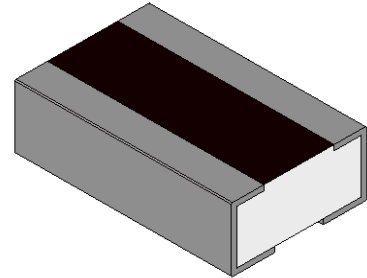


VSRP0508WD Series Current Sensing Resistor (Lead / Halogen Free)

Features / Applications :

- High power rating is up to 1/2W
- Low TCR (± 200 ppm/ $^{\circ}\text{C}$)
- Current sensing resistor for power supplies, motor circuits, etc.
- RoHS compliant & AEC-Q200 qualified
- Suitable for reflow soldering
- Excellent heat dissipation by wide terminal type

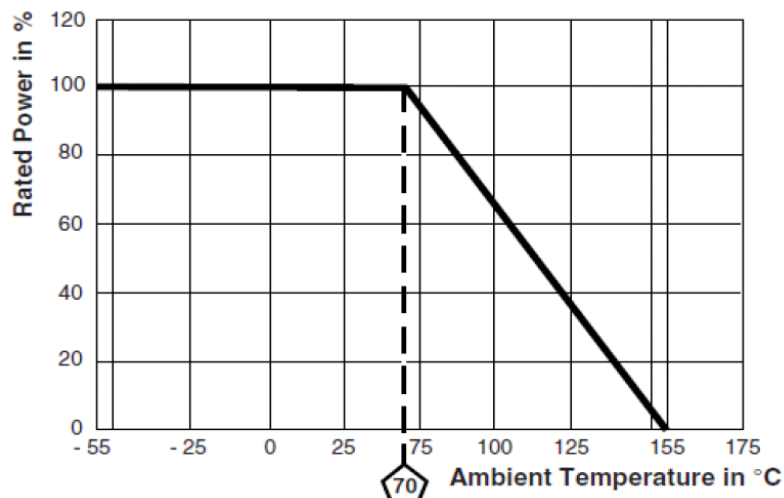


Electrical Specifications :

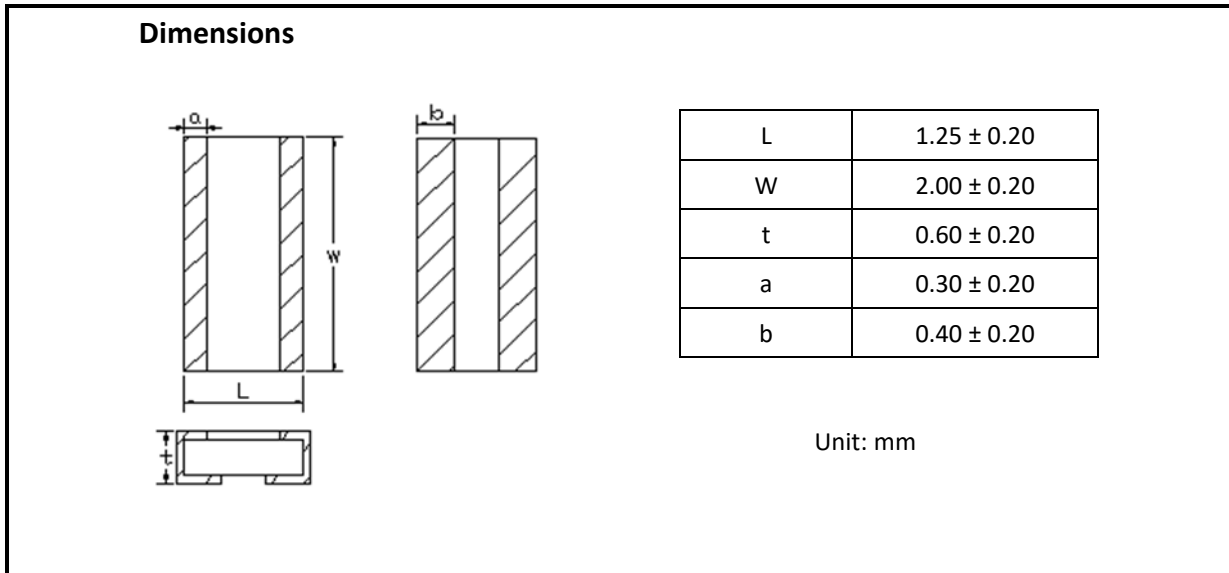
Characteristics	Feature
Power Rating*	1/2 W
Resistance Range	0.02 Ω ~ 0.51 Ω
Temperature Coefficient of Resistance(ppm/ $^{\circ}\text{C}$)	± 200
Resistance Tolerance	$\pm 1\%$ (F), $\pm 2\%$ (G), $\pm 5\%$ (J)
Operation Temperature Range	-55 $^{\circ}\text{C}$ ~ +155 $^{\circ}\text{C}$

*Note :

For sensor operated at ambient temperature in excess of 70 $^{\circ}\text{C}$, the maximum load shall be derated in accordance with the following curve.



Outline Drawing :



Type Designation :

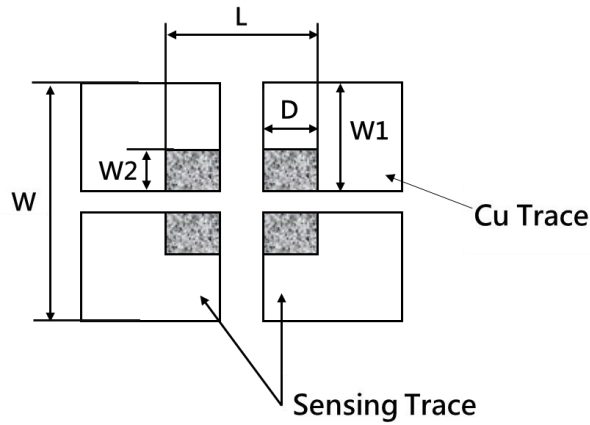
V S R P 0508 W D - □ □ □ □ □
 (1) (2) (3) (4) - (5) (6)

Note :

- (1) Series No.
- (2) Size
- (3) Terminal type : W = Wide terminal
- (4) Power Rating : $D = 1/2W$
- (5) Resistance value:
 The "R" shall be used as a decimal point, For example --
 $R020 = 0.02\Omega$;
- (6) Tolerance (%)
 $F = \pm 1\%$, $G = \pm 2\%$, $J = \pm 5\%$

Recommend Land Pattern Dimensions :

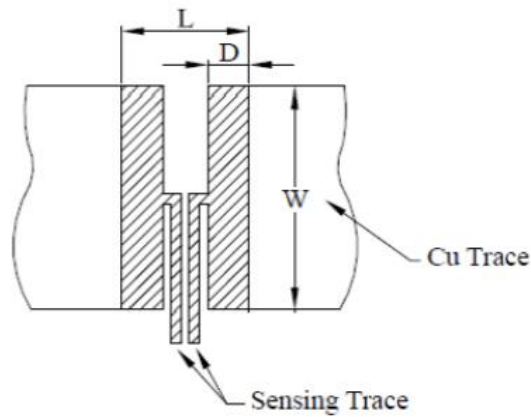
1. Suitable $0.020\Omega \sim 0.050\Omega$



Size	W (mm)	W1 (mm)	W2 (mm)	L (mm)	D (mm)	t (mm)
1220W	5.45	2.5	0.95	2.7	1.05	1.05

t: Copper foil minimum thickness of PCB

2. Suitable $0.051\Omega \sim 0.510\Omega$

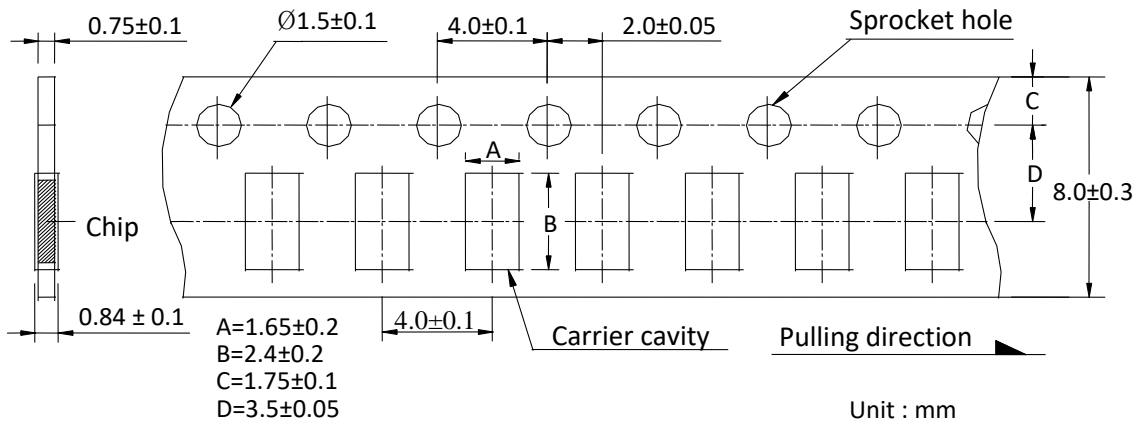


Size	W (mm)	L (mm)	D (mm)	t (mm)
1220W	2.0	2.2	0.8	1.05

t: Copper foil minimum thickness of PCB

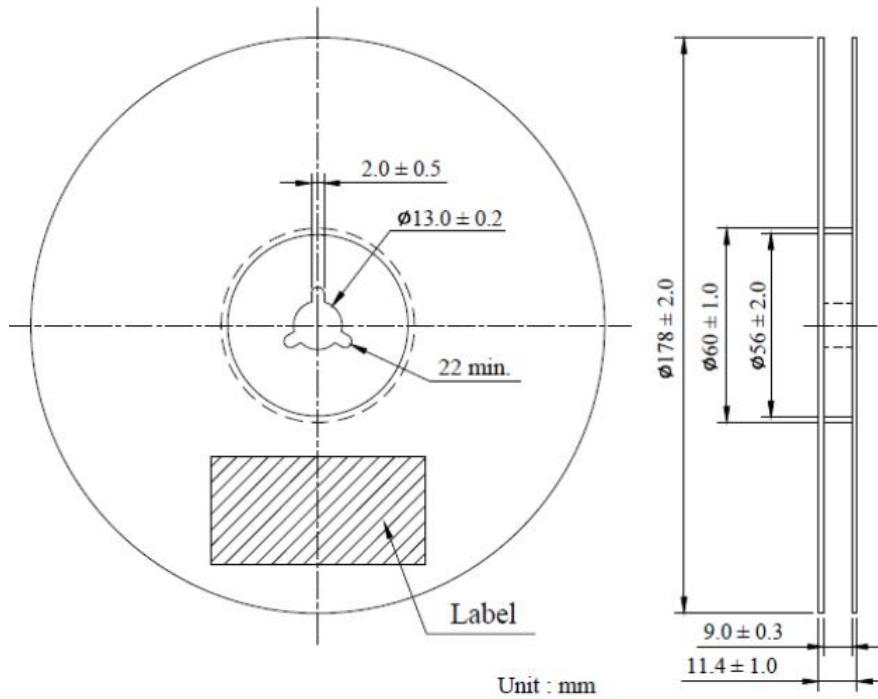
Packaging :

Tape packaging dimensions



Remark: Leader tape length ≥ 30 cm (150 Hollow carrier cavity)

Reel dimensions



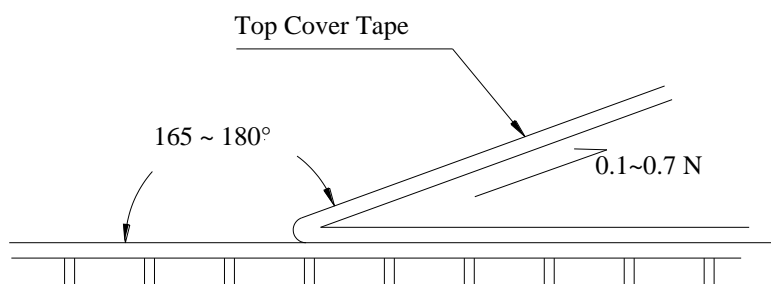
Numbers of Taping : 5,000 pieces /reel

The following items shall be marked on the reel.

- (1) Type designation.
- (2) Quantity
- (3) Manufacturing date code
- (4) Manufacturer's name

Peel force of top cover tape

The peel speed shall be about 300 mm/min. The peel force of top cover tape shall be between 0.1 to 0.7 N.



Care Note :

Care note for storage

- (1) Chip resistor shall be stored in a room where temperature and humidity must be controlled.
(temperature 5 to 35°C, humidity 45 to 85% RH) However, a humidity keep it low, as it is possible.
- (2) Chip resistor shall be stored as direct sunshine doesn't hit on it.
- (3) Chip resistor shall be stored with no moisture, dust, a material that will make solderability inferior, and a harmful gas (Chloridation hydrogen, sulfurous acid gas, and sulfuration hydrogen).

Care note for operating and handling

- (1) It is necessary to protect the edge and protection coat of resistors from mechanical stress.
- (2) Handle with care when printing circuit board (PCB) is divided or fixed on support body, because bending of printing circuit board (PCB) mounting will make mechanical stress for resistors.
- (3) Resistors shall be used with in rated range shown in specification. Especially, if voltage more than specified value will be loaded to resistor, there is a case it will make damage for machine because of temperature rise depending on generating of heat, and increase resistance value or breaks.
- (4) In case that resistor is loaded a rated voltage, it is necessary to confirms temperature of a resistor and to reduce a load power according to load reduction curve, because a temperature rise of a resistor depends on influence of heat from mounting density and neighboring element.
- (5) Observe Limiting element voltage and maximum overload voltage specified in each specification
- (6) If there is possibility that a large voltage (pulse voltage, shock voltage) charge to resistor, it is necessary that operating condition shall be set up before use.