

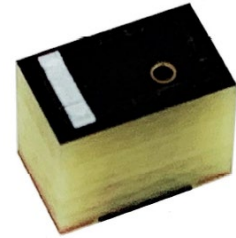
NGRV5030UG1R575G1TRF

1575 MHz GNSS Vertical Chip Antenna



Features

- Stable and reliable performance
- GNSS Vertical Antenna
- Low Profile, Compact Size
- RoHs Complaint



Applications

- GNSS (Global Navigation Satellite System)
- Handheld Devices when GPS/ bds/Glonass & Galileo functions are needed, e.g. PDA, Smart phone, PND.

Specifications

Electrical	
Frequency Range	1560~1606MHz
Center Frequency	1575.42 MHz
Gain	1.5 dBi typ.
Efficiency	55.8% typ.
V.S.W.R	2.0 Max
Maximum Input Power	2 W
Polarization	Linear
Impedance	50Ω
Environmental	
Operating Temperature	-40°C~+85°C
Storage Temperature	-5°C~+40°C -40°C~+85°C - After mounting on PCB
Relative Humidity	10% to 70% - Operating & Storage after mounting on PCB 20% to 70% - Storage
Shelf Life	1 year
RoHs Compliant	Yes

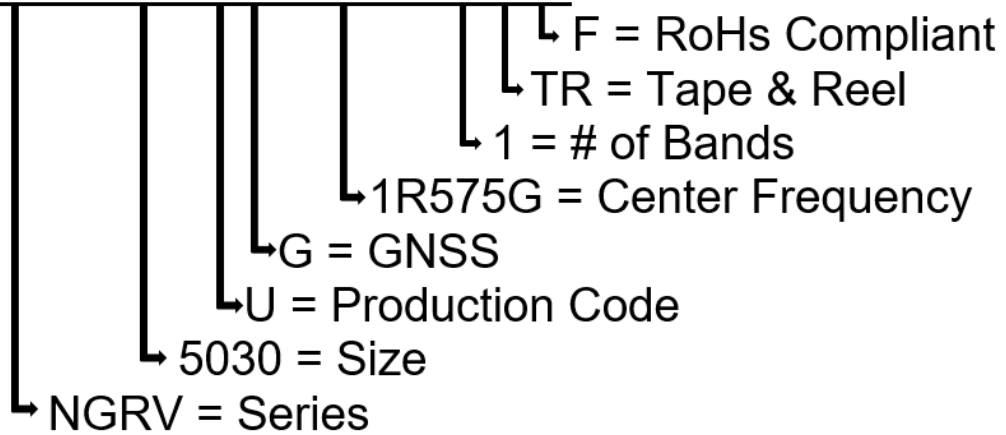
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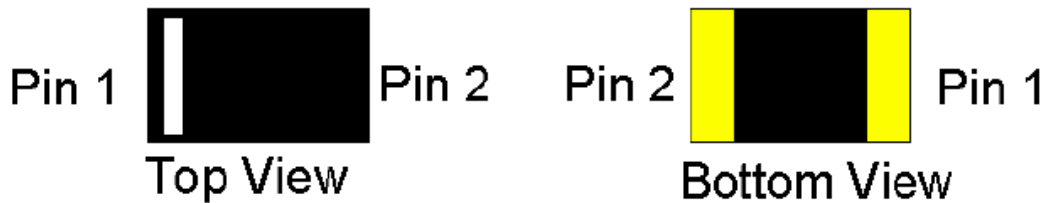


Part Number Breakdown

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Pin Definition



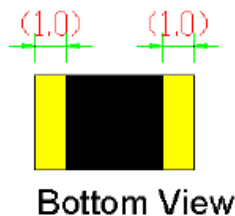
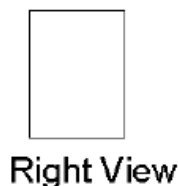
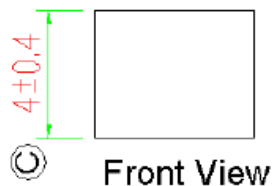
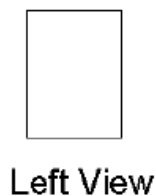
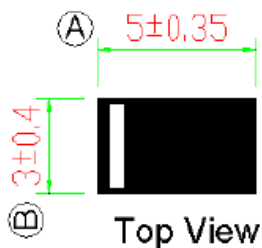
PIN	1	2
Soldering PAD	Signal	N/C

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Dimension Drawing



NOTE:
1. All materials are RoHS 2.0 compliant.
2. "A-C" Critical Dimensions.
3. "()" Reference Dimensions.

Dimensions (mm) & Mechanical

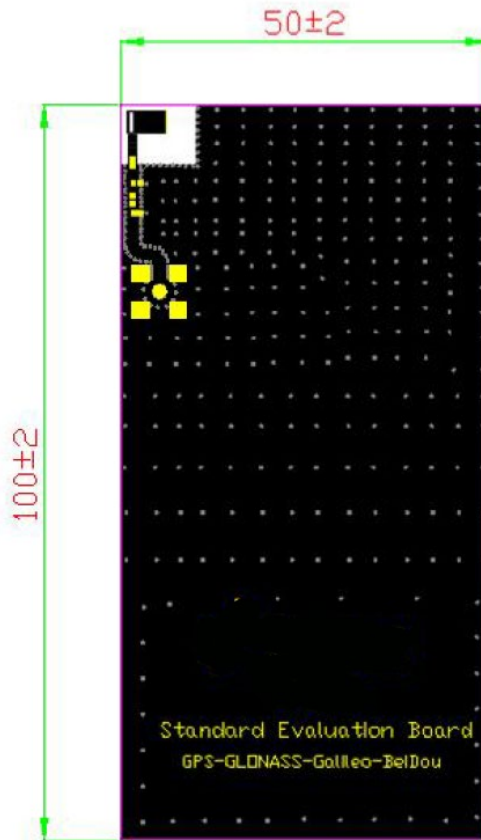
Body Length (A)	5.0 ± 0.15
Width (B)	3.0 ± 0.15
Thickness (C)	4.0 ± 0.15
Connection Type	SMT
Ground Plane	100 mm x 50 mm
Material	Ceramic

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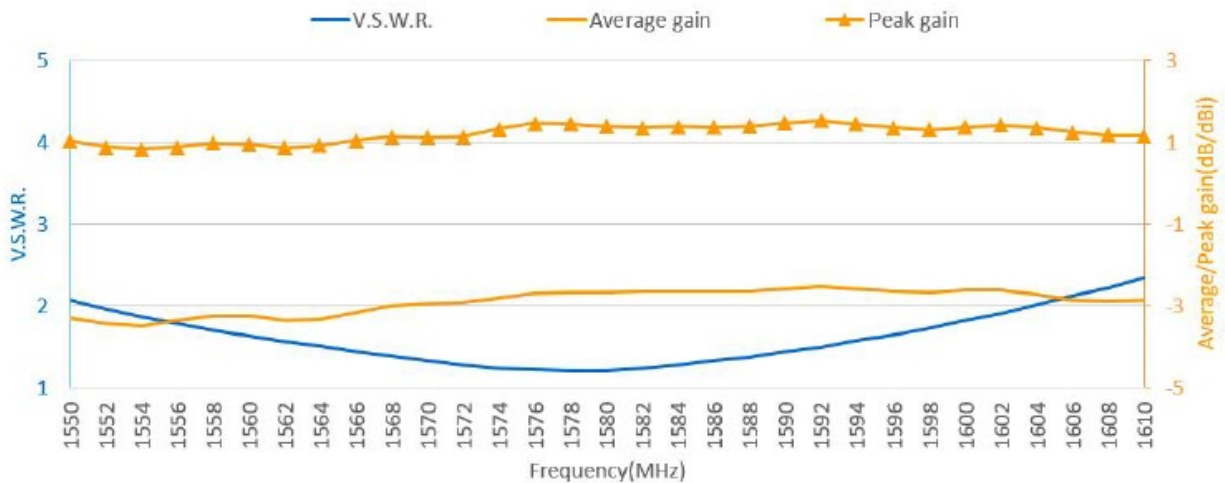


Evaluation Board



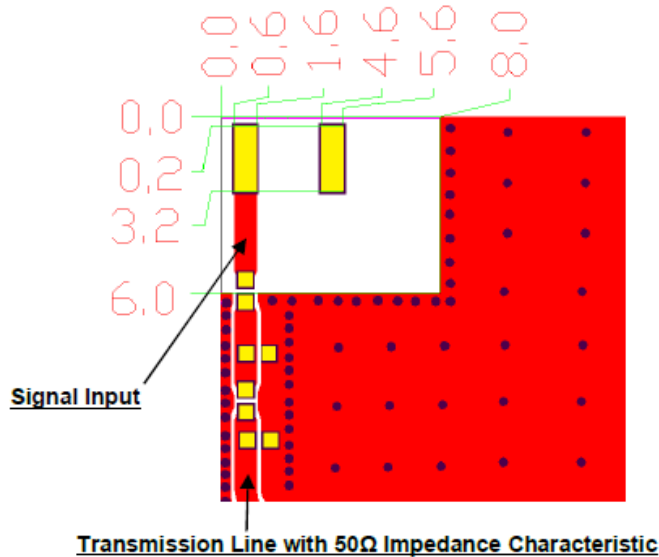
Unit: mm

Frequency Vs VSWR and Total Radiation Gain

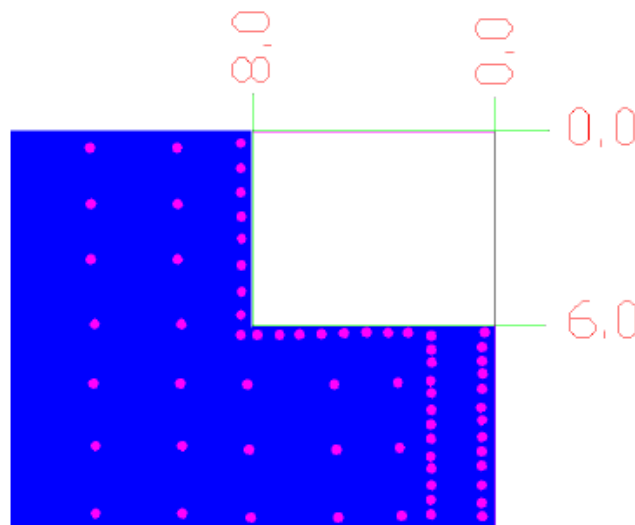


Solder Land Pattern

The gold areas represent the solder land pattern. Any recommendations on the matching circuit will be provided according to the customer's installation conditions.



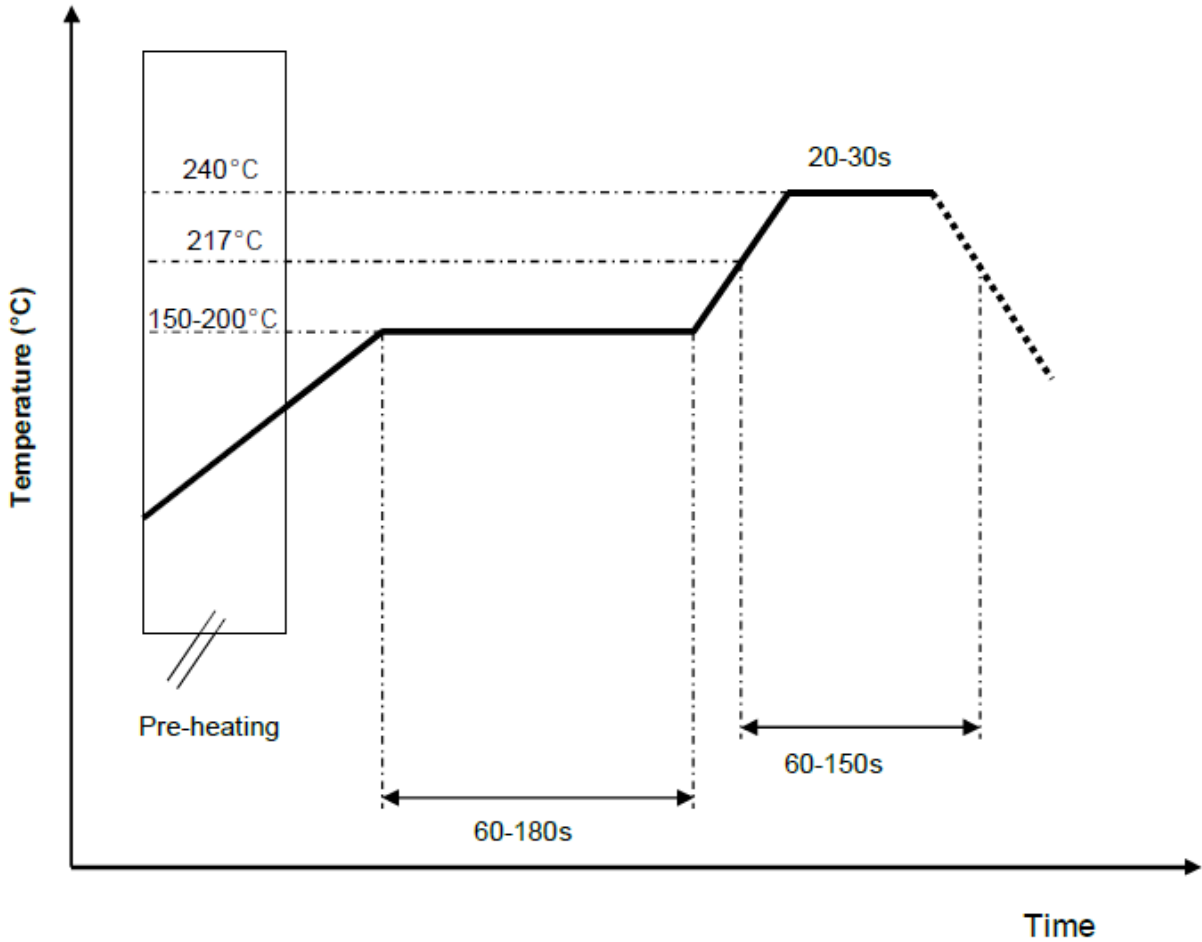
Top View



Bottom View

Soldering Conditions

Typical Soldering Profile for Lead-free Process



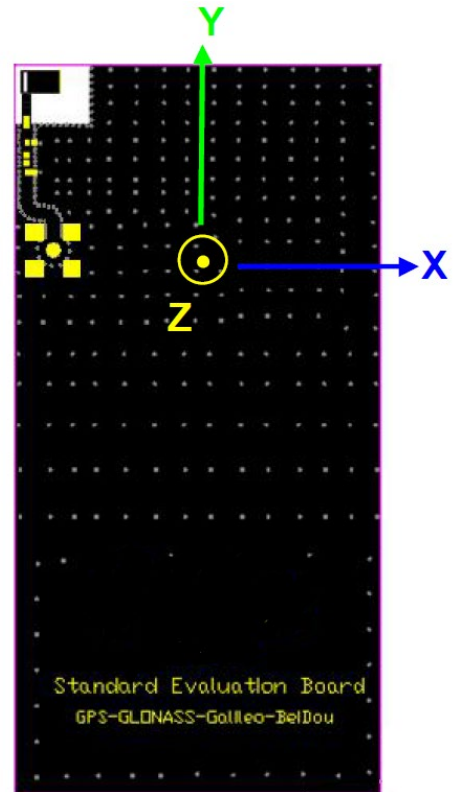
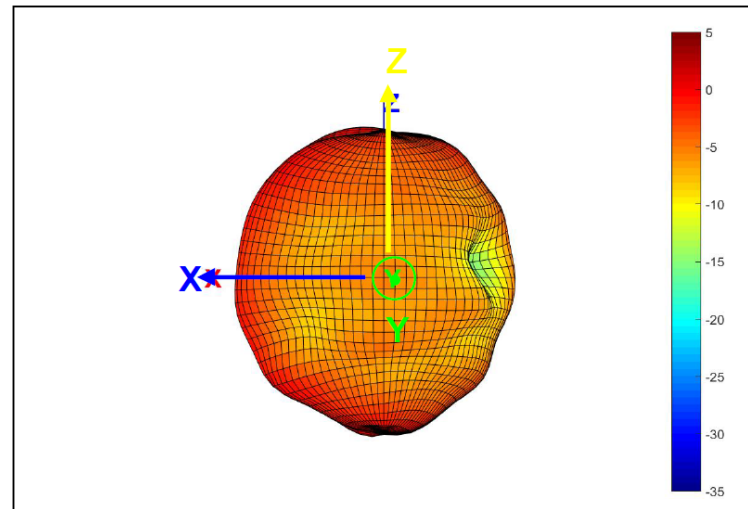
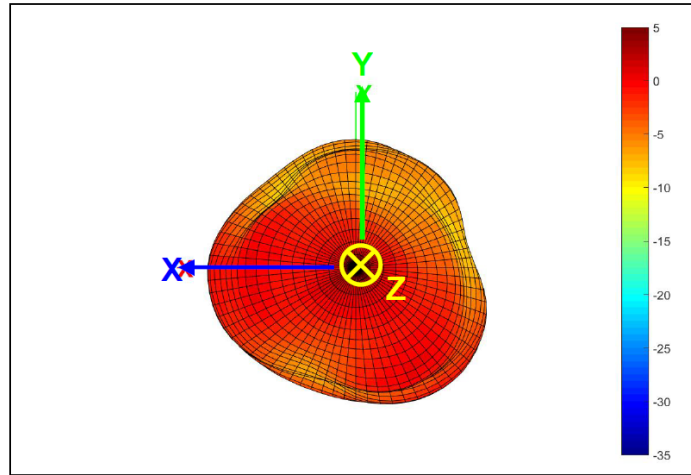
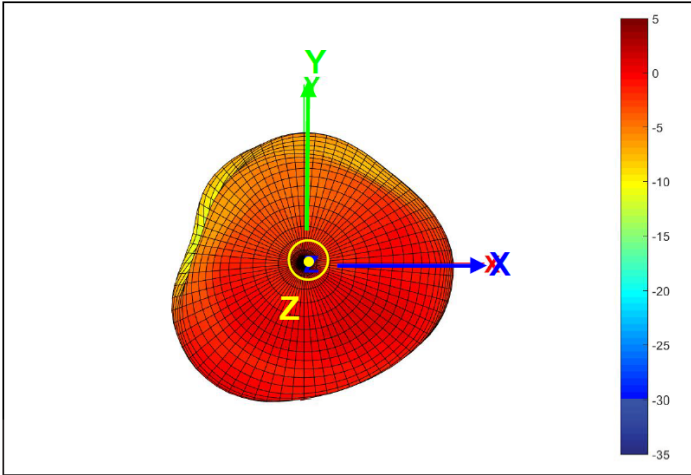
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Radiation Patterns

3D Gain Patterns @ 1575.42 MHz

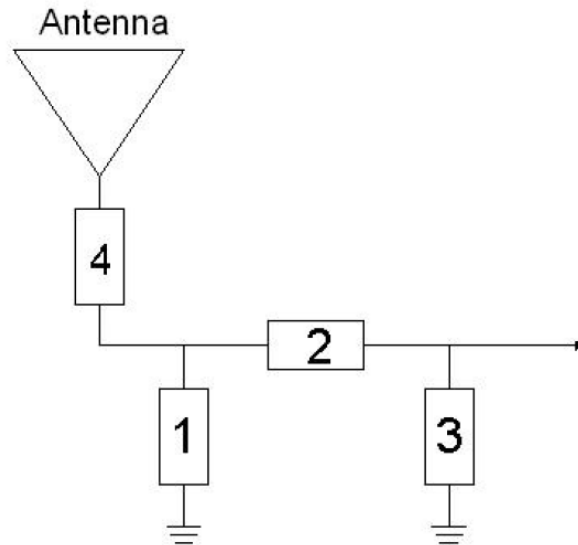
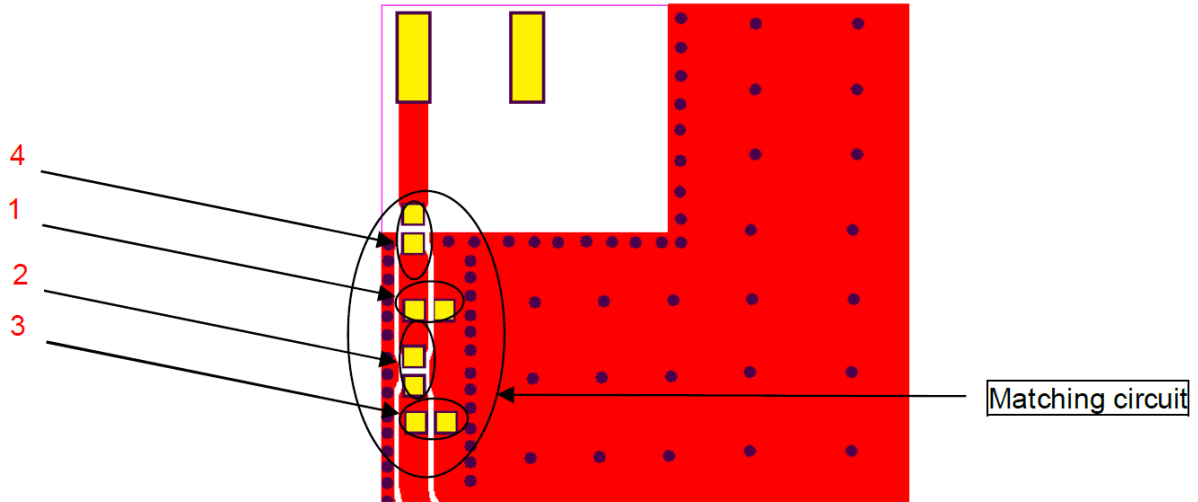


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Frequency Tuning & Matching Circuit



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System Matching Circuit Component

Location	Description	Tolerance	NIC Part Number
1	2.2nH, (0402)	±0.1nH	NML04B2N2TRF
2	6.8pF, (0402)	±0.05pF	NMC-Q0402NPO6R8A50TRPF
3	-	-	-
4	6.2nH, (0402)	±0.1 nH	NML04B6N2TRF

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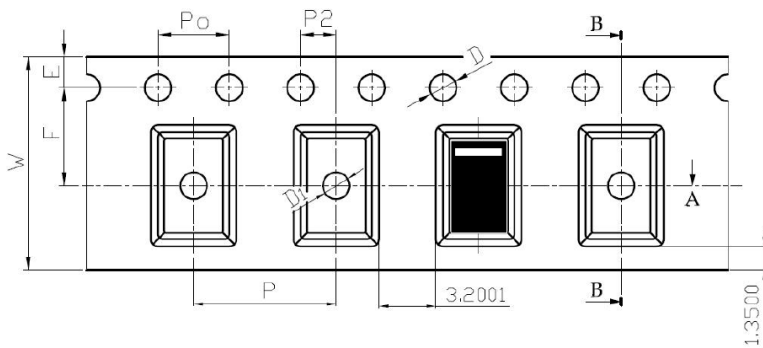
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Packing

- (1) Quantity/Reel: 1500 pcs/Reel
- (2) Plastic tape

a. Tape Drawing



b. Tape Dimensions (unit: mm)

Feature	Specifications	Tolerances
W	12.00	±0.30
P	8.00	±0.10
E	1.75	±0.10
F	5.50	±0.10
P2	2.00	±0.10
D	1.50	+0.10 -0.00
D1	1.50	+0.10
Po	4.00	±0.10
10Po	40.00	±0.20