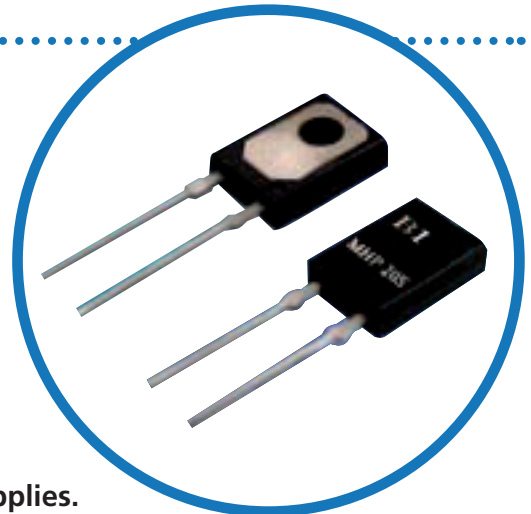


20W TO126

High Power Resistors

MHP 20 S

- **Non-Inductive, Small, 20 Watt high power resistor.**
- **TO-126 style package offering a very low thermal resistance of 5.9 °C/W.**
- **Complete thermal flow design available for easy implementation.**
- **Superior vibration durability.**
- **Small thin package for high density PCB installation.**
- **RoHS compliant**



Applications

- **High frequency emitter resistors in switching power supplies.**
- **High precision CRT color video amplifiers.**
- **High frequency snubber and pulse handling circuits.**
- **VHF amplifiers.**
- **Pulse generator load resistors.**

Specifications

Items	Specification			Conditions
Power Rating	20 Watts			@ Tab Temp < 25°C
Power Rating	1 Watts			Free air.
Thermal Resistance	5.9°C/W			From hot spot to tab.
Resistance Range	0.01-0.09 Ω	0.1-9.1 Ω	10-220 Ω	Extended resistance range to 51KΩ available
Nominal Resistance Series	E6	E24	E24	Additional 2.0Ω and 5.0 Ω also available
TCR	250 ppm/°C	100 ppm/°C	50 ppm/°C	For -55 to +155°C
Tolerance	+/-5%	+/- 5% and 1%	+/- 1%	
Operation Temp. Range	-55 to +155 °C			
Dielectric Withstand Voltage	2000 Volts DC			60 seconds. between terminals and flange
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)			60°C, 90-95% RH, DC 0.1W, 1000 hours.
Soldering Heat (Max)	ΔR +/- (1.0 % + 0.05 Ω)			250 +/- 5°C, 3 seconds,
Solderability	Min 95% coverage			230 +/- 5°C, 3 seconds.
Insulation Resistance	Over 1000 MΩ			Between terminals and metal back plate.
Vibration	ΔR +/- (0.25 % Ω)			

Specifications subject to change without notice

Note:

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. For the resistance range 220Ω to 51KΩ, the power rating is restricted to 10W.

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.

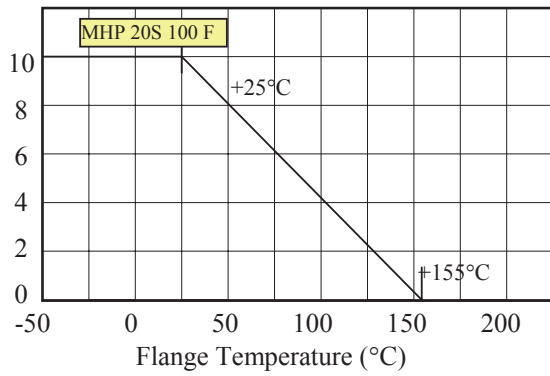
MHP 20 S

Electrical Performance

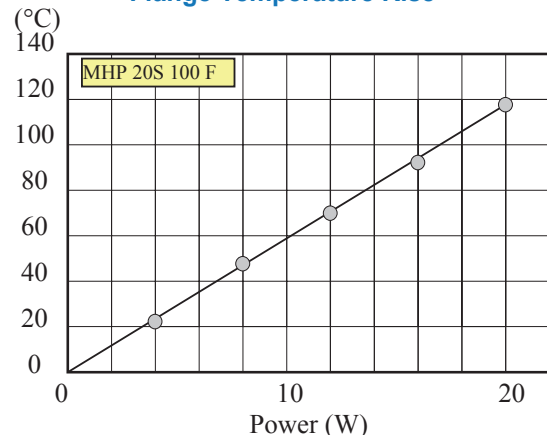
Electrical Performance

Derating Curve

Rating Power (W), with 2.8°C/W heat sink.

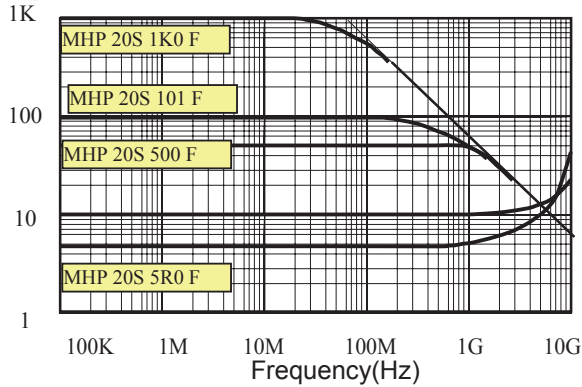


Flange Temperature Rise



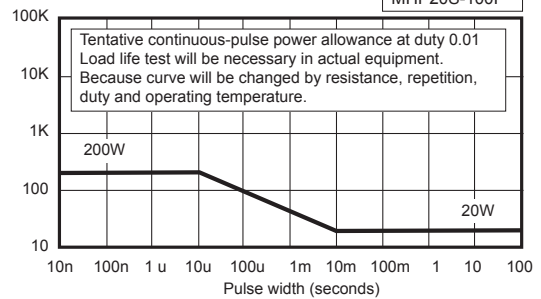
Frequency Characteristics

Impedance (Ω)



Pulse Energy Durability

Pulse peak power (W)



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Dimensions

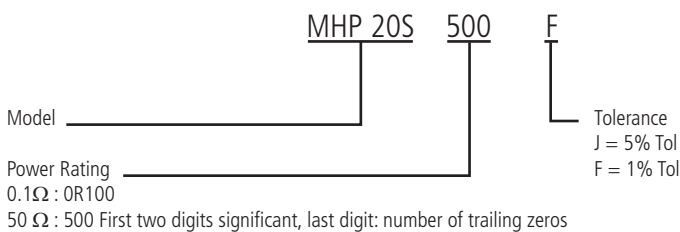
Materials

- Molding, epoxy, UL94-V0
- Leads, Tin plated Cu
- Conductor, Copper
- Resistor, Ni-Cr or RuO
- Substrate, Alumina
- Flange, Ni plated Cu

Resistor is electrically isolated from flange

MHP100		
	mm	± mm
A	8.5	± 0.2
B	12.0	± 0.2
C	3.1	± 0.2
D	3.1	± 0.1
E	17.0	± 1.0
F	3.2	± 0.5
G	3.8	± 0.2
H	1.75	± 0.1
J	0.5	± 0.05
K	0.6	± 0.05
L	1.4	± 0.05
M	5.08	± 0.1

Ordering Information



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