

# 2W, 2512, SL Type Low Resistance Chip Resistor (Lead / Halogen Free)

## 1. Scope

This specification applies to 3.2mm x 6.4mm size 2W, fixed metal foil current sensing resistors used in electronic equipment.

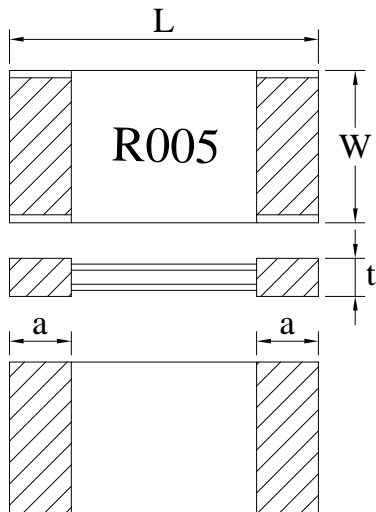
## 2. Type Designation

RL32649W -      -  

(1)                      (2)                      (3)

- Where
- (1) Series No.
  - (2) Resistance value :  
For example :  
Four digits of number  
1R2m = 1.2mΩ  
R005 = 5mΩ
  - (3) Tolerance :  
Refer to paragraph 4

## 3. Dimensions and schematic



Code Letter	Dimensions (mm)
	3264
L	6.35 ± 0.25
W	3.15 ± 0.25
a	0.95 ± 0.30
t	0.80 ± 0.20

Note: Marking (No Direction)

Figure 1. Construction and Dimensions

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#### 4. Specification

Characteristics	Feature		
Power Rating*	2W		
Resistance Value	1.2 mΩ	2~4 mΩ	5~50 mΩ
Temperature Coefficient of Resistance	0~500 ppm/°C	± 200 ppm/°C	± 100 ppm/°C
Operation Temperature Range	-55°C ~ +170°C		
Resistance Tolerance	± 1%(F) , ± 2%(G) , ± 5%(J)		
Insulation Resistance	Over 100MΩ		
Maximum Working Voltage (V)	$(P \cdot R)^{1/2}$		

Note \* :

Power rating is based on continuous full load operation at rated ambient temperature of 70°C . For resistors operated at ambient temperature in excess of 70°C , the maximum load shall be derated in accordance with the following curve.

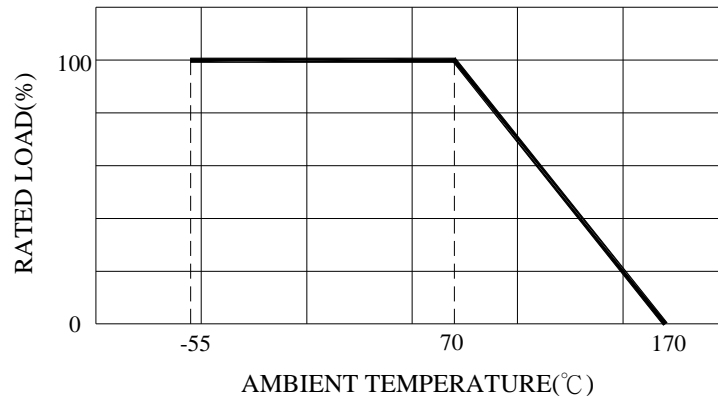


Figure 2. : Power Temperature Derating Curve

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## 5. Reliability Performance

Test Item	Condition of Test	Requirements
Short Time Overload	2.5 x Rated power for 5 seconds Refer to JIS C 5201-1 4.13	$\Delta R : \pm (0.5\% + 0.0005\Omega)$
Thermal Shock	-55 ~125°C 100 cycles, 15 min at each extreme condition Refer to JIS C 5201-1 4.19	$\Delta R : \pm (0.5\% + 0.0005\Omega)$
Low Temperature Storage	Kept at -55°C, 1,000 hours Refer to JIS C 5201-1 4.23.4	$\Delta R : \pm (0.5\% + 0.0005\Omega)$
Resistance to Soldering Heat	Dipped into solder at $270 \pm 5^\circ\text{C}$ for $20 \pm 1$ seconds Refer to JIS C 5201-1 4.18	$\Delta R : \pm (0.5\% + 0.0005\Omega)$
Load Life	Rated voltage for 1.5hours followed by a pause 0.5hour at $70 \pm 3^\circ\text{C}$ Cycle repeated 1,000 hours Refer to JIS C 5201-1 4.25	$\Delta R : \pm (1.0\% + 0.0005\Omega)$
Damp Heat with Load	$40 \pm 2^\circ\text{C}$ with relative humidity 90% to 95%. D.C. rated voltage for 1.5 hours ON 30 minutes OFF. Cycle repeated 1,000 hours Refer to JIS C 5201-1 4.24	$\Delta R : \pm (1.0\% + 0.0005\Omega)$
High Temperature Exposure	Kept at $170^\circ\text{C}$ for 1,000 hours Refer to JIS C 5201-1 4.23.2	$\Delta R : \pm (1.0\% + 0.0005\Omega)$
Solderability	Temperature of Solder : $245 \pm 5^\circ\text{C}$ Immersion Duration : $3 \pm 0.5$ second Refer to JIS C 5201-1 4.17	Uniform coating of solder cover minimum of 95% surface being immersed
Mechanical Shock	100 G's for 6milliseconds. 5 pulses Refer to JIS C 5201-1 4.21	$\Delta R : \pm (0.5\% + 0.0005\Omega)$
Substrate Bending	Glass-Epoxy board thickness : 1.6mm Bending width : 2mm Between the fulcrums : 90mm Refer to JIS C 5201-1 4.33	$\Delta R : \pm (0.5\% + 0.0005\Omega)$

UNLESS OTHERWISE SPECIFIED  
TOLERANCES ON :  
X =  $\pm$   
X.X =  $\pm$   
X.XX =  $\pm$   
ANGLES  $\pm$  HOLE DIA.  $\pm$

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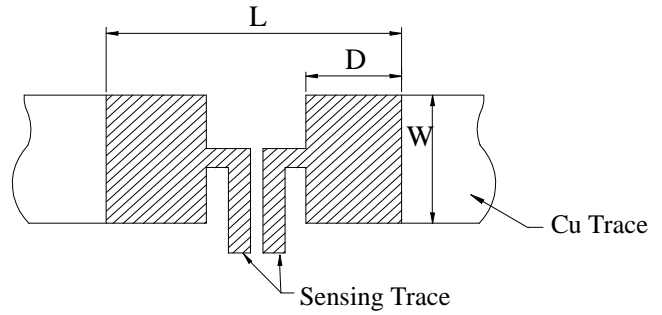
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## 6. Recommended Solder Pad Dimensions

	W (mm)	L (mm)	D (mm)	t ( $\mu$ m)
3264	4.00	8.00	3.35	105

t: Copper foil minimum thickness of PCB



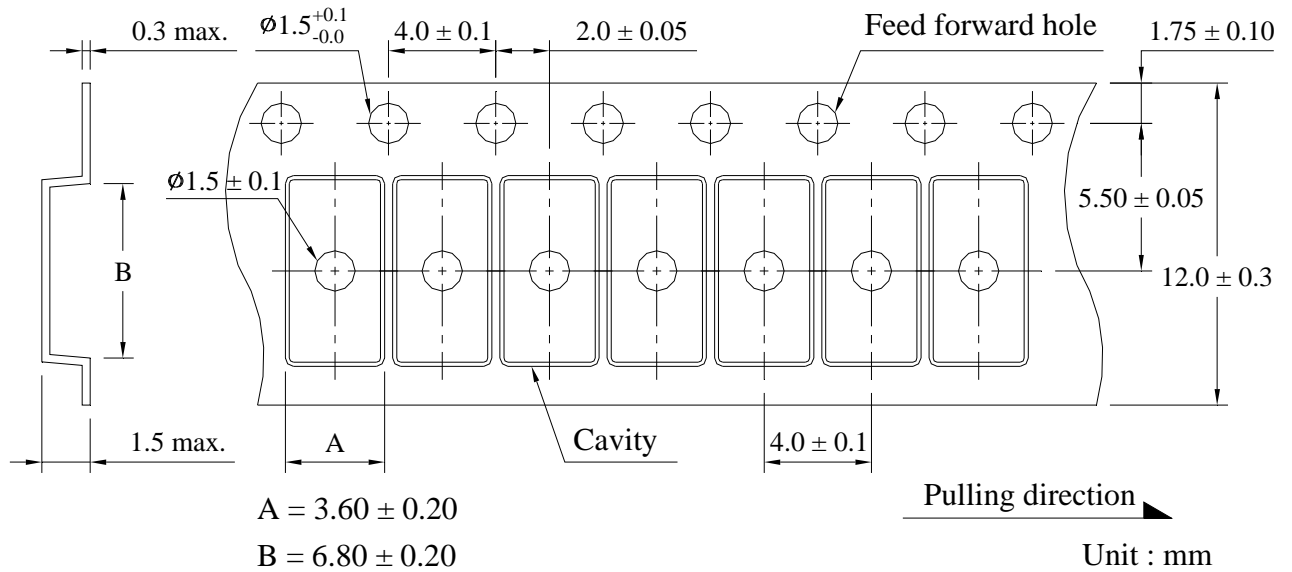
Note : We recommend there is no circuit design between pads to avoid circuit short

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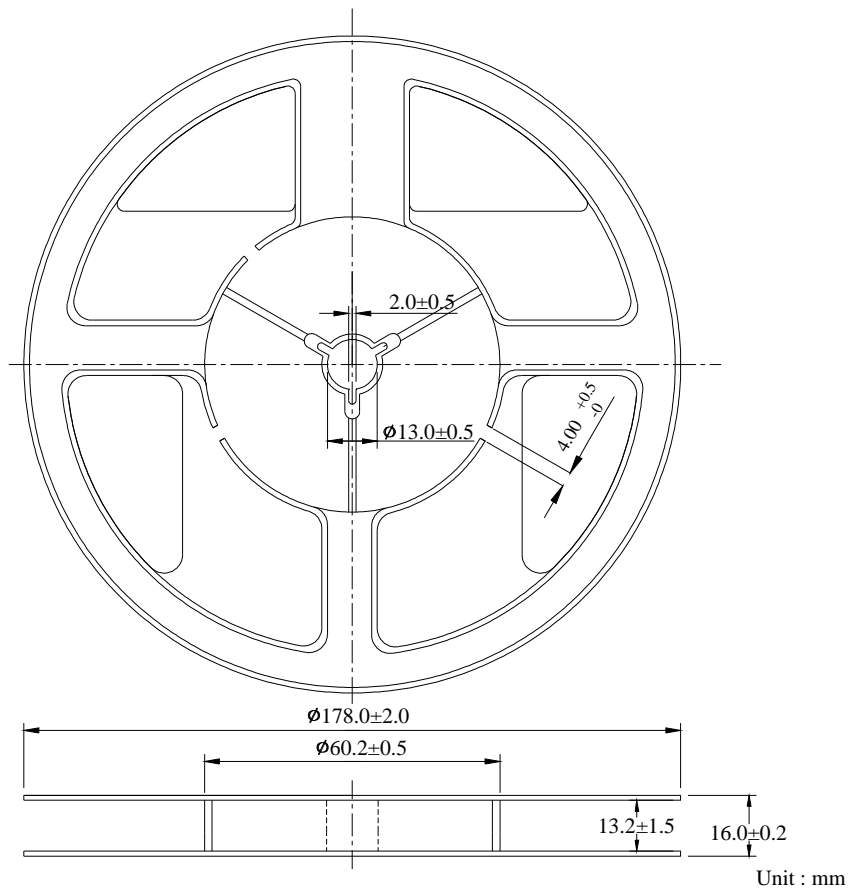
## 7. Packaging

### 7-1 Dimensions

#### 7-1-1 Tape packaging dimensions



#### 7-1-2 Reel dimensions



UNLESS OTHERWISE SPECIFIED  
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X =  $\pm$

X.X =  $\pm$

X.XX =  $\pm$

ANGLES  $\pm$  HOLE DIA.  $\pm$

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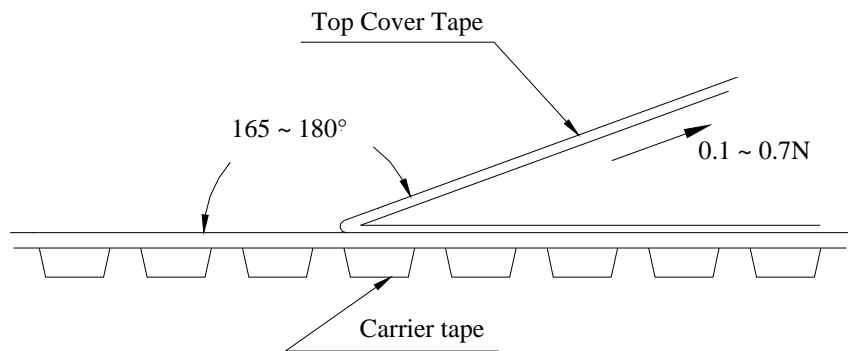
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### 7-2 Peel Strength of Top Cover Tape

The peel speed shall be about 300mm/min.

The peel force of top cover tape shall between 0.1 to 0.7N



### 7-3 Number of Taping

2,000 pieces / reel

### 7-4 Label marking

The following items shall be marked on the reel.

- (1) Type designation
- (2) Quantity
- (3) Manufacturing date code
- (4) Manufacturer's name
- (5) The country of origin

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