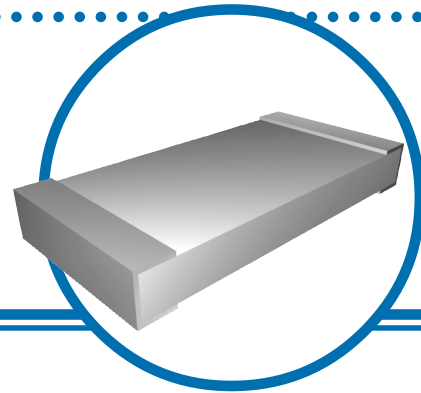


# Low Value Current Sense Flat Chip Resistor

## LR Series

- Resistance range from 0.002Ω up to 1Ω
- Standard 60/40 and lead-free terminations available
- High power dissipation at 70°C
- Tolerances to ±1%

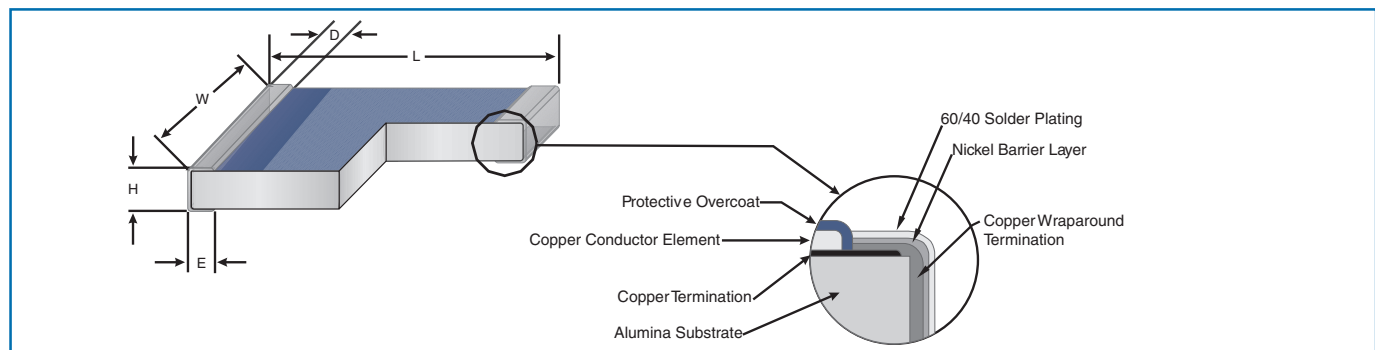


## Electrical Data

Size	Resistance Range			TCR* (ppm/°C)	Power Rating at 70°C (Watts)	Dielectric Withstanding Voltage	Temperature Rise at Rated Power	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	40°C	-55°C to +150°C	30 mm <sup>2</sup>
2010	0.010 to 1Ω	0.003 to 1Ω	0.002 to 1Ω		1.0	200	80°C		30 mm <sup>2</sup>
2512	0.010 to 1Ω	0.003 to 1Ω	0.002 to 1Ω		2.0	200	90°C		300 mm <sup>2</sup>

\* Contact factory for TCR information on values under 0.05 ohms

## Outline Dimensions



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

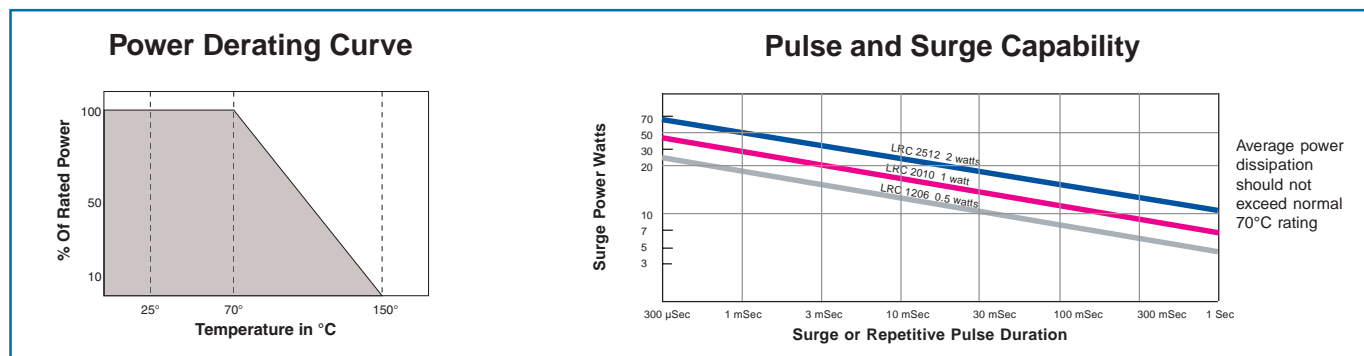
IRC reserves the right to make changes in product specification without notice or liability. All information is subject to IRC's own data and is considered accurate at time of going to print.

# Low Value Current Sense Flat Chip Resistor

## Environmental Performance

Environmental Test	Test Method	Performance (Resistance Change)
Thermal Shock	MIL-STD-202 Method 107 Condition B, -65°C +125°C	±0.5% + 0.0005Ω
Short Time Overload	MIL-PRF-55342	±0.5% + 0.0005Ω
High Temperature Exposure	MIL-PRF-55342	±0.5%
Temperature Cycling	MIL-STD-883 Method 1010 Condition B, -65°C +125°C	±0.25%
Moisture Resistance	MIL-PRF-55342	±0.5%
Load Life	MIL-PRF-55342 Rated Power @ 70°C	±1.0%
Low Temperature Operation	MIL-PRF-55342	±0.5%
Resistance to Solder Heat	MIL-STD-202 Method 210	±0.25% + 0.0005Ω
Leach Resistance	Molten Solder 250°C	90 seconds minimum

## Power Derating and Pulse/Surge Capability



## Ordering Procedure

Prefix . . . . . **LRC** - **LRF** **1206** - **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%

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

## Recommended Solder Pad Layout

