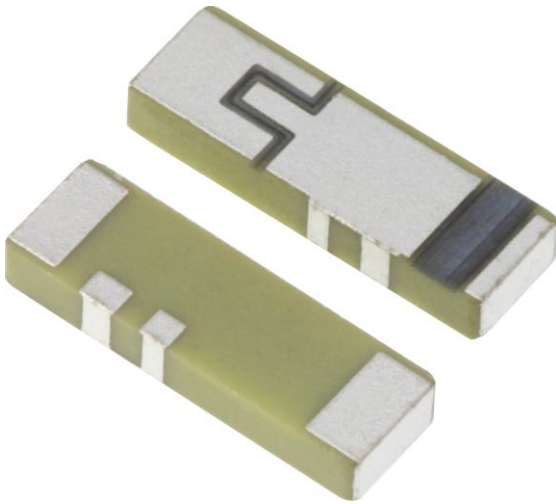


Features:

- Frequency: 1558-1616/2400-2500MHz
- Omni directional radiation
- Low profile
- Size W x L x H (10 x 3.2 x 1.5mm)
- Lead free materials
- Fully SMD compatible
- MSL Level 1
- RoHS Compliant

**Applications:**

- Combo 2-in-1 Antenna
- Single feed point
- GNSS L1 band
- Bluetooth, WLAN, WiFi (2.4 – 2.5GHz)

All dimensions are in mm / inches

Issue: 2049

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For more information:

Pulse Worldwide Headquarters
15255 Innovation Drive #100
San Diego, CA 92128
USA
Tel: 1-858-674-8100

Pulse/Larsen Antennas
18110 SE 34th St Bldg 2 Suite 250
Vancouver, WA 98683
USA
Tel: 1-360-944-7551

Europe Headquarters
Pulse GmbH & Do, KG
Zeppelinstrasse 15
Herrenberg, Germany
Tel: 49 7032 7806 0

Pulse (Suzhou) Wireless Products Co, Inc.
99 Huo Ju Road(#29 Bldg,4th Phase
Suzhou New District
Jiangsu Province, Suzhou 215009 PR China
Tel: 86 512 6807 9998



**Description: Ceramic Single Feed GNSS/BT
Antenna****Series: Ceramic Antenna****PART NUMBER: W3056****ELECTRICAL SPECIFICATIONS**

Antenna Type	Ceramic Chip
Frequency	1558-1616MHz/2.4-2.5GHz
Nominal Impedance	50 Ω
Return Loss / Max (BD / GPS / GLONASS / BT)	-4 / -5 / -3 / -7 (dB)
Radiation Pattern – XY Plane & ZY Plane	Omni
Radiation Pattern – ZX Plane	Directional
Gain / Min (BD / GPS / GLONASS / BT)	-0.5 / 0.5 / 0 / 2 (dBi)
Efficiency / Min (BD / GPS / GLONASS / BT)	35% / 45% / 45% / 65%
Polarization	Linear-Vertical
Power Withstanding	1W

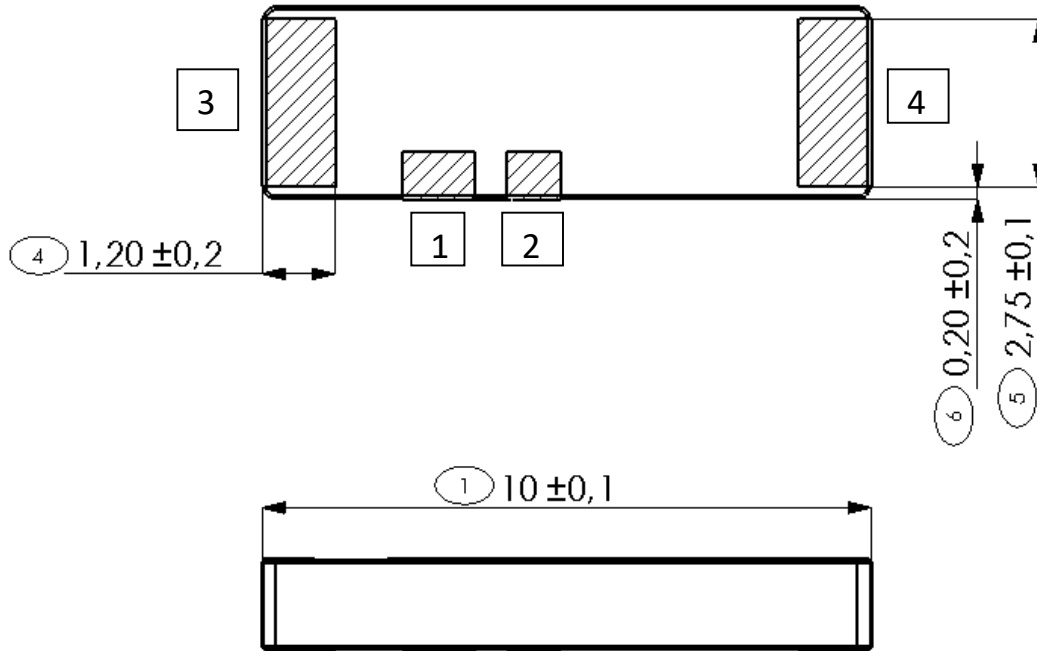
MECHANICAL SPECIFICATIONS

Overall Length	10mm
Weight	0.24g
Antenna Color	White

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40 ~ +85° C
Storage Temperature	-40 ~ +85° C
RoHS Compliant	Yes

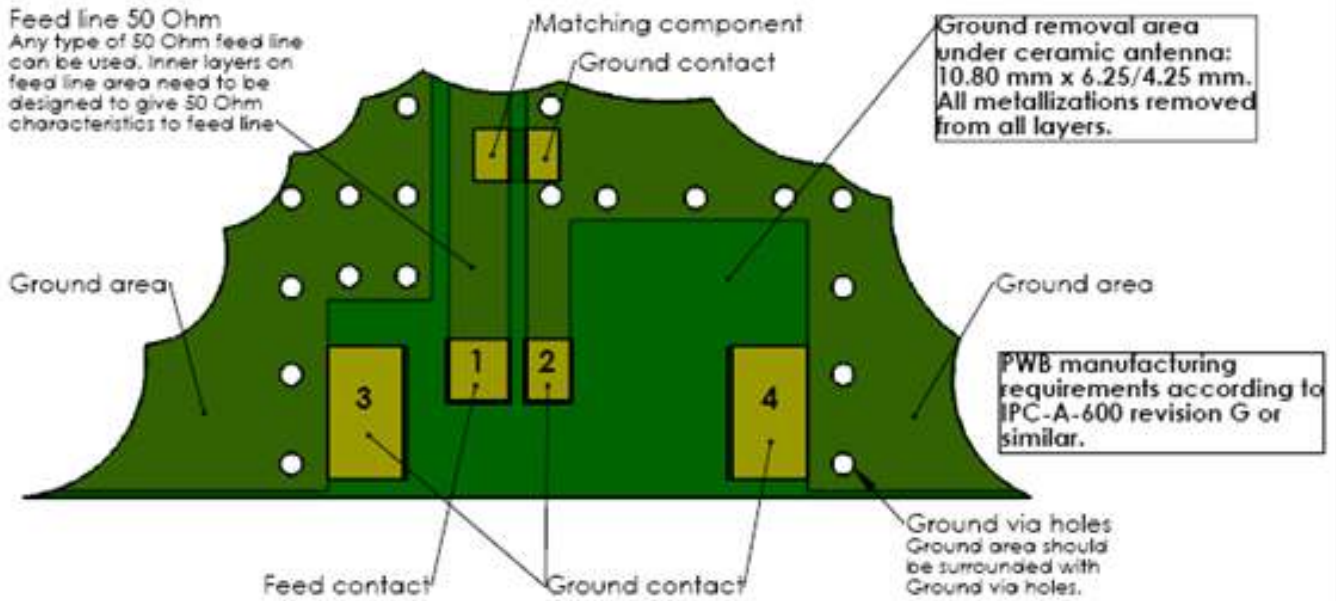
MECHANICAL DRAWING



No.	Terminal Name	Terminal Dimensions
1	Feed	1.34 x 0.80 mm
2	GND	1.00 x 0.80 mm
3	GND	2.75 x 1.20 mm
4	GND	2.75 x 1.20 mm

TEST SETUP

Test board information



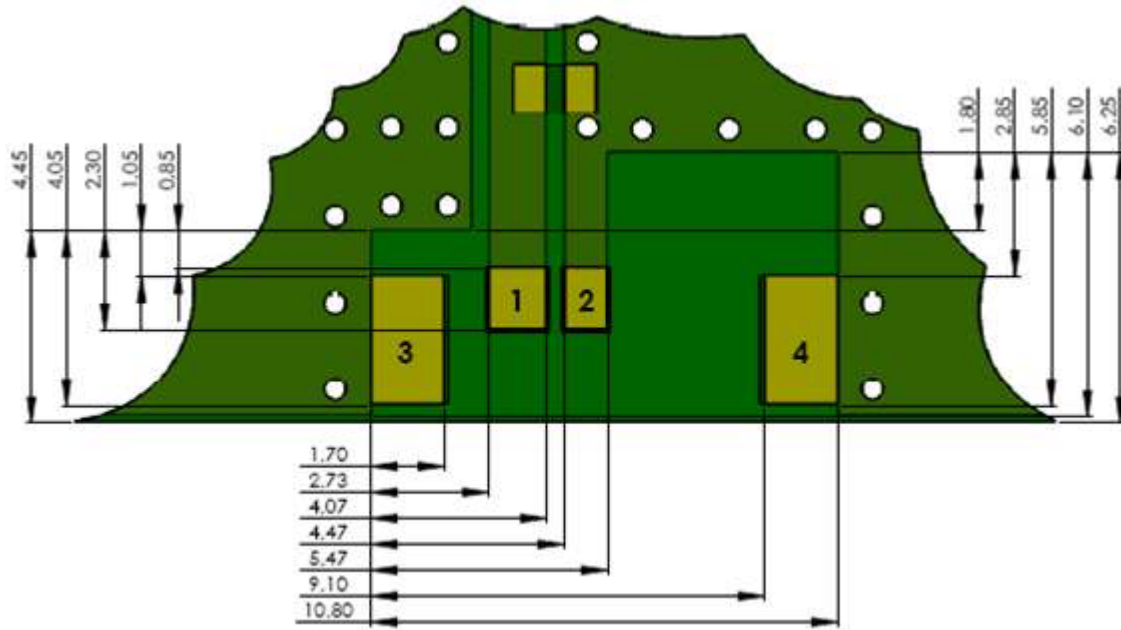
Note: Electrical characteristics are measured on test pwb with matching circuit (2.2 nH shunt matching inductor on feed).

Recommended Antenna Pad Dimensions on PWB Layout (top surface)

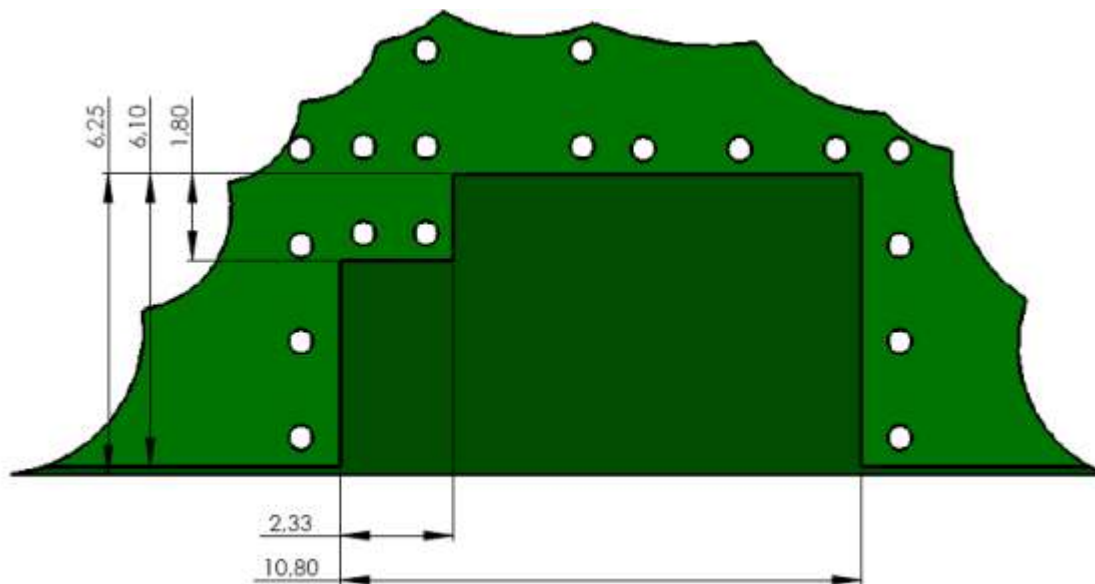
PWB features		
No.	Terminal Name	Terminal Dimensions
1	Feed	1.45 x 1.34 mm
2	GND	1.45 x 1.00 mm
3	GND	3.00 x 1.70 mm
4	GND	3.00 x 1.70 mm

TEST SETUP

Recommended ground clearance area under antenna on PWB (top surface)



Recommended ground clearance area under antenna on PWB (bottom surface)



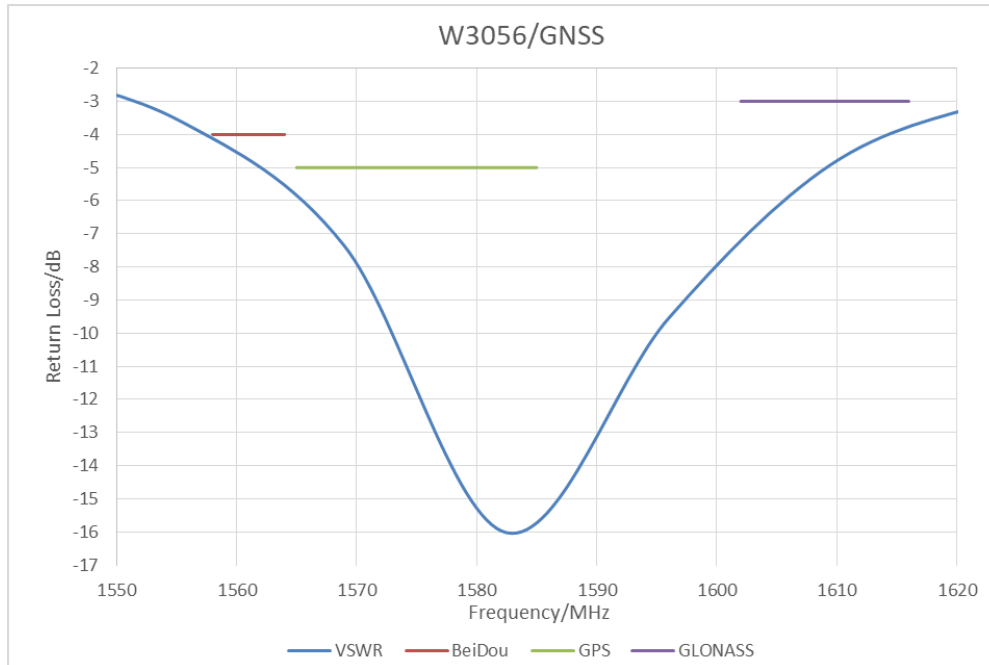
Description: Ceramic Single Feed GNSS/BT Antenna

Series: Ceramic Antenna

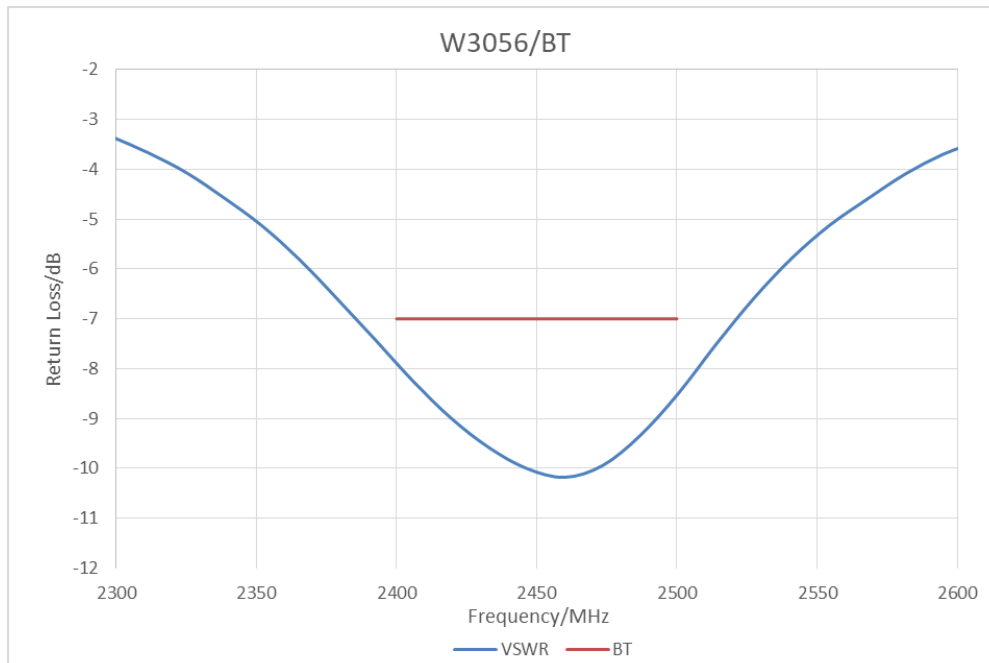
PART NUMBER: W3056

CHARTS

Return Loss/GNSS



Return Loss/ BT



Issue: 2049

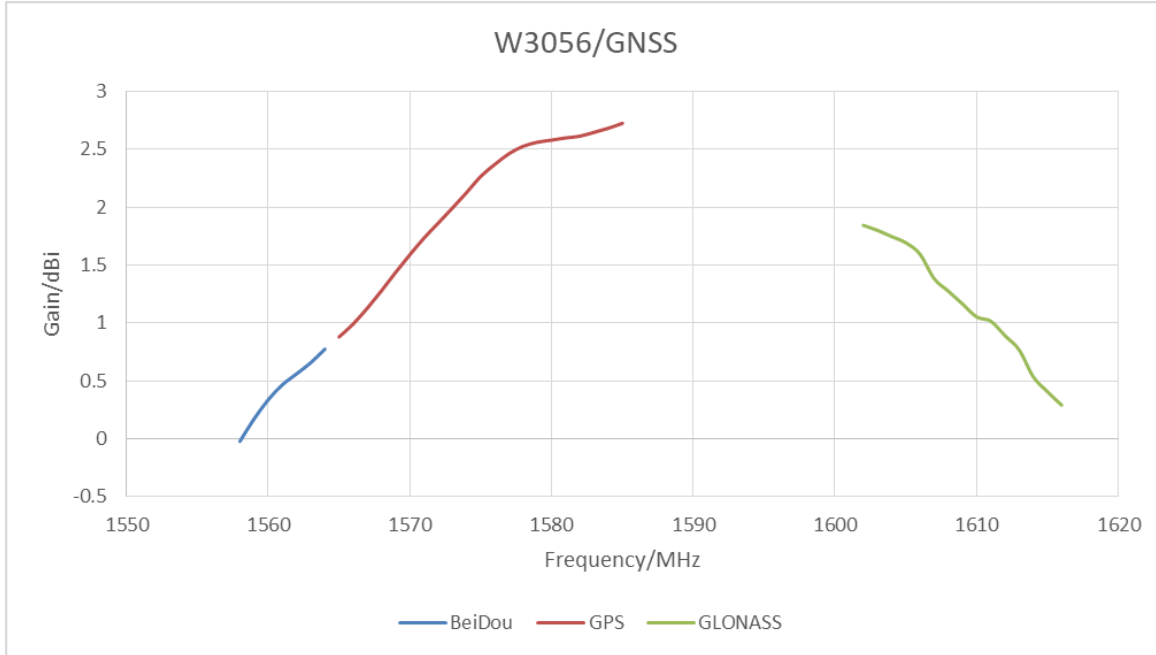
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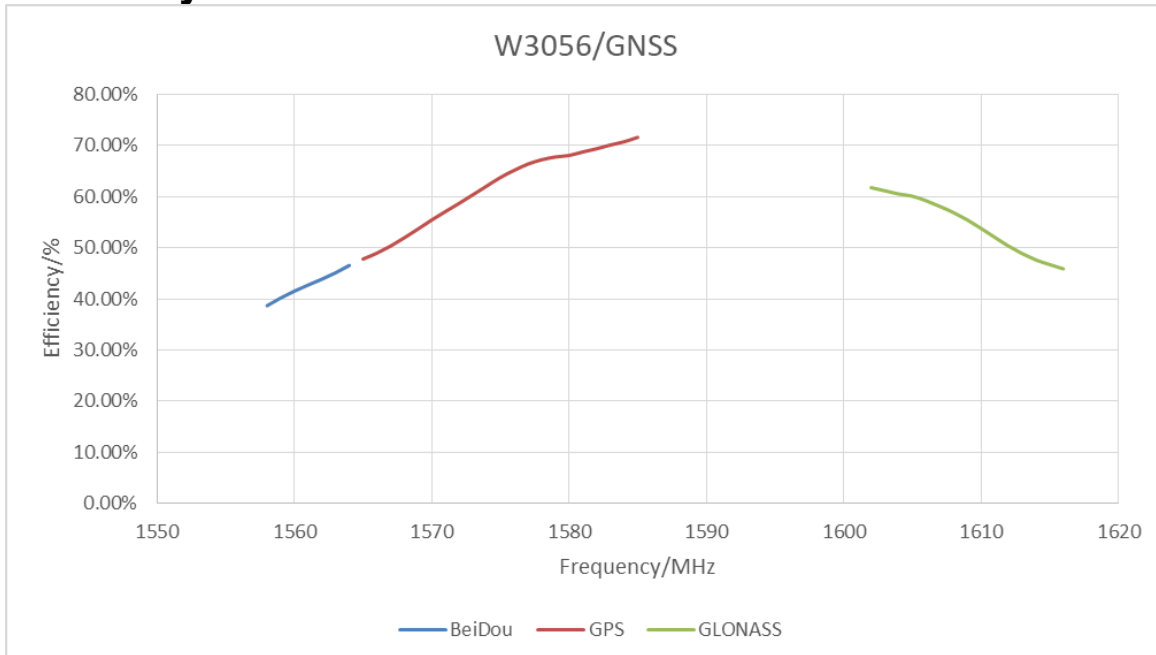
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CHARTS

Peaking Gain/ GNSS



Rad Efficiency/ GNSS



Issue: 2049

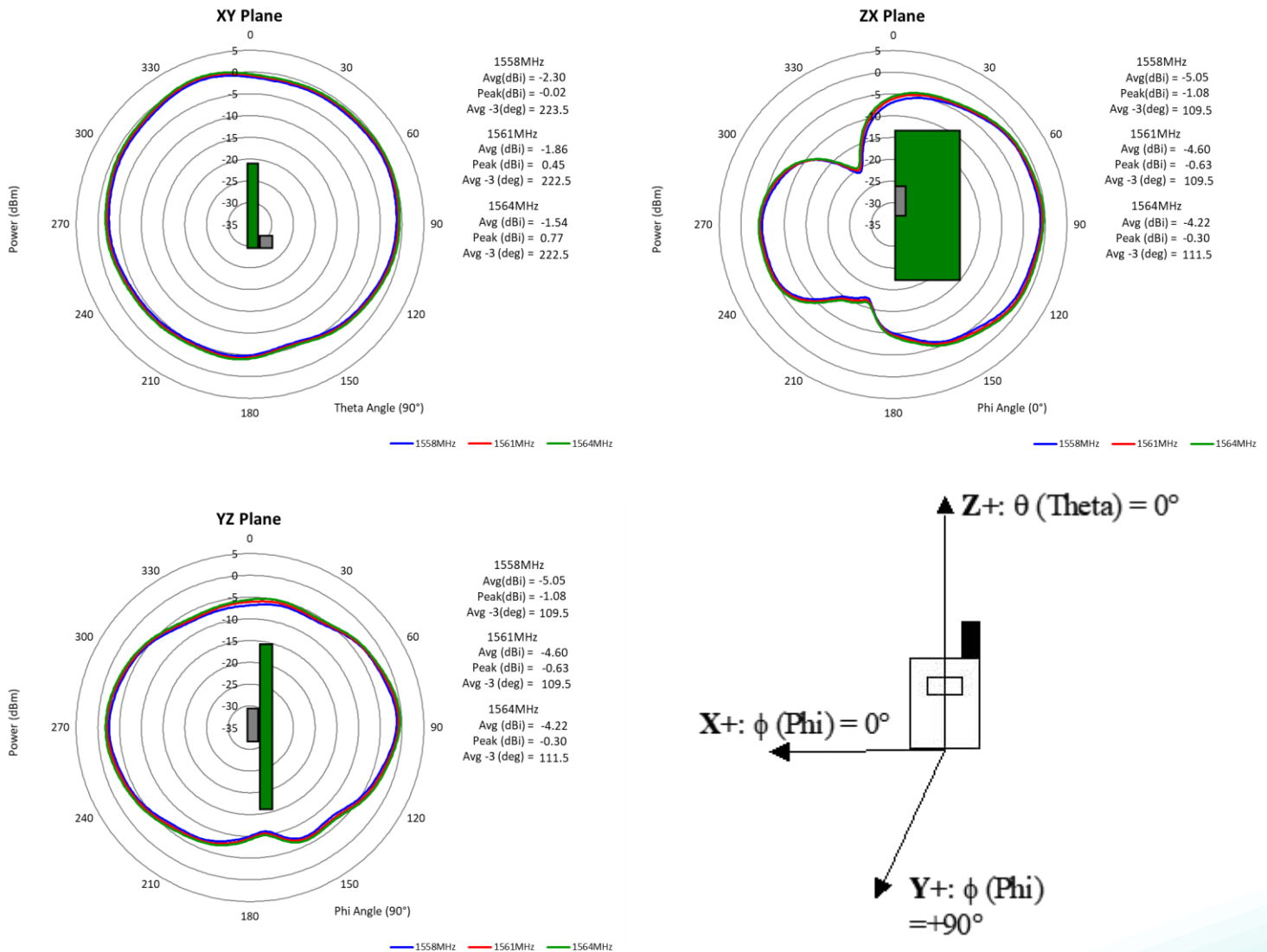
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CHARTS

Typical Free Space Radiation Patterns / BeiDou



Issue: 2049

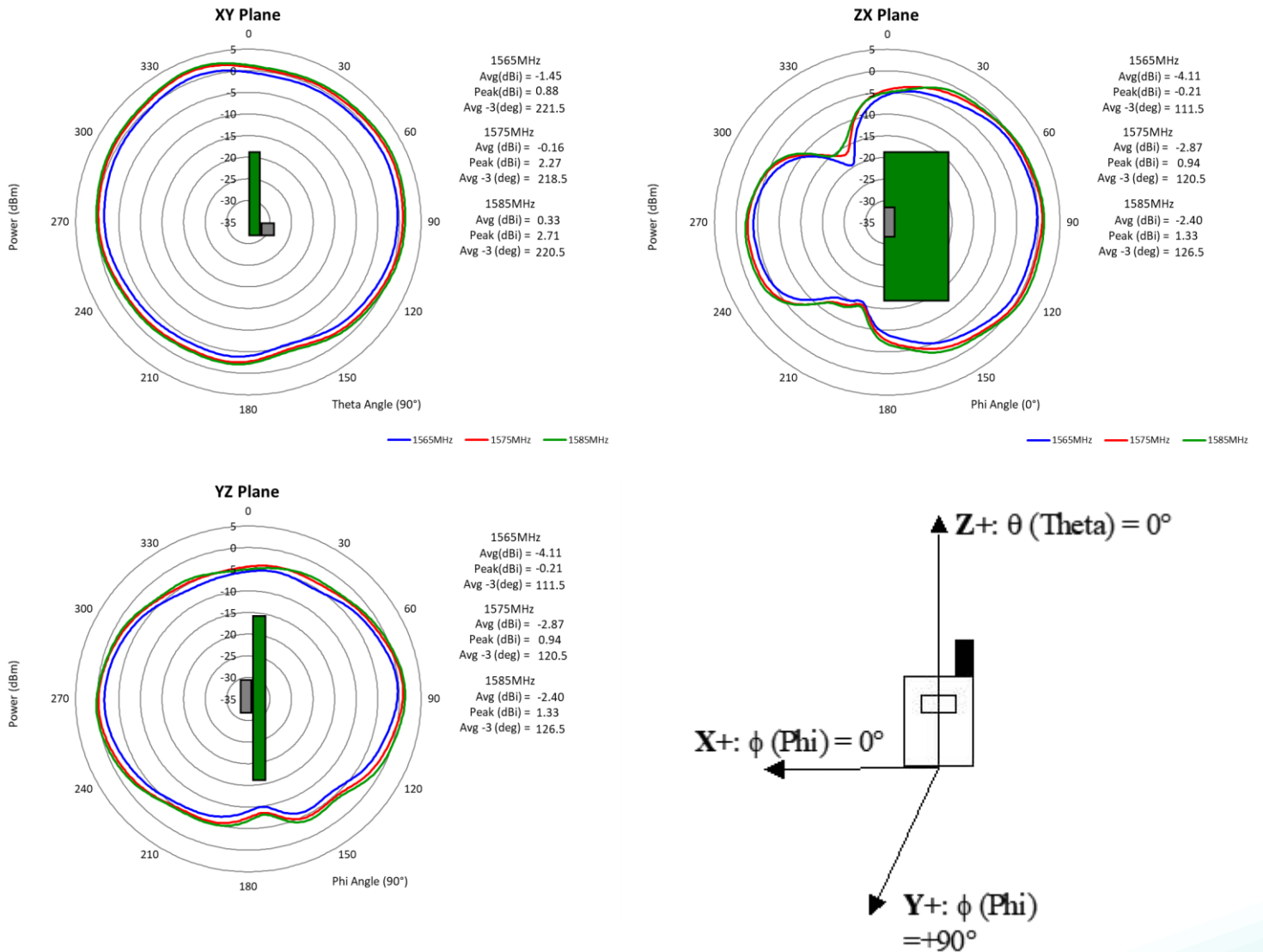
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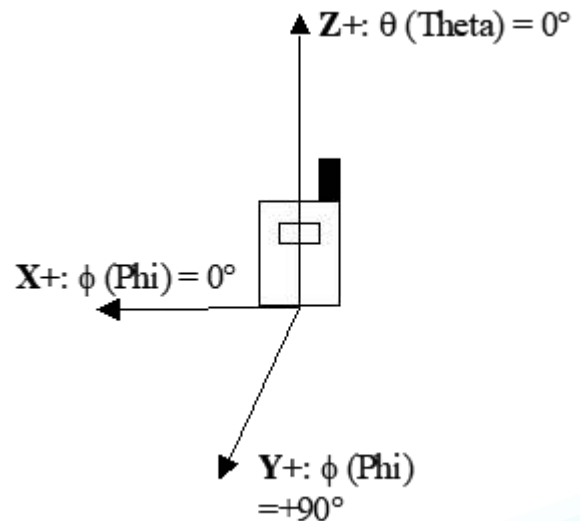
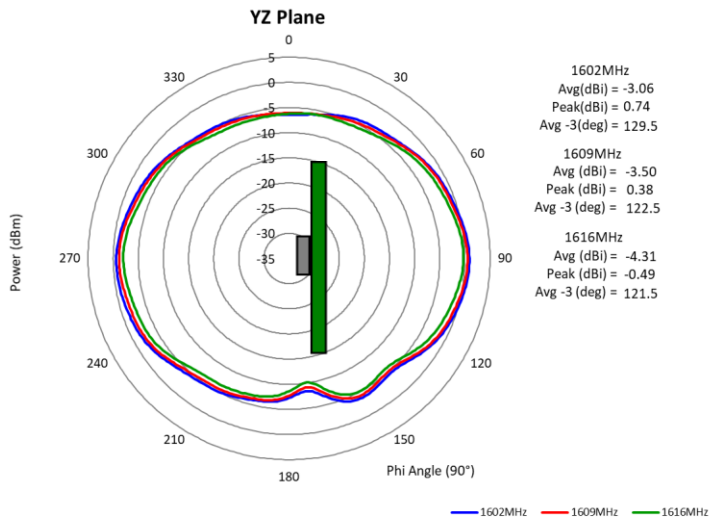
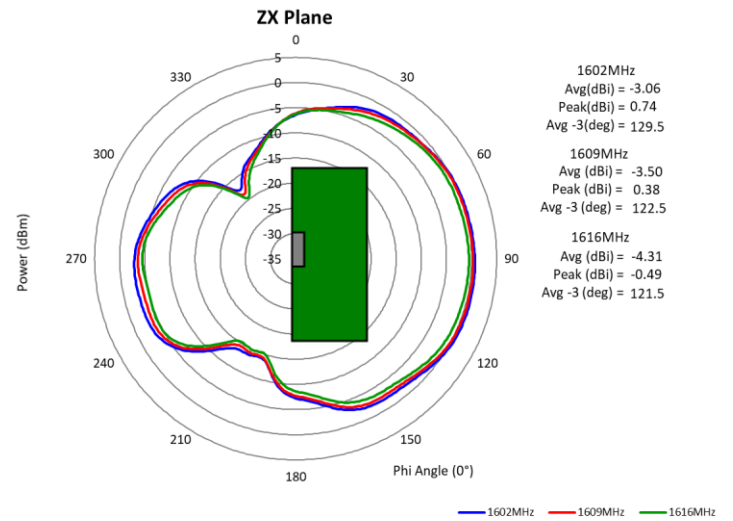
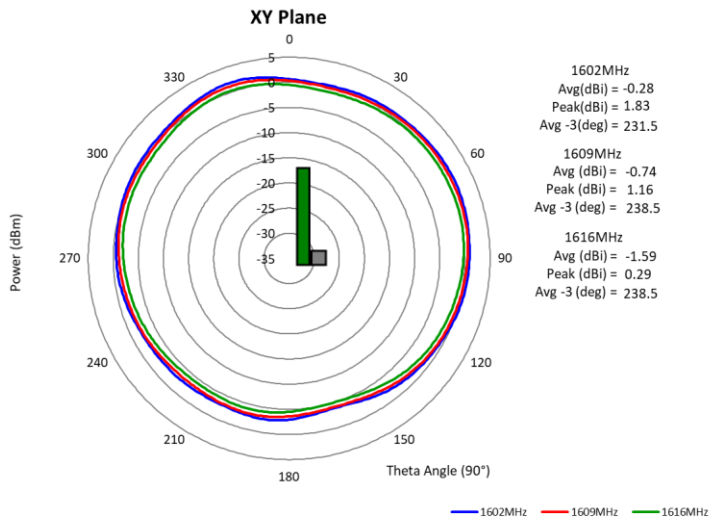
CHARTS

Typical Free Space Radiation Patterns / GPS



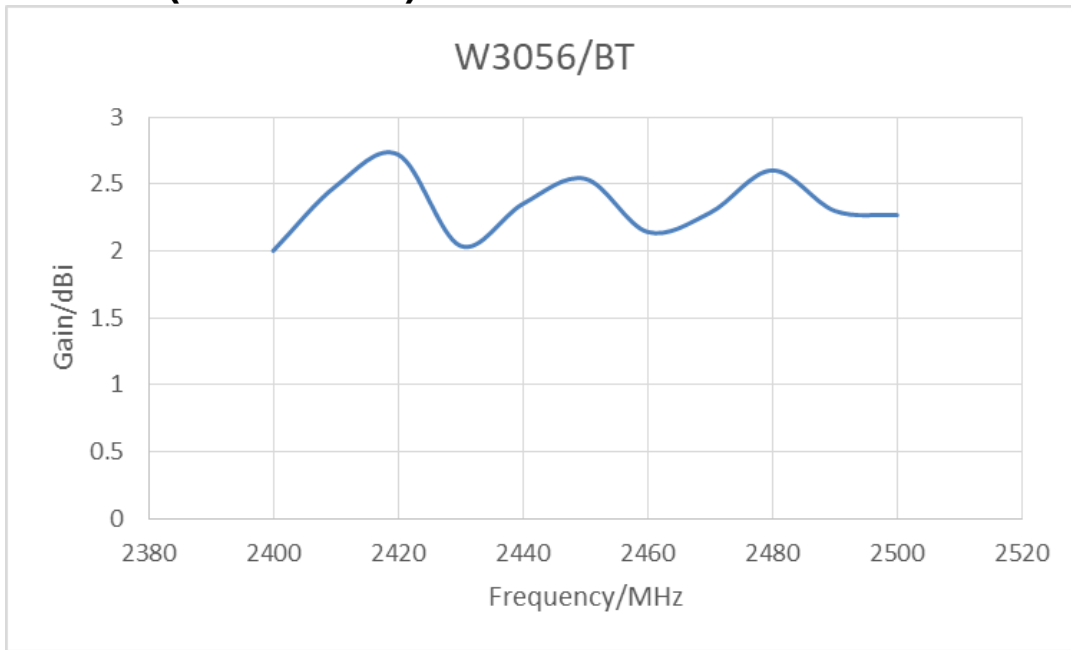
CHARTS

Typical Free Space Radiation Patterns / GLONASS

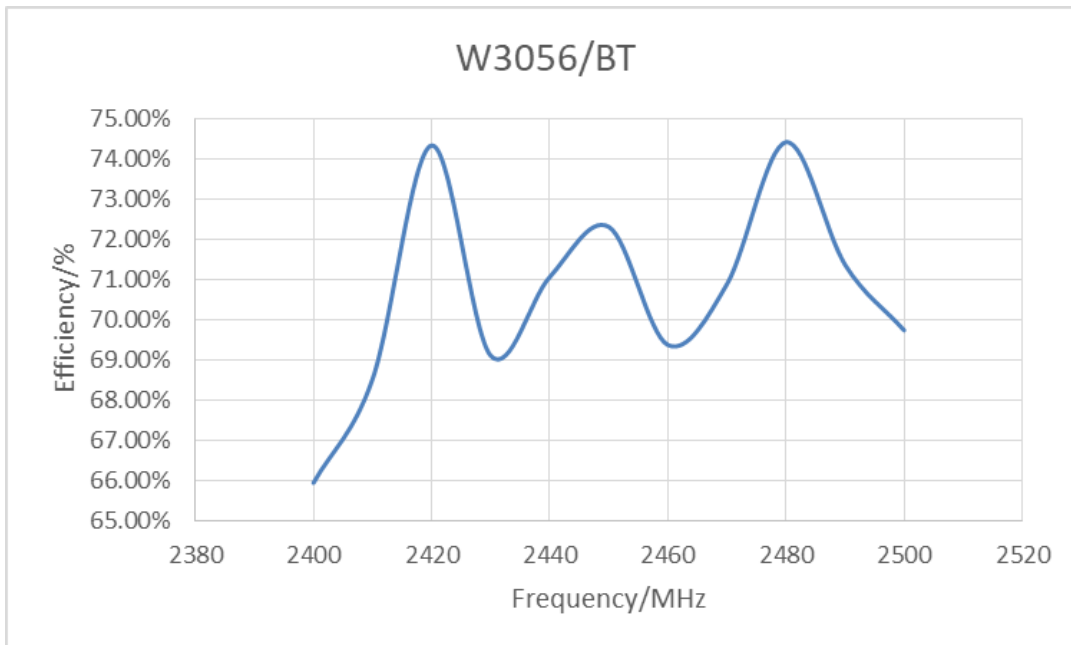


CHARTS

Peaking Gain/ BT(2.4G-2.5G)



Rad Efficiency/ BT(2.4G-2.5G)



Issue: 2049

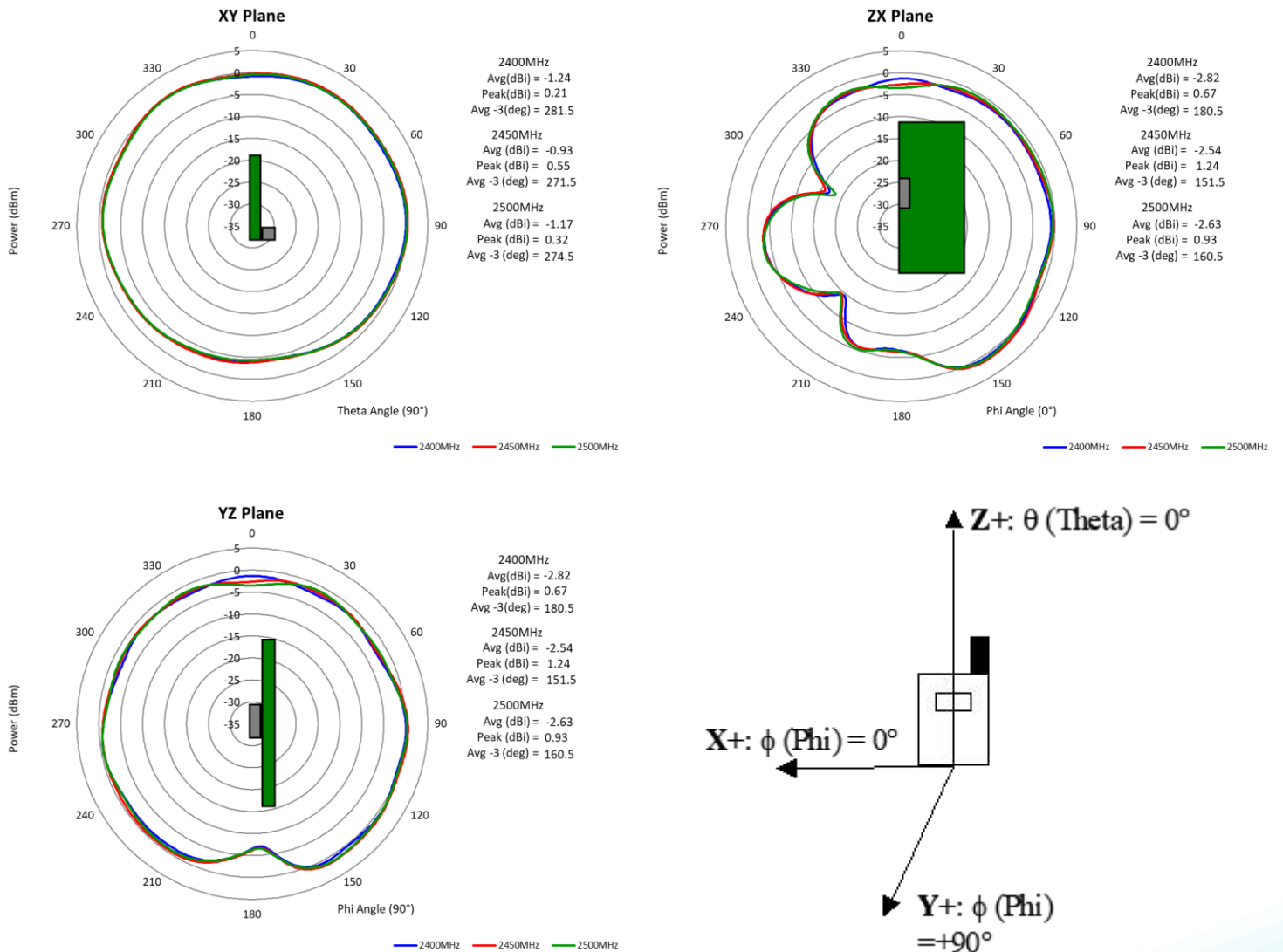
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CHARTS

Typical Free Space Radiation Patterns / BT(2.4G-2.5G)



Issue: 2049

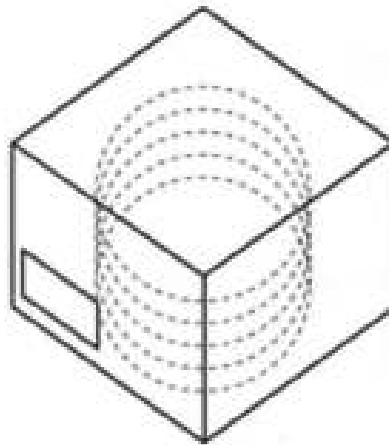
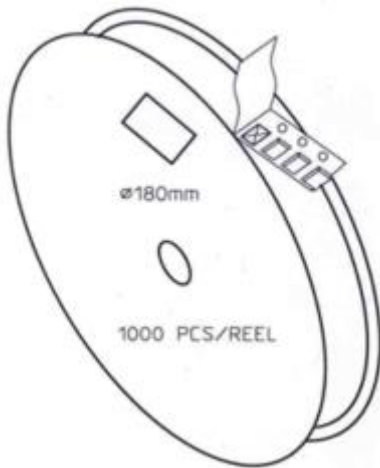
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PACKAGING

1. Tape and reel packing with plastic vacuum bag.
1000 PCS/ REEL, 4 Reels/ BOX



2. MSL: Level 1

These devices do not require special storage conditions provided:

- 1). They are maintained at conditions equal to or less than 30°C and 85% RH.

- 2). They are solder reflowed at a peak body temperature which does not exceed 260°C.

Note: Level and body temperature defined by IPC/JEDEC J-STD-020