



Metal Alloy Low-Resistance Resistor

TYPE : LR2010 1W Series

SPECIFICATIONS

規 格 書

Issued by : _____ Date : _____

Checked by : _____ Date : _____

Approved by : 陳富強 Date : 2008/09/16

巨 馳 科 技 股 份 有 限 公 司

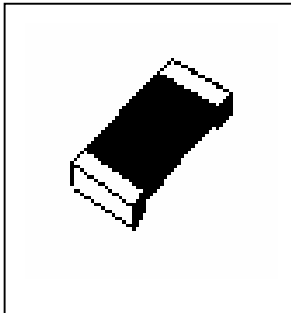
Giant Chip Technology Co., Ltd.

TEL : 886-2-8698-2189 FAX : 886-2-8698-2358

TEL : 886-7-301-0468 FAX : 886-7-301-0467

Metal Alloy Low-Resistance Resistor

Product Specification: LR2010 1W Type



FEATURES :



- ◆ Ideal for all types of current sensing, voltage division and Pulse applications including switching and linear power Supplies, Instruments, power amplifiers.
- ◆ Proprietary processing technique produces extremely low Resistance values.
- ◆ High-temperature performance (up to +275 °C)
- ◆ Very low inductance 0.5nH to 5nH
- ◆ Excellent frequency response
- ◆ Low thermal EMF (<1uV/°C)
- ◆ Lead(Pb)-free construction is RoHS-compliant

1. Standard Electrical Specifications :

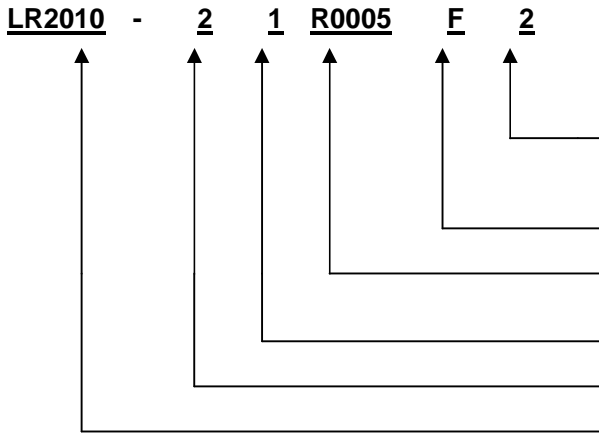
Model	Power Rating at 100 °C (Watts)	Resistance Range m		
		0.5%(D)	1.0%(F)	5.0%(J)
LR2010-21	1.0	3~100	0.5~100	0.5~100

1 Watts with total solder pad trace size of 100mm²

2. Technical Specifications :

Parameter	Unit	LR2010-21 (m)
Temperature Coefficient	ppm /°C	0.5~3= +50 4~6.9= -25 7~100= -15
Operating Temperature Range	°C	-65 ~ + 275
Maximum Working Voltage	V	(P × R) ^{1/2}

Ordering Information :



Packing

2 =Tape & Reel ; B=Bulk Pack

2 =2,000 Pcs

Tolerance

D=±0.5% ; F=±1.0% ; J=±5.0%

Resistance

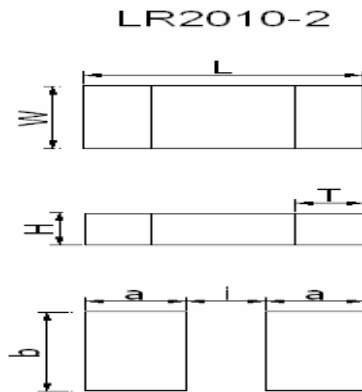
EX : R001=1m ; R010=10m

Power Rating (Watts)

Number of Terminals

Model (Size)

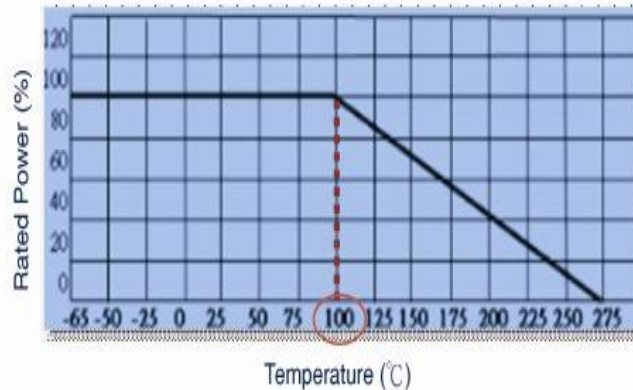
3. Dimensions :



DIMENSIONS - in inches (millimeters)					
Model	Resistance Range m	L	W	H	T
LR2010-21	0.5 ~ 3	0.20±0.010 (5.1±0.254)	0.10±0.010 (2.54±0.254)	0.031±0.010 (0.8±0.254)	0.051±0.010 (1.60±0.254)
	4 ~100	0.20±0.010 (5.1±0.254)	0.10±0.010 (2.54±0.254)	0.031±0.010 (0.8±0.254)	0.031±0.010 (0.8±0.254)
SOLDER PAD DIMENSIONS - in inches (millimeters)					
Model	Resistance Range m	a	b	i	
LR2010-21	0.5 ~ 3	0.011(1.80)	0.115(2.92)	0.048(1.22)	
	4 ~ 100	0.09(2.29)	0.115(2.92)	0.095(2.41)	

Remark : 1 Watts with total solder pad trace size of 100 mm²

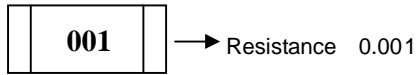
4. Power Derating Curve :



5. Performance :

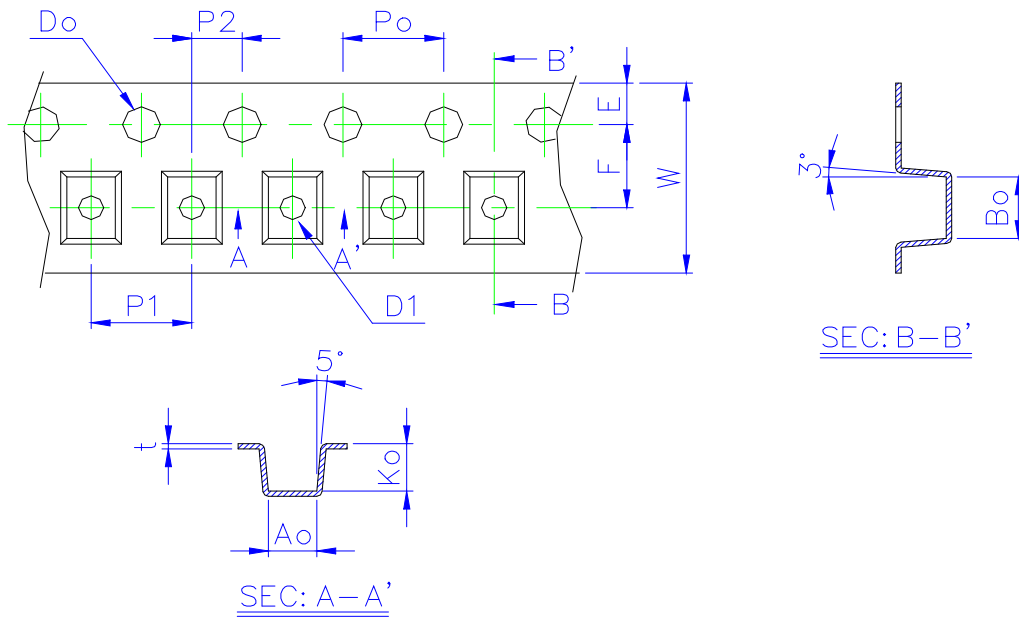
Test Item	Conditions of test	Test Method
Thermal Shock	- 55 °C to + 125 °C , 1000 cycles , 15 minutes at each extreme	JIS C5202 7.4
Solderability test	Steam aging:4 hrs, cool down 30 minutes then test	JIS C5202 6.5
Low Temperature Storage	-55°C for 1000 hours	JIS C5202 7.1
High Temperature Exposure	1000 hours @ + 155°C	JIS C5202 7.2
Bias Humidity	+ 85°C , 85% RH, 10% Bias, 1000 hours,90 minutes "ON" ,30 minutes "OFF"	JIS C5202 7.9
Mechanical Shock	100 grams for 6 milliseconds, 5 pulses	JIS C5202 6.13
Vibration	Frequency varied 55Hz in one minute , 3 directions , 12 hours	JIS C5202 6.7
Load Life	1000 hours @ rated power, + 100 °C , 1.5 hours "ON" , 0.5 hours "OFF"	JIS C5202 7.10
Resistance to Solder Heat	Solder temp./immersion time:260±5 °C ,10±1secs and 350±10 °C ,3.5±0.5secs	JIS C5202 6.4
Moisture Resistance	Mil-STD-202 , Method 106 , 0% power , 7a and 7b not required	JIS C5202 7.6
Resistance to solvent	Immersion time:60±5 secs,20 °C ~ 25 °C	JIS C5202 6.9

6. Marking :



7. Packaging :

Model	Reel			
	Tape Width	Diameter	Pieces/Reel	Code
LR2010	12mm/Embossed Plastic	178mm/7"	2,000	2



Unite: mm

Item	W	P1	E	F	Do	D1	P0	Po*10	P2	Ao	Bo	Ko	t
Spec.	12.00	4.00	1.75	5.50	1.50	1.50	4.00	40.00	2.00	2.90	5.45	1.10	0.23
Tole.	±0.10	±0.10	±0.10	±0.05	+ 0.10 - 0.00	±0.10	±0.05	±0.10	±0.05	±0.10	±0.10	±0.05	±0.05