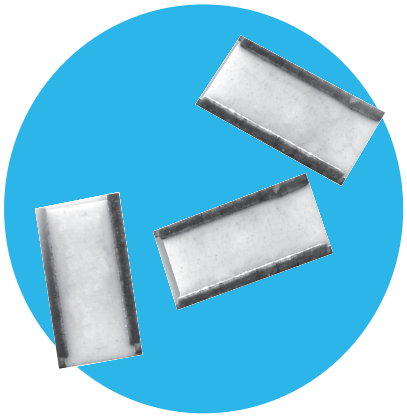
Resistors

High Power Chip Resistors



SC3 Series

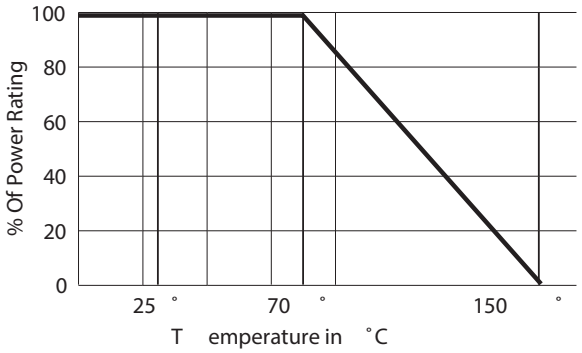
- 3 watts in a 1 watt size package
- Resistance range from 1R0 to 10K
- Tolerances to ±1%
- AEC-Q200 Qualified

All Pb-free parts comply with EU Directive 2011/65/EU (RoHS2)

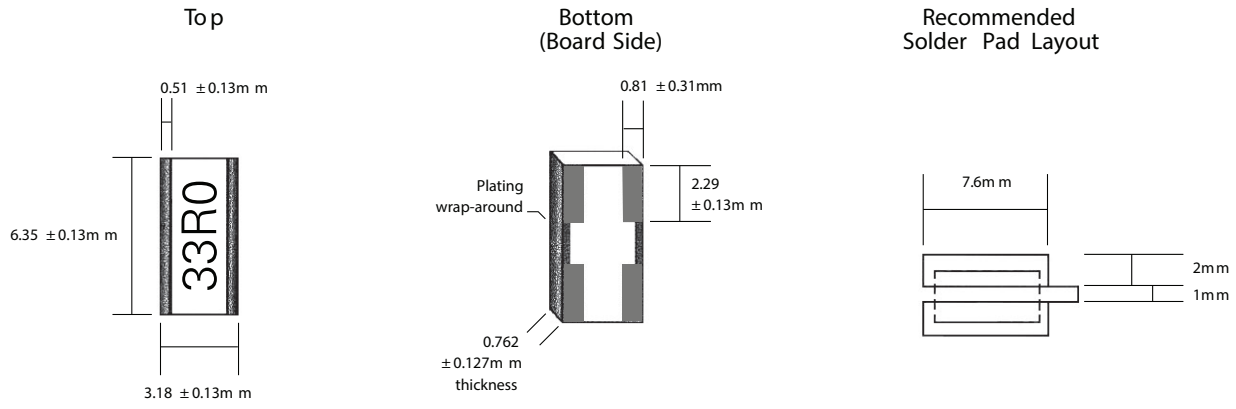
Electrical Data

Characteristic	Value
Power dissipation @70˚C	3 watts
Resistance Range	1R0 to 10K
LEV	100 V
Ambient temp range	-55 to +150˚C
Resistance tolerance	1, 2, 5%
TCR	±100ppm/˚C
Termination	Leach-resistant solder-plated copper wrap-around
Pad & trace area for maximum power rating	300mm^2

Power Derating Curve



Physical Data



General Note

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BI Technologies IRC Welwyn

www.ttelectronicsresistors.com

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Construction

Resistive thick film material, overglaze and organic protection are screen printed on a 96% alumina substrate. The components are laser trimmed to achieve the required resistance tolerance.

Terminations

The wrap-around terminations have an electroplated nickel barrier and matte tin finish. This ensures excellent 'leach' resistance properties and solderability.

Chips can withstand immersion in solder at 250˚C for 90 seconds and are suitable for reflow or wave soldering mounting applications.

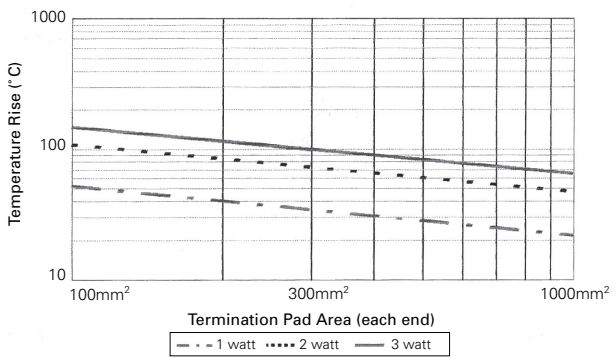
Marking

The body protection and marking are resistant to all normal industrial cleaning solvents suitable for printed circuits.
Chips are packed and mounted with marking side up.
The SC3 Chips are mounted with the actual resistor element mounted face down on its termination pads.

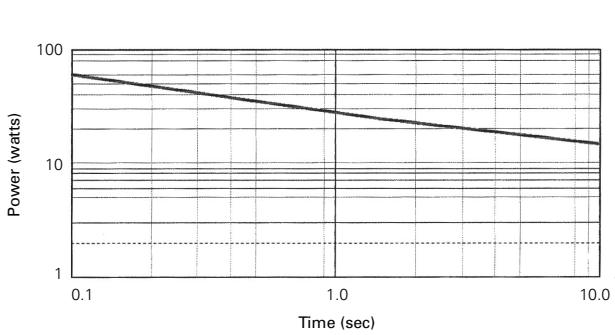
Performance Data

AEC-Q200 Table 7 ref	Test	Method	Max.+0.01Ω		Typ.
3	High Temp. Exposure	MIL-STD-202 Method 108	ΔR%	0.5	0.2
4	Temperature Cycling	JESD22 Method JA-104	ΔR%	0.25	0.1
6	Moisture Resistance	MIL-STD-202 Method 106	ΔR%	0.5	0.2
7	Biased Humidity	MIL-STD-202 Method 103	ΔR%	0.5	0.1
8	Operational Life (Cyclic Load)	MIL-STD-202 Method 108	ΔR%	1.0	0.5
14	Vibration	MIL-STD-202 Method 204	ΔR%	0.25	0.05
15	Resistance to Soldering Heat	MIL-STD-202 Method 210	ΔR%	0.25	0.05
16	Thermal Shock	MIL-STD-202 Method 107	ΔR%	0.5	0.2
18	Solderability	J-STD-002	>95% coverage		
21	Board Flex	AEC-Q200-005	ΔR%	0.25	0.05
22	Terminal Strength	AEC-Q200-006	ΔR%	0.25	0.05
	Short Term Overload	6.25 x Pr for 2s	ΔR%	0.5	
	Low Temperature Storage	-65°C for 100 hours	ΔR%	0.5	
	Low Temperature Operation	-65°C for 1 hour then Pr for 45 minutes	ΔR%	0.5	
	Shelf Life Test	Room temp for 12 months	ΔR%	0.1	
	Leach Resistance	Solder dip at 250°C	90s minimum		

Temperature Rise vs Pad Area



Pulse Power Rating

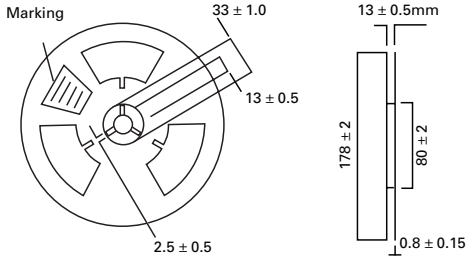


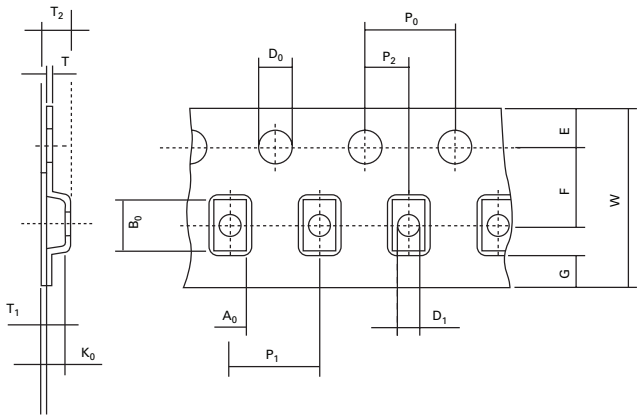
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Packaging

SC3 Resistors are supplied taped and reeled as per IEC 286-3. The standard quantity per reel is 1800 parts.





Tape dimensions in mm

	W	P1	P0	P2	D0	D1	E	F	A0	B0	K0	T	T1	T2
	±0.3	±0.1	±0.1	±0.05	±0.1	±0.2	±0.1	±0.05	±0.1	±0.1	±0.1	±0.05	nom	±0.15
SC3	12	8	4	2	1.5	1.5	1.75	5.5	3.61	6.96	1.17	0.28	0.06	1.45

Ordering Procedure

This product has two valid part numbers:

European (Welwyn) Part Number: SC3-33RFI (33 ohms ±1%, Pb-free)

S	C	3	-	3	3	R	F	I
1				2			3	4

1 Type	2 Value	3 Tolerance	4 Packing
SC3	E24 = 3/4 characters	F = ±1%	I = Standard
	E96 = 3/4 characters	G = ±2%	1800/reel
	R = ohms	J = ±5%	
	K = kilohms		

USA (IRC) Part Number: SCW-SC3LF-33R0F (33 ohms ±1%, Pb-free)

S	C	W	-	S	C	3	L	F	-	3	3	R	0	F
1				2			3			4				5

1 Family	2 Model	3 Termination	4 Value	5 Tolerance
SCW	SC3	Omit for SnPb	3 digits + multiplier	F = ±1%
		LF = Pb-free	R = ohms for values <100 ohms	G = ±2%
				J = ±5%

Note: packaging is tape & reel, 1800/reel

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