

SMHP Series

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



Electrical

ITEMS	SPECIFICATION			TEST CONDITIONS
Power Rating	20 watt			-55°C to +25°C Flange Temperature
	2.0 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	E24	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	$\Delta R = \pm 0.25\% + 0.5\Omega$			

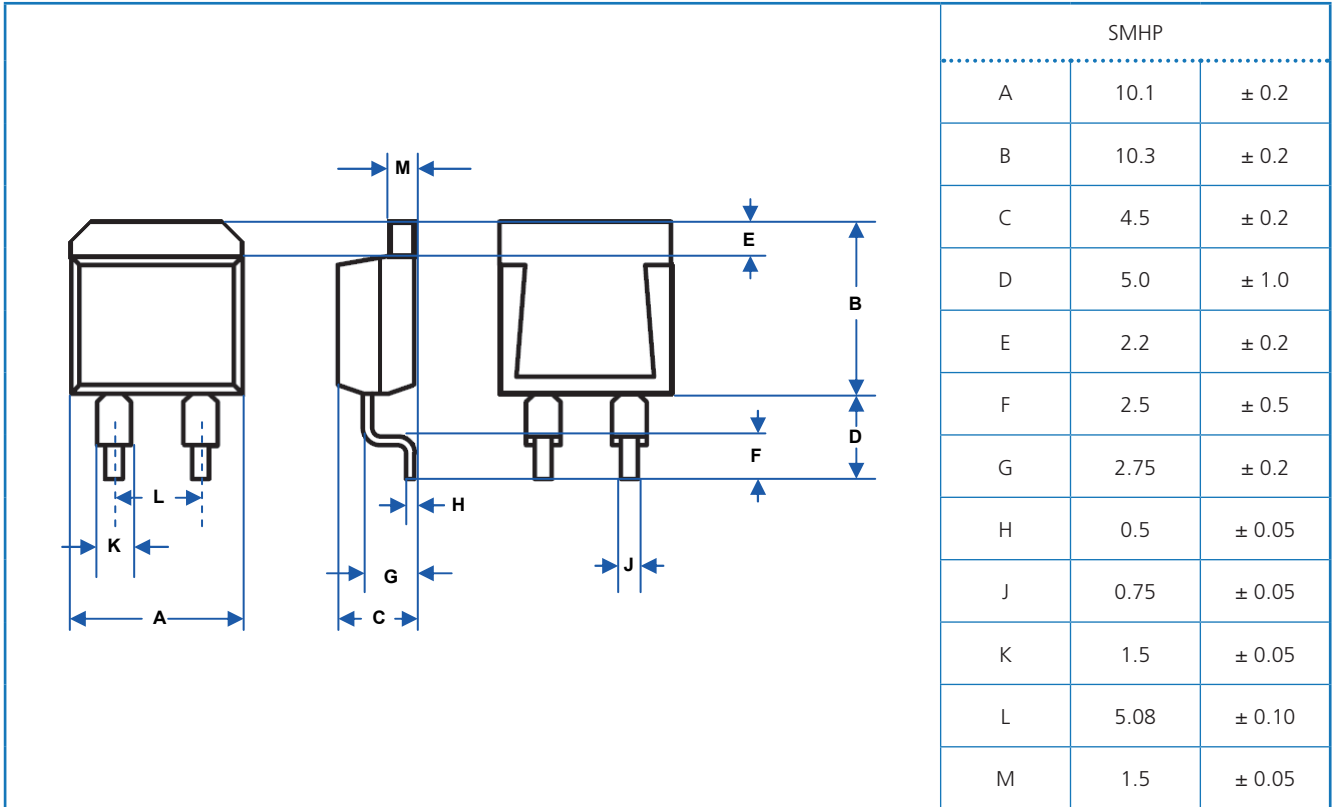
Notes:

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

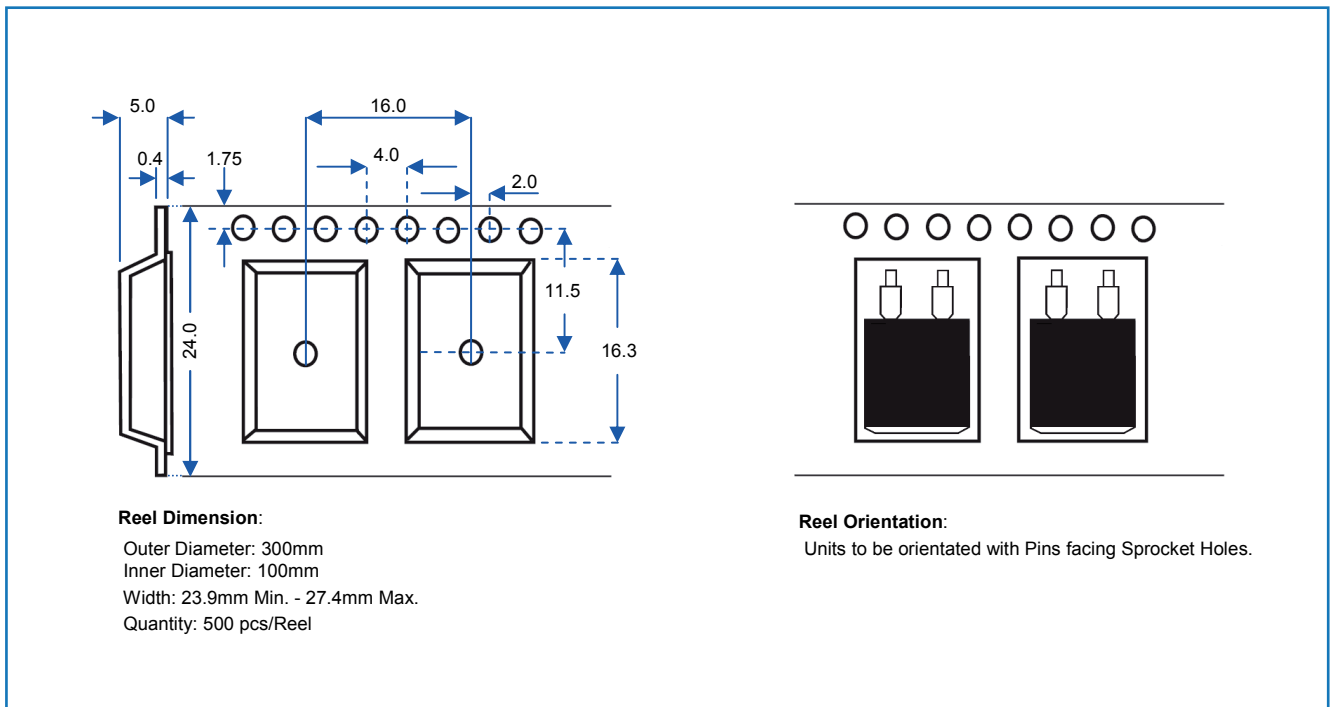
General Note

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.

Dimensions (mm)



Tape Dimensions & Orientation



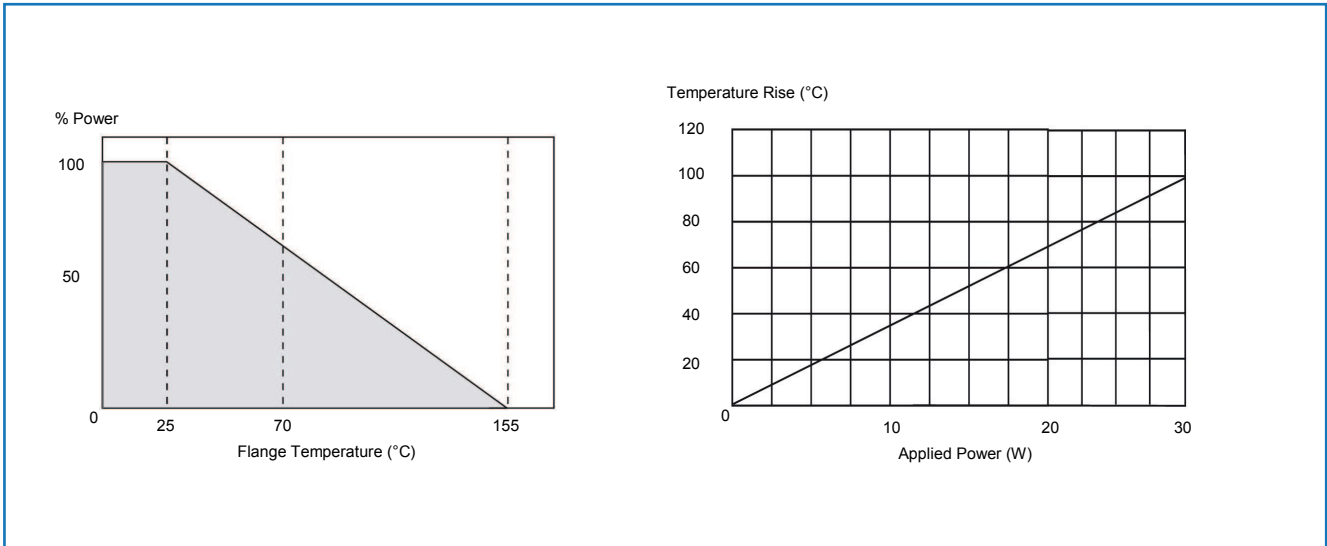
General Note

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.

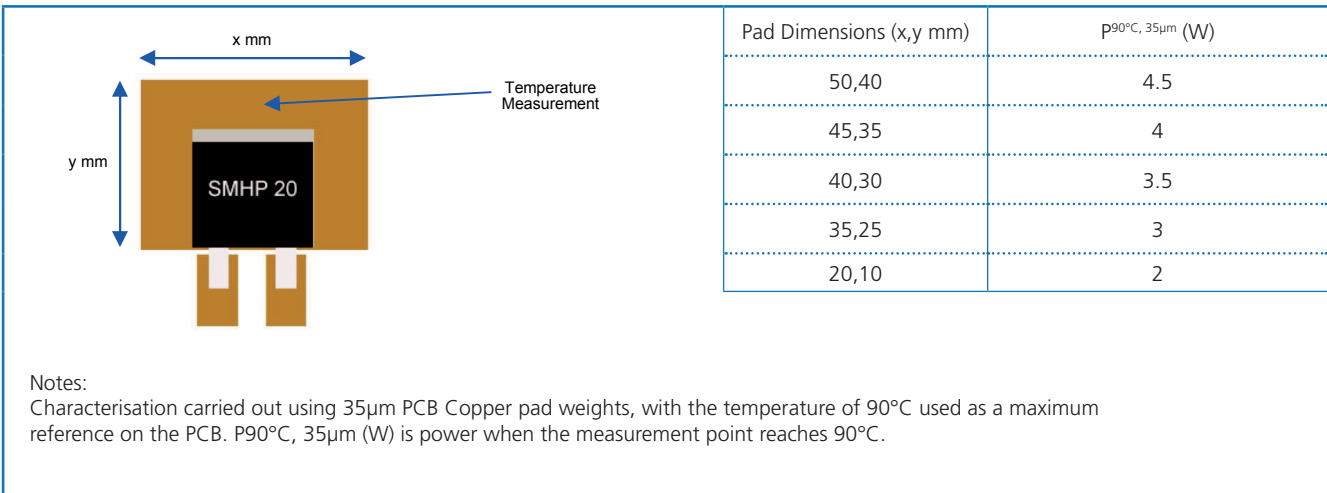


Derating Curve

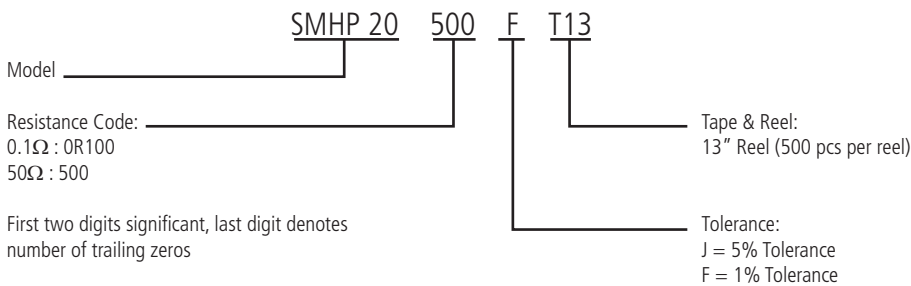
Temperature Rise



FR4 Thermal PCB Characterisation



Ordering Information



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.