

# 1/2W, 0612 Low Resistance Chip Resistor (Lead / Halogen Free)

## 1. Scope

This specification applies to 1.6mm x 3.2mm size 1/2W, fixed metal film chip resistors rectangular type for use in electronic equipment.

## 2. Type Designation

RL1632W - □ - □□□□ □  
 (1) (2) (3) (4)

Where (1) Series No.

(2)  $4=1/2W$

(3) Resistance value :

For example - -

R001 = 1mΩ

The “ R “ shall be used as a decimal point.

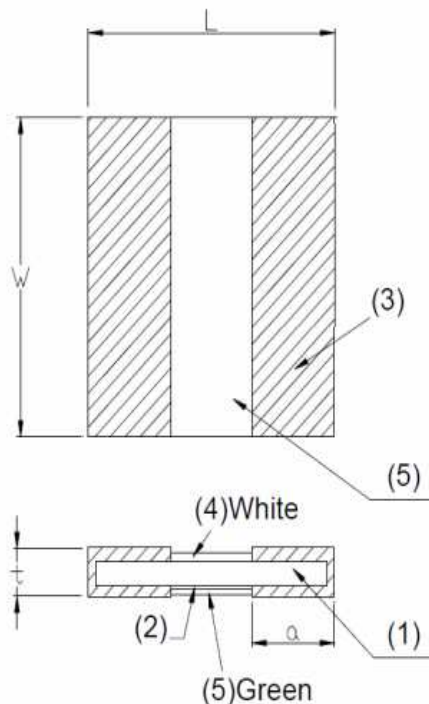
(4) Resistance value :

F = ± 1%

G = ± 2%

J = ± 5%

## 3. Outline Designation



- (1) Substrate Alumina 96%
- (2) Resistor Cu-alloy
- (3) Terminals Sn (on Cu )
- (4) Marking Heat resistive epoxy resin(White)
- (5)Protection coat: Heat resistive epoxy resin(Green)

Code Letter	Dimensions (mm)
	RL1632W
L	$1.6 \pm 0.25$
W	$3.15 \pm 0.25$
a	$0.35 \pm 0.2$
t	$0.95 \pm 0.25$

Figure 1. Construction and Dimensions

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			A2

#### 4. Ratings

##### 4-1 Specification

Power Ratings *	1/2 W
Resistance Value	1 ~10mΩ
Resistance Tolerance	±1% 、 ±2% 、 ±5%
Temperature Coefficient of Resistance	±150ppm/°C (Reflow)

Note \* :

Power ratings 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.

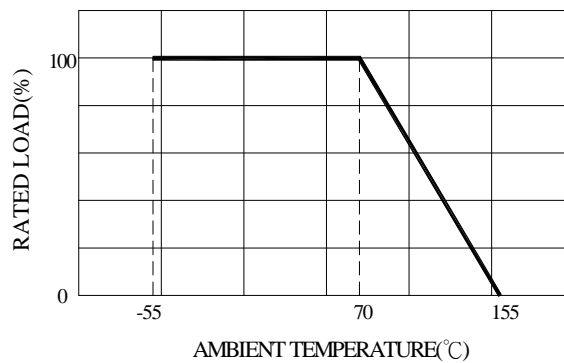


Figure 2. : Power Temperature Derating Curve

##### 4-2 Rated Voltage

The rated voltage shall be determined by the following expression.

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

Where V : Rated voltage (V)

R : Nominal resistance value (Ω)

P : Rated dissipation (W)

##### 4-3 Operating and Storage Temperature Range

-55 to +155°C

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				A2

5. Life test

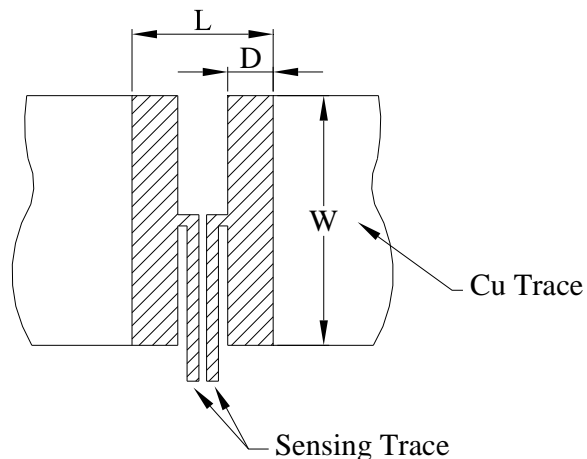
Test Item	Condition of Test	Requirements
Short Time Overload	2.5 * rated power for 5 seconds Refer to JIS C 5201-1 4.13	$\Delta R : \pm 1.0\%$
Thermal Shock	-55 ~125°C 100 cycles, 15 min at each extreme condition Refer to JIS C 5201-1 4.19	$\Delta R : \pm 1.0\%$
Low Temperature Storage	Kept at -55°C, 1,000 hours Refer to JIS C 5201-1 4.23.4	$\Delta R : \pm 2.0\%$
Load Life	Rated voltage for 1.5hours followed by a pause 0.5hour at 70 ± 3°C. Cycle repeated 1000 hours Refer to JIS C 5201-1 4.25	$\Delta R : \pm 2.0\%$
Damp Heat with Load	40 ± 2°C with relative humidity 90% to 95%. Cycle repeated 1,000 hours Refer to JIS C 5201-1 4.24	$\Delta R : \pm 2.0\%$
High Temperature Exposure	Kept at 170°C for 1,000 hours Refer to JIS C 5201-1 4.23.2	$\Delta R : \pm 2.0\%$
Solderability	Temperature of Solder : 245 ± 5°C Immersion Duration : 3 ± 0.5 seconds 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	$\Delta R : \pm 1.0\%$
Bending Test	Glass-Epoxy board thickness : 1.6mm Bending width : 2mm Between the fulcrums : 90mm Refer to JIS C 5201-1 4.33	$\Delta R : \pm 1.0\%$

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			PAGE REV. A2

6. Recommend Land Pattern

	W	L	D
1632W	3.3	2.8	1.1

Unit : mm



Note : We recommend there is no circuit design

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TOLERANCES ON :  
X = ±  
X.X = ±  
X.XX = ±  
ANGLES ± HOLE DIA. ±

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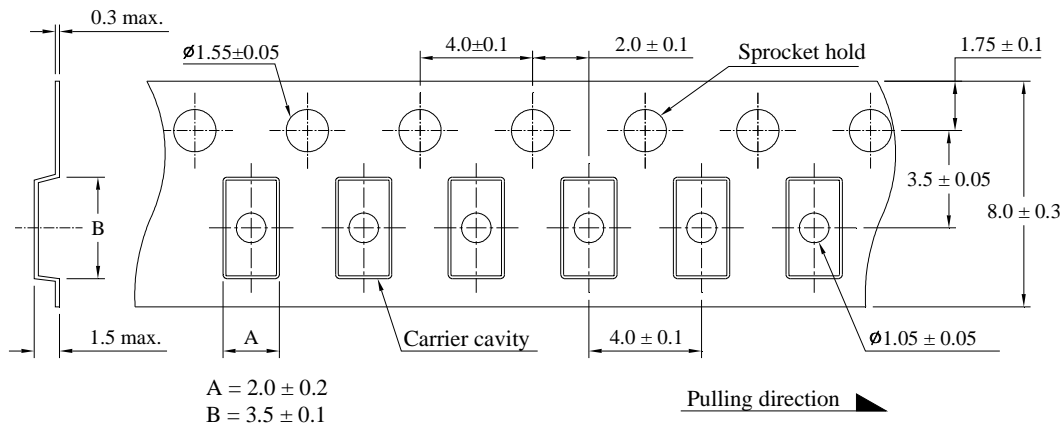
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PAGE  
REV.  
A2

## 7. Packaging

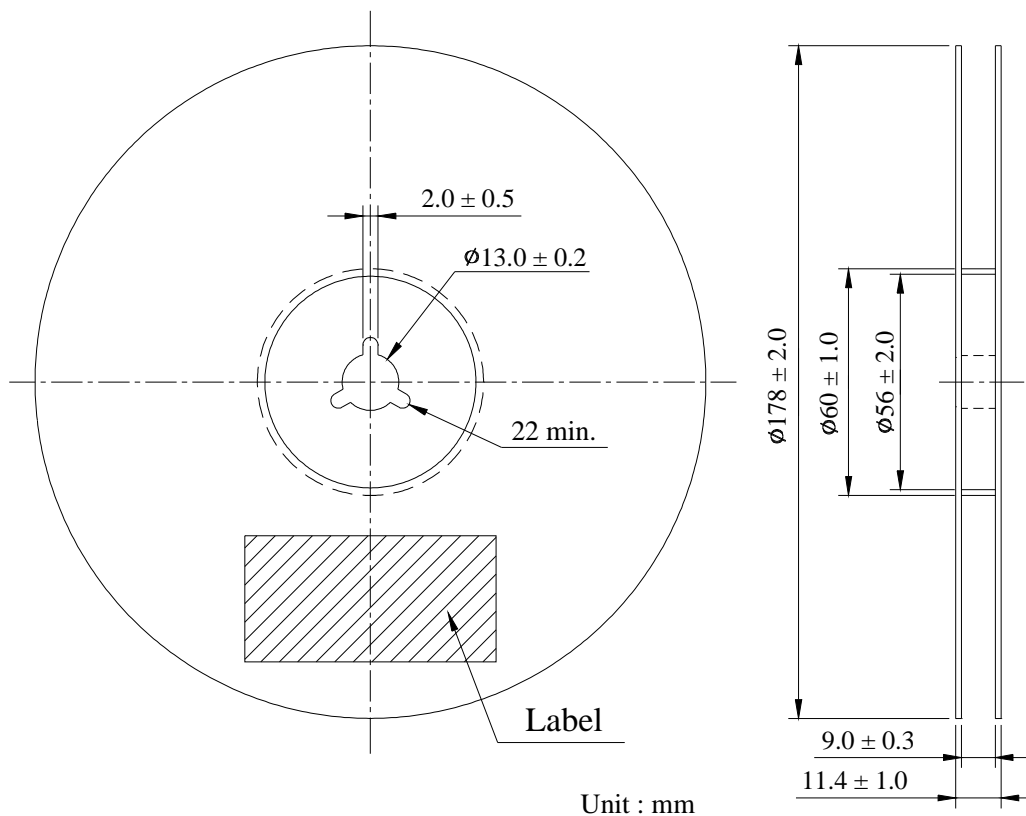
### 7-1 Dimensions

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



Unit : mm

#### 7-1-2 Reel dimensions



Unit : mm

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

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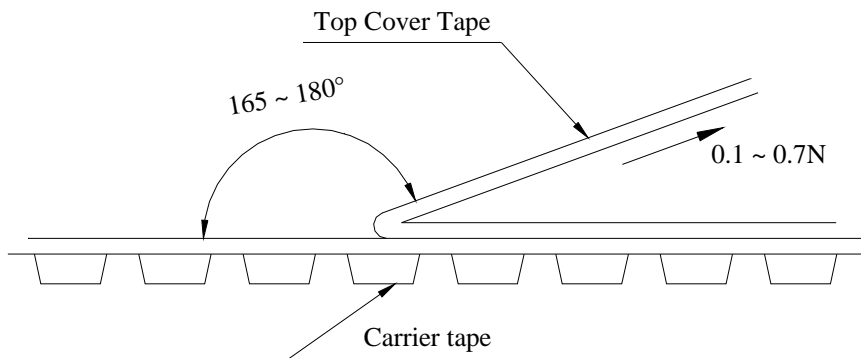
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PAGE  
REV.  
A2

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

The peel speed shall be about 300mm/minute

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



### 7-3 Number of Taping

4,000 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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