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

RL1632 L - □□□□ - □
(1) (2) (3) (4)

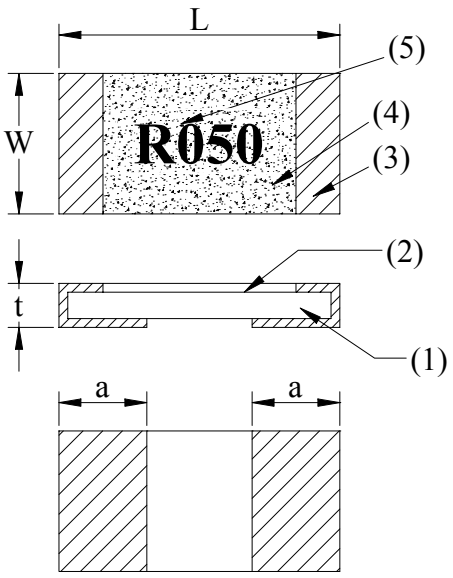
Where (1) Series No.

(2) L = L Type

(3) Resistance value :
For example - -
R050 = 50mΩ
R100 = 100mΩ
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	Ni-alloy
(3) Terminals	Sn-Pb (on Cu)
(4) Protection coat	Heat resistive epoxy resin
(5) Marking	Epoxy resin

Code Letter	Dimensions (mm)
	RL1632L
L	3.2 ± 0.20
W	1.6 ± 0.20
a	1.0 ± 0.15
t	0.5 ± 0.15

Figure 1. Construction and Dimensions

4. Ratings

4-1 Specification

Power Ratings *	1/2 W
Resistance Value	0.010Ω～2.7Ω
Resistance Tolerance	±1% (F)、±2% (G)、±5% (J)

Note *：

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

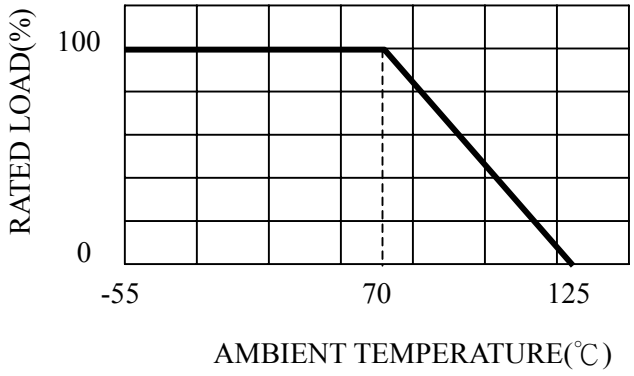


Figure 2.：Power Temperature Derating Cure

4-2 Maximum over current

$I = \sqrt{\langle 32/R \rangle}\,[A]/10ms$ Where I : maximum current

R : Nominal resistance value (Ω)

Interval 60 seconds minimum

If maximum current so obtained exceed than 32A , use 32A as maximum current.

4-3 Operation Temperature

-55℃ to +125℃

5. Characteristics

5-1 Electrical

5-1-1 Short Time Overload

Resistance Change : ± (0.5% + 0.0005Ω)

Without significant damage by flashover (spark, arching), burning or breakdown etc.

Test voltage : 2.5 times the rated voltage.

Duration : 5 seconds

5-2 Mechanical

5-2-1 Solderability

A new uniform coating of solder shall cover minimum of 95% of the surface being immersed.

Temperature of solder : 235 ± 5℃

Immersion duration : 3 ± 0.5 seconds

5-2-2 Resistance to Soldering Heat

Resistance change : ± (0.5% + 0.0005Ω)

Electrical characteristics shall be satisfied.

Without distinct deformation in appearance

Dipped into solder for 10 ± 1 seconds at 260 ± 5℃

5-2-3 Substrate bending

Resistance change : ± (0.5% + 0.0005Ω)

Without mechanical damage such as breaks.

Electrical characteristics shall be satisfied.

Glass-Epoxy bard t = 1.6mm

Bending value : 2mm

Between the fulcrums : 90mm

5-3 Endurance

5-3-1 Rapid change of temperature

Resistance change : ± (0.5% + 0.0005Ω)

Without distinct damage.

Perform 5 cycles as follows :

-55℃ for 30minutes → room temperature for 3 minutes

→ +125℃ for 30minutes → room temperature for 3 minutes

5-3-2 Endurance at 70℃

Resistance change : ± (0.5% + 0.0005Ω)

Without distinct damage.

Rated voltage for 1.5 hours followed by a pause 0.5 hour at a temperature of 70 ± 3℃.

Cycle shall be repeated for 1,000 hours.

5-3-3 Dump heat with load

Resistance change : ± (0.5% + 0.0005Ω)

The marking shall be legible.

60 ± 2℃ with relative humidity of 90% to 95%.

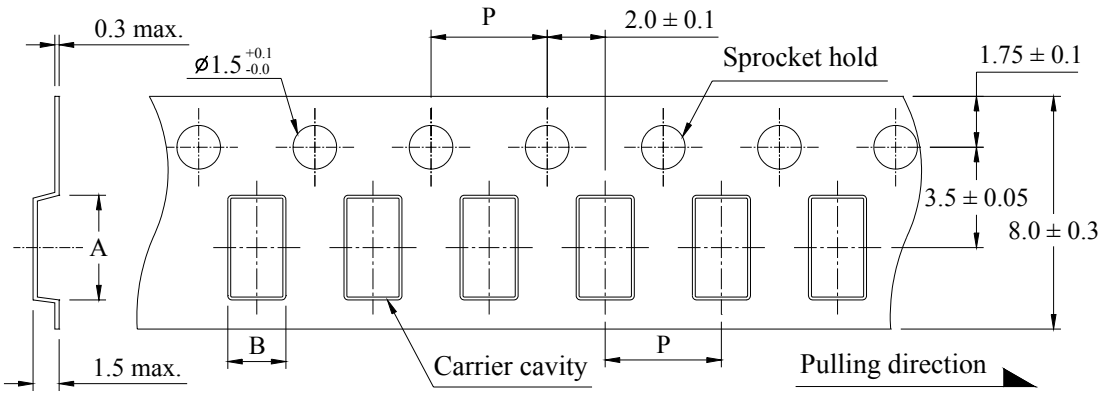
D.C. rated voltage for 1.5 hours ON 30 minutes OFF.

Cycle shall be repeated for 1,000 hours.

6. Packaging

6-1 Dimensions

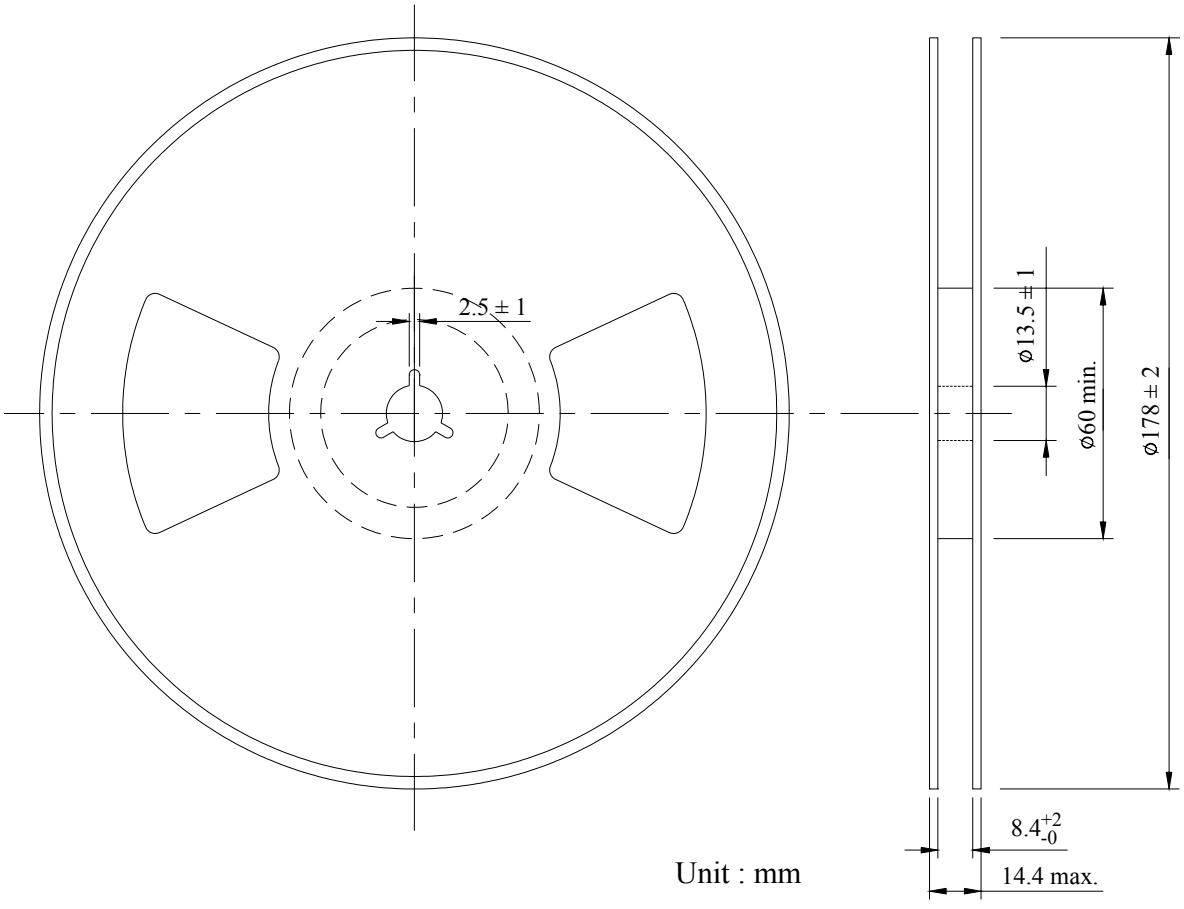
6-1-1 Tape packaging dimensions



A = 2.0 ± 0.2
B = 3.6 ± 0.2
P(PITCH) = 4.0 ± 0.1

Unit : mm

6-1-2 Reel dimensions

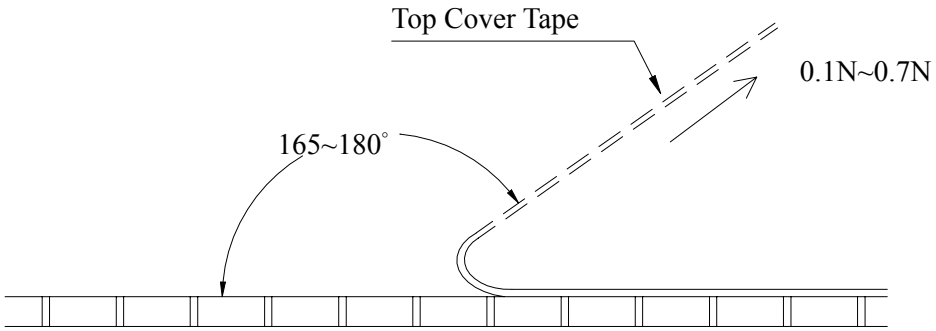


Unit : mm

6-2 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



6-3 Number of Taping

5,000 pieces / reel

6-4 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