special marking, custom lead wires, burn-in, etc).

High Performance Molded Heat-Sink Resistors
RCD's MP series feature power film resistor elements designed for excellent stability as well as superior high-frequency performance (custom designs up to 1GHz avail.). All sizes feature metal base plate for optimum heat transfer. The resistor is electrically isolated from the metal tab, and molded into various package styles with high-temp flame-retardant epoxy.
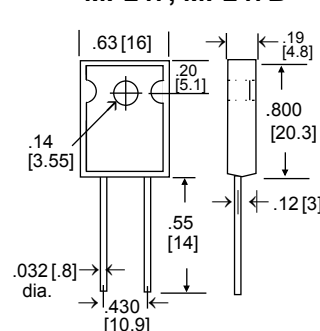
MP126 and MP220 in reduced wattage ratings now available in tighter TCs and tolerances from 10Ω to 49.9K: MP126 (5W) to 0.025% and 2ppm, MP220 (10W) to 0.05% and 5ppm.

MP126   **MP220, MP220B**

MP126G   **MP220G, MP220GB**
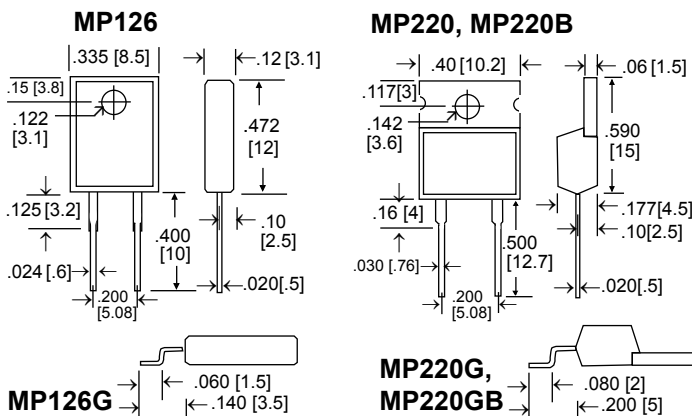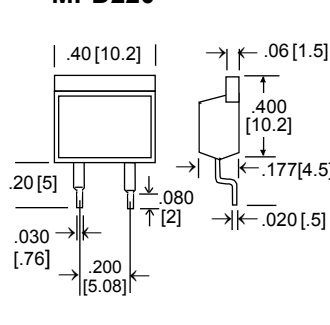
MPD220   **MP247, MP247B**

SPECIFICATIONS

RCD Type	Max. Power with Heat Sink (25°C)	Max Power[1] w/o Heat Sink (25°C)	Thermal Resis.[2]	Max. Voltage[3,4]	Standard Resistance Range (Ω)[4]
MP126	20W	1.25W	<6°C/W	500V	.01 - 56K
MP126G	20W	1.25W	<6°C/W	300V	.01 - 56K
MP220	35W	2.0W	3.3°C/W	350V	.01 - 56K
MP220G	35W	2.0W	3.3°C/W	700V	.01 - 56K
MPD220	35W	2.0W	3.3°C/W	500V	.01 - 56K
MP220B	50W	2.25W	2.3°C/W	350V	.1 - 56K
MP220GB	50W	2.25W	2.3°C/W	700V	.01 - 56K
MP247	100W	3.0W	1.3°C/W	500V	.01 - 56K
MP247B	140W	3.5W	<1°C/W	500V	.1 - 56K

[1] Power rating without heat sink is based on unit being mounted on double-sided 2oz 1" x 1" x .063" PCB. [2] R$_{\theta JC}$ Film (J) to Case (C)   [3] Voltage determined by E= (PR)$^{1/2}$, not to exceed the Max.Voltage Rating   [4] Increased resistance range available, consult factory.

POWER DERATING ABOVE 25°C
Power rating is based on the resistor being tightly screwed to a suitable heat sink (with thermal compound) to limit hot spot temp to 155°C. Derate per chart below. Mounting torque not to exceed 8 in-lbs. Refer to Applic.Guide R-34 for additional detail concerning heat-sink resistor mounting guidelines.

CASE TEMPERATURE (°C)
% OF RATED WN/A
Opt."V"
Std
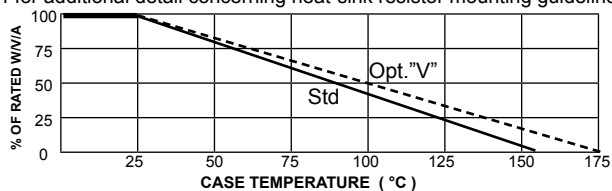
SOLDER REFLOW: recommended peak reflow temp ion opt.G & MPD220D 220°C (245C & 270C avail)

TYPICAL PERFORMANCE CHARACTERISTICS

Standard Temperature Coefficient (Typ, +25°C to +125°C)	50ppm ≥10Ω (2-25ppm avail) 100ppm 0.1 - 9.9Ω 250ppm 0.01 - 0.99Ω
Operating Temperature Range	-55 to +155°C ('V'= +175°C)
Std. Resistance Tol. (0.025%-5% avail)	±1% ≥.05Ω, ±5% <.05Ω
Dielectric Strength	1500VAC (up to 2.5KV avail)
Current Rating	30A max.
Insulation Resistance	10,000 MΩ min.
Load Life Stability	±1%
Overload	1.5x W, 5S, nte 1.5x Max V
Thermal Shock (Mil-Std-202 M107C)	±0.25%
Moisture Res (Mil-STD-202, M106)	±0.5%

P/N DESIGNATION: MP220☐ - 1001 - F B ☐ W

RCD Type

Options: P, G, B, etc (leave blank for std)

Resis.Code 0.025%-1%: 3 digits &multiplier (R010=.01Ω, R100=.1Ω, 1R00=1Ω, 10R0=10Ω, 1000=100Ω, 1001=1K, etc)
Resis.Code 2%-10%: 2 digits & multiplier (R01=.01Ω, R10=0.1Ω, 1R0=1Ω, 100=10Ω, 101=100Ω, 102=1K, etc.)

Tolerance Code: J=5%, G=2%, F=1%, D=0.5%, C=0.25%, B=0.1%, A=0.05%, X=0.025%

Std Packaging: 'B'= Bulk tube/tray ('T' Tape&Reel optional on MPD220, MP126G, MP220G, MP220GB)

Optional Temp. Coefficient: 25=25ppm, 50=50ppm, 25=25ppm, 10=10ppm, 5=5ppm, 2=2ppm (leave blank for std)
Termination: W= Pb-free (std), Q= Sn/Pb (leave blank if both acceptable)