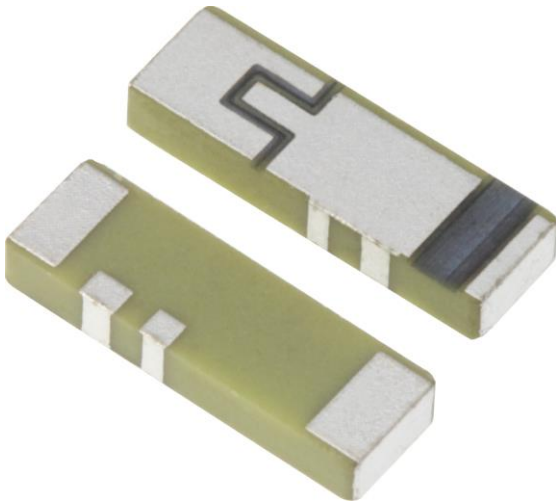


Features:

- 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 3
- 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: 1837

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Pulse (Suzhou) Wireless Products Co, Inc.
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Suzhou New District
Jiangsu Province, Suzhou 215009 PR China
Tel: 86 512 6807 9998



Series: Ceramic Antenna

Description: Ceramic Single Feed GNSS/BT
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 |

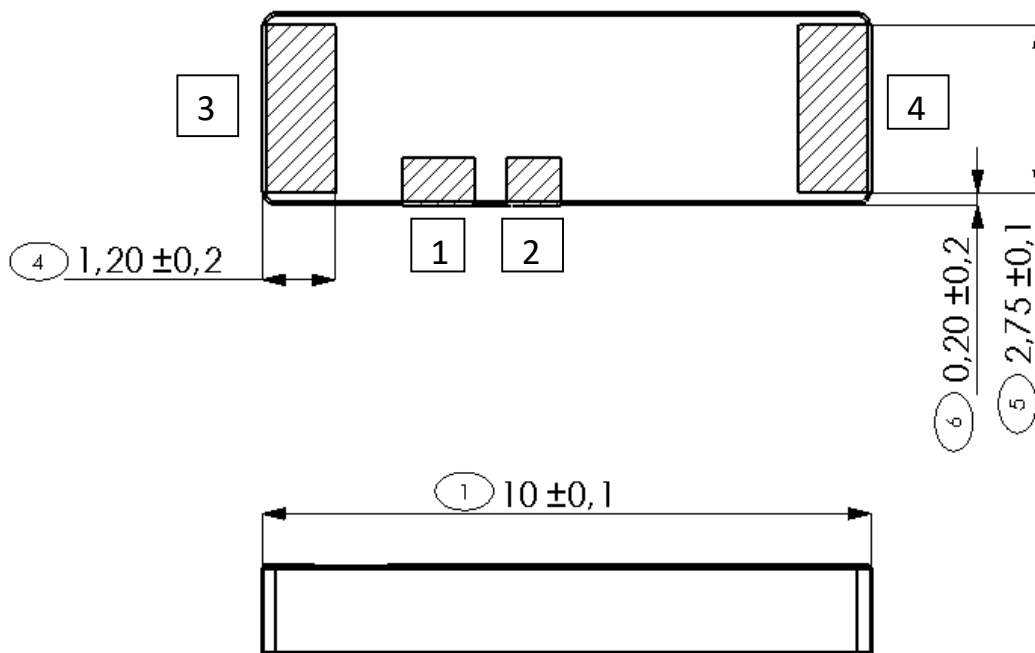
MECHANICAL SPECIFICATIONS

| | |
|----------------|-------|
| Overall Length | 10mm |
| Weight | 0.24g |
| Antenna Color | White |

ENVIRONMENTAL SPECIFICATIONS

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

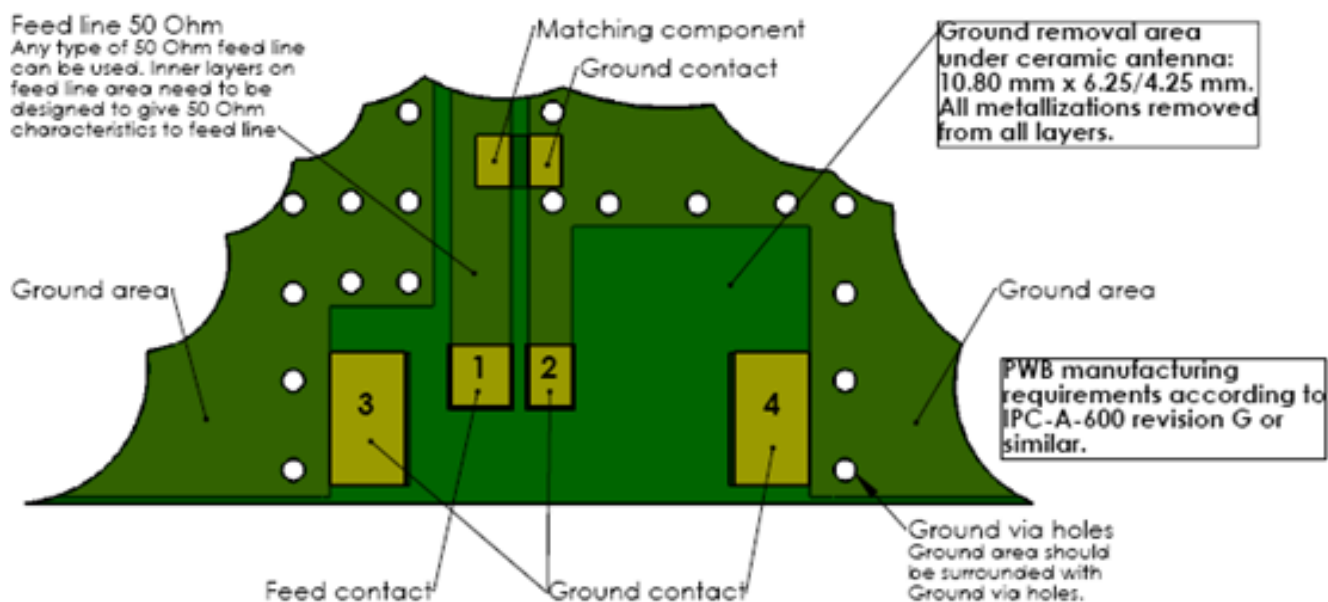
MECHANICAL DRAWING



| 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



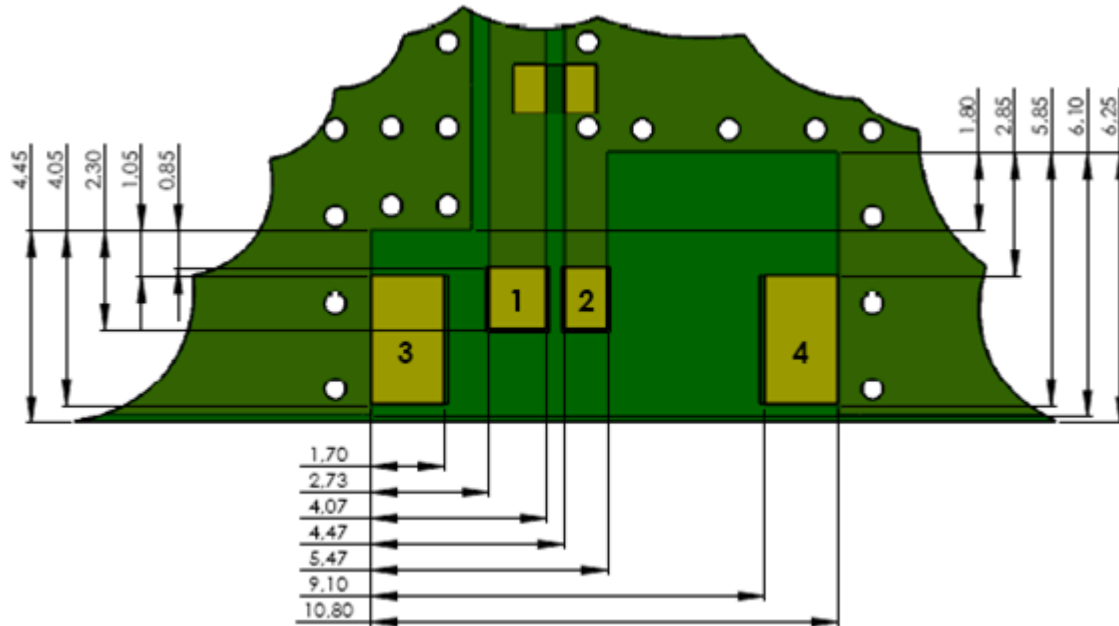
Note: Electrical characteristics are measured on test pwb with matching circuit (2.2 nH shunt matching inductor on feed).

Recommended Antenna Pad Dimensions on PWB Layout (top surface)

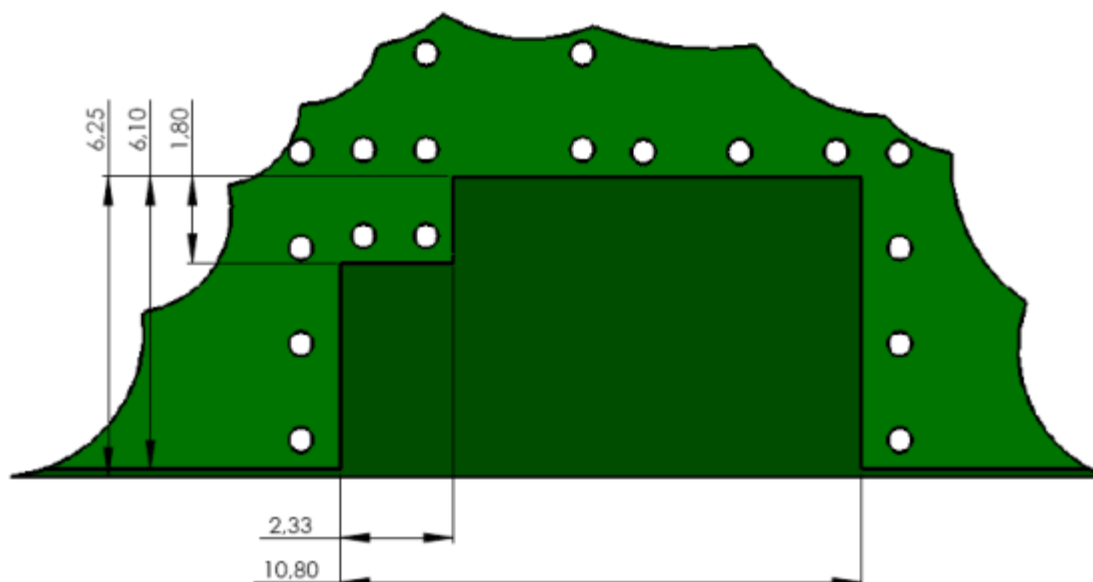
| PWB features | | |
|--------------|---------------|---------------------|
| No. | Terminal Name | Terminal Dimensions |
| 1 | Feed | 1.45 x 1.34 mm |
| 2 | GND | 1.45 x 1.00 mm |
| 3 | GND | 3.00 x 1.70 mm |
| 4 | GND | 3.00 x 1.70 mm |

TEST SETUP

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



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



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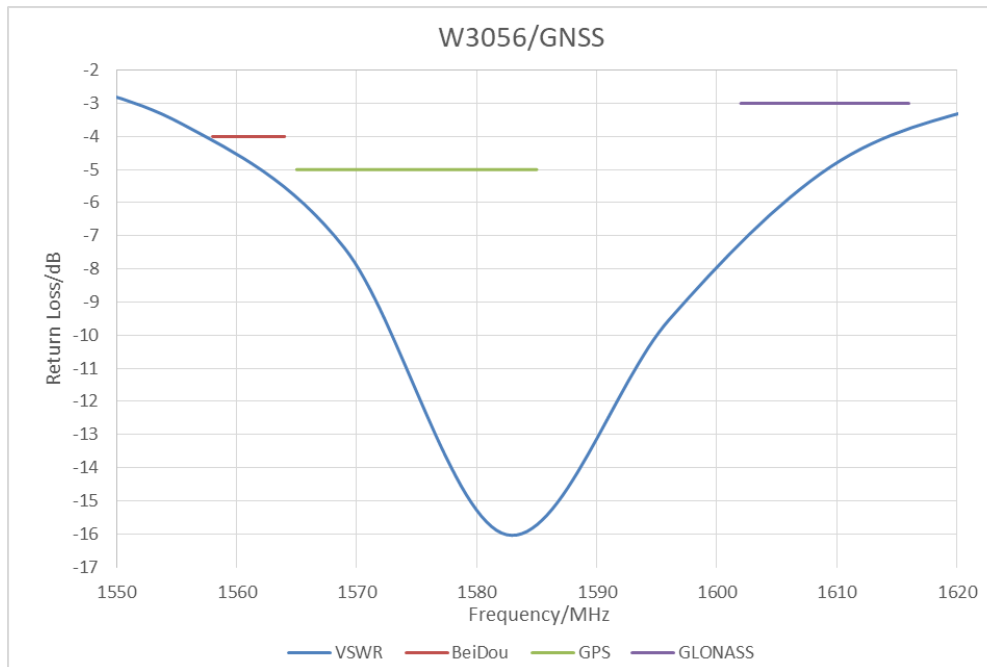
Series: Ceramic Antenna

Description: Ceramic Single Feed GNSS/BT
Antenna

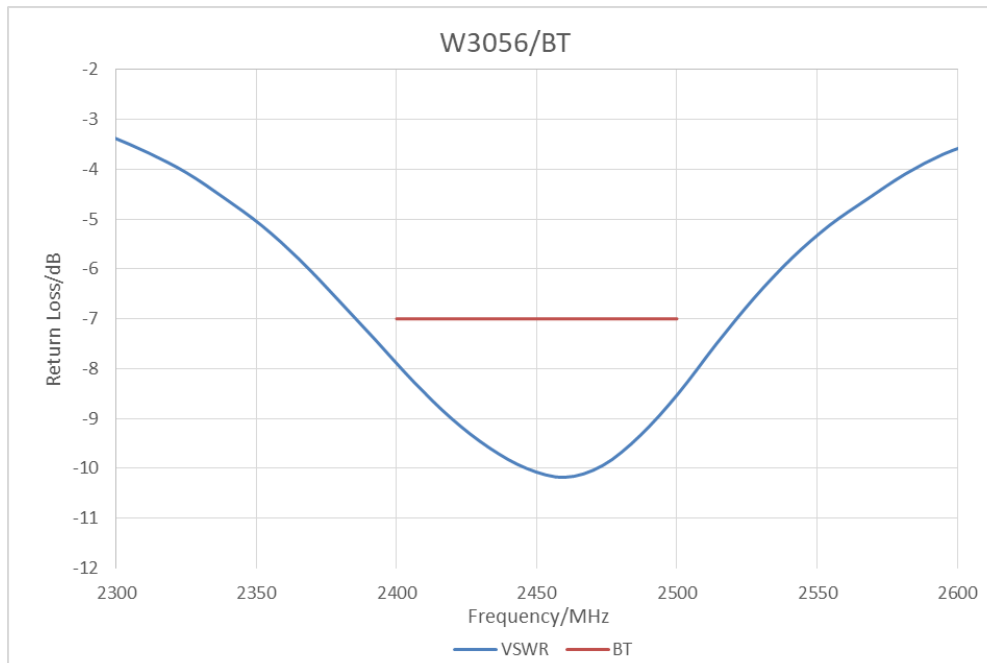
PART NUMBER: W3056

CHARTS

Return Loss/GNSS



Return Loss/ BT



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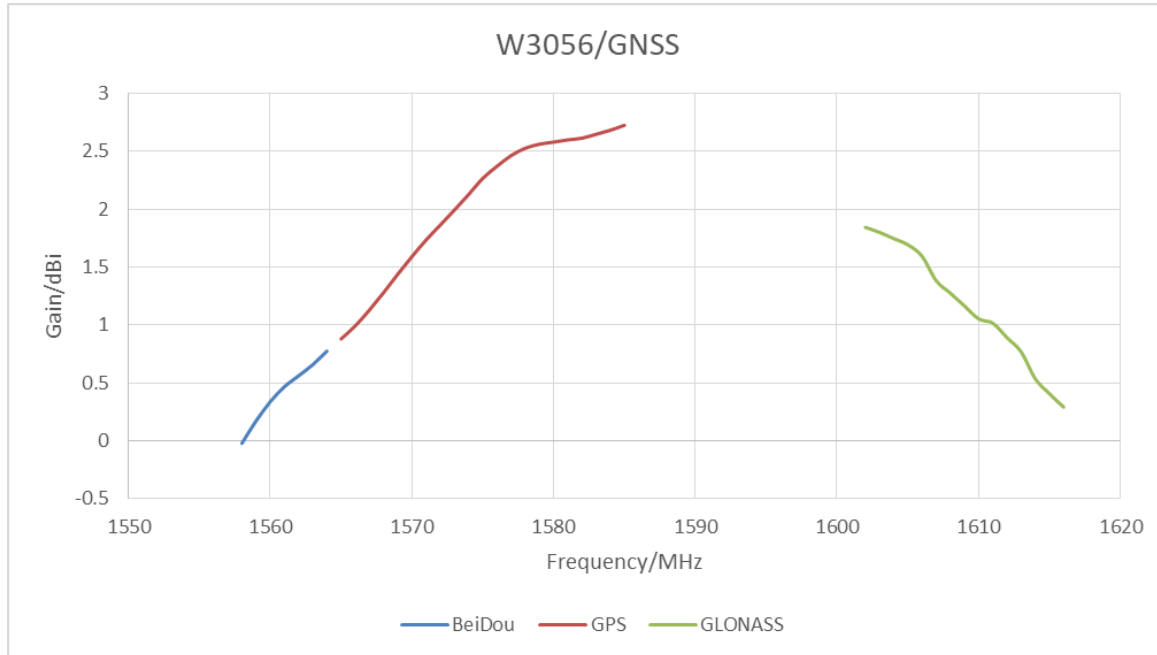
Series: Ceramic Antenna

Description: Ceramic Single Feed GNSS/BT Antenna

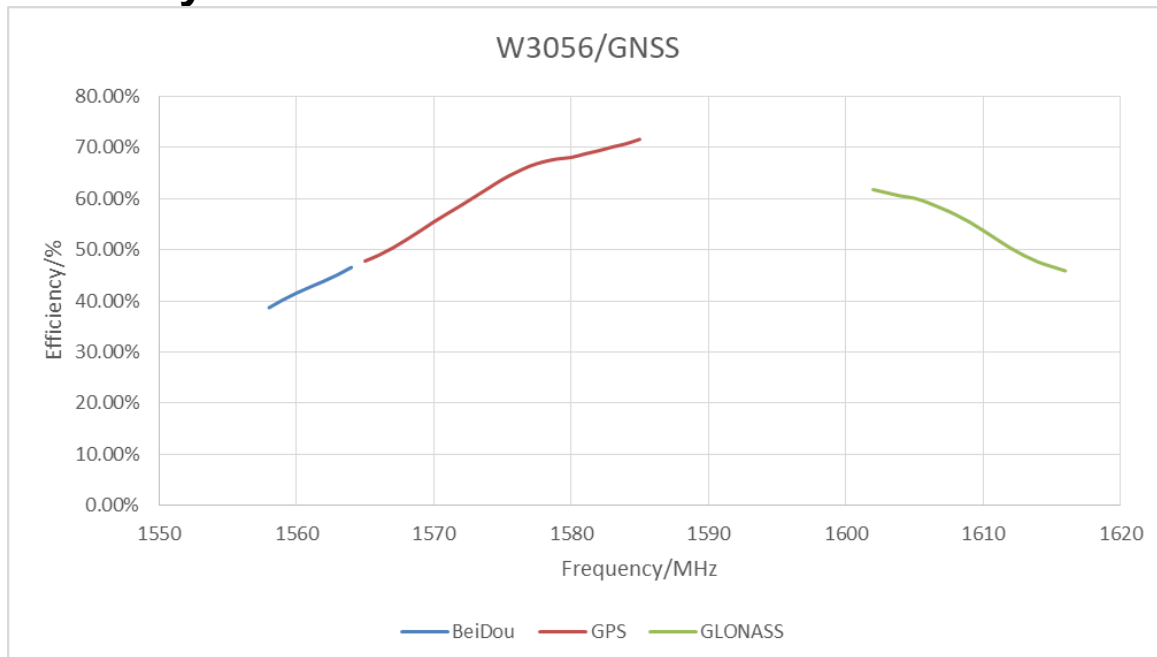
PART NUMBER: W3056

CHARTS

Peaking Gain/ GNSS



Rad Efficiency/ GNSS



Issue: 1837

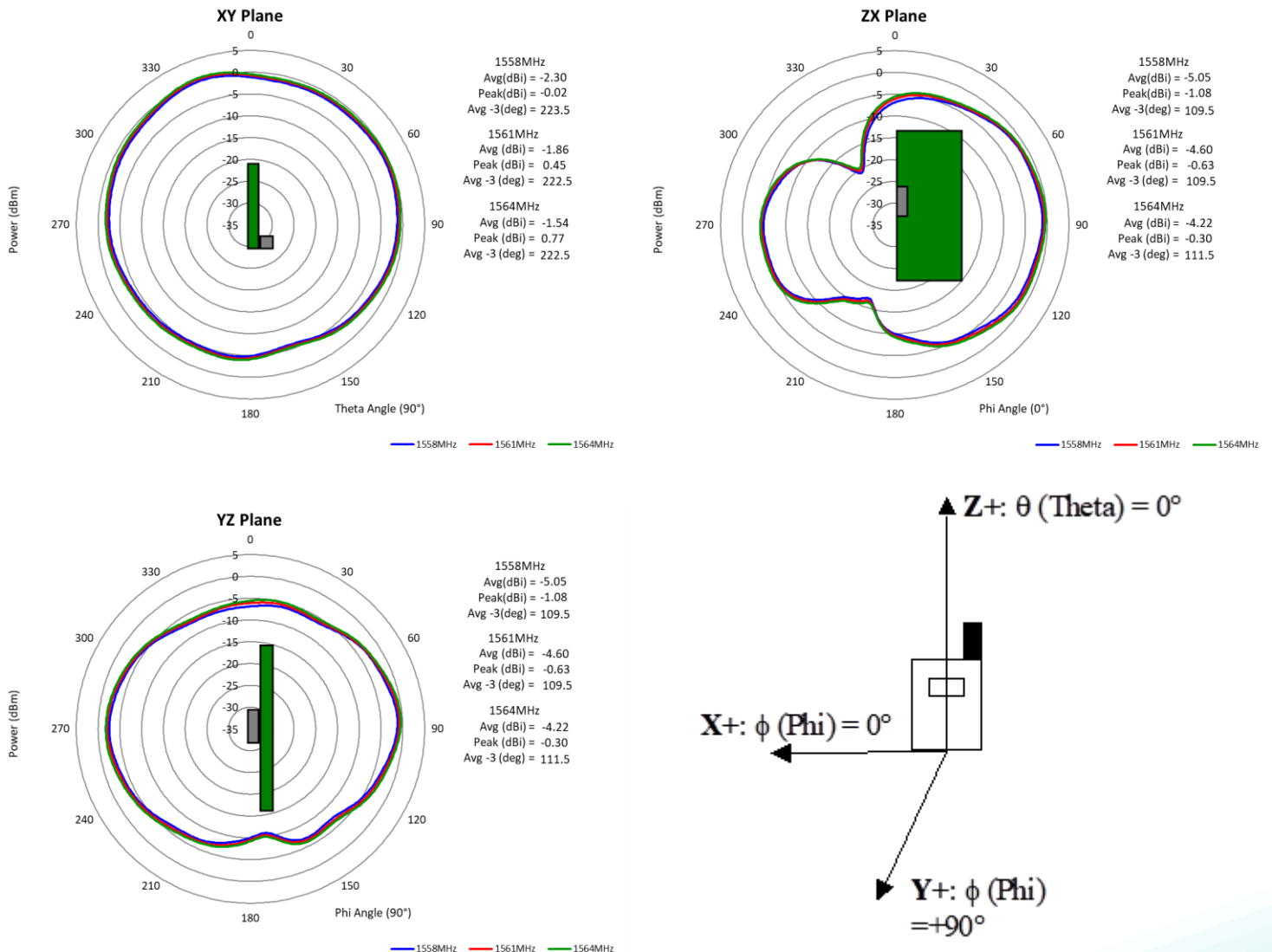
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CHARTS

Typical Free Space Radiation Patterns / BeiDou



Issue: 1837

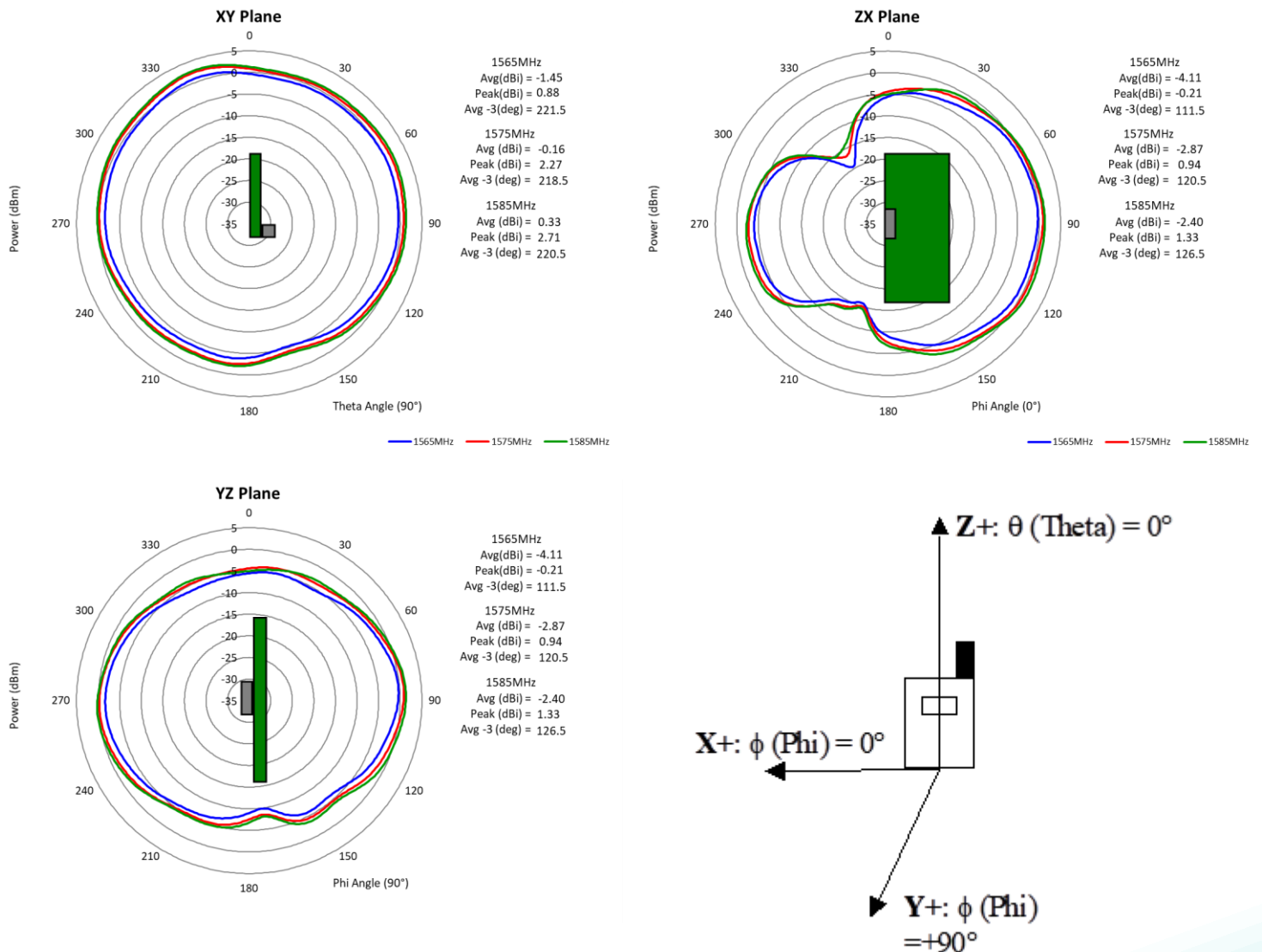
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CHARTS

Typical Free Space Radiation Patterns / GPS



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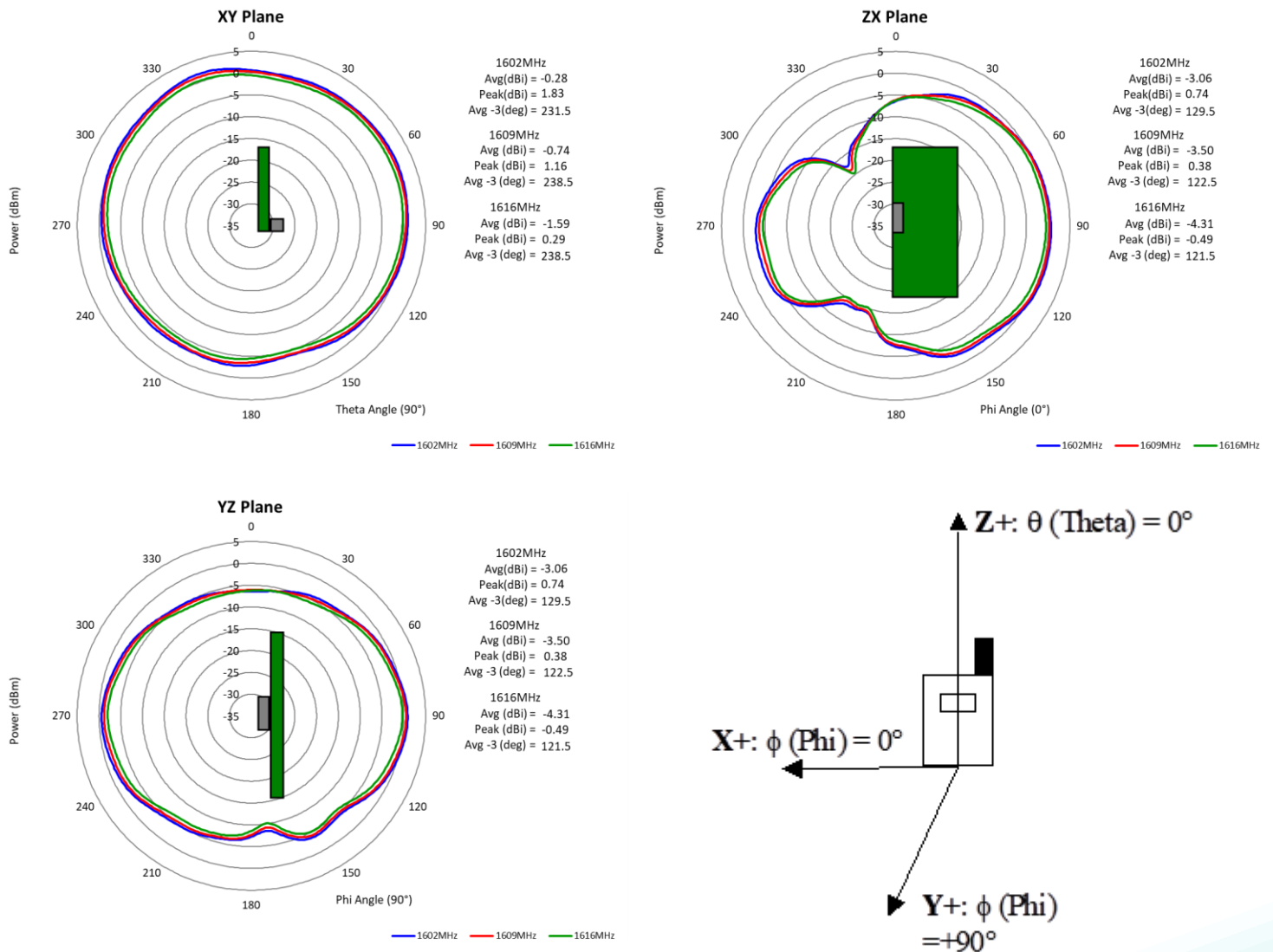
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CHARTS

Typical Free Space Radiation Patterns / GLONASS



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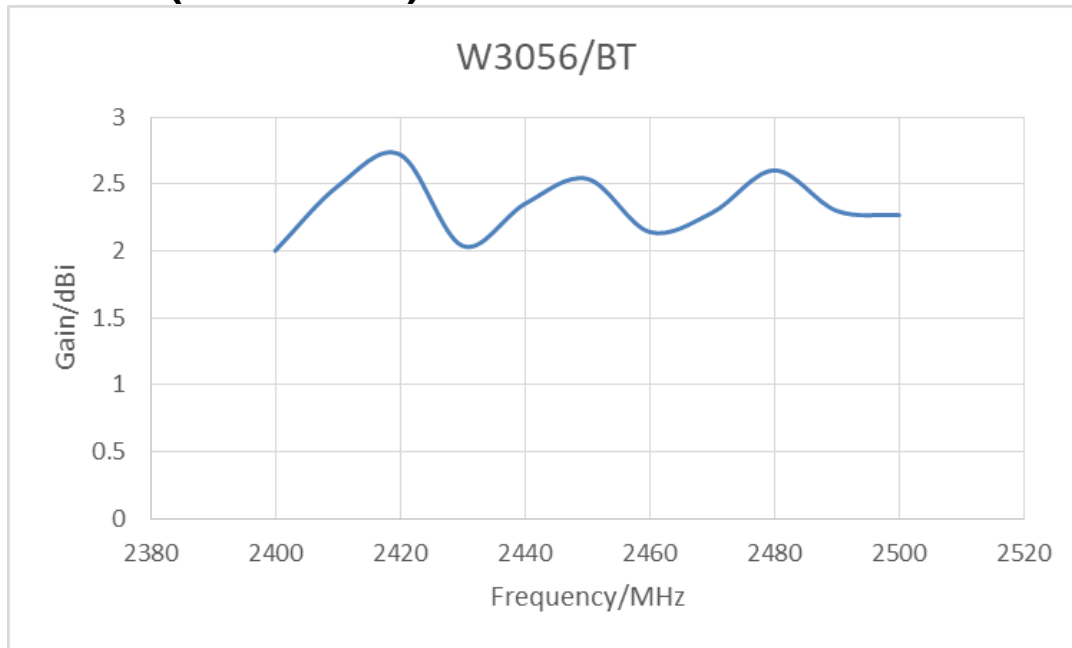
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Description: Ceramic Single Feed GNSS/BT
Antenna

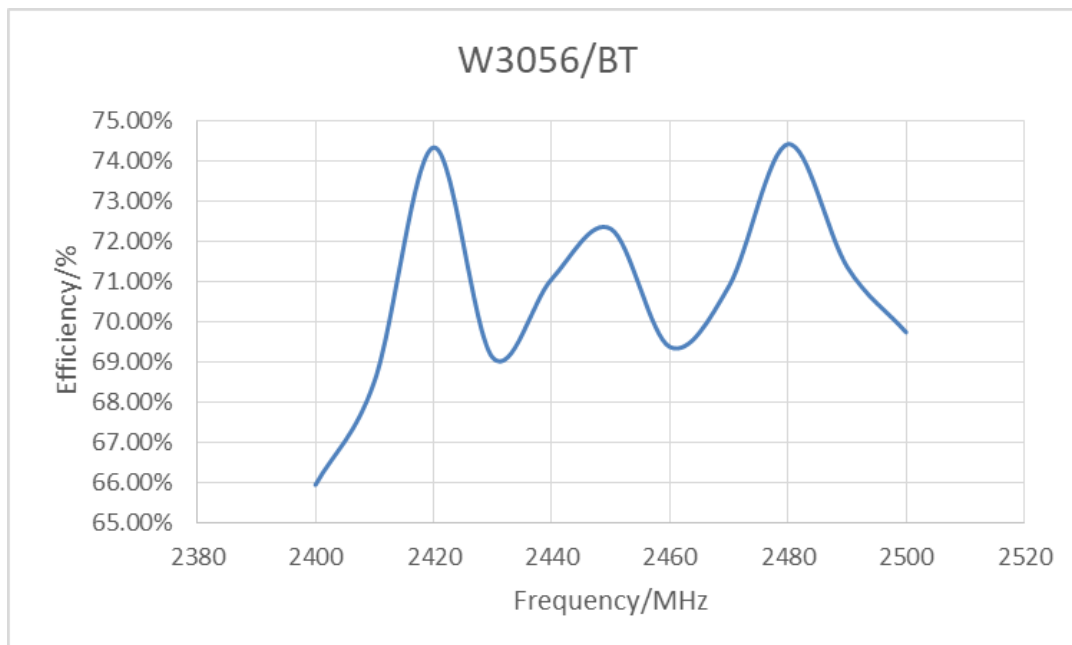
PART NUMBER: W3056

CHARTS

Peaking Gain/ BT(2.4G-2.5G)



Rad Efficiency/ BT(2.4G-2.5G)



Issue: 1837

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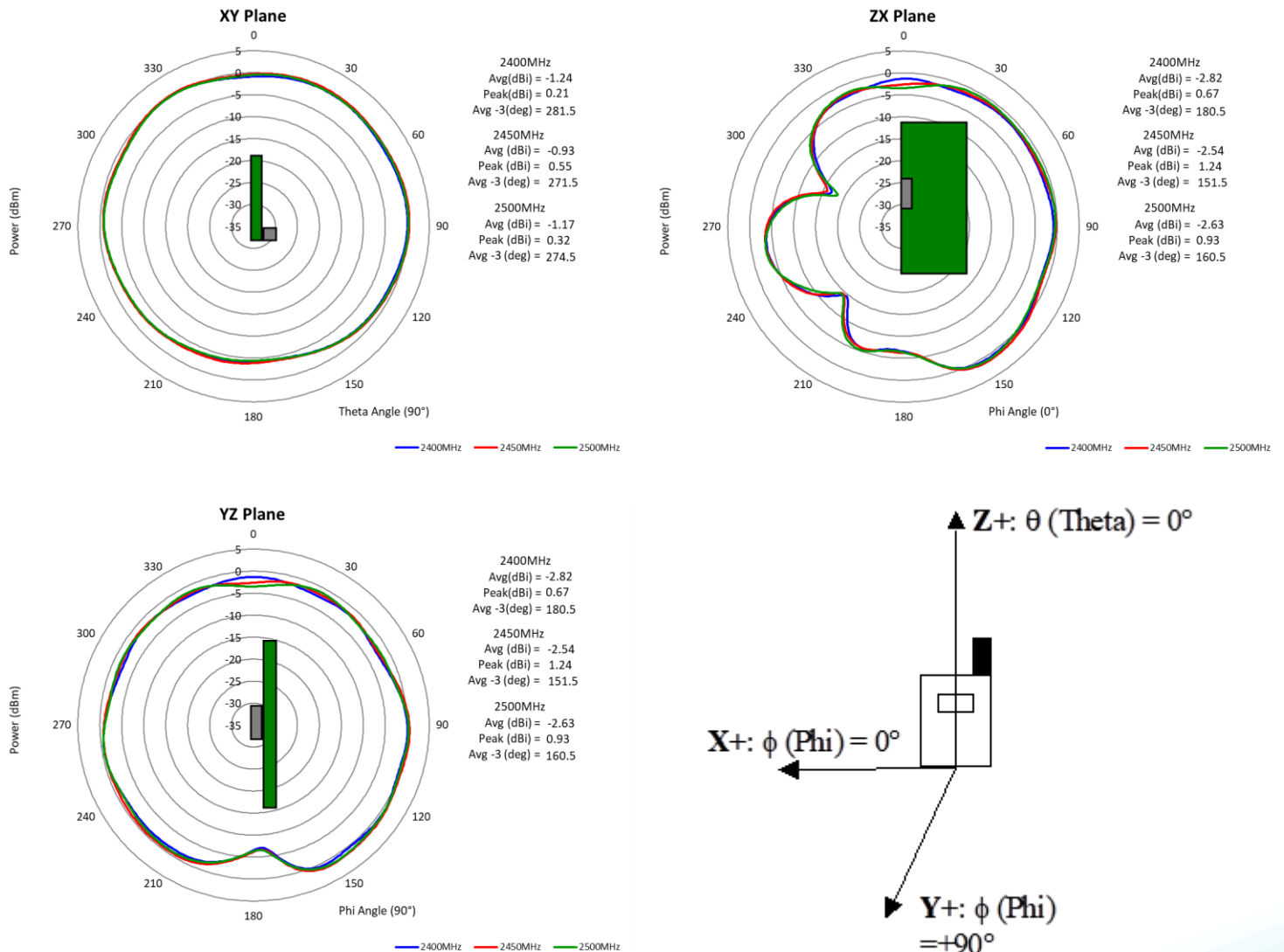
Description: Ceramic Single Feed GNSS/BT Antenna

Series: Ceramic Antenna

PART NUMBER: W3056

CHARTS

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



Issue: 1837

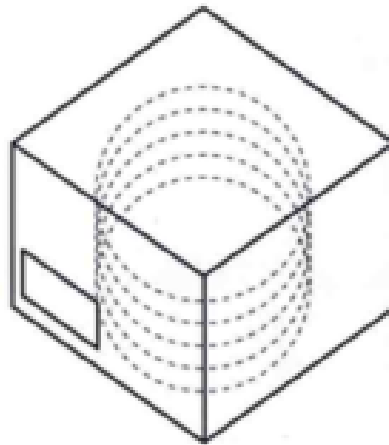
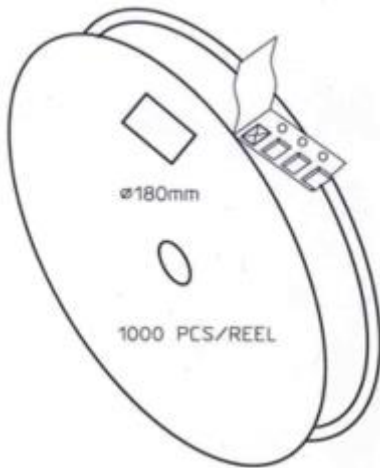
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PACKAGING

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



2. MSL: Level 3

2.1 Calculated shelf life in sealed bag: 12 months at $< 30^{\circ}\text{C}$ and 60% relative humidity (RH)

2.2 Peak temperature in reflow: 260°C

2.3 After bag is opened, devices that will be subjected to reflow solder or other temperature process must:

- a) Mount within: 168 hours of factory conditions $\leq 30^{\circ}\text{C}/60\%$
- b) stored at $< 20\%$ RH

2.4 Devices require bake, before mounting, if:

- a) Humidity Indicator Card is $> 20\%$ when read at $23 \pm 5^{\circ}\text{C}$
- b) 3a or 3b not met

2.5 If baking is required, devices may be baked for 24 hours at $125\sim 130^{\circ}\text{C}$



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Электрон
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