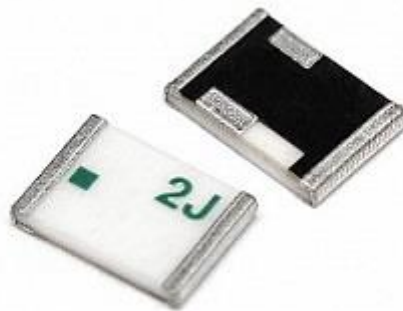


## AMC-ANT-2JL41

2.4/5.0/6.0GHz surface mount ceramic antenna

### Features

- **2.4/5.0/6.0GHz ISM:**
  - 2410 – 2490MHz
  - 4920 – 7125MHz
- Surface mount
- Easy to integrate
- Compact size
- Ceramic material
- Ground plane dependent
- Dimensions: 5.2 x 3.7 x 0.7mm



## 1. Antenna and electrical specifications

Parameters	2.4/5.06.0GHz ISM antenna	
Standards	Wi-Fi, Bluetooth, ZigBee, ISM	
Band (GHz)	2.4	5.0/6.0
Frequency (MHz)	2410 - 2490	4920 - 7125
Return Loss (dB)	~-18.8	~-8.2
VSWR	~1.3:1	~2.4:1
Efficiency (%)	64.7	61.5
Peak Gain (dBi)	~1.3	~2.3
Average Gain (dB)	~-1.9	~-2.2
Impedance (Ohms)	50	
Polarisation	Linear	
Radiation Pattern	Omni-directional	
Max. Input Power (W)	10	

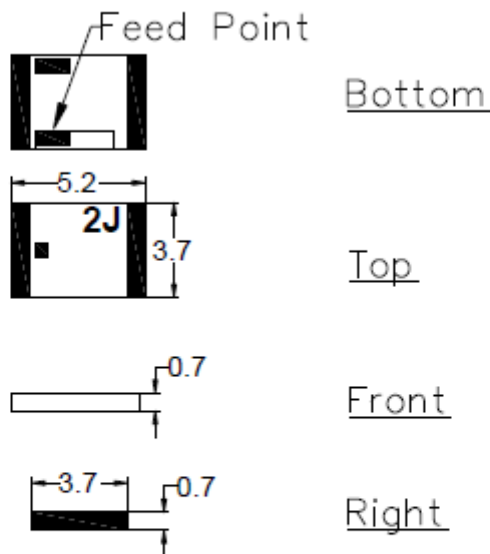
### Measurement Conditions:

- Mounted on ground plane of 80 x 40mm
- Measured in certified CTIA 3D anechoic chamber



## 2. Mechanical and environmental specifications

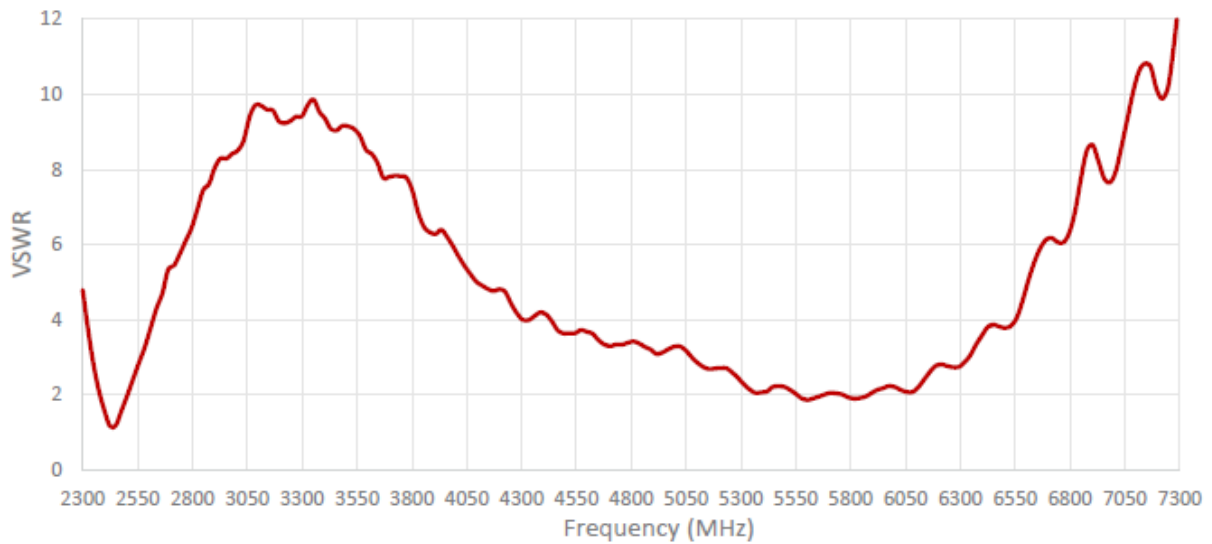
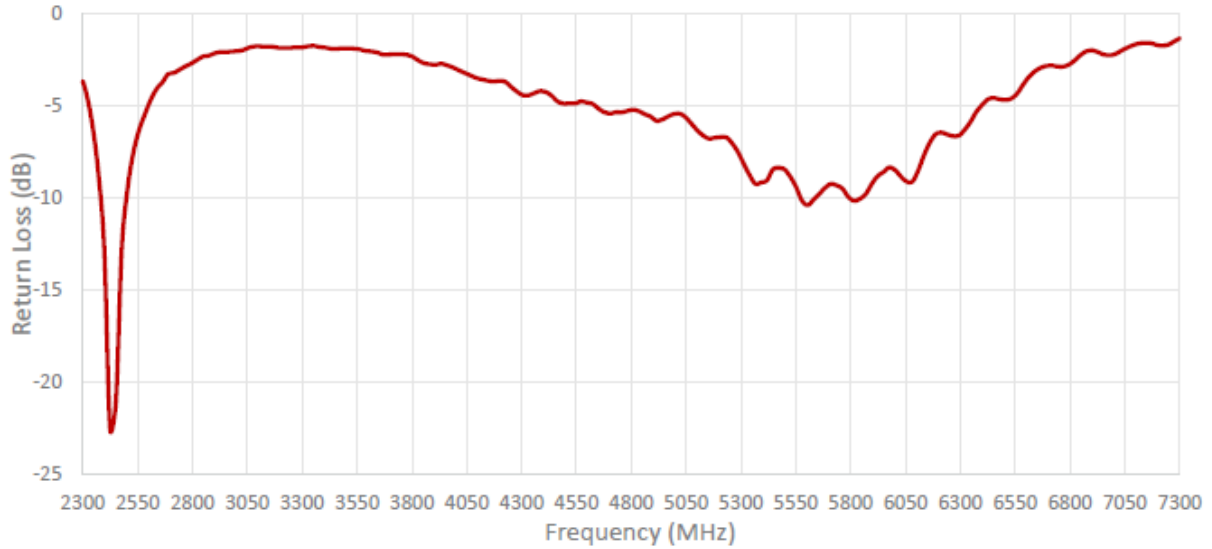
<b>Mounting Type</b>	Surface mount
<b>Dimensions (mm)</b>	5.2 x 3.7 x 0.7
<b>Material</b>	Ceramic
<b>Operating Temperature (°C)</b>	-40 to +85
<b>Storage Temperature (°C)</b>	-40 to +85
<b>Substance Compliance</b>	RoHS

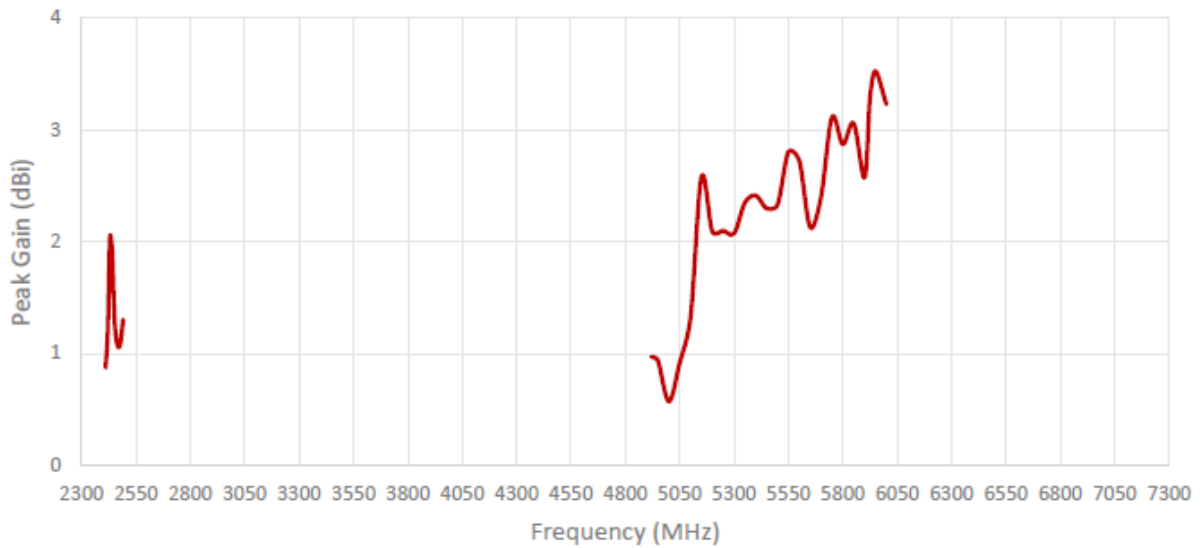
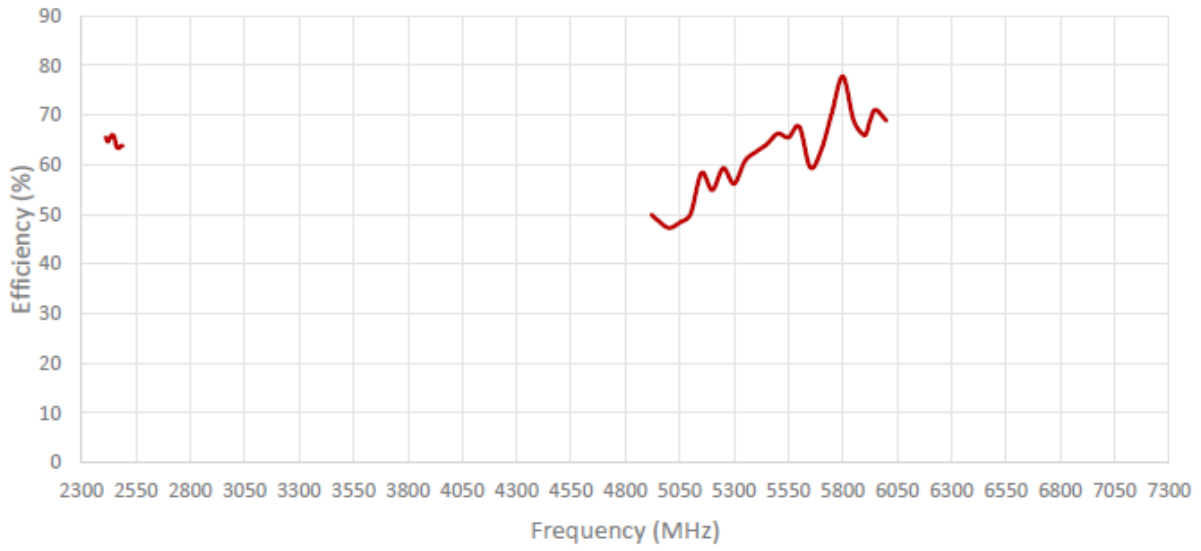


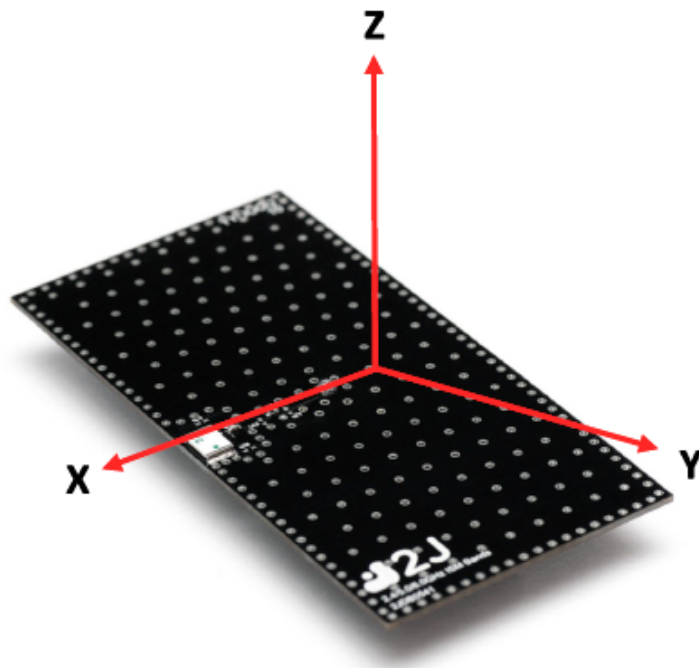
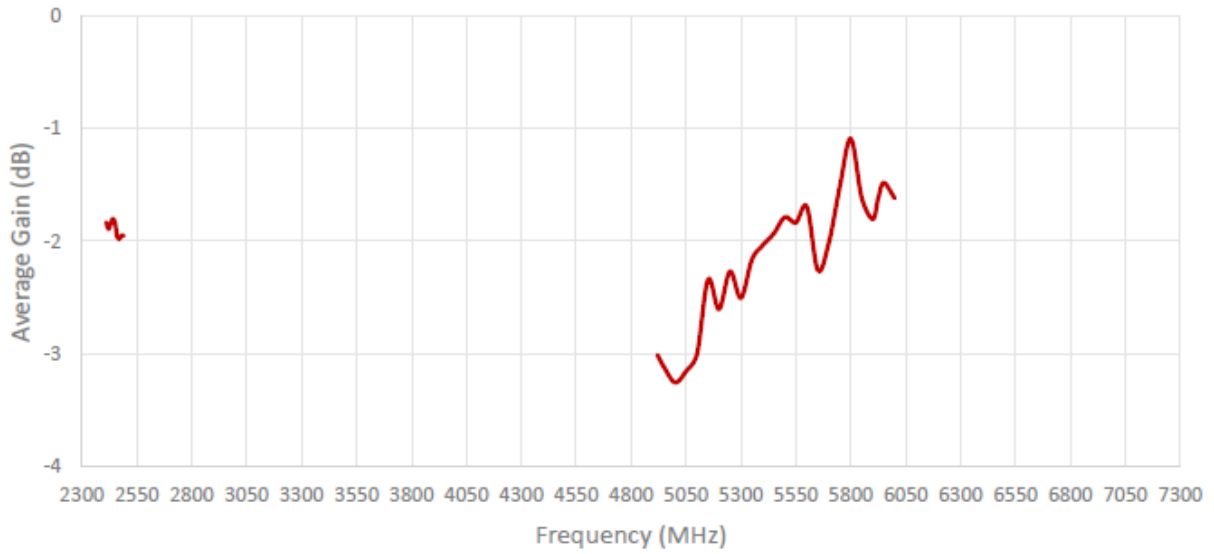
Dimensions for ceramic antenna (5.2mm x 3.7mm x 0.7mm)



### 3. Antenna parameters

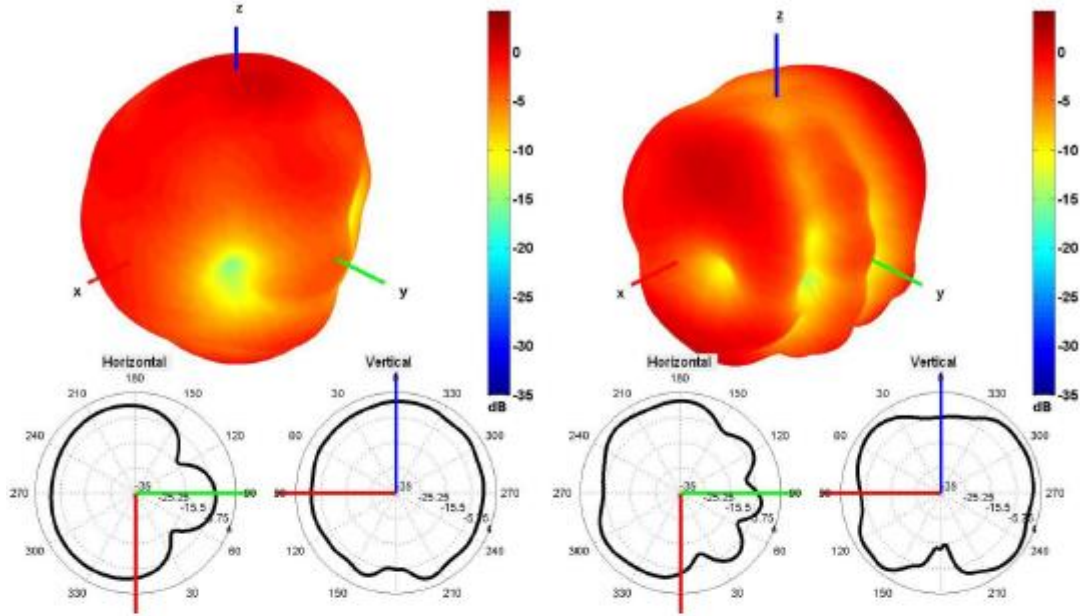




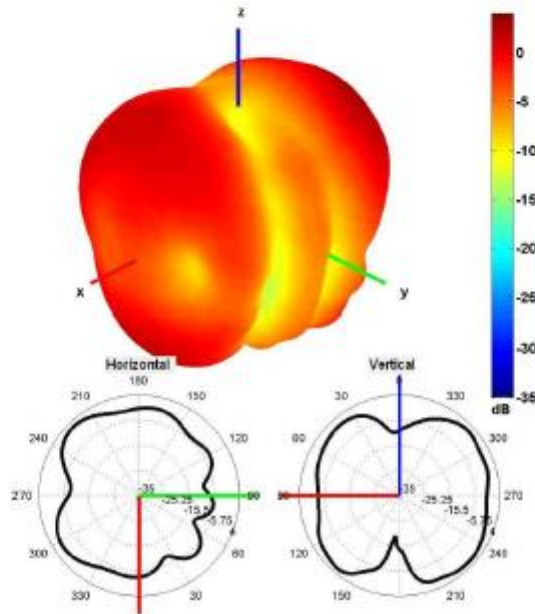


Radiation pattern reference





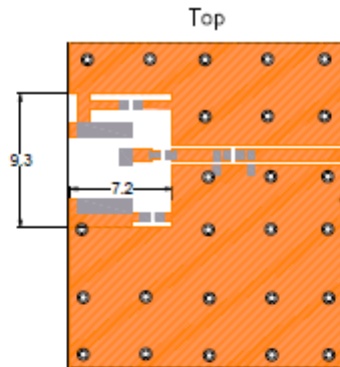
2450 and 5500 MHz Radiation pattern



6500 MHz Radiation pattern

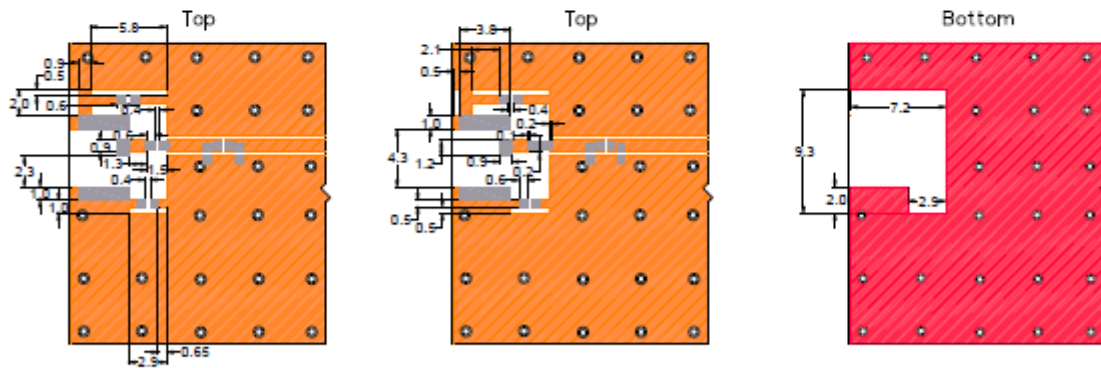


### 4. PCB layout



- Solder Region
- Top Copper Region
- Copper-Free Region

Minimum area required for antenna integration



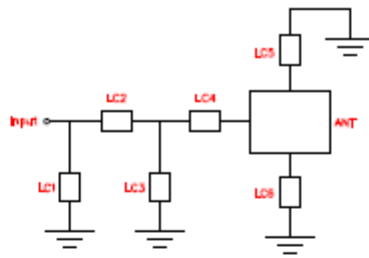
- Solder Region
- Top Copper Region
- Bottom Copper Region
- Copper-Free Region

Layout dimensions for antenna integration (mm)

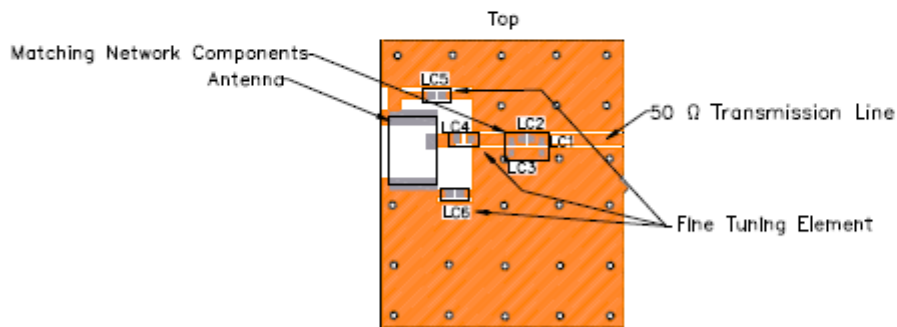







## 5. Matching components



Matching Network Schematic



-  Solder Region
-  Top Copper Region
-  Copper-Free Region

Matching network drawing (LC1=OPEN, LC2=0Ω, LC3=OPEN, LC4=0.2pF ±0.1pF, LC5=OPEN, LC6=OPEN)

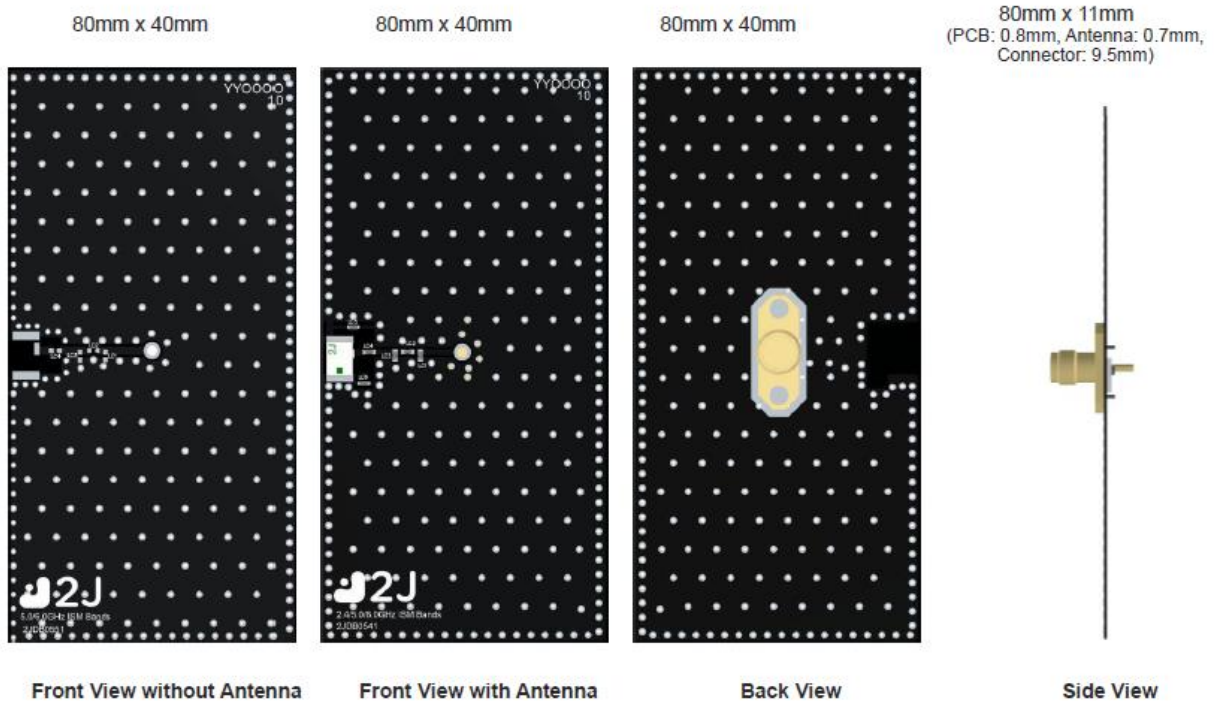




3D View of matching components and recommended values

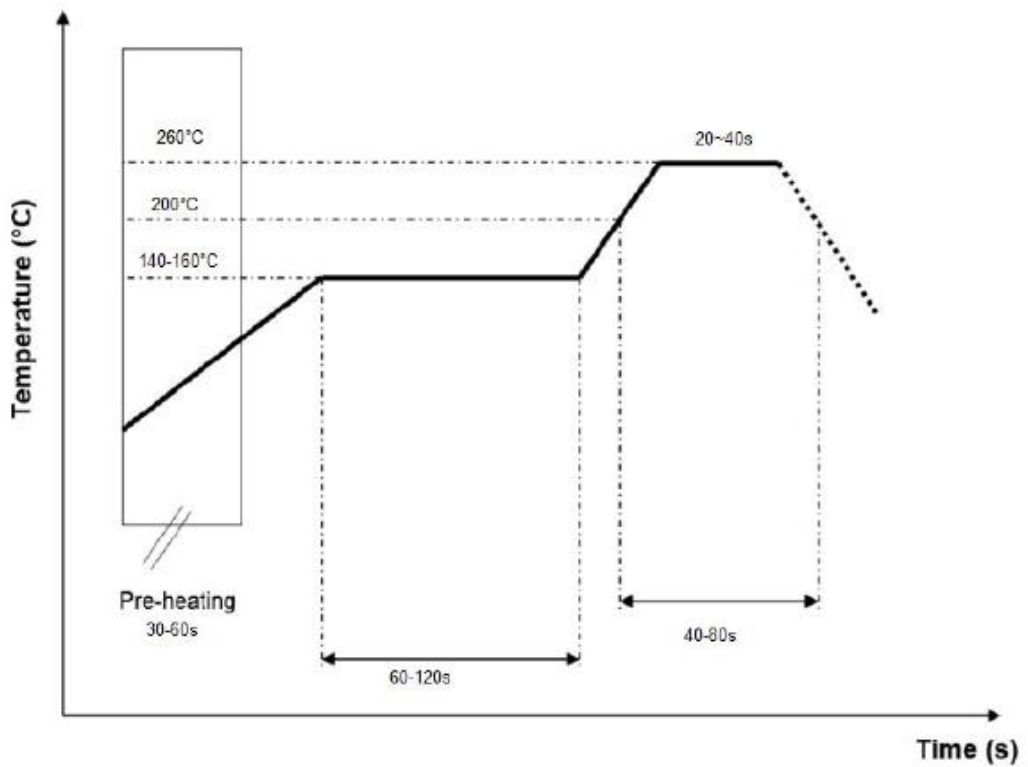
(LC1=OPEN, LC2=0Ω , LC3=OPEN, LC4=0.2pF ±0.1pF, LC5=OPEN, LC6=OPEN)

## 6. Evaluation board

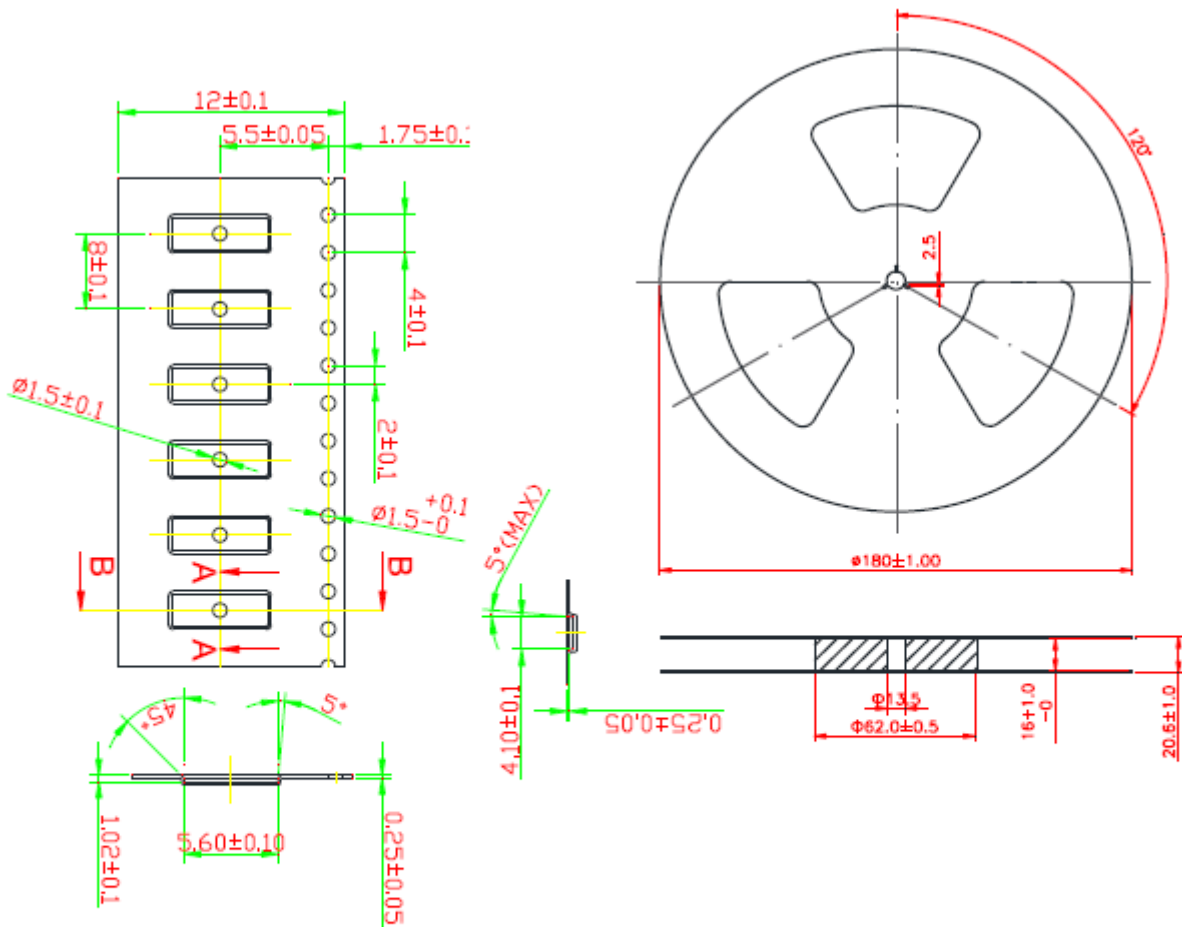


## 7. Reflow temperature profile

REFLOW TEMPERATURE PROFILE



### 8. Tape and reel information



Tape and Reel Specifications



## 9. Packaging

### PACKAGING SPECIFICATION

<b>Antenna</b>	2JL41
<b>REEL</b>	
<b>Max Quantity per Reel</b>	2000
<b>REEL BOX</b>	
<b>Reels per Box</b>	1
<b>Max Quantity per Box</b>	2000
<b>Reel Box Dimensions (cm)</b>	35.5 x 33.5 x 4
<b>Reel Box Weight (Kg)</b>	0.68
<b>CARTON</b>	
<b>Reels per Carton</b>	4
<b>Max Quantity per Carton</b>	8,000
<b>Reel Carton Dimensions (cm)</b>	38.5 x 36.5 x 21
<b>Reel Carton Weight (Kg)</b>	2.72

#### Storage Conditions:

##### (a) At warehouse:

The temperature should be within 0 ~ 30°C and humidity should be less than 60% RH.

The product should be used within 1 year from the time of delivery.

##### (b) On board:

The temperature should be within -40 ~ 85°C and humidity should be less than 85% RH

