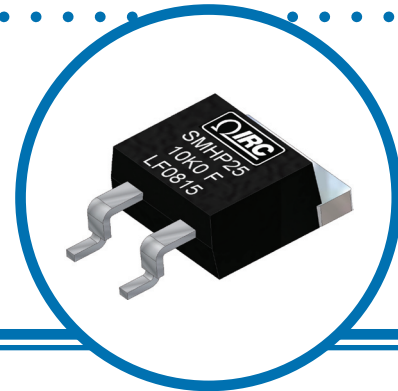


Surface Mount TO-263 25W Power Resistor

SMHP Series

- RoHS compliant
- Popular D2PAK TO263 package
- Resistance values from 0.010Ω to 51KΩ
- Non-inductive design
- Resistor film electrically isolated from copper heat sink tab
- High frequency snubber and pulse handling circuits



Electrical Data

Item	Specification			Comments
Resistance Range	0.01Ω to 0.09Ω	0.1Ω to 9.1Ω	10Ω to 51KΩ	
Tolerance	±5%	±1%, ±5%	±1%, ±5%	
TCR (ppm/°C)	250	100	50	-55°C to +155°C Reference Temperature 25°C
Nominal Resistance Series	E6	E24	E24	Including 2.5Ω and 5.0Ω
Thermal Resistance	3.3°C/W			Resistor hot spot to copper tab
Power Rating	25W			-55°C to +25°C copper tab temperature
	2.5W			@ 25°C when mounted to a double sided 2 oz. copper FR-4 board 1" x 1" x .063"(thick) min.
Operating Temperature Range	-55°C to +155°C			
Maximum Operating Voltage	500V not to exceed $\sqrt{P \times R}$			
Dielectric Withstanding Voltage	2000 VDC 60 seconds			
Solderability *	Min. 90% coverage 230±5°C, 3 seconds			

* Soldering Note: During surface mount soldering, the soldering temperature profile must not cause the metal tab of this device to exceed 220°C.

General Note

IRC reserves the right to make changes in product specification without notice or liability. All information is subject to IRC's own data and is considered accurate at time of going to print.

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SMHP Series Issue July 2008

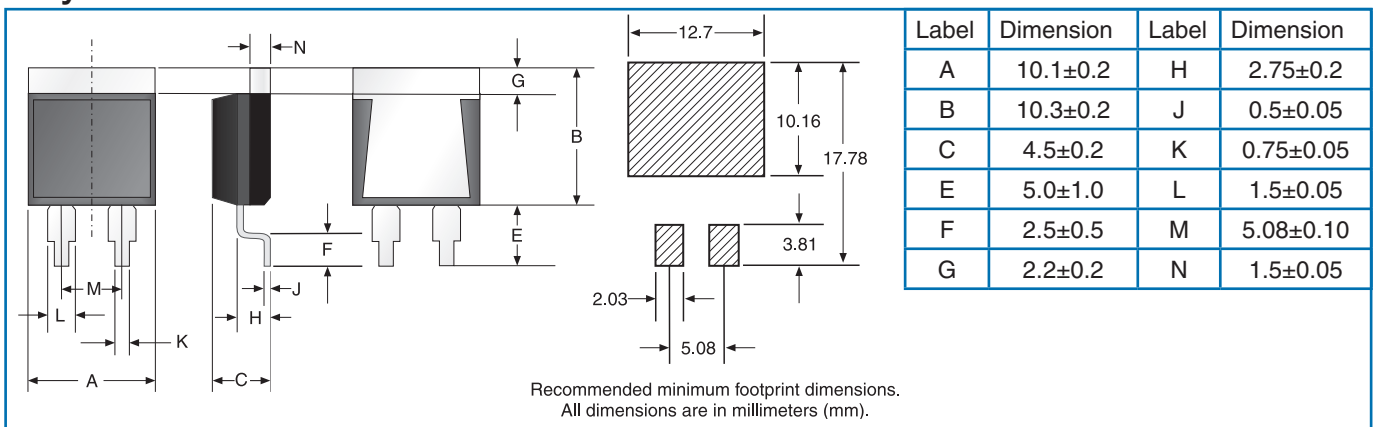
Surface Mount TO-263 25W Power Resistor



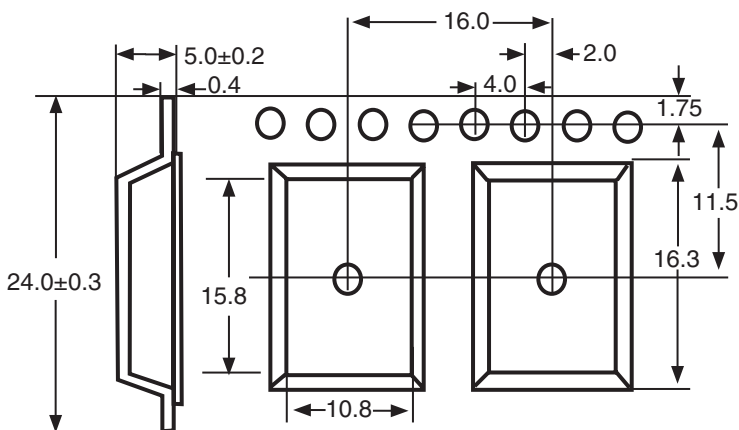
Environmental Data

Environmental Test	Test Method	Result
Load Life	1000 hours @ 25°C; 90 minutes on, 30 minutes off,	±1.0% +0.05Ω
Humidity	1000 hours; 40°C, 90 to 95% RH, 0.1W DC	±1.0% +0.05Ω
Temperature Cycle	5 cycles; 30 minutes @ -55°C, 30 minutes @ +155°C	±0.25% +0.05Ω
Short Time Overload	2X Rated Power, not to exceed 1.5X Rated Voltage for 5 seconds, 25°C with Heat Sink	±0.25% +0.05Ω
Vibration	2 hours; X, Y, Z axis, amplitude 1.5mm, 10-55Hz sweep/min.	±0.25% +0.05Ω
Insulation Resistance	Between terminals and tab	>1000 MegΩ

Physical Data



Packaging Data



Reel Dimensions	
Outer Diameter	300 mm
Inner Diameter	100 mm
Width	27.4 mm max
Quantity	500pcs/reel

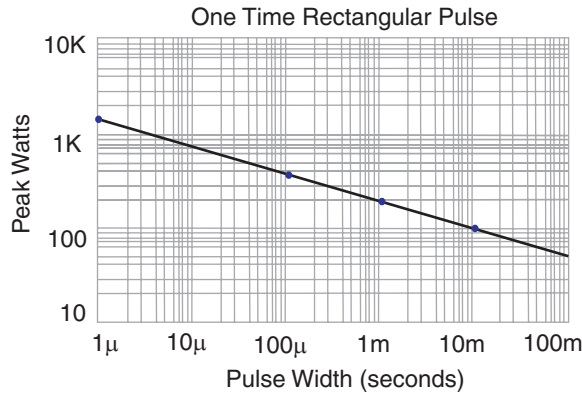
Also available in tubes of 50 pieces.
Tube packaging material is RoHS compliant.

Tolerances are ±0.1mm unless otherwise shown

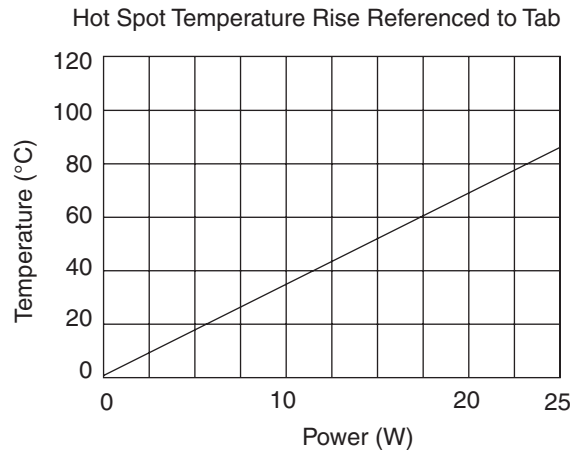
Surface Mount TO-263 25W Power Resistor



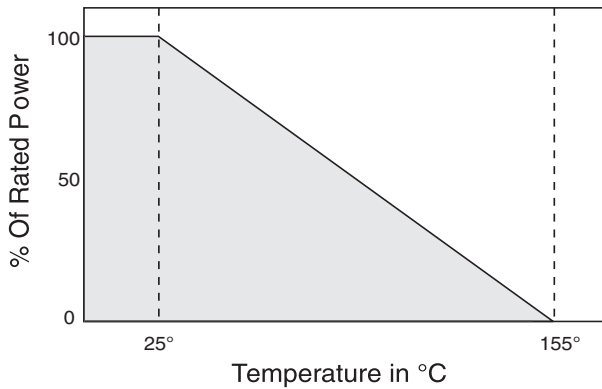
Pulse Data



Temperature Rise Data



Power Derating Curve



Case Temperature is measured on the metal mounting tab against the molded body

Ordering Data

Prefix **TFP** - **SMHP25LF** - **10R0** - **J**

Style [points to SMHP25LF]

Resistance Code [points to 10R0]
 4-digit resistance code.
 Ex: 10R0 = 10Ω, 1K00 = 1KΩ

Tolerance Code [points to J]
 J = ±5%; F = ±1%

Note: 1% tolerance available above 0.1Ω

For additional information or to discuss your specific requirements, please contact our Applications Team using the contact details below.