

2JS20

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 25 x 25 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)	~-26.4	~-26.4
VSWR	~1.1:1	~1.1:1
Efficiency (%)	~84.2	~80.9
Peak Gain (dBi)	~4.6	~4.7
Average Gain (dB)	~-0.7	~-0.9
Impedance (Ohms)	50	
Radiation Pattern	Hemispherical	

Antenna Measurement Conditions:

Free Space

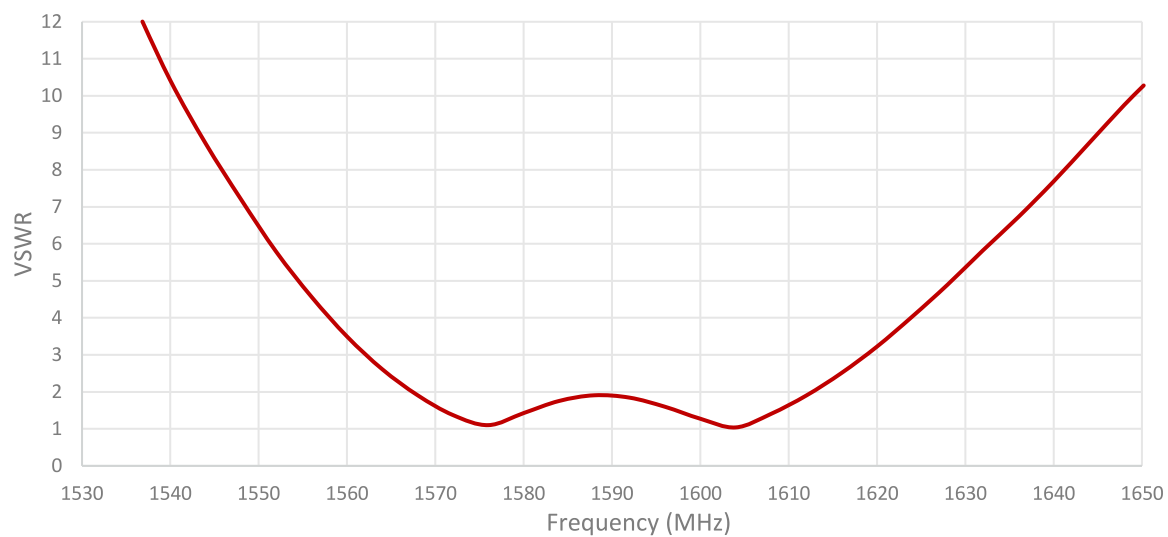
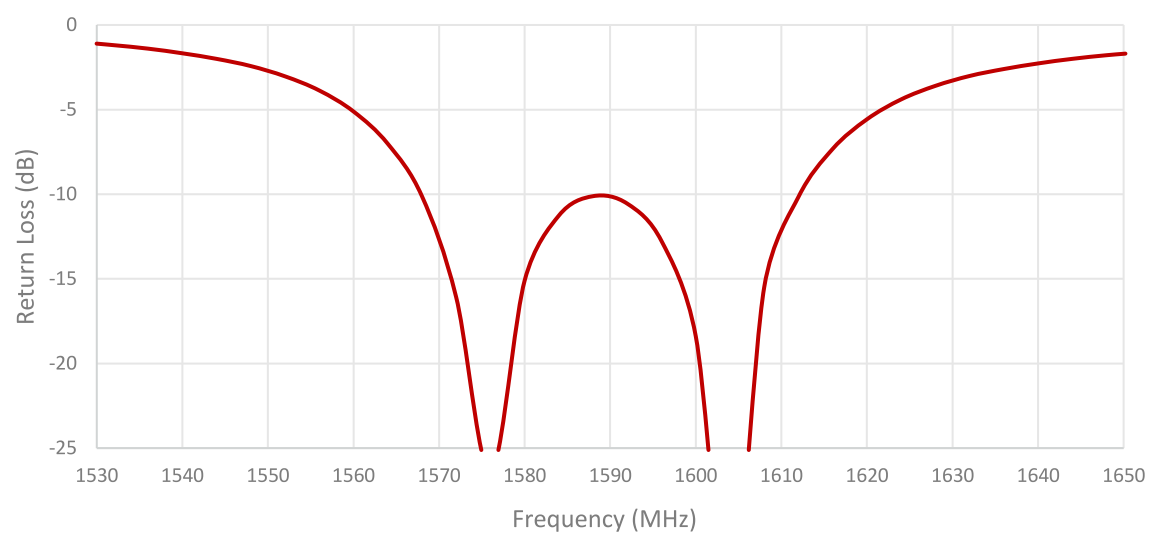
Mounted on Ground Plane of 70 x 70 mm

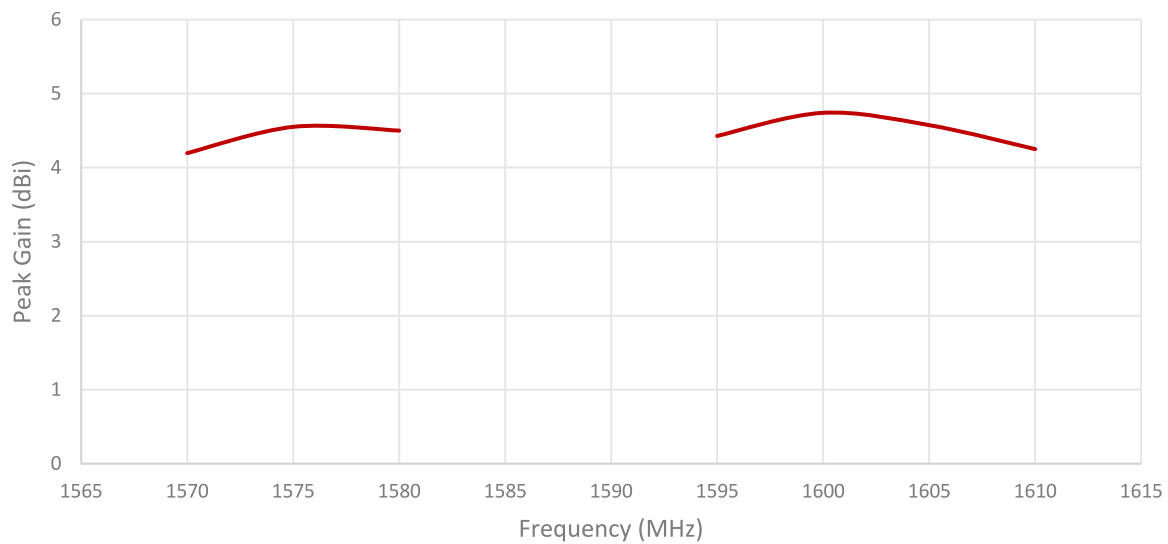
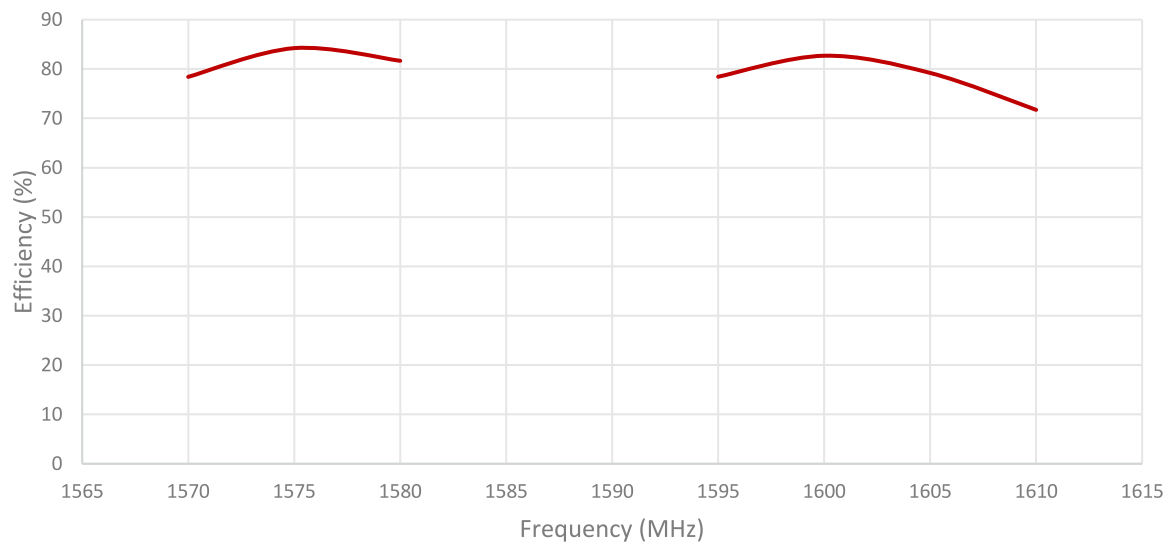
Measured in Certified CTIA 3D Anechoic Chamber

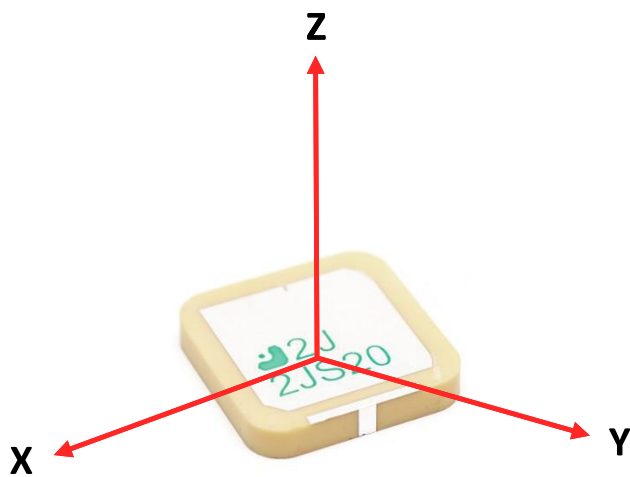
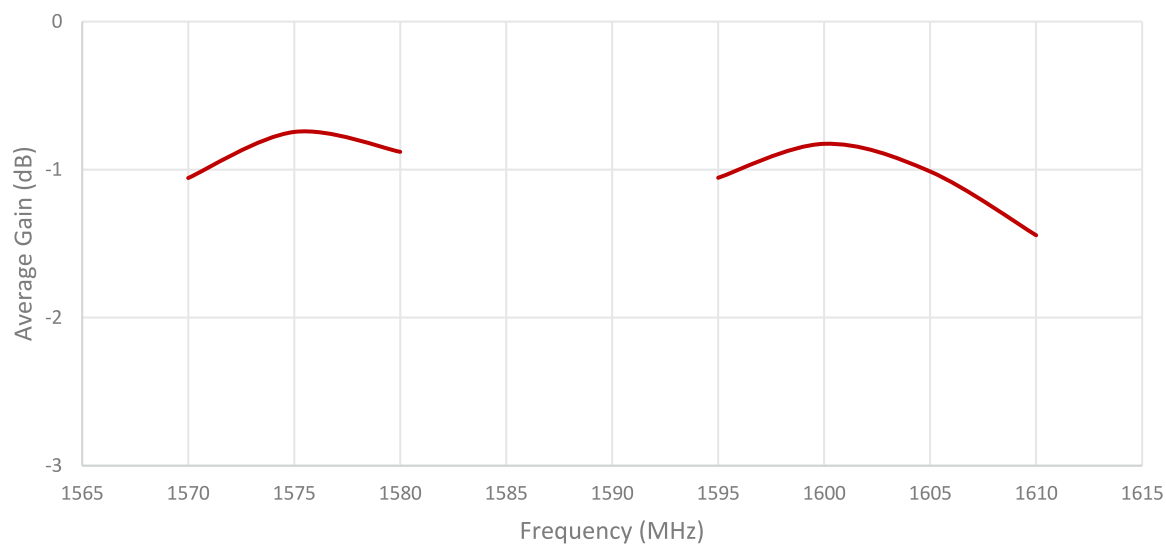
2. Mechanical and environmental specifications

Specifications	2JS20
Mounting Type	Surface Mount
Dimensions (mm)	25 x 25 x 4
Material	Ceramic
Operating Temperature (C)	-40 to +85
Storage Temperature (C)	-40 to +85
Substance Compliance	RoHS
Typical Shear Force Test	50Kgf according to IEC62137-1-2:2007

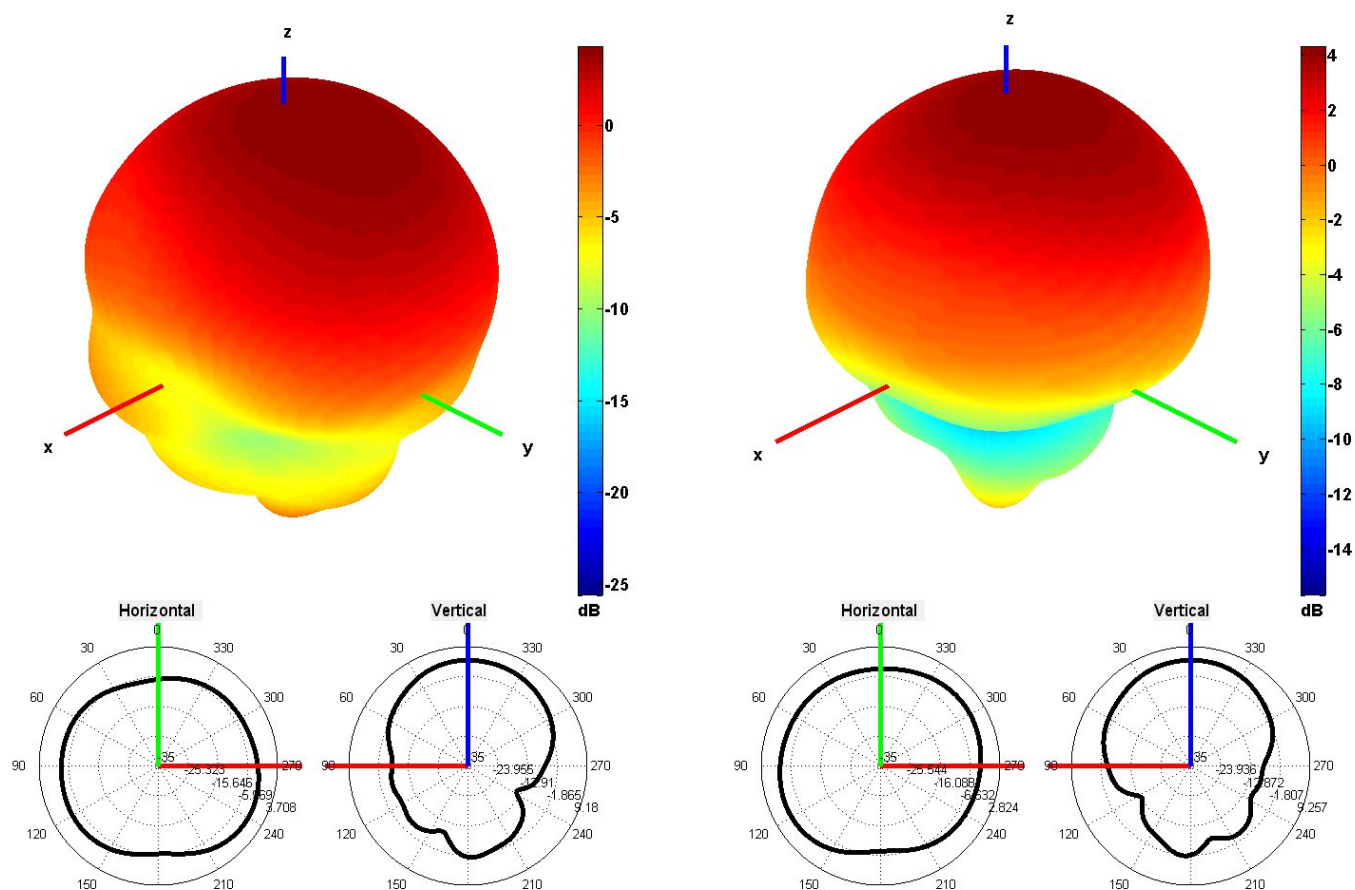
3. Antenna parameters





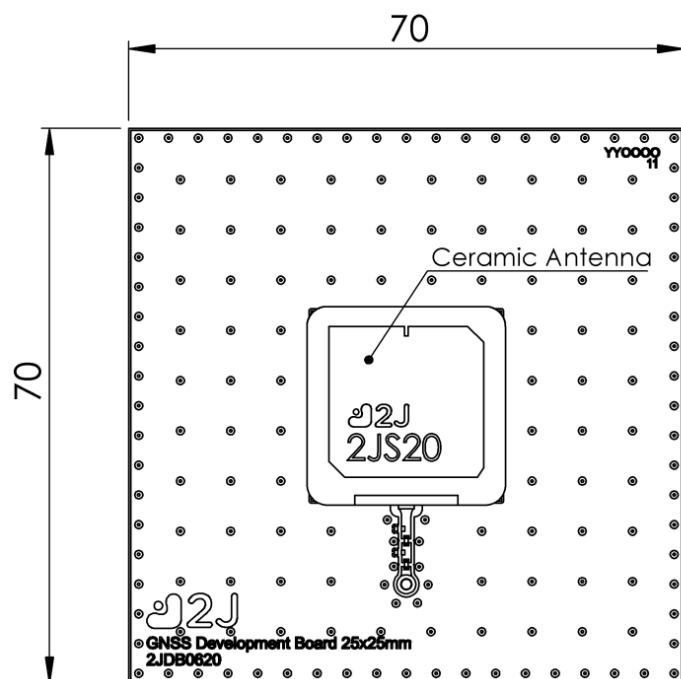


Radiation pattern reference

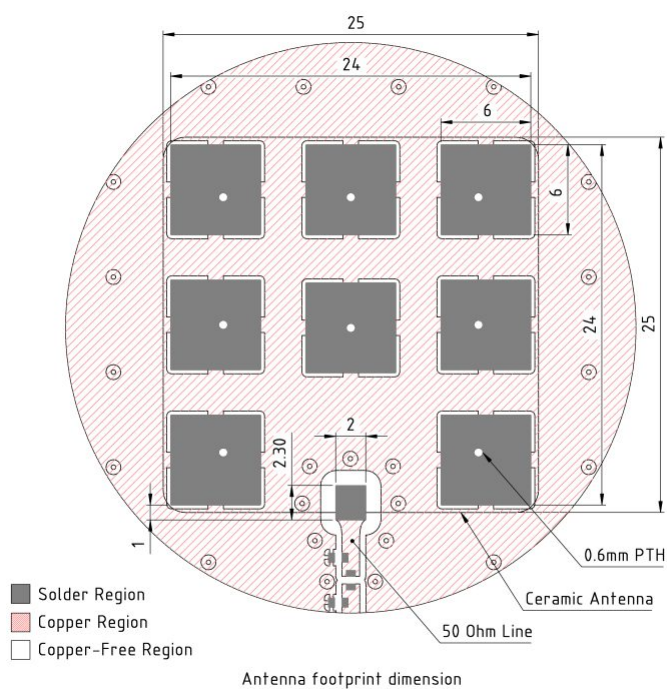


1575 AND 1600 MHz Radiation pattern

4. PCB Layout

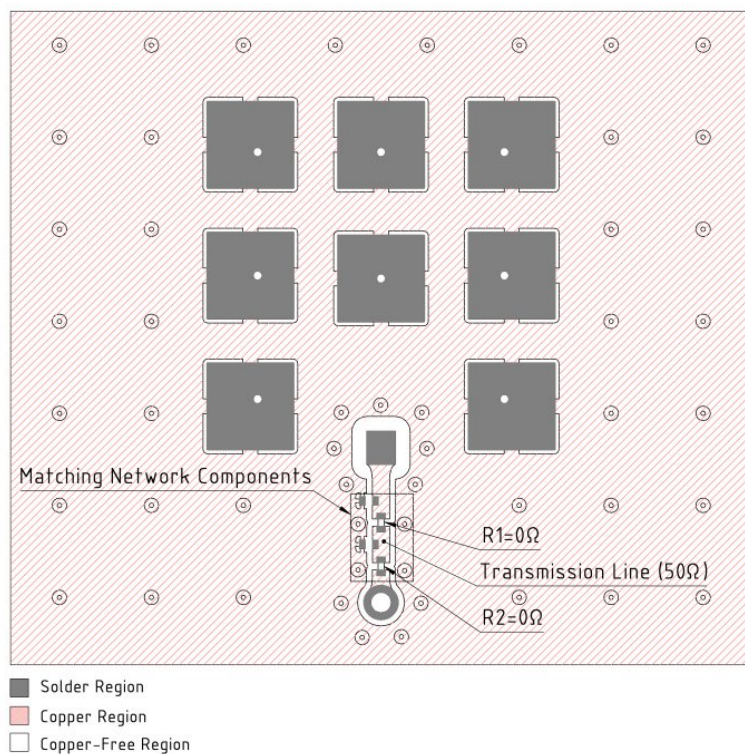


Recommended PCB Dimensions



Layout dimensions for antenna integration (mm)

5. Matching Components

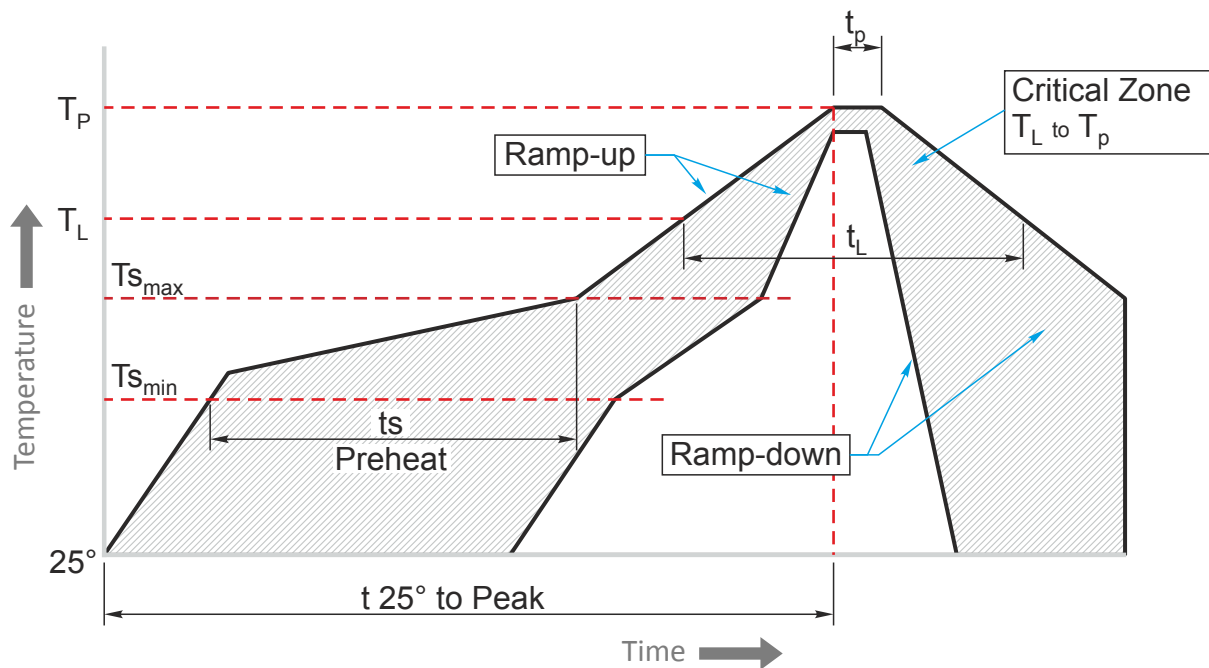


Matching Network Drawing



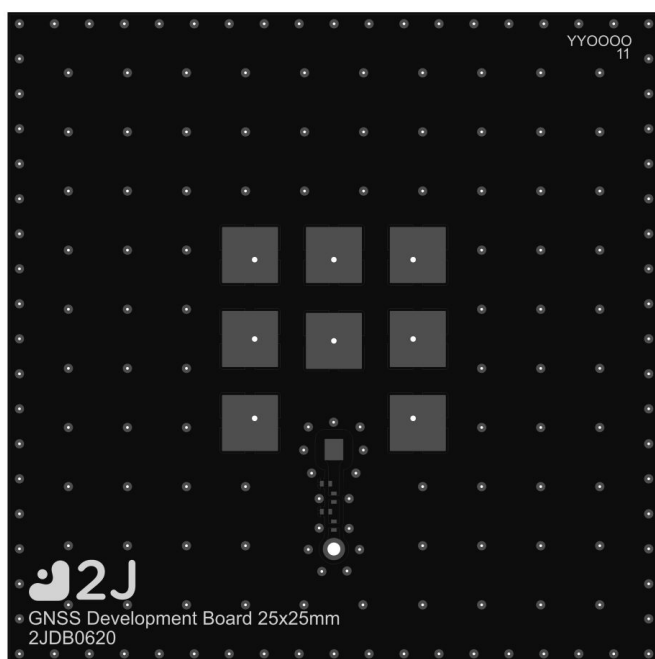
3D View of matching components and recommended values

REFLOW TEMPERATURE PROFILE

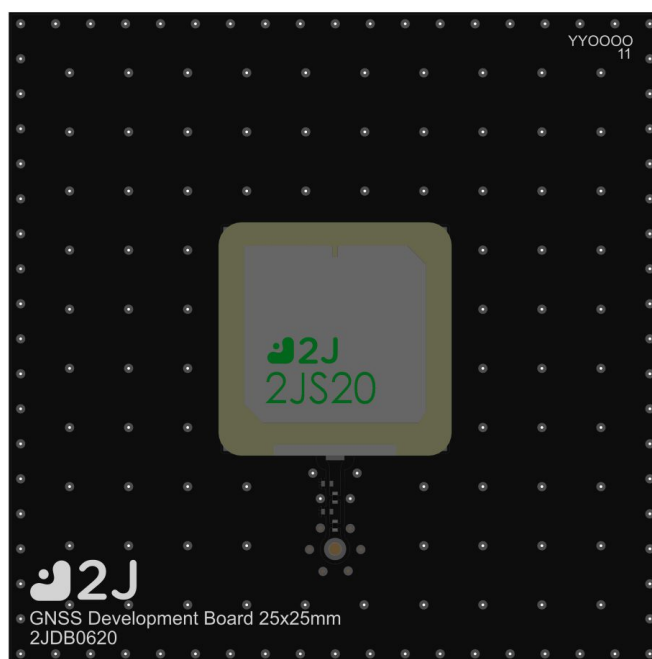


Phase	Profile features	Pb-Free Assembly (SnAgCu)
RAMP-UP	Avg. Ramp-up Rate ($T_{s_{max}}$ to T_P)	3°C / second (max)
PREHEAT	-Temperature Min Rate ($T_{s_{min}}$) -Temperature Max Rate ($T_{s_{min}}$) -Time ($t_{s_{min}}$ to $t_{s_{max}}$)	150°C 200°C 60-120 seconds
REFLOW	-Temperature (T_L) -Total Time 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.

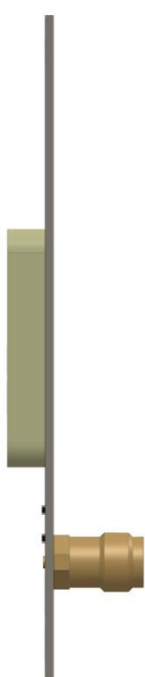
6. Evaluation Board



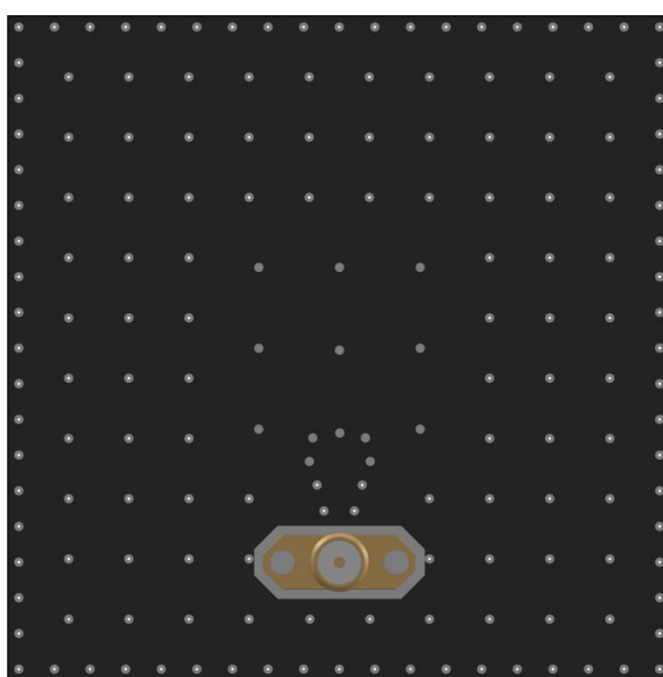
Front View without Antenna



Front View with Antenna

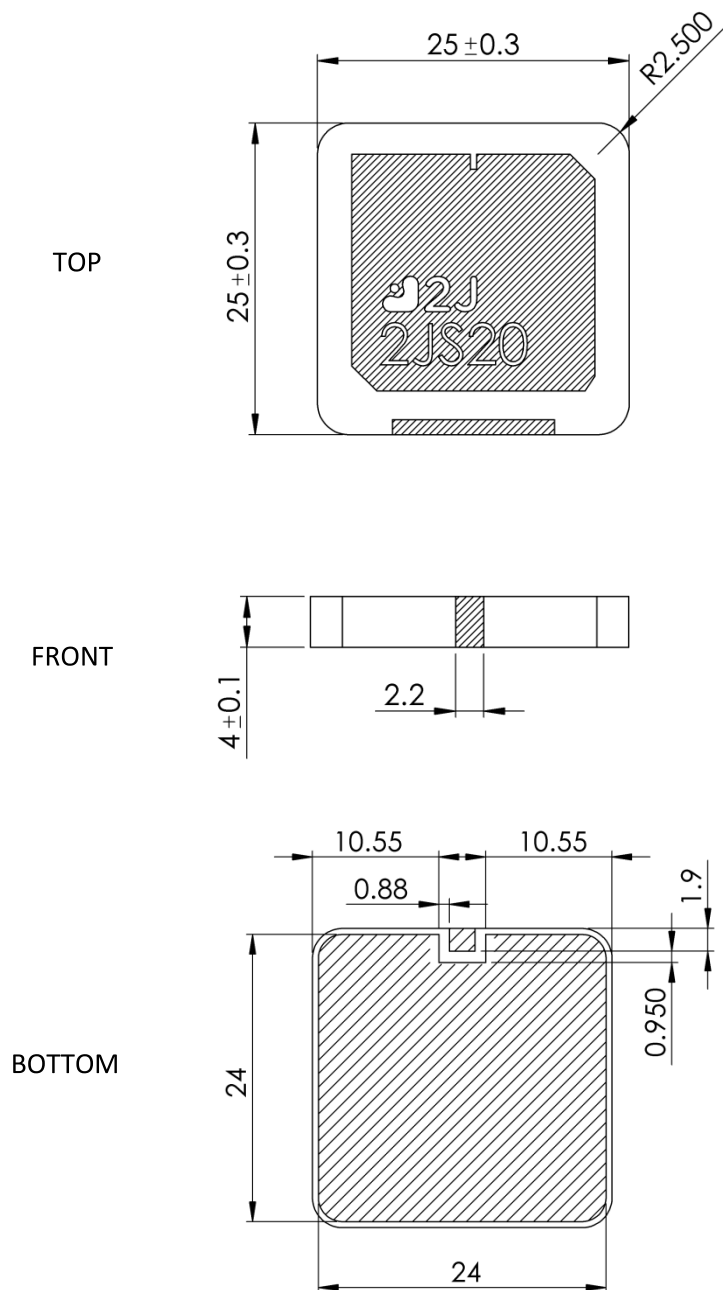


Side View



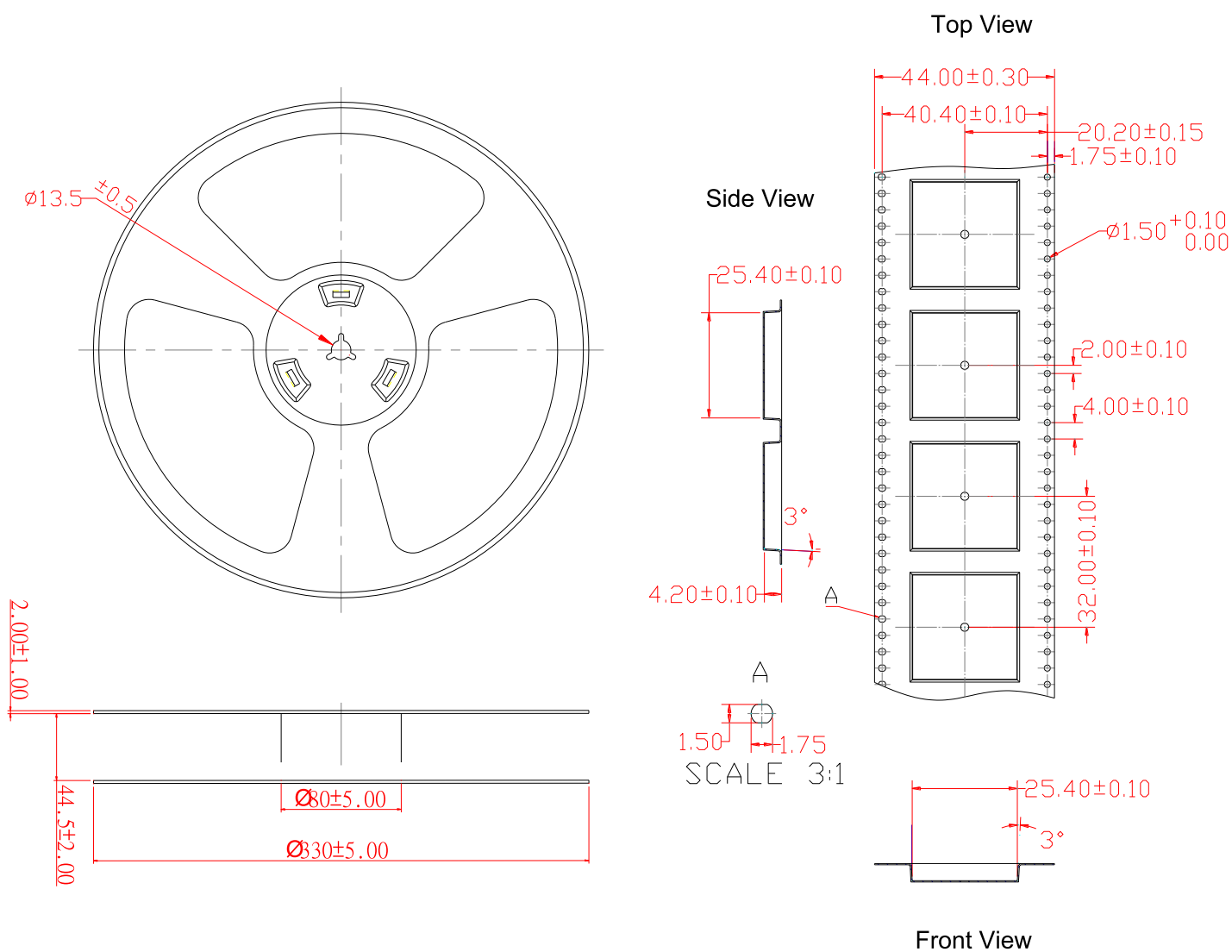
Back View

7. Antenna drawings



Dimensions for ceramic antenna 25 x 25 x 4 mm

8. Tape and Reel Information



Tape and Reel Specifications

9. Packaging

PACKAGING SPECIFICATION

Antenna	2JS20
REEL	
Max Quantity per Reel	250
REEL BOX	
Reels per Box	1
Reel Box Dimensions (cm)	34 x 34 x 4
Reel Box Weight (Kg)	2.75
CARTON	
Reels per Carton	4
Max Quantity per Carton	1000
Reel Carton Dimensions (cm)	36 x 36 x 23
Reel Carton Weight (Kg)	11

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

