

2JL51

5.0/6.0 GHz ISM Surface Mount

Key Features

5.0/6.0 GHz ISM

- 4920-5925 MHz
- 5925-7125 MHz

Surface Mount

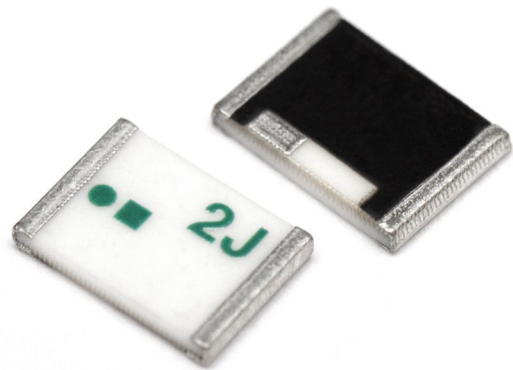
Easy to Integrate

Compact Size

Ceramic Material

Ground Plane Dependent

Dimensions 5.2 x 3.7 x 0.7 mm



1. Antenna and electrical specifications

Parameters	5.0/6.0 GHz ISM Antenna	
Standards	WiFi, ISM	
Band (MHz)	5.0 GHz	6.0 GHz
Frequency (MHz)	4920-5925	5925-7125
Return Loss (dB)	~-12.7	~-8.1
VSWR	~1.6:1	~2.4:1
Efficiency (%)	~56.3	~41.8
Peak Gain (dBi)	~1.7	~1.0
Average Gain (dB)	~-2.5	~-3.8
Impedance (Ohm)	50	
Polarisation	Linear	
Radiation Pattern	Omni-Directional	

Antenna Measurement Conditions:

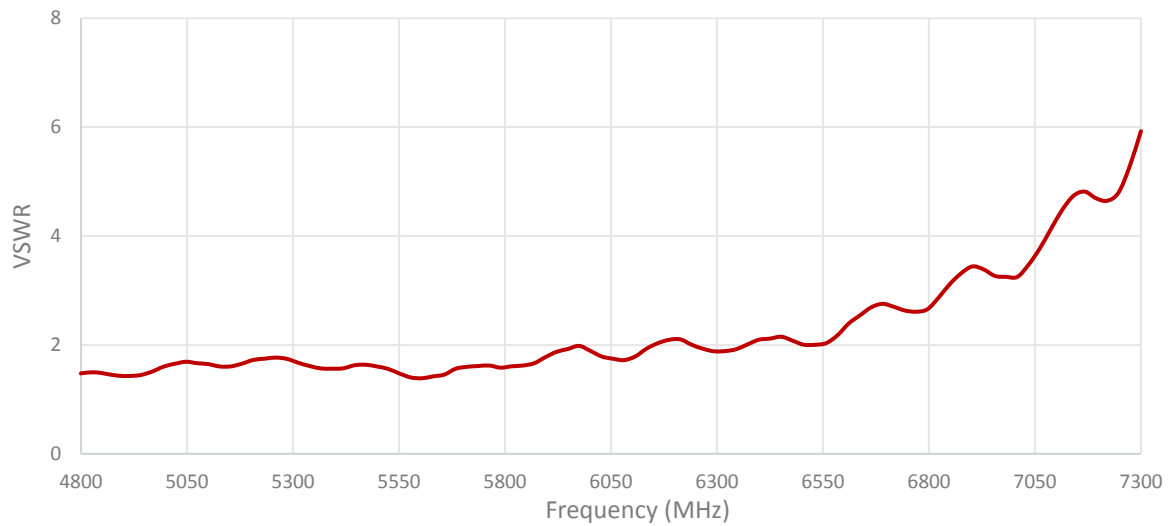
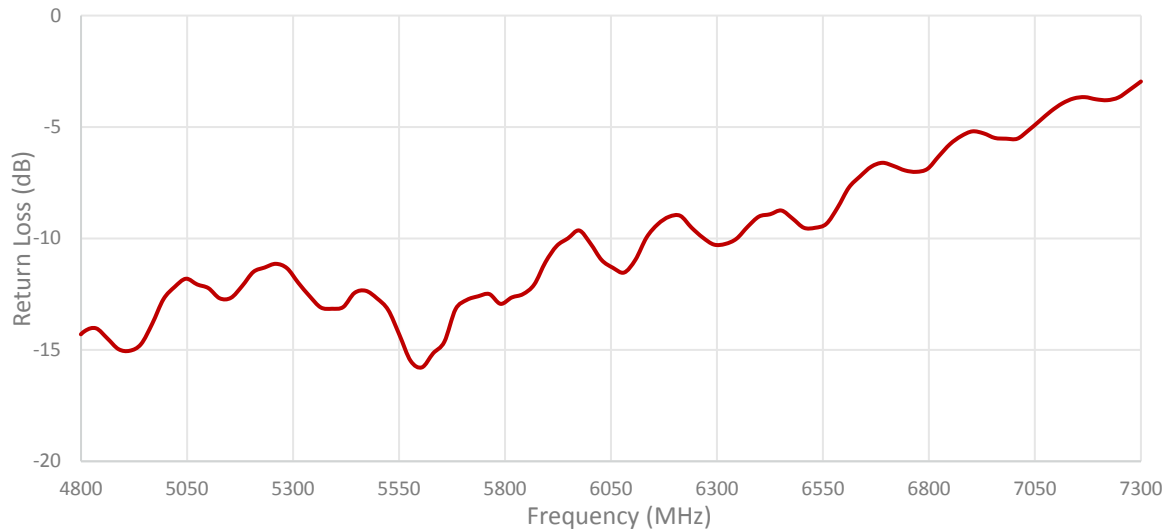
Mounted on ground plane of 80 x 40 mm

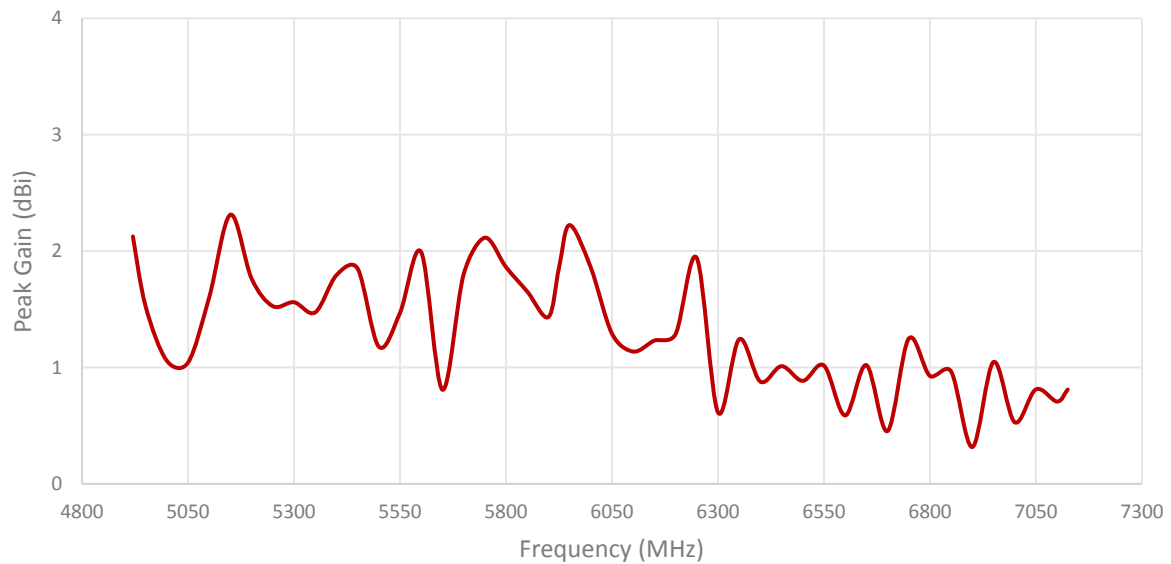
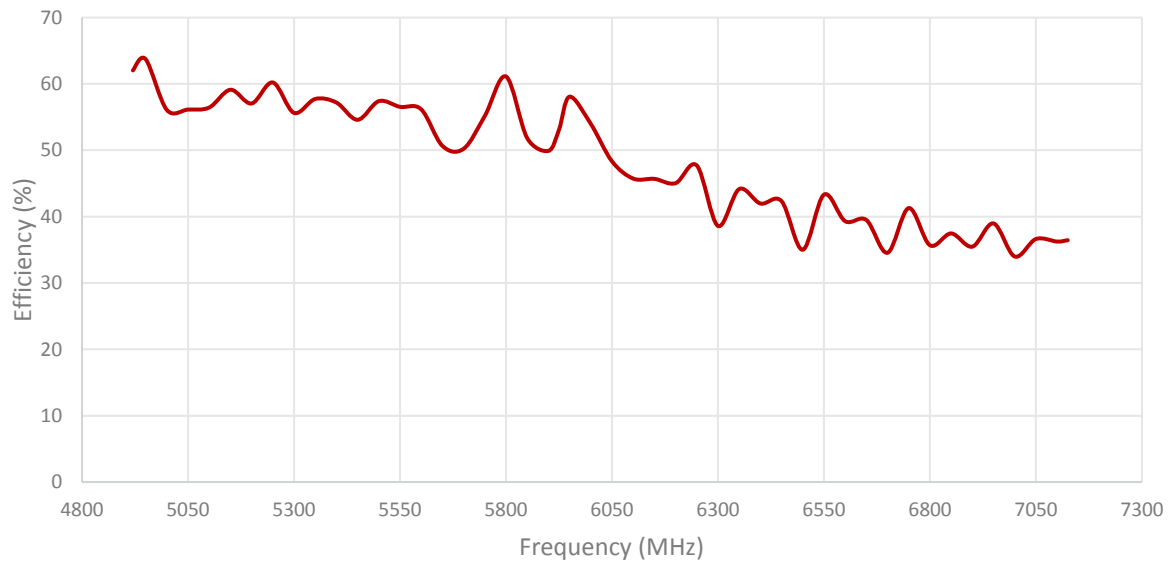
Measured in Certified CTIA 3D Anechoic Chamber

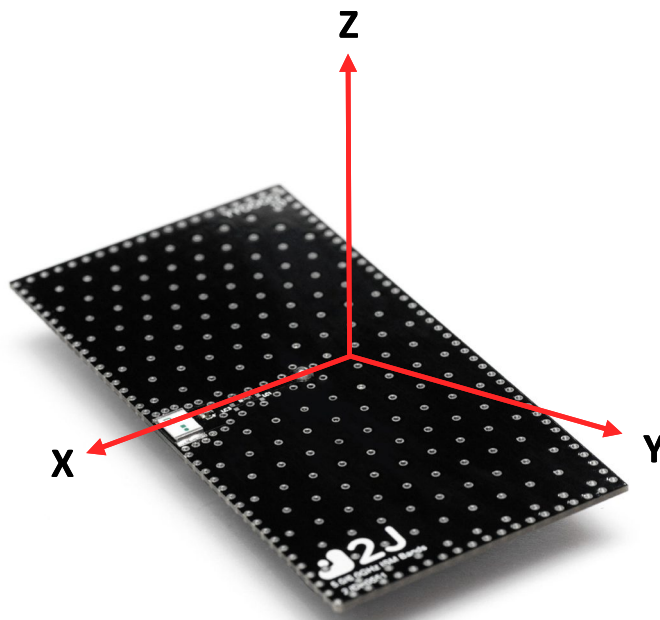
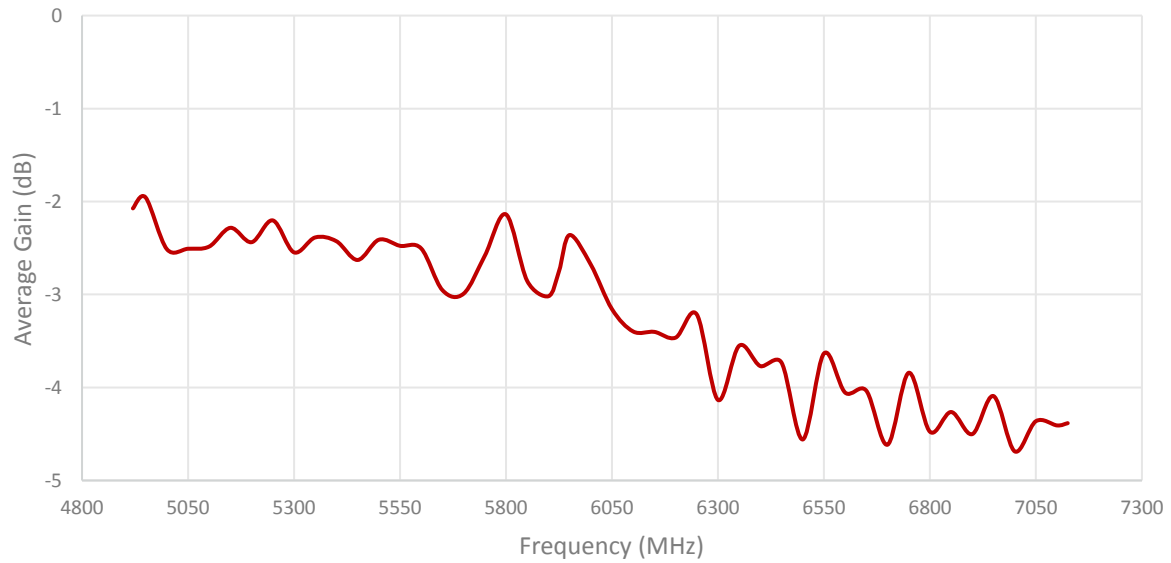
2. Mechanical and environmental specifications

Specifications	2JL51
Mounting Type	Surface Mount
Dimensions (mm)	5.2 x 3.7 x 0.7
Material	Ceramic
Operating Temperature (C)	-40 to +85
Storage Temperature (C)	-40 to +85
Substance Compliance	RoHS

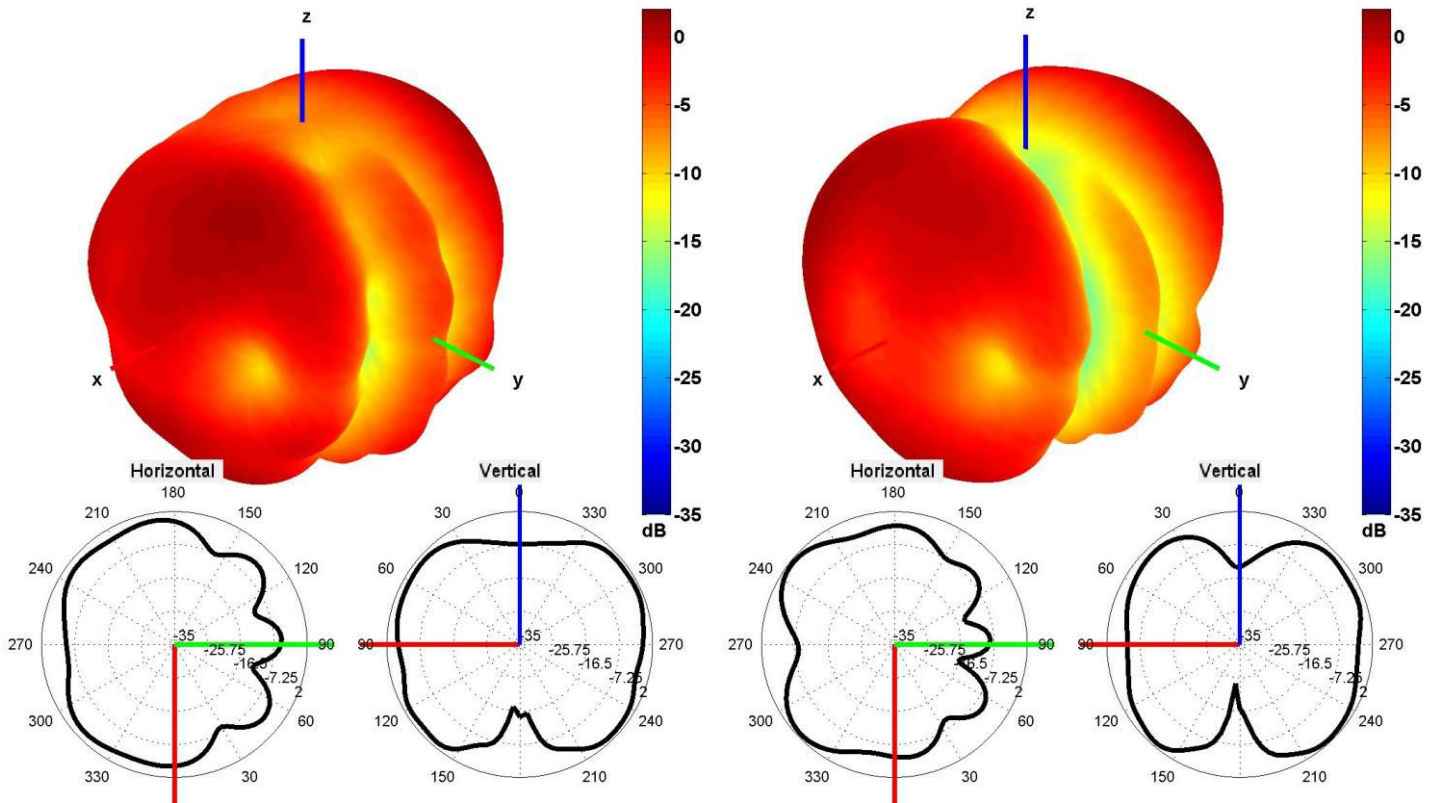
3. Antenna parameters





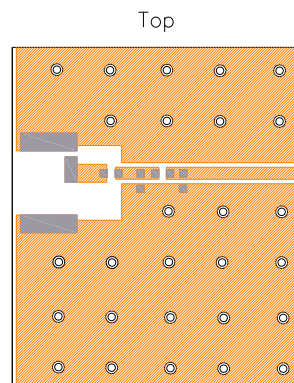





Radiation pattern reference

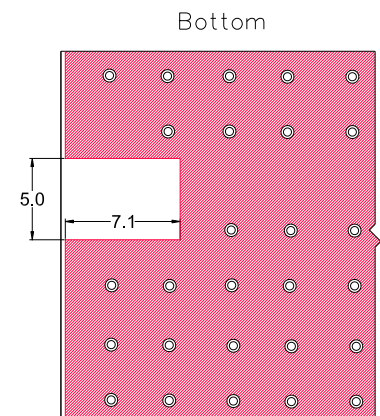
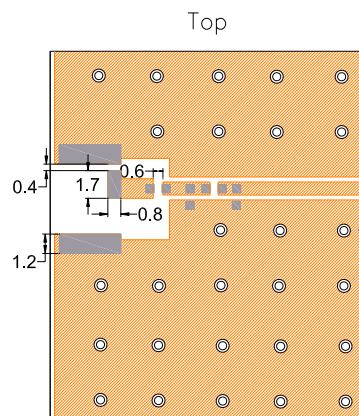
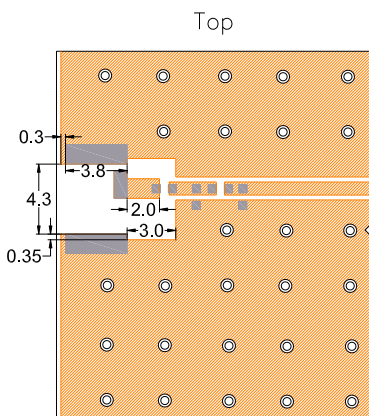


5500 and 6000 MHz Radiation pattern

4. PCB Layout



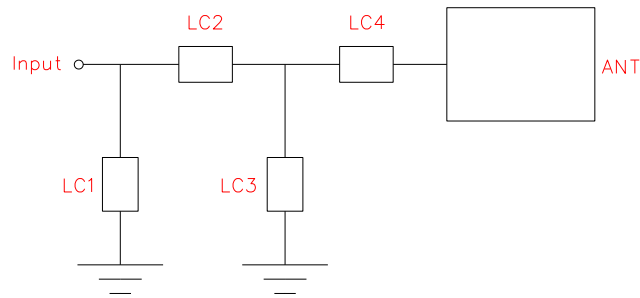
-  Solder Region
-  Top Copper Region
-  Copper-Free Region



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

Layout dimensions for antenna integration (mm)

5. Matching Components






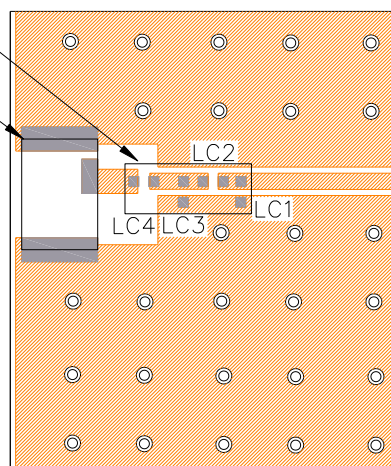
Matching Network Schematic

Matching Network Components

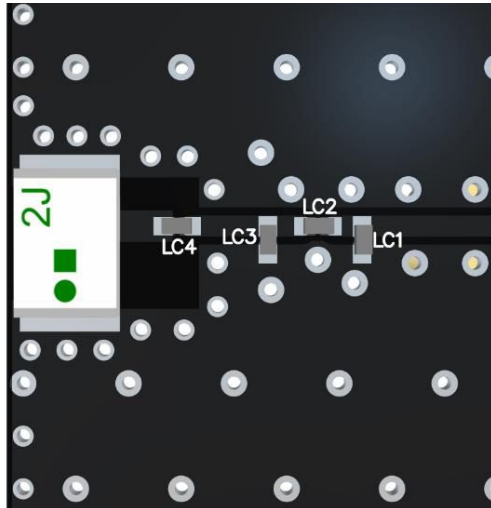
Antenna

Top

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



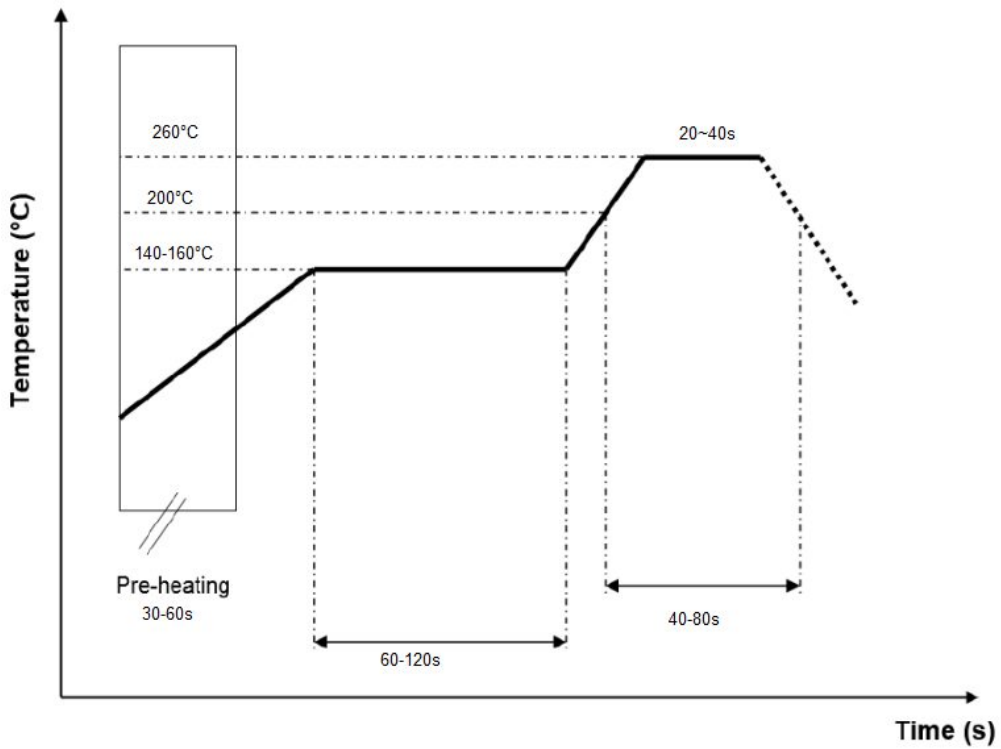
Matching network drawing (LC1 = OPEN, LC2=0Ω, LC3=OPEN, LC4=0.7 ±0.1pF)



3D View of matching components and recommended values

Matching network drawing (LC1 = OPEN, LC2=0 Ω , LC3=OPEN, LC4=0.7 \pm 0.1pF)

REFLOW TEMPERATURE PROFILE



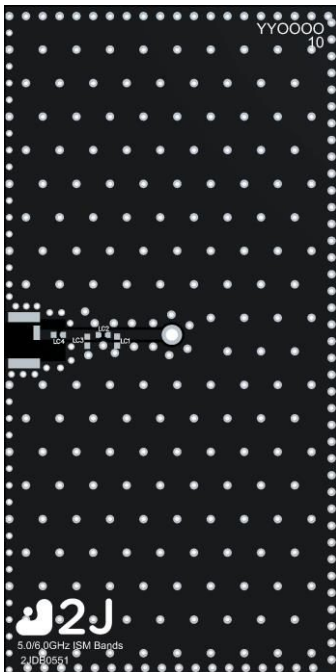
6. Evaluation Board

80mm x 40mm

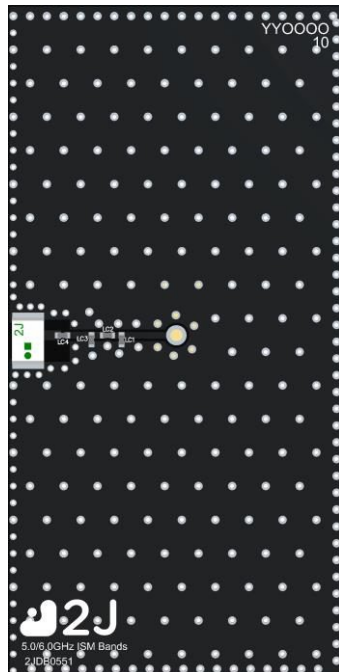
80mm x 40mm

80mm x 40mm

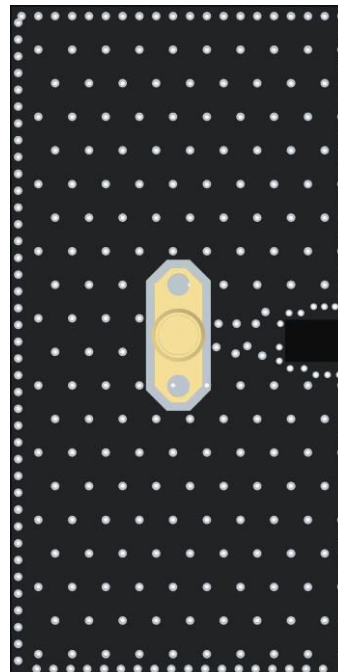
80mm x 11mm
(PCB: 0.8mm, Antenna: 0.7mm,
Connector: 9.5mm)



Front View without Antenna



Front View with Antenna

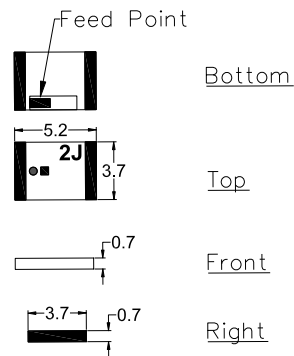


Back View



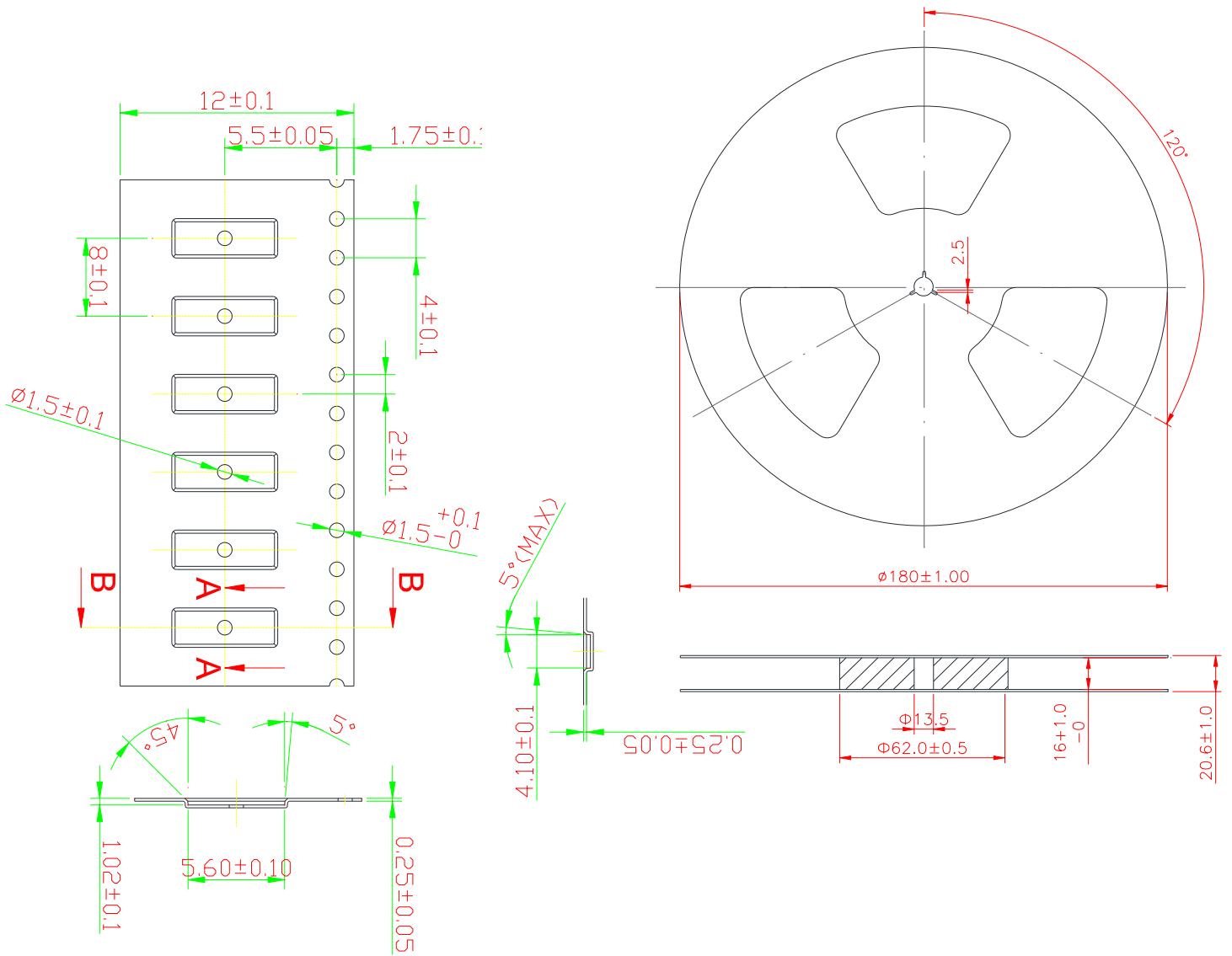
Side View

7. Antenna drawings



Dimensions for ceramic antenna 5.2 x 3.7 x 0.7 mm

8. Tape and Reel Information



Tape and Reel Specifications

9. Packaging

PACKAGING SPECIFICATION

Antenna	2JL51
REEL	
Max Quantity per Reel	2000
REEL BOX	
Reels per Box	1
Max Quantity per Box	2000
Reel Box Dimensions (cm)	35.5 x 33.5 x 4
Reel Box Weight (Kg)	0.68
CARTON	
Reels per Carton	4
Max Quantity per Carton	8,000
Reel Carton Dimensions (cm)	38.5 x 36.5 x 21
Reel Carton Weight (Kg)	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

10. Antenna Images

