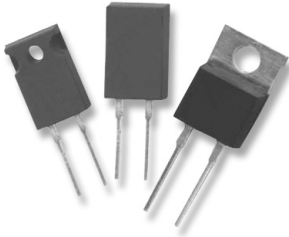


Thick Film Power Resistors

Type MPT Series

Type MPT Series



The MPT Resistor series are a range of TO220 packaged, low inductance thick film power resistors which complement the thin film MPR series.

This small size, high power device packaged in 5 case sizes are ideally suited to applications where high power dissipation yet small size are key design requirements. The MPT Resistor series are the ideal solution for small snubber circuits, the output side of high speed pulse generators and low inductive resistor requirements in switch mode power supplies.

Key Features

- Small size TO220 package
- Easy to mount
- Isolated moulded case
- Non inductive
- High Power up to 100W with suitable heatsink

Characteristics - Electrical

	MPT20	MPT30	MPT35	MPT50	MPT100
Resistance Range:	R10 - 10K	R10 - 10K	R10 - 10K	R10 - 10K	R10 - 10K
Selection Series:	E24				
Rated Power with Suitable Heatsink:	20W	30W	35W	50W	100W
Rated Power without Heatsink:	3W	2.25W	2.5W	3W	3.5W
Maximum Operating Voltage:	350V				
Dielectric Strength:	1800VAC				
Insulation Resistance:	10G min.				
Operating Temperature Range:	-65°C to +150°C				-65°C to +175°C

TCR / Tolerance Value Chart

Resistance Range / Tolerance	MPT 20 / 30 / 35 / 50		MPT100
	1% / 5% / 10%	0.5%	1% / 5% / 10%
R10 - 2R7	300ppm	-	300ppm
3R - 10R	100ppm	-	100ppm
3R - 10R	200ppm	-	200ppm
11R - 10K	50ppm	50ppm	50ppm
11R - 10K	100ppm	100ppm	100ppm
11R - 10K	200ppm	200ppm	200ppm

Characteristics - Environmental

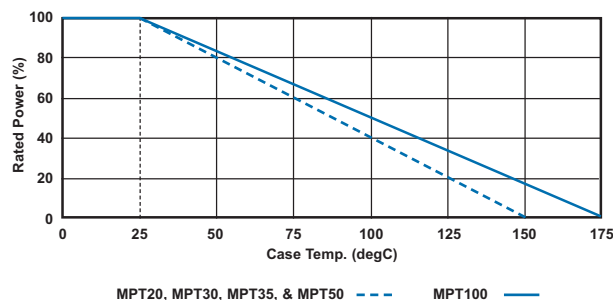
	Characteristic	Test Method
Short Time Overload:	$\Delta R \pm 0.3\%$	2 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds
	MPT100 - $\Delta R \pm 0.5\%$	1.5 times rated power and V(dc) $\leq 1.5V_{max}$ for 5 seconds
Load Life:	$\Delta R \pm 1.0\%$	MIL-PRF-39009D, 2000 hours at rated power
Moisture Resistance:	$\Delta R \pm 0.5\%$	MIL-STD-202F, Method 103B
	MPT100 - $\Delta R \pm 0.5\%$	-10C~+65C, RH>90%, cycle 240 hours
Thermal Shock:	$\Delta R \pm 0.3\%$	MIL-STD-202F, Method 107G
	MPT100 - $\Delta R \pm 0.5\%$	
Terminal Strength:	$\Delta R \pm 0.2\%$	MIL-STD-202F, Method 211, Cond. A (Pull Test) 2.4N
Vibration, High Frequency:	$\Delta R \pm 0.2\%$	MIL-STD-202F, Method 204, Cond. D
	MPT100 - $\Delta R \pm 0.4\%$	

Case Temperature to be used for definition of Applied Power Limit

Case Temperature Measurement must be made with a thermocouple contacting centre of component mounted on designed heatsink

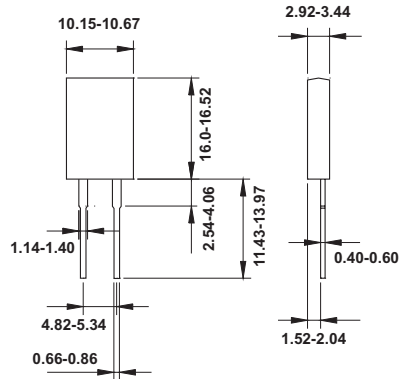
Thermal grease should be correctly applied

Power Derating Curve

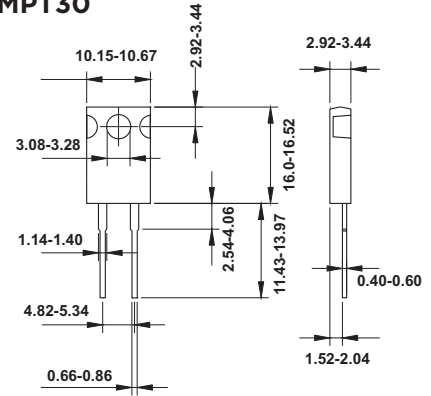


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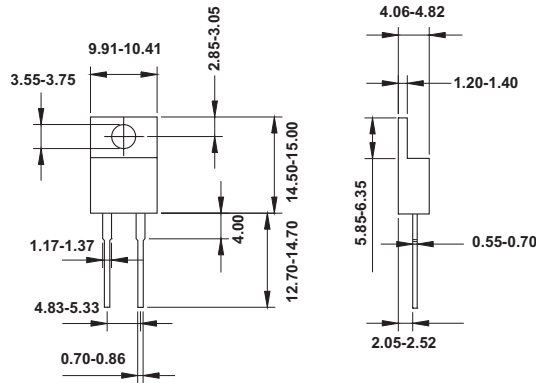
Dimensions - MPT20



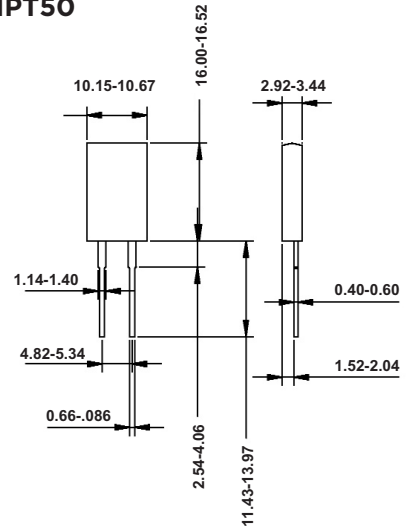
MPT30



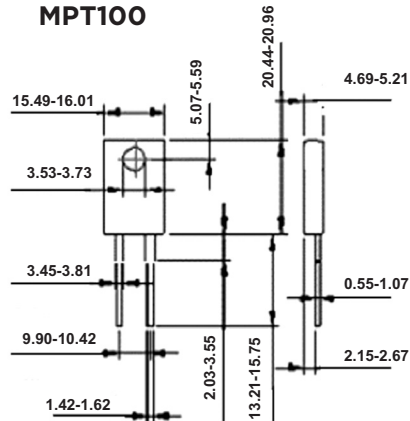
MPT35



MPT50



MPT100



How to Order

MPT	20	C	100R	F
Common Part	Wattage Rating @ 25°C with Heatsink	Temp. Coefficient of Resistance	Resistance Value	Tolerance
MPT - TO220 High Power Resistor	20 - 20 Watts 30 - 30 Watts 35 - 35 Watts 50 - 50 Watts 100 - 100 Watts	C - 50ppm/°C A - 100ppm/°C S - 200ppm/°C T - 300ppm/°C	0.1 ohm (100 milliohms) R10 1 ohm (1000 milliohms) 1R0 1K ohm (1000 ohm) 1K0	D - 0.5% F - 1% J - 5% K - 10%