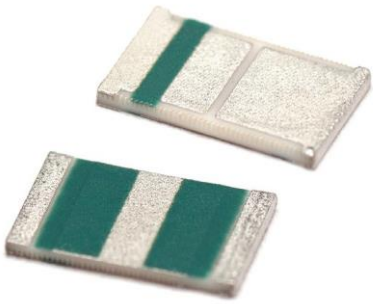
AMC-ANT-2JL66

GNSS L1/L2/L5/L6 ceramic surface mount antenna

Features

- GPS/GLONASS/BeiDou/QZSS/Galileo/IRNSS/SBAS - L1/L2/L5/L6
  - 1176 - 1606MHz
- Surface mount
- High performance
- Ceramic material
- Ground plane dependent
- Dimensions: 5 x 3 x 0.5mm



Alpha Micro Components: Tel: +44 1256 851770 | email: sales@alphamicro.net
www.alphamicro.net

1. Antenna and electrical specifications

Parameters	GNSS antenna			
Technologies	GPS/GLONASS/BeiDou/QZSS/Galileo/IRNSS/SBAS/L1/L2/L5/L6			
Bandwidth (MHz)	1176 - 1208	1227 - 1246	1268 - 1279	1561 - 1606
Bands	L5	L2	L6	L1
Frequency (MHz)	1176.45, 1207.14	1227.6, 1246.00	1268.52, 1278.75	1561.09, 1575.42, 1602
Standards	GPS(L5) BeiDou(B2a, B2b) QZSS(L5) Galileo(E5a) IRNSS(L5)	GPS(L2C) GLONASS(L2OF) QZSS(L2C)	GPS(L6) BeiDou(B3) QZSS(L6) Galileo(E6)	GPS(L1C) GLONASS(L1OF) BeiDou(B1) QZSS((L1C) Galileo(E1) SBAS(L1)
Return Loss (dB)	~-12.8	~-10.6	~-6.6	~-12.5
VSWR	~1.8:1	~1.9:1	~2.8:1	~1.6:1
Efficiency (%)	~70.6	~67.4	~65.3	~78.6
Passive Peak Gain (dBi)	~2.5	~2.0	~2.0	~2.6
Average Gain (dB)	~-1.5	~-1.7	~-2.1	~-1.0
Impedance (Ohms)	50			
Polarisation	Linear			
Radiation Pattern	Hemispherical			

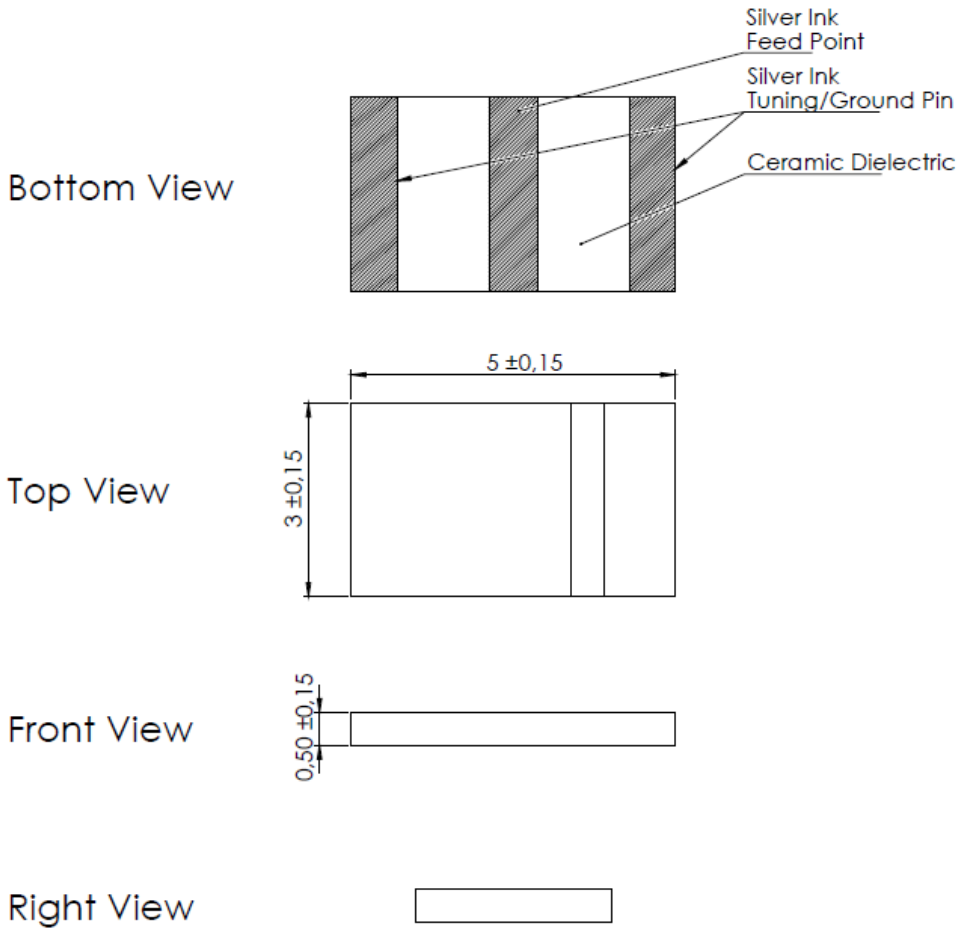
Antenna Measurement Conditions:

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

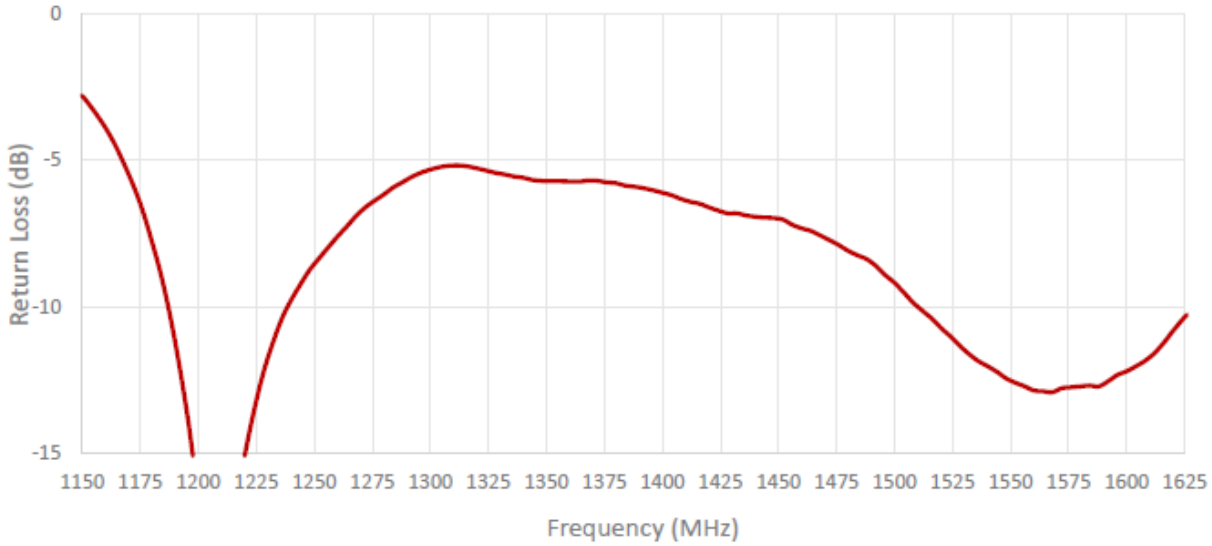
2. Mechanical and environmental specifications

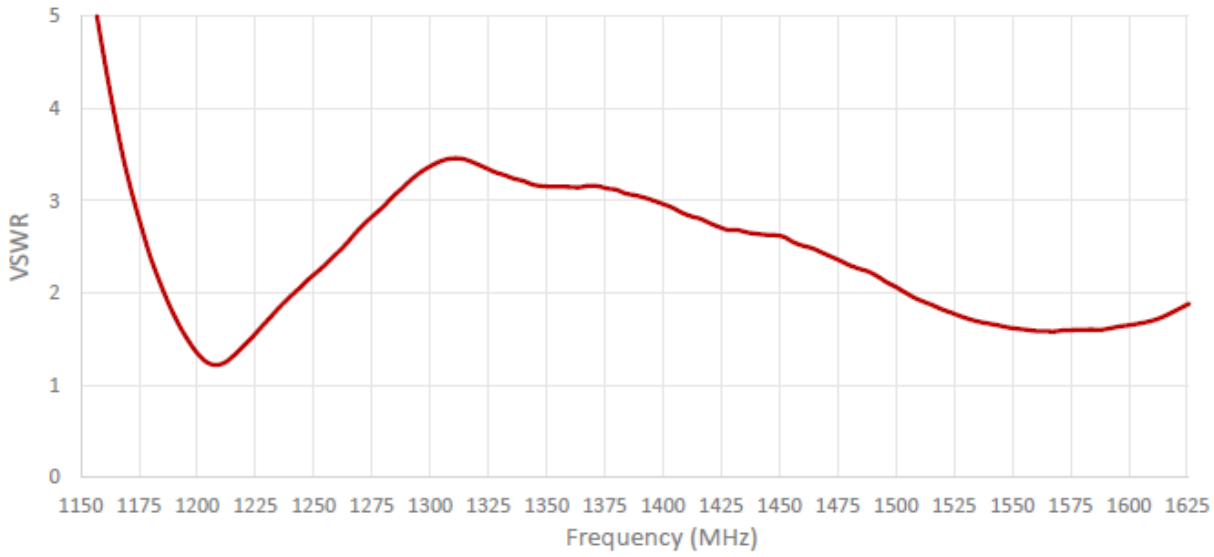
Mounting Type	Surface mount
Dimensions (mm)	5 x 3x 0.5
Material	Ceramic
Operating Temperature (°C)	-40 to +85
Storage Temperature (°C)	-40 to +85
Substance Compliance	RoHS

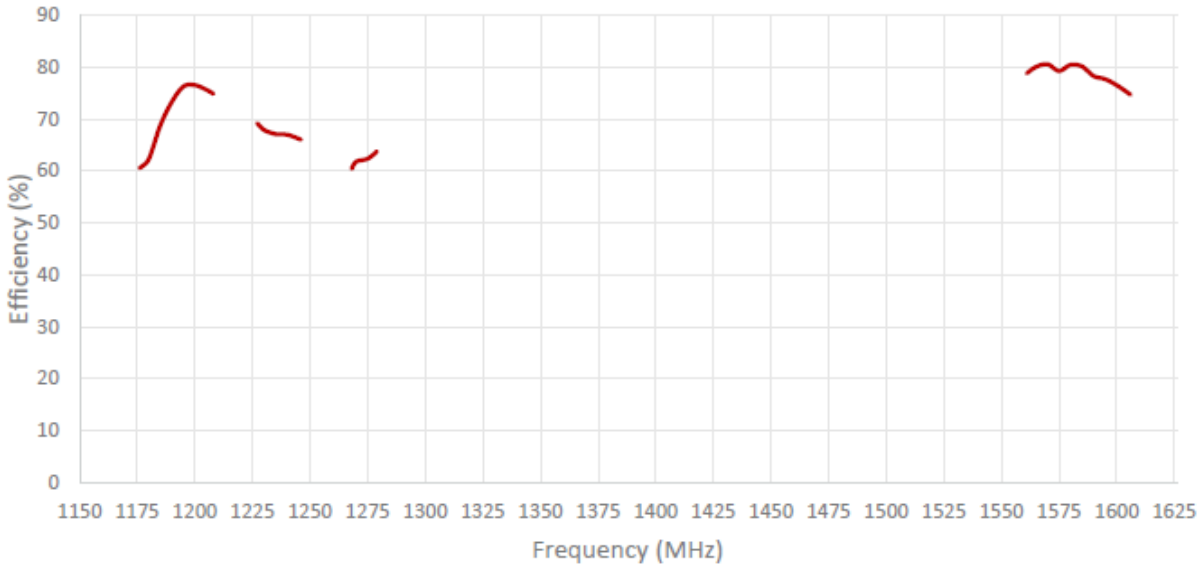
3. Antenna drawings

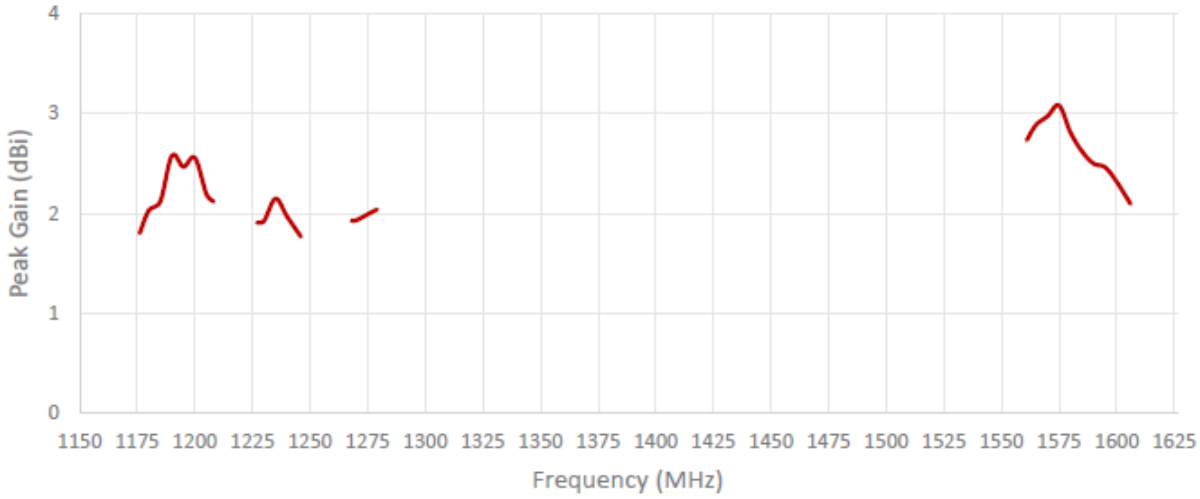


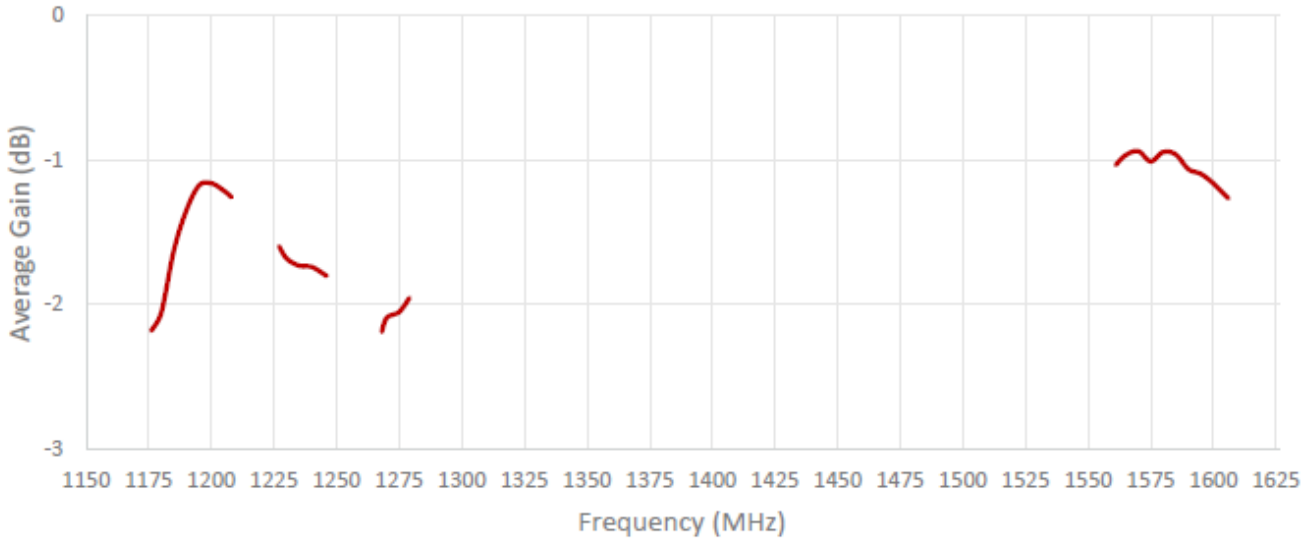
4. Antenna parameters

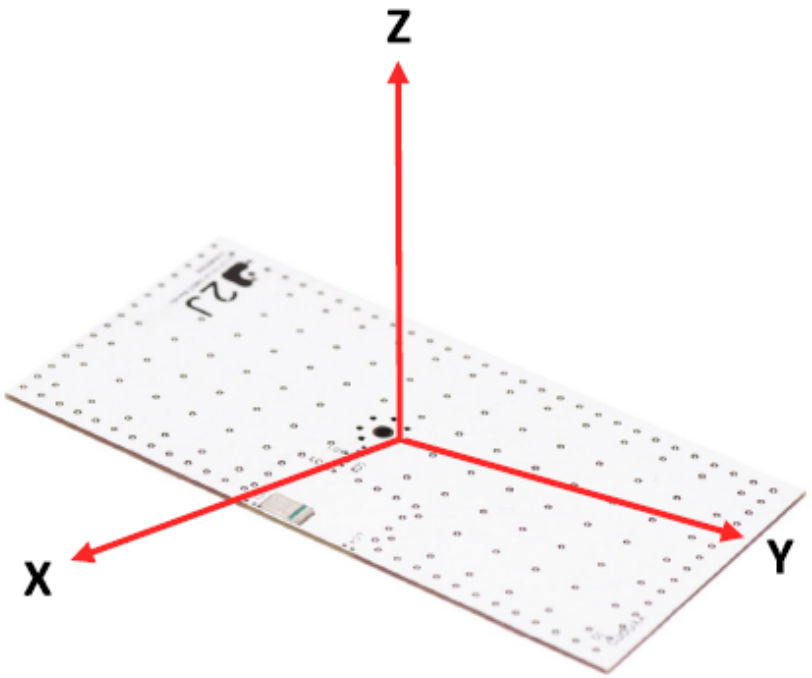




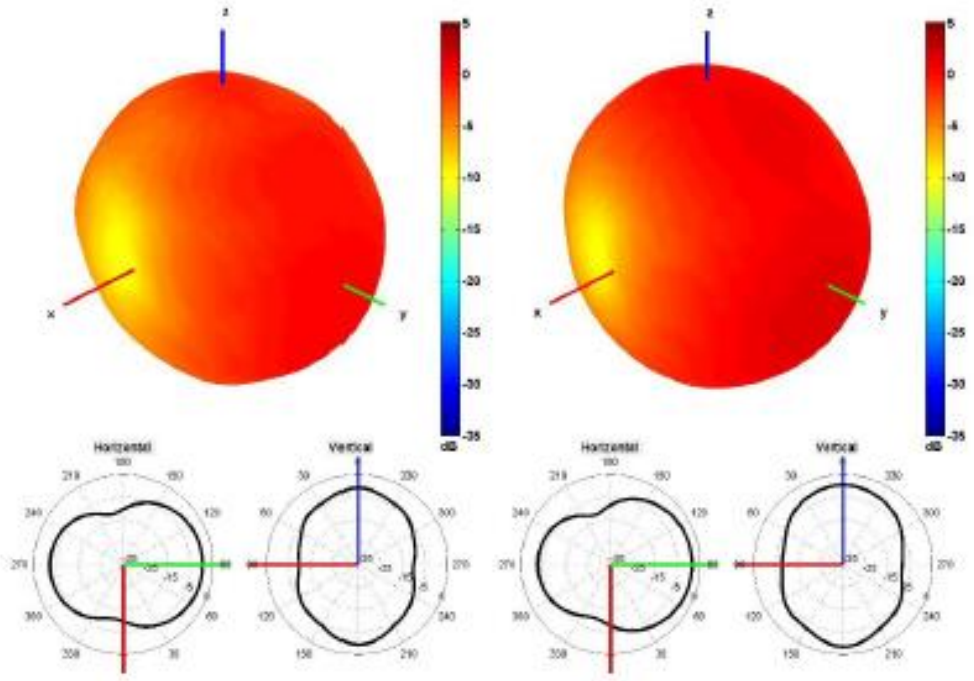

90
80
70
60
50
40
30
20
10
0
Efficiency (%)
1150 1175 1200 1225 1250 1275 1300 1325 1350 1375 1400 1425 1450 1475 1500 1525 1550 1575 1600 1625
Frequency (MHz)


4
3
2
1
0
Peak Gain (dBi)
1150 1175 1200 1225 1250 1275 1300 1325 1350 1375 1400 1425 1450 1475 1500 1525 1550 1575 1600 1625
Frequency (MHz)

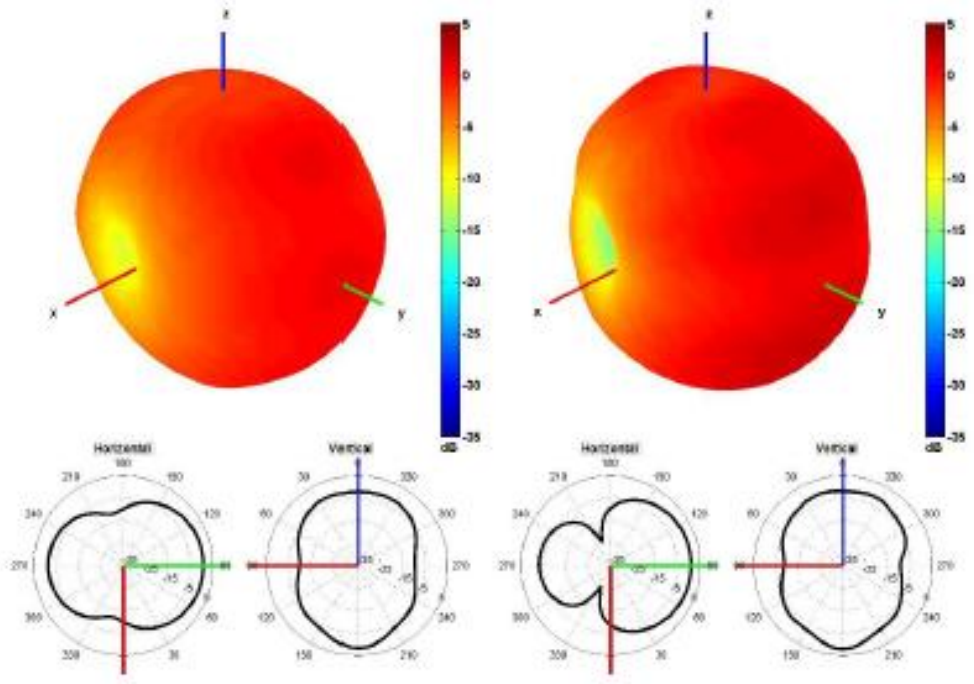




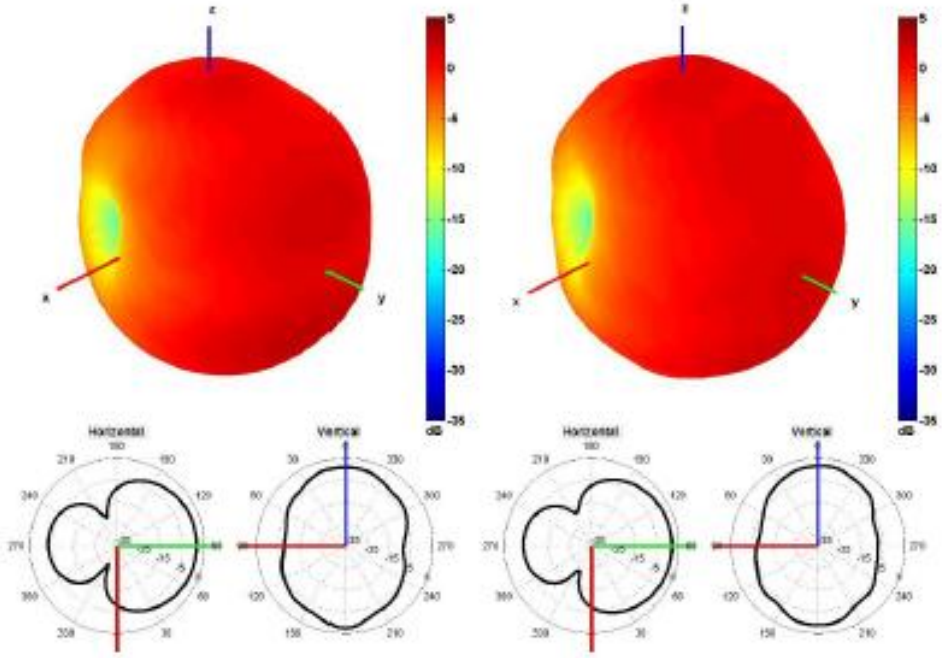
Radiation pattern reference



1176 AND 1227 MHz Radiation pattern

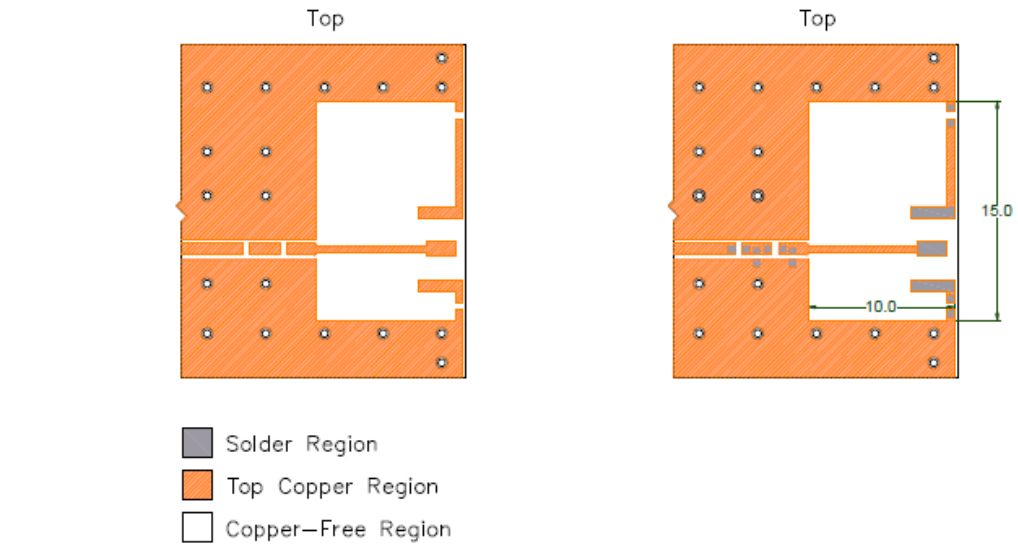


1268 AND 1561 MHz Radiation pattern

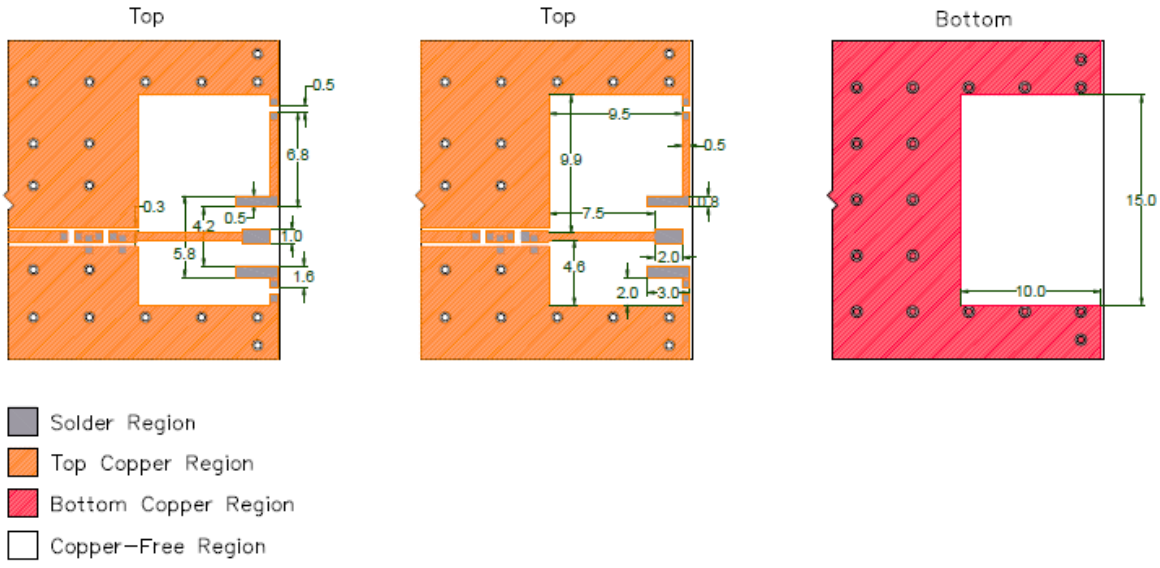


1575 AND 1602 MHz Radiation pattern

5. PCB layout

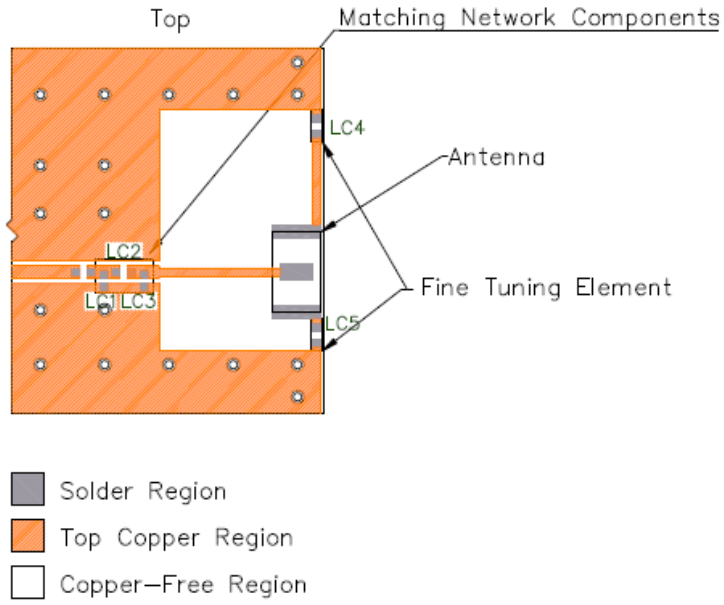


Minimum area required for antenna integration

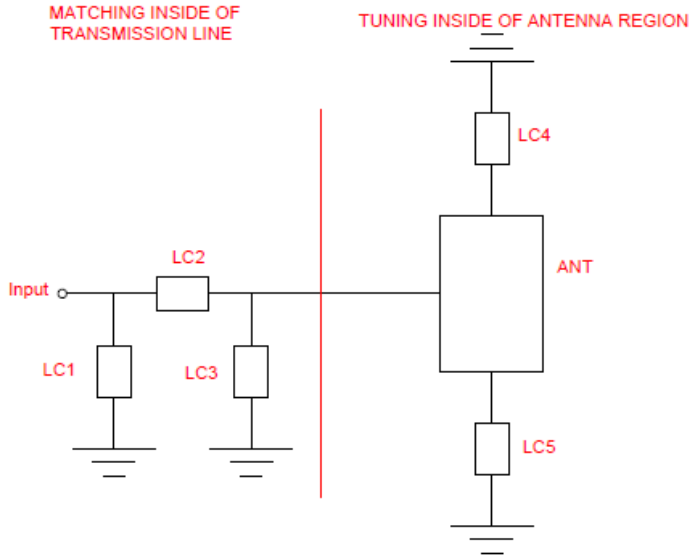


Layout dimensions for antenna integration (mm)

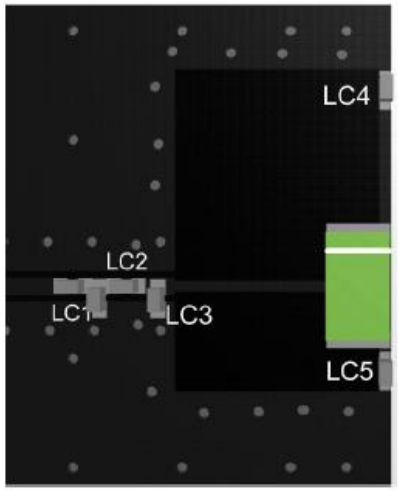
6. Matching components



Matching Network Schematic



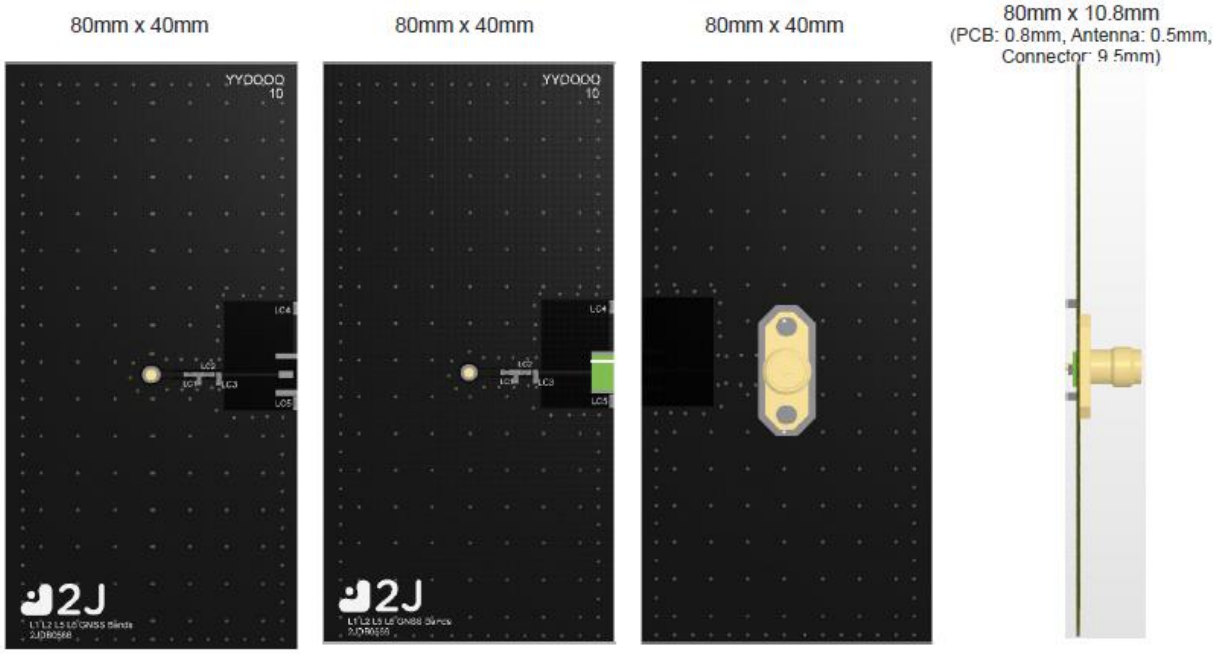
Matching network drawing (LC1=OPEN, LC2=3.6pF , LC3=1.5pF, LC4=4.7pF ±0.05pF, LC5=3.6pF ±0.05pF)



3D View of matching components and recommended values

(LC1=OPEN, LC2=3.6pF , LC3=1.5pF, LC4=4.7pF ±0.05pF, LC5=3.6pF ±0.05pF)

7. Evaluation board



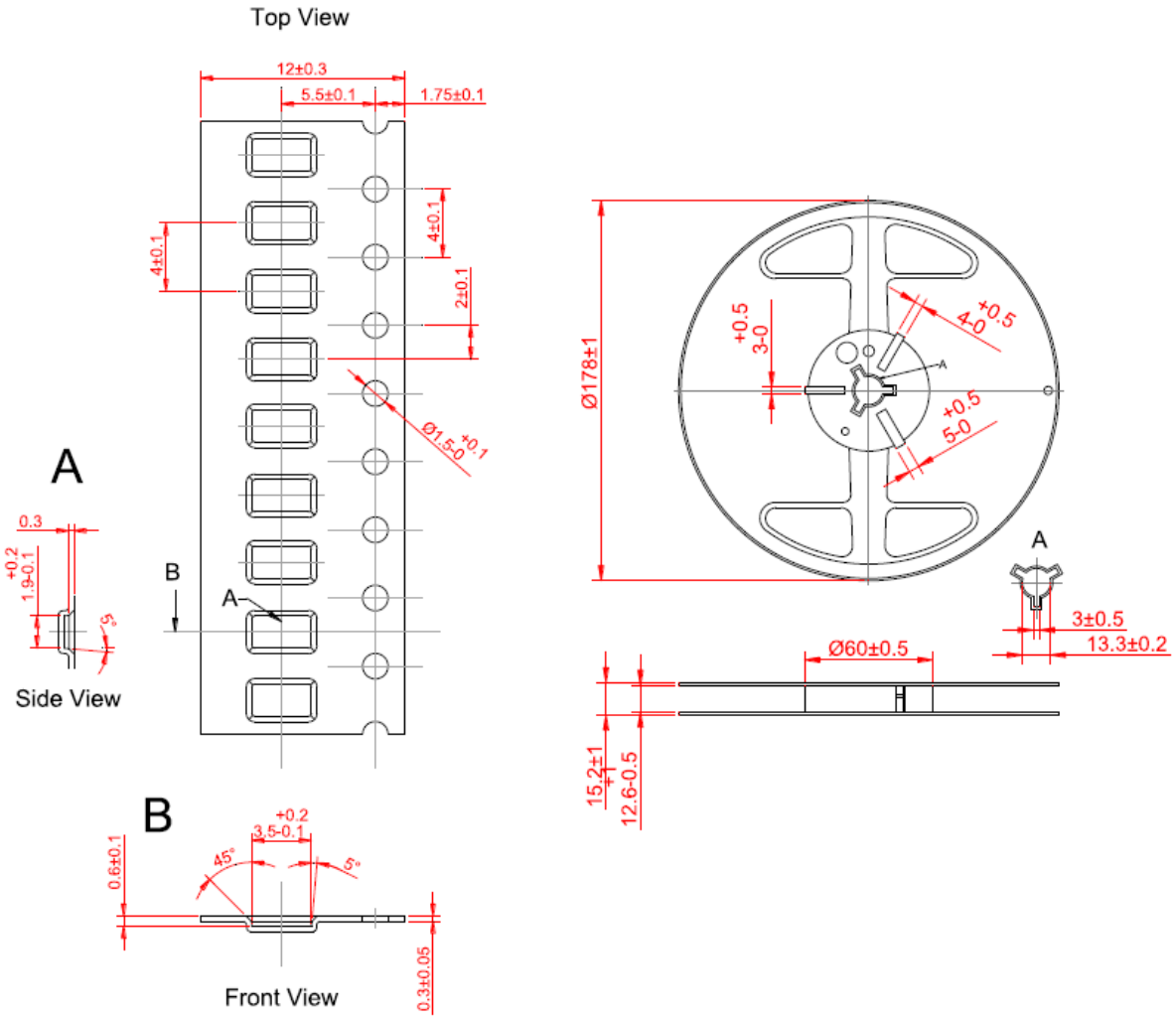
8. Packaging

PACKAGING SPECIFICATION	
Antenna	
REEL	
Max Quantity per Reel	6000
REEL BOX	
Reels per Box	2
Max Quantity per Box	12000
Reel Box Dimensions (cm)	18 x 18 x 3.6
Reel Box Weight (Kg)	0.7
INNER CARTON	
Boxes per Inner Carton	5
Max Quantity per Inner Carton	60000
Inner Carton Dimensions (cm)	22.5 x 19.3 x 19.53.5
Inner Carton Weight (Kg)	
CARTON	
Inner Cartons per Carton	2
Max Quantity per Carton	120000
Carton Dimensions (cm)	40.5 x 24.7 x 22.5
Carton Weight (Kg)	7

Storage Conditions:

- Storage Temperature Range: -40 °C to +85 °C
- Oxidizable material. Store for 12 months in vacuum sealed bag.
- Repack material after use by re-sealing package.

9. Tape and reel information



Tape and Reel Specifications

10. Reflow temperature Profile