



DATA SHEET

Product: Metal Foil Current Sensing Chip Resistors

Size: 1206、2010、2512

Issued Data:

Edition:

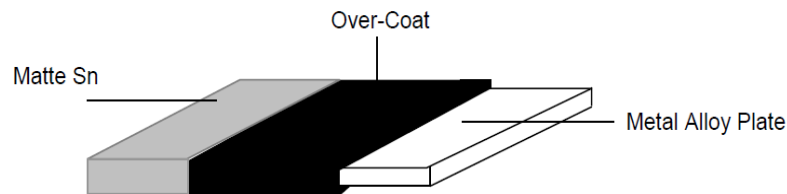
Produced by (QC)	Checked (QC)	Approved by (QC)
15-Jan-14	15-Jan-14	15-Jan-14
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Metal Foil Current Sensing Chip Resistors

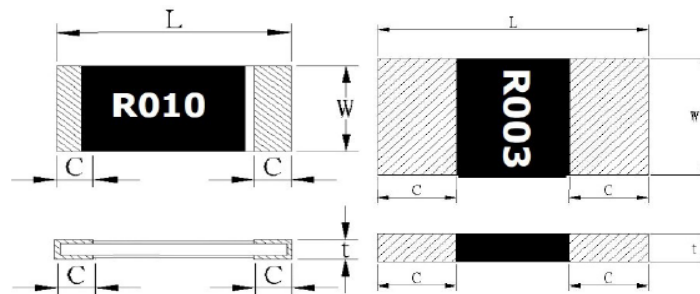
■ Resume

High power rating up to 3Watts/Low TCR down to 75PPM/Resistance values from 1mΩ to 60mΩ/Customized resistance available.

■ Construction



■ Dimensions



Size	L	W	T	C
1206	3.20±0.20	1.60±0.20	0.75±0.20 (R=1mΩ)	1.10±0.30 (R=1mΩ)
			0.60±0.20 (2mΩ≤R≤30mΩ)	0.50±0.30 (2mΩ≤R≤30mΩ)
2010	5.00±0.20	2.50±0.20	0.60±0.20	0.60±0.30
2512	6.40±0.20	3.20±0.20	0.60±0.20	2.0±0.20(R≤3mΩ)
				0.9±0.2(R>3mΩ)
*2512	6.40±0.20	3.20±0.20	0.70±0.20	2.0±0.20(R≤4mΩ)
				0.9±0.2(R>4mΩ)

■ Part Numbering

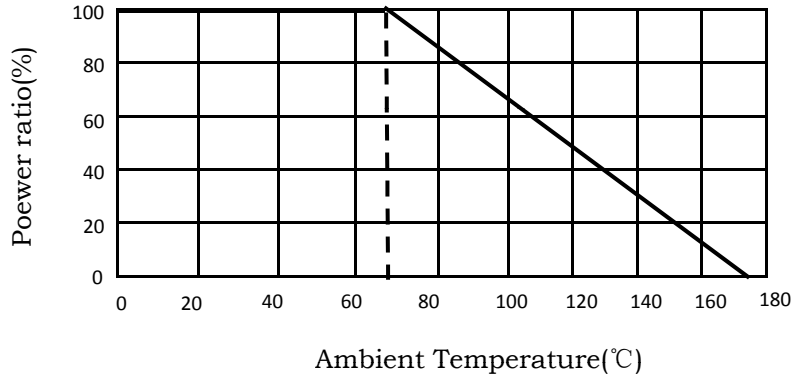
<u>MRD</u>	<u>6432(2512)</u>	<u>LR3M5</u>	<u>F</u>	<u>T</u>	<u>S</u>
Product Type	Resistor Size	Resistance	Resistance Tolerance	Packing Code	High Power
	3216(1206) 5025(2010) 6432(2512)	5% LR001:0.001Ω LR010:0.01Ω LR3M5:0.0035Ω 1% LR002:0.002Ω LR050:0.05Ω LR3M5:0.0035Ω	F=1% G=2% J=5%	T: Taping Reel B: Bulk	R: 3W S: 2W A: 1.5W N: 1W U: 1/2W

■ Standard Electrical Specifications

Item Type	Power Rating	Operating Temp. Range	Max. Operating Voltage	Resistance Range			Insulation Resistance	TCR (PPM/°C)
				1%	2%	5%		
1206	1/4W 1/2W 1W	-55°C~170°C	√(P*R)	1mΩ ≤ R ≤ 30mΩ			>100MΩ	±200ppm/°C (R=1mΩ) ±100ppm/°C (2mΩ ≤ R ≤ 10mΩ) ±75ppm/°C (R > 10mΩ)
2010	1/2W 3/4W 1W 1.5W	-55°C~170°C	√(P*R)	5mΩ ≤ R ≤ 30mΩ			>100MΩ	±100ppm/°C (5mΩ ≤ R ≤ 10mΩ) ±75ppm/°C (R > 10mΩ)
2512	1W	-55°C~170°C	√(P*R)	1mΩ ≤ R ≤ 50mΩ			>100MΩ	±275ppm/°C (R ≤ 1mΩ) ±100ppm/°C (1mΩ < R ≤ 10mΩ) ±75ppm/°C (R > 10mΩ)
	1.5W			R ≤ 15mΩ				
	2W			R ≤ 10mΩ				
*2512	1W 1.5W 2W 3W	-55°C~170°C	√(P*R)	1mΩ ≤ R ≤ 100mΩ			>100MΩ	±75ppm/°C
	1W 1.5W			100mΩ < R ≤ 500mΩ				

*:Ultra High Power

■ Derating Curve



■ Environmental Characteristics

Item	Requirement	Test Method
Temperature Coefficient of Resistance(T.C.R.)	Refer 4.0	+25°C~+125°C
Load Life	<±1%	1000hours at rated power,70°C 1.5 hrs"ON" and 0.5 hrs "OFF"
Short Time Overload	<±0.5%	5 X rated power for 5s
Moisture no Load	<±1%	85°C,85%RH,1000hrs
Temperature Cycle	<±0.5%	-55°C & +155°C,300cycle,15min per extreme condition
Resistance to Soldering Heat	<±0.5%	260±5°C for 20±1 seconds
Solderability	95% min. coverage	245±5°C for 2±0.5 seconds
High Temperature Exposure	<±1%	170°C,1000hrs
Low Temperature Storage	<±0.5%	-55°C,1000hrs
Substrate Bending	<±1%	Bending width 2mm
Insulation Resistance	≥100MΩ	100V DC for 1 minute

Operating Voltage= $\sqrt{P \cdot R}$ or Max.Operating Voltage listed above, whichever is lower.

Overload Voltage= $2.5 \cdot \sqrt{P \cdot R}$ or Max.Overload Voltage listed above, whichever is lower.

RCWV(Rated Continuous Working Voltage)= $\sqrt{P \cdot R}$ or Max. Operating Voltage whichever is lower.

■ **Reference Standards:IEC 60115-1,60068-2-58;JIS-C 5201-1**