

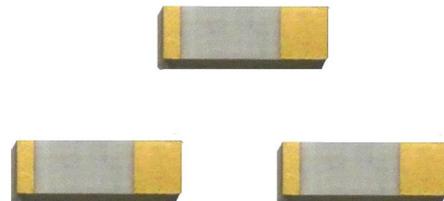
NGRL1032UG1R575G1TRF

1560 MHz GNSS Chip Antenna



Features

- Stable and reliable performance
- Low temperature coefficient of frequency
- 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

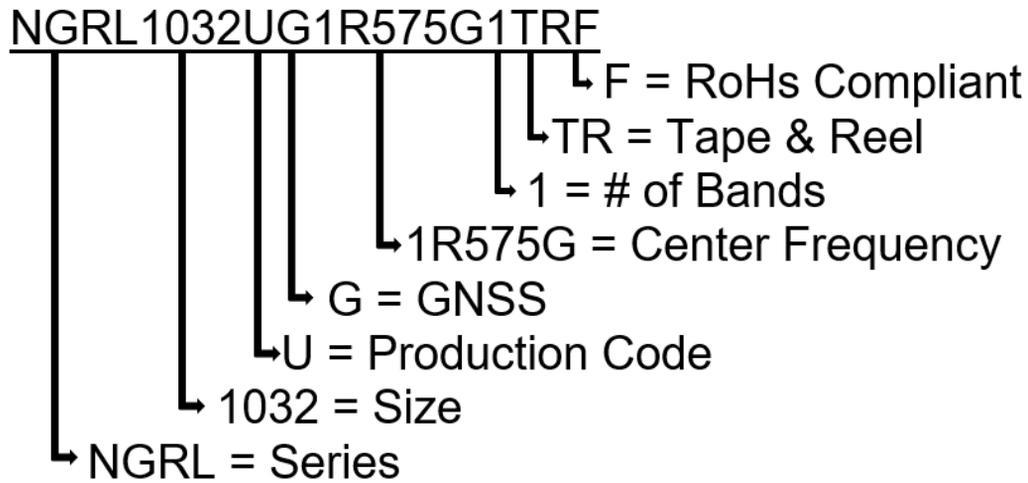
Electrical	
Frequency Range	1560~1606 MHz
Peak Gain	2.7 dBi
Efficiency	75 %
V.S.W.R	< 2
Maximum Input Power	2 W
Polarization	Linear
Impedance	50Ω
Environmental	
Operating Temperature	-40°C~+85°C
Storage Temperature	-5°C~+40°C -40°C~+85°C - After mounting on PCB
Relative Humidity	10% to 70% - Operating & Storage after mounting on PCB 20% to 70% - Storage
Shelf Life	1 year
RoHs Compliant	Yes

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Part Number Breakdown



Pin Definition



Top View



Bottom View

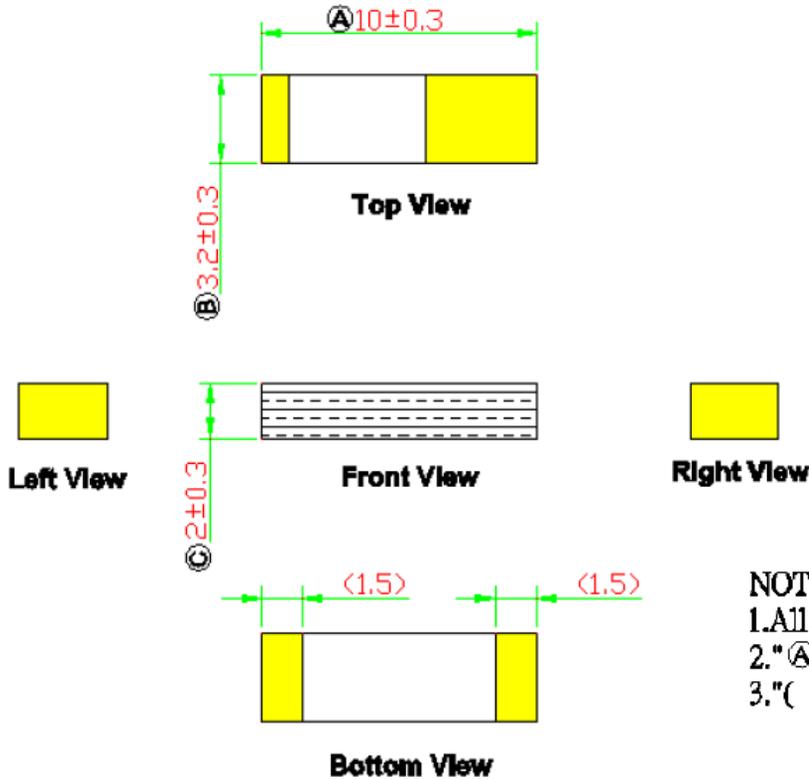
PIN	1	2
Soldering pad	Signal	Tuning / Ground

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Dimension Drawing



NOTE:

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

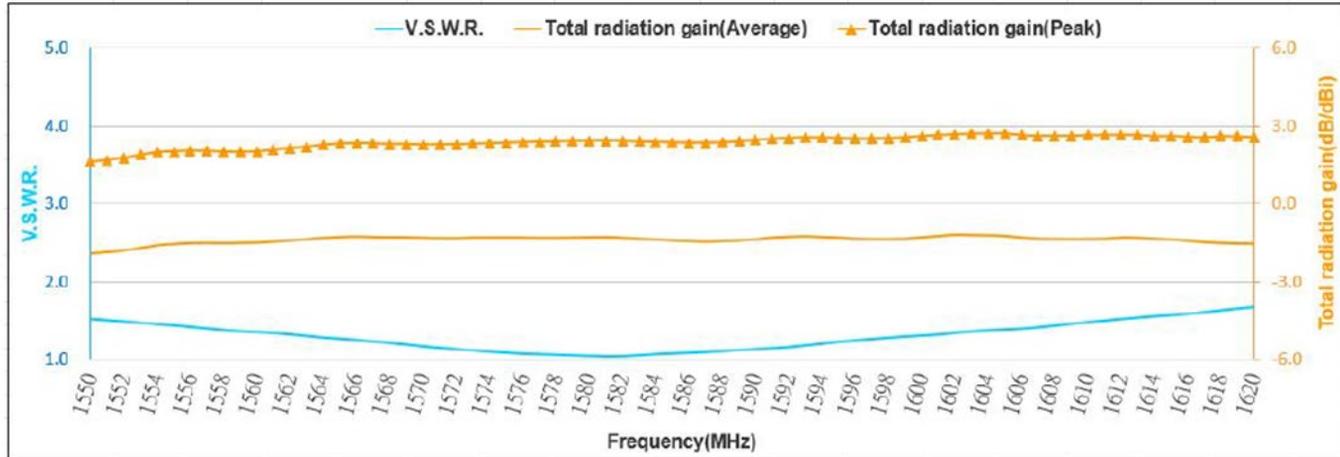
Body Length (A)	10 ± 0.3
Width (B)	3.2 ± 0.3
Thickness (C)	2 ± 0.3
Connection Type	SMT
Ground Plane	80 mm x 40 mm

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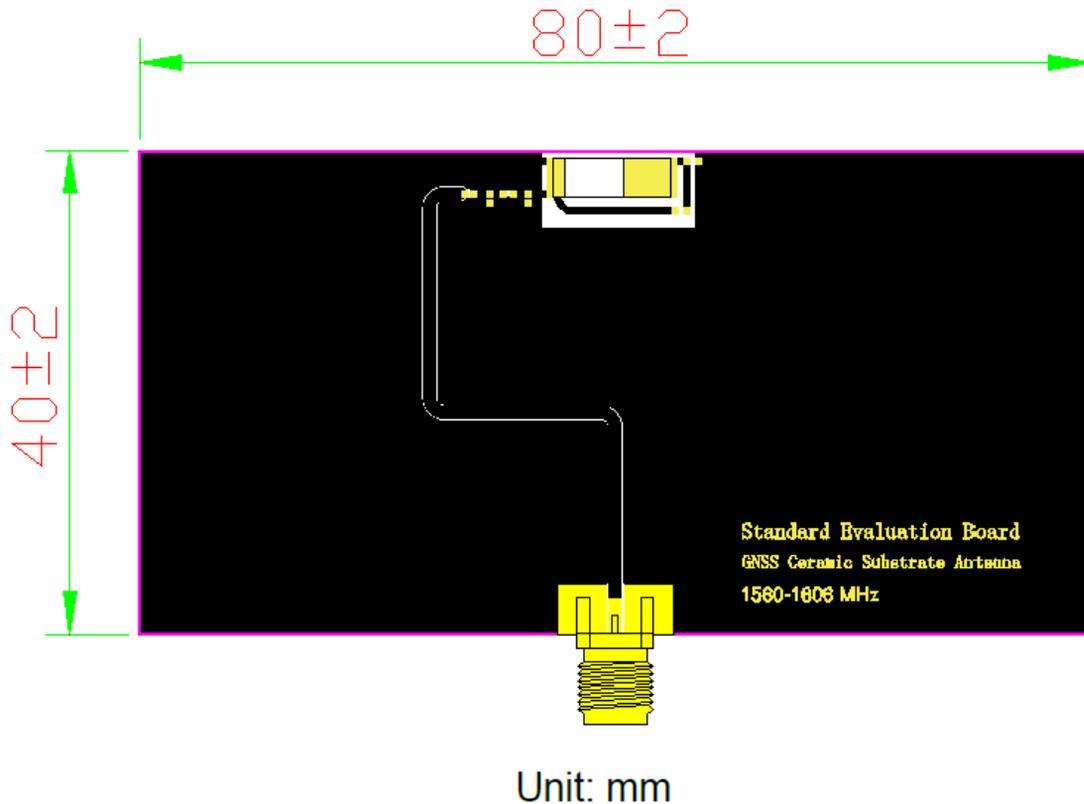
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Frequency vs. V.S.W.R and Total Gain



Evaluation Board



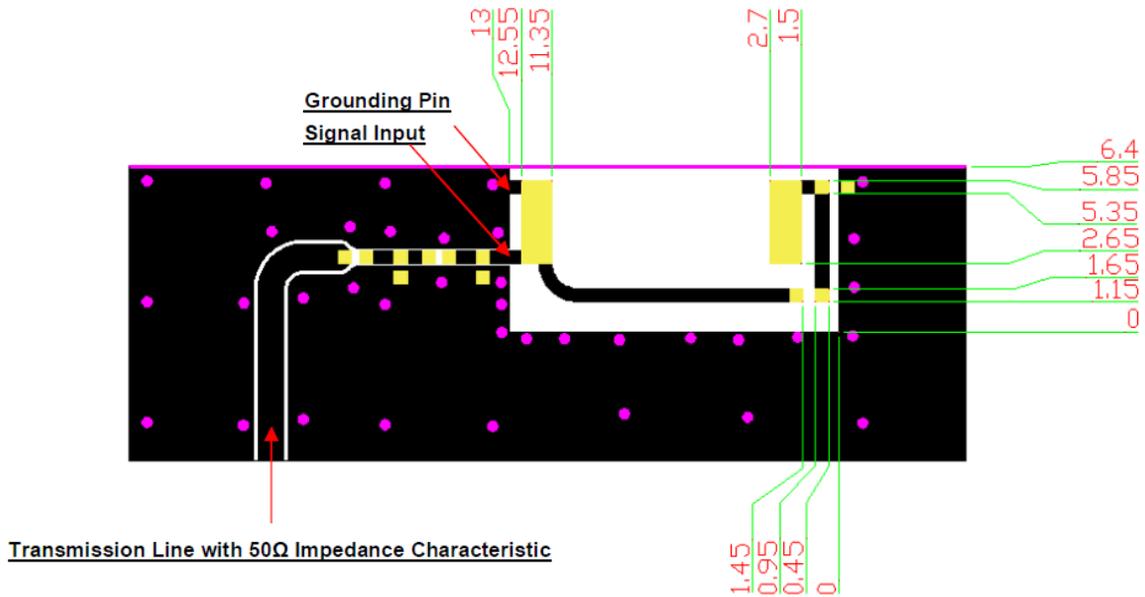
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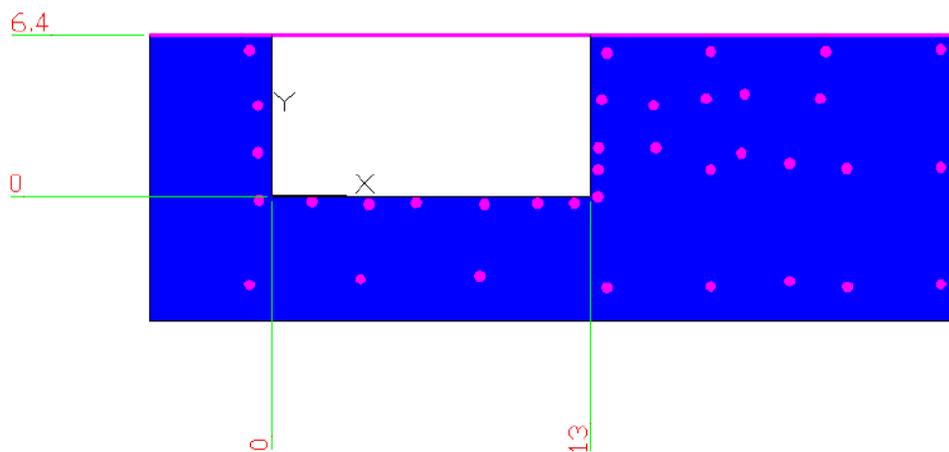


Solder Land Pattern

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



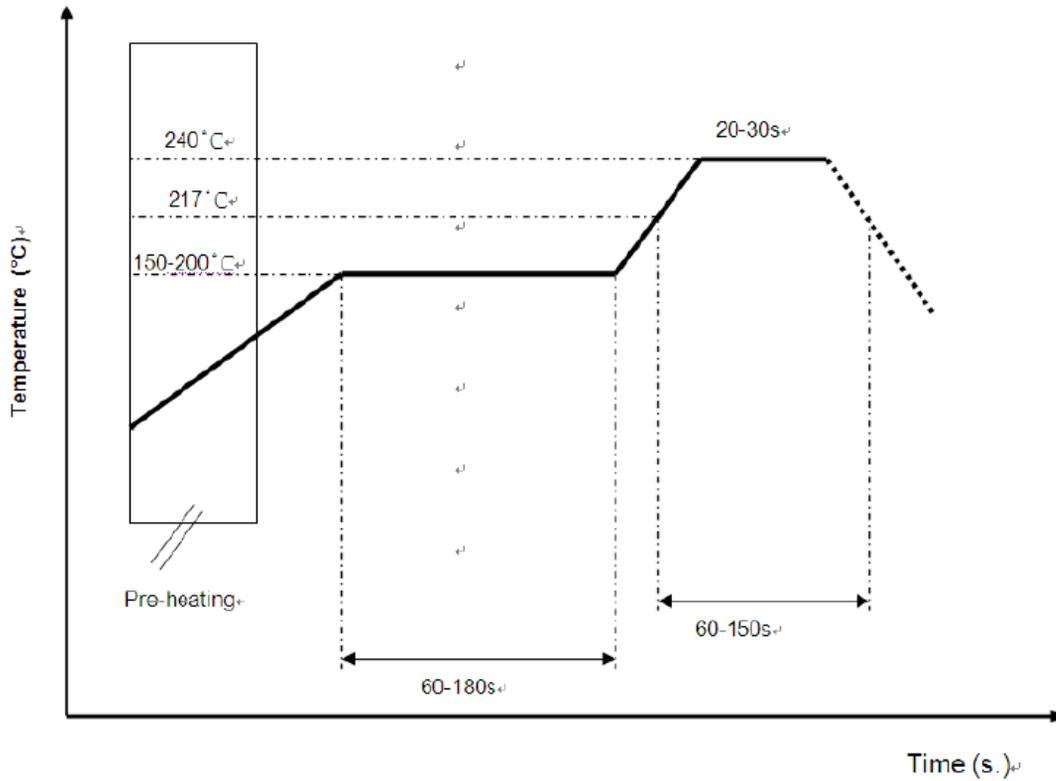
Top View



Bottom View

Soldering Conditions

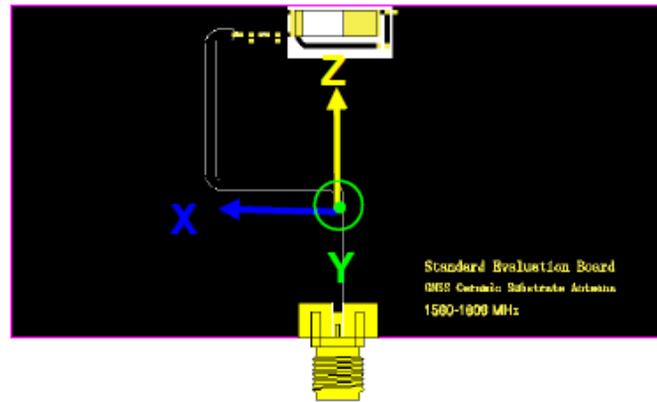
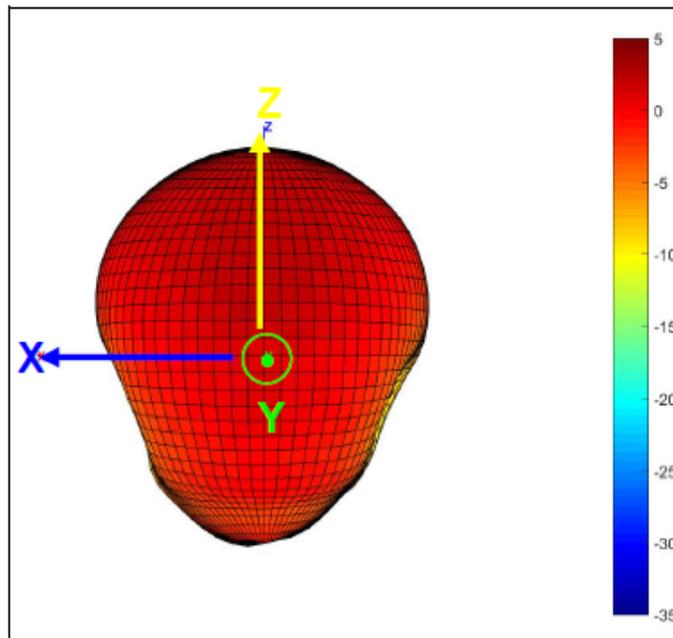
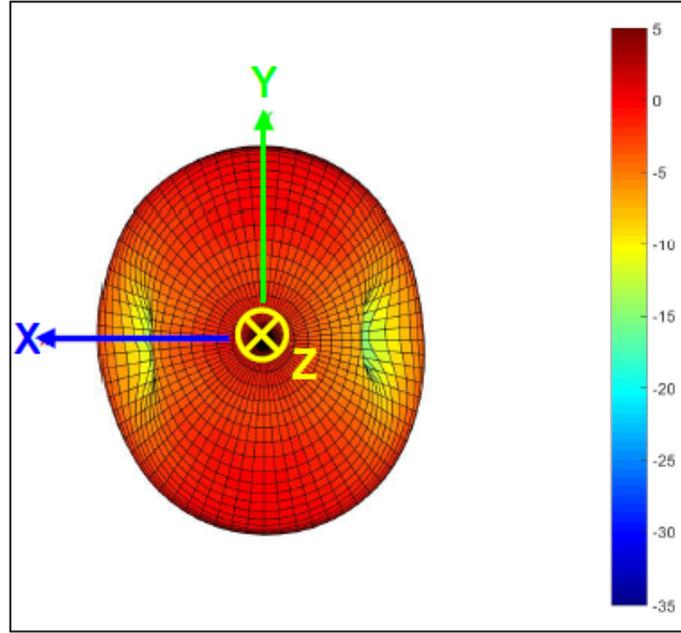
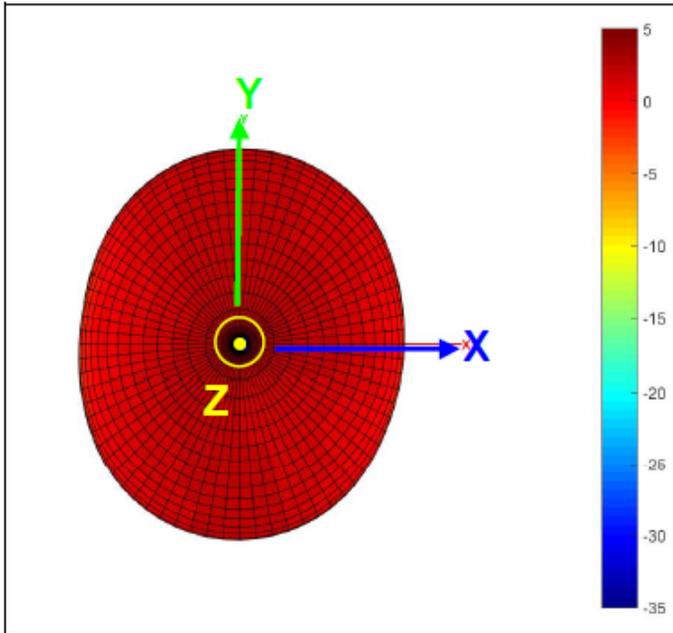
Typical Soldering Profile for Lead-free Process



*Recommended solder paste alloy: SAC305 (Sn96.5 /Ag3 /Cu0.5) Lead Free solder paste.

Radiation Patterns

3D Gain Patterns @ 1561 MHz



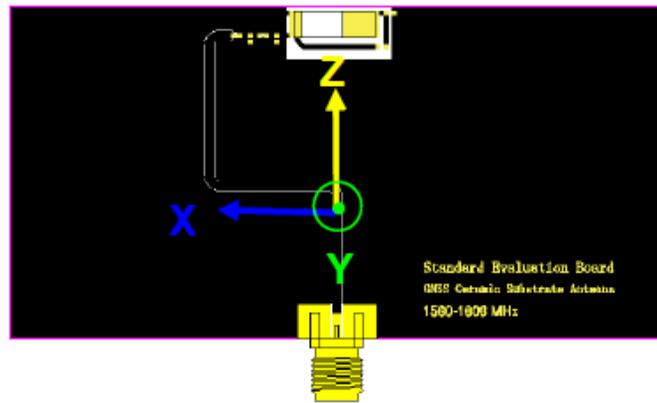
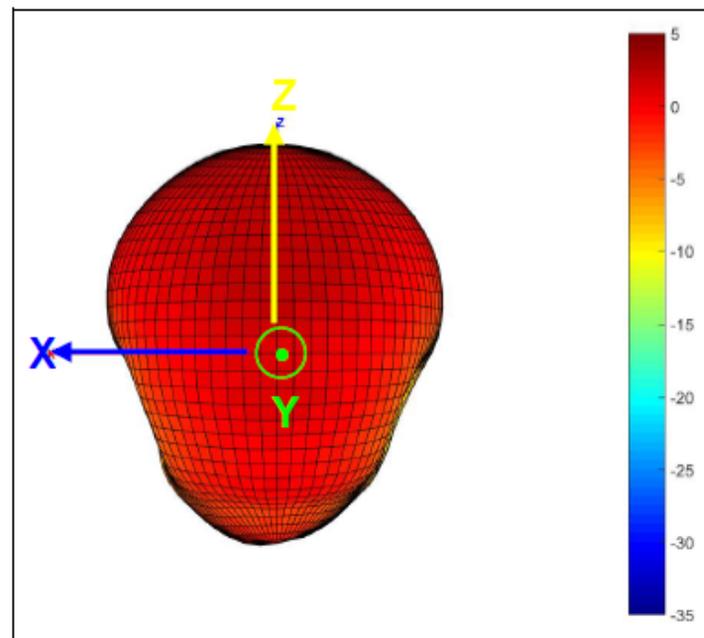
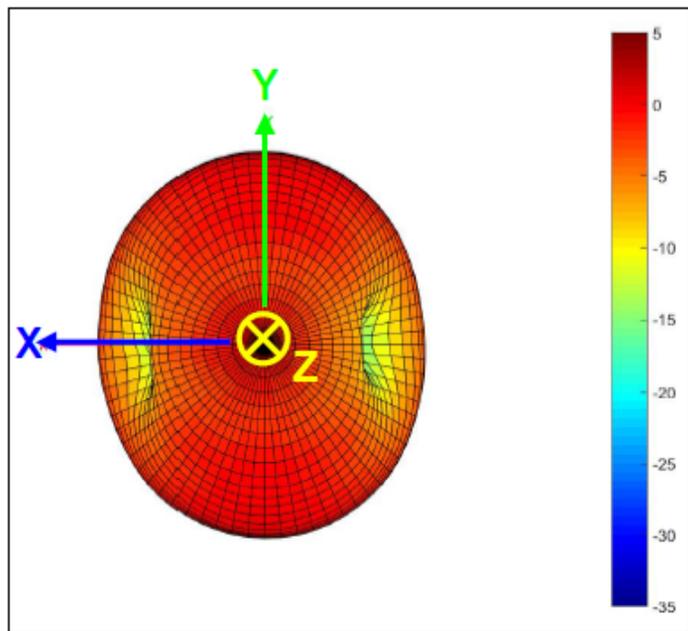
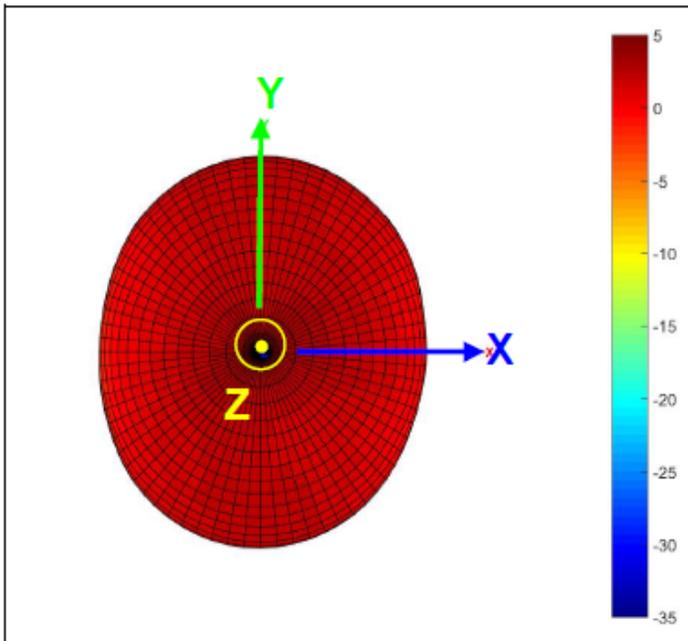
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Radiation Patterns

3D Gain Patterns @ 1575.42 MHz



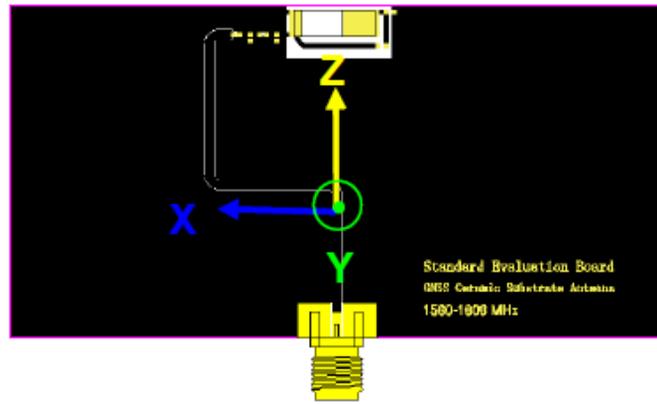
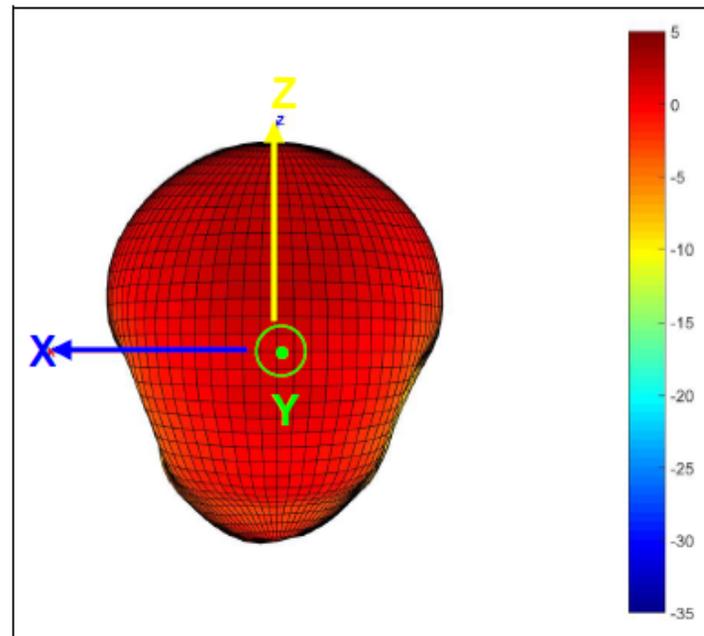
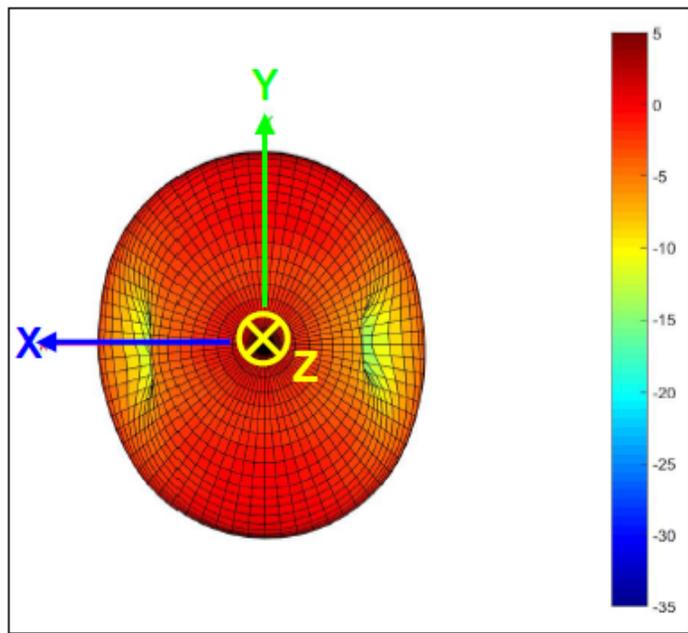
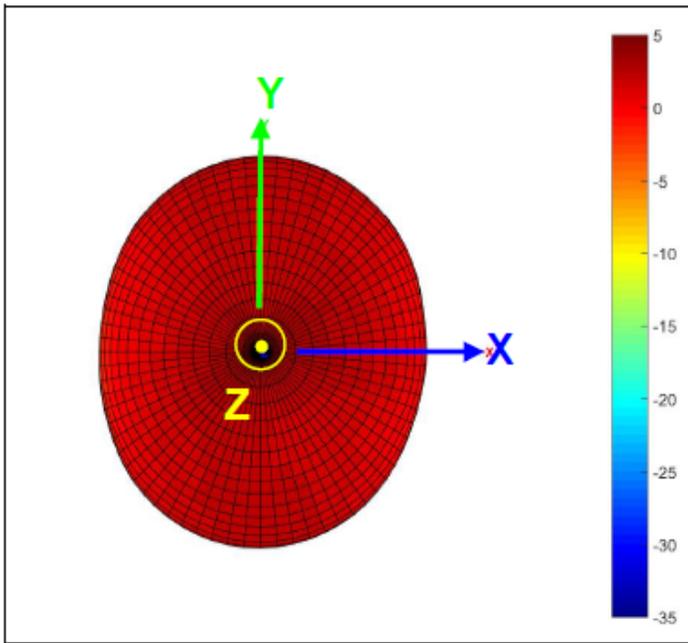
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Radiation Patterns

3D Gain Patterns @ 1590 MHz



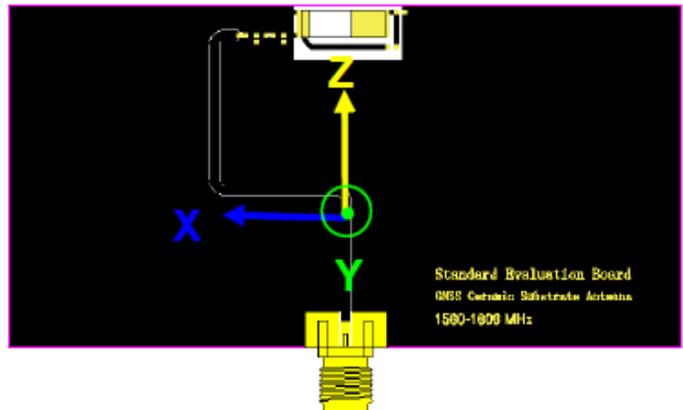
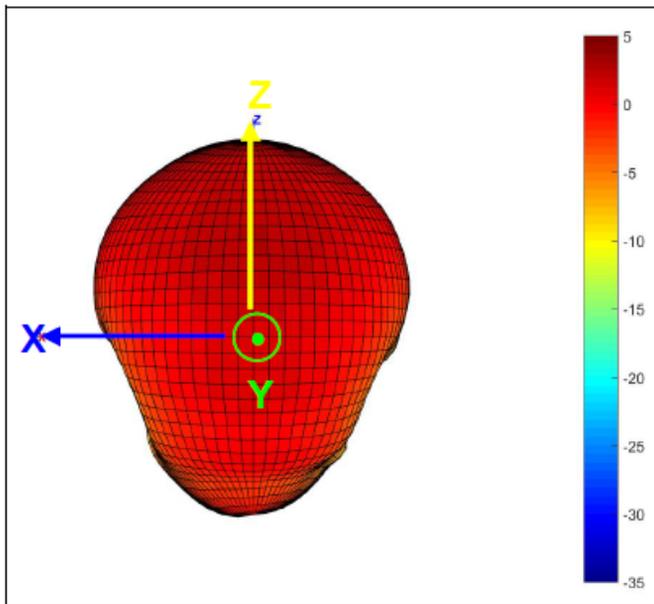
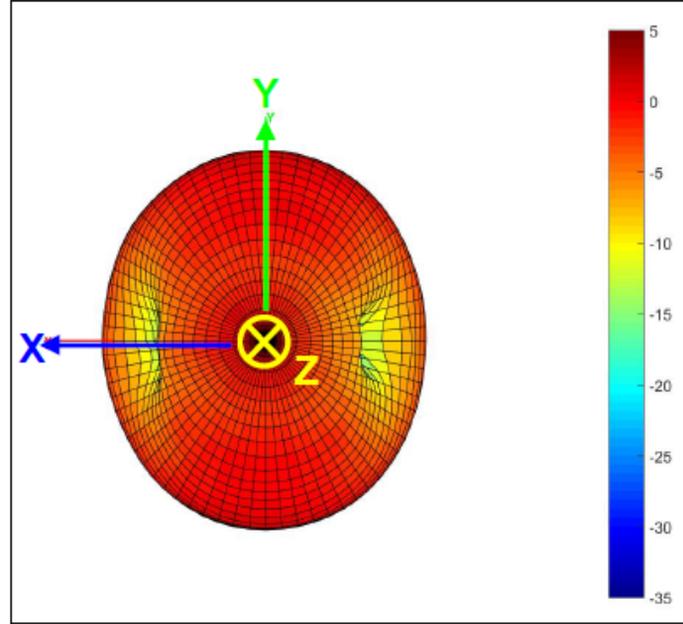
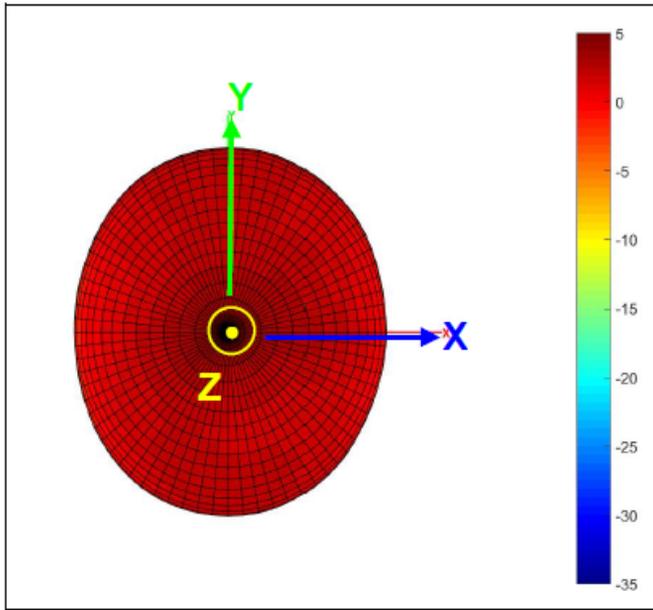
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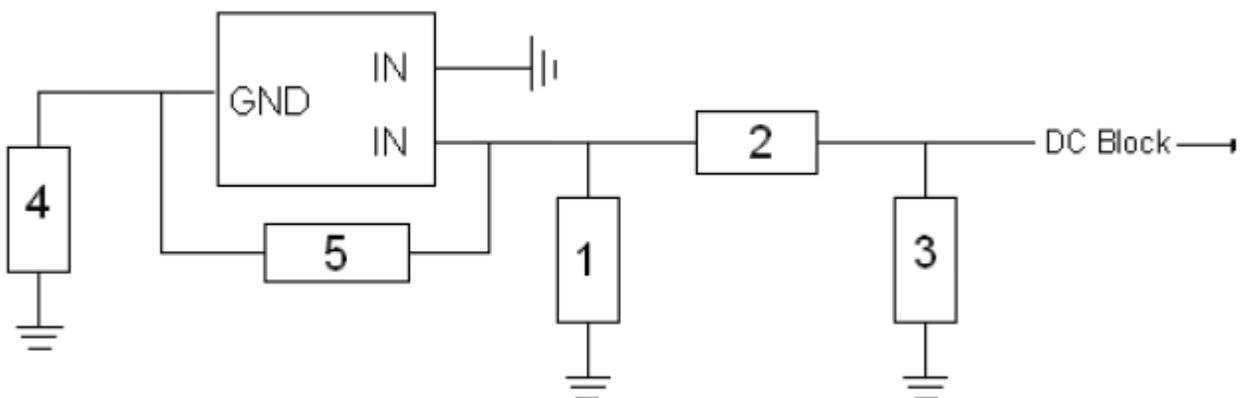
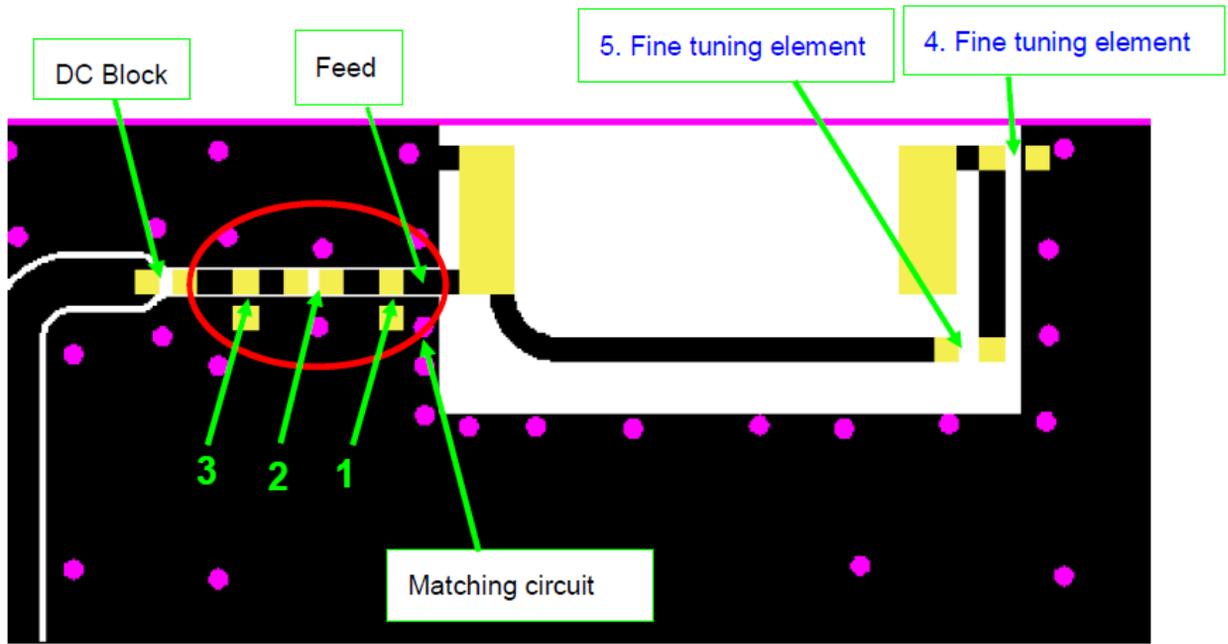


Radiation Patterns

3D Gain Patterns @ 1602 MHz



Frequency Tuning & Matching Circuit



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System Matching Circuit Component

Location	Description	Tolerance	NIC Part Number
1	N/A	N/A	N/A
2	1.5nH, (0402)	±0.3nH	NML04D1N5TRF
3	1.5pF, (0402)	±0.05pF	NMC-Q0402NPO1R5A50TRPF
4 Fine Tuning Element	1.8pF, (0402)	±0.05pF	NMC-Q0402NPO1R8A50TRPF
5 Fine Tuning Element	0.7pF, (0402)	±0.05pF	NMC-Q0402NPO0R7A50TRPF

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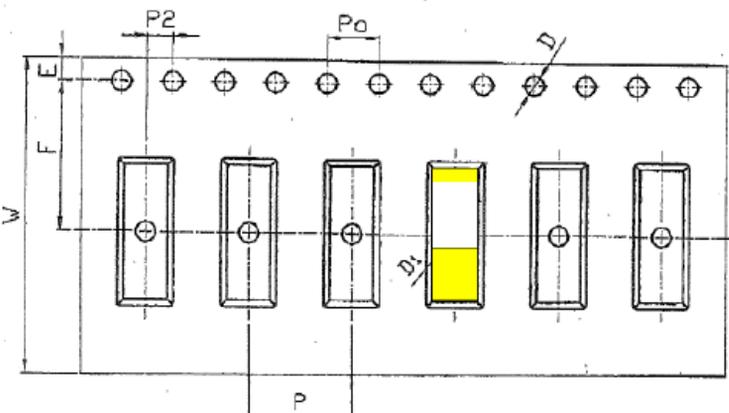
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Packing

- (1) Quantity/Reel: 2000 pcs/Reel
- (2) Plastic tape

a. Tape Drawing



b. Tape Dimensions (unit: mm)

Feature	Specifications	Tolerances
W	24.00	±0.30
P	8.00	±0.10
E	1.75	±0.10
F	11.50	±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