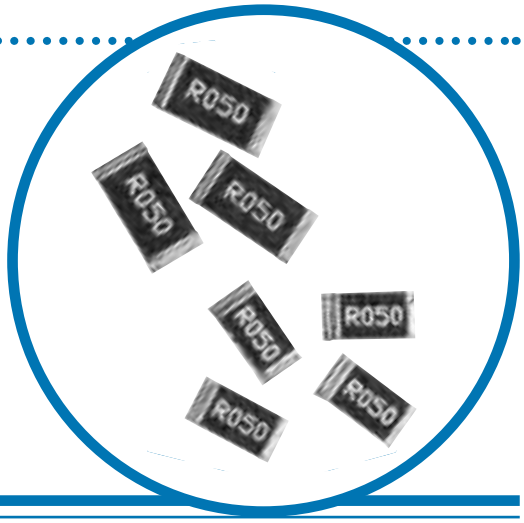
Low Value Flat Chip Resistor

LRC/LRF Series

- **Standard 2512, 2010 and 1206 sizes**
- **Resistance values down to 0.003 ohms**
- **Leach resistant solder-plated copper wrap-around termination**
- **Low inductance - less than 0.2nH**
- **AEC-Q200 Qualified**



Electrical Data

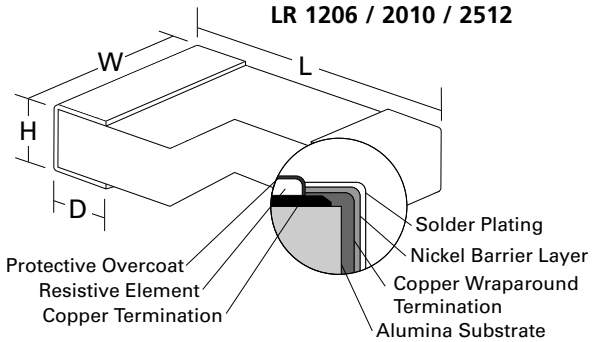
		LR1206	LR2010	LR2512
Power rating at 70°C	watts	0.5	1.0	1.5/2.0*
Resistance range	ohms	0R010 to 1R	0R003 to 1R	0R003 to 1R
Dielectric withstanding voltage	volts	200	200	200
TCR	ppm/°C	±100 (Contact factory for value below 0.050 ohms)		
Resistance tolerance	%	≤R005 5%, >R005 1, 2, 5%		
Temperature rise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

*2 Watts with total solder pad and trace size of 300 mm^2

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

LR 1206 / 2010 / 2512



General Note

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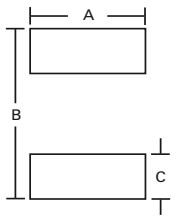
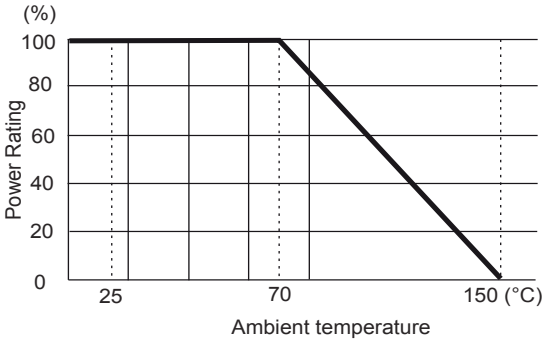
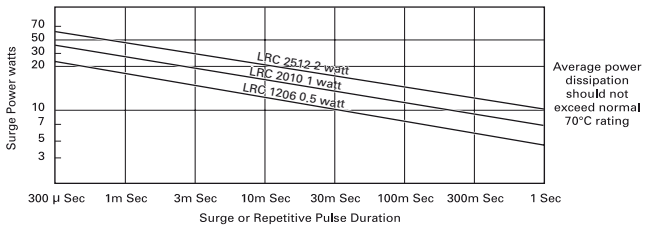
LRC/LRF Series

Dimensions (mm)	A	B	C
LR1206	2.0	4.0	1.25
LR2010	3.05	6.5	1.5
LR2512	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	0.2
4	Temperature Cycling	JESD22 Method JA-104	ΔR%	0.25	0.1
6	Moisture Resistance	MIL-STD-202 Method 106	ΔR%	0.5	0.2
7	Biased Humidity	MIL-STD-202 Method 103	ΔR%	0.5	0.2
8	Operational Life (Cyclic Load)	MIL-STD-202 Method 108	ΔR%	1	0.5
14	Vibration	MIL-STD-202 Method 204	ΔR%	0.5	0.05
15	Resistance to Soldering Heat	MIL-STD-202 Method 210	ΔR%	0.25	0.05
16	Thermal Shock	MIL-STD-202 Method 107	ΔR%	0.25	0.1
18	Solderability	J-STD-002	>95% coverage		
21	Board Flex	AEC-Q200-005	ΔR%	0.5	0.2
22	Terminal Strength	AEC-Q200-006	ΔR%	0.25	0.1
	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:

1. 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.
2. 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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