

140W TO247

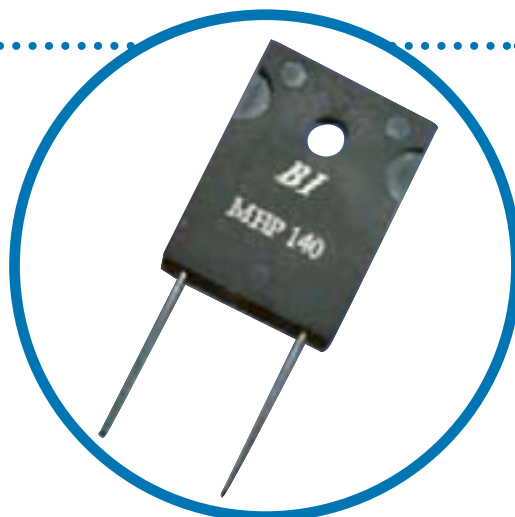
High Power Resistors

MHP 140

- Non-inductive, high power resistor.
- Thermally enhanced Industry standard TO-247 package.
- Extremely Low thermal resistance, 0.9 °C/W resistor hot spot to metal tab.
- Complete thermal flow design available for easy implementation.
- Small thin package for high density PCB installation.
- RoHS compliant.

Applications

- High frequency circuits and RF power amplifiers.
- UPS and power supply circuits
- Motor control and power/RF power amplifiers.
- Industrial power equipment.
- PLC drivers.
- Inrush current protection.



Specifications

Items	Specification			Conditions
Power Rating	140 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 75% 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 0.9°C/W and a maximum resistor temperature of 155°C.
4. Resistances greater than 220Ω are available, please call factory.
5. Current rating: 25A maximum.

General Note

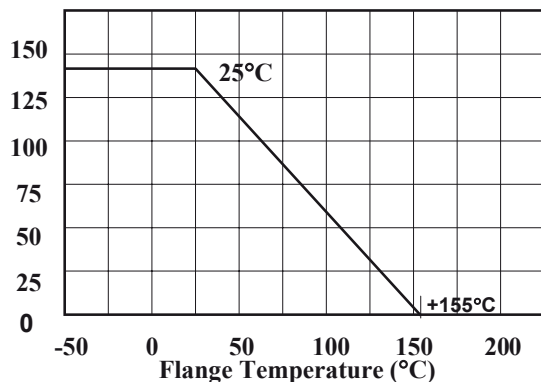
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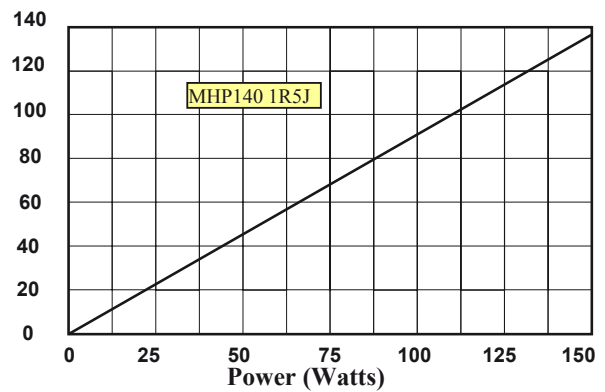
Electrical Performance

Derating Curve

Power rating (Watts)

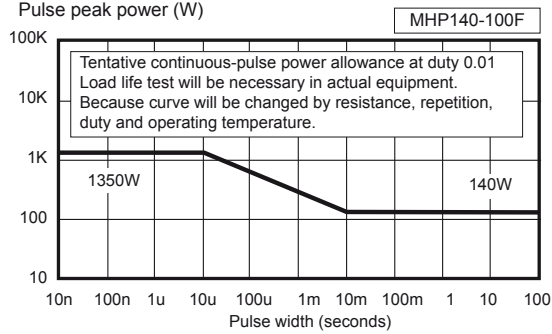


Temperature Rise



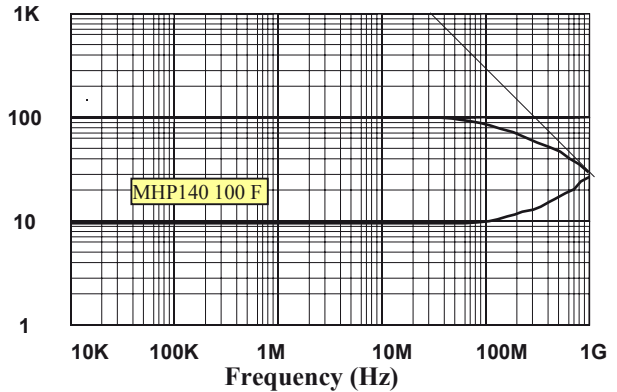
Pulse Energy Durability

Pulse peak power (W)



Frequency Characteristics

Impedance (Ω)



General Note

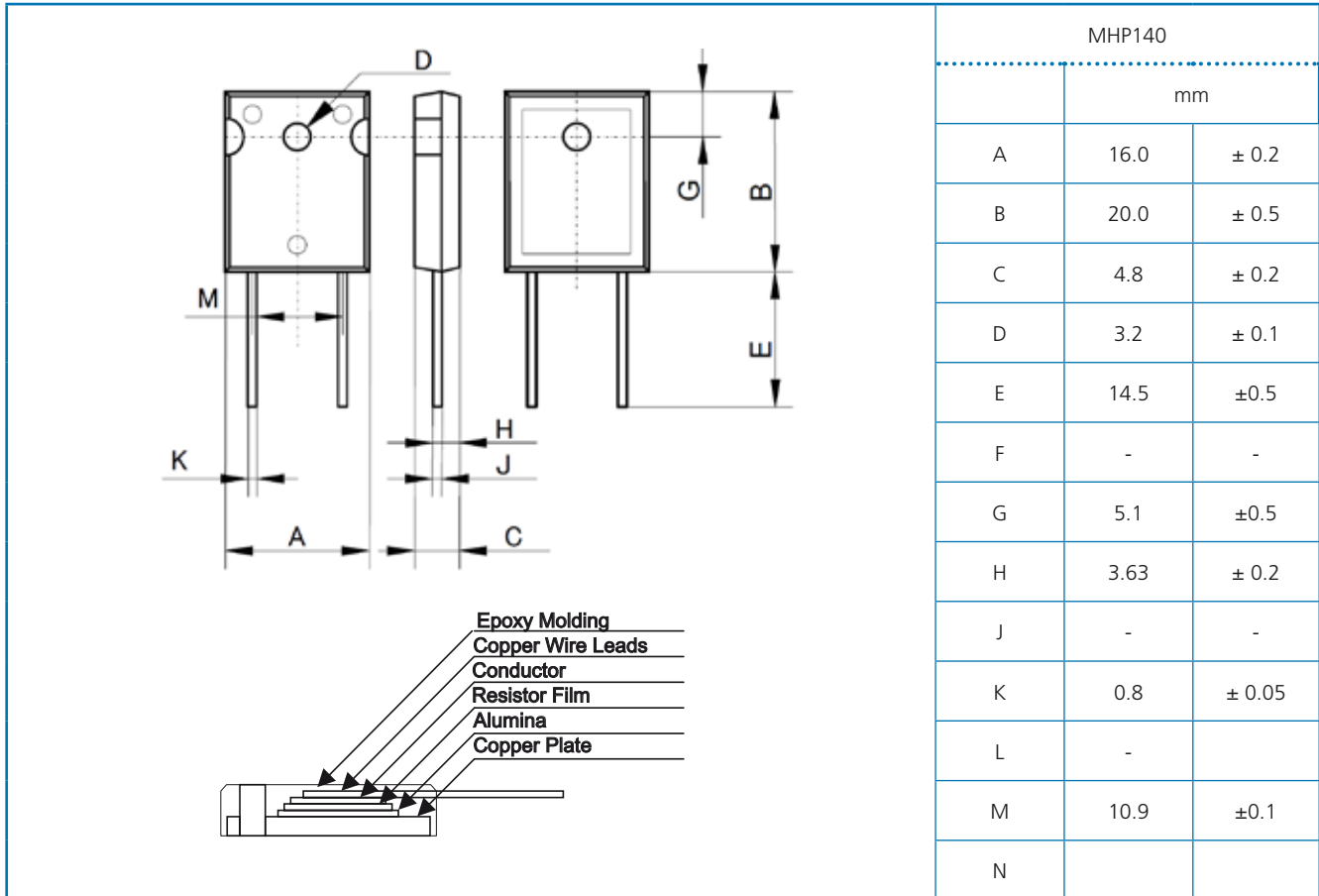
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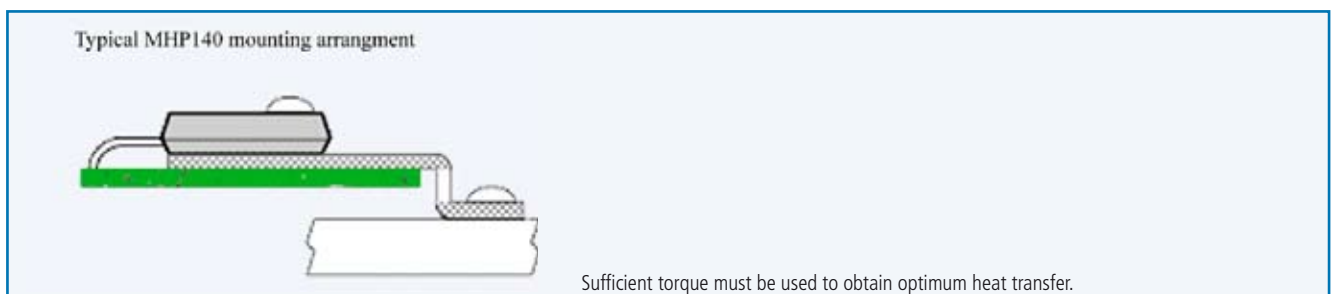
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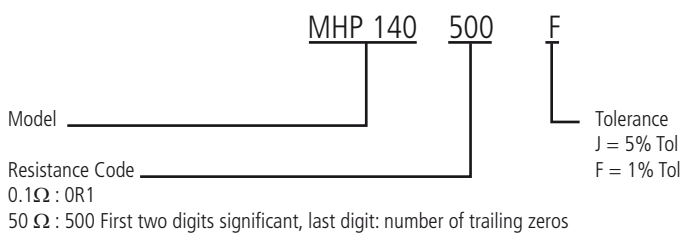
Dimensions



Mounting Recommendations



Ordering Information



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