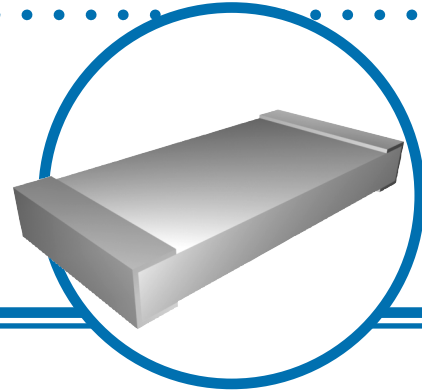


Low Value Current Sense Flat Chip Resistor



LR Series

- Resistance range from 0.002Ω up to 1Ω
- Standard Sn/Pb and Pb lead-free terminations available
- High power dissipation at 70°C
- Tolerances to ±1%



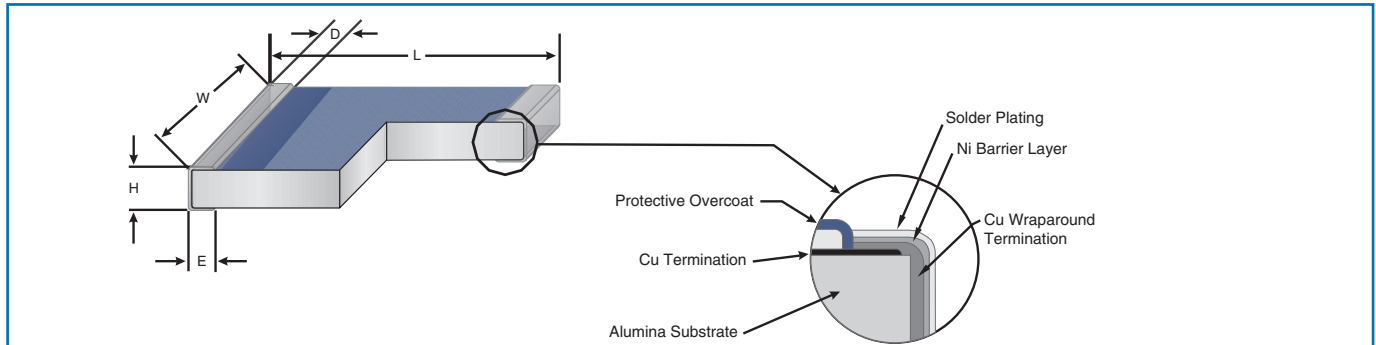
Electrical Data

Size	Resistance Range ¹			TCR ² (ppm/°C)	Power Rating at 70°C (Watts)	Dielectric Withstanding Voltage (V)	Maximum Current (Amps)	Operating Temperature	Pad and Trace Area for Max Power Rating @ 70°C
	Tolerance F, G, J, K	Tolerance J, K	Tolerance K						
1206	0.010 to 1Ω	0.003 to 1Ω	0.003 to 1Ω	±100	0.5	200	16	-55°C to +150°C	30mm ²
2010			0.002 to 1Ω		1.0		22		100mm ²
2512			0.002 to 1Ω		2.0		32		300mm ²

¹ Non-standard resistance values available

² Contact factory for TCR information on values under 0.05ohms

Outline Dimensions



	1206		2010		2512	
	in.	mm	in.	mm	in.	mm.
L	0.126 ± 0.012	3.20 ± 0.305	0.206 ± 0.015	5.23 ± 0.38	0.256 ± 0.015	6.50 ± 0.38
W	0.064 ± 0.008	1.63 ± 0.203	0.104 ± 0.010	2.64 ± 0.25	0.128 ± .010	3.25 ± 0.25
H	0.024 ± 0.004	0.61 ± 0.102	0.029 ± 0.004	0.74 ± 0.1	0.029 ± 0.004	0.74 ± 0.1
D	0.019 ± 0.010	0.48 ± 0.25	0.019 ± 0.010	0.48 ± 0.25	0.019 ± 0.010	0.48 ± 0.25
E	0.019 ± 0.010	0.48 ± 0.25	0.019 ± 0.010	0.48 ± 0.25	0.019 ± 0.010	0.48 ± 0.25

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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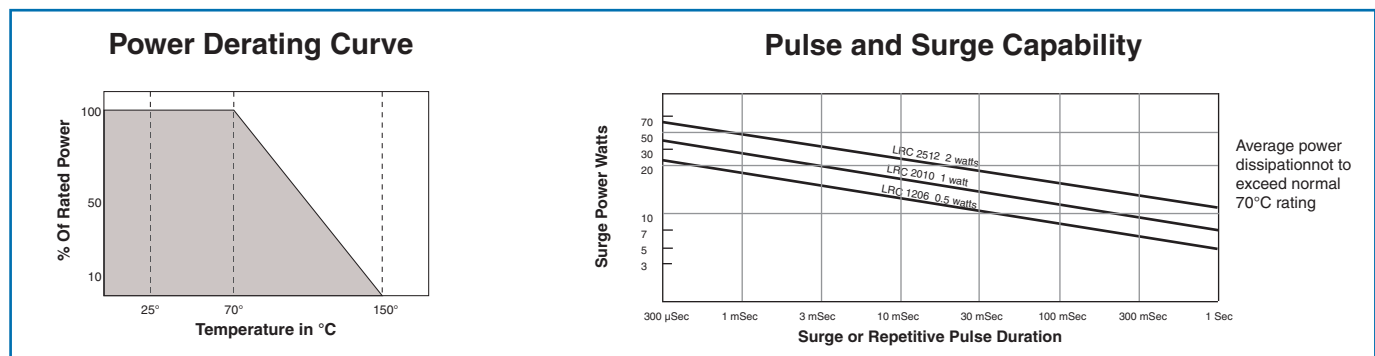
Low Value Current Sense Flat Chip Resistor



Environmental Performance

Environmental Test	Test Method	Typical Performance
Thermal Shock	MIL-STD-202 Method 107G Condition B, -55°C +150°C, 100 cycles	±0.5% + 1.0mΩ
Short Time Overload	6.25X Rated Power for 5 seconds (1206, 2010 Size) 5X Rated Power for 5 seconds (2512 Size)	±0.5% + 0.5mΩ
High Temperature Exposure	100 hours @ 150°C	±0.5% + 0.5mΩ
Dielectric Withstanding Voltage	MIL-STD-202, Method 301 2.5X Rated Voltage, 1 minute	±0.25% + 0.5mΩ
Moisture Resistance	MIL-STD-202 Method 106	±0.5% + 0.5mΩ
Load Life	1000 hours, Rated Power, 70°C 1.5 hours on, 30 minutes off	±1.0% + 0.5mΩ
Low Temperature Operation	1 hour -65°C followed by rated power for 45 min	±0.5% + 0.5mΩ
Resistance to Solder Heat	MIL-STD-202 Method 210 260°C, 10 seconds	±0.5% + 1.0mΩ
Insulation Resistance	MIL-STD-202 Method 302 100VDC, 1 minute	>1000 megohms
Solderability	MIL-STD-202 Method 208 245°C, 5 seconds	95% min Coverage

Power Derating and Pulse/Surge Capability



Ordering Procedure

Prefix **LRC** - **LRF** **1206LF** - **01** - **R020** - **F**

Model

LR for values > 0.025Ω
LRF for values ≤ 0.025Ω

Size

1206; 1206LF; 2010; 2010LF; 2512; 2512LF
(LF=Lead Free Terminations)

TCR Code

01 = ±100ppm/°C

Resistance Code

4-Digit resistance code. Ex: R050 = 0.050Ω; 1R00 = 1Ω

Tolerance Code

F = ±1%, G = ±2%, J = ±5%, K = ±10%

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

Recommended Solder Pad Layout

The diagram illustrates the recommended solder pad layout for three different component types: LR1206, LR2010, and LR2512. It shows two rectangular solder pads, one above the other. Dimension A indicates the width of the pads. Dimension B indicates the distance between the centers of the two pads. Dimension C indicates the width of the bottom pad.

DIM.	LR1206	LR2010	LR2512
A	in. 0.080	0.120	0.145
	mm (2.0)	(3.05)	(3.7)
B	in. 0.160	0.255	0.305
	mm (4.0)	(6.5)	(7.75)
C	in. 0.050	0.060	0.060
	mm (1.25)	(1.5)	(1.5)