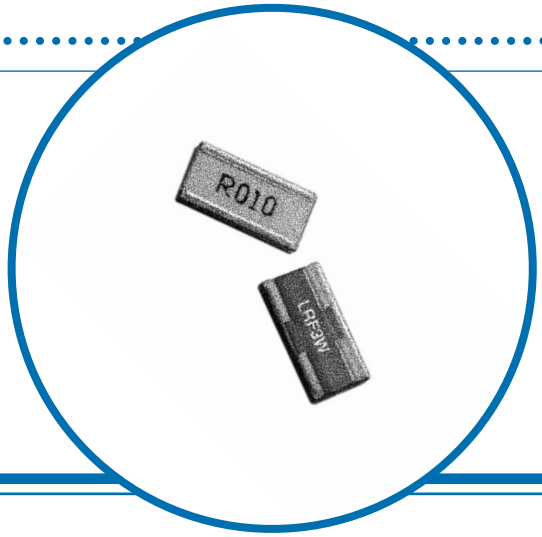
Low Value 3W Chip Resistors

TT electronics
Welwyn Components

LRF3W Series

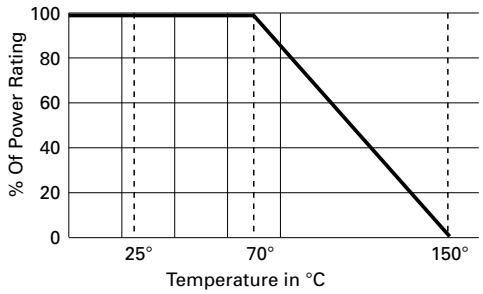
- **3 Watts @ 70°C**
- **Resistance range from 0.003 to 0.1Ω**
- **Tolerances to ±1%**



Electrical Data

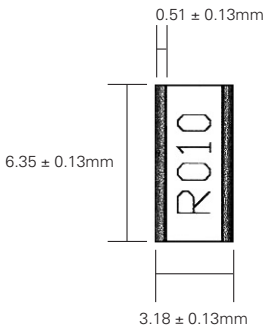
Characteristic	Value
Power dissipation @70°C	3 Watts
Resistance Range	0.005 to 0.100Ω
Dielectric withstand	200V
Ambient temp range	-55 to +150°C
Resistance tolerance	≤R005 5%, >R005 2, 5%, ≥R01 1, 2, 5%
TCR	±100ppm/°C
Pad & trace area for maximum power rating*	300mm²

Power Derating Curve

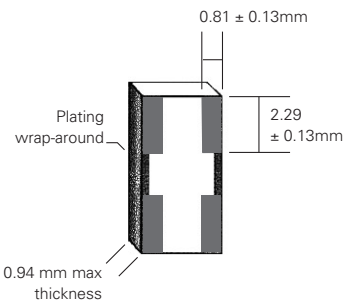


Physical Data

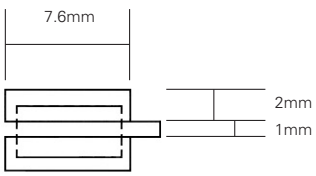
Top



Bottom
(Board Side)



Recommended Solder Pad Layout



Weight 0.065g typ.

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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Telephone: +44 (0) 1670 822181 · Facsimile: +44 (0) 1670 829465 · Email: info@welwyn-tt.com · Website: www.welwyn-tt.com

Welwyn
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TT electronics plc

Issue C · 02.05

Low Value 3W Chip Resistors

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Construction

Patented non-noble copper based 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 copper terminations have an electroplated nickel barrier and tin-lead solder coating, 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

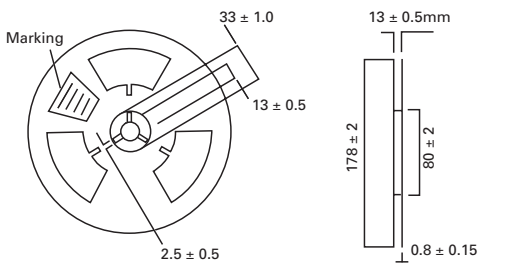
The body protection and marking are resistant to all normal industrial cleaning solvents suitable for printed circuits. Chips are packed and mounted with marking side up. The LRF3W Chips are mounted with the actual resistor element mounted face down on its termination pads.

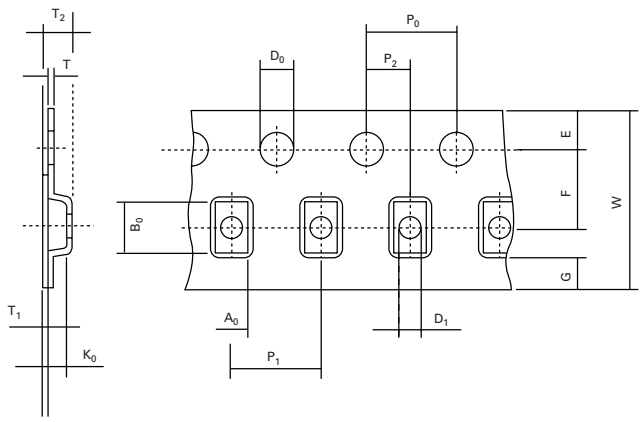
Performance Data

		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.

Packaging

LRF3W Resistors are supplied taped and reeled as per IEC 286-3. The standard quantity per reel is 1800 parts.



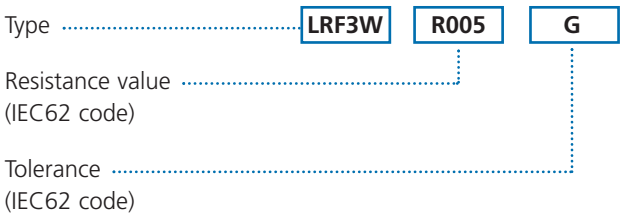


Tape dimensions in mm														
	W	P1	P0	P2	D0	D1	E	F	A0	B0	K0	T	T1	T2
	±0.3	±0.1	±0.1	±0.05	±0.1	±0.2	±0.1	±0.05	±0.1	±0.1	±0.1	±0.05	nom	±0.15
LRF3W	12	8	4	2	1.5	1.5	1.75	5.5	3.61	6.96	1.17	0.28	0.06	1.45

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Ordering Procedure

Specify type reference, value and tolerance as shown in this example of LRF3W 5mΩ 2%:



F	1%
G	2%
J	5%

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