



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# 5.5 GHz Ceramic Chip Antenna



ACAG0301-5500-T



3.2 x 1.6 x 1.2mm  
RoHS/RoHS II Compliant  
MSL = 1

## FEATURES

- Gain of 4.5dBi
- VSWR  $\leq$  2.0
- Made using LTCC (low temperature co-fired ceramic) technology
- Small form factor 3.2 x 1.6 x 1.2mm
- Omni-directional

## APPLICATIONS

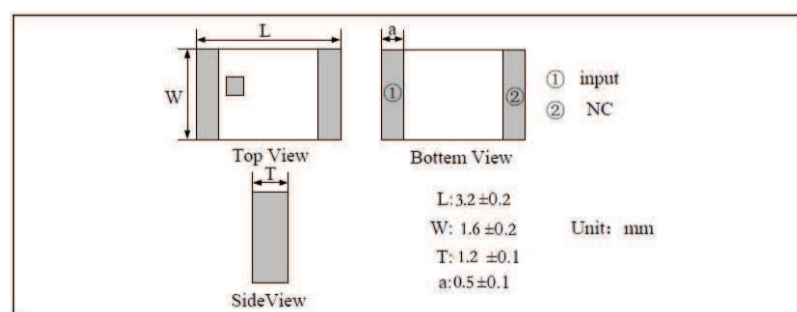
- IoT and wearables
- WiFi/WLAN
- ISM band

## ELECTRICAL CHARACTERISTICS

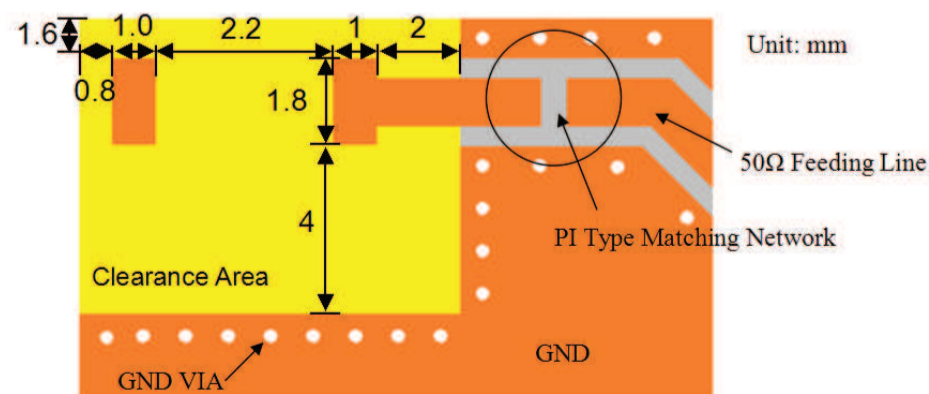
| Item                        | Minimum          |
|-----------------------------|------------------|
| Frequency (No matching)     | 5785 MHz         |
| Frequency (after matching)  | 5500 MHz         |
| Bandwidth                   | 800 MHz typ      |
| VSWR                        | $\leq$ 2.0       |
| Impedance                   | 50 $\Omega$      |
| Peak Gain                   | 4.5 dBi          |
| Azimuth                     | Omni-directional |
| Polarization                | Linear           |
| Operating Temperature Range | -40°C ~+ 85°C    |

## MECHANICAL DIMENSIONS (mm)

Antenna Dimensions



Layout Dimensions



# 5.5 GHz Ceramic Chip Antenna

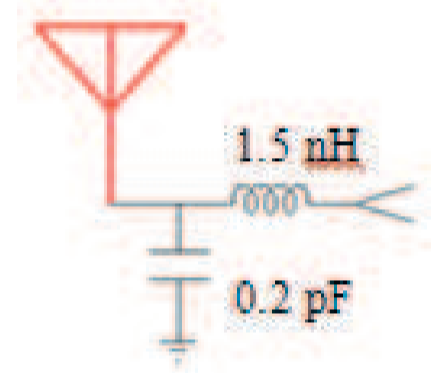
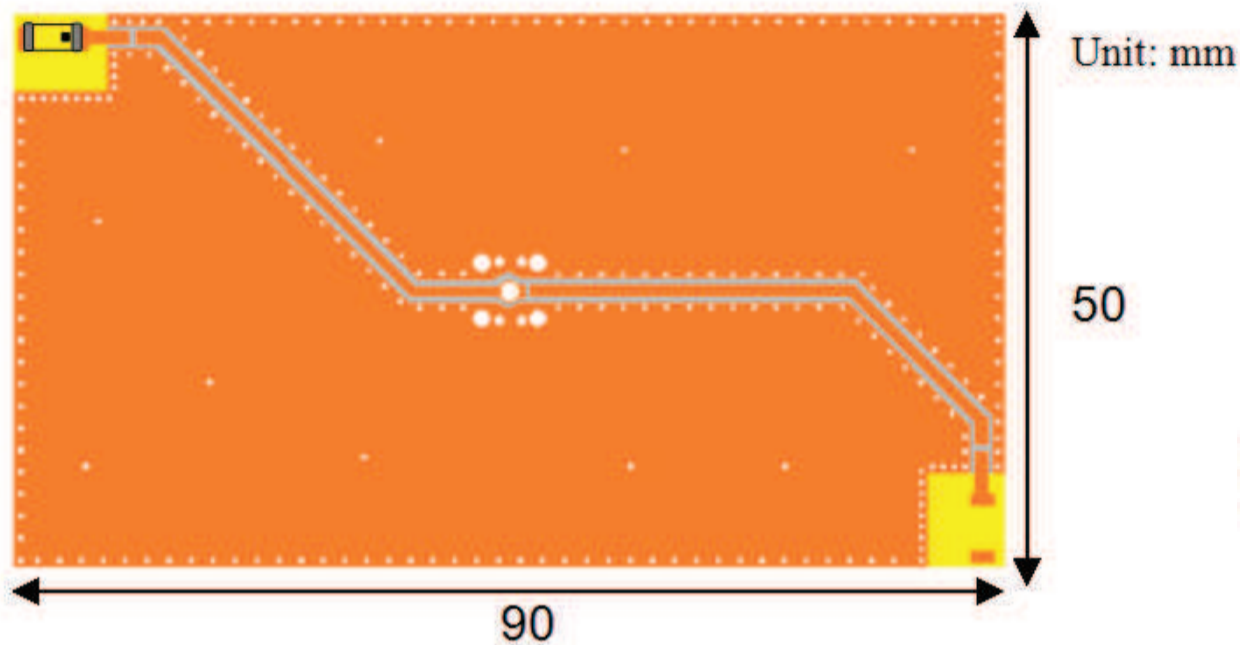


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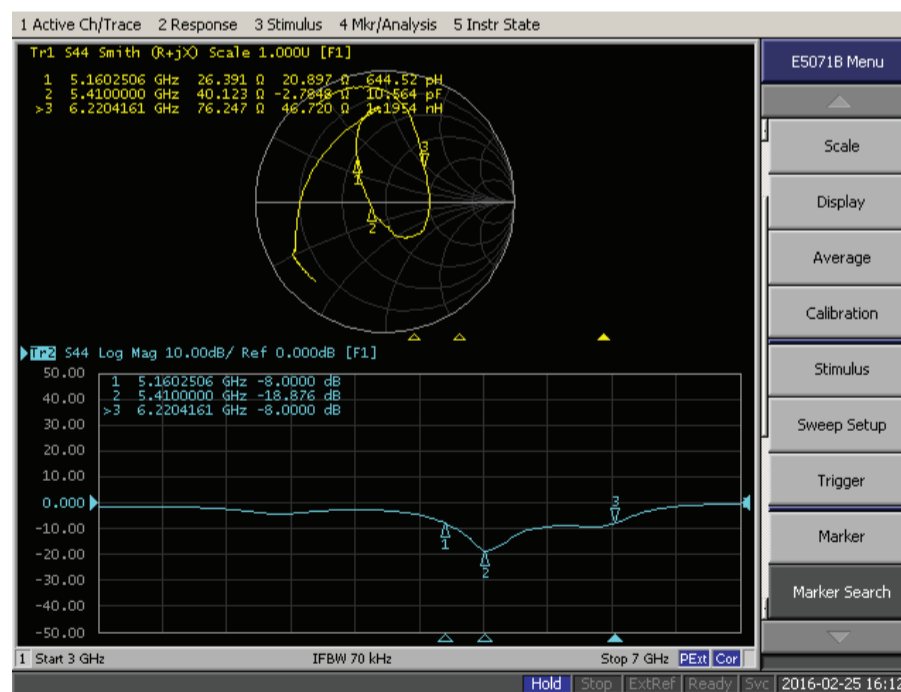


3.2 x 1.6 x 1.2mm  
RoHS/RoHS II Compliant  
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## EVALUATION BOARD AND MATCHING CIRCUITS



## ANTENNA RESPONSE – SMITH CHART AND RETURN LOSS S11



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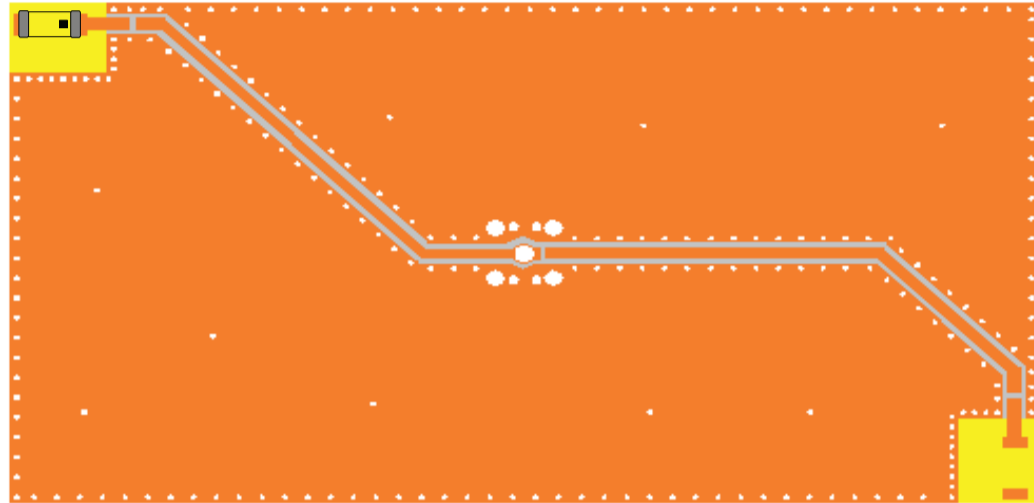
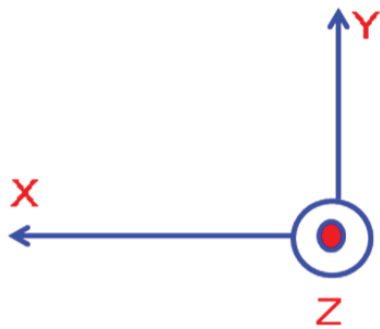


3.2 x 1.6 x 1.2mm  
RoHS/RoHS II Compliant

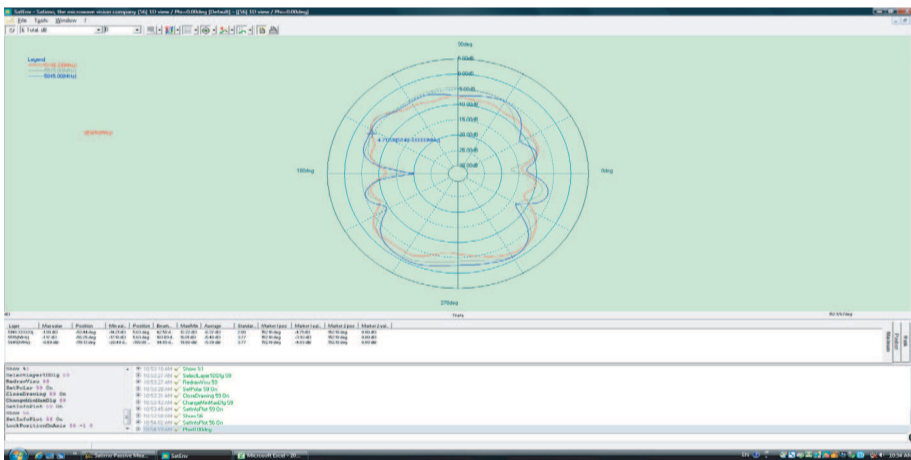
MSL = 1

## RADIATION PATTERNS

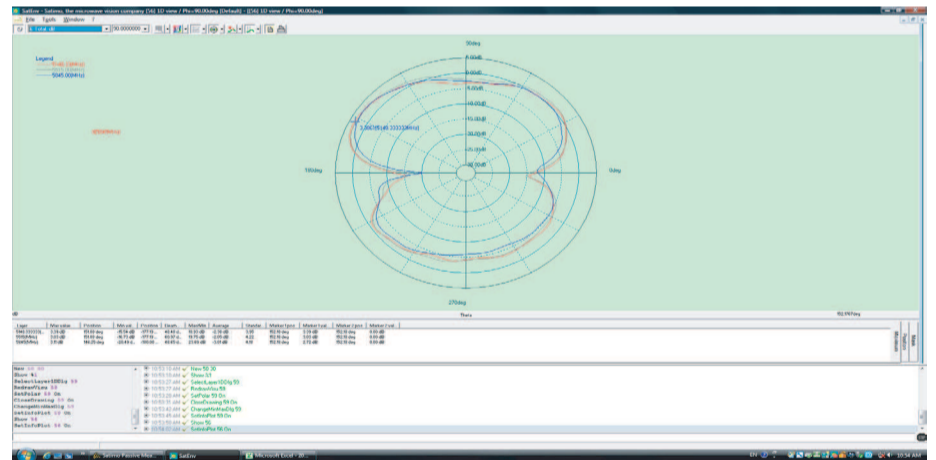
### Coordinates



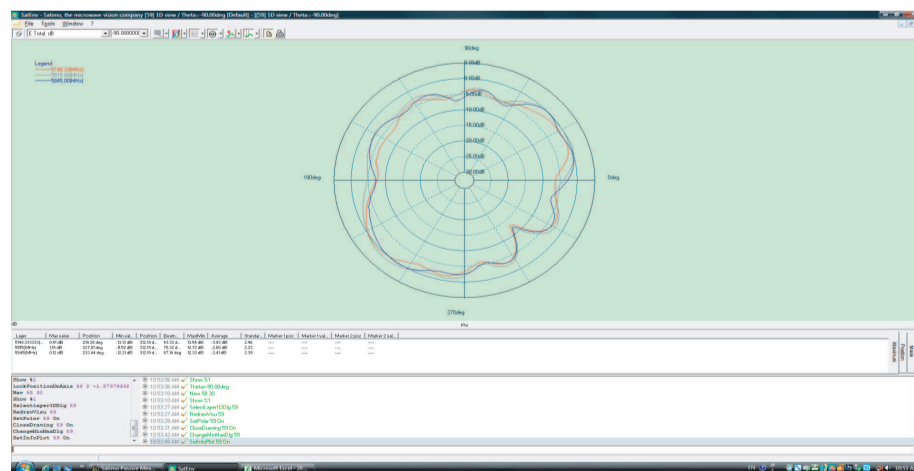
### X-Z Plane



### Y-Z Plane



### X-Y Plane



REVISED: 06.21.2018

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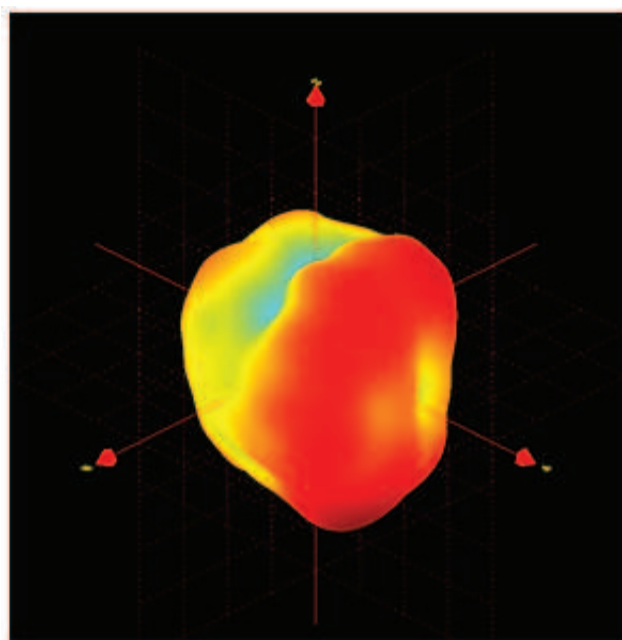


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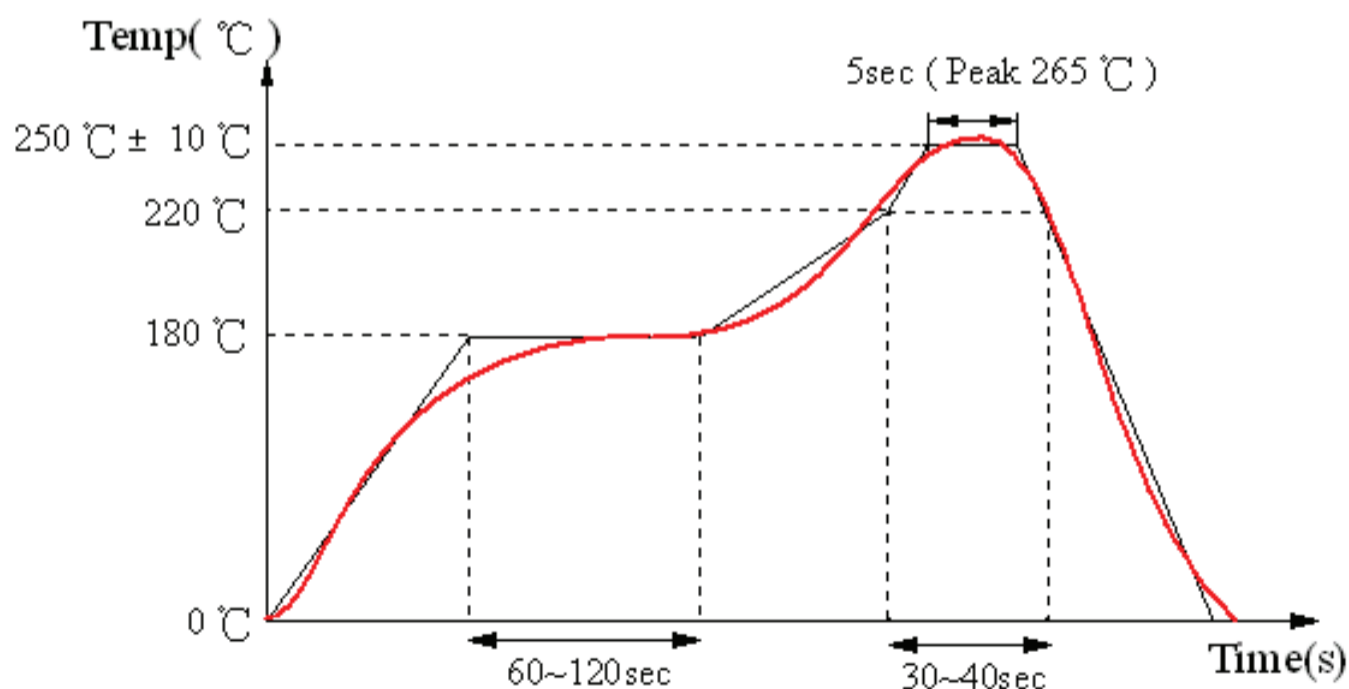
3.2 x 1.6 x 1.2mm  
RoHS/RoHS II Compliant  
MSL = 1

## 3D PATTERNS



|                 |       |       |       |
|-----------------|-------|-------|-------|
| Frequency (MHz) | 5150  | 5500  | 5850  |
| Avg. Gain (dBi) | -2.36 | -2.05 | -3.01 |
| Peak Gain (dBi) | 3.98  | 4.5   | 4.06  |
| Efficiency (%)  | 60    | 72    | 63    |

## REFLOW SOLDERING STANDARD CONDITION



# 5.5 GHz Ceramic Chip Antenna



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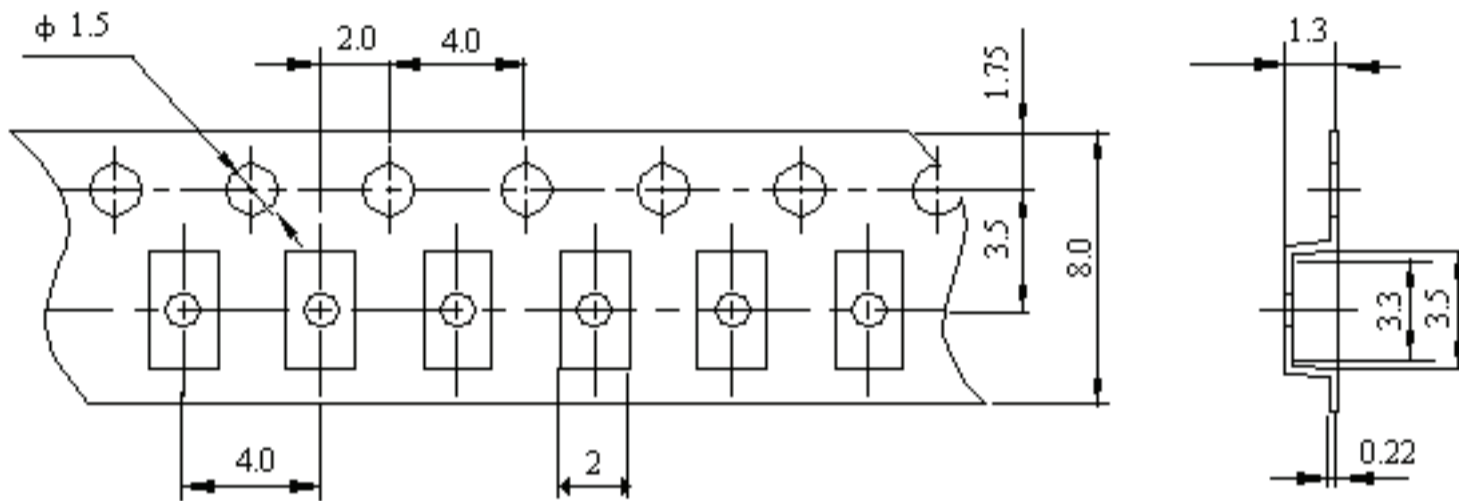
3.2 x 1.6 x 1.2mm  
RoHS/RoHS II Compliant  
MSL = 1

## PACKAGING

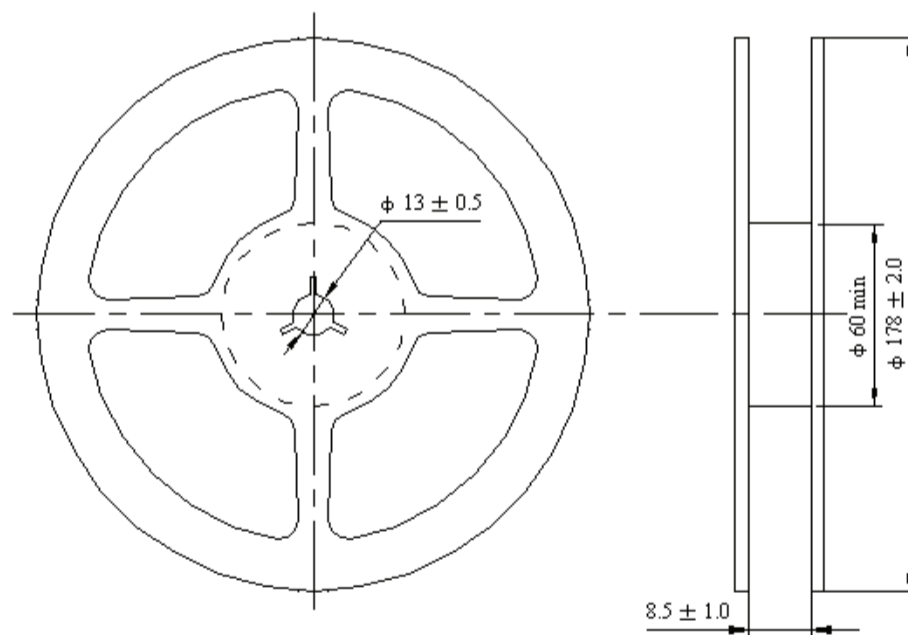
Reel (3000 pcs/Reel)

Size of the carton: 330 x 210 x 210 mm

### Tape Dimensions: mm



### Reel Dimensions: mm



Storage Temperature Range : <math><30</math> degree C, Humidity : <math><60\%RH</math>

MSL - 1

Oxidizable, 12 months in a vacuum sealed bag.

Once opened, please repack the unused items within 168 hours by re-seal package treatment.

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## CAUTIONS

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### 1. Static voltage

Static voltage between signal & ground may cause deterioration & destruction of the component. Please avoid static voltage.

### 2. Ultrasonic cleaning

Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning.

### 3. Soldering

Only leads of the component may be soldered. Please avoid soldering to any other part of the component, such as on the patterns as this will change the performance of the antenna.