

20W TO220

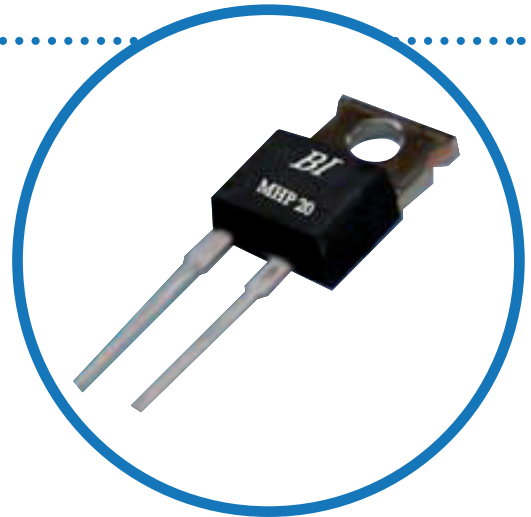
High Power Resistors

MHP 20

- **Non-inductive.**
- **Thermally enhanced Industry standard TO220 package.**
- **RoHS compliant.**
- **Low thermal resistance, 5.9 °C/W resistor hot spot to metal tab.**
- **Complete thermal flow design available for easy implementation.**
- **Superior vibration durability.**
- **Small thin package for high density PCB installation.**

Applications

- **High frequency circuits and high speed pulse designs.**
- **Switch mode power supplies.**
- **Motor control and drive circuits.**
- **Automotive.**
- **Industrial computing and measurement systems.**



Specifications

Items	Specification			Conditions
Power Rating	20 Watts			-55 to 25 °C flange temperature
Power Rating	1.0 Watts			Free air.
Thermal Resistance	5.9 °C/W			Hot spot to Tab
Resistance Range	0.01-0.09 Ω	0.1-9.1 Ω	10-220 Ω	Up to 51 KΩ also available
Nominal Resistance Series	E6	E24	E24	2.5 Ω and 5.0 Ω also available
TCR	250 ppm/°C	100 ppm/°C	50 ppm/°C	-55 to +155 °C
Tolerance	+/- 5% (J)	5% (J)	+/-1% (F)	
Operation Temp. Range	-55°C to +155°C			
Max. Operating Volt.	500V or √ P.R			
Dielectric Withstanding Voltage	2000 Volts AC			60 seconds.
Load Life	ΔR +/- (1.0 % + 0.05 Ω)			25 °C, 90 min. ON, 30 min. OFF, 1000 hours.
Humidity	ΔR +/- (1.0 % + 0.05 Ω)			40°C, 90-95% RH, DC 0.1 W, 1000 hours.
Temp. Cycle	ΔR +/- (0.25 % + 0.05 Ω)			-55 °C, 30 min., +155 °C, 30 min., 5 cycles
Soldering Heat	ΔR +/- (0.1 % + 0.05 Ω)			250 +/- 5 °C, 3 seconds,
Solder ability	Over 95% of surface			230 +/- 5 °C, 3 seconds.
Insulation Resistance	Over 1,000 MΩ			Between terminals and tab.
Vibration	ΔR +/- (0.25 % + 0.05 Ω)			

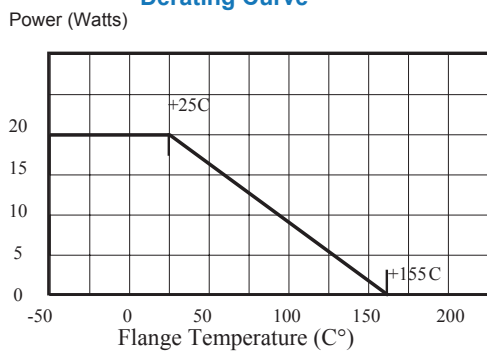
General Note

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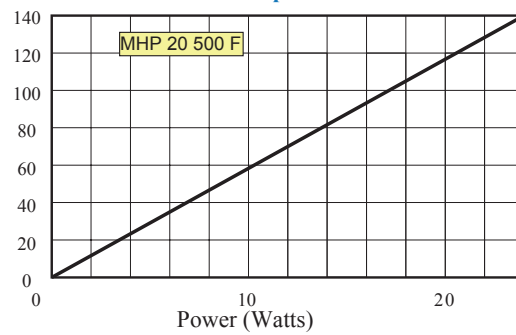
MHP 20

Electrical Performance

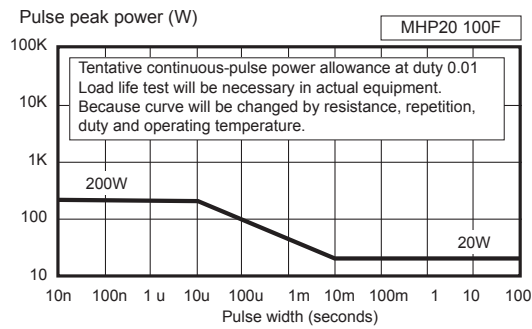
Derating Curve



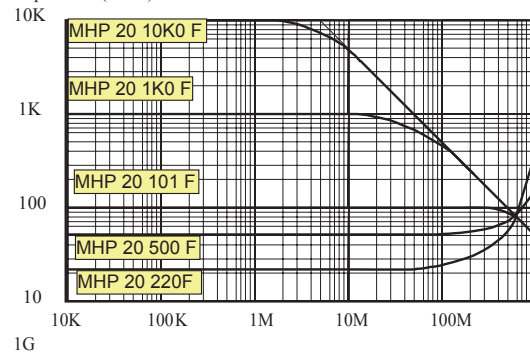
Temperature Rise



Pulse Energy Durability



Frequency Characteristics



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