

E-beam Welding Alloy Resistor

- Vacuum Electron-beam welding craft, pure copper electrode, Ideal solution for current detection applications.
- Bridge-shaped structure, conducive to heat dissipation, high power, superb pulse load capability
- All-metal structure, surface pickling and passivation treatment, strong weather resistance
- Ultra-low EMF
- Ultra-low parasitic inductance, fast response, suitable for high frequency AC current detection
- RoHS compliant



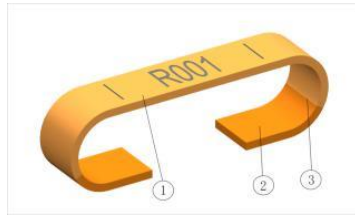
GENERAL SPECIFICATIONS

Model	Resistance Value (mΩ)	Rated Power (70°C)	Material	T.C.R (ppm/°C)	Tolerance	Inductance	Thermal EMF (0-100°C)	Temp. Range
RSNB4312	2	4W	Manganese Copper	±100	±1% (F) ±5% (J)	< 3nH	< 1μV/°C	-55°C ~ +170°C
	3							
	5		Karma	±50				
	10							
	20							
RSNB4320	1	7W	Manganese Copper	±100				
	2		Karma	±50				
	5							
	6							
	8							
	10							

CHARACTERISTICS

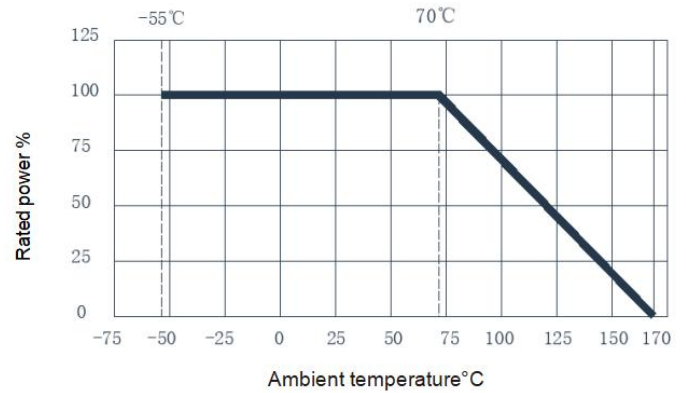
Test Item	Standard	Test method
T.C.R	Within specified T.C.R	IEC60115-1 4.8, measured point 20°C~+130°C, reference point +20°C
Solderability	Minimum 95%	IEC60115-1 4.17, 245°C tin bath, 3s
Short time overload	△R±1%	IEC60115-1 4.13, five times rated power, 5s
Resistance to soldering heat	△R±0.5%	IEC60115-1 4.18, 260°C tin bath, maintaining 10s
High temp. & humidity	△R±1%	Applying 10% of the rated power (current) or the maximum current of the component (whichever is lower) for a duration of 1000 hours in a temperature of 85° C and a humidity of 85% according to MIL-STD-202 method 103
High temp. storage	△R±1%	IEC60115-1 4.25.3, 1000hours @170°C, without loading current and voltage
Low temp. load	△R±0.5%	IEC60115-1 4.36, cooled from room temperature to -55°C, no load for 1.5 hours, applying rated power, continuously flowing for 45 minutes, cool for 15 minutes, then recover to room temperature for testing again.
Temperature cycle	△R±1%	IEC60115-1 4.19, -55°C @30mins ~ +155°C @30mins ; 1000 cycles
Load life	△R±1%	IEC 60115-1 4.25.1, 1000hrs., 70°C±2°C, rated current, or the maximum current rating of the component (whichever is lower) is applied for 1.5 hours/0.5 hour interruption

CONSTRUCTION



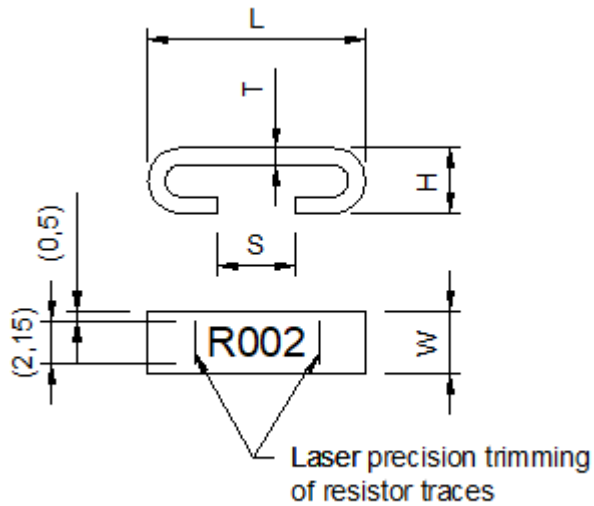
- ① Manganese copper, Karma, low T.C.R ($< 20\text{ppm}/^{\circ}\text{C}$)
- ② Pure red copper terminal
- ③ Electron-beam welding

DERATING CURVE

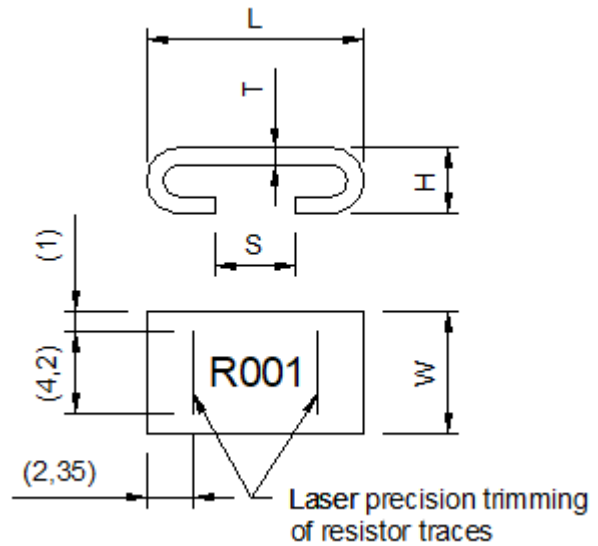


DIMENSIONS & RECOMMENDED PAD AND SIZE [mm]

▽ RSNB4312



▽ RSNB4320



Model	Resistance value	L	W	H	S	T
RSNB4312	2m Ω	11 ± 0.3	3.15 ± 0.3	3.3 ± 0.3	4 ± 0.25	0.85 ± 0.1
	3m Ω					0.60 ± 0.1
	5m Ω					0.35 ± 0.1
	10m Ω					0.60 ± 0.1
	20m Ω					0.30 ± 0.1
RSNB4320	1m Ω	11 ± 0.3	6.2 ± 0.3	3.3 ± 0.3	4 ± 0.25	0.85 ± 0.1
	2m Ω					0.43 ± 0.1
	5m Ω					0.60 ± 0.1
	6m Ω					0.50 ± 0.1
	8m Ω					0.38 ± 0.1
	10m Ω					0.30 ± 0.1

RECOMMEDED PAD AND SIZE [mm]

	Model	a	b	c
	RSNB4312	4.2	5	2
	RSNB4320	7.2	5	2

PACKING SPECIFICATIONS AND SIZE [mm]

Model	A	B	W	E	F	P0	P1	P2	ØD0	T	Qty
RSNB 4312	3.7	11.7	24	1.75	11.5	4	8	2	1.5	3.8	2,000
RSNB 4320	6.8	11.7	24	1.75	11.5	4	12	2	1.5	3.8	1,000

Reel Type	W	M	A	B	D
13" reel for 24mm tape	25.0±0.5	Φ330±2.0	2.0±0.5	Φ13.5±0.5	Φ99.0±1.0



ORDERING PROCEFURE EXAMPLE

Model#	Material	Resistance value	Tolerance	Packing code
RSNB4312 RSNB4320	K : Karma M : Manganese copper	R001 = 1mΩ R005 = 5mΩ	F = ±1% J = ±5%	T0 : Tape & Reel standard B0 : without tape and reel