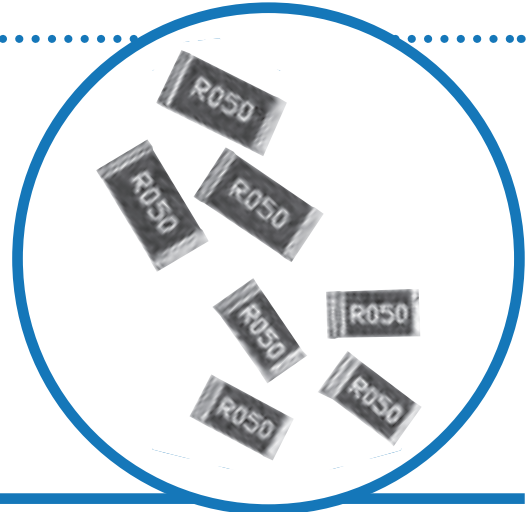


# Low Value Flat Chip Resistor

LRC/LRF Series

- Standard 2512, 2010 and 1206 sizes
- Resistance values down to 0.003 ohms
- Leach resistant solder-plated copper wrap-around termination
- AEC-Q200 Qualified



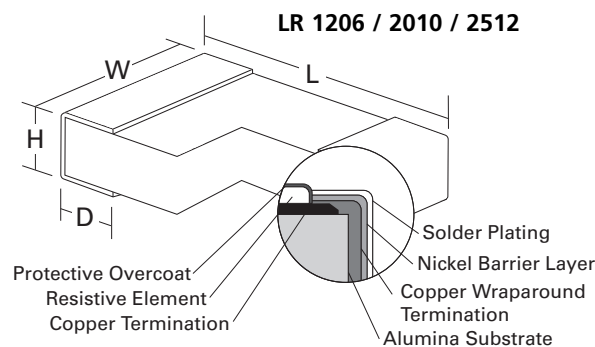
## Electrical Data

		LR1206	LR2010	LR2512
Power rating at 70°C	watts	0.5	1.0	1.5/2.0*
Resistance range	ohms	0R010 to 1R	0R003 to 1R	0R003 to 1R
Dielectric withstanding voltage	volts	200	200	200
TCR	ppm/°C	±100 (Contact factory for value below 0.050 ohms)		
Resistance tolerance	%	≤R005 5%, >R005 1, 2, 5%		
Temperature rise at rated power	°C	40	80	90
Pad and trace area for max power rating @ 70°C	mm <sup>2</sup>	30	30	100

\*2 Watts with total solder pad and trace size of 300 mm<sup>2</sup>

## Physical Data

Dimensions (mm)					
Size	L	W	H (max)	D	D1
LR1206	3.20±0.305	1.63±0.203	0.8	0.48±0.25	0.48±0.25
LR2010	5.23±0.38	2.64±0.25	0.8	0.48±0.25	0.48±0.25
LR2512	6.50±0.38	3.25±0.25	0.8	0.48±0.25	0.48±0.25

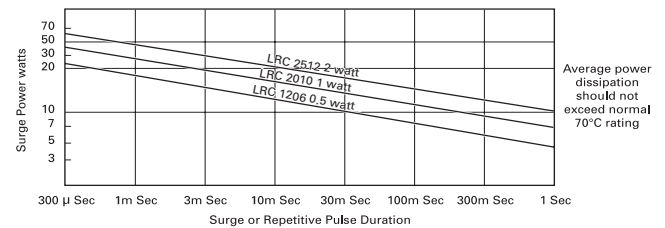
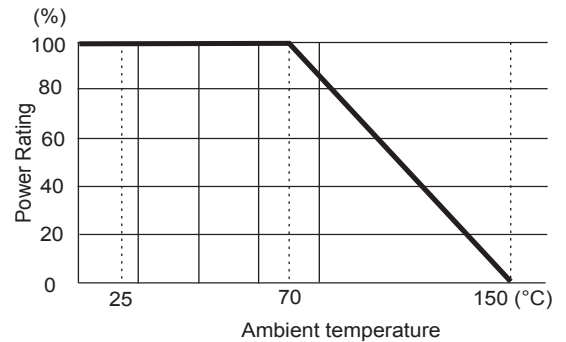


### General Note

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Dimensions (mm)			
	A	B	C
<b>LR1206</b>	2.0	4.0	1.25
<b>LR2010</b>	3.05	6.5	1.5
<b>LR2512</b>	3.7	7.75	1.5

AEC-Q200 Table 7				
ref	Test	Method	Max. (add R05)	Typ. (@1R0)
3	High Temp. Exposure	MIL-STD-202 Method 108	ΔR%	0.5
4	Temperature Cycling	JESD22 Method JA-104	ΔR%	0.25
6	Moisture Resistance	MIL-STD-202 Method 106	ΔR%	0.5
7	Biased Humidity	MIL-STD-202 Method 103	ΔR%	0.5
8	Operational Life (Cyclic Load)	MIL-STD-202 Method 108	ΔR%	1
14	Vibration	MIL-STD-202 Method 204	ΔR%	0.5
15	Resistance to Soldering Heat	MIL-STD-202 Method 210	ΔR%	0.25
16	Thermal Shock	MIL-STD-202 Method 107	ΔR%	0.25
18	Solderability	J-STD-002	>95% coverage	
21	Board Flex	AEC-Q200-005	ΔR%	0.5
22	Terminal Strength	AEC-Q200-006	ΔR%	0.25
	Short Term Overload	6.25 x Pr for 2s	ΔR%	0.5
	Low Temperature Storage	-65°C for 100 hours	ΔR%	0.5
	Leach Resistance	Solder dip at 250°C	90s minimum	



**Note:**

- Although 2010 and 2512 sizes have passed temperature cycling and thermal shock, it is in general not recommended that ceramic chips this large be used on FR4 in a severe temperature cycle environment due to the possibility of solder joint fatigue.
- Full AEC-Q200 qualification applies to ohmic values ≥R01.

**Ordering Procedure**

Example: LRF2512 at 10 milliohms (hence flip-chip mounted) and 2% tolerance on a reel of 1800 pieces

**L R F 2 5 1 2 - R 0 1 G W**

Type \_\_\_\_\_

Mounting \_\_\_\_\_

	Conventional (element up)	Values > R025
F	Flip-chip (element down)	Values ≤ R025

Size \_\_\_\_\_

Value (use IEC62 code) \_\_\_\_\_

Tolerance (use IEC62 code) \_\_\_\_\_

F	1%
G	2%
J	5%

Packing \_\_\_\_\_

W	Tape	1206 or 2010	3000/reel	Standard
		2512	1800/reel	
T1		All sizes	1000/reel	

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