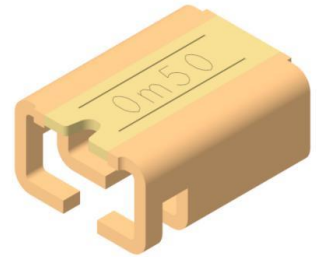


## E-beam Welding Alloy Resistor

- E-beam welding craft, square hole structure with 4- terminal, pure copper electrode, ideal solution for current detection applications
- High reliability and stability ,superb pulse load capability,  $\pm 0.5\%$  tolerance
- Full metal structure, pickling and passivating on the surface of metal, vulcanization resistance, strong weather resistance
- Ultra-low thermal EMF
- Ultra-low parasitic inductance, fast response, suitable for high frequency AC current detection
- RoHS compliant



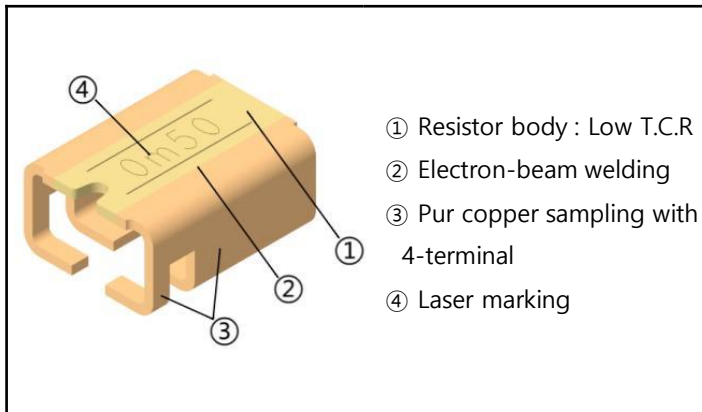
### GENERAL SPECIFICATIONS

| Model    | Resistance Value (m $\Omega$ ) | Rated Power (70°C) | Material | Tolerance                                   | T.C.R (ppm/°C) | Inductance | Thermal EMF (0-100°C) | Temp. Range          |
|----------|--------------------------------|--------------------|----------|---------------------------------------------|----------------|------------|-----------------------|----------------------|
| RSKN1216 | 0.3                            | 10                 | M        | $\pm 0.5$ (D)<br>$\pm 1$ (F)<br>$\pm 5$ (J) | $\pm 75$       | < 3nH      | < 1 $\mu$ V/°C        | -55°C<br>~<br>+170°C |
|          | 0.5                            | 9                  | M        |                                             |                |            |                       |                      |
|          | 1                              | 7                  | M        |                                             |                |            |                       |                      |
|          | 2                              | 5                  | K        |                                             |                |            |                       |                      |
|          | 2.5                            | 5                  | K        |                                             |                |            |                       |                      |

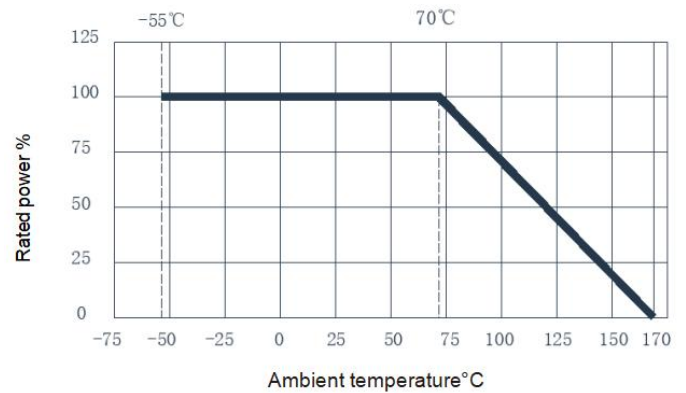
### CHARACTERISTICS

| 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          | $\Delta R \pm 1\%$     | IEC60115-1 4.13, five times rated power, 5s                                                                                                                                                                             |
| Resistance to soldering heat | $\Delta R \pm 0.5\%$   | IEC60115-1 4.18, 260°C tin bath, maintaining 10s                                                                                                                                                                        |
| High temp. & humidity        | $\Delta R \pm 1\%$     | 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           | $\Delta R \pm 0.5\%$   | IEC60115-1 4.25.3, 1000hours @170°C, without loading current and voltage                                                                                                                                                |
| Low temp. load               | $\Delta R \pm 0.5\%$   | 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            | $\Delta R \pm 1\%$     | IEC60115-1 4.19, -55°C @30mins ~ +155°C @30mins ; 1000 cycles                                                                                                                                                           |
| Load life                    | $\Delta R \pm 1\%$     | IEC 60115-1 4.25.1, 1000hrs., 70°C $\pm 2^\circ$ C, rated current, or the maximum current rating of the component (whichever is lower) is applied for 1.5 hours/0.5 hour interruption                                   |

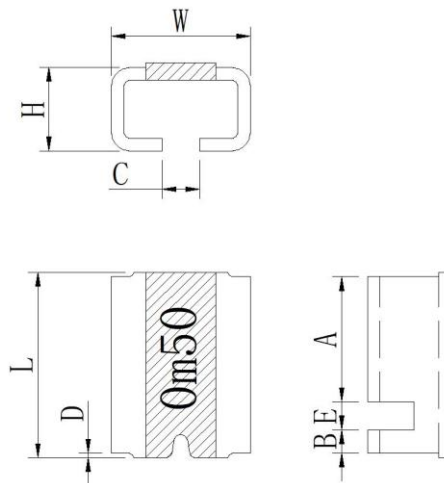
## Construction



## Derating curve



## DIMENSIONS [mm]



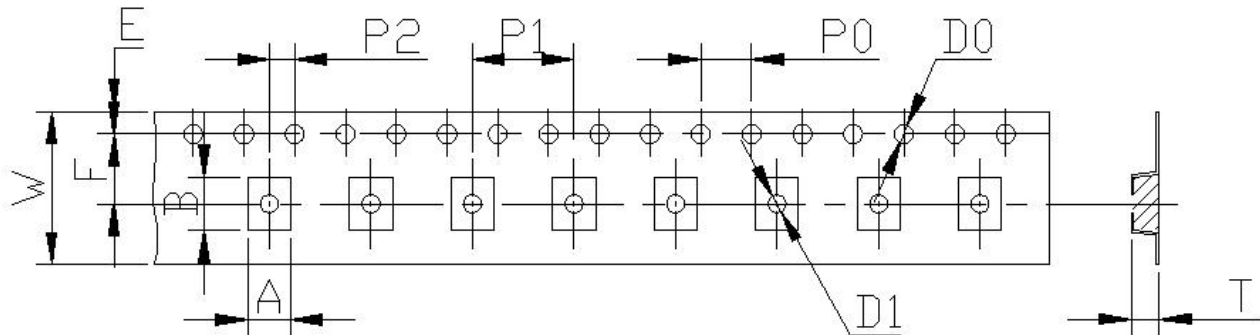
| L       | W        | H        | A       | B       | C       | D   | E        |
|---------|----------|----------|---------|---------|---------|-----|----------|
| 4.1-0.3 | 3.1-0.35 | 1.9-0.35 | 2.7±0.1 | 0.5±0.1 | 0.8+0.3 | 0.1 | 0.6+0.15 |

\* Notice : word code marking as laser engraving, the "L" is used in the naming to indicate the mΩ and also show the decimal point position, which corresponds to the mark "m". For example : 0m30=0.3m Ω, the "R" is used in the naming to indicate the Ω and also show the decimal point position, which corresponds to the mark "R". For example : R001=1mΩ

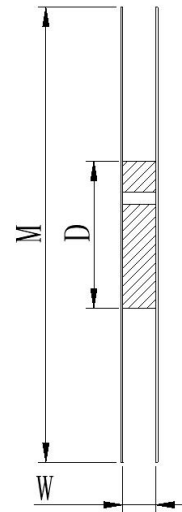
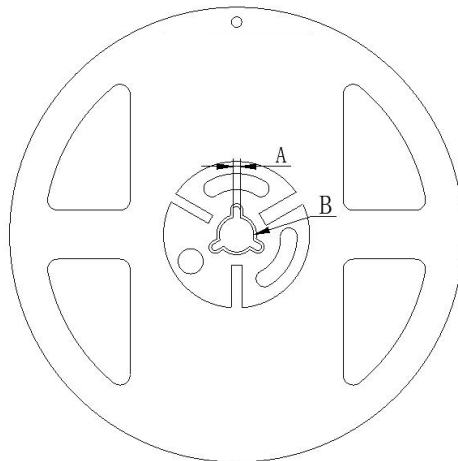
## RECOMMENDED PAD AND SIZE [mm]

|  | a    | b   | c   | i   | w   |
|--|------|-----|-----|-----|-----|
|  | 2.95 | 0.7 | 0.6 | 0.5 | 3.6 |

## Packing specifications and size [mm]



| A   | B   | W  | E    | F   | P0 | P1 | P2 | ØD0 | T   | Qty   |
|-----|-----|----|------|-----|----|----|----|-----|-----|-------|
| 3.4 | 4.2 | 12 | 1.75 | 5.5 | 4  | 8  | 2  | 1.5 | 2.3 | 1,000 |



| Reel Type                | W        | M       | A       | B        | D        |
|--------------------------|----------|---------|---------|----------|----------|
| 7" reel<br>for 12mm tape | 12.3±1.0 | 178±2.0 | 2.0±0.5 | 13.5±0.5 | 60.0±1.0 |

## ORDERING PROCEFURE EXAMPLE

| Model#   | Material                          | Resistance value                           | Tolerance                       | Packing code                                            |
|----------|-----------------------------------|--------------------------------------------|---------------------------------|---------------------------------------------------------|
| RSKN1216 | K : Karma<br>M : Manganese copper | L500 = 0.5mΩ<br>R002 = 2mΩ<br>2L50 = 2.5mΩ | D = ±0.5%<br>F = ±1%<br>J = ±5% | T0 : Tape & Reel standard<br>B0 : without tape and reel |