

MODEL SMHP

SMHP Series

- 20W High Power Resistors
- TO-263 Surface Mount
- RoHS Compliant.



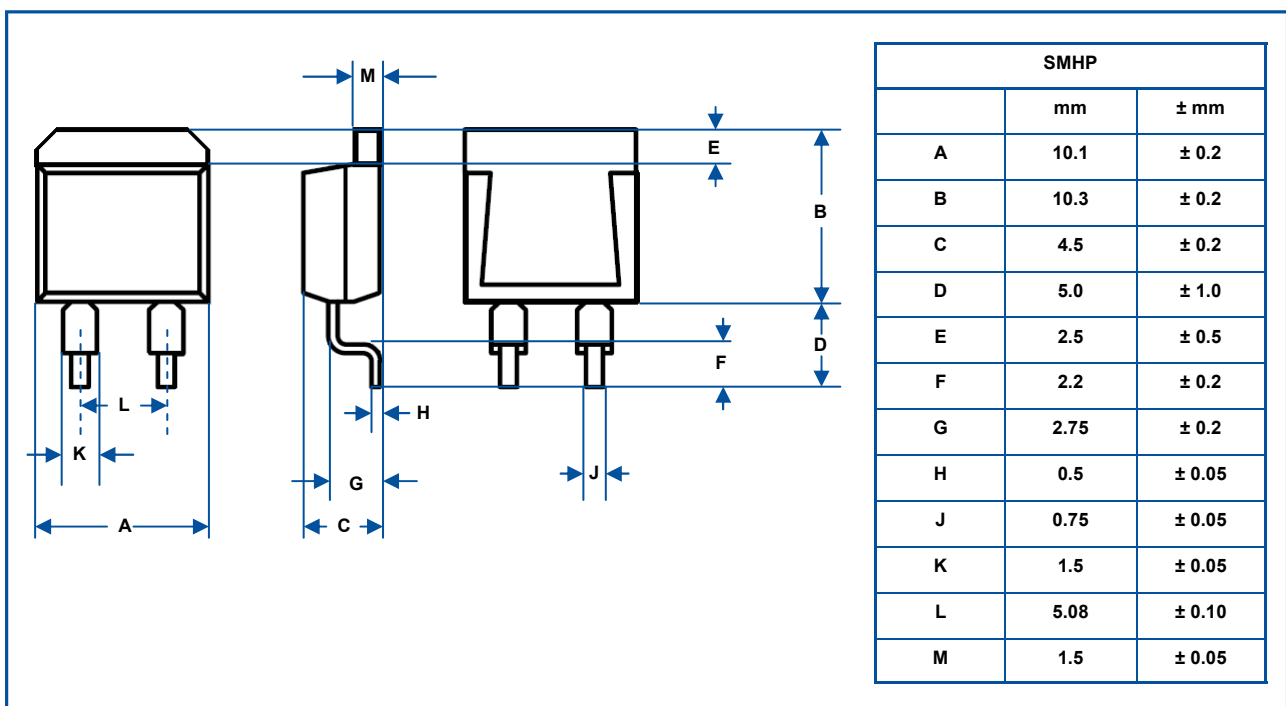
FEATURES

- Non-Inductive, Small, 20 Watt high power resistor.
- TO-263 surface mount package offering a very low thermal resistance.
- Small thin package for high density PCB installation.
- Suitable for board mounting with either solder or clip.

APPLICATIONS

- High frequency emitter resistors in switching power supplies.
- High precision CRT colour video amplifiers.
- High frequency snubber and pulse handling circuits.
- Pulse generator load resistors.
- In-rush current protection.
- Bleeder Resistors.

DIMENSIONS (mm)



General Note

BI Technologies reserves the right to make changes in product specification without notice or liability

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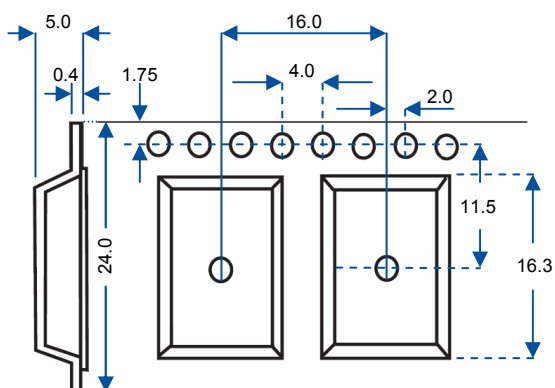
ELECTRICAL

ITEMS	SPECIFICATION			TEST CONDITIONS
Power Rating	20 Watt			-55°C to +25°C Flange Temperature
	2.25 Watt			Without Heatsink
Thermal Resistance	3.3°C/W			Resistor Hotspot to Flange
Resistance Range	0.01 - 0.09Ω	0.1 - 9.1Ω	10 - 220Ω	Up to 51KΩ also available
Nominal Resistance Series	E6	E12	E24	Including 2.5Ω and 5.0Ω
TCR (ppm/°C)	250	100	50	For -55°C to +155°C
Tolerance	±5%	±1% & ±5%	±1%	
Operation Temperature Range	-55°C to +155°C			
Maximum Operating Voltage	500V or \sqrt{PR}			
Dielectric Withstanding Voltage	2000 Vdc			60 Seconds
Load Life	$\Delta R = \pm 1\% + 0.5\Omega$			25°C, 90 min ON, 30 min OFF, 1000 Hours
Humidity	$\Delta R = \pm 1\% + 0.5\Omega$			40°C, 90 - 95%RH, DC 0.1W, 1000 Hours
Temperature Cycle	$\Delta R = \pm 1\% + 0.5\Omega$			-55°C, 30 min, +155°C, 30 min, 5 cycles
Soldering Heat (Max.)	$\Delta R = \pm 1\% + 0.5\Omega$			250 ± 5°C, 3 seconds
Solderability	Minimum 90% Coverage			230 ± 5°C, 3 seconds
Insulation Resistance	Over 1,000 MegΩ			Between Terminals and Tab
Vibration	$\Delta R = \pm 0.25\% + 0.5\Omega$			

Notes:

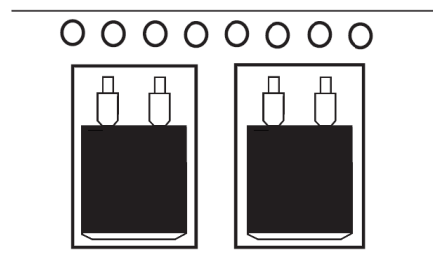
1. Electrically isolated metal tab.
2. Contact Factory for custom products, non-standard values and tolerances
3. Current Rating: 25A Maximum.

TAPE DIMENSIONS & ORIENTATION



Reel Dimension:

Outer Diameter: 300mm
 Inner Diameter: 100mm
 Width: 23.9mm Min. - 27.4mm Max.
 Quantity: 500 pcs/Reel



Reel Orientation:

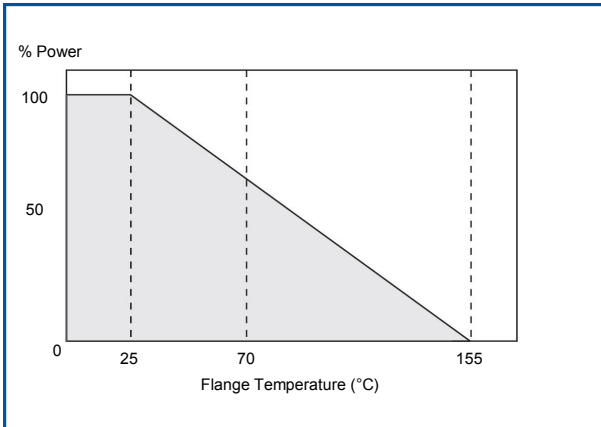
Units to be orientated with Pins facing Sprocket Holes.

General Note

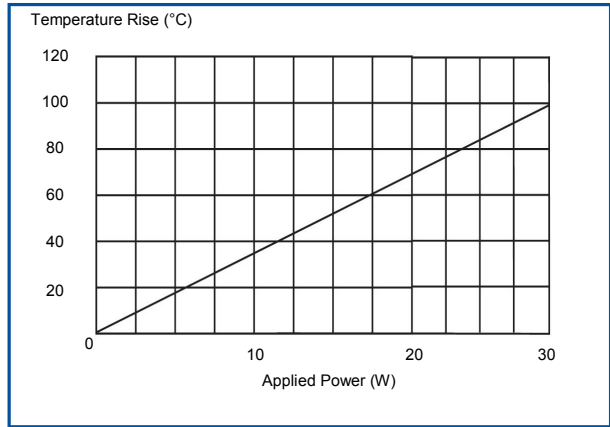
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DERATING CURVE

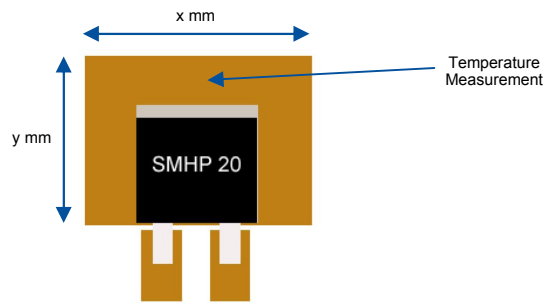


TEMPERATURE RISE



FR4 THERMAL PSB CHARACTERISATION

Pad Dimensions (x,y mm)	P _{90°C, 35µm} (W)
50,40	4.5
45,35	4
40,30	3.5
35,25	3
20,10	2



Notes:

Characterisation carried out using 35µm PCB Copper pad weights, with the temperature of 90°C used as a maximum reference on the PCB.

P_{90°C, 35µm} (W) is power when the measurement point reaches 90°C.

ORDERING INFORMATION

	SMHP 20	500	F	T13	
Model					
Resistance Code:					
	0.1Ω : 0R100				
	50Ω : 500				
	First two digits significant, last digit denotes number of trailing zeros				
				Tape & Reel:	
				13" Reel (500 pcs per reel)	
				(No code used for Magazines)	
				Tolerance:	
				J = 5% Tolerance	
				F = 1% Tolerance	

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