

## 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
<b>Standards</b>	GPS/QZSS/Galileo	GLONASS
<b>Bands (MHz)</b>	1575	1602
<b>Frequency (MHz)</b>	1575.42	1598-1606
<b>Return Loss (dB)</b>	~-26.4	~-26.4
<b>VSWR</b>	~1.1:1	~1.1:1
<b>Efficiency (%)</b>	~84.2	~80.9
<b>Peak Gain (dBi)</b>	~4.6	~4.7
<b>Average Gain (dB)</b>	~-0.7	~-0.9
<b>Impedance (Ohms)</b>	50	
<b>Radiation Pattern</b>	Hemispherical	

### Antenna Measurement Conditions:

Free Space

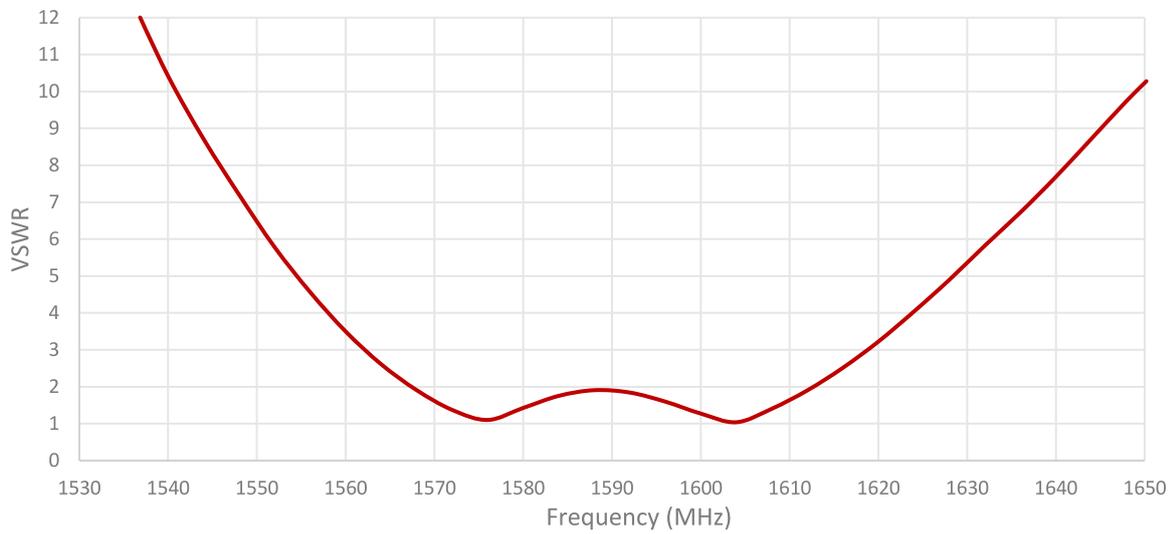
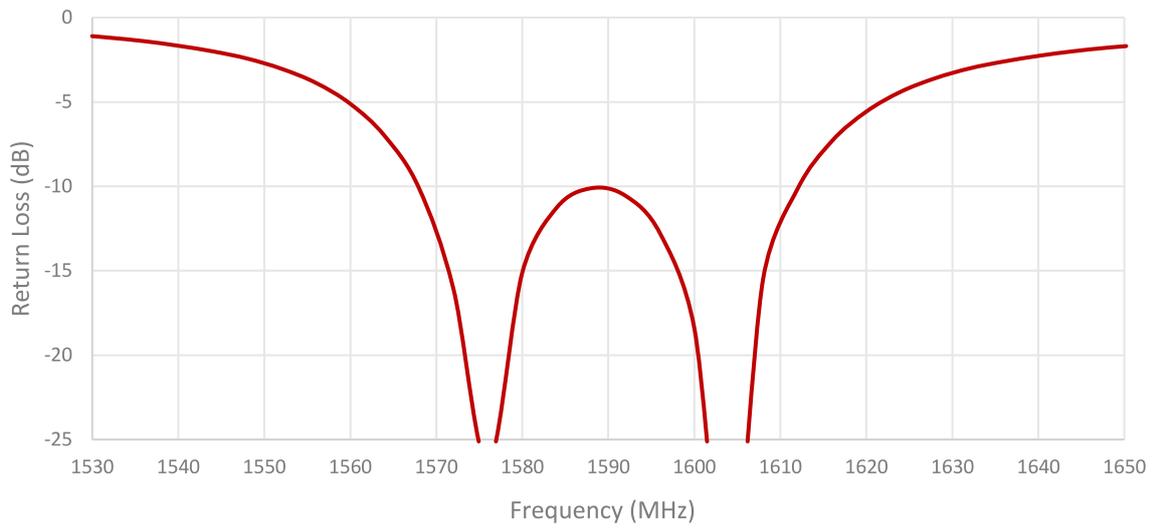
Mounted on Ground Plane of 70 x 70 mm

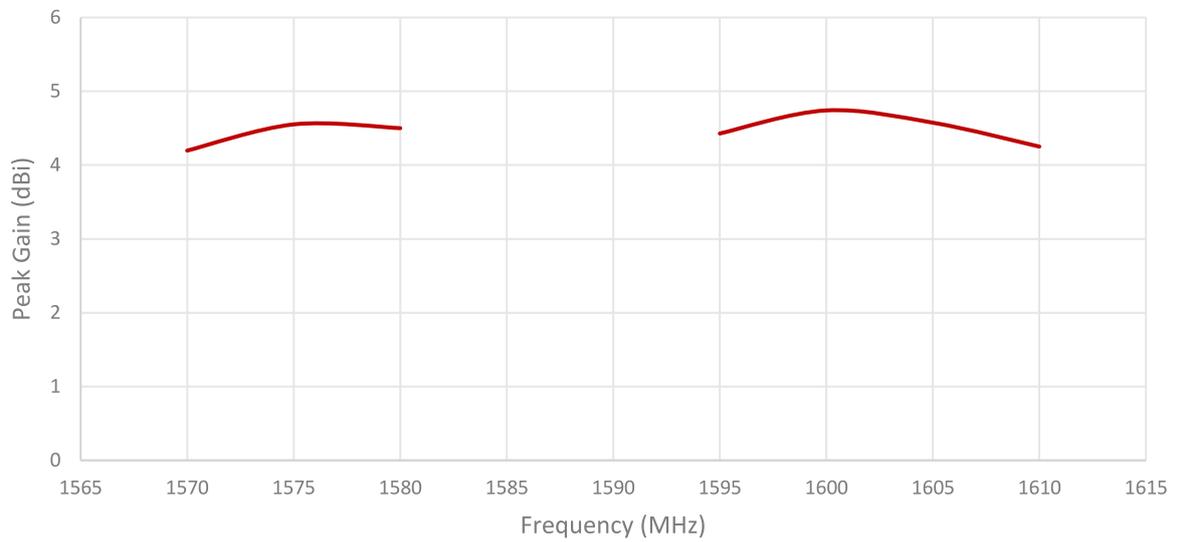
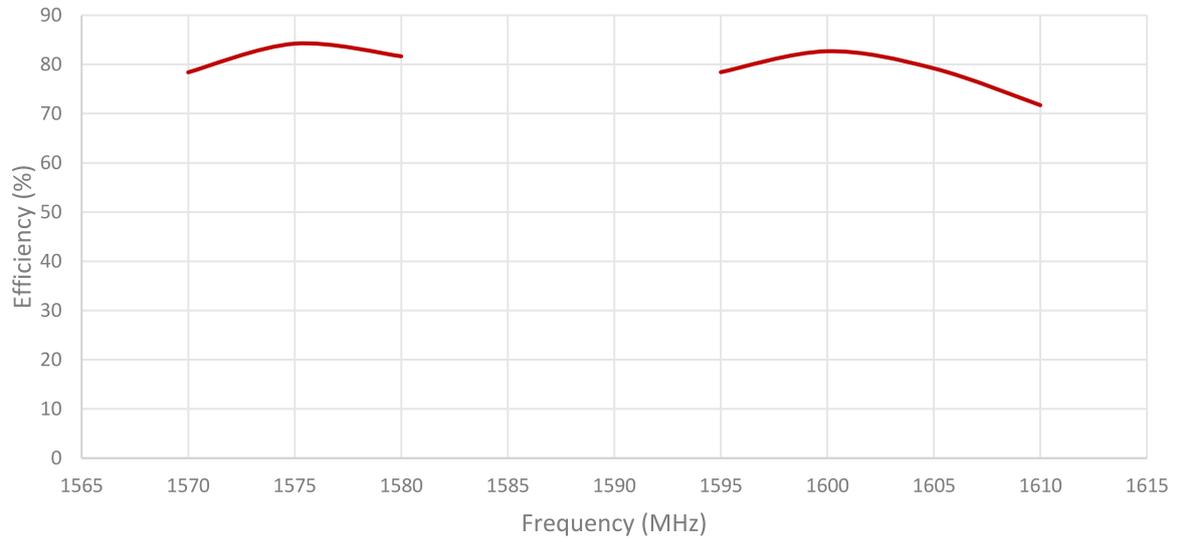
Measured in Certified CTIA 3D Anechoic Chamber

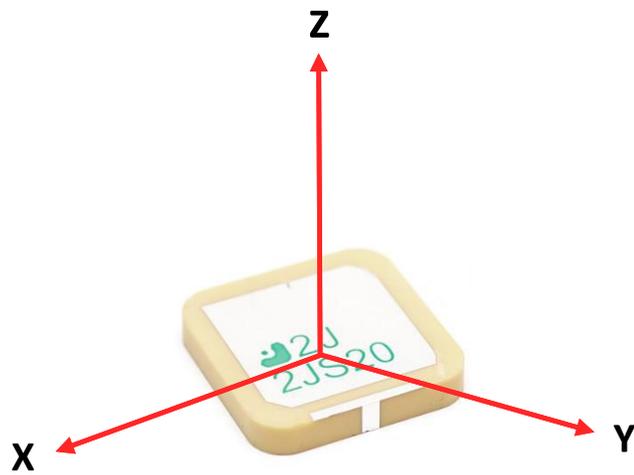
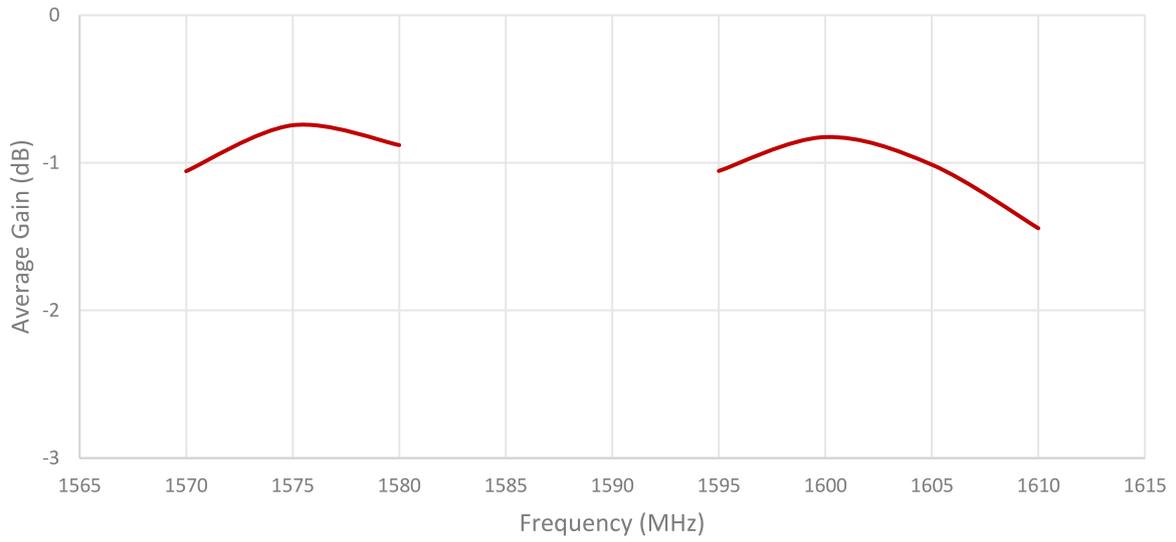
## 2. Mechanical and environmental specifications

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

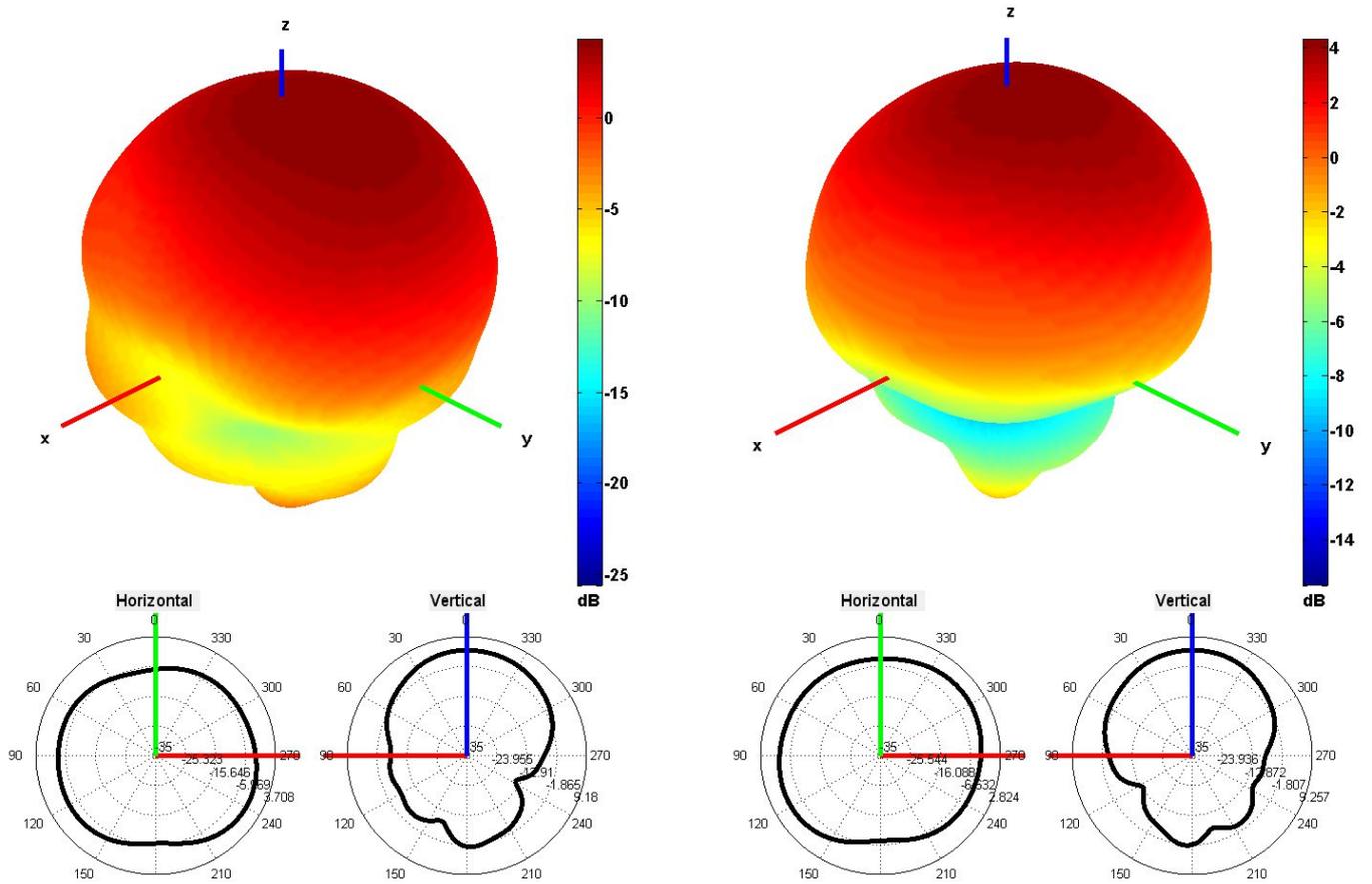
### 3. Antenna parameters





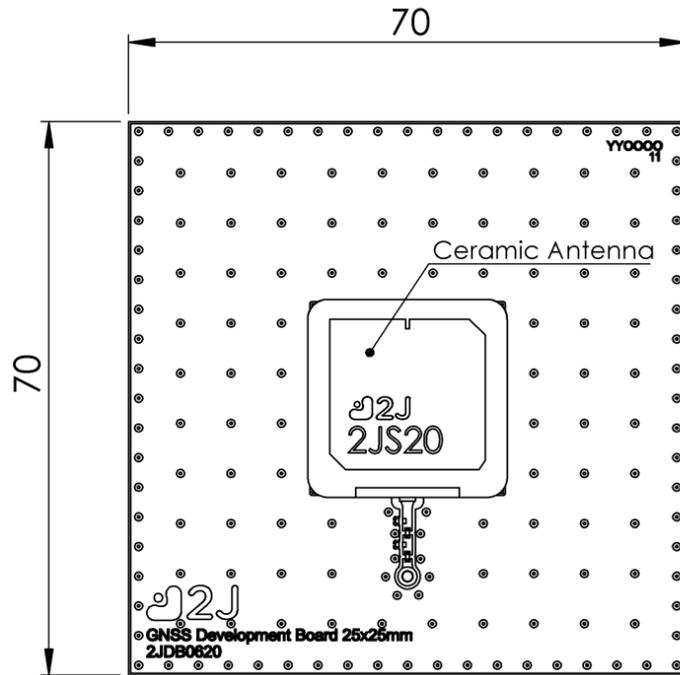


Radiation pattern reference

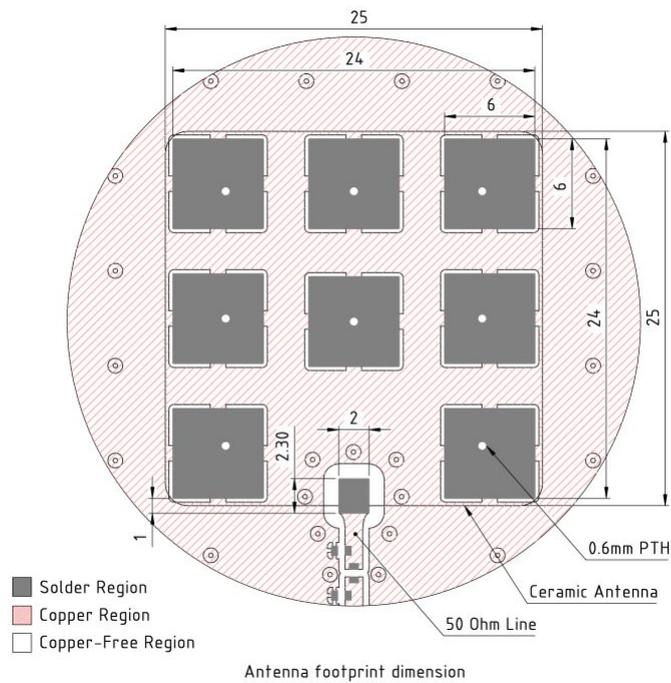


1575 AND 1600 MHz Radiation pattern

## 4. PCB Layout

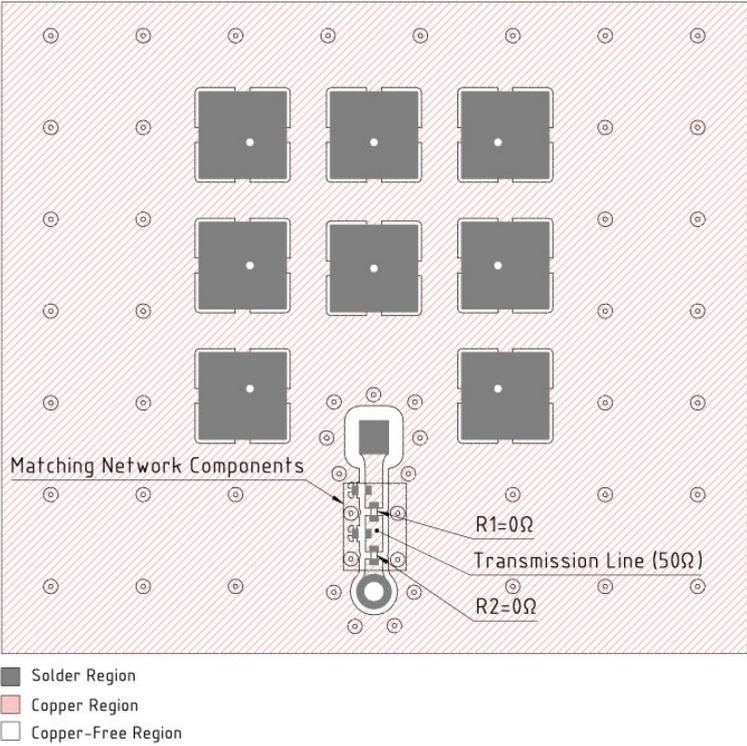


Recommended PCB Dimensions



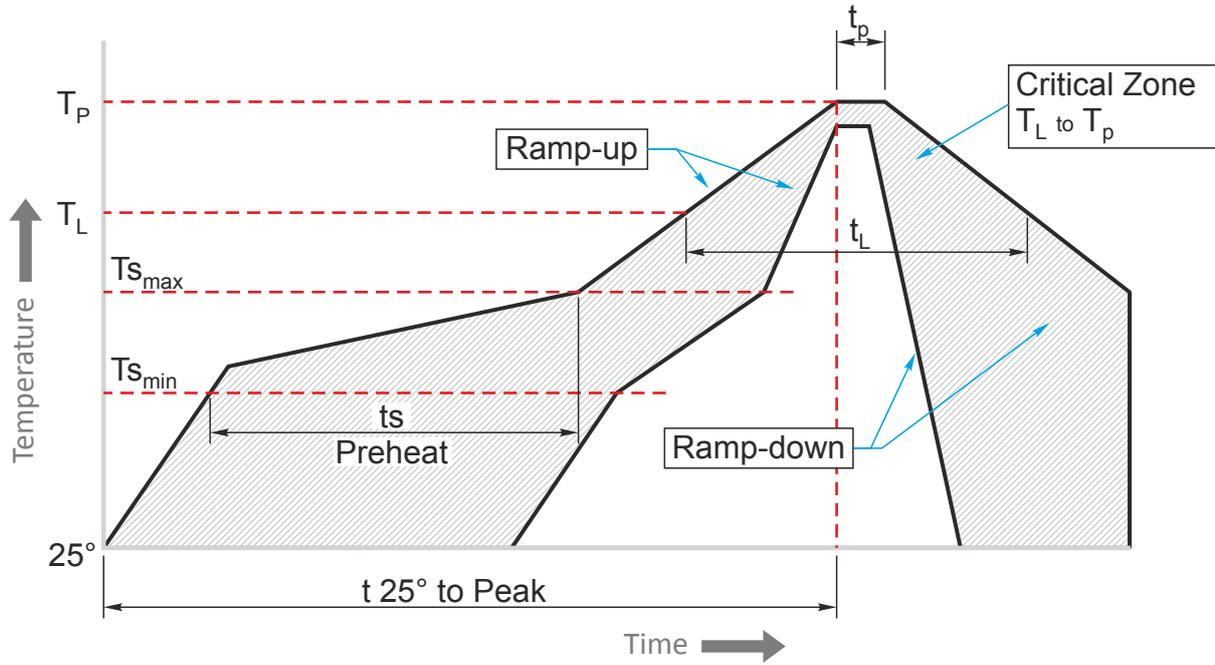
Layout dimensions for antenna integration (mm)

## 5. Matching Components



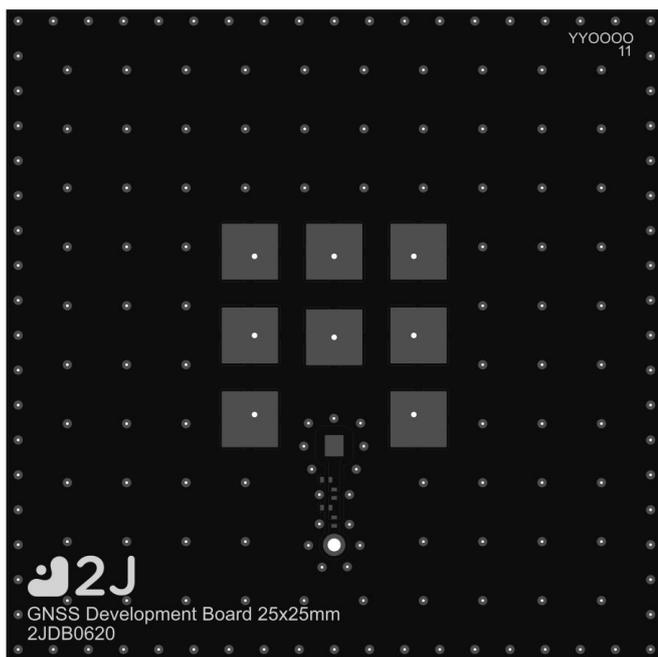
3D View of matching components and recommended values

**REFLOW TEMPERATURE PROFILE**

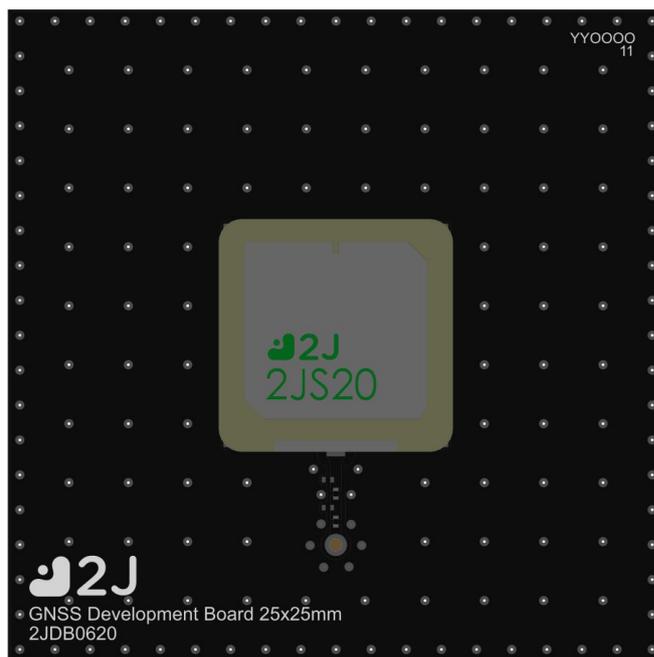


Phase	Profile features	Pb-Free Assembly (SnAgCu)
<b>RAMP-UP</b>	Avg. Ramp-up Rate ( $T_{s_{max}}$ to $T_p$ )	3°C / second (max)
<b>PREHEAT</b>	-Temperature Min Rate ( $T_{s_{min}}$ ) -Temperature Max Rate ( $T_{s_{min}}$ ) -Time ( $t_{s_{min}}$ to $t_{s_{max}}$ )	150°C 200°C 60-120 seconds
<b>REFLOW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

## 6. Evaluation Board



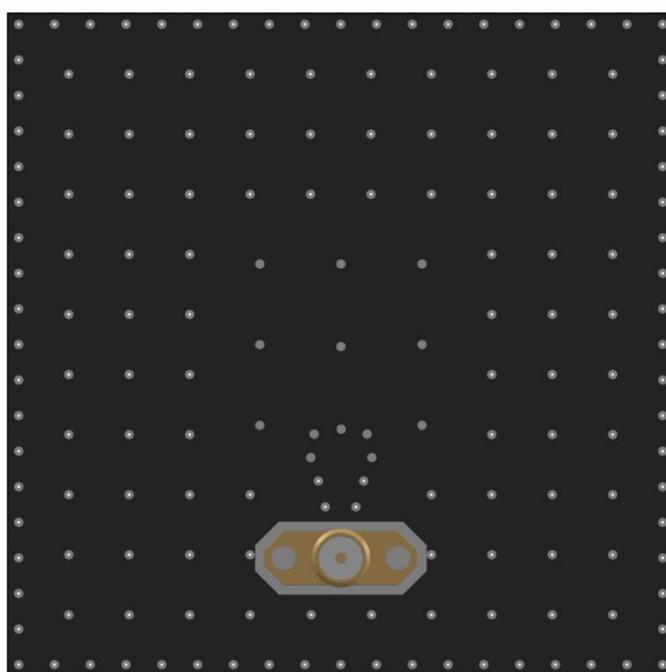
Front View without Antenna



Front View with Antenna

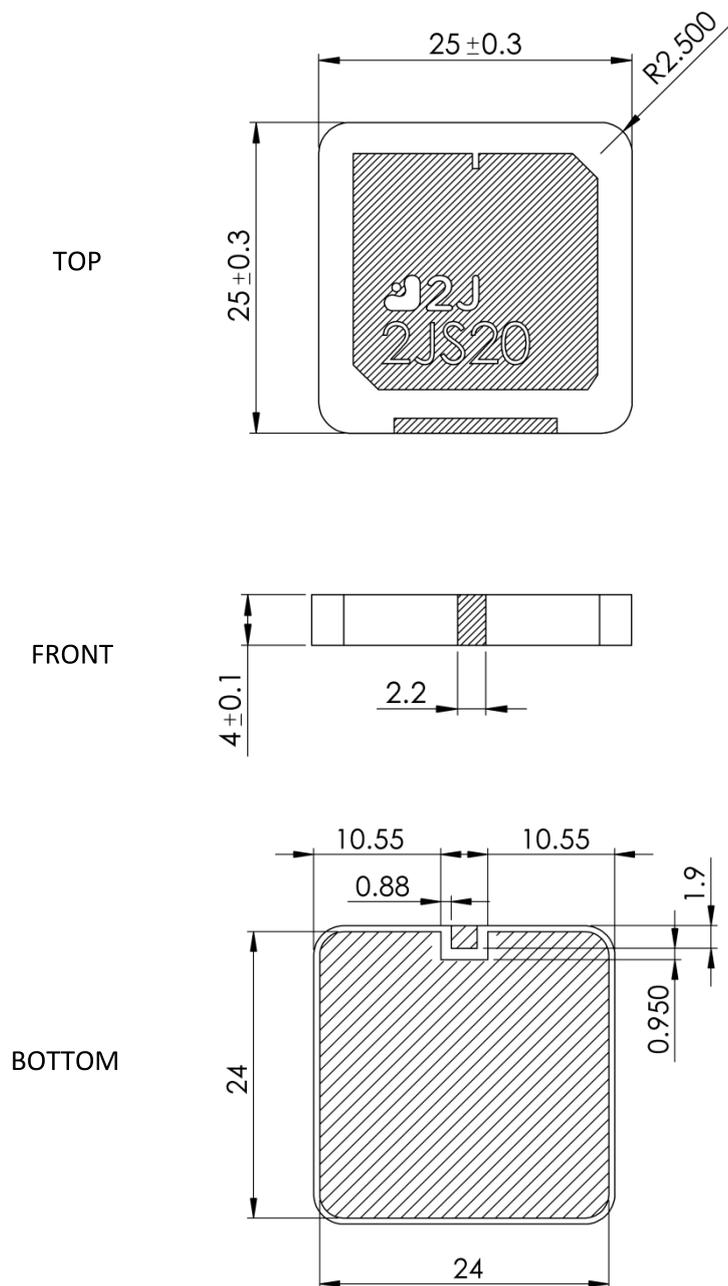


Side View



Back View

## 7. Antenna drawings



Dimensions for ceramic antenna 25 x 25 x 4 mm



## 9. Packaging

### PACKAGING SPECIFICATION

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





**МАКРО  
ГРУПП**

Макро Групп – это:

- дистрибьютор электронных компонентов с 1994 года
- контрактный производитель электроники с 2007 года с собственным производством в Санкт-Петербурге (компания Макро EMC, входит в ГК Макро Групп)
- поставщик полупроводниковых материалов
- комплексный поставщик электронных компонентов
- моделирование и производство полупроводниковых эпитаксиальных гетероструктур для задач оптоэлектроники

Головной офис расположен в Санкт-Петербурге. Собственные представительства в крупных промышленных городах России и стран СНГ.

Преимущества для наших заказчиков:

- работа по тендерам с 2012 года
- оформление банковских гарантий
- отсрочки платежей
- поставка электронных компонентов по проектным ценам
- инженерная поддержка проектов заказчиков
- сертификат системы менеджмента качества ISO 9001-2015
- необходимые сертификаты и лицензии

Данный файл получен с сайта [www.macrogroup.ru](http://www.macrogroup.ru)