

# 20W TO220

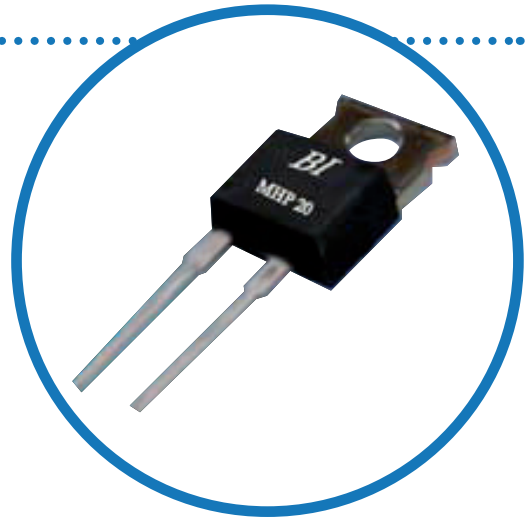
## High Power Resistors

### 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)			

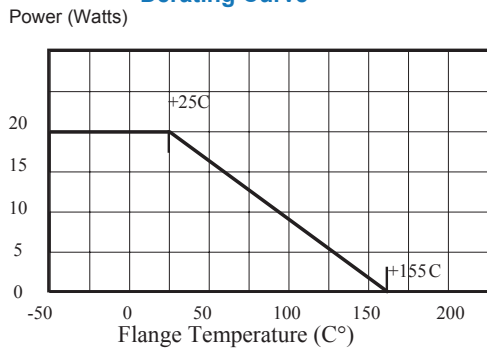
### General Note

TT electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT electronics' own data and is considered accurate at time of going to print.

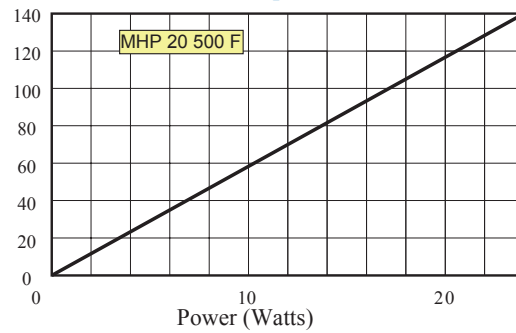
MHP 20

## Electrical Performance

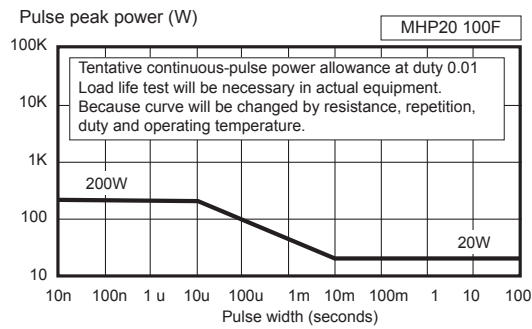
**Derating Curve**



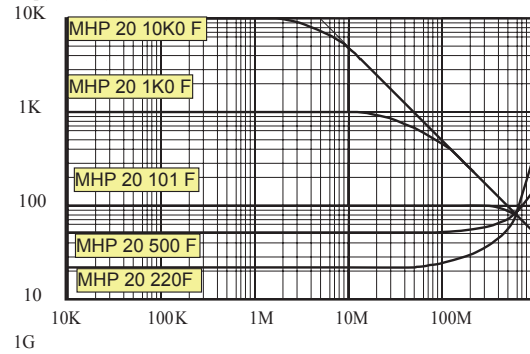
**Temperature Rise**



**Pulse Energy Durability**



**Frequency Characteristics**



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