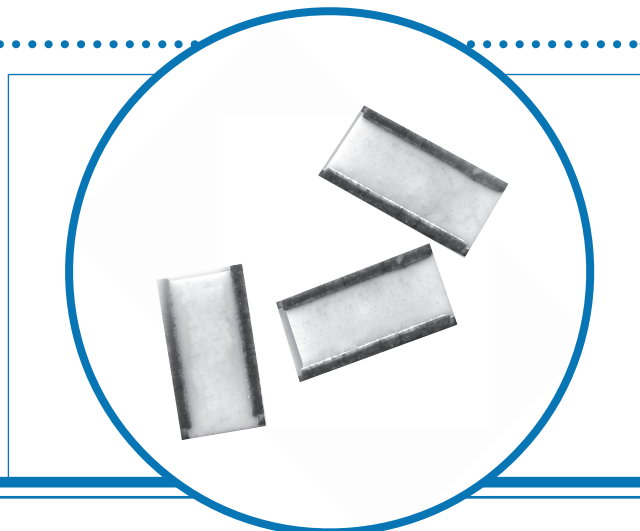


# High Power Chip Resistors

## SC3 Series

- **3 Watts in a 1 Watt size package\***
- **Resistance range from 1 to 200Ω**
- **Tolerances to ±1%**

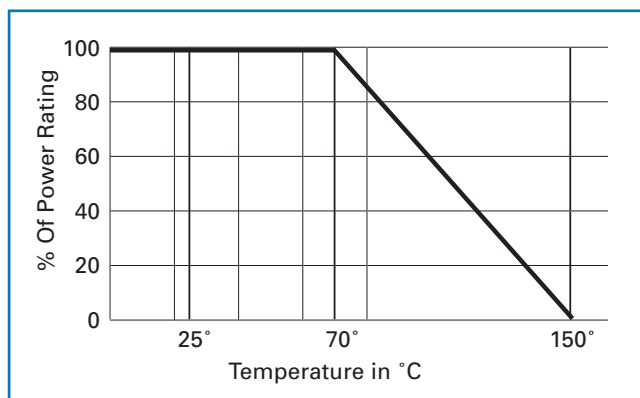
\* Rated Power @ 70°C



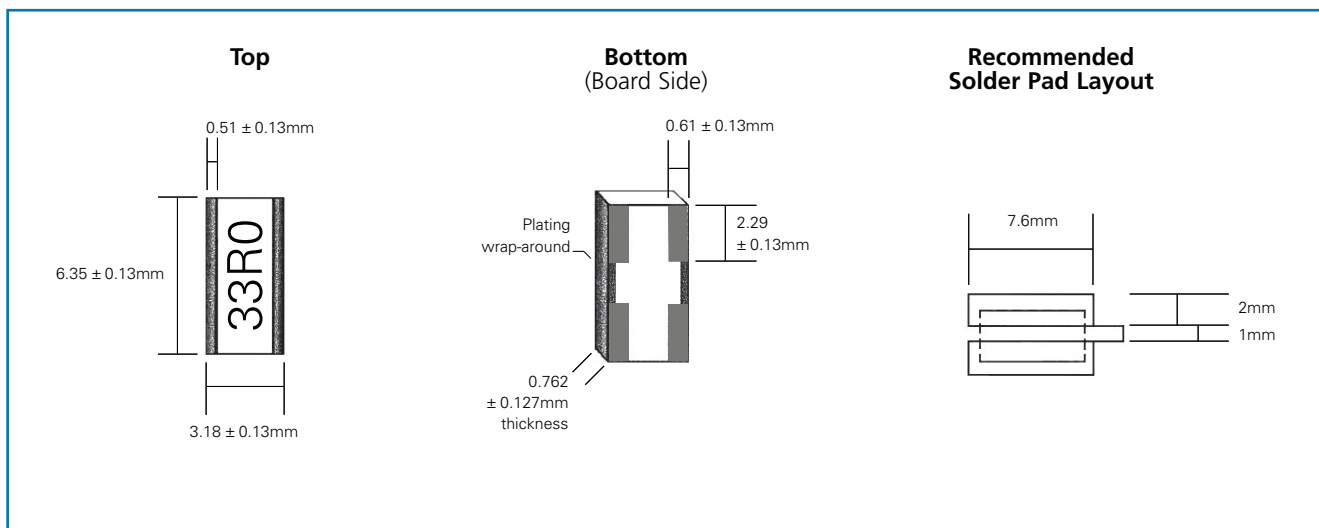
## Electrical Data

Characteristic	Value
Power dissipation @70° C	3 Watts
Resistance Range	1.0 to 200Ω
LEV	50V
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 <sup>2</sup>

## Power Derating Curve



## Physical Data



### General Note

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

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# High Power Chip Resistors

SC3 Series

## 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.

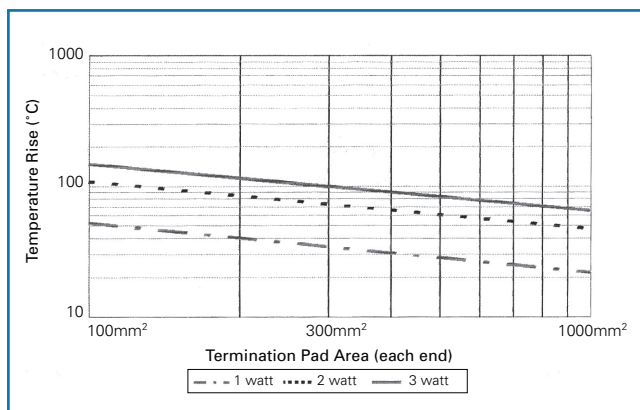
## Marking

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.

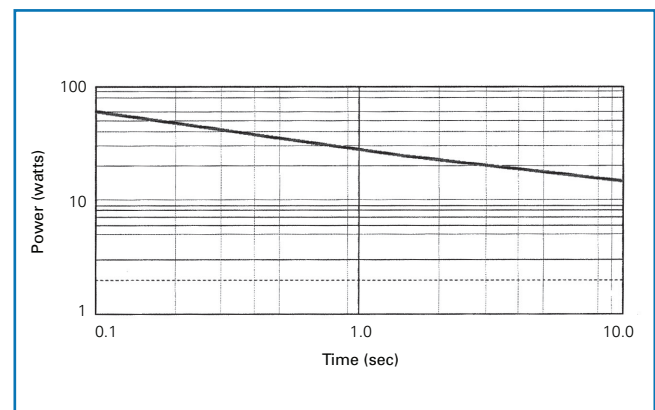
## Performance Data

		Typical
Load at rated power: 1000 hours at 70°C MIL-PRF-55342	ΔR%	1
Overload: 6.25 x rated power for 2 seconds MIL-PRF-55342	ΔR%	0.5
High temperature exposure: MIL-PRF-55342	ΔR%	0.5
Low temperature operation: MIL-PRF-55342	ΔR%	0.5
Low temperature storage: -65°C, 100 hours	ΔR%	0.5
Moisture: MIL-PRF-55342	ΔR%	0.5
Temperature cycling: MIL-STD-883 Method 1010 Test condition B	ΔR%	0.25
Thermal shock: MIL-STD-202 Method 107 condition B -65°C +125°C	ΔR%	0.25
Resistance to solder heat: MIL-STD-202 Method 210	ΔR%	0.25
Shelf life test: 12 months at room temperature	ΔR%	0.1
Leach resistance: molten solder 250°C		90 Seconds min.

## Temperature Rise vs Pad Area

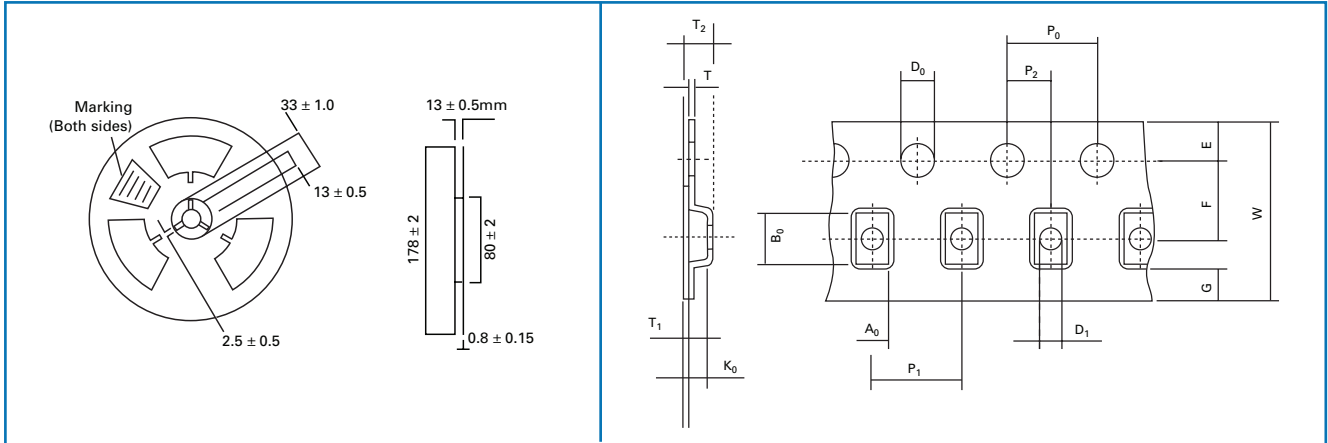


## Pulse Power Rating



## 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
<b>SC3</b>	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

Specify type reference etc. as shown in this example of SC3 at 33Ω 1%

Type ..... **SC3** - **33R** **F**

Resistance value .....  
(IEC62 code)

Tolerance .....  
(IEC62 code)

F	1%
G	2%
J	5%