

2JL21

915 MHz ISM Surface Mount

Key Features

915 MHz ISM

- 902-928 MHz

Surface Mount

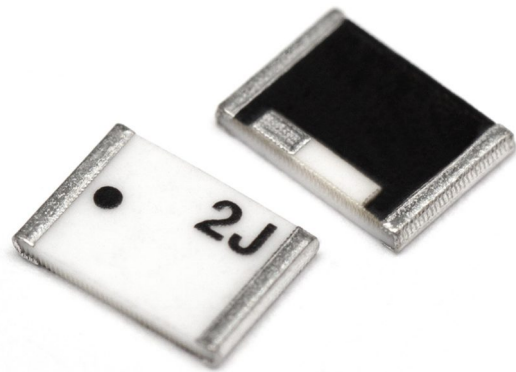
Easy to Integrate

Compact Size

Ceramic Material

Ground Plane Dependent

Dimensions 5.2 x 3.7 x 0.7 mm



1. Antenna and electrical specifications

Parameters	915 MHz ISM Antenna
Standards	ZigBee, ISM, SigFox, LoRa
Band (MHz)	915
Frequency (MHz)	902-928
Return Loss (dB)	~-16.8
VSWR	~1.5:1
Efficiency (%)	~68.1
Peak Gain (dBi)	~1.2
Average Gain (dB)	~-1.7
Impedance (Ohm)	50
Polarisation	Linear
Radiation Pattern	Omni-Directional

Antenna Measurement Conditions:

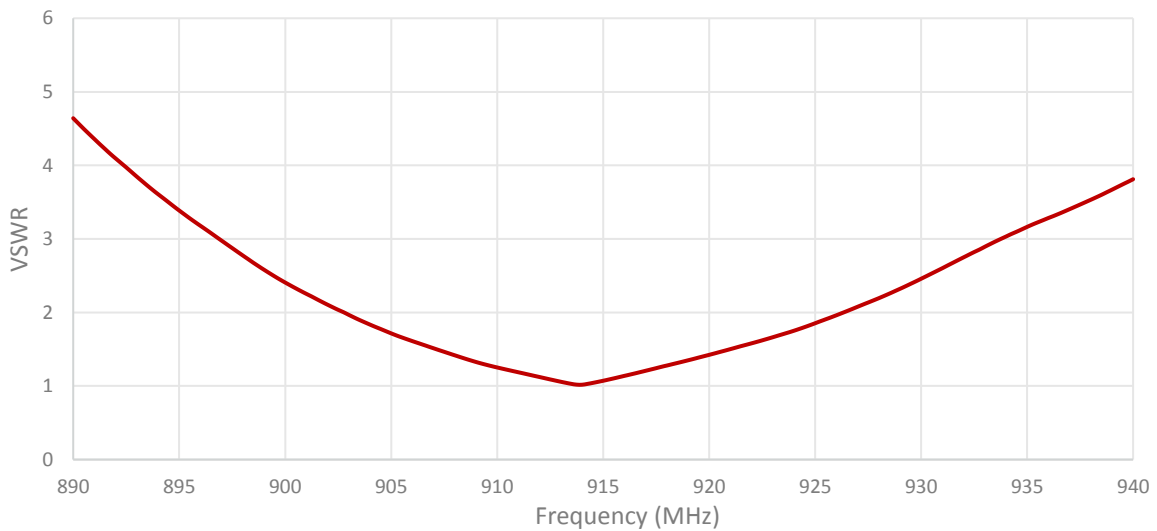
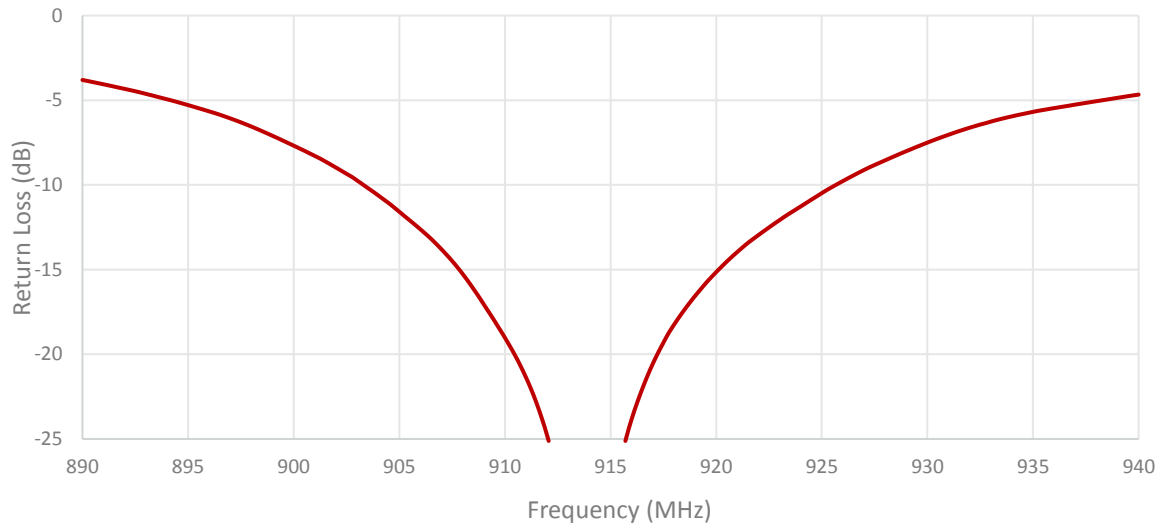
Mounted on ground plane of 100 x 40 mm

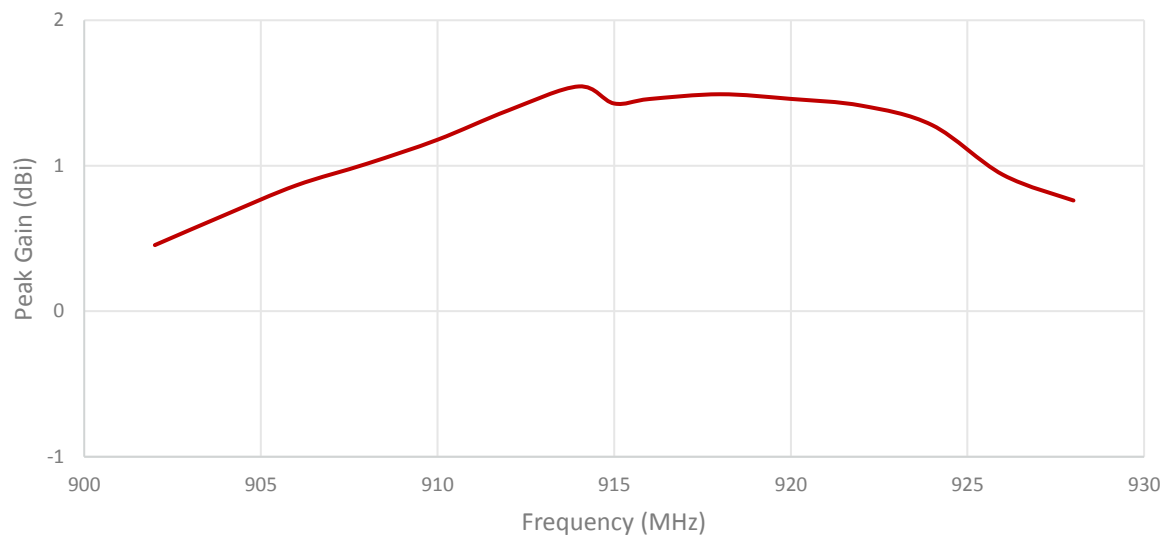
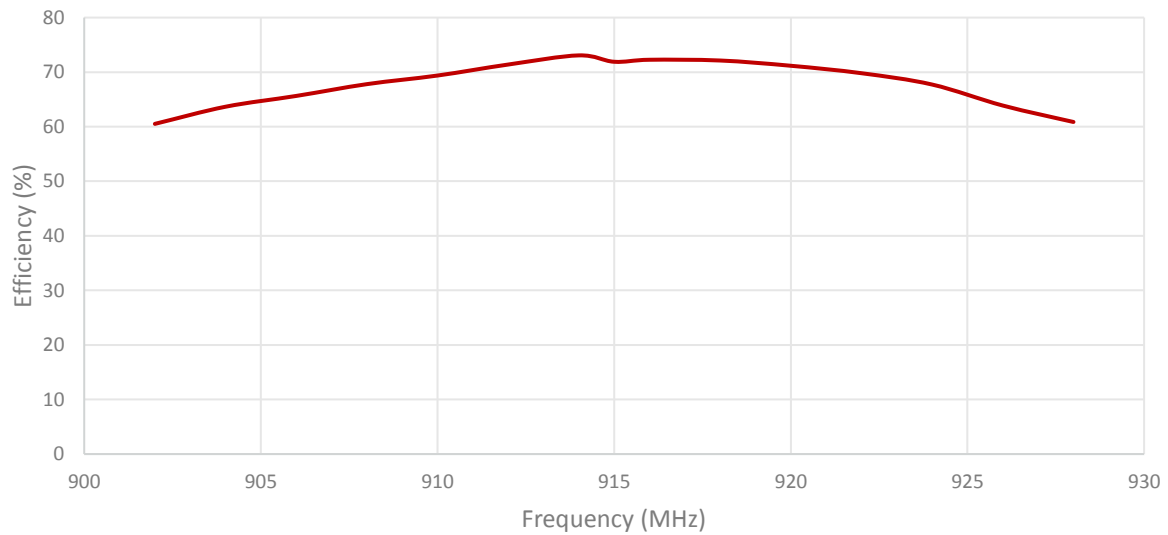
Measured in Certified CTIA 3D Anechoic Chamber

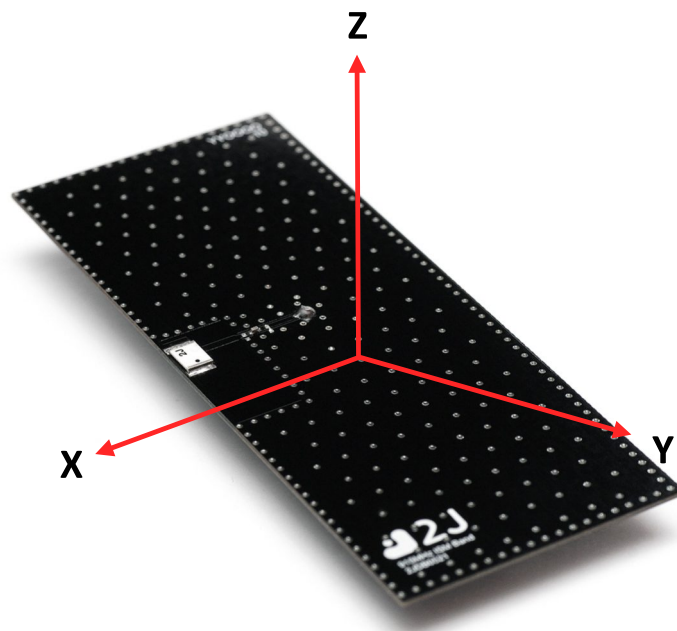
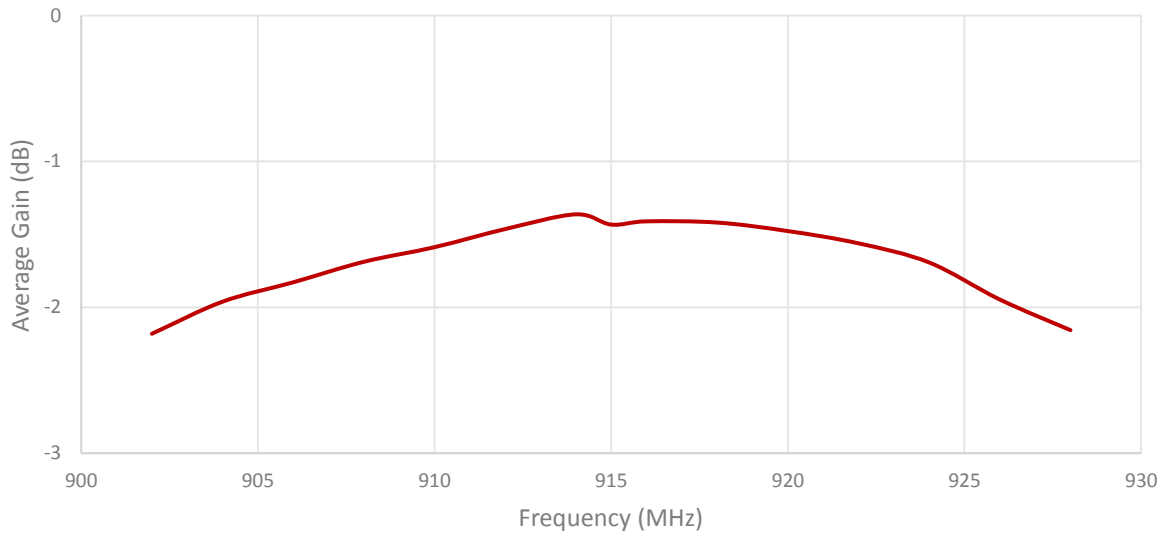
2. Mechanical and environmental specifications

Specifications	2JL21
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

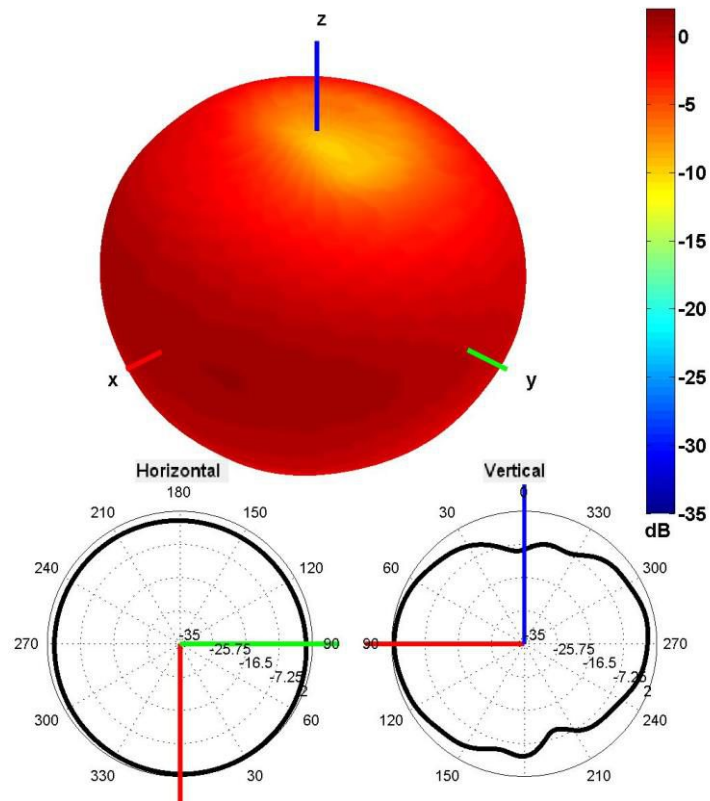
3. Antenna parameters





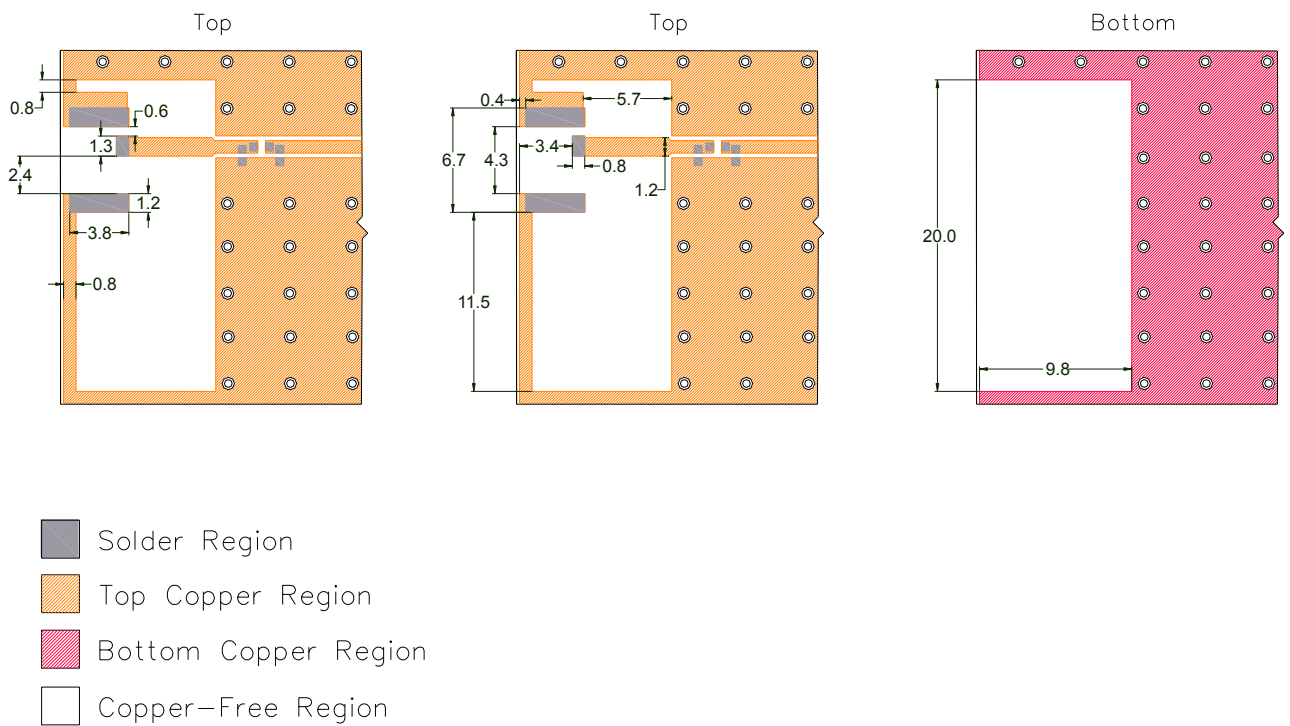
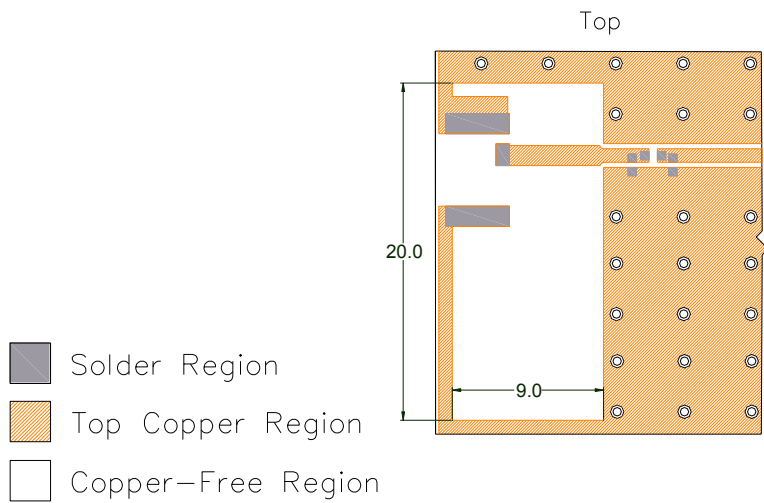


Radiation pattern reference



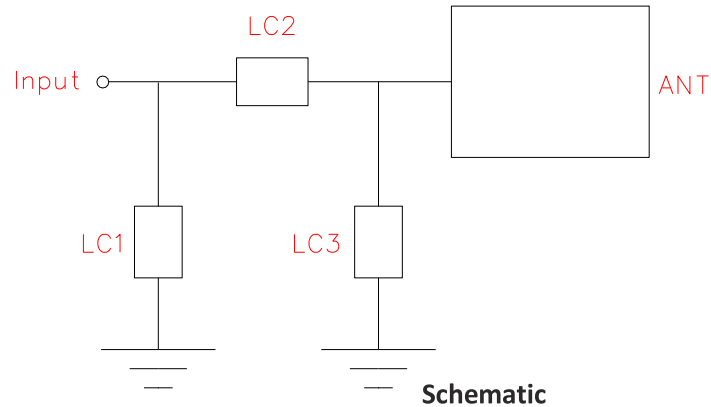
915 MHz Radiation pattern

4. PCB Layout

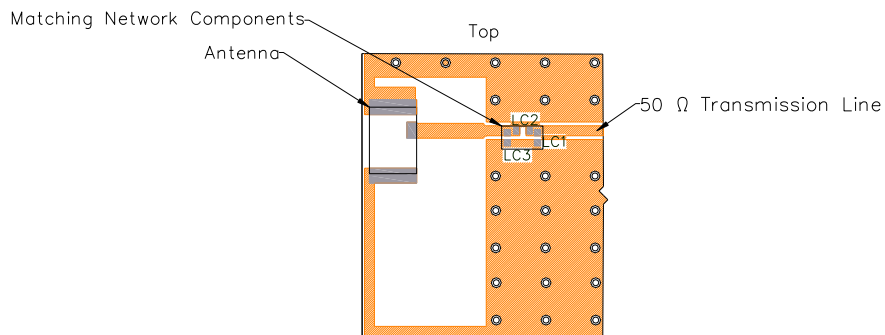


Layout dimensions for antenna integration (mm)

5. Matching Components

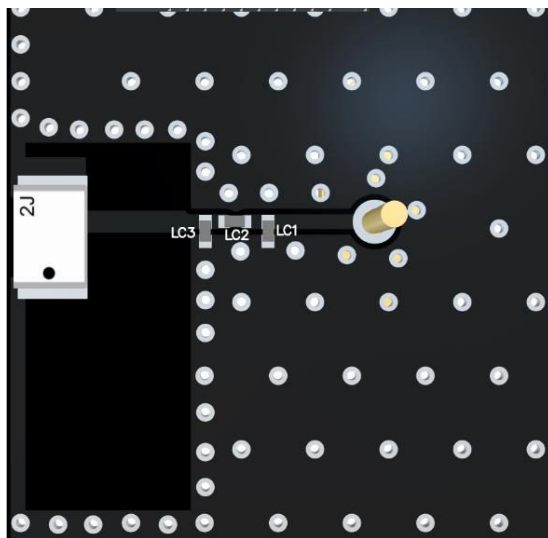


Matching Network



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

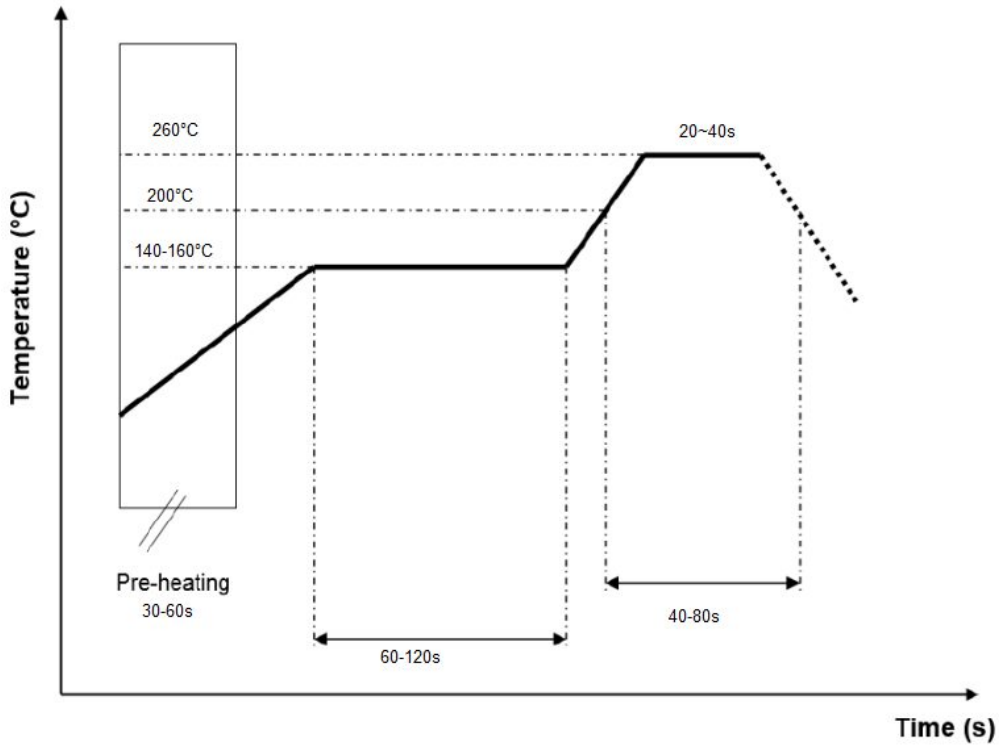
Matching network drawing (LC1 = OPEN, LC2=0.7 ±0.1pF, LC3=1.1 ±0.1pF)



3D View of matching components and recommended values

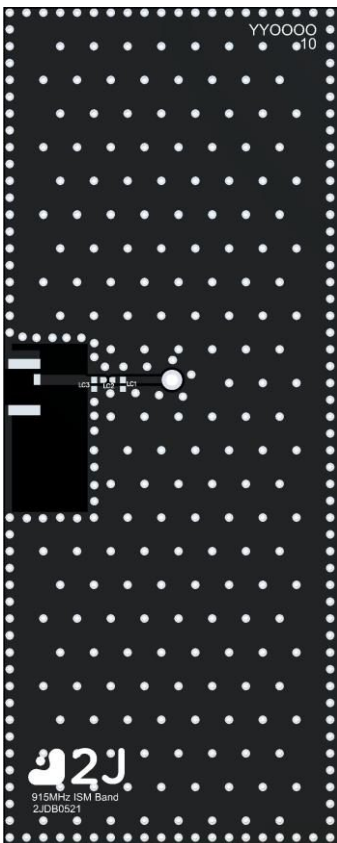
Matching network drawing (LC1 = OPEN, LC2=0.7 ±0.1pF, LC3=1.1 ±0.1pF)

REFLOW TEMPERATURE PROFILE



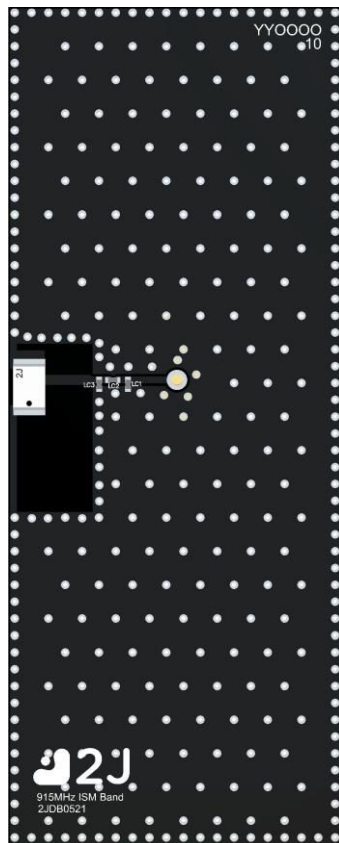
6. Evaluation Board

100mm x 40mm



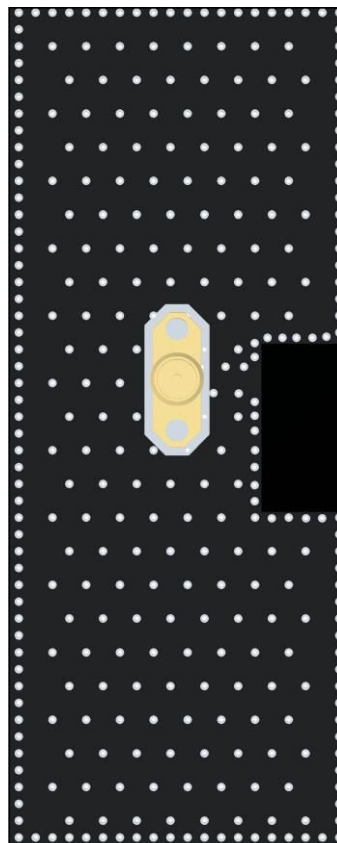
Front View without Antenna

100mm x 40mm



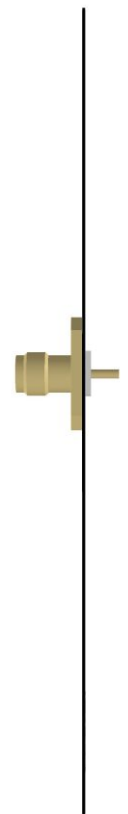
Front View with Antenna

100mm x 40mm



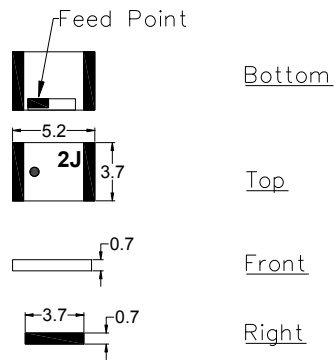
Back View

100mm x 11mm
(PCB: 0.8mm, Antenna: 0.7mm,
Connector: 9.5mm)



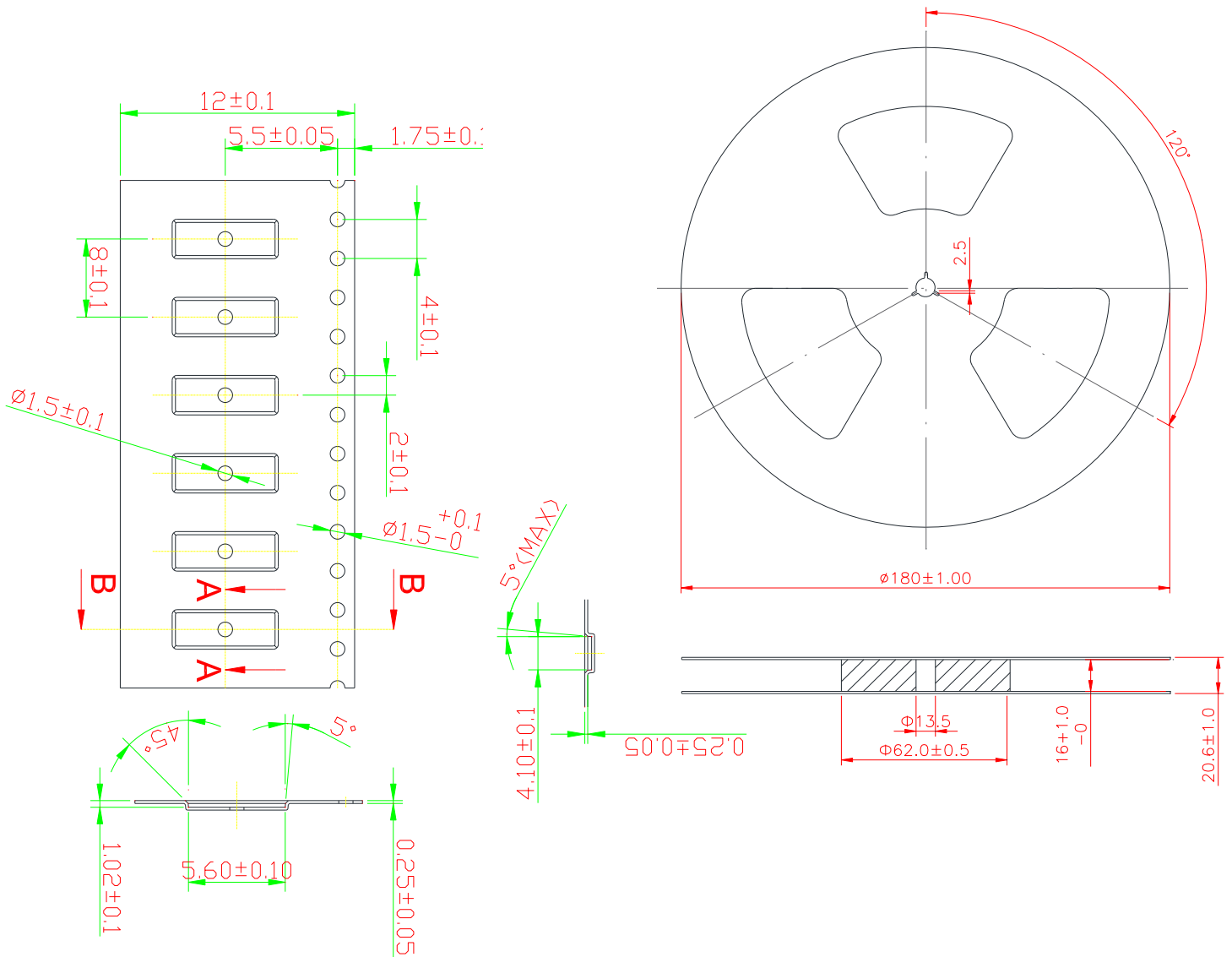
Side View

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	2JL21
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

