Data Sheet

Customer:

Product: Metal Strip Low Ohmic Resistors. HLR Series

Size : 2512

Issued Date: 1-Feb.-2016

Edition: Ver. 1

Record of change

Date	Ver.	Description	Page
1-Feb.-2016	1		

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1-Feb.-2016	1-Feb.-2016	1-Feb.-2016	
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METAL STRIP LOW OHMIC RESISTORS
HLR SERIES

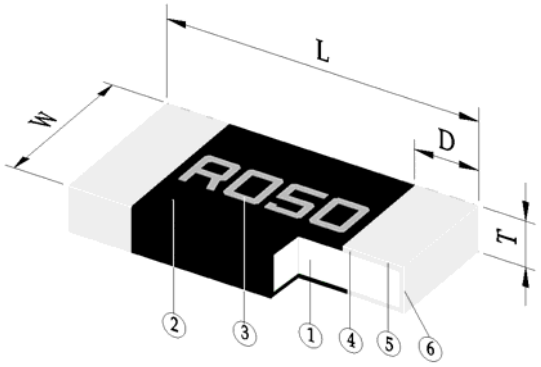
Features

- High power rating upto 3 Watts
- Low TCR down to ±50PPM/℃
- Resistance values from 7mΩ to 100mΩ
- Customized resiatance value is available.

Applications

- DC-DC converter, Charger, Adaptor
- SMPS, M/B, NB (for power management)
- Monitor power management

Configuration



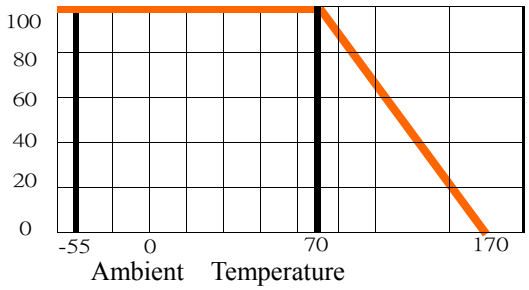
1	Alloy Plate	4	Internal Electrode (Cu)
2	Overcoat (Epoxy)	5	Barrier Layer (Ni)
3	Marking	6	Solder Plating (Sn)

Dimensions

Type	L	W	T	D
HLR2512 7m~100m	6.40+/-0.25	3.20+/-0.25	0.70+/-0.20	0.90+/-0.30

(unit:mm)

Power Derating Curve



Maximum dissipation in percentage of rated power as a function of the ambient temperaature

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Rating

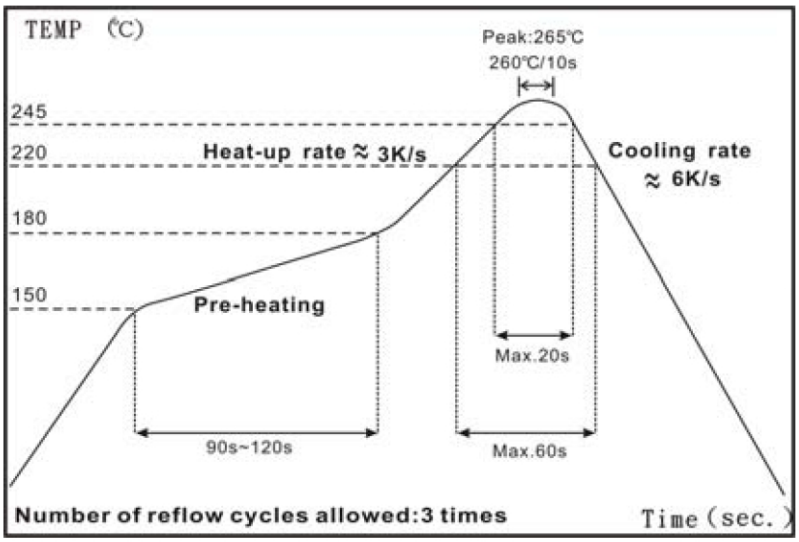
Rating / Type	Power Rating at 70℃(W)	Operating Temp. Range	Resistance Tolerance (%)	TCR (PPM/℃)	Resistance Range (mΩ)
HLR2512	1W,2W,3W	-55 ~ +170℃	±0.5%,±1%,±5%	±75	7 ~ 14.9
				±50	15 ~ 100

$E = \sqrt{P * R}$　E：Working Voltage(V)，P：Rated Power (W)，R：Resistance Value(Ω)

Part Numbering

HLR	2512	F	T	S	-	R015
Type	Size	Tolerance	Packing	Watt		R Value
	2512	D: ±0.5%	Tape/Reel	T : 1W		
		F: ±1%		S : 2W		4 digit
		J : ±5%		R : 3W		R015=15mΩ
						R020-20mΩ

Soldering Profile (Reflow soldering only)



IR Reflow Soldering

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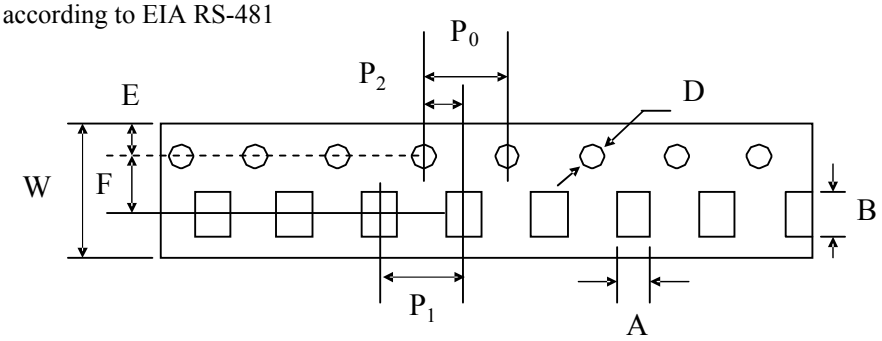
Tape And Reel Package

- Taping specs are according to EIA RS-481

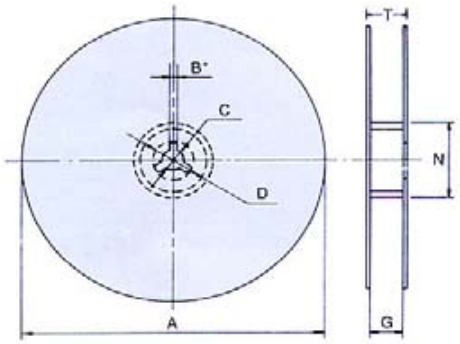


Accumulated dimensional tolerance 40±0.2mm

Size	A	B	W	F	E	P1	P2	P0	D
2512	3.50±0.20	6.70±0.20	12.00±0.30	5.50±0.05	1.75±0.10	4.00±0.10	2.00±0.05	4.00±0.10	1.50+0.10/-0

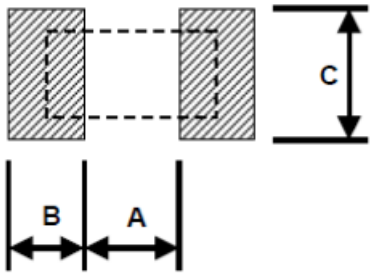
(unit: mm)

Reel Package



Size	Packaging Q'ty	A	N	C	D	B	G	T
2512	4kpcs/Reel	178.0±2.0	60.0±0.5	13.0±0.5	20(Min.)	2.0±0.5	13.8±1.5	16.7max.

Recommended Land Pattern



Type	A(mm)	B(mm)	C(mm)
HLR2512	4.00	2.00	3.50

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■ Specification And Test Methods

ITEM	SPECIFICATION	TEST METHOD
Temperature Coefficient of Resistance (T.C.R.)	As Spec.	**IEC60115-1 4.8** **JIS-C-5201-1 4.8** -55℃~+125℃, 25℃ is the reference temperature
Short Time Overload	1.0%	**IEC60115-1 4.13** **JIS-C-5201-1 4.13** 5*rated power for 5 seconds
Insulation Resistance	>100MΩ	**IEC60115-1 4.6** **JIS-C-5201-1 4.13** 100V DC for 1 minute
Endurance	1.0%	**IEC60115-1 4.25** **JIS-C-5201-1 4.25.1** 70±2℃, rated power for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Biased Humidity	1.0%	**MIL-STD-202 Method 103** 1000 hrs 85℃/85%RH 10% of operating power
Dry Heat	1.0%	**IEC60115-1 4.23.2** **JIS-C-5201-1 4.23.2** at +170℃ for 1000 hrs
Bending Strength	1.0%	**JIS-C-5201-1 4.33** **IEC-60115-1 4.33** Bending width 2mm once for 5 seconds
Solder ability	95% min. coverage	**JIS-C-5201-1 4.17** **IEC-60115-1 4.17** 245±5℃ for 3 seconds
Resistance to Soldering Heat	0.5%	**JIS-C-5201-1 4.18** **IEC-60115-1 4.18** 260±5℃ for 10 seconds
Rapid Change of Temperature	1.0%	**JIS-C-5201-1 4.19** **IEC-60115-1 4.19** -55℃ to +155℃, 5 cycles
Low Temperature Storage	1.0%	**IEC60115-1 4.23.4** **JIS-C-5201-1 4.23.4** at -55℃ for 1000 hrs

■Storage Temperature: 25±3 C; Humidity < 80%RH