

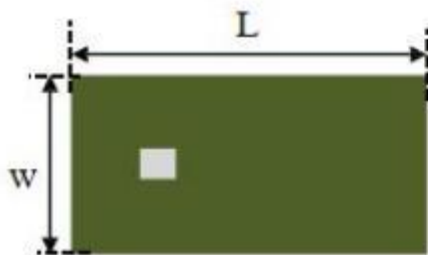
# P/N: HLX321606A01

## Features

1. Surface Mounted Devices with a small dimension of 3.6 x 1.6 x 0.6 mm<sup>3</sup> meet future miniaturization trend.
2. Embedded and LTCC (Low Temperature Co-fired Ceramic) technology is able to future integrate with system design as well as beautifying the housing of final product.
3. High Stability in Temperature / Humidity Change

## Applications

1. Bluetooth
2. Wireless LAN
3. ISMband 2.4GHz wireless applications



( Top View )

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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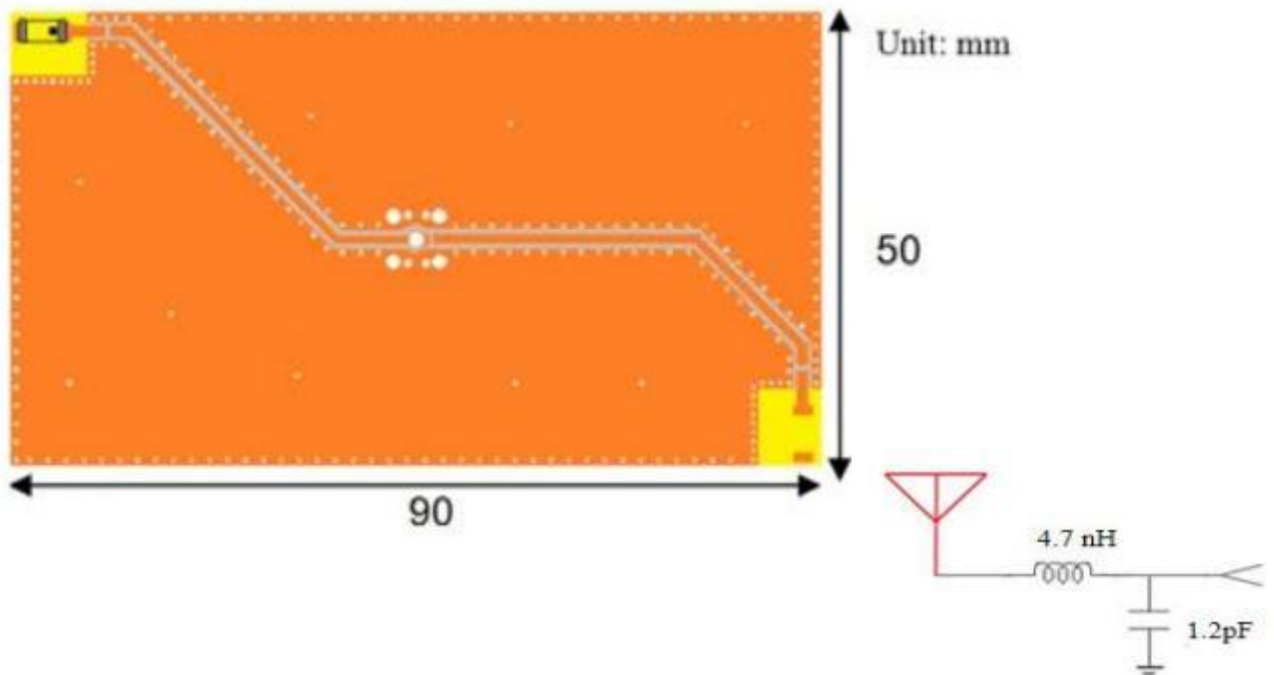
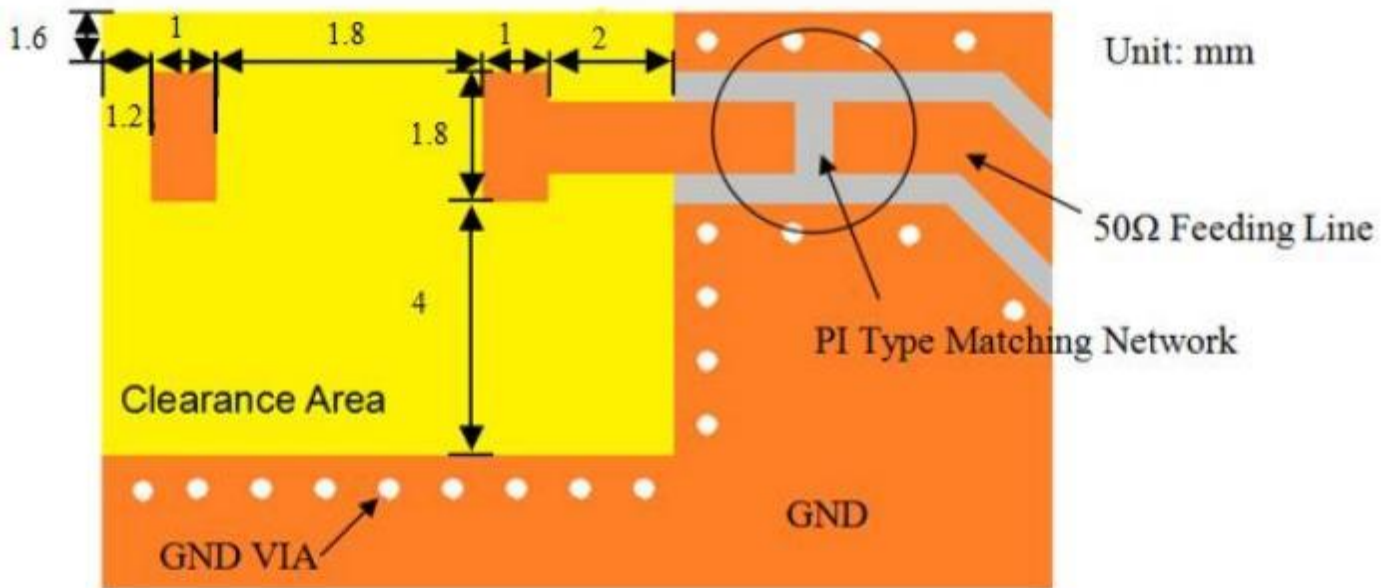


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## Evaluation Board and Matching Circuits



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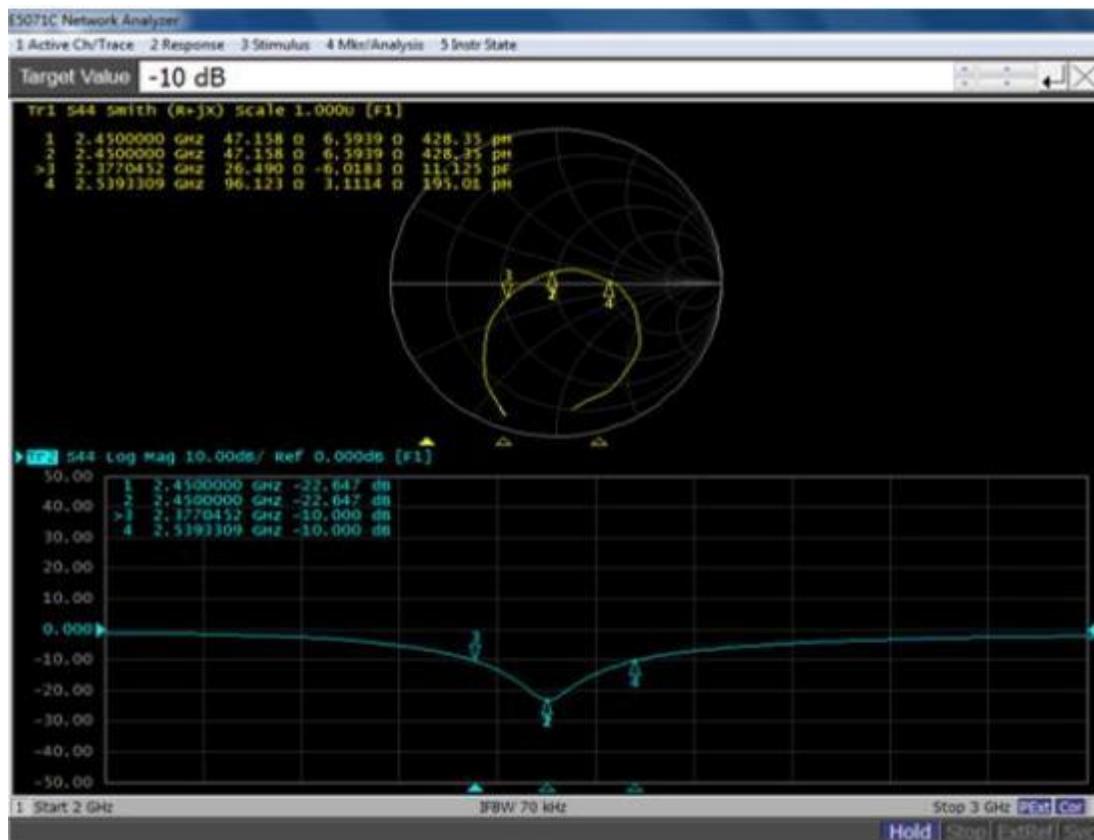
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## Electrical Characteristics

No.	Item	Specifications
1	Central Frequency	2545MHz
2	Bandwidth	100 MHz typ .
3	Peak Gain	2.01 dBi
4	Return Loss	$\leq 2.0$
5	Polarization	Linear
6	Azimuth Beam width	Omni-directional
7	Impedance	50 $\Omega$

## Characteristic curve



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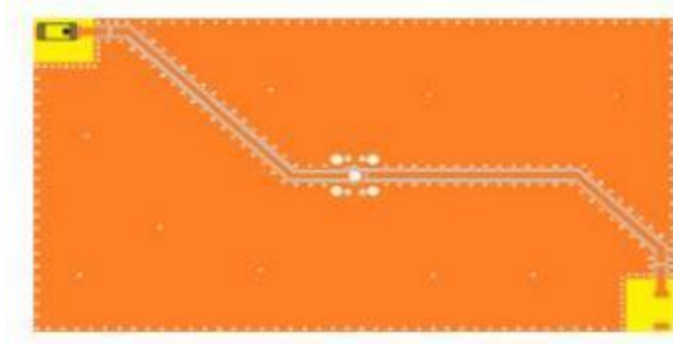
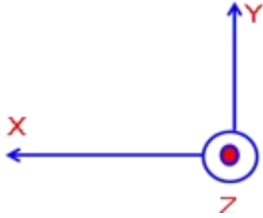
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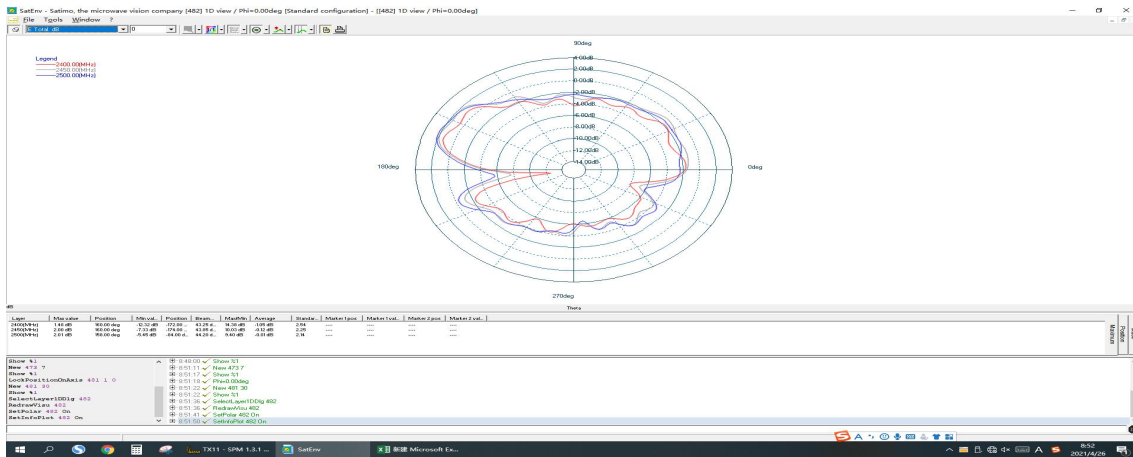
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## Radiation Pattern

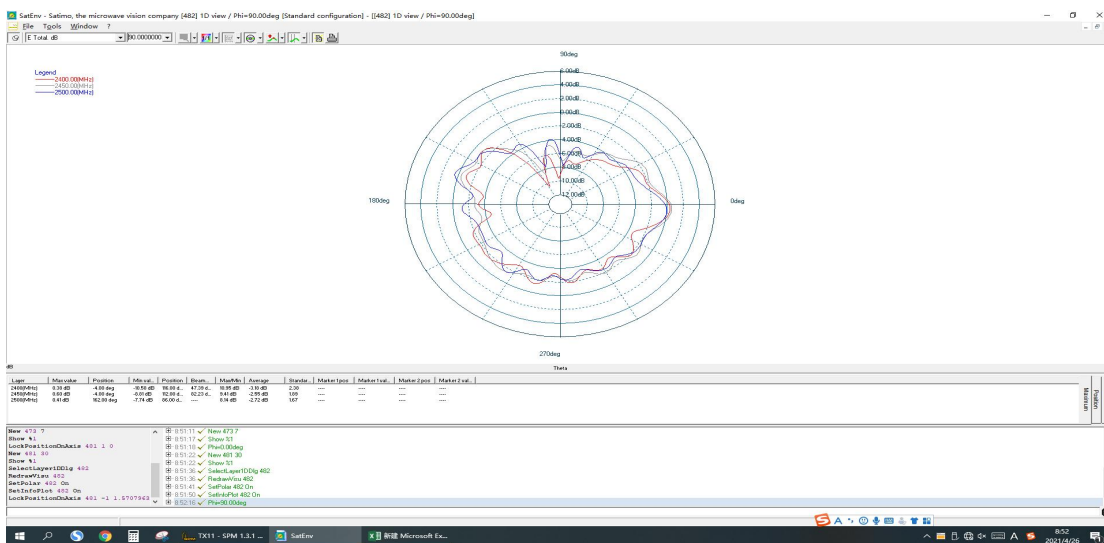
coordinates :



## X-Z Plane



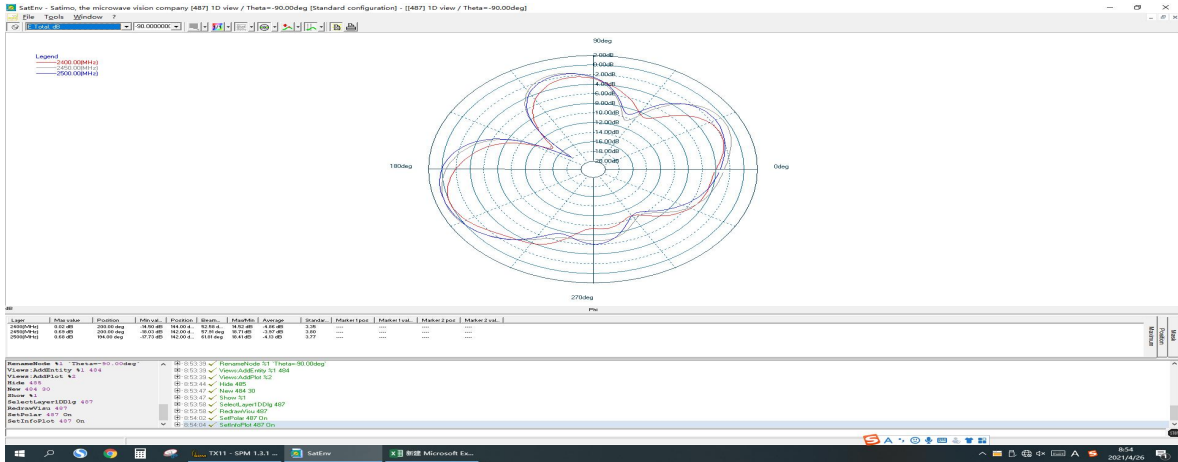
## X-Y Plane



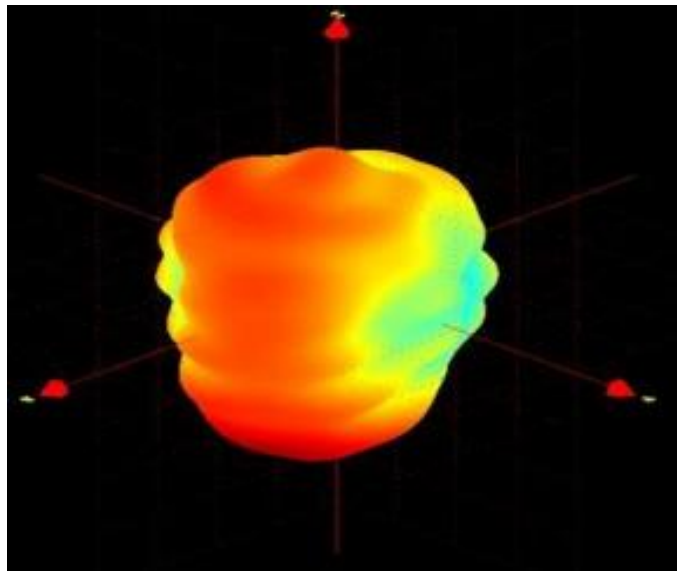
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## Y-Z Plane



## 3D Radiation Pattern



Frequency (MH z)	2400	2450	2500
Avg.Gain (dBi)	-3 .03	-2.01	-2 .29
Peck Gain (dBi)	1 .48	2.0	2 .01
Efficiency (%)	60	72	70

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## Dependability Test

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

## 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 .

## 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 .

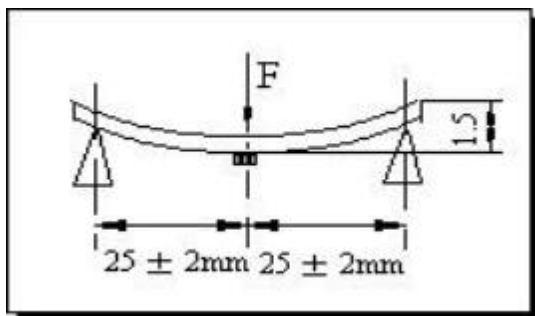
## Solder Heat Proof

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 .

## 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 .

## Bending Resist Test



Weld the product to the center part of the PCB with the thickness  $1.6 \pm 0.2\text{mm}$  as the illustration shows, and keep exerting force arrow-ward on it at speed of :1m m/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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## 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 .

## High Temperature Endurance

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

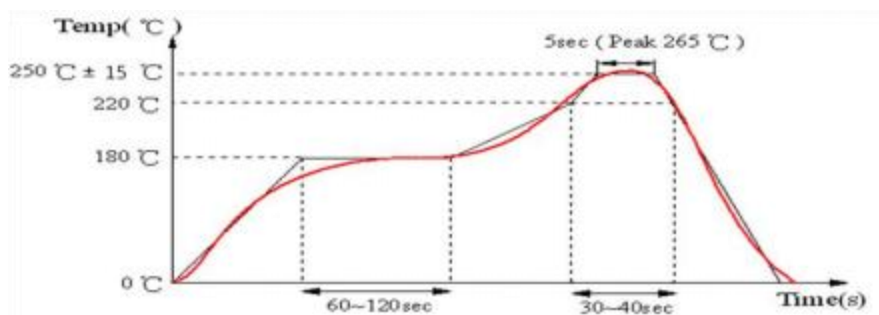
## Low Temperature Endurance

The device should fulfill the electrical specification after exposed to the temperature  $-40^{\circ}\text{C}\pm 5^{\circ}\text{C}$  for  $96\pm 2$  hours and to 2 hours recovery time under normal temperature .

## Temperature Cycle Test

The device should fulfill the electrical specification 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.

## Reflow Soldering Standard Condition



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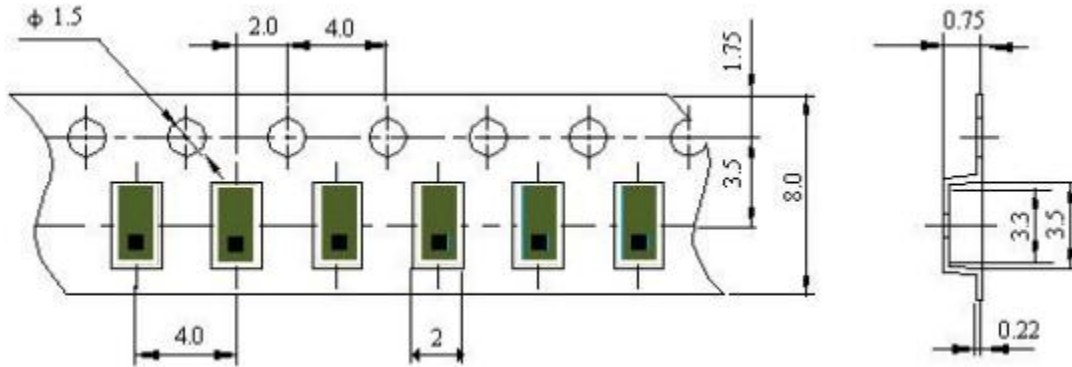
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## Packaging and Dimensions (3216)

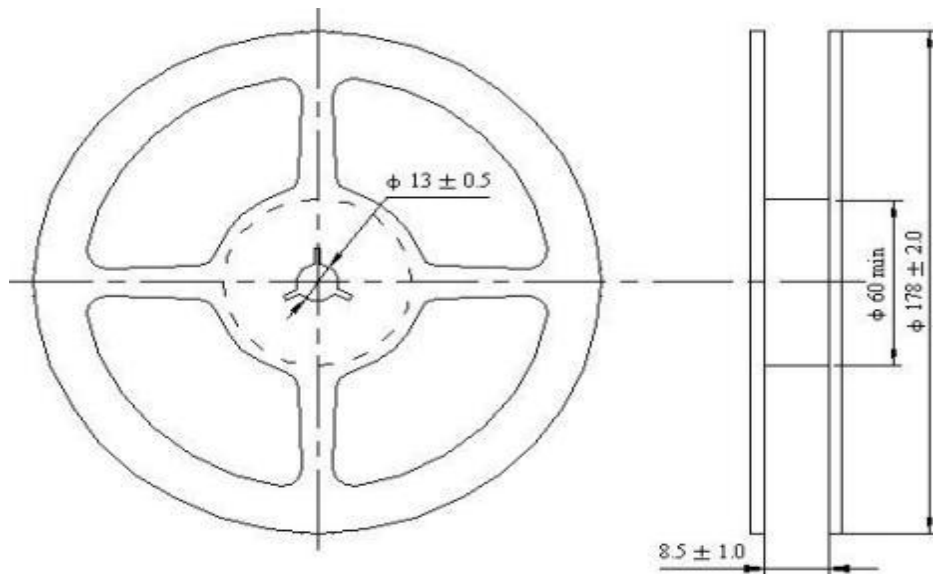
### Plastic Tape



### 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 )



### Storage Period

Product should be used within six months of receipt.

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

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