High Power Dissipation SMT Chip Resistor

SC3 Series

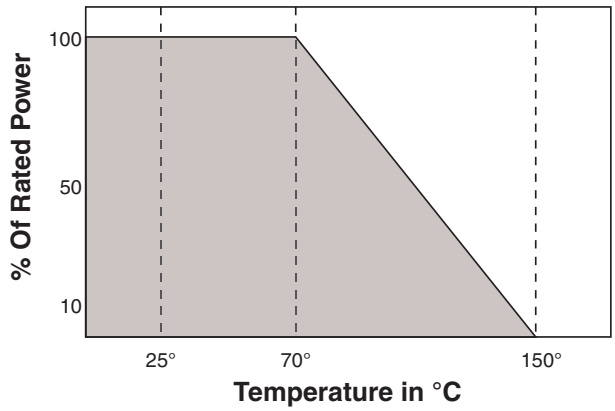
- Tolerances to ±1%
- 3 watt rating at 70°C
- Resistance range from 1 to 100KΩ
- Standard Sn/Pb and matte tin (Pb-free) terminations available



Electrical Data

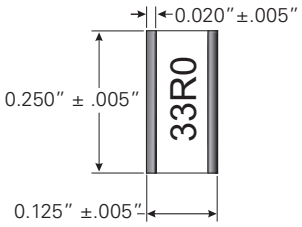
Resistance Range	1Ω to 100KΩ
Resistance Tolerance	±1%, ±2%, ±5%
Temperature Coefficient	±100 ppm/°C
Power Dissipation	3.0 Watts* @70°C
Maximum Voltage Rating (not to exceed $\sqrt{P \times R}$)	100 Volts
Operating Temperature Range	-55°C to +150°C
Termination	Leach-resistant nickel barrier under solder-plated wrap-around
*Note: With 1" square copper area as heat spreader.	

Power Derating Chart

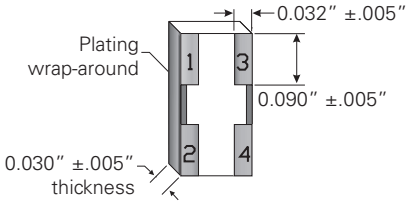


Physical Data

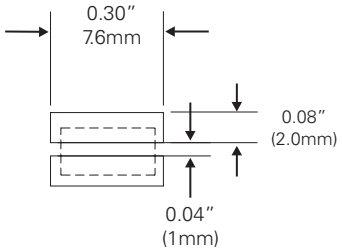
TOP



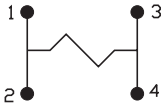
BOTTOM
(Board Side)



RECOMMENDED SOLDER PAD LAYOUT



SCHEMATIC



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.

Advanced Film Division • 4222 South Staples Street • Corpus Christi Texas 78411 USA
Telephone: 361 992 7900 • Facsimile: 361 992 3377 • Website: www.irctt.com

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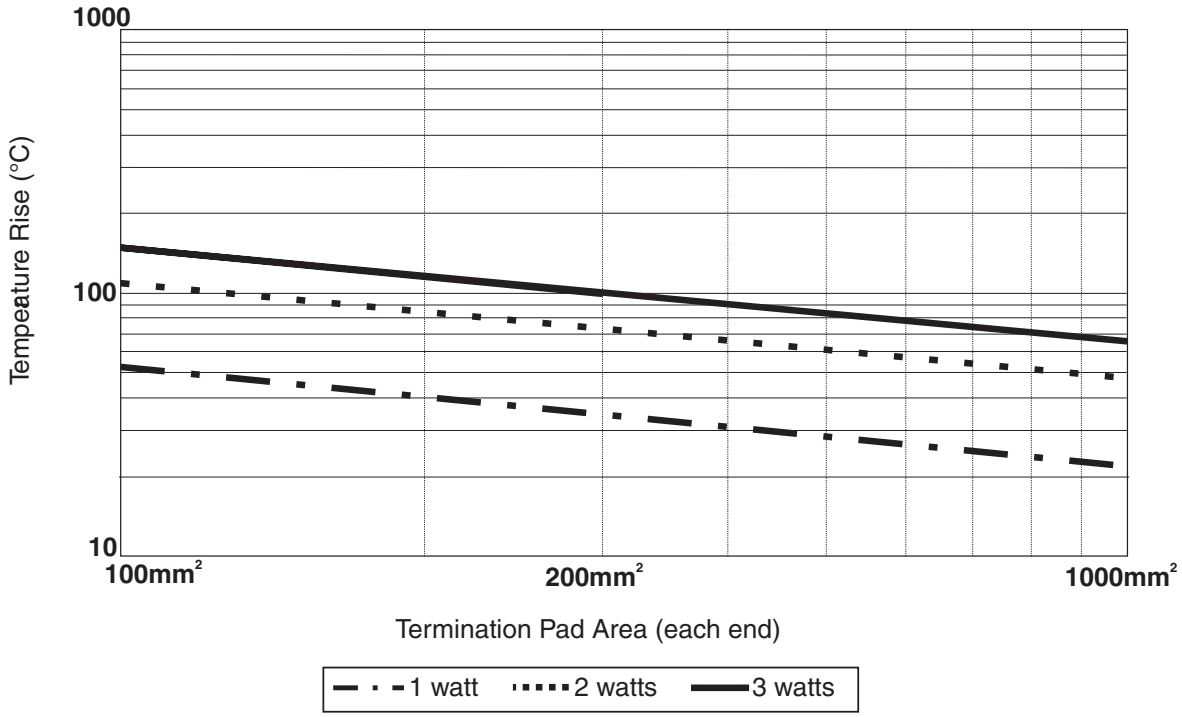
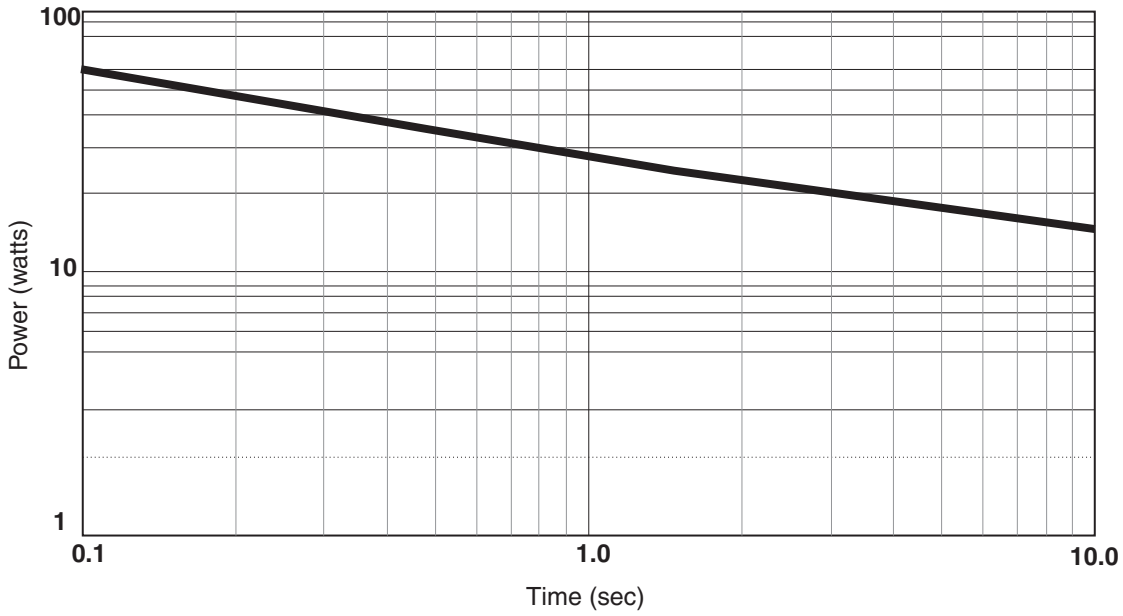
Temperature Rise vs Pad Area



Pulse Power Rating



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Environmental Data

Environmental Test	Test Method	Specification
Thermal Shock	MIL-STD-202 Method 107 Condition B, -65°C + 125°C	ΔR ±0.5% + 0.01Ω
Short-time Overload	2x rated power for 5 seconds	ΔR ±0.5% + 0.01Ω
High Temperature Exposure	100 Hours, 150°C	ΔR ±0.5% + 0.01Ω
Moisture Resistance	MIL-STD-202 Method 106	ΔR ±0.5% + 0.01Ω
Load Life	Rated Power @ 70°C for 1000 hours; 1.5 hours 'on', 0.5 hours 'off'	ΔR ±1.0% + 0.01Ω
Low Temperature Operation	1 hour @ -65°C followed by Rated power for 45 minutes	ΔR ±0.5% + 0.01Ω
Resistance To Solder Heat	MIL-STD-202 Method 210 260°C, 5 seconds	ΔR ±0.25% + 0.01Ω
Solderability	MIL-STD-202 Method 208 245°C, 5 seconds	95% coverage

Ordering Data

Prefix ····· SCW - SC3LF - 33R0 - F

Model ·····
SC3 = 3 watt chip with standard Sn/Pb termination
SC3LF = 3 watt chip with matte tin (Pb-free) termination

Resistance Code ·····
Standard 4-digit resistance code
Example: 33R0 = 33Ω; 10K0 = 10,000Ω

Resistance Tolerance Code ·····
J = ±5%; G = ±2%; F = ±1%

Packaging
Available in both bulk and tape & reel.

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

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