

SPECIFICATION

PART NO: LA31H2450-A35/H
CUSTOMER PART NO:
CUSTOMER APPROVED BY:
APPROVED DATE:

RoHS Compliant Parts

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Formed On	Document Version (V1.1)	

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Version rejigger track record

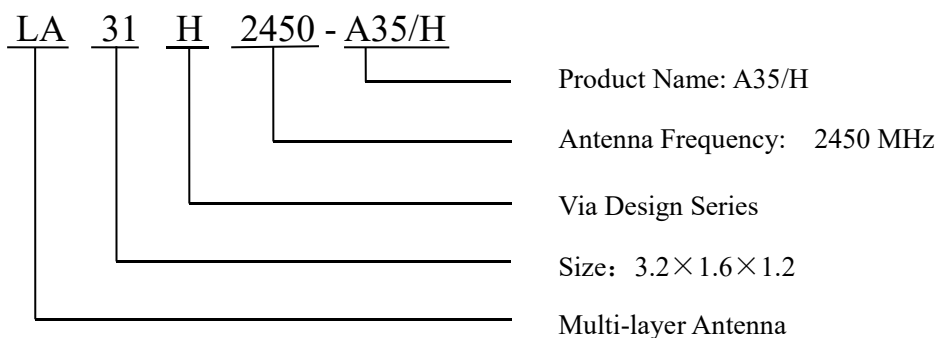
Version	Rejigger	Prepared	Approve	Date
V1.0	First Releasing	刘楠	罗昌桅	2021.03.25
V1.1	Update the reflow temperature for point 9	金天翔	罗昌桅	2024.12.15
Note: 1、When the performance modified, the data sheet version will be updated (V1.0 to V2.0、V3.0……); 2、When the measured method is changed (Including reliability condition), or used condition, the data sheet version will be updated (V1.0 to V1.1、V1.2……)。				

Specification

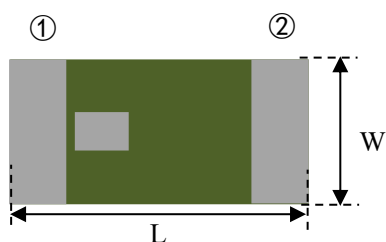
1. INTRODUCTION

"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.

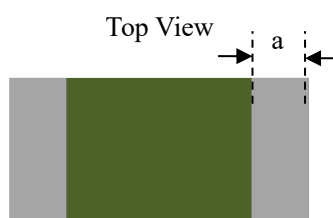
2. Part Number



3. Dimensions (Unit: mm)



Number	Terminal Name
①	Input
②	NC



Bottom View



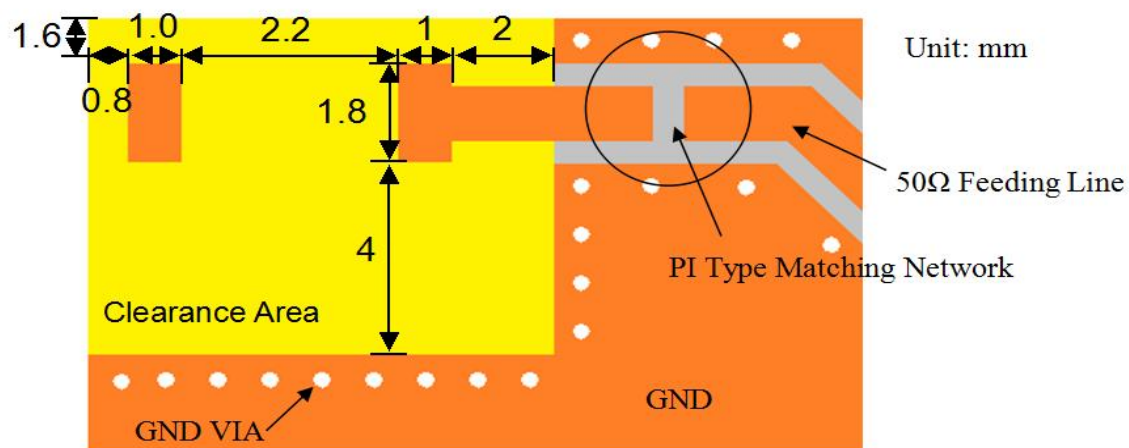
Side View



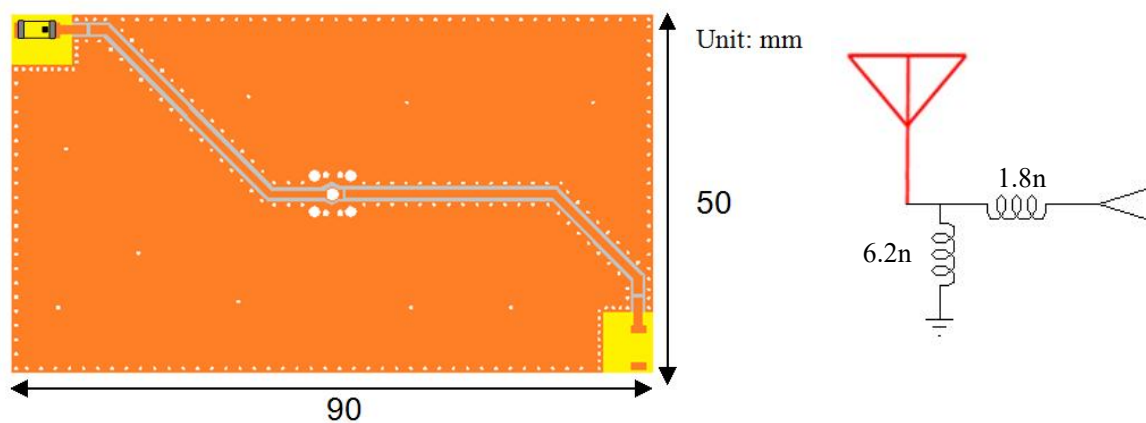
Side View

Symbol	L	W	T	a
Dimension(mm)	3.2 ± 0.2	1.6 ± 0.2	1.2 ± 0.1	0.5 ± 0.1

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4. Evaluation Board and Matching Circuits

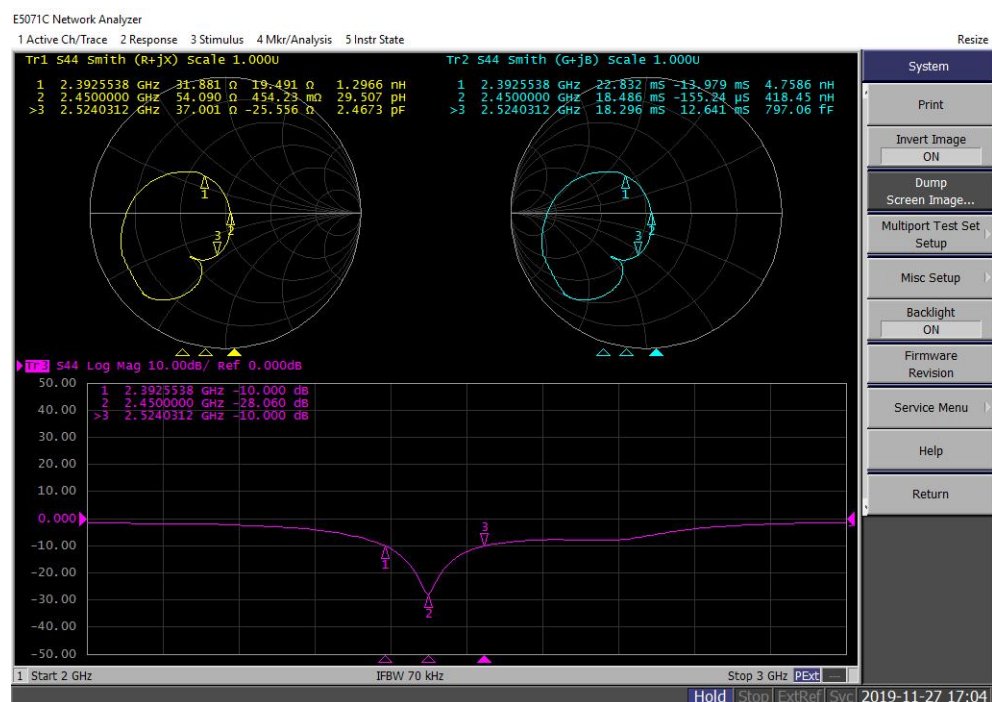


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5. Electrical Characteristics

No.	Item	Specifications
5.1	Central Frequency (No matching)	2875MHz
	After Matching	2450 MHz
5.2	Band Width	100MHz typ.
5.3	Peak Gain	5.29 dBi
5.4	V.S.W.R	≤ 2.0
5.5	Polarization	Linear
5.6	Azimuth Beam width	Omni-directional
5.7	Impedance	50 Ω

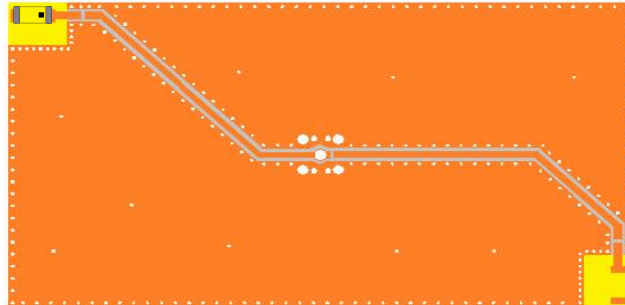
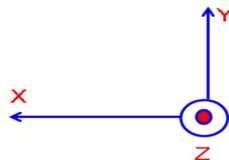
6. Characteristic curve



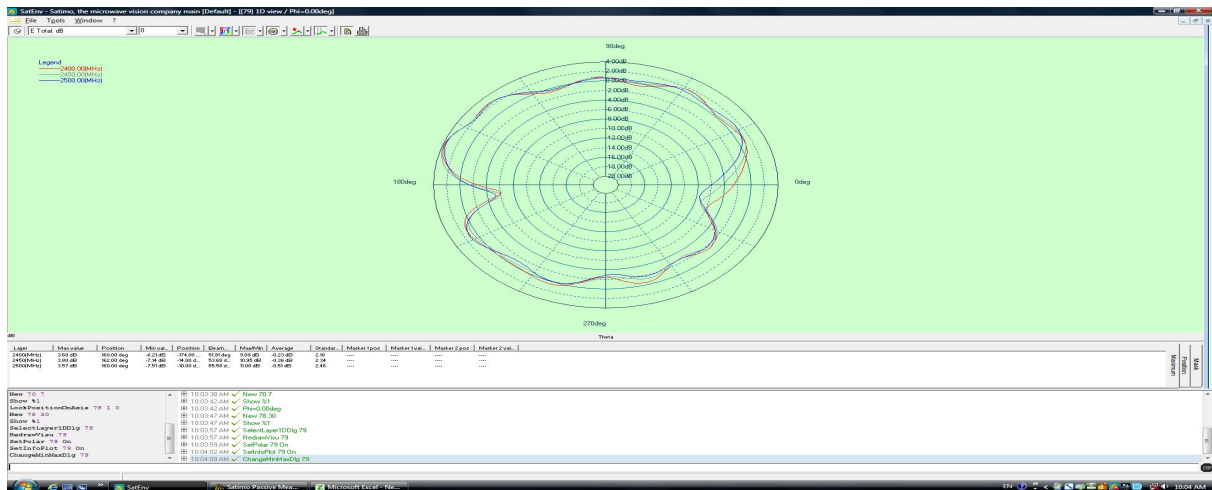
Specification

7. Radiation Pattern

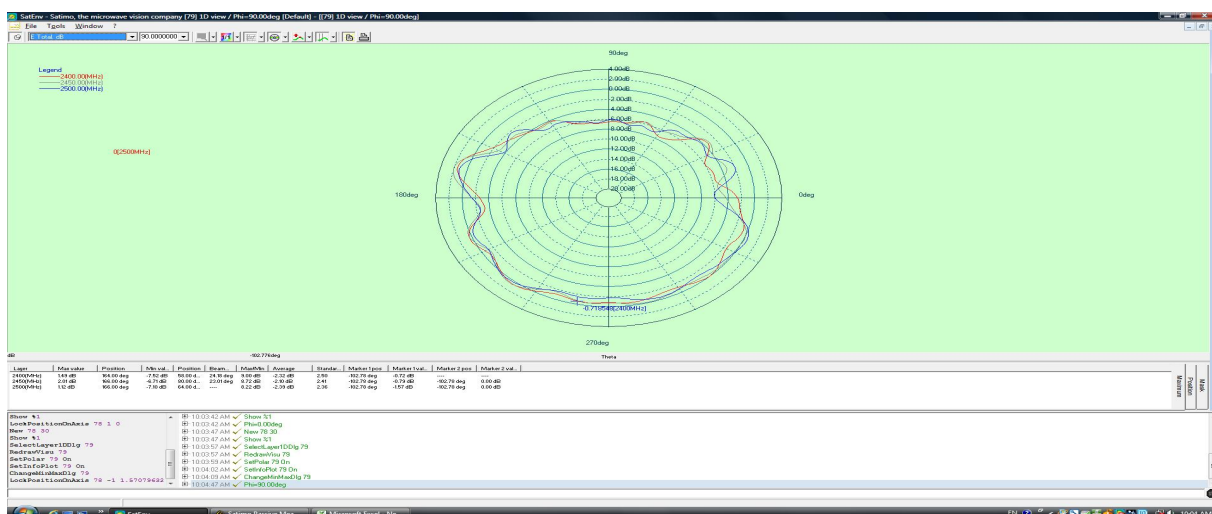
coordinates:



X-Z Plane

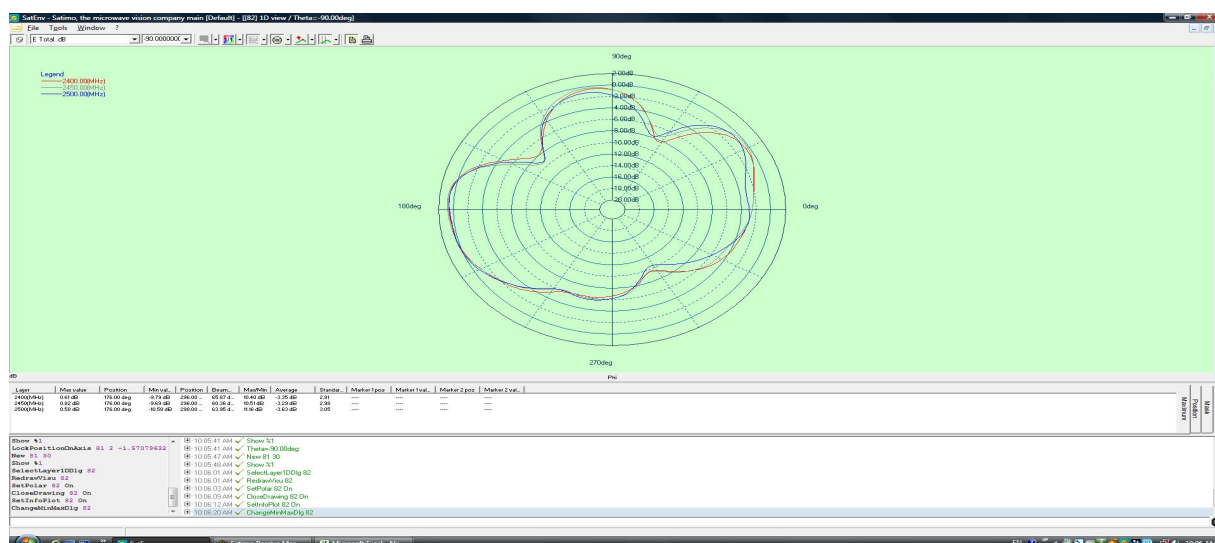


Y-Z Plane

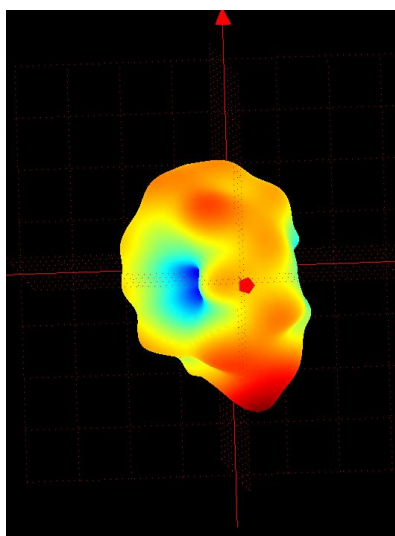


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X-Y Plane



3D Radiation Pattern



Frequency (MHz)	2400	2450	2500
Avg. Gain (dBi)	-0.21	-0.33	-0.49
Peck Gain (dBi)	4.99	5.29	4.58
Efficiency (%)	72	73	70

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8 Dependability Test

Condition: Temperature range	$25 \pm 5^{\circ}\text{C}$
Relative Humidity range	55~75%RH
Operating Temperature range	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Storage Temperature range	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

8.1 Vibration Resist

The device should fulfill the electrical specification 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

The device should have no mechanical damage after dropping onto the hard wooden board from the height of 100cm for 3 times each facet of the 3 dimensions of the device.

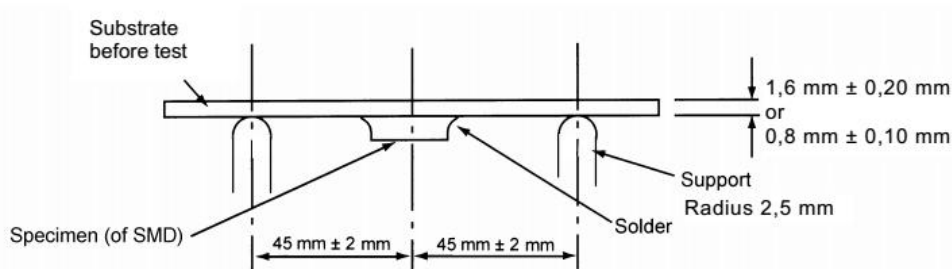
8.3 Solder Heat Proof

The device should be satisfied after preheating at $120^{\circ}\text{C} \sim 150^{\circ}\text{C}$ for 120 seconds and dipping in soldering Sn at $255^{\circ}\text{C} \pm 10^{\circ}\text{C}$ for 5 ± 0.5 seconds, or electric iron $300^{\circ}\text{C} - 10^{\circ}\text{C}$ for 3 ± 0.5 seconds, without damage.

8.4 Adhesive Strength of Termination

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



Weld the product to the center part of the PCB with the thickness $1.6 \pm 0.2\text{mm}$ or $0.8 \pm 0.1\text{mm}$ as the illustration shows, and keep exerting force arrow-ward on it at speed of 1mm/S , and hold for $5 \pm 1\text{S}$ 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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8.6 Moisture Proof

The device should fulfill the electrical specification 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.

8.7 High Temperature Endurance

The device should fulfill the electrical specification after exposed to temperature $85 \pm 5^\circ\text{C}$ for 96 ± 2 hours and 1~2 hours recovery time under normal temperature.

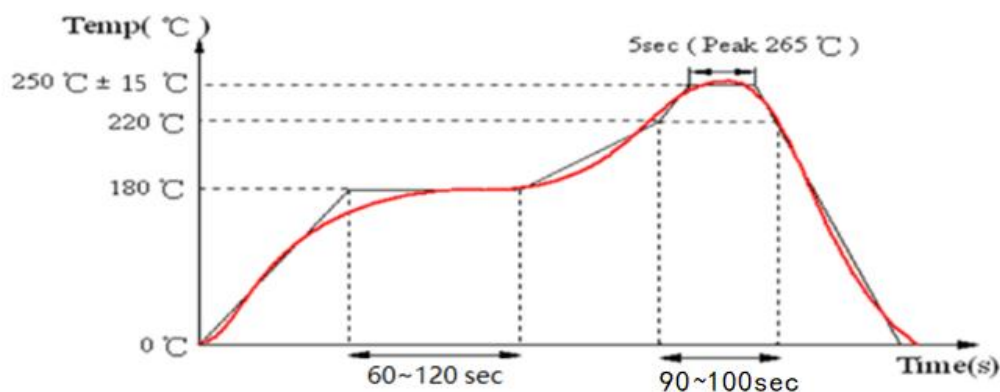
8.8 Low Temperature Endurance

The device should fulfill the electrical specification 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

The device should fulfill the electrical specification 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.

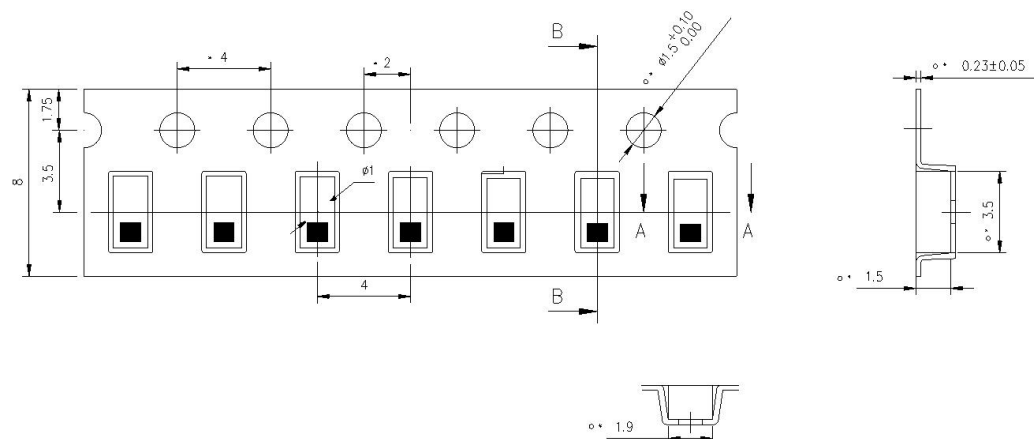
9 Reflow Soldering Standard Condition



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10 Packaging and Dimensions

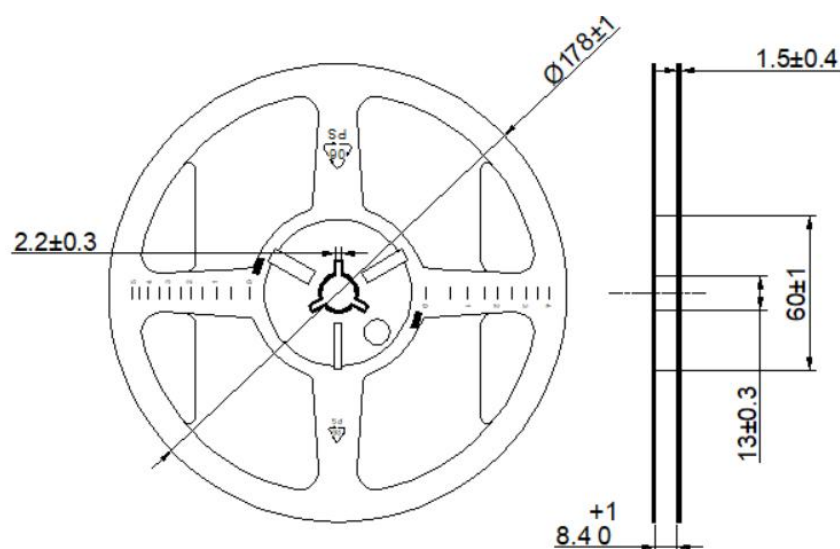
10.1 Plastic Tape



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.

10.2 Reel (3000 pcs/Reel)



10.3 Storage Period

Product should be used within twelve months of receipt.

MSL 1 / Storage Temperature Range :-10~+30 degree C, Humidity : <85%RH