

2JS01

GNSS Ceramic Surface Mount

Key Features

GPS/GLONASS/QZSS/Galileo

- 1575-1606 MHz

Surface Mount

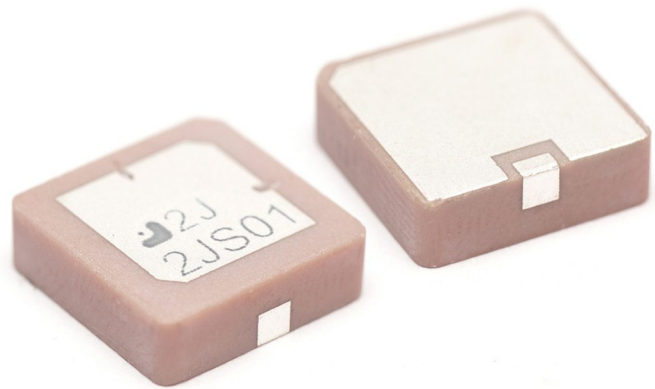
Easy to Integrate

Compact size

Ceramic Material

Ground Plane Dependent

Dimensions 13 x 13 x 4 mm



1. Antenna and electrical specifications

Parameters	GNSS Ceramic Surface Mount Antenna	
	GPS/QZSS/Galileo	GLONASS
Standards		
Bands (MHz)	1575	1602
Frequency (MHz)	1575.42	1598-1606
Return Loss (dB)	~-15.4	~-14.7
VSWR	~1.4:1	~1.8:1
Efficiency (%)	~58.9	~58.3
Peak Gain (dBi)	~-3.5	~-3.5
Average Gain (dB)	~-2.3	~-2.4
Impedance (Ohms)	50	
Radiation Pattern	Hemispherical	

Antenna Measurement Conditions:

Free Space

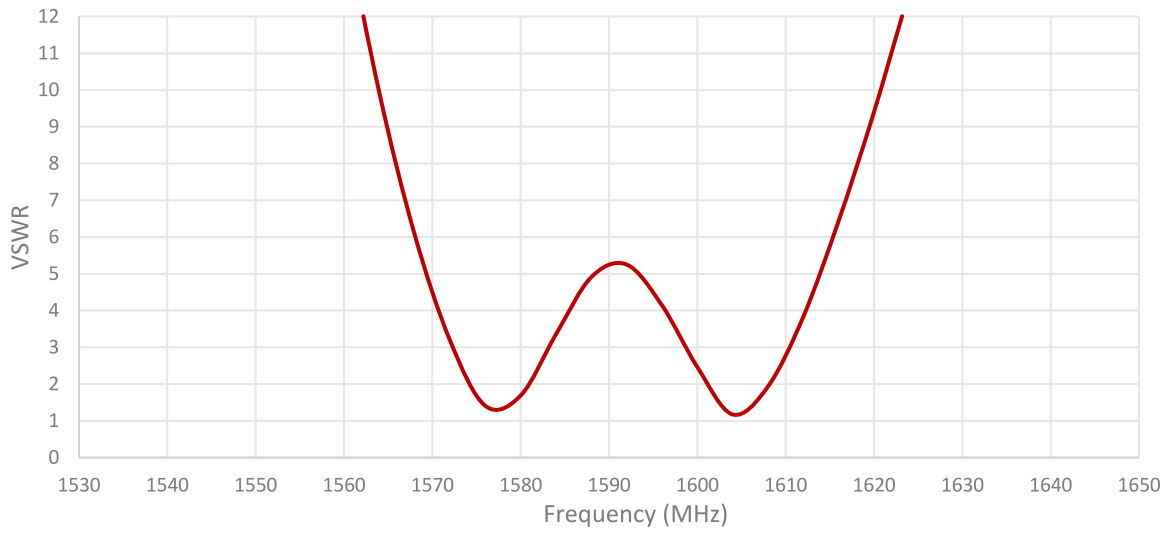
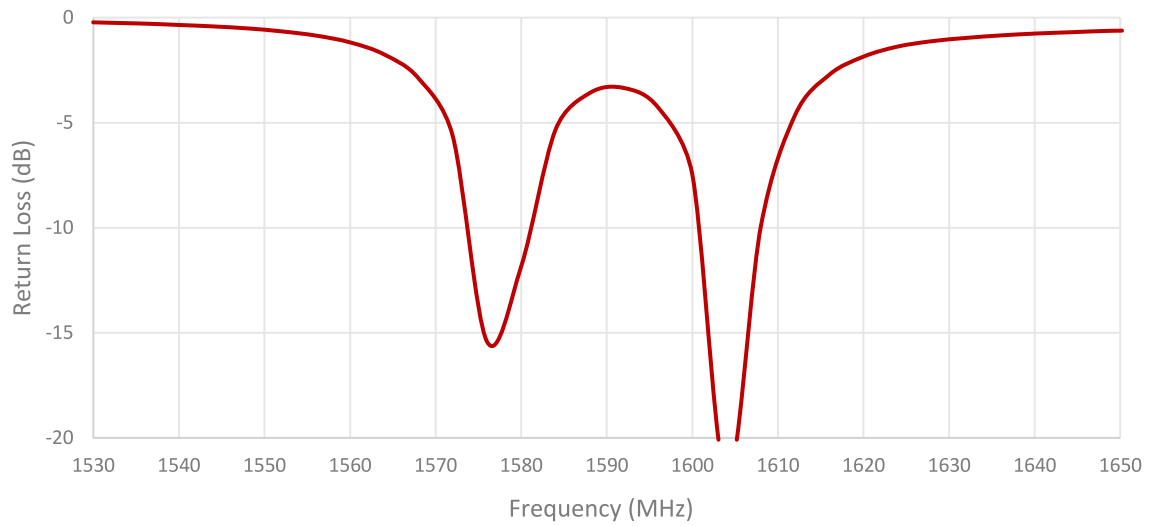
Mounted on Ground Plane of 70 x 70 mm

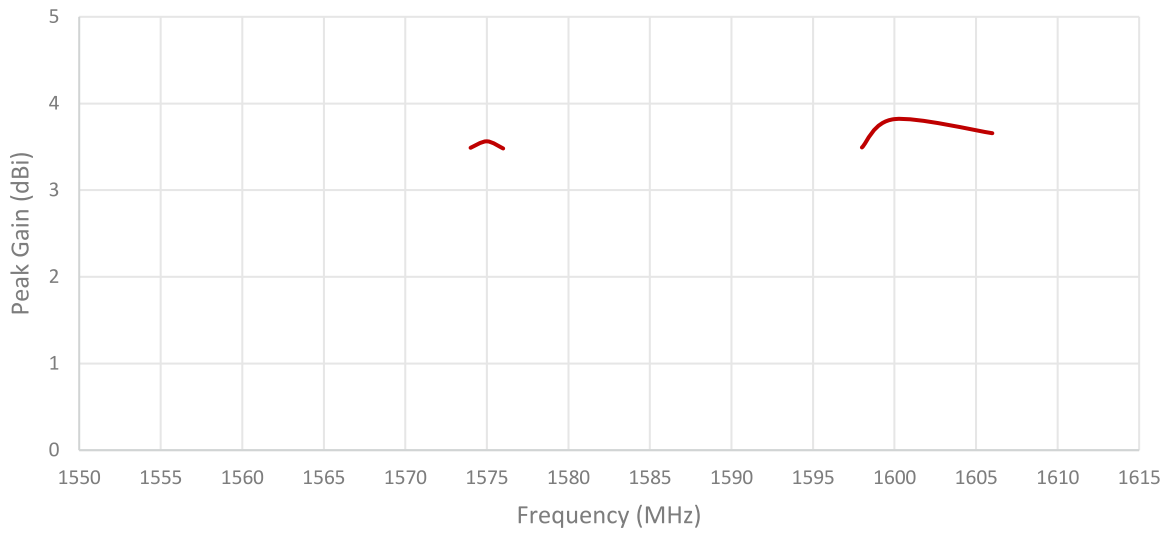
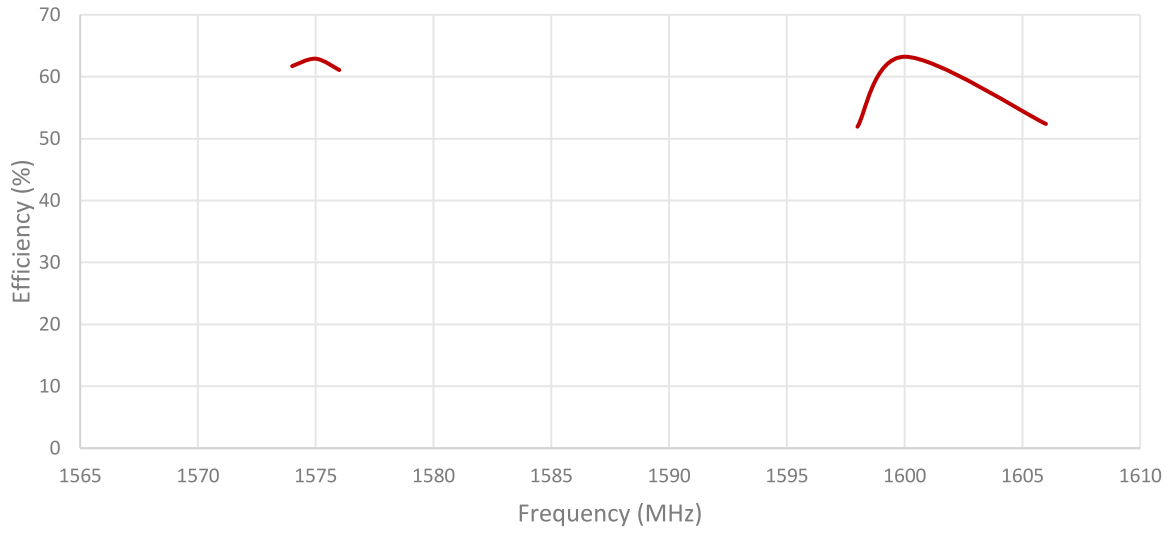
Measured in Certified CTIA 3D Anechoic Chamber

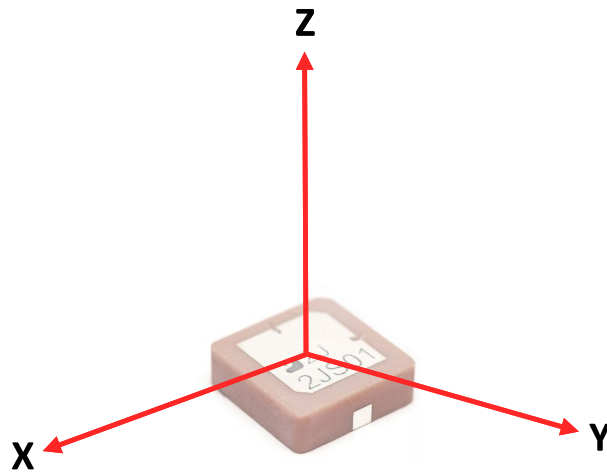
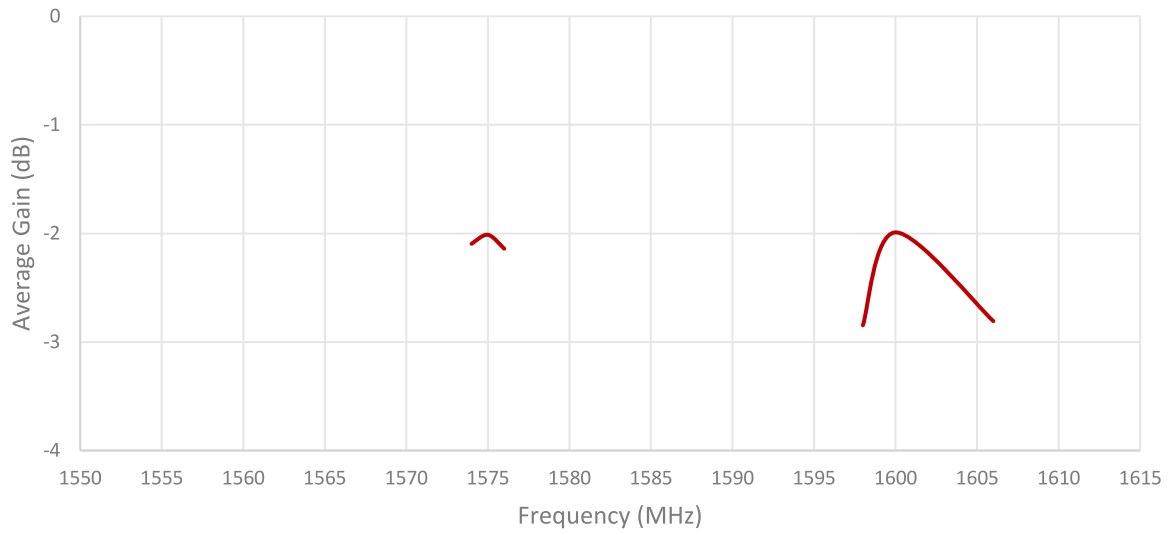
2. Mechanical and environmental specifications

Specifications	2JS01
Mounting Type	Surface Mount
Dimensions (mm)	13 x 13 x 4
Material	Ceramic
Operating Temperature (C)	-40 to +85
Storage Temperature (C)	-40 to +85
Substance Compliance	RoHS

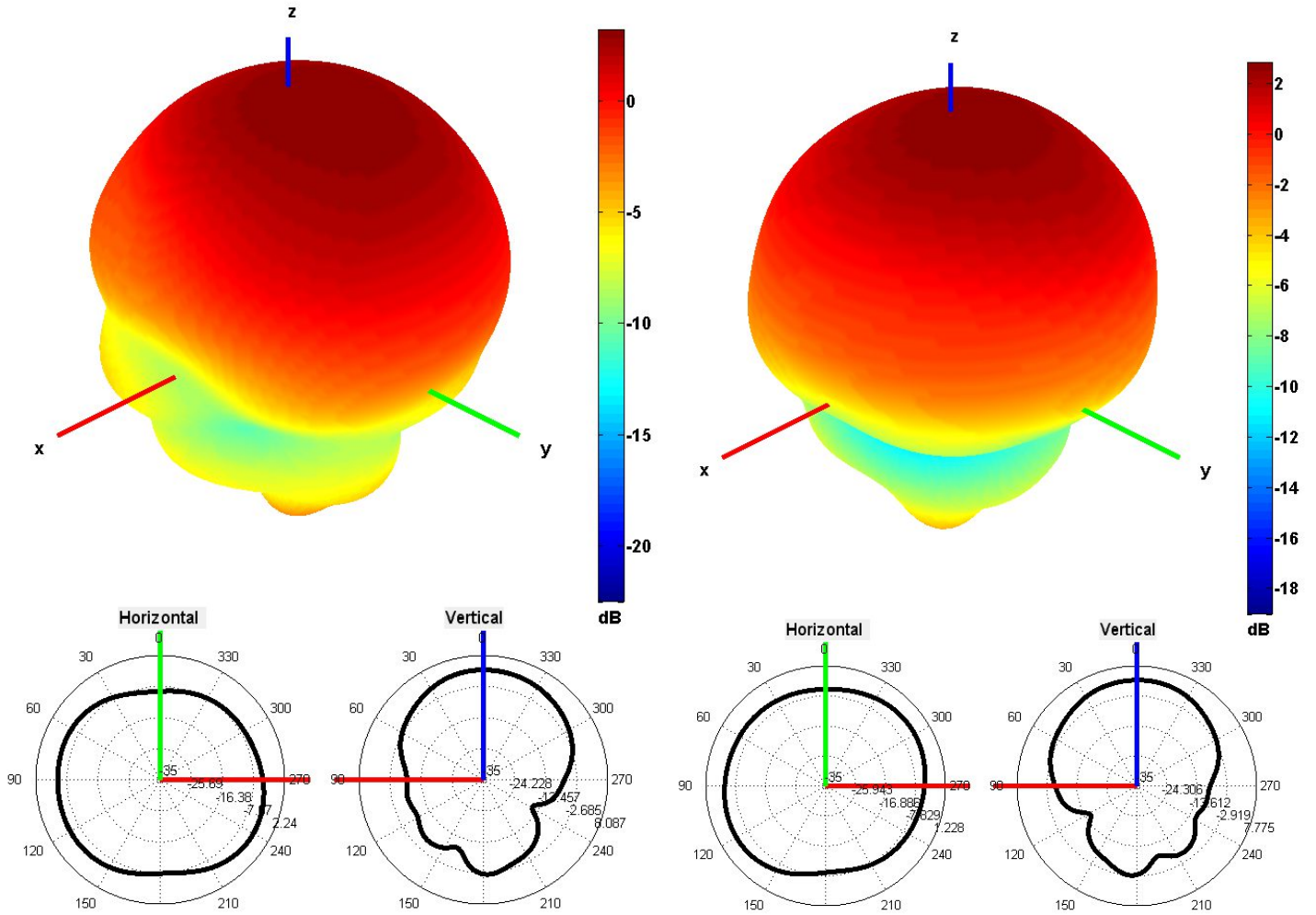
3. Antenna parameters





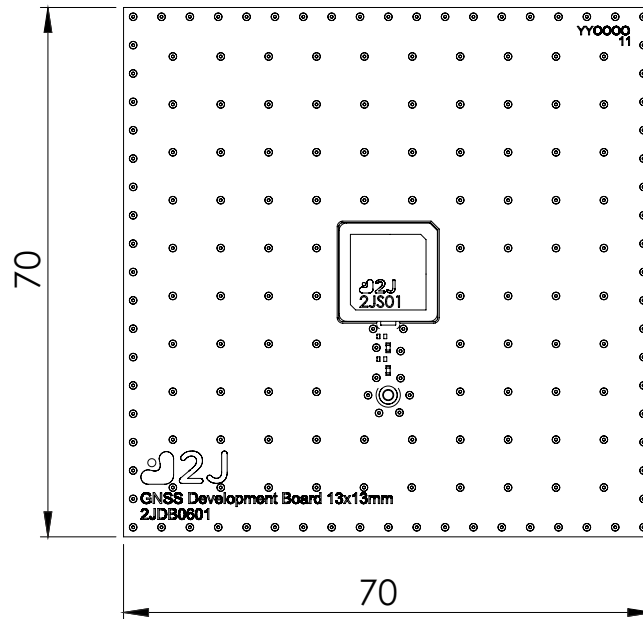


Radiation pattern reference

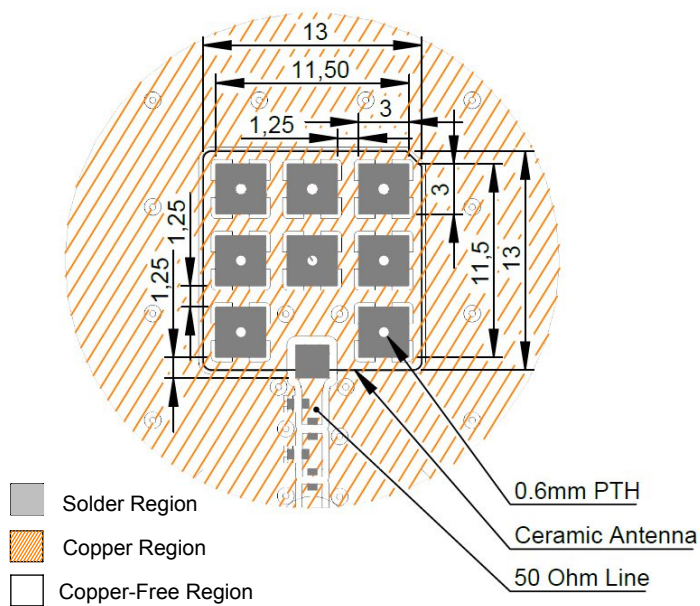


1575 AND 1600 MHz Radiation pattern

4. PCB Layout

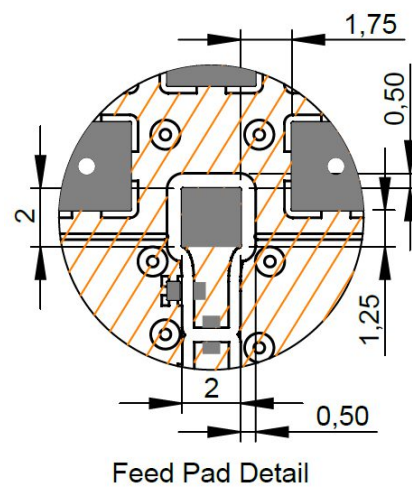


Recommended PCB Dimensions



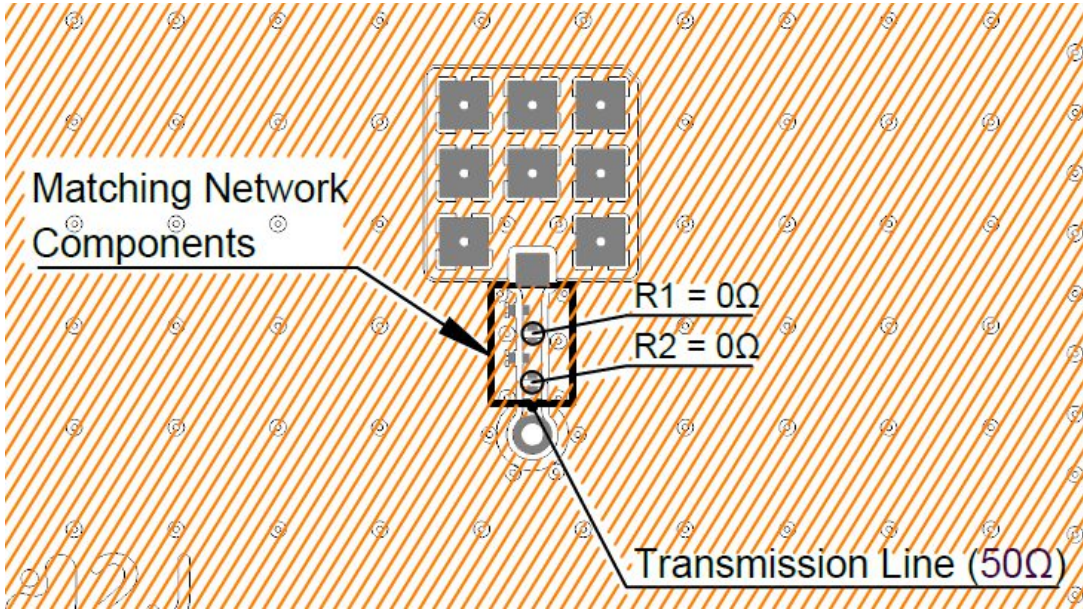
Layout dimensions for antenna integration (mm)

DETAIL B SCALE 3 : 1

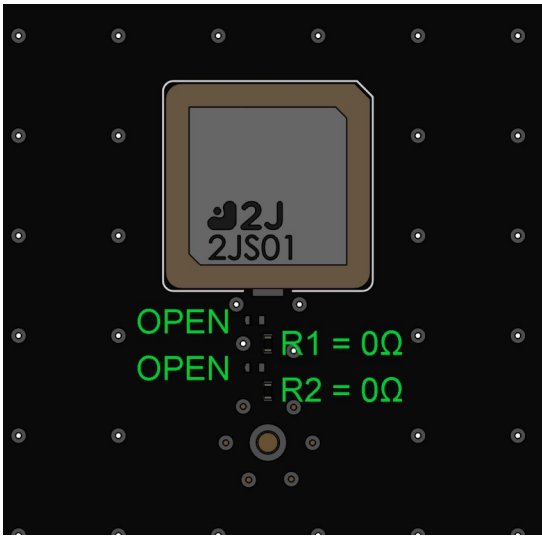


Feed Pad Detail

5. Matching Components

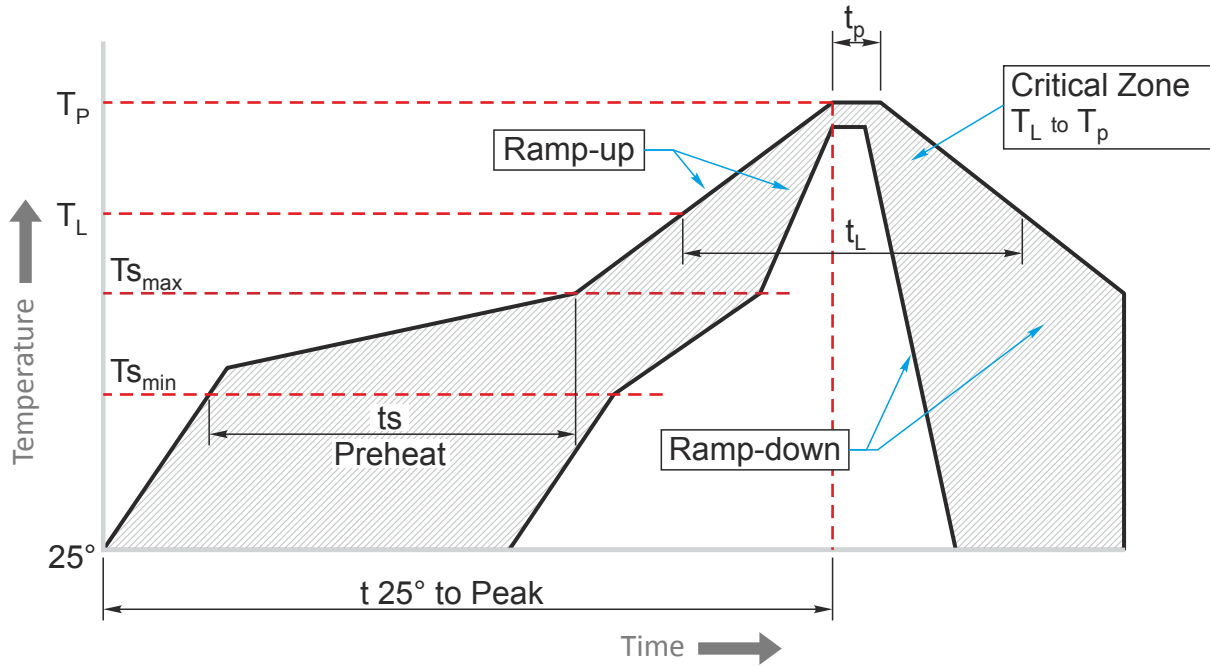


Matching Network Drawing



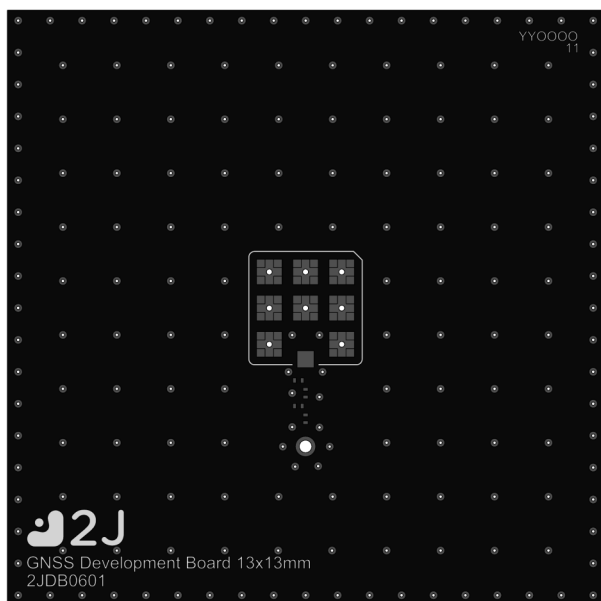
3D View of matching components and recommended values

REFLOW TEMPERATURE PROFILE

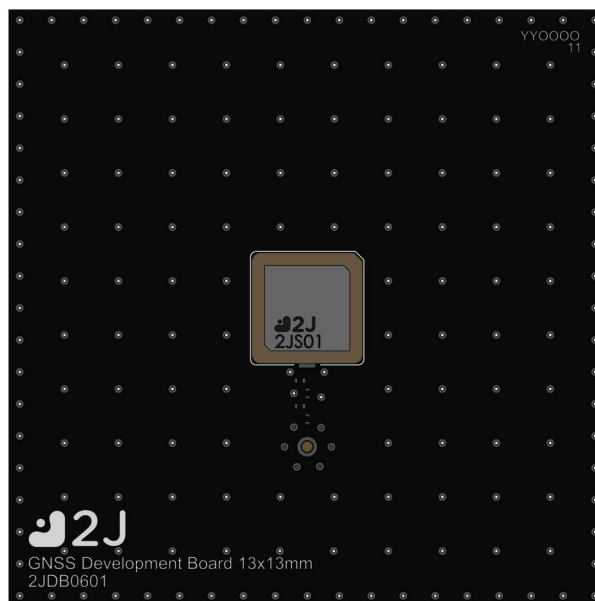


Phase	Profile features	Pb-Free Assembly (SnAgCu)
RAMP-UP	Avg. Ramp-up Rate ($T_{s_{max}}$ to T_p)	3°C / second (max)
PREHEAT	-Temperature Min Rate ($T_{s_{min}}$) -Temperature Max Rate ($T_{s_{min}}$) -Time ($t_{s_{min}}$ to $t_{s_{max}}$)	150°C 200°C 60-120 seconds
REFLOW	-Temperature (T_L) -Total Time above T_L (t_L)	217°C 30-100 seconds
PEAK	-Temperature (T_p) -Time (t_p)	245°C 2-5 seconds
RAMP-DOWN	Rate	3°C / second max.
Time from 25°C to Peak Temperature		8 minutes max.

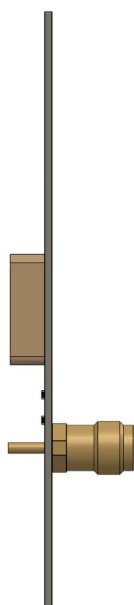
6. Evaluation Board



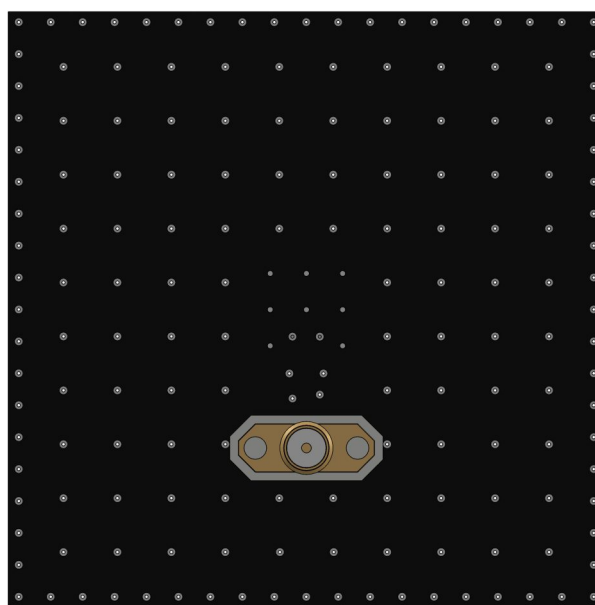
Front View without Antenna



Front View with Antenna

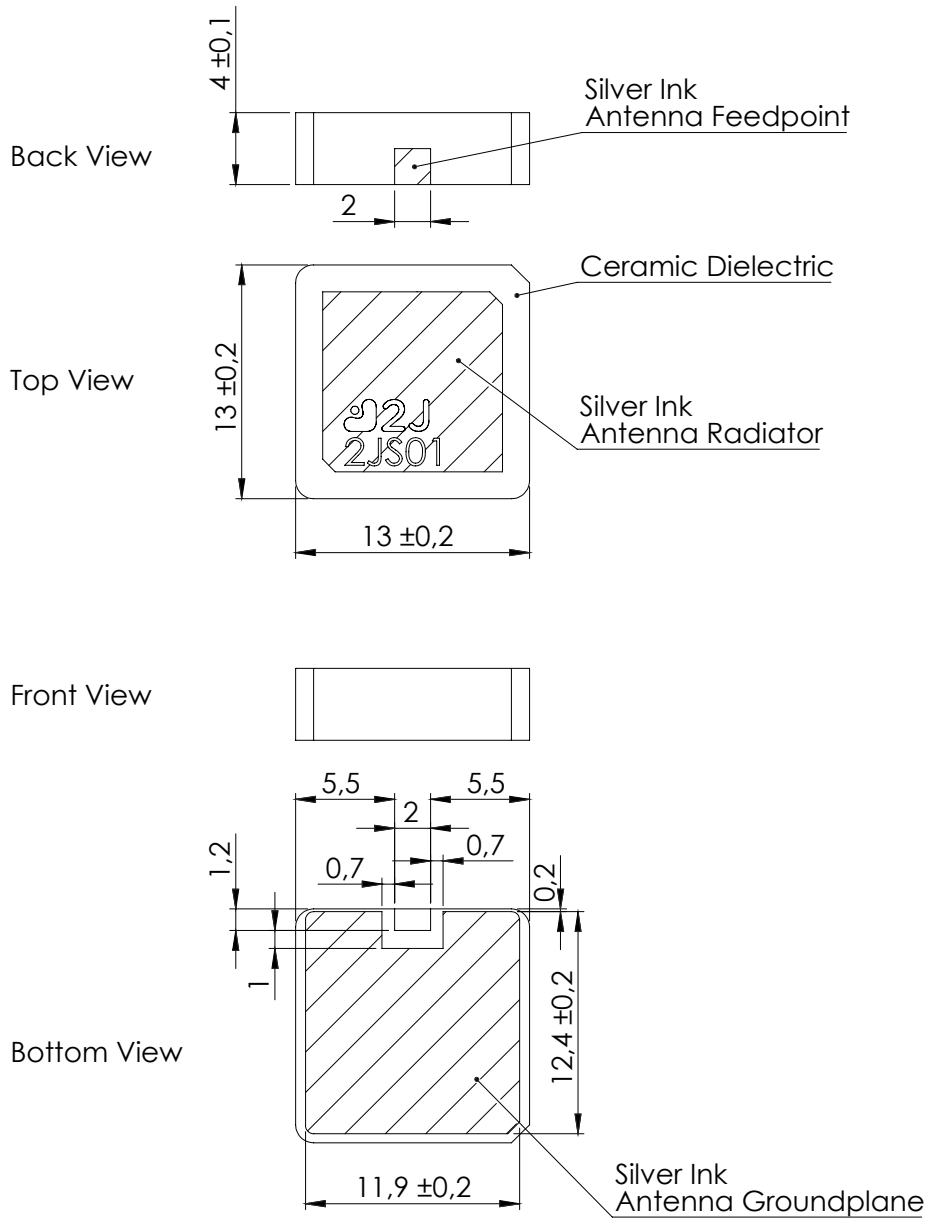


Side View



Back View

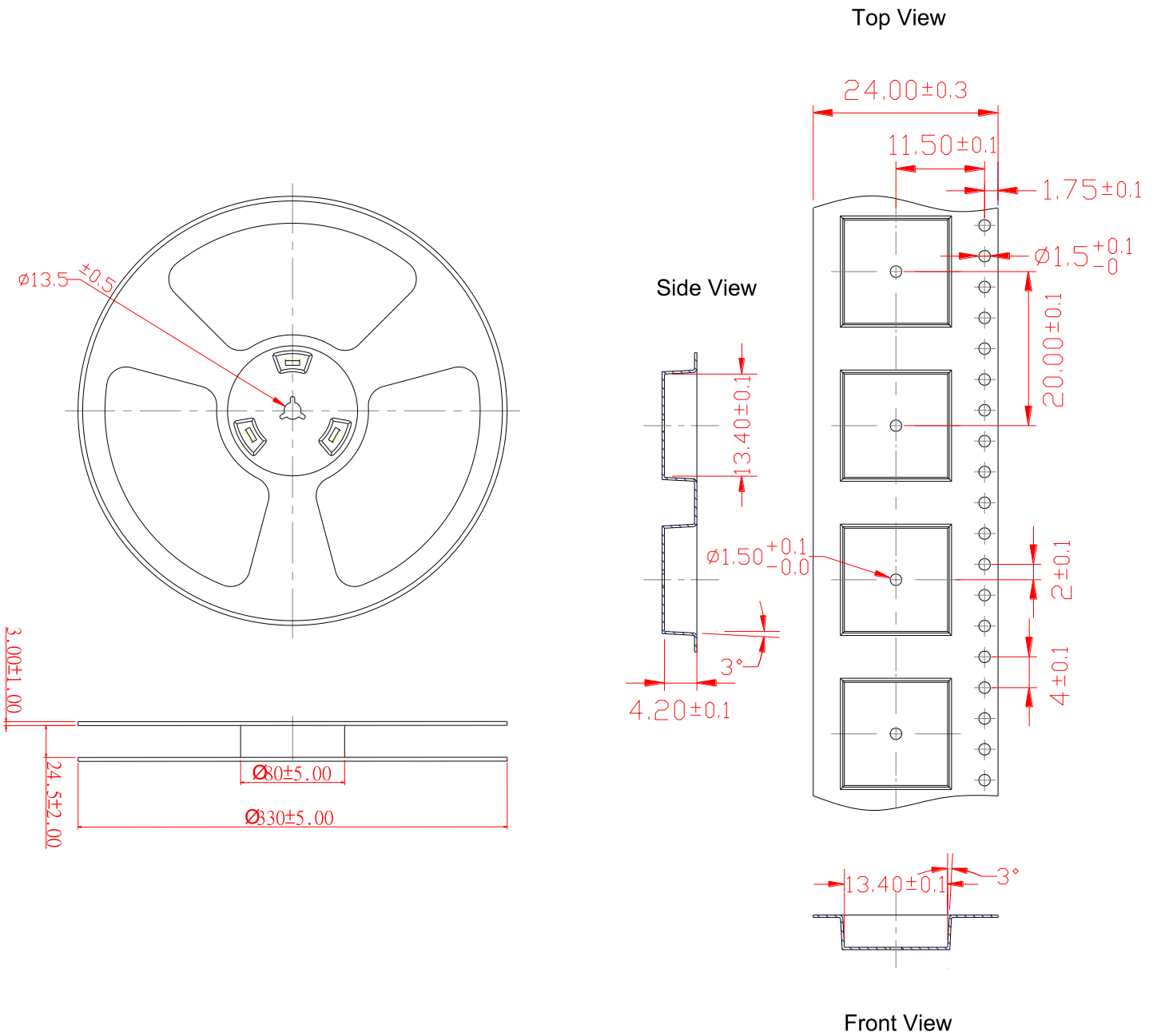
7. Antenna drawings



Mark: Black
Undeclared tolerance: ± 0.3

Dimensions for ceramic antenna 13 x 13 x 4 mm

8. Tape and Reel Information



Tape and Reel Specifications

9. Packaging

PACKAGING SPECIFICATION

Antenna	2JS01
REEL	
Max Quantity per Reel	700
REEL BOX	
Reels per Box	1
Reel Box Dimensions (cm)	34 x 34 x 4
Reel Box Weight (Kg)	3.31
CARTON	
Reels per Carton	5
Max Quantity per Carton	3500
Reel Carton Dimensions (cm)	36 x 36 x 23
Reel Carton Weight (Kg)	16.55

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.

5. Antenna Images

