



## Data Sheet

Customer: \_\_\_\_\_  
Model: SB-LA31H2450-A35(V1.0)  
Customer P/N: \_\_\_\_\_  
SINBON P/N: A970369  
Date: 2016/09/14  
Pages: 10 (Cover Page Included)

Approved By

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Signature:

Checked by :

Signature:

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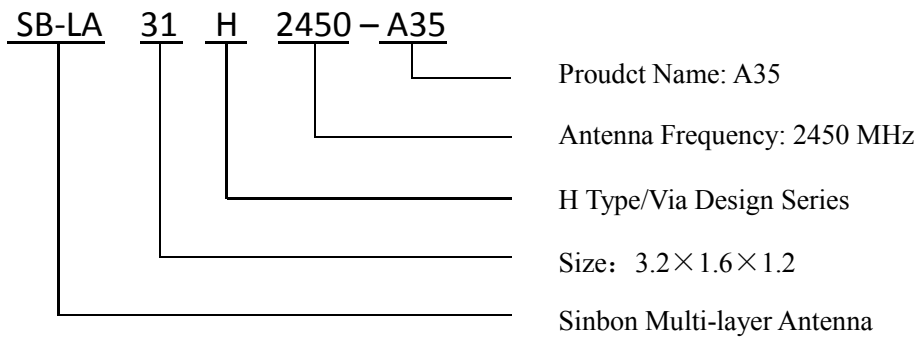
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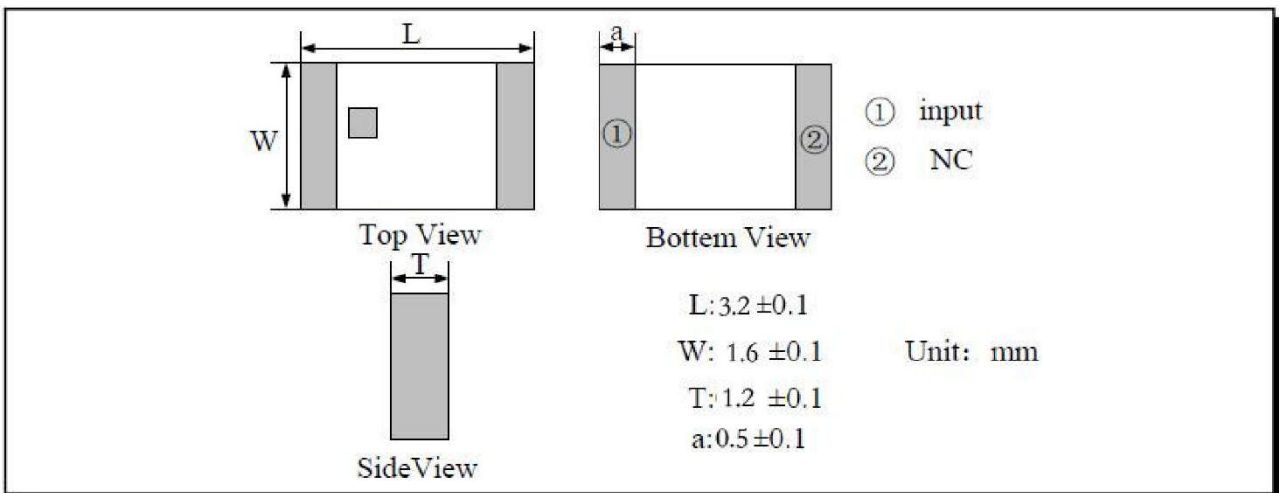
# 1. INTRODUCTION

Microwave Multi-Layer Ceramic Antenna SB-LA series are designed to be used in WLAN、WiFi、Bluetooth、PHS、Multiple-band Mobile phone antenna, FM, etc and compact size SMD chip design.

## 2. Part Number



## 3. Dimensions ( Unit : mm )

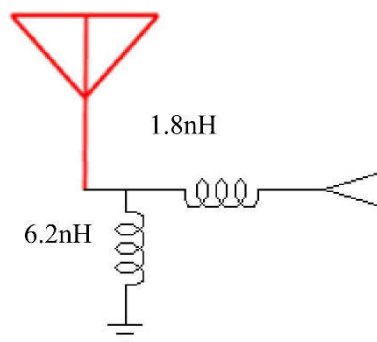
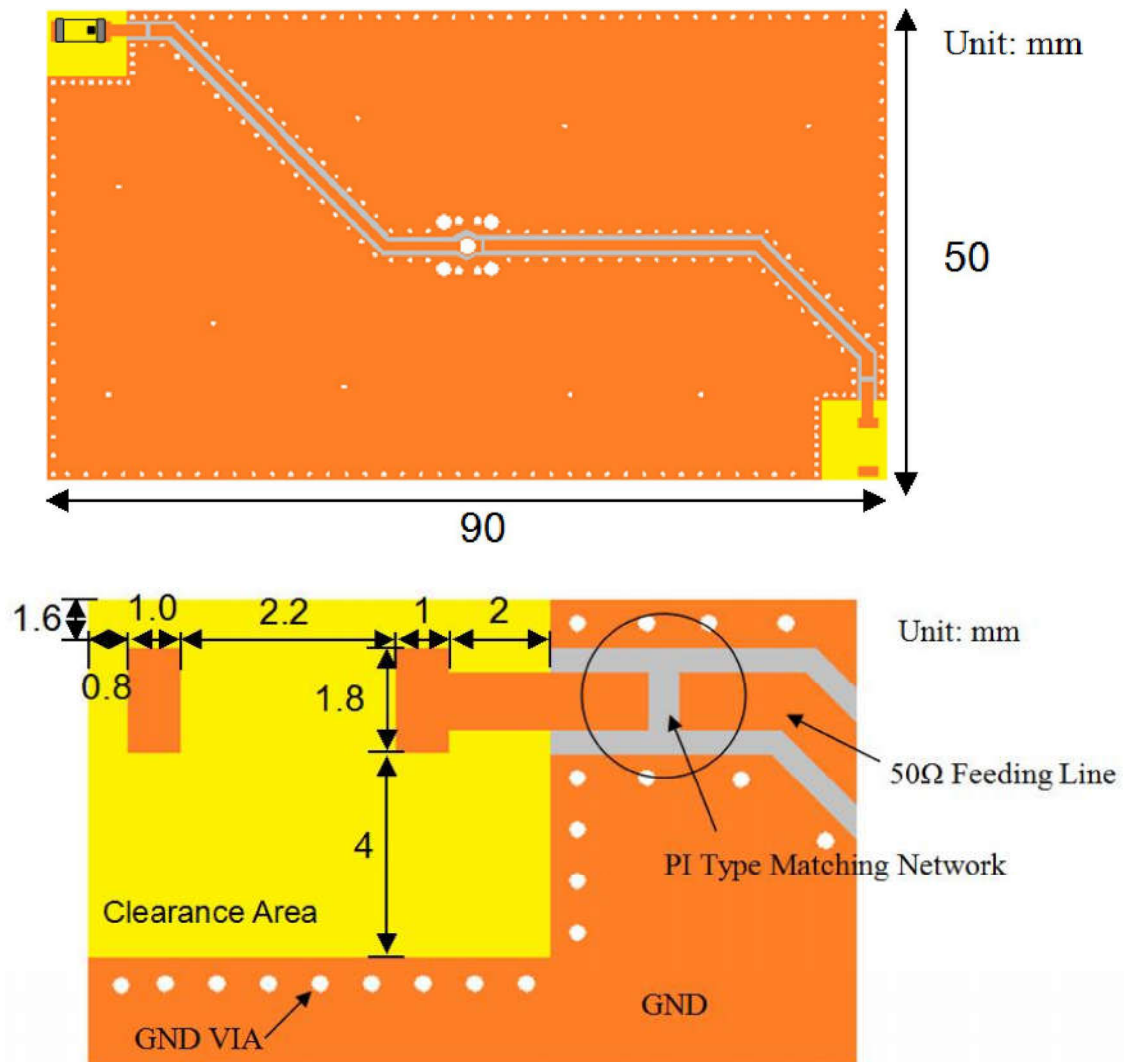


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## 4. Evaluation Board and Matching Circuits



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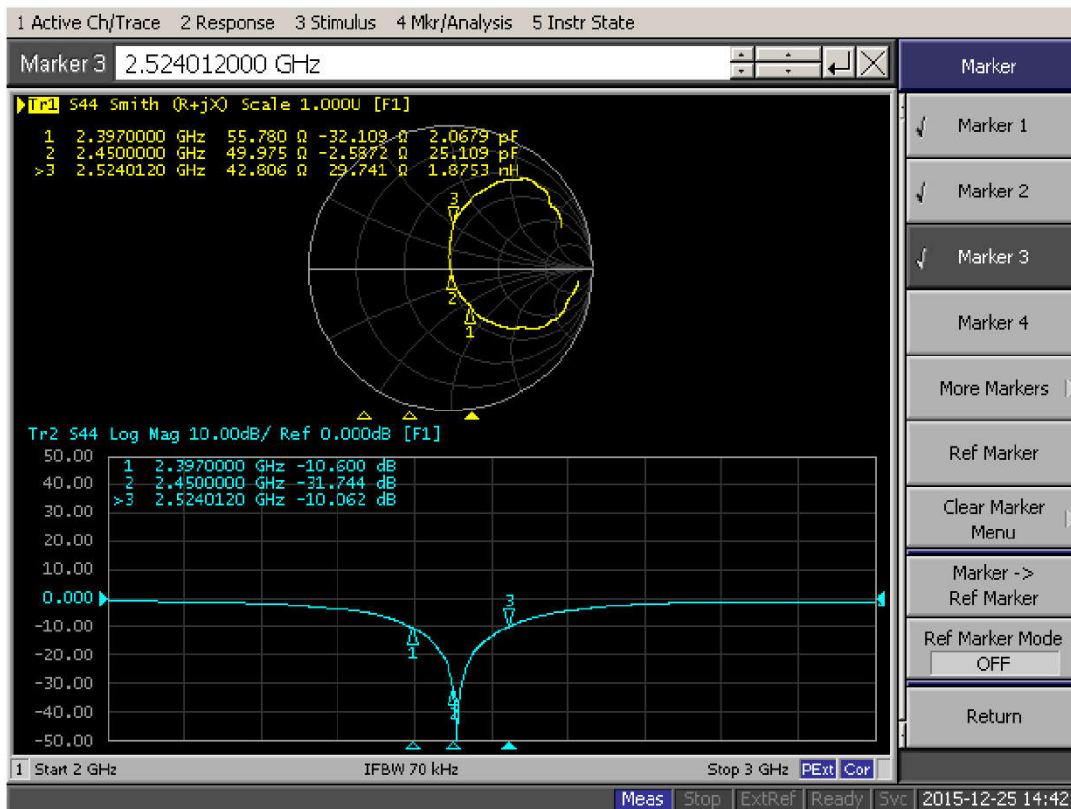
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## 5. Electrical Characteristics

No.	Item	Specifications
5.1	Central Frequency (No matching)	2,875MHz
	After Matching	2,450 MHz
5.2	Band Width (No matching)	100 MHz typ
5.3	Peak Gain	5.19 dBi
5.4	V.S.W.R (in BW)	≤2.0
5.5	Polarization	Linear
5.6	Azimuth Beam width	Omni-directional
5.7	Impedance	50 Ω

## 6. Characteristic curve



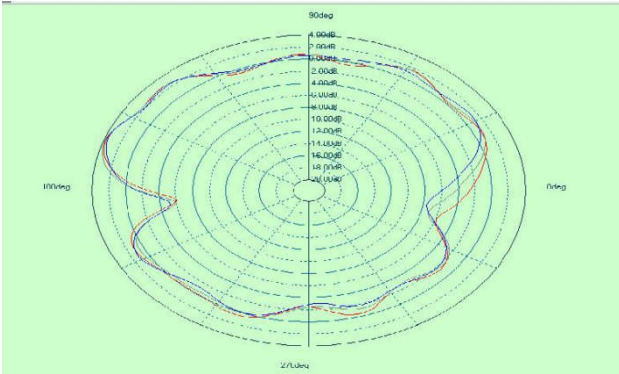
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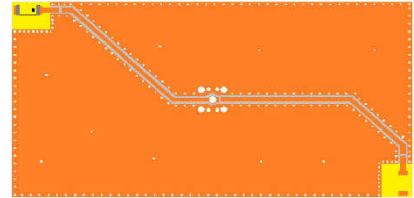
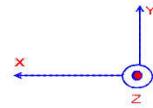
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## 7. Radiation Pattern

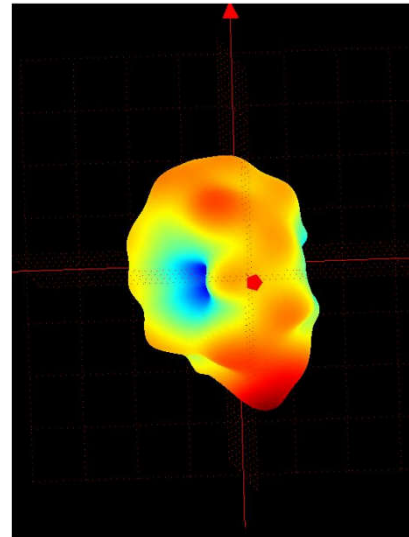
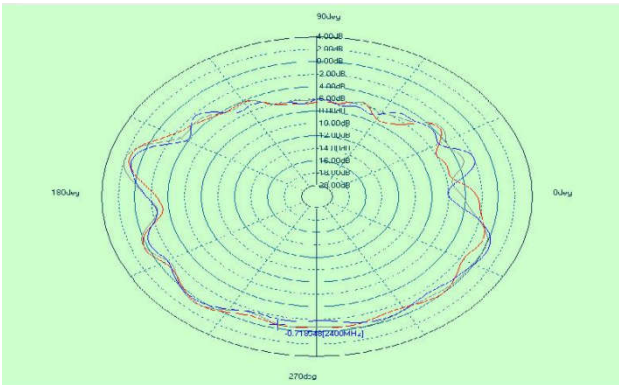
X-Z Plane



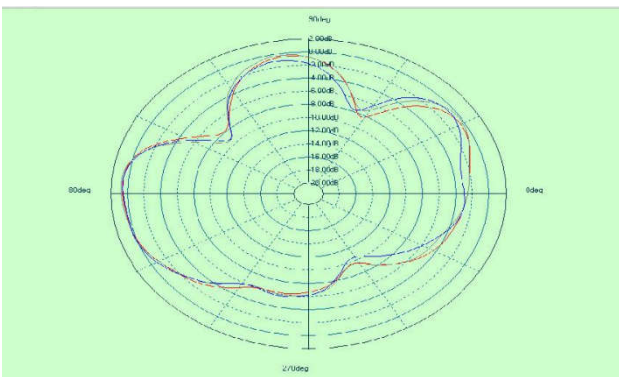
coordinates:



Y-Z Plane



X-Y Plane



3D Radiation Pattern

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## 8. Efficiency

Frequency (MHz)	2400	2450	2500
Avg. Gain (dBi)	-0.23	-0.36	-0.51
Peck Gain (dBi)	4.98	5.19	4.55
Efficiency (%)	70	71.2	69

## 9 Post Dependability Tolerance

Post Dependability Tolerance (Refer to the table)

No.	Item	Post Dependability Tolerance
9.1	Central Frequency	$\pm 5$ MHz
9.2	Band Width	$\pm 5$ MHz
9.3	Gain	$\pm 0.1$ dBi
9.4	V.S.W.R (in BW)	$\pm 0.1$

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## 10. Dependability Test

Temperature range.....	25±5℃
Relative Humidity range.....	55~75%RH
Operating Temperature range.....	-40℃~+85℃
Storage Temperature range.....	-40℃~+85℃

### 10.1 Vibration Resist

The device should satisfy the electrical characteristics specified in paragraph 9.1~9.4 after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X, Y and Z directions.

### 10.2 Drop Shock

The device should satisfy the electrical characteristics specified in paragraph 9.1~9.4 after dropping onto the hard wooden board from the height of 100cm for 3 times each facet of the 3 dimensions of the device.

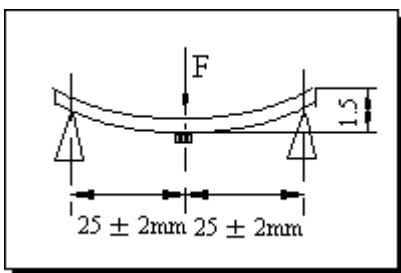
### 10.3 Solder Heat Proof

The device should be satisfied after preheating at 120℃~150℃ for 120 seconds and dipping in soldering Sn at 255℃+10℃ for 5±0.5 seconds, or electric iron 300℃-10℃ for 3±0.5 seconds, without damage.

### 10.4 Tensile Strength of Terminal

The device should not be broken after tensile force of 1.0kg is slowly applied to pull a lead pin of the fixed device in the lead axis direction for 10±1 seconds.

### 10.5 Bending Resist Test



Weld the product to the center part of the PCB with the thickness 1.6±0.2mm as the illustration shows, and keep exerting force arrow-ward on it at speed of 1mm/S, and hold for 5±1S at the position of 1.5mm bending distance, so far, any peeling off of the product metal coating should not be detected.

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## 10.6 Moisture Proof

The device should satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to the temperature  $60\pm 2^{\circ}\text{C}$  and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time under normal condition.

## 10.7 High Temperature Endurance

The device should satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to temperature  $85\pm 5^{\circ}\text{C}$  for  $96\pm 2$  hours and 1~2 hours recovery time under normal temperature.

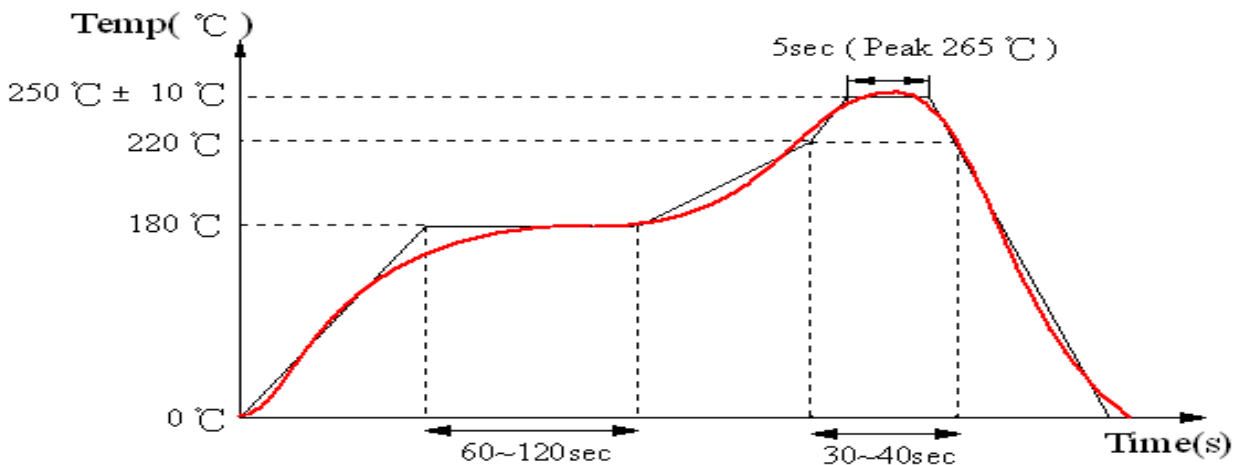
## 10.8 Low Temperature Endurance

The device should also satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to the temperature  $-40^{\circ}\text{C}\pm 5^{\circ}\text{C}$  for  $96\pm 2$  hours and to 2 hours recovery time under normal temperature.

## 10.9 Temperature Cycle Test

The device should also satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to the low temperature  $-40^{\circ}\text{C}$  and high temperature  $+85^{\circ}\text{C}$  for  $30\pm 2$  min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

## 11. Reflow Soldering Standard Condition



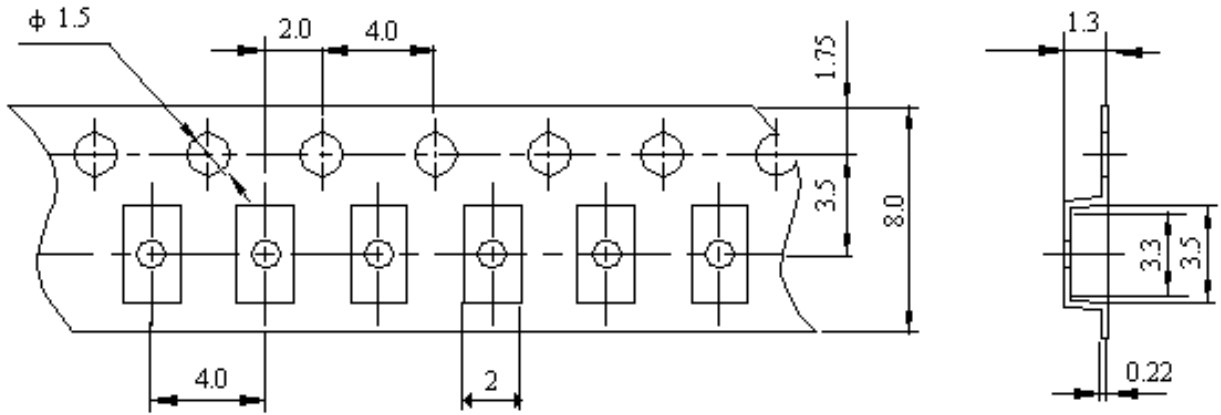
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## 12. Packaging and Dimensions

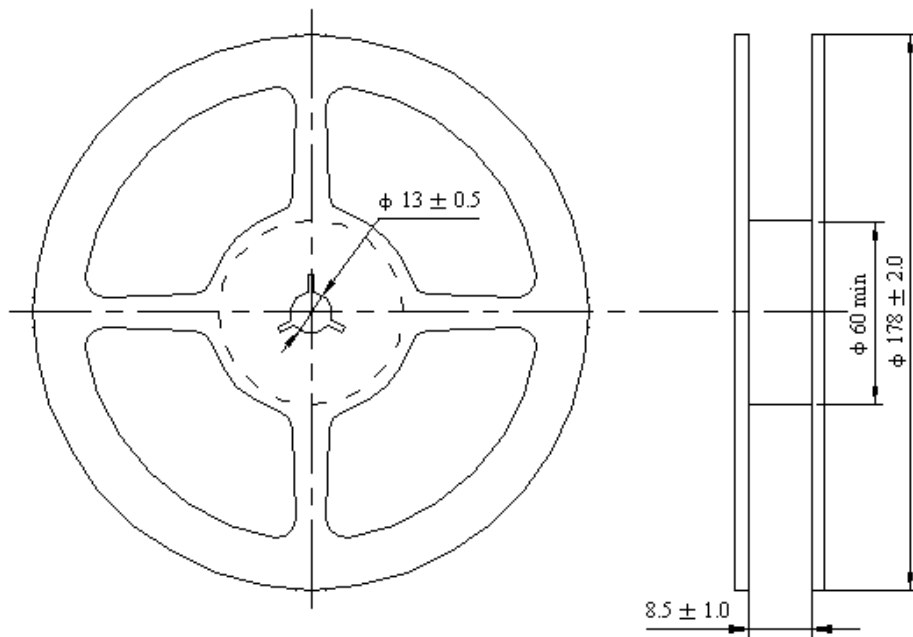
### 12.1 Plastic Tape(mm)



#### Remarks for Package

Reserve a length of 150~200mm for the trailer of the carrier and 250~300 mm for the leader of the carrier and further 250mm of cover tape at the leading part of the carrier.

### 12.2 Reel ( 3000 pcs/Reel )



### 12.3 Storage Period

Oxidizable. material, please repack within 48 hours by re-seal the package treatment after use them!

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