

High Power Dissipation SMT Chip Resistor



SC3 Series

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

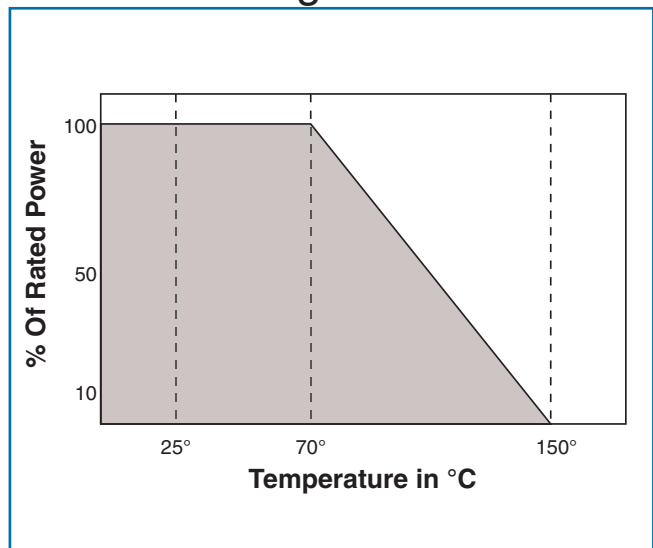


Electrical Data

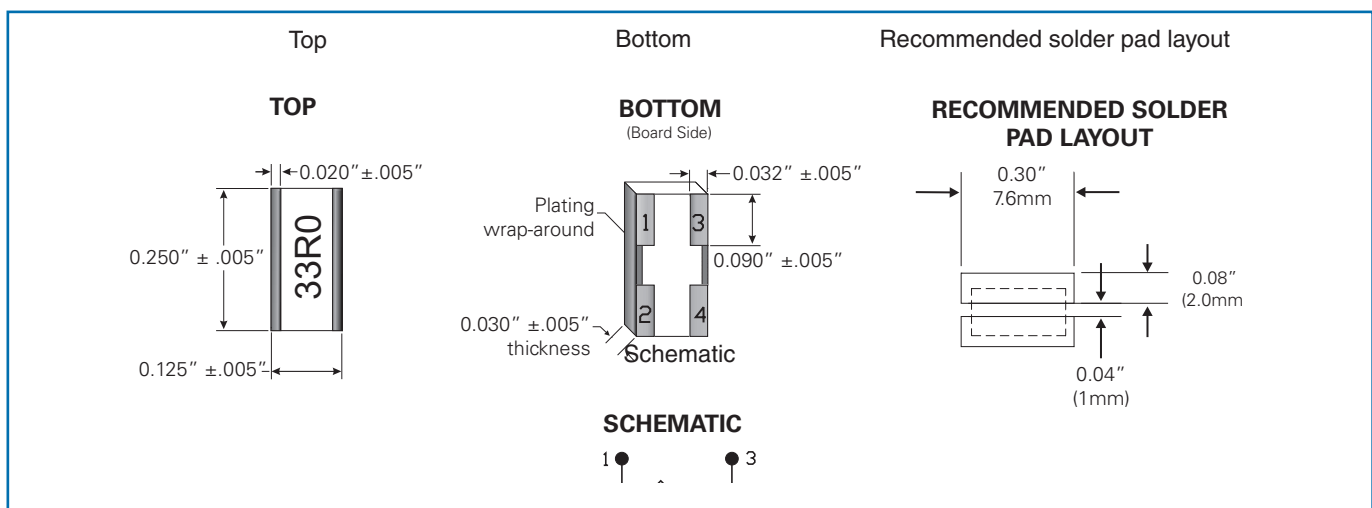
Resistance Range	1 Ω to 100K Ω
Resistance Tolerance	$\pm 1\%$, $\pm 2\%$, $\pm 5\%$
Temperature Coefficient	± 100 ppm/ $^{\circ}\text{C}$
Power Dissipation	3.0 Watts* @70°C
Maximum Voltage Rating (not to exceed $\sqrt{P \times R}$)	100 Volts
Operating Temperature Range	-55°C to +150°C
Termination	Leach-resistant nickel barrier under solder-plated wrap-around

*Note: With 1" square copper area as heat spreader.

Power Derating Chart



Physical Data



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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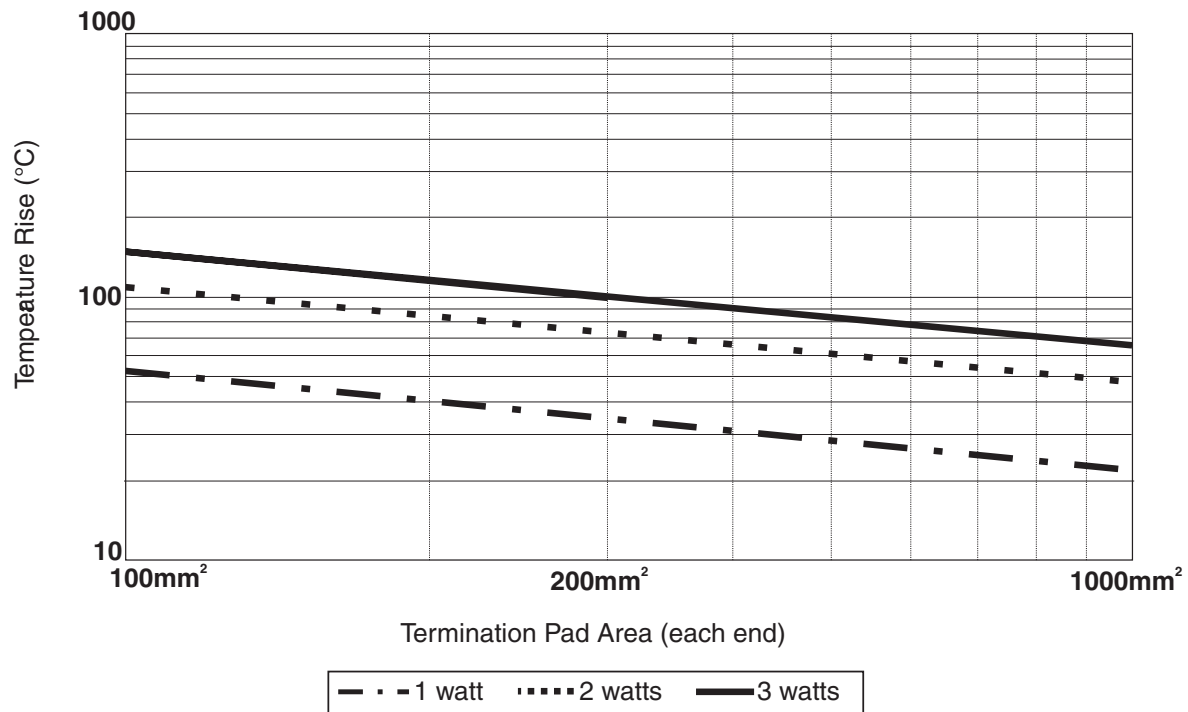


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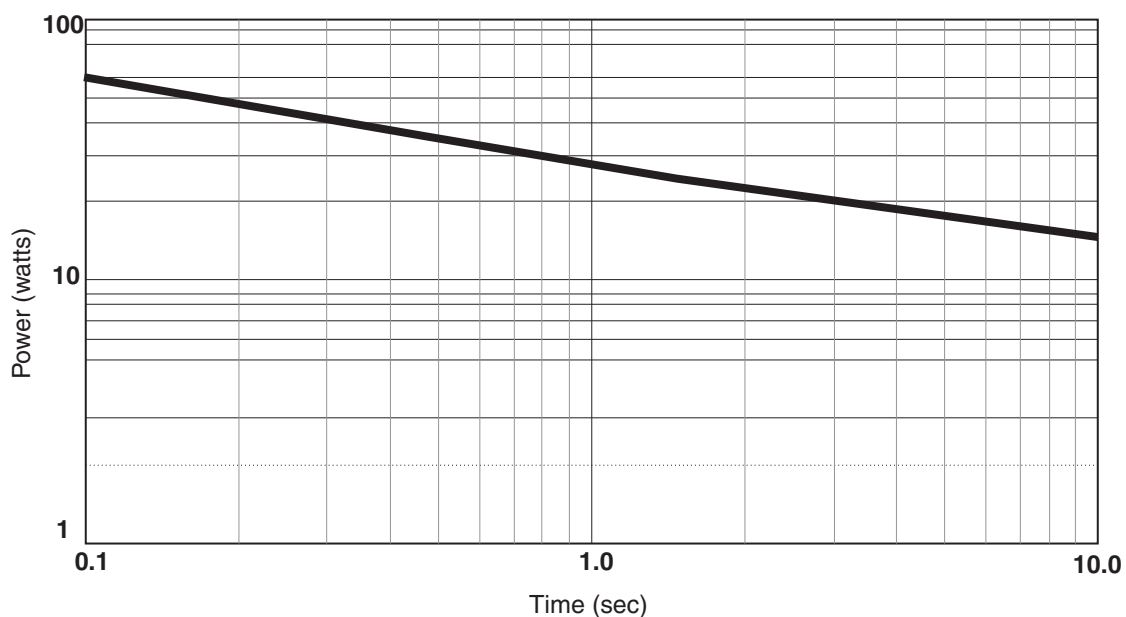
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Temperature Rise vs Pad Area



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	$\Delta R \pm 0.5\% + 0.01\Omega$
Short-time Overload	2x rated power for 5 seconds	$\Delta R \pm 0.5\% + 0.01\Omega$
High Temperature Exposure	100 Hours, 150°C	$\Delta R \pm 0.5\% + 0.01\Omega$
Moisture Resistance	MIL-STD-202 Method 106	$\Delta R \pm 0.5\% + 0.01\Omega$
Load Life	Rated Power @ 70°C for 1000 hours; 1.5 hours 'on', 0.5 hours 'off'	$\Delta R \pm 1.0\% + 0.01\Omega$
Low Temperature Operation	1 hour @ -65°C followed by Rated power for 45 minutes	$\Delta R \pm 0.5\% + 0.01\Omega$
Resistance To Solder Heat	MIL-STD-202 Method 210 260°C, 5 seconds	$\Delta R \pm 0.25\% + 0.01\Omega$
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 = 33 Ω ; 10K0 = 10,000 Ω

Resistance Tolerance Code

J = $\pm 5\%$; G = $\pm 2\%$; F = $\pm 1\%$

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.

Mouser Electronics

Authorized Distributor

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