

SPECIFICATION

PART NO: LA31H2450-A71 CUSTOMER PART NO:
CUSTOMER APPROVED BY: Validation Date APPROVED DATE:

RoHS Compliant Parts

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Jiaying Jiali Electronics Co., LTD. <http://www.glead.com>. The cn Alibaba <http://zydq.en.alibaba.com>
JIA XING GLEAD ELECTRONIC S CO., LTD

Specification

1. An Overview of the INTRODUCTION

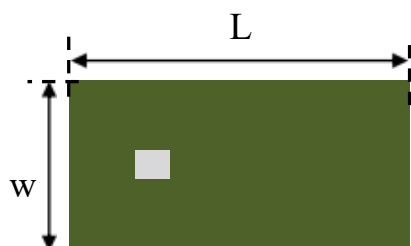
"Jiali" microwave multi-layer ceramic antenna LA series products are designed for WLAN, WiFi, Bluetooth, PHS, mobile phone multi-frequency antenna, FM and other small volume SMD chip design.

"GLEAD" Microwave Multi-Layer Ceramic Antenna 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

LA	31	H	2450	- A71	
					Product Name: A71
					Antenna Frequency: 2450 MHz
					Design Series
					Product size / Size: 3.21.60.6
					Multi-layer Antenna

3. External size Dimensions (Unit: mm)



(Top View) A

Number	Terminal Name
①	INPUT
②	NC



(Bottom View)



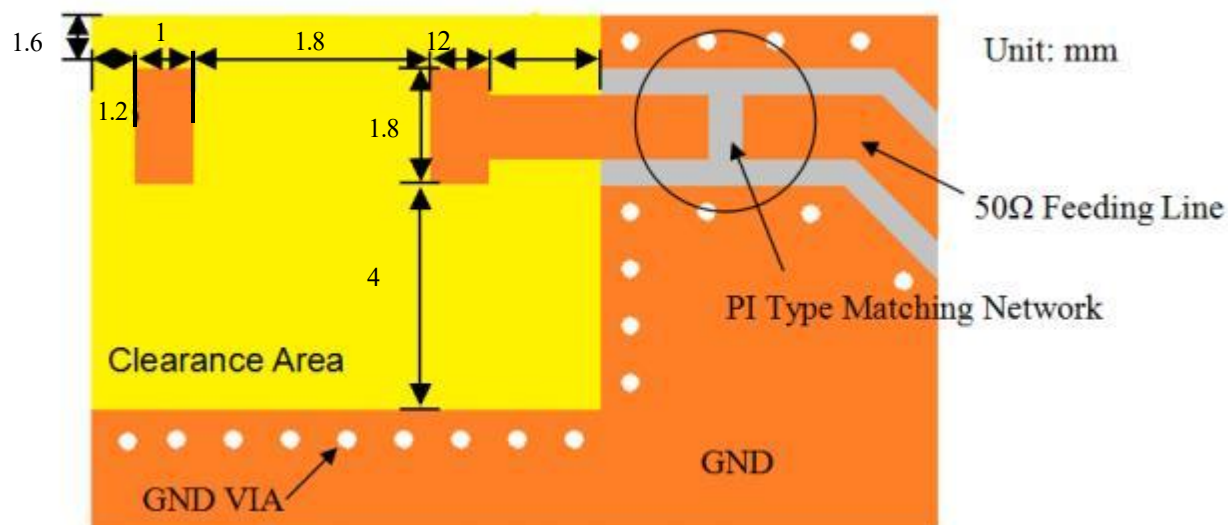
(Side View)



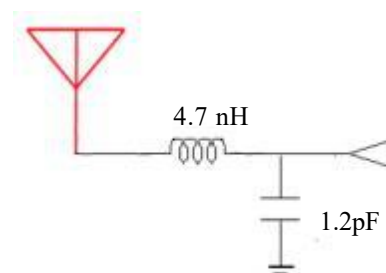
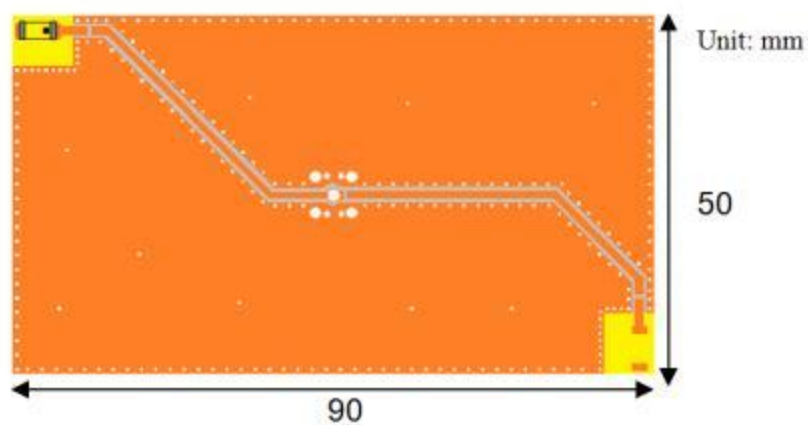
(Side View)

Symbols	L	W	T	A
Dimensions	3.2+/-0.2	1.6+/-0.2	0.6+/-0.1	0.5+/-0.1

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4. Evaluation Board and Matching Circuits

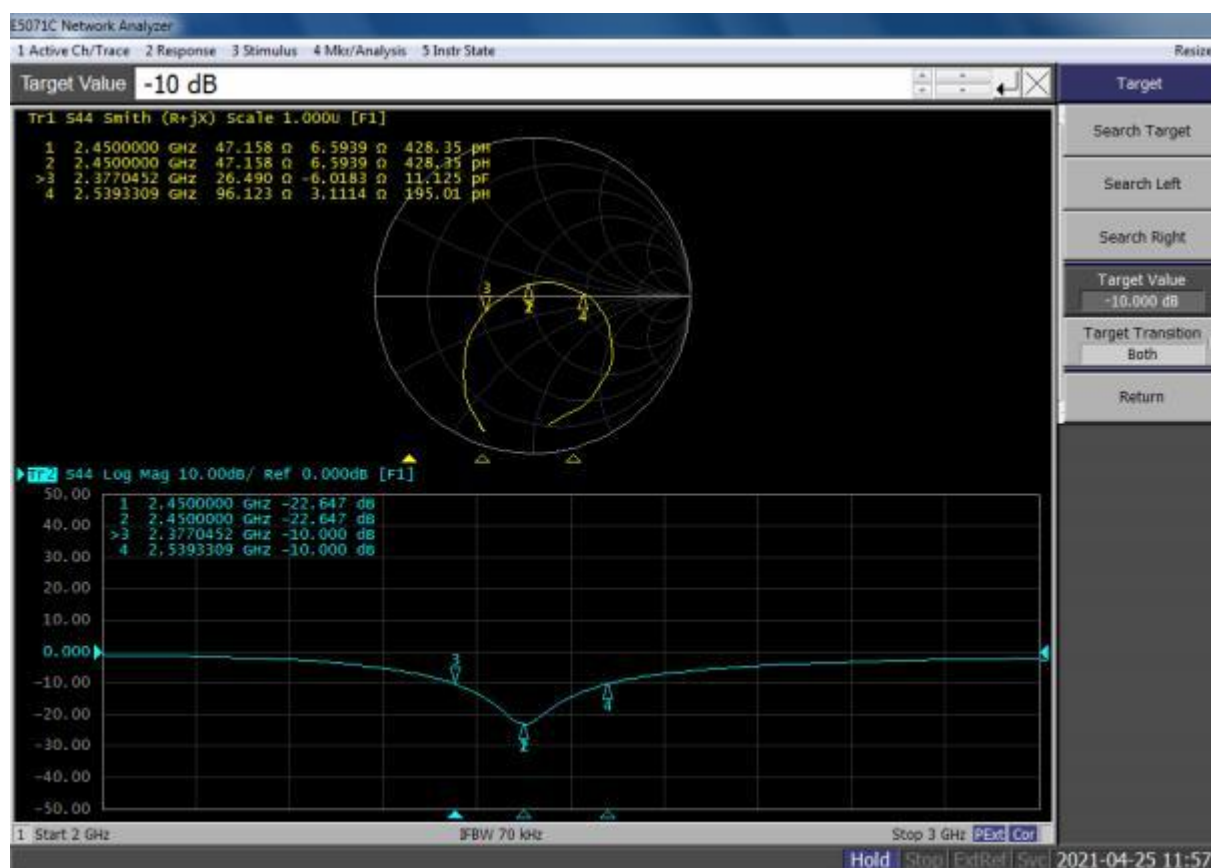


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5. Electrical Characteristics

No.	I. Item (Project)	Specifications (Feature)
5.1	(With the matching circuit test) After Matching	2450 MHz
5.2	Band Width Pass band width	100MHz typ .
5.3	Peak Gain, Peak gain	2.01 dBi
5.4	V.S.W. R standing-wave ratio	≤ 2.0
5.5	Polarization Polarization mode	Linear Linearity
5.6	Azimuth Beam width Azimuth angle	The Omni-directional is omnidirectional
5.7	Impedance Impedance	50 Ω

6. Characteristic curve



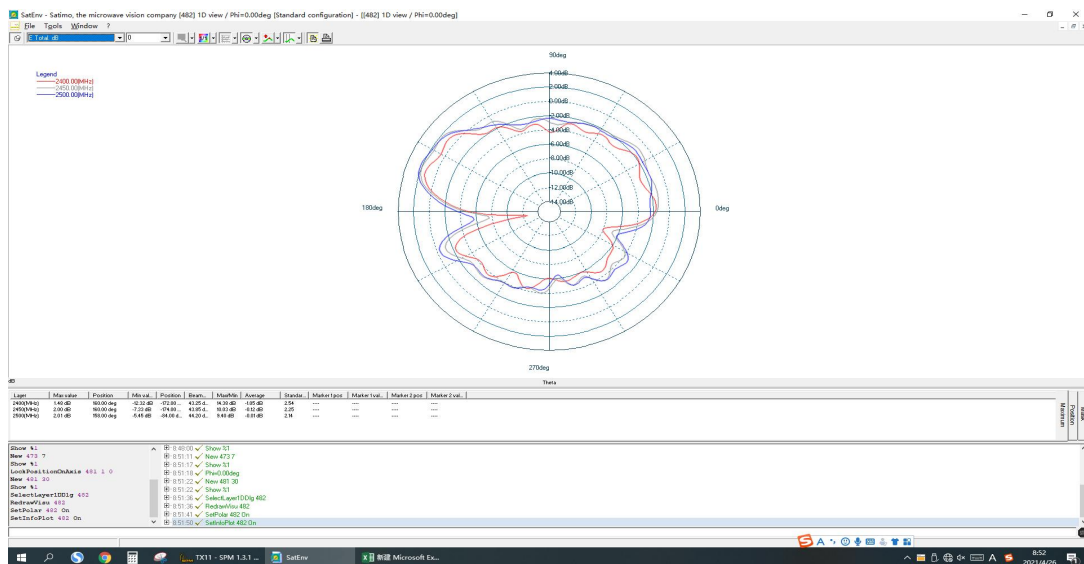
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7. Radiation Pattern

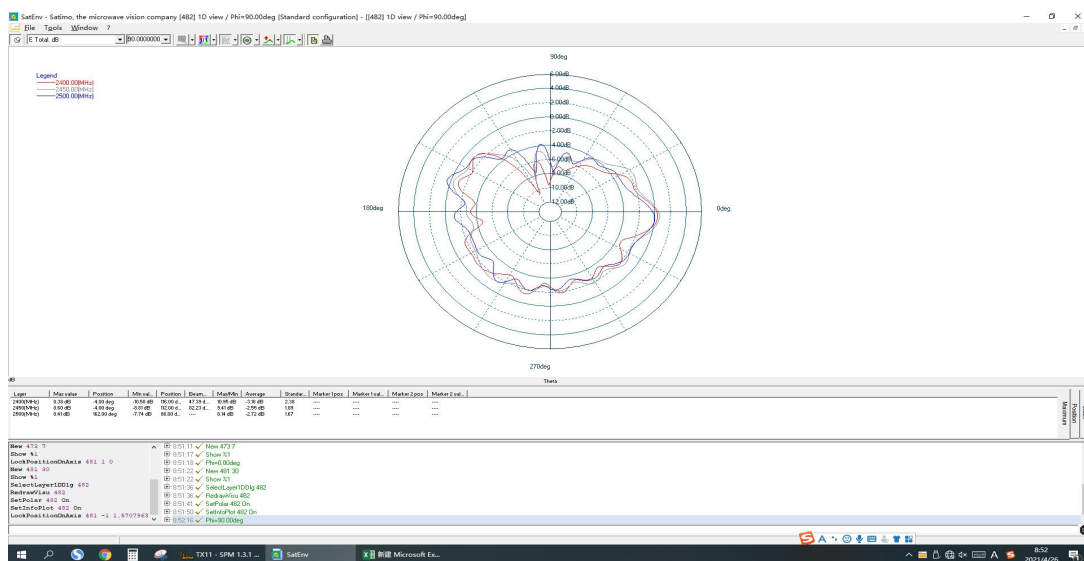
coordinates :



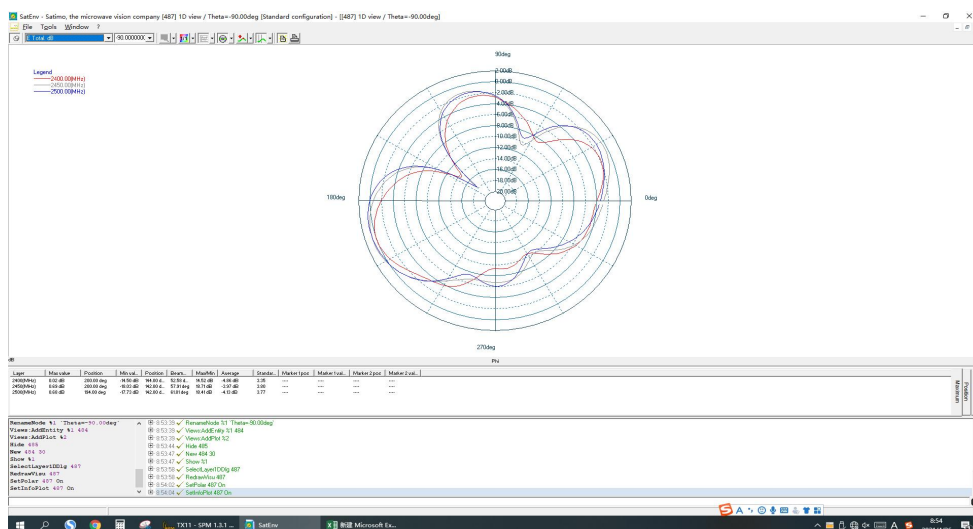
X-Z Plane



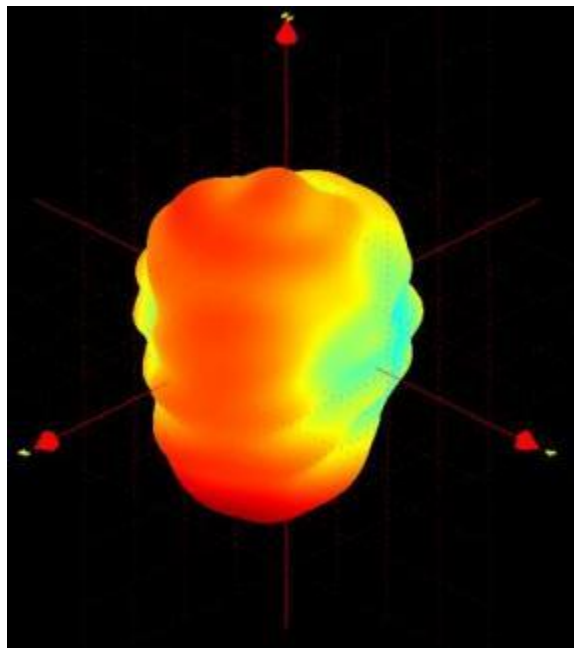
Y-Z Plane



X-Y Plane



3D Radiation Pattern



Frequency (MHz)	2400	2450	2500
Avg.Gain (dBi)	-3.03	-2.01	-2.29
Peck Gain (dBi)	1.48	2.0	2.01
Efficiency (%)	59	72	70

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8 Dependability Test

Base condition: Temperature range	Temperature range	25±5°C
Relative humidity range	Relative Humidity range	55~75%RH
working temperature	Operating Temperature range	-40°C~+105°C
reserve temperature	Storage Temperature range	-40°C~+105°C

8.1, Vibration Resist

At a vibration frequency of 10 to 55 Hz with an amplitude of 1.5mm along the X.Y. After 2 hours of vibration, each test conforms to Table 8.1~8.4.

The device should satisfy the electrical characteristics specified in paragraph 8.1~8.4 after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X ,Y and Z directions .

8.2 Drop Shock

At the height of 100cm, fall on the wooden floor for 3 times before the test meets Table 8.1~8.4.

The device should satisfy the electrical characteristics specified in paragraph 8.1~8.4 after dropping onto the hard wooden board from the height of 100cm for 3 times each facet of the 3 dimensions of the device.

8.3 Solder Heat Proof

After heat of 120°C -150°C for 120 seconds, 3 ± 0.5 seconds, 3 ± 0.5 seconds, or 300°C -10°C, without damage to the welding surface.

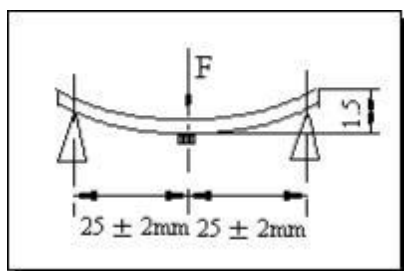
The device should be satisfied after preheating at 120°C~150°C for 120 seconds and dipping in soldering Sn at 255°C+10°C for 5 ± 0.5 seconds , or electric iron 300°C-10°C for 3 ± 0.5 seconds , without damage.

8.4 Adhesive Strength of Termination

5N (0603) on the product electrode terminal; 10N (> 0603) horizontal thrust for 10 ± 1 seconds without obvious appearance damage, shift with the electrode.

The device have no remarkable damage or removal of the termination after horizontal force of 5N(≤ 0603); 10N(>0603)with 10 ± 1 seconds .

8.5 Bending Resist Test



Welding the product in the middle of the PCB board of 1.6 ± 0.2 mm according to the drawing, applying force by the arrow direction: 1mm / S, bending distance: 1.5mm, maintain 5 ± 1 S, and the metal layer of the product does not fall off. Weld the product to the center part of the PCB with the thickness 1.6 ± 0.2 mm as the illustration shows , and keep exerting force arrow -ward on it at speed of :1mm /S ,and hold for 5 ± 1 S at the position of 1.5mm bending distance ,so far ,any peeling off of the

product metal coating should not be detected .

8.6 Moisture Proof

If in a temperature of 60 ± 2 °C with 96 hours relative humidity of 90~95%, and restored for 1~2 hours in room temperature, the test is in accordance with Table 8.1~8.4.

The device should satisfy the electrical characteristics specified in paragraph 8.1~8.4 after exposed to the temperature 60 ± 2 °C and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time

Specification

under normal condition.

8.7 High Temperature Endurance

Place for 96 ± 2 hours in an incubator at $85 \pm 5^\circ\text{C}$ and recover for 1 to 2 hours at room temperature before testing. Compliance with Table 8.1~8.4.

The device should satisfy the electrical characteristics specified in paragraph 8.1~8.4 after exposed to temperature $85 \pm 5^\circ\text{C}$ for 96 ± 2 hours and 1~2 hours recovery time under normal temperature.

8.8 Low Temperature Endurance

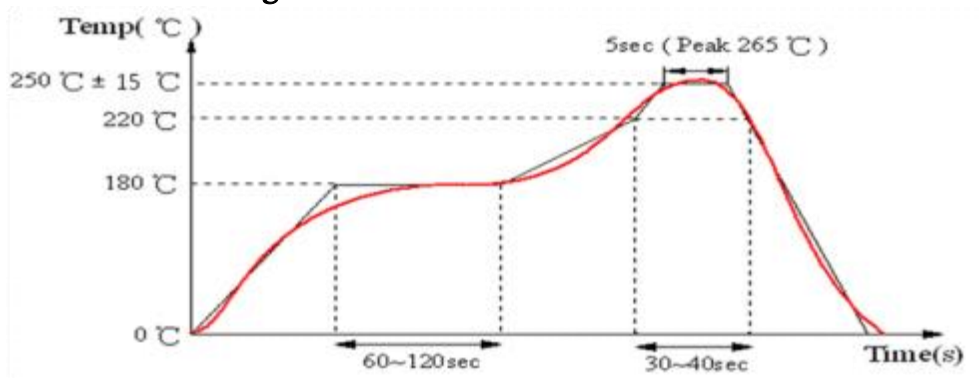
Place $96 \pm$ in a temperature of $-40^\circ\text{C} \pm 5^\circ\text{C}$ and recover for 1~2 hours as specified in Table 8.1~8.4.

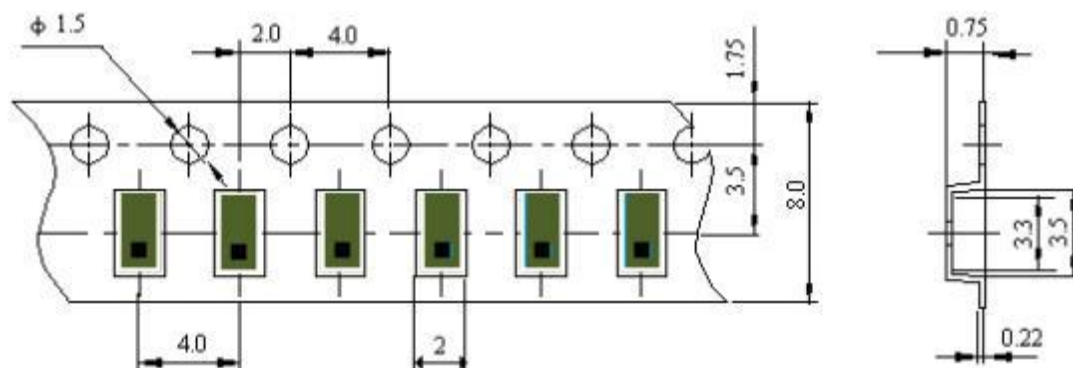
The device should also satisfy the electrical characteristics specified in paragraph 8.1~8.4 after exposed to the temperature $-40^\circ\text{C} \pm 5^\circ\text{C}$ for 96 ± 2 hours and to 2 hours recovery time under normal temperature.

8.9 Temperature Cycle Test

At -40°C for 30 minutes and $+85^\circ\text{C}$ for 30 minutes, after 5 cycles and 1 to 2 hours in room temperature, the test conforms to Table 8.1~8.4.

The device should also satisfy the electrical characteristics specified in paragraph 8.1~8.4 after exposed to the low temperature -40°C and high temperature $+85^\circ\text{C}$ for 30 ± 2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

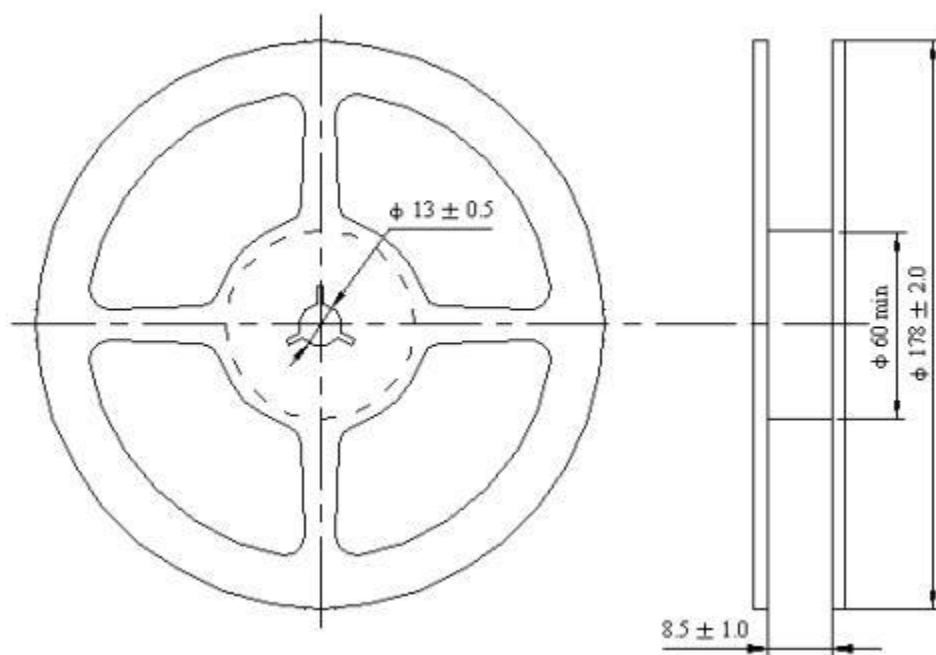
9 Reflow Soldering Standard Condition

Specification**10 Packaging size (3216) Packaging and Dimensions****10.1 Plastic Tape**

Packaging description: Remarks for Package

The length of the tail hole of the carrier is 150~200mm, the length of the carrier head is 250~300mm, and the cover of the head is 250mm longer.

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.

10.2 Reel (3000 pcs/Reel)**10.3, Storage Period**

The product shall be used up within one year after receipt.

Product should be used within twelve months of receipt.

Wet sensitivity level 1 / Storage temperature and humidity:

MSL 1 / Storage Temperature Range : -40~105 degree C , Humidity : <85%RH