

## 20W TO-220 HIGH POWER RESISTORS

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### Features

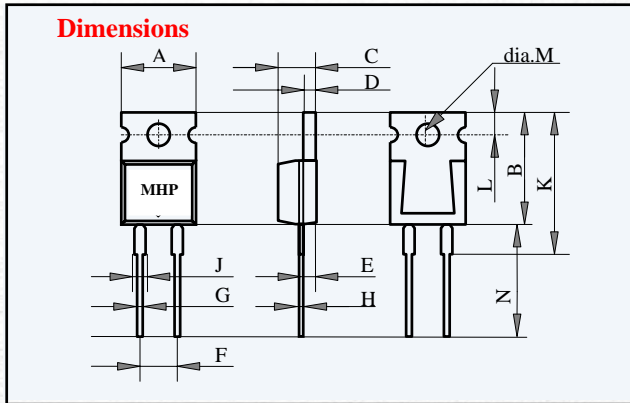
- Non-inductive.
- Thermally enhanced Industry standard TO220 package.
- RoHS compliant.
- Low thermal resistance, 5.9 °C/W resistor hot spot to metal tab.
- Complete thermal flow design available for easy implementation.
- Superior vibration durability.
- Small thin package for high density PCB installation.

### Applications

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



### Specification



A	B	C	D	E	F	G	H	J	K	L	M	N
10.6	15.0	4.5	1.5	2.7	5.08	0.75	0.5	1.5	19.0	2.7	3.6	15.0

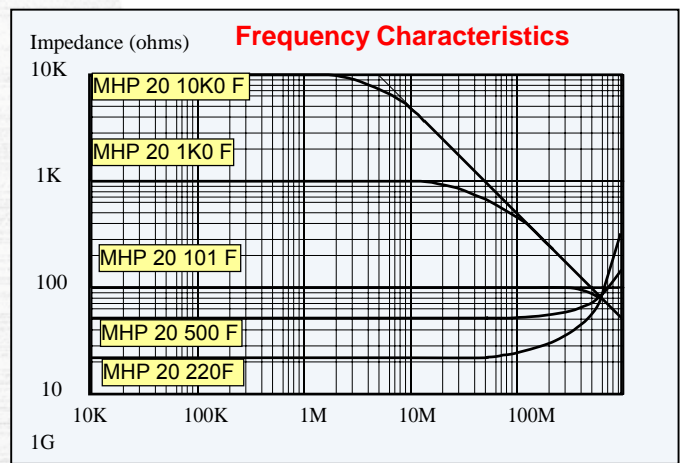
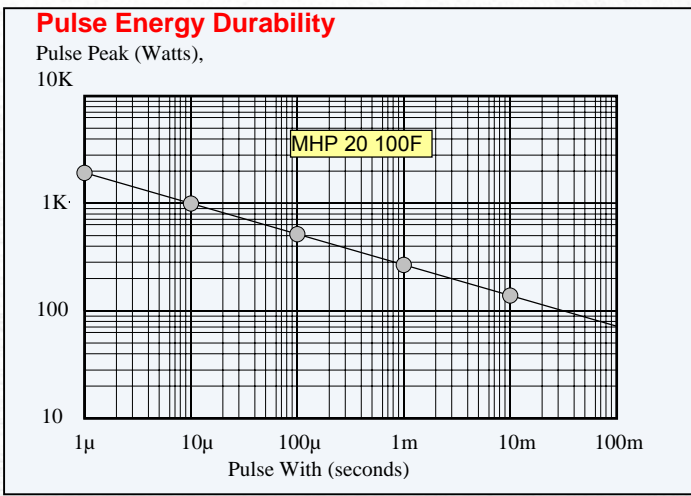
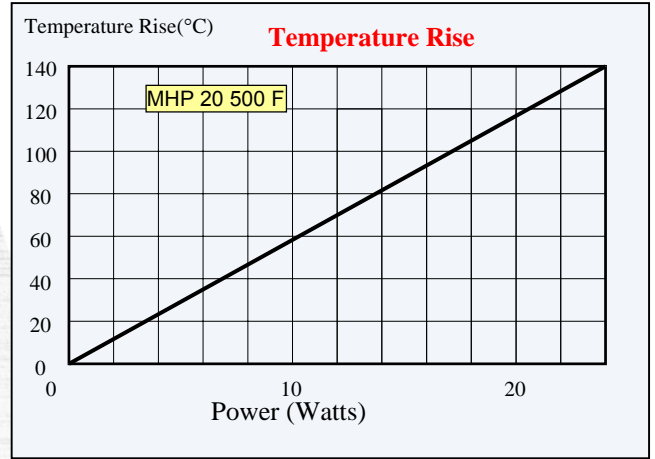
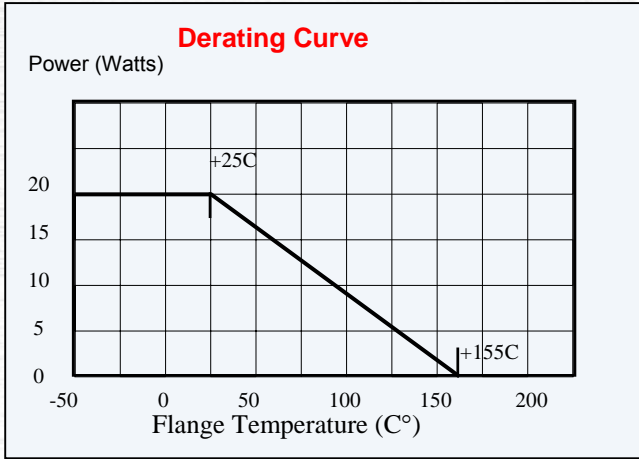
### Specification

Item	Specifications			Test Conditions
Power Rating	20 Watts			-55 to 25 °C flange temperature
Power Rating	2.25 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	E12	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 $\sqrt{P.R}$			
Dielectric Withstanding Voltage	2000 Volts AC			60 seconds.
Load Life	$\Delta R$ +/- (1.0 % + 0.05 Ω)			25°C, 90 min. ON, 30 min. OFF, 1000 hours.
Humidity	$\Delta R$ +/- (1.0 % + 0.05 Ω)			40°C, 90-95%RH, DC 0.1W, 1000 hours.
Temp. Cycle	$\Delta R$ +/- (0.25 % + 0.05 Ω)			-55 °C, 30 min., +155 °C, 30 min., 5 cycles
Soldering Heat	$\Delta R$ +/- (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	$\Delta R$ +/- (0.25 % + 0.05 Ω)			

Specifications subject to change without notice

MHP 20

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- Notes:**
- (1) Electrically isolated metal tab.
  - (2) Recommend the use of thermal grease between metal tab and heat sink.
  - (3) Thermal design should account for a thermal resistance between resistor and tab of 5.9°C/W and a maximum resistor temperature of 155°C.
  - (4) Current rating: 25A maximum.
  - (5) Surface mount package also available, please call factory.

**Ordering Information**

