

100W TO247

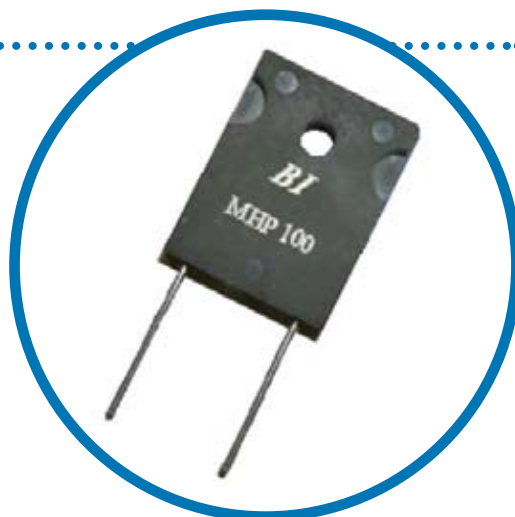
High Power Resistors

MHP 100

- Non-inductive, high power resistor.
- Thermally enhanced Industry standard TO-247 package.
- Extremely Low thermal resistance, 1.3 °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.
- RoHS compliant.

Applications

- High frequency circuits and wide band / linear amplifiers.
- Switch mode and industrial RF power sources.
- AC motor control, electronic load and drive circuits.
- Automotive.
- Industrial PC modules (IPM) and measurement systems.
- RF circuit terminations.
- Constant current and precision voltage sources



Specifications

Items	Specification			Conditions
Power Rating	100 Watts			@ Tab Temp < 25°C
Power Rating	2.0 Watts			Free air.
Resistance Range	0.01-0.09 Ω	0.1-9.1 Ω	10-220 Ω	Extended resistance range to 51KΩ avail.
Nominal Resistance Series	E6	E12	E24	2.0 Ω 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 - +155 °C			
Rated Voltage (Max).	700V or $\sqrt{P \cdot R}$			
Dielectric Withstand Voltage	2500 Volt			60 seconds.
Load Life	$\Delta R \pm (1.0 \% + 0.05 \Omega)$			25°C, 90 min. ON, 30 min. OFF, 1000 hours.
Humidity	$\Delta R \pm (1.0 \% + 0.05 \Omega)$			40°C, 90-95% RH, DC 0.1W, 1000 hours.
Temperature Cycle	$\Delta R \pm (0.25 \% + 0.05 \Omega)$			-55°C, 30 min., +155°C 30min., 5cycles.
Soldering Heat (Max)	$\Delta R \pm (0.25 \% + 0.05 \Omega)$			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	$\Delta R \pm (0.25 \% + 0.05 \Omega)$			

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 1.3°C/W and a maximum resistor temperature of 155°C.
4. Resistances greater than 220Ω are available, please call factory.
5. For resistances from 220Ω to 51 KΩ the power rating shall be restricted to 50W.
6. Current rating: 25A maximum.

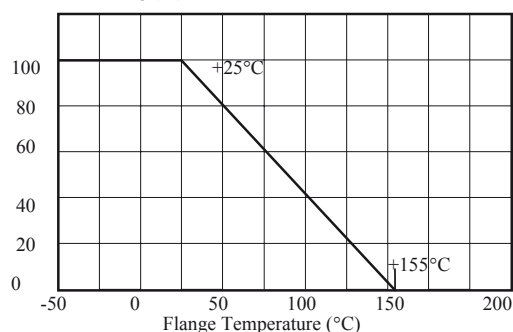
General Note

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.

Electrical Performance

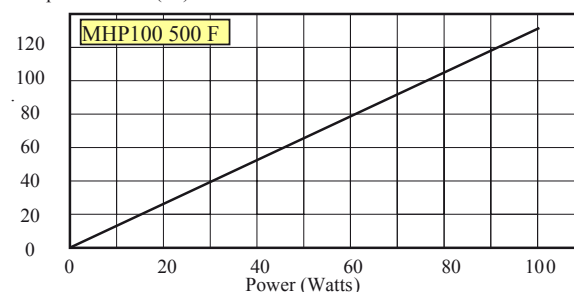
Derating Curve

Power Rating (W)



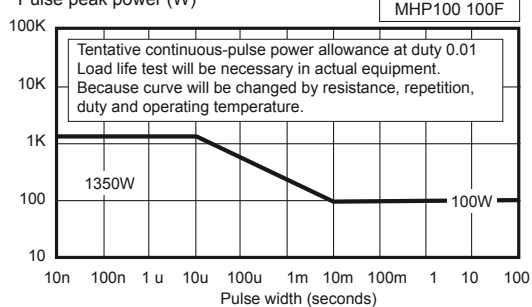
Temperature Rise

Temperature Rise (°C)



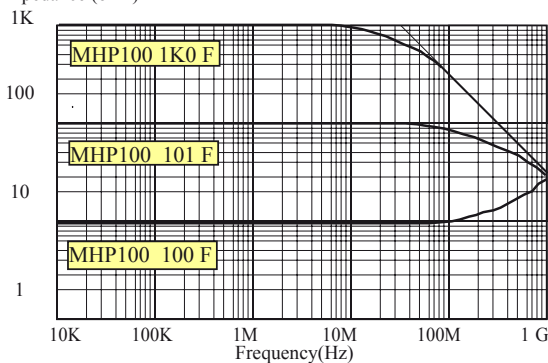
Pulse Energy Durability

Pulse peak power (W)



Frequency Characteristics

Impedance (ohm)



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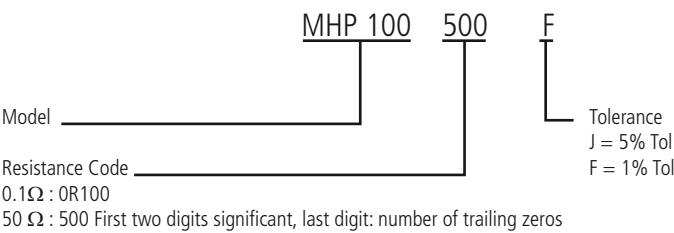
Electrical Performance

MHP100		
	mm	
A	16.0	± 0.2
B	20.0	± 0.5
C	4.8	± 0.2
D	3.55*	± 0.1
E	14.5	± 0.5
F	-	-
G	5.1	± 0.5
H	3.63	± 0.2
J	-	-
K	0.8	± 0.05
L	-	
M	10.9	± 0.1
N		

Leads, Tin plated Cu
Mold, epoxy, UL94-V0
Conductor, Cu
Resistor, NiCr or RuO
Substrate, Alumina
Flange, Ni plated Cu

Resistor is electrically isolated from flange

Ordering Information



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