APPROVAL SHEET

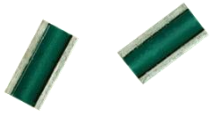
Product Name	**: Metal Strip High Power Low Ohm Chip Resistor_Long Terminal**
Part No.	**: RHL_W**
Description	**: Size 1225**

For more contact information, please refer to our website: www.rideetech.com

Metal Strip High Power Low Ohm Chip Resistor_Long Terminal

Applications

- Industrial Product Power Management
- Power Supply
- SWPS (DC-DC Converter, Charger, Adaptor



Pb-free
RoHS COMPLIANT
HALOGEN FREE

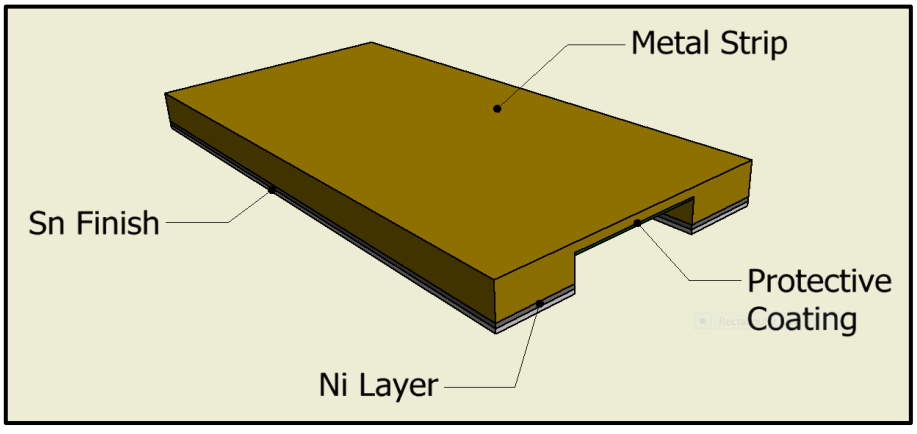
Features

- These specifications cover 1225 sized high power low resistance current sensing metal resistors.

Part Number Explanation

RHL	1225	40	F	R005	T	W
Product	Size (Inch)	Rated Power	Tolerance	Resistance	Packaging	Functional
Metal Strip High Power Low Ohm Chip Resistor_Long Terminal	1225	40: 4W	F : ±1.0% H : ±3.0% J : ±5.0%	R005=5mΩ 1M50=1.5mΩ M500=0.5mΩ	T= Tape & Reel	W= Long Terminal

Configuration

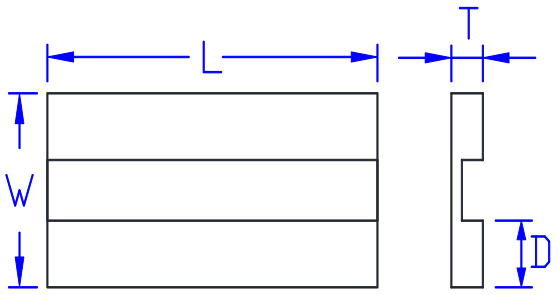


Standard Electrical Specifications

Type	Rated Power at 70℃	Max Working Current	Max Overload Current	Temperature Coefficient (TCR; ppm/℃)	Resistance Range F(± 1%) H(± 3%) J(± 5%)
RHL1225	4W	200A	447A	±500	0.1mΩ
		116A	258A	±350	0.3mΩ
		89A	200A	±300	0.5mΩ
		63A	141A	±250	1mΩ
		36A	81A	±100	3mΩ

- Functional code: W
- Beyond the above specification also can meet the special requirements. For detail questions, please contact us freely.

Dimensions

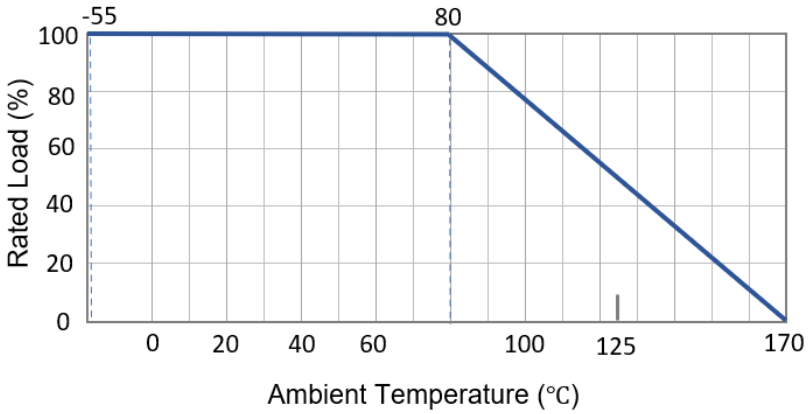


Unit : mm

Type	L	W	D	T	Alloy
M10~M25	6.35±0.25	3.0±0.2	1.0±0.25	1.0±0.2	Manganin-C2
M30~M40			0.5±0.25	1.0±0.2	Manganin-C2
M50~R001			0.5±0.25	0.6±0.2	Manganin
1M5			1.0±0.25	0.6±0.2	Kanthal
R002			0.8±0.25	0.6±0.2	Kanthal
2M5~R003			0.5±0.25	0.6±0.2	Kanthal

Derating Curve

Power ratings are based on continuous full load operation at rated ambient temperature of 80°C. For resistors operated at ambient temperature in excess of 80°C, the maximum load shall be derated in accordance with the following curve.



Recommended Customer Soldering Parameters

Recommended IR Reflow Soldering Conditions

Preliminary heating: 150℃~180℃, 120s max
Soldering: 220℃, 60s max
Peak temperature: 245℃, 15s max

Voltage Rating or Current Rating

The direct or alternating voltage for the rated power can be calculated from the following formula but must not exceed the maximum voltage.

$$V=\sqrt{P\times R}$$

V=Rated Voltage(V)
P=Rated Power(W)
R=Rated Resistance(Ω)

■ Reliability Test and Requirement

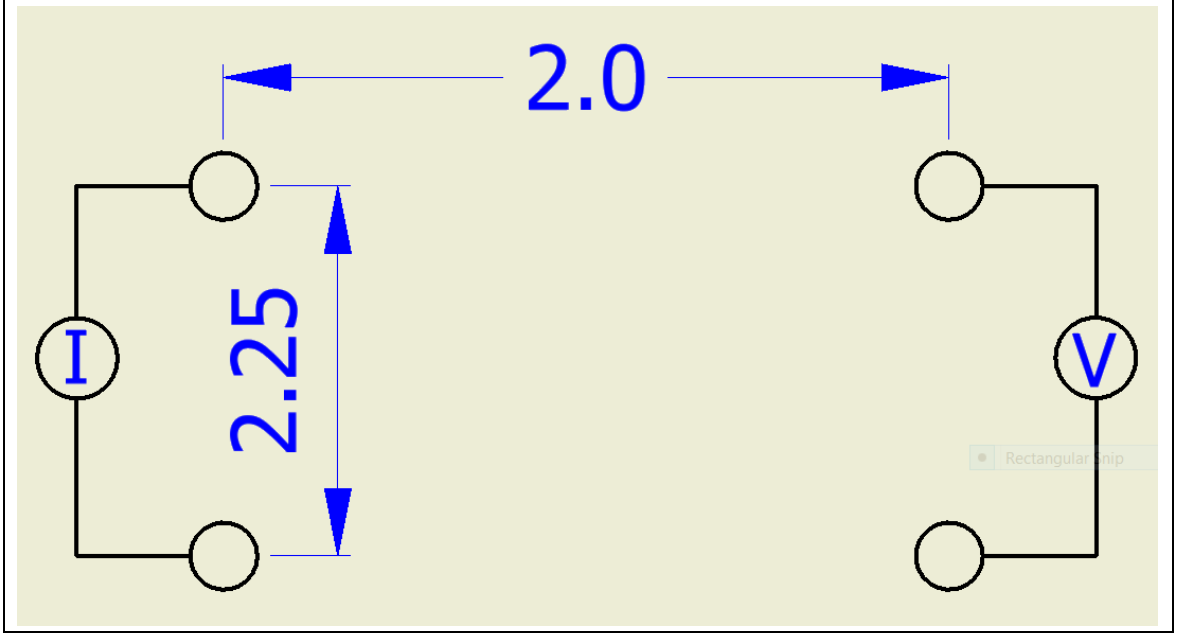
Test	Test Method	Procedure	Requirements
High Temperature Storage	MIL-STD-202 Method 108	1000hrs. T=125C. Unpowered. Measurement at 24±4hrs after test conclusion	ΔR≦ ±(1%＋0.5mΩ)
Temperature Cycling	JESD22 Method JA-104	1000 cycles (-55C to +125C). Measurement at 24±4hrs after test conclusion. 30 m max., dwell time at each temp extreme, transition time 1m max.	
Bias Humidity	MIL-STD-202 Method 103	1000hrs. 85C/85%RH. 10% of operating power. Measurement at 24±4hrs after test conclusion.	
Operating Life	MIL-STD-202 Method 108	Condition D (1000hrs) Steady State TA=125C at rated power. Measurement at 24±4hrs after test conclusion.	
External Visual	MIL-STD-883 Method 2009	Electrical test not required. Inspect device construction, marking and workmanship	
Physical Dimension	JESD22 Method JB-100	Verify physical dimensions to the applicable device detail specification. Electrical test not required	User Spec.
Resistance to Solvents	MIL-STD-202 Method 215	Aqueous wash chemical-OKEM Clean or equivalent Do not use banned solvents.	ΔR≦ ±(1%＋0.5mΩ)
Mechanical Shock	MIL-STD-202 Method 213	Figure 1 of Method 213. Condition C	
Vibration	MIL-STD-202 Method 204	5g's for 20min., 12 cycles each of 3 orientations. Use 8"*5" PCB .031" thick 7 secure points on one long side and secure points at corners of opposite sides. Parts mounted within 2"from any secure point. Test from 10-2000Hz	
Resistance to Soldering heat	MIL-STD-202 Method 210	Condition B. No pre-heat of samples. Single Wave Solder-Procedure 2 for SMD	
Solderability	J-STD-002	Electrical test not required. Magnification 50 X. SMD Conditions: a) Method B, 4hrs @155C dry heat @235C b) Method B @215C category 3. c) Method D category 3@260C.	>95% coverage
Electrical Characterization	User Spec.	Parametrically test per lot and sample size requirements, summary to show min, max, mean and standard deviation at room as well as min and max operating temperatures.	User Spec.
Board Flex	AEC Q200-005	Appendix 2 Note: 2mm (Min)	ΔR≦ ±(1%＋0.5mΩ)
Terminal strength (SMD)	AEC Q200-006	Appendix 1 Note: Force of 1.8kg for 60 seconds	

Measurements

4-Wire Precision Measurement

Equipment : ADEX AX-1152D DC Low Ohm Meter

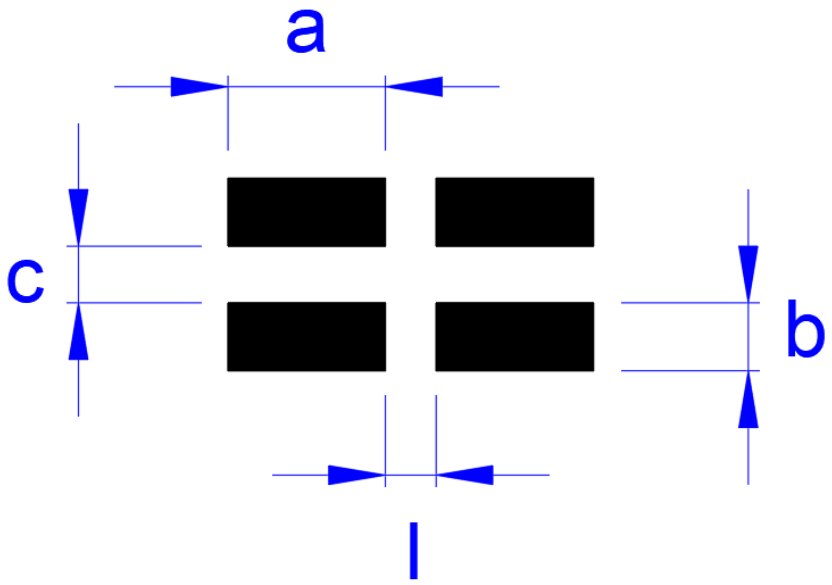
Excitation Current: 1A



Unit: mm

■ 4-Wire Pad Layout

Note: No circuits between pads to avoid short circuit



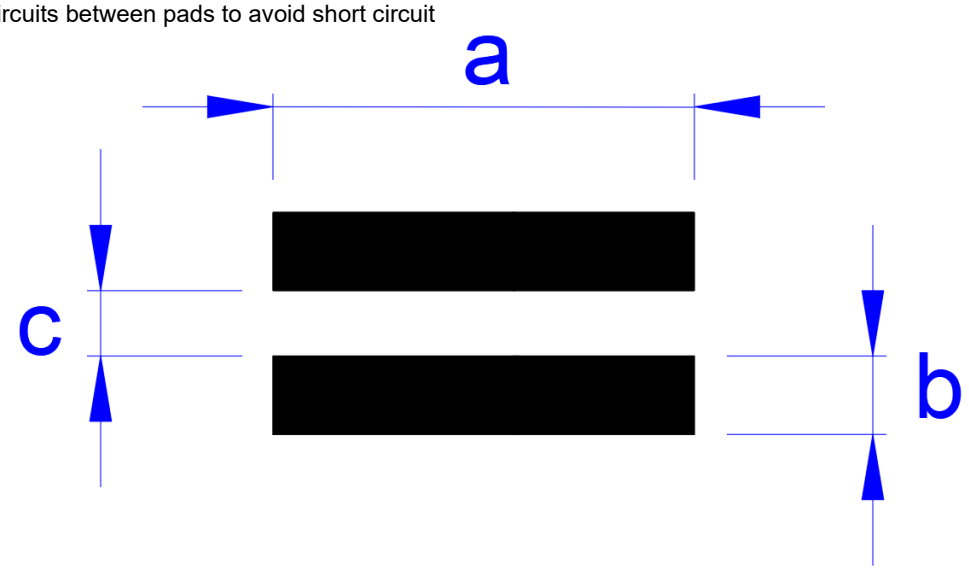
Unit: mm

TYPE	a	b	c	l
0.1mΩ~0.25mΩ	3.0	1.4	0.6	0.8
0.3mΩ~0.4mΩ	3.0	0.9	1.6	0.8
0.5mΩ~1mΩ	3.0	0.9	1.6	0.8
1.5mΩ	3.0	1.4	0.6	0.8
2mΩ	3.0	1.2	1.0	0.8
2.5mΩ~3mΩ	3.0	0.9	1.6	0.8

*Dimensions are for reference only.

■ 2-Wire Pad Layout

Note: No circuits between pads to avoid short circuit

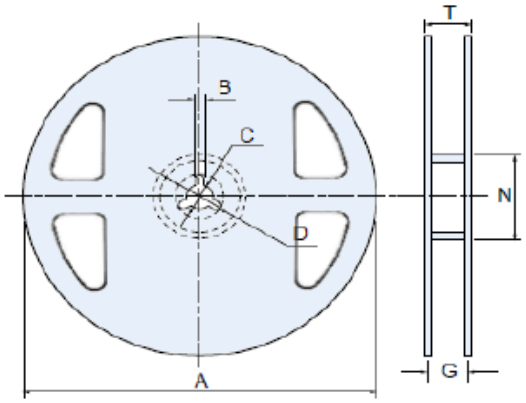


Unit: mm

TYPE	a	b	c
0.1mΩ~0.25mΩ	6.8	1.4	0.6
0.3mΩ~0.4mΩ	6.8	0.9	1.6
0.5mΩ~1mΩ	6.8	0.9	1.6
1.5mΩ	6.8	1.4	0.6
2mΩ	6.8	1.2	1.0
2.5mΩ~3mΩ	6.8	0.9	1.6

*Dimensions are for reference only.

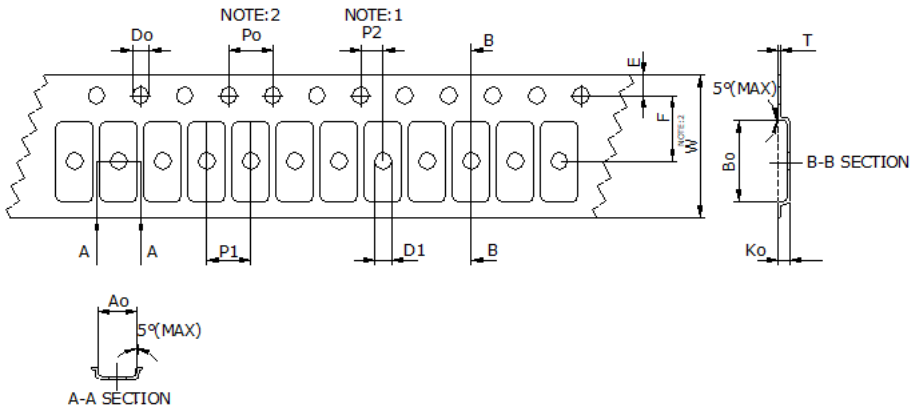
■ Packaging Information



Unit : mm

Size	Packaging Q'ty	A	N	C	D	B	G	T
1225	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.

■ Taping Information



Unit：mm

Size	Ao	Bo	Ko	Po	P1	P2	T
1225	3.4±0.1	6.75±0.1	0.80±0.1*	4.0±0.1	4.0±0.1	2.0±0.05	0.25±0.1
	E	F	Do	D1	W	10Po	
	1.75±0.1	5.5±0.05	1.55±0.05	1.5 (min)	12.0±0.3	40.0±0.2	