

2JL66

GNSS/L1L2L5L6 Surface Mount

Key Features

GPS/GLONASS/BeiDou/QZSS/Galileo/
/IRNSS/SBAS/L1L2L5L6

- 1176-1606 MHz

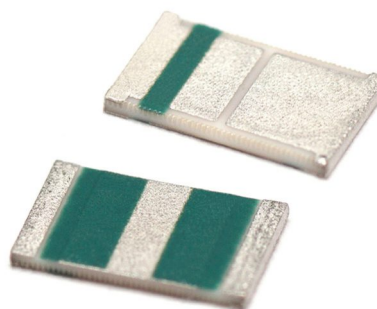
Surface Mount

High Performance

Ceramic Material

Ground Plane Dependent

Dimensions 5 × 3 × 0.5 mm



1. Antenna and electrical specifications

Parameters	GNSS Antenna			
Technologies	GPS/Glonass/BeiDou/QZSS/Galileo/IRNSS/SBAS/L1L2L5L6			
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	~-12.6
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			
Radiation Pattern	Hemispherical			
Polarization	Linear			

Antenna Measurement Conditions:

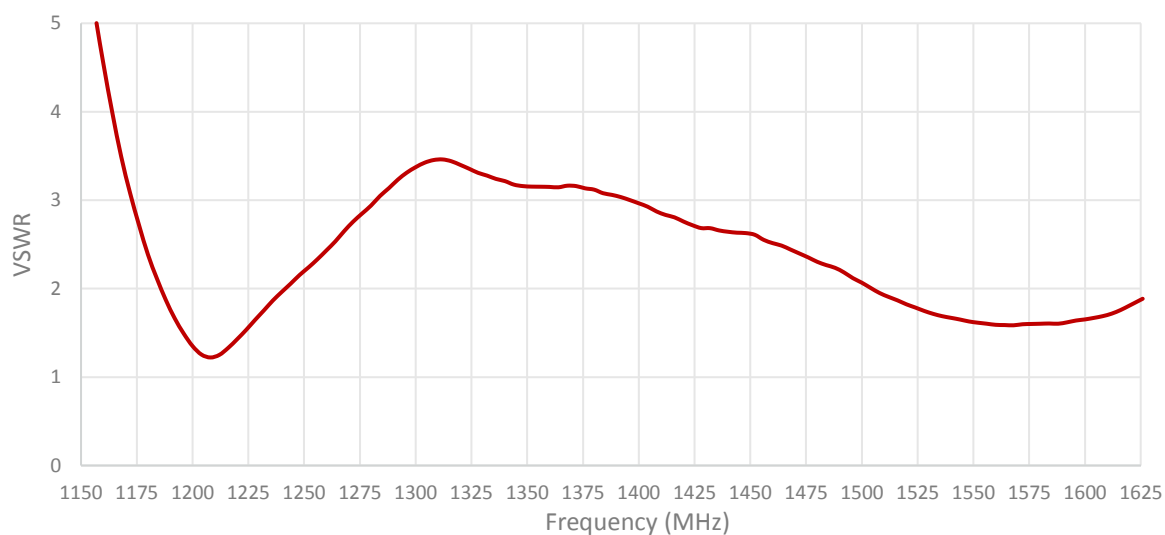
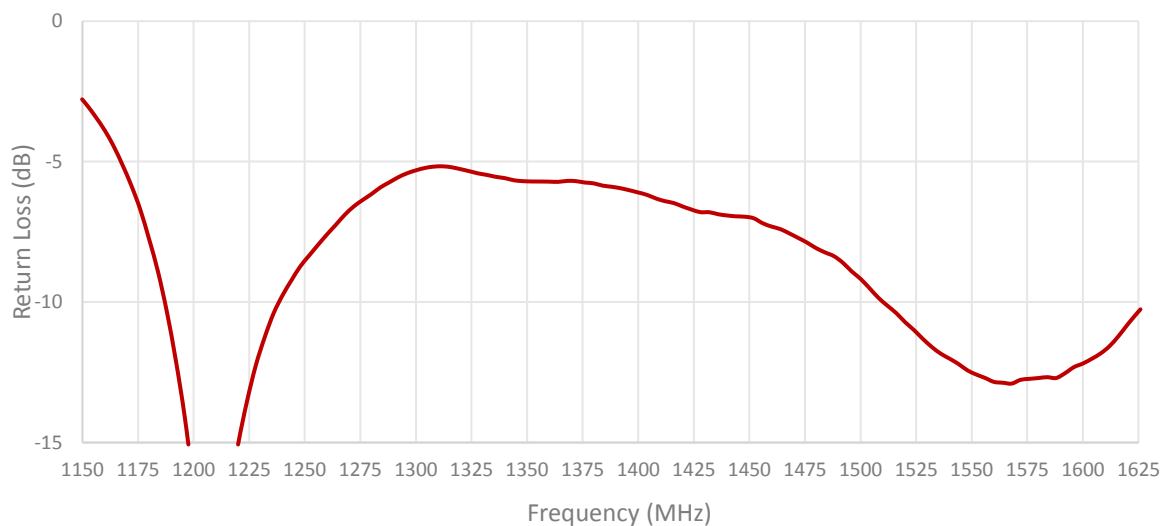
Mounted on ground plane of 80 x 40 mm

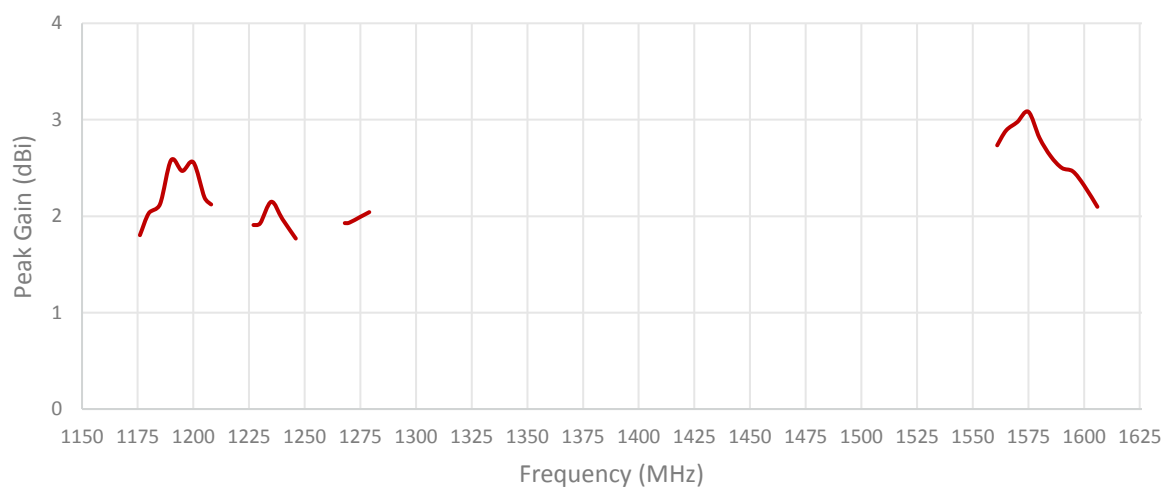
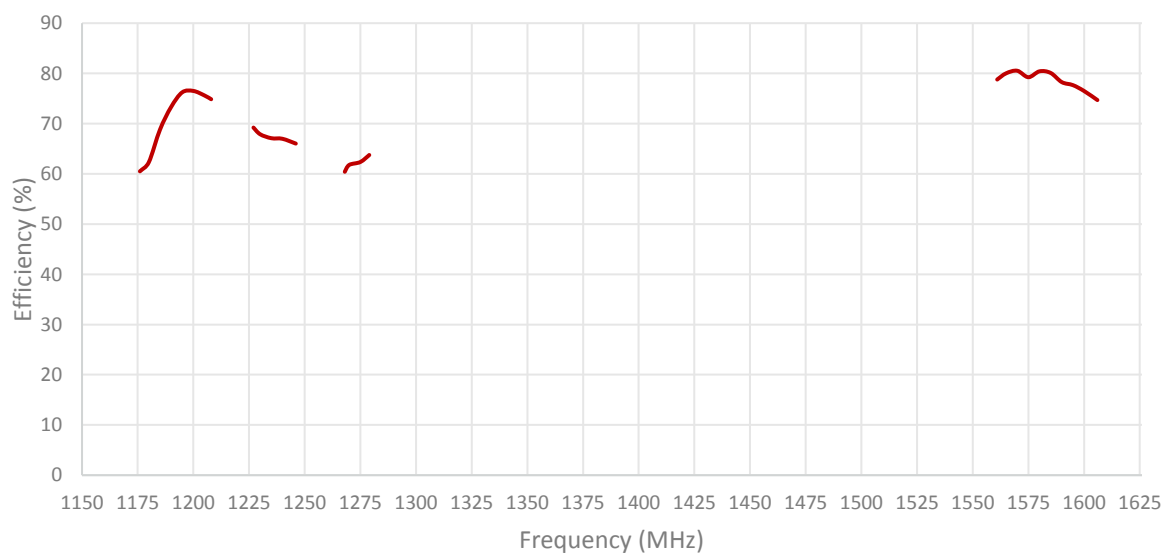
Measured in Certified CTIA 3D Anechoic Chamber

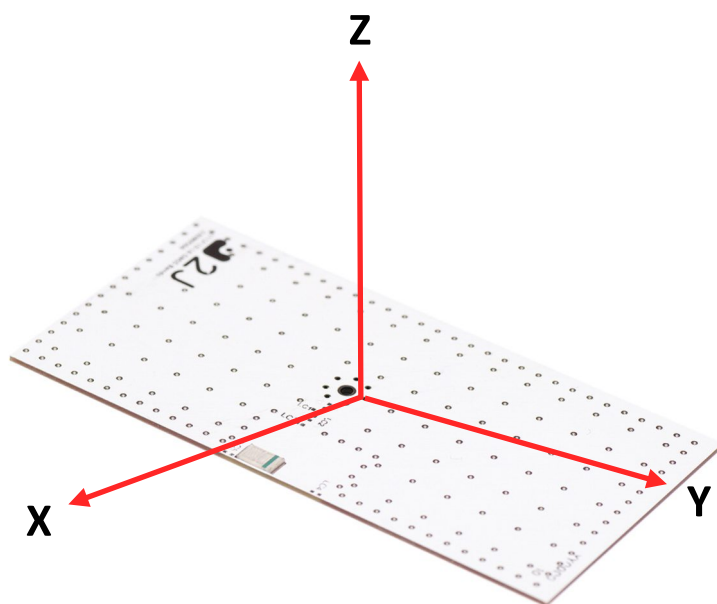
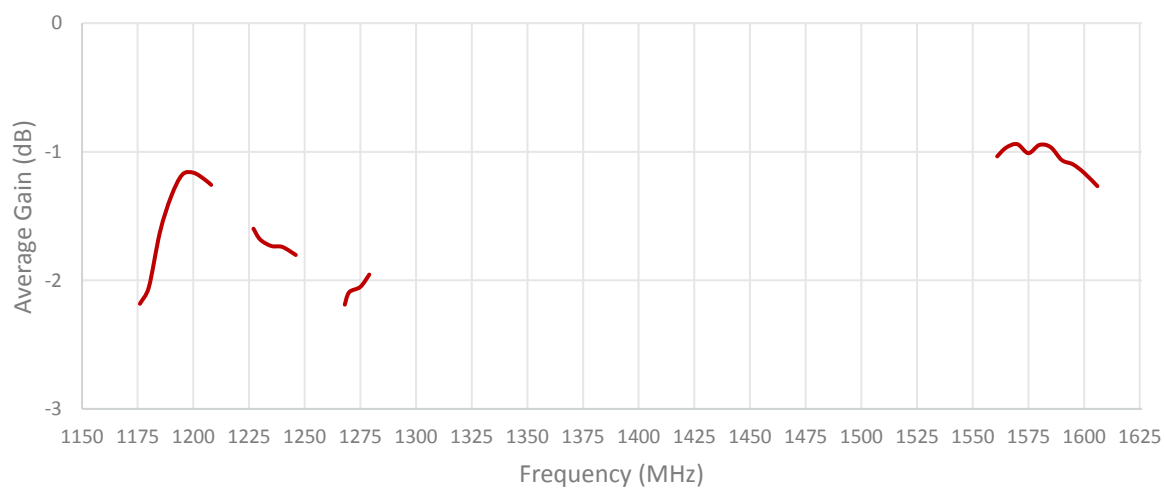
2. Mechanical and environmental specifications

Specifications	2JL66
Mounting Type	Surface Mount
Dimensions (mm)	5 × 3 × 0.5
Material	Ceramic
Operating Temperature (C)	-40 to +85
Storage Temperature (C)	-40 to +85
Substance Compliance	RoHS

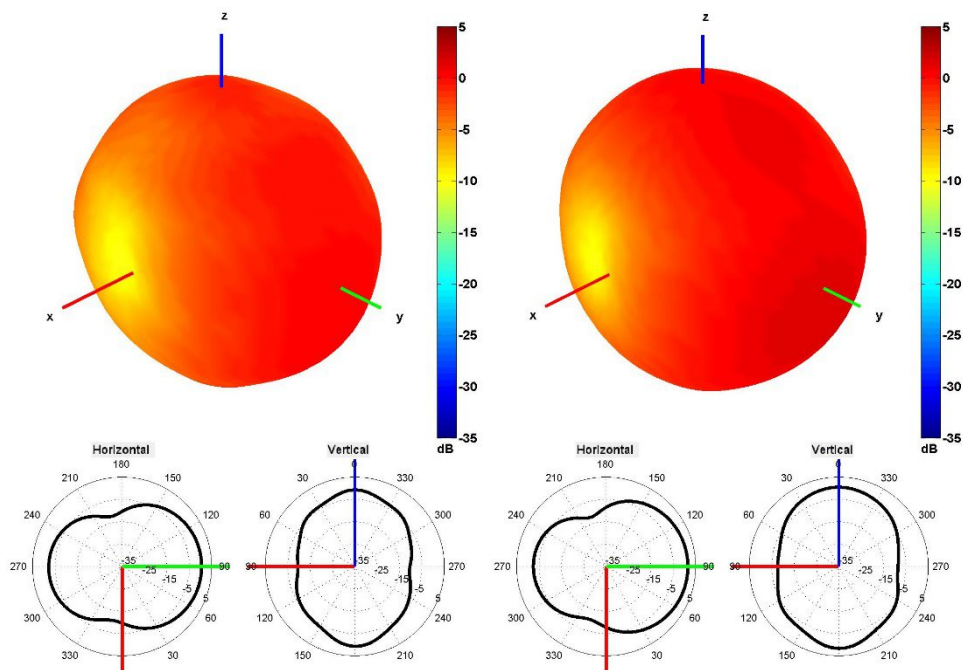
3. Antenna parameters



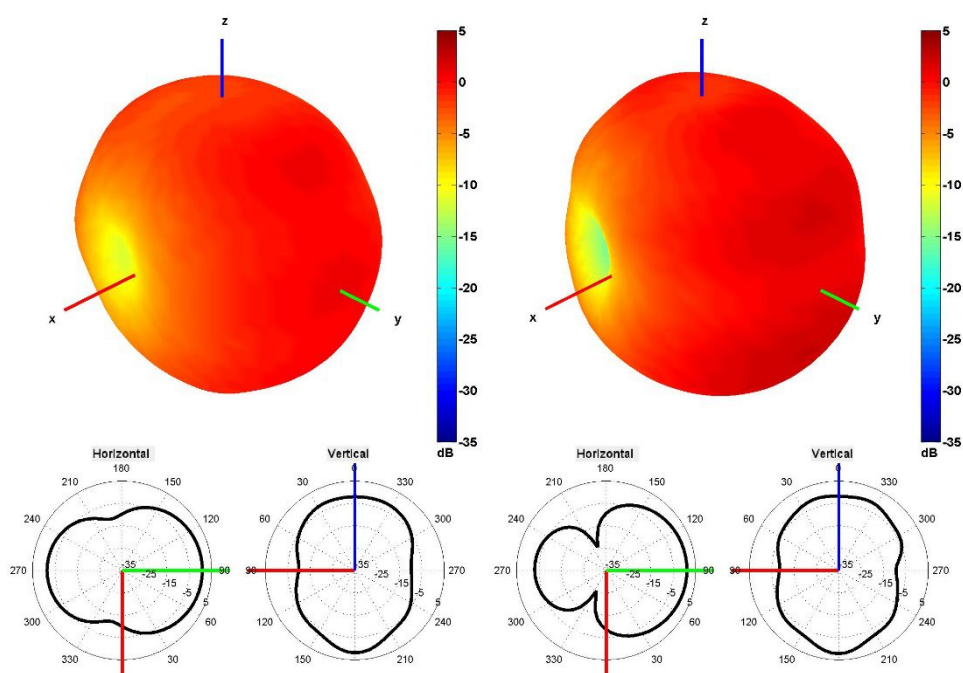




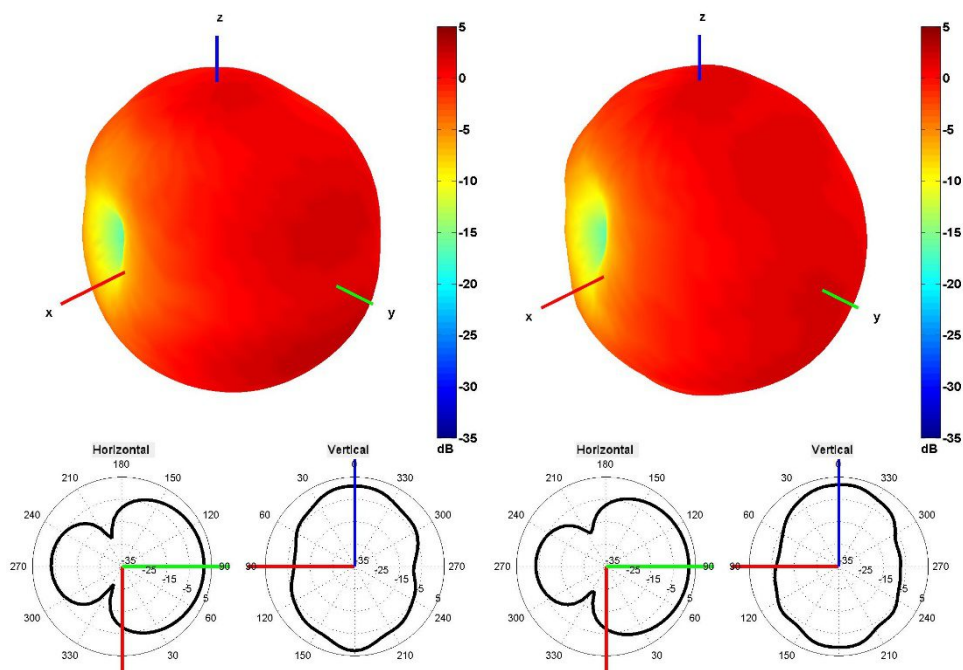
Radiation pattern reference



1176 AND 1227 MHz Radiation pattern

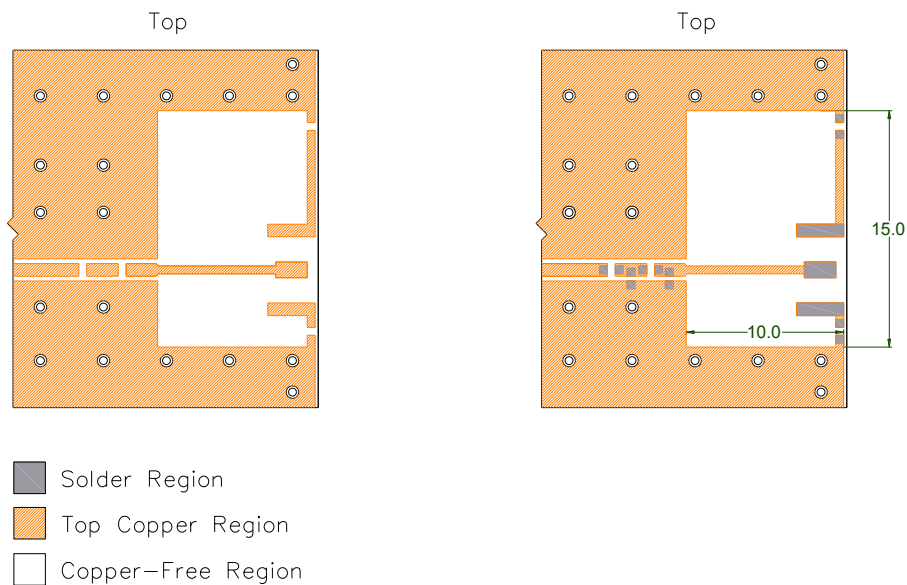


1268 AND 1561 MHz Radiation pattern

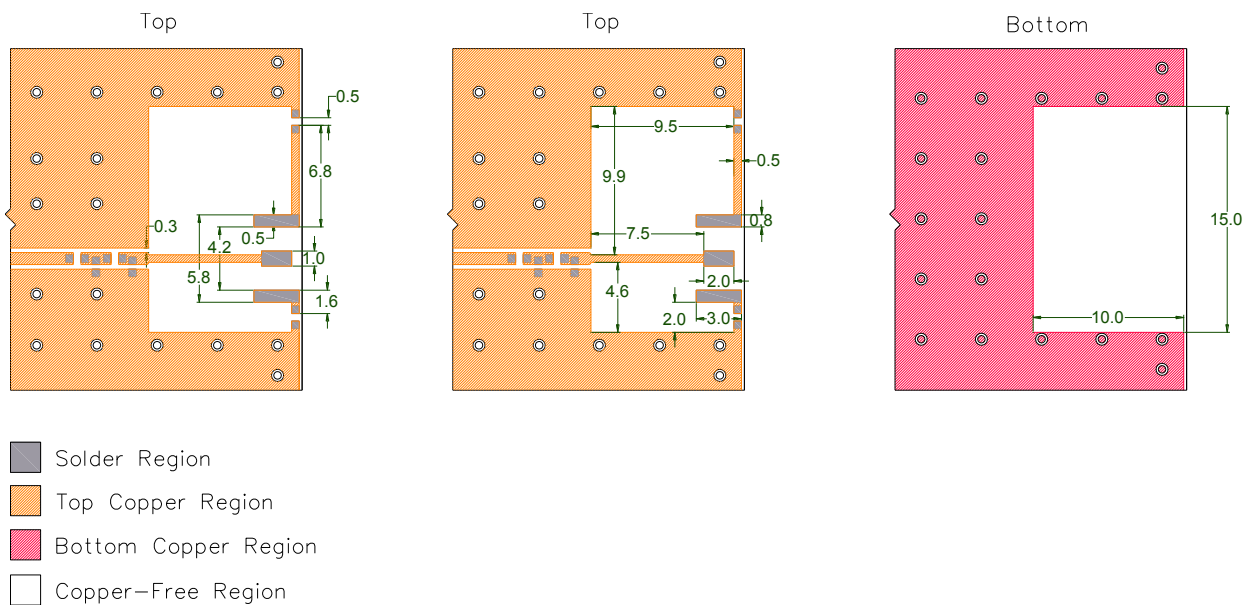


1575 AND 1602 MHz Radiation pattern

4. PCB Layout

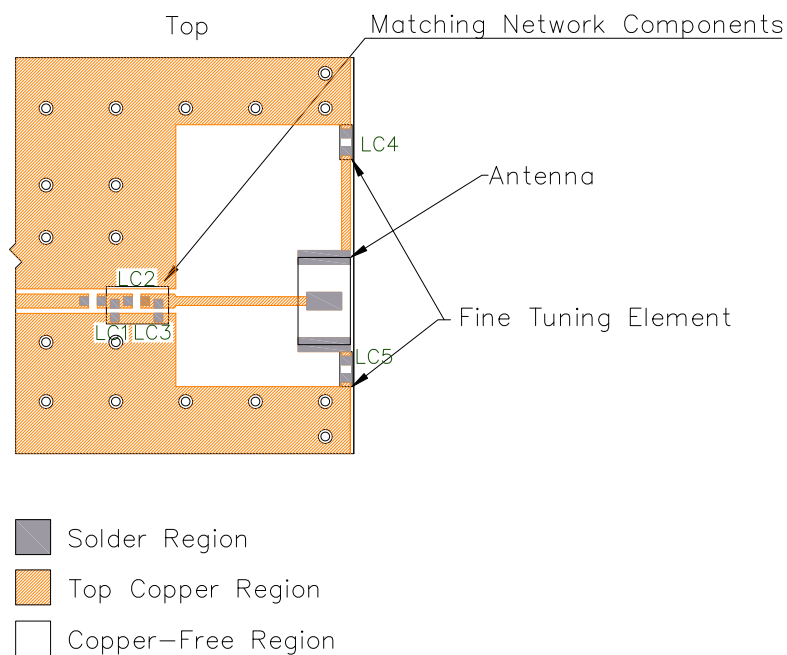


Minimum area required for antenna integration

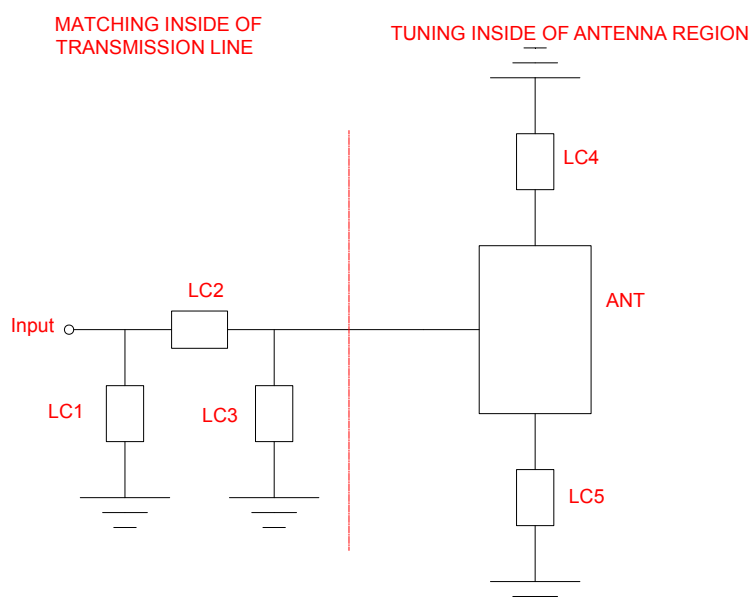


Layout dimensions for antenna integration (mm)

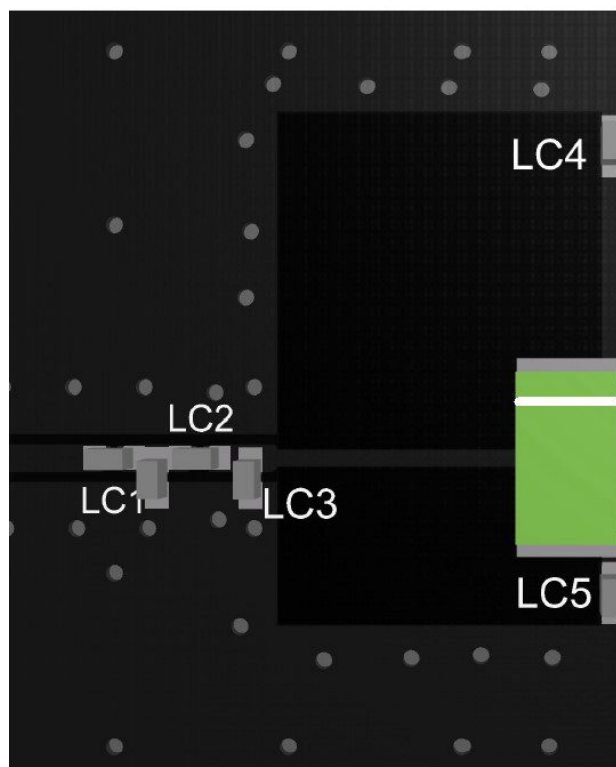
5. Matching Components



Matching Network Schematic



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

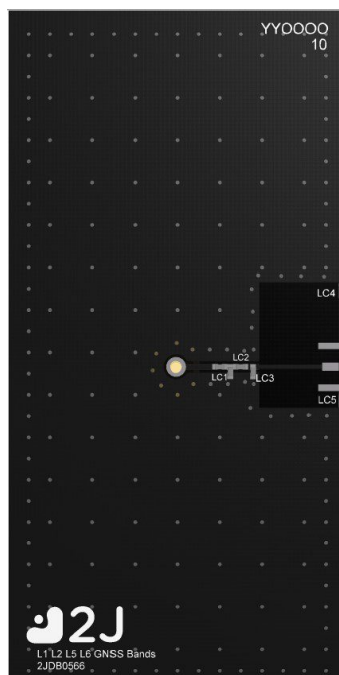


3D View of matching components and recommended values

(LC1=OPEN, LC2=3.6pF , LC3=1.5pF, LC4=4.7pF $\pm$ 0.05pF, LC5=3.6pF $\pm$ 0.05pF)

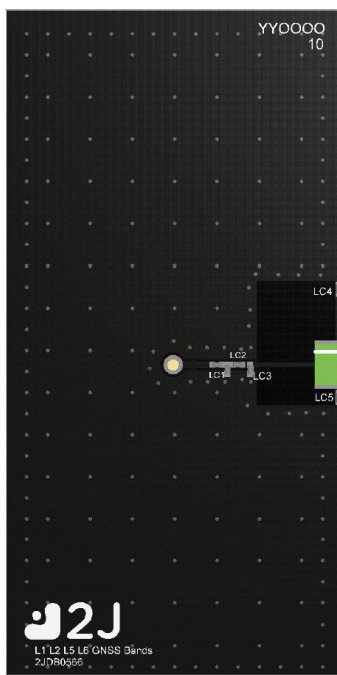
6. Evaluation Board

80mm x 40mm



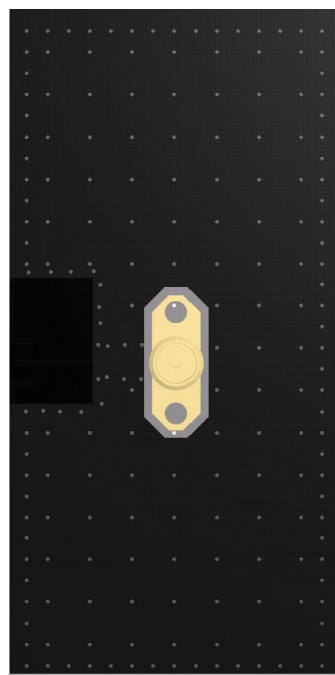
Front View without Antenna

80mm x 40mm



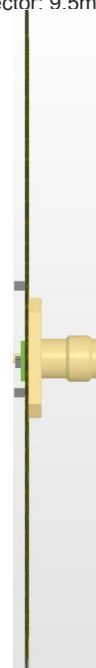
Front View with Antenna

80mm x 40mm



Back View

80mm x 10.8mm
(PCB: 0.8mm, Antenna: 0.5mm,
Connector: 9.5mm)



Side View

7. Packaging

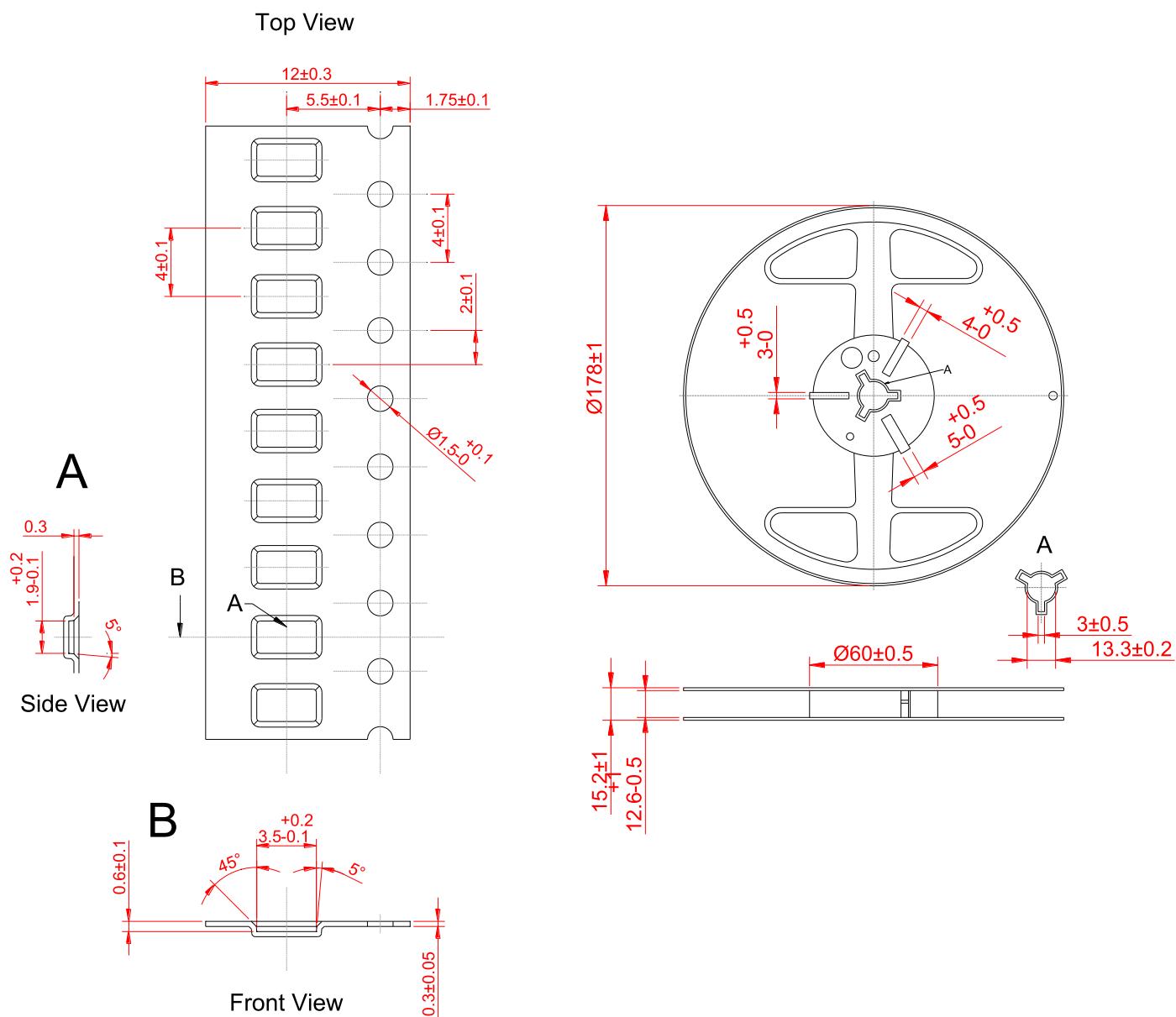
PACKAGING SPECIFICATION

Antenna	2JL66
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

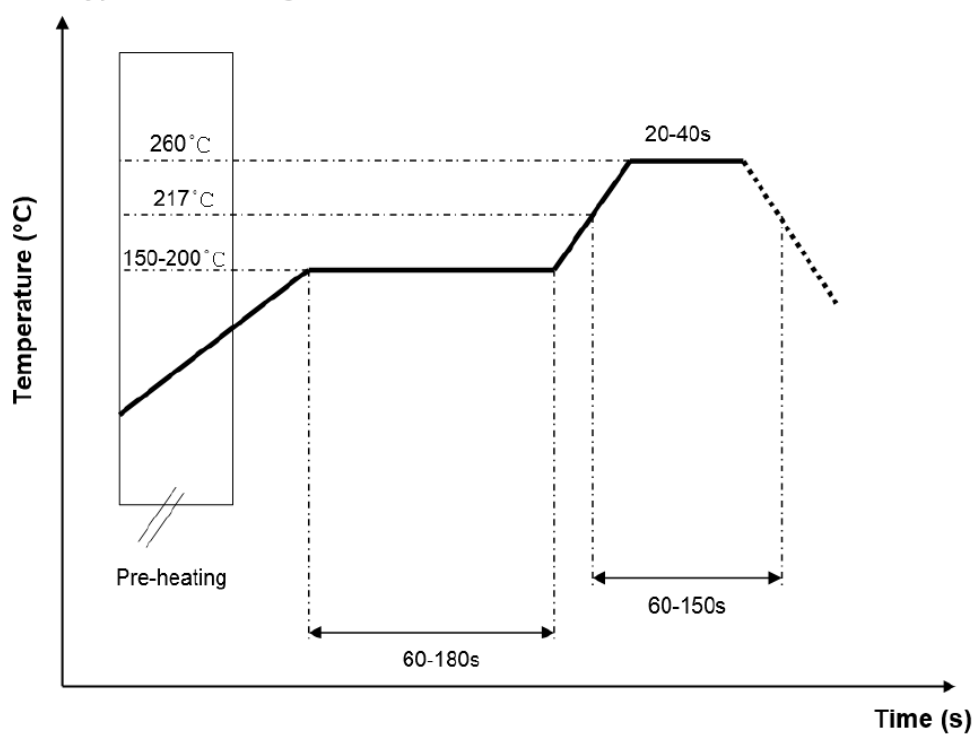
Storage Conditions:

- 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.

8. Tape and Reel Information

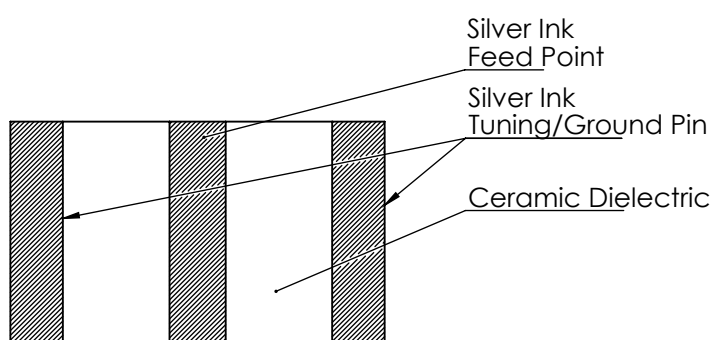


9. Reflow Temperature Profile

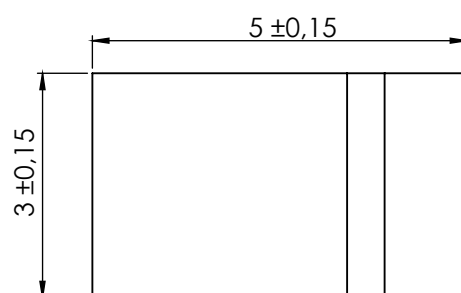


10. Antenna drawings

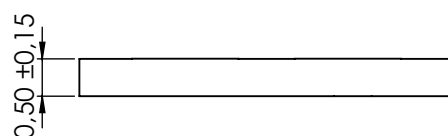
Bottom View



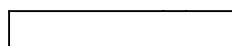
Top View



Front View



Right View



11. Antenna Images

