



# Datasheet

Circularly Polarized Beidou Passive Embedded Ceramic Patch Antenna

**Model:** AIGC060

**PN:** M04-0105900R0A

**Description:**

Beidou Satellite Communication Stacked Patch Antenna

L-band: 1610 - 1626.5 MHz, LHCP

S-band: 2483.5 - 2500 MHz, RHCP

**Features:**

Ceramic Patch Element

Dual Feed, 2-Pin Configuration

Dimensions: 25 x 25 x 6 + 18 x 18 x 4 mm

Tuned for 36 x 36 mm Ground Plane

Low Axial Ratio

Adhesive Mount

RoHS & Reach Compliant



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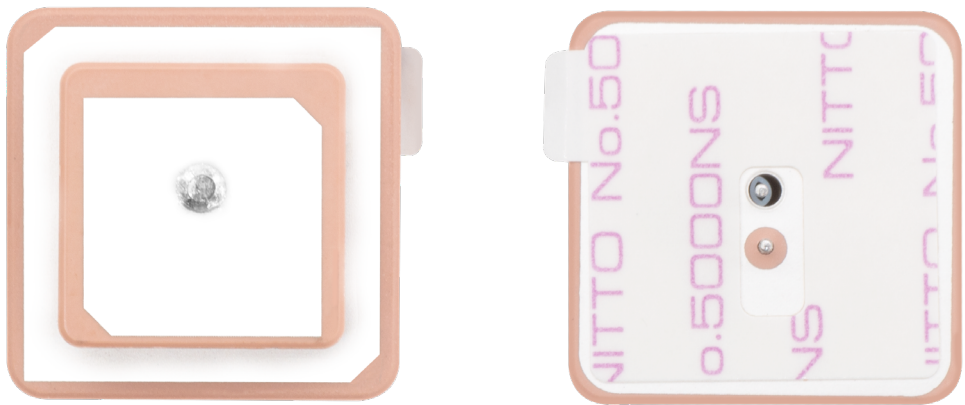


FEATURES & BENEFITS

- Ceramic Patch Element
- Compact, Multi-system Compatible
- 2-Pin Configuration
- Low Axial Ratio
- Customization Available
- RoHS & Reach Compliant
- Covering Bands: BeiDou

APPLICATIONS

- Satellite Navigation Receivers
- Geodetic Surveying and Mapping
- Channel Surveying and Mapping
- Precision Agriculture
- Marine Surveying
- Asset and Fleet Tracking
- Oil, Gas, and Mining Industries
- M2M Applications
- Hand-held/Portable Devices



Antenna Diagram

ORDER INFORMATION

|                |                                                                    |
|----------------|--------------------------------------------------------------------|
| Product Name   | Circularly Polarized Beidou Passive Embedded Ceramic Patch Antenna |
| Model          | AIGC060                                                            |
| Part Number    | M04-0105900R0A                                                     |
| Dimensions     | 25 x 25 x 6 + 18 x 18 x 4 mm                                       |
| Weight         | 18.3 g                                                             |
| Mounting       | Internal/Embedded/Adhesive Mount                                   |
| Custom Options | Logo, Packaging, Cable and Connectors                              |



## REFERENCE GUIDE

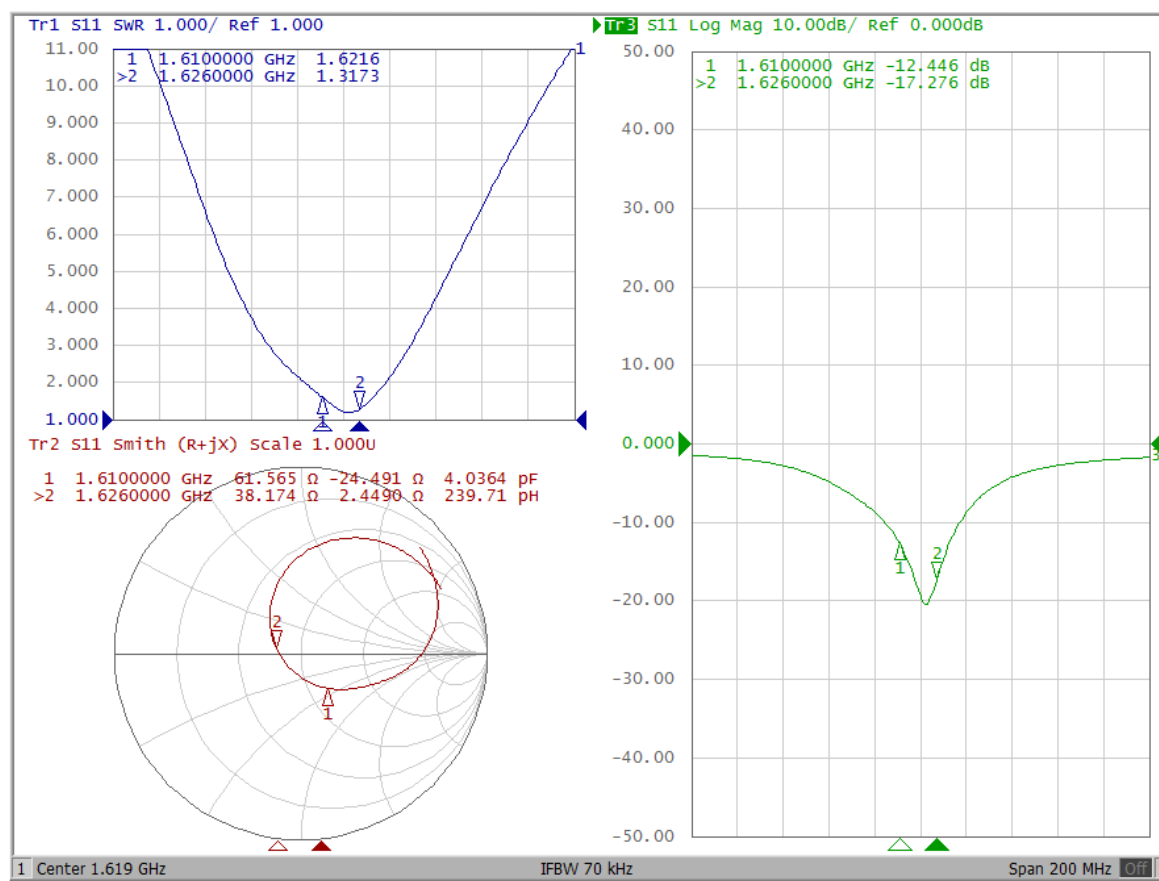
| Antenna                                                                                                        |                                                     |                                                     |         |         |
|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|---------|---------|
| Frequency                                                                                                      | L-band: 1610 - 1626.5 MHz, LHCP                     |                                                     |         |         |
|                                                                                                                | S-band: 2483.5 - 2500 MHz, RHCP                     |                                                     |         |         |
| Bandwidth                                                                                                      | 50 MHz                                              |                                                     |         |         |
| VSWR                                                                                                           | <2.0                                                |                                                     |         |         |
| Efficiency (%)                                                                                                 | 69.29                                               |                                                     |         |         |
| Peak Gain (dBi)                                                                                                | 2.06                                                |                                                     |         |         |
| Axial Ratio (dB)                                                                                               | <3                                                  |                                                     |         |         |
| Polarization                                                                                                   | RHCP                                                |                                                     |         |         |
| Radiation Pattern                                                                                              | Directional                                         |                                                     |         |         |
| Input Impedance                                                                                                | 50 Ω                                                |                                                     |         |         |
| Environmental                                                                                                  |                                                     |                                                     |         |         |
| Operating Temperature                                                                                          | -40°C to +75°C                                      |                                                     |         |         |
| Storage Temperature                                                                                            | -40°C to +85°C                                      |                                                     |         |         |
| Relative Humidity                                                                                              | 40% to 95%                                          |                                                     |         |         |
| Vibration                                                                                                      | Wave Form: Random Vibration                         |                                                     |         |         |
|                                                                                                                | Test Time: 30min/Axis                               |                                                     |         |         |
|                                                                                                                | Direction: X, Y, Z Axis                             |                                                     |         |         |
|                                                                                                                | PSD Break Points<br>for 9.8 RMS (m/s <sup>2</sup> ) | Frequency (Hz)                                      | 50      | 300     |
|                                                                                                                |                                                     | Acceleration ((m/s <sup>2</sup> ) <sup>2</sup> /Hz) | 0.38416 | 0.38416 |
| RoHS Compliant                                                                                                 | Yes                                                 |                                                     |         |         |
| All data were measured using a 36x36 ground plane and two 40-mm-long RF1.13 cables. Application data may vary. |                                                     |                                                     |         |         |

## ELECTRICAL PERFORMANCE(1610-1626.5MHz)

### Note

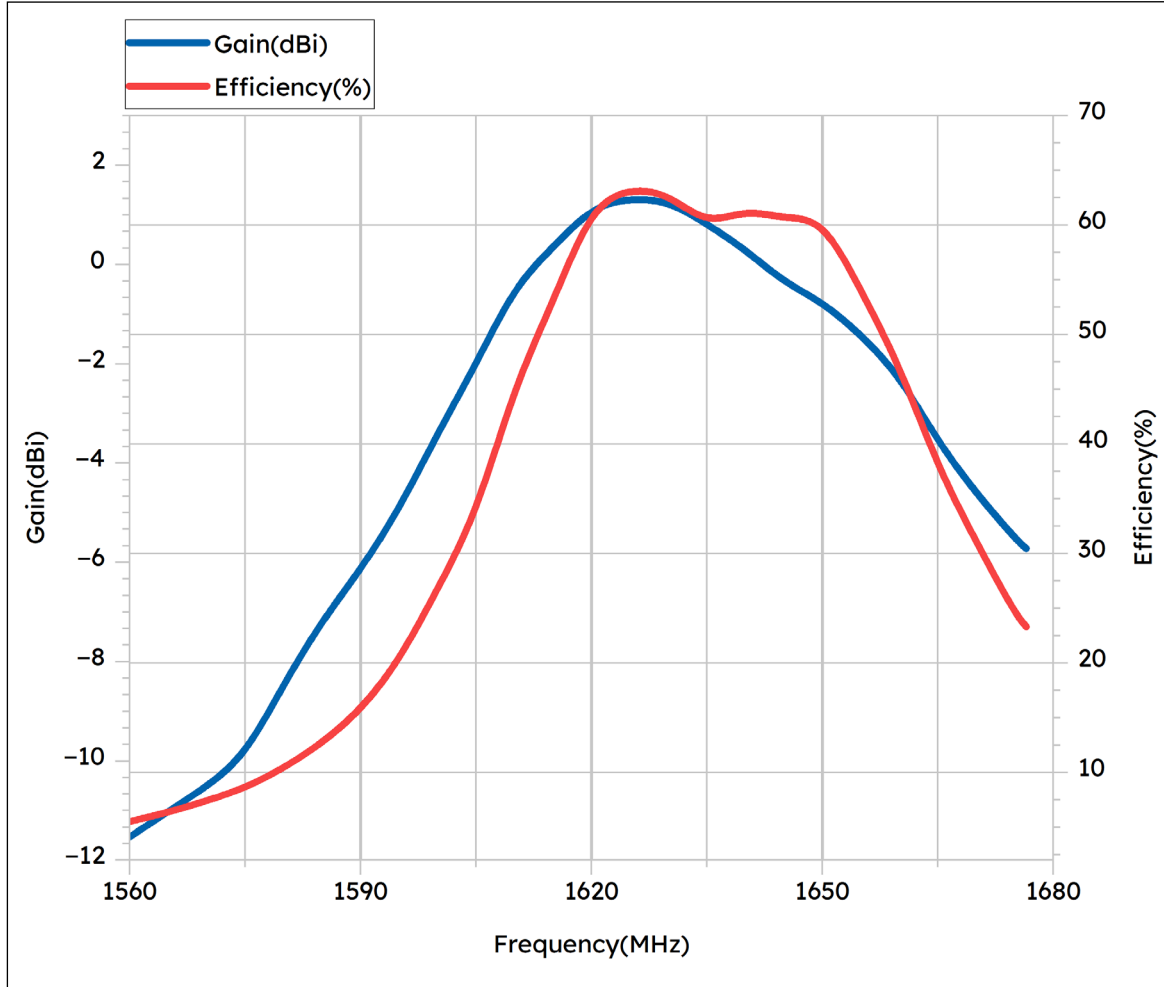
All data were measured using a 36x36 ground plane and two 40-mm-long RF1.13 cables. Application data may vary.

### S11





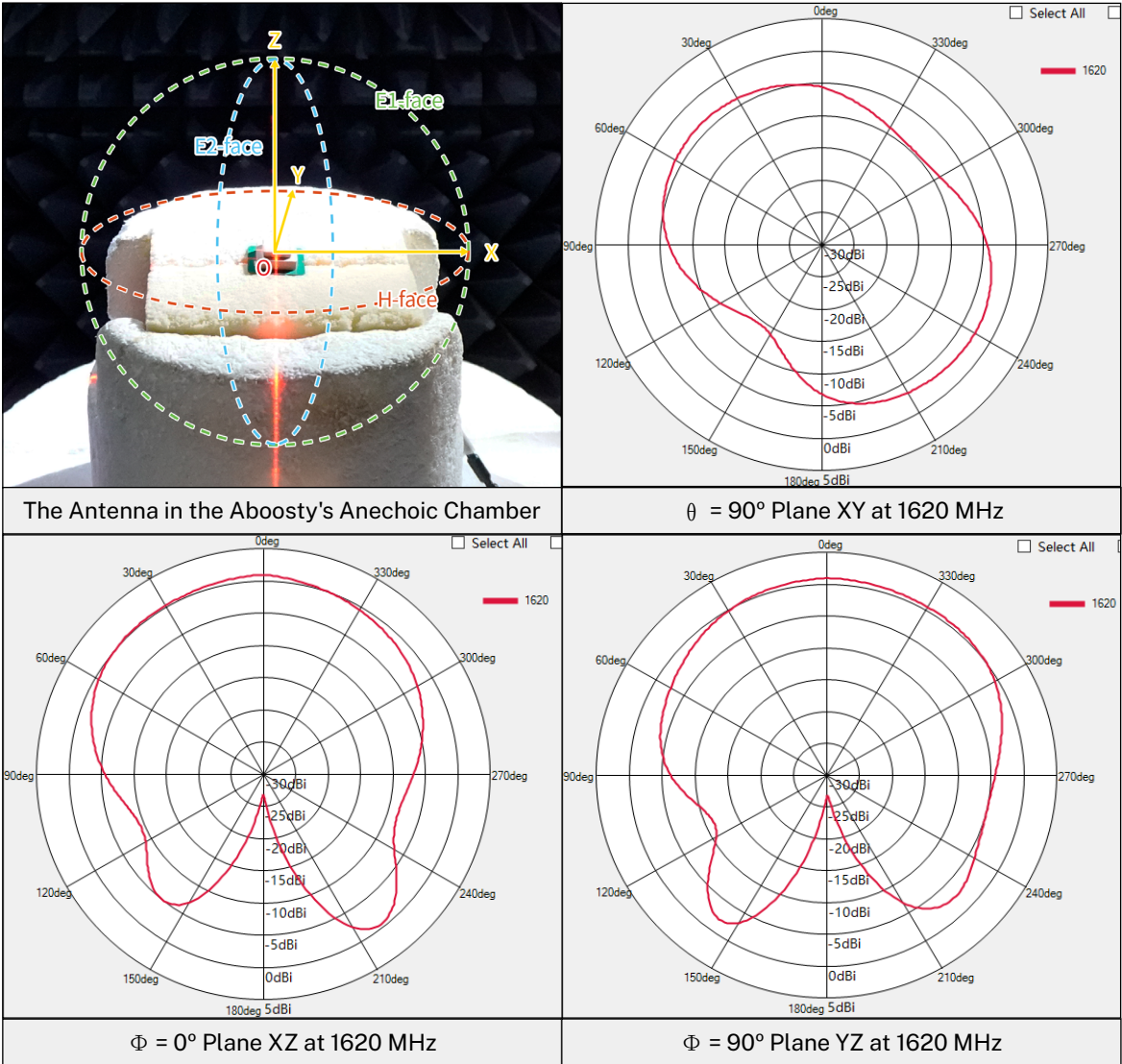
## Passive Gain (dBi) and Total Efficiency (%)

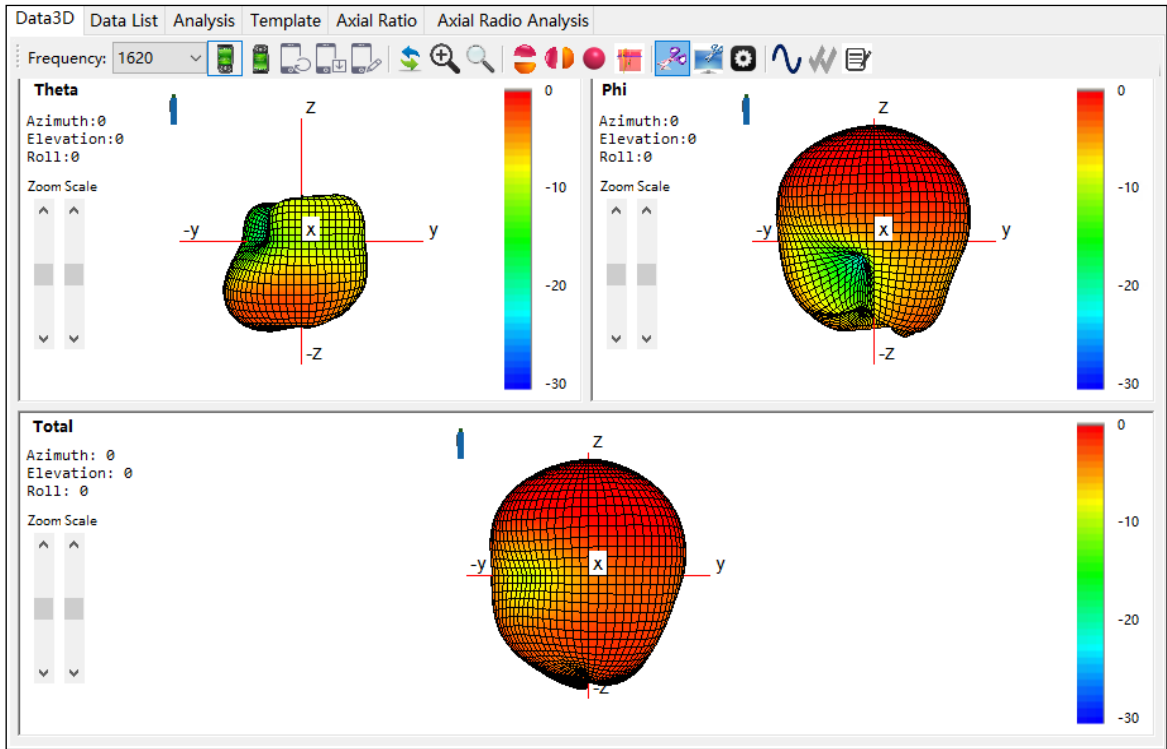


| Freq (MHz) | Gain (dBi) | Efficiency (%) | Freq (MHz) | Gain (dBi) | Efficiency (%) |
|------------|------------|----------------|------------|------------|----------------|
| 1560       | -11.53     | 5.53           | 1625       | 1.34       | 63.39          |
| 1565       | -11.01     | 6.38           | 1630       | 1.28       | 62.89          |
| 1570       | -10.52     | 7.44           | 1635       | 0.82       | 59.96          |
| 1575       | -9.89      | 8.6            | 1640       | 0.3        | 61.47          |
| 1580       | -8.45      | 10.43          | 1645       | -0.36      | 60.58          |
| 1585       | -7.17      | 12.72          | 1650       | -0.75      | 60.69          |
| 1590       | -6.15      | 15.7           | 1655       | -1.41      | 54.03          |
| 1595       | -4.93      | 20.22          | 1660       | -2.22      | 47.26          |
| 1600       | -3.4       | 26.78          | 1665       | -3.57      | 37.89          |
| 1605       | -2.01      | 33.51          | 1670       | -4.61      | 31.06          |
| 1610       | -0.43      | 45.37          | 1675       | -5.51      | 24.55          |
| 1615       | 0.35       | 52.93          | 1676.5     | -5.72      | 23.32          |
| 1620       | 1.16       | 61.78          |            |            |                |



## 2D and 3D Radiation Patterns (1620 MHz)





3D at 1620 MHz, Gain= 1.16 dBi

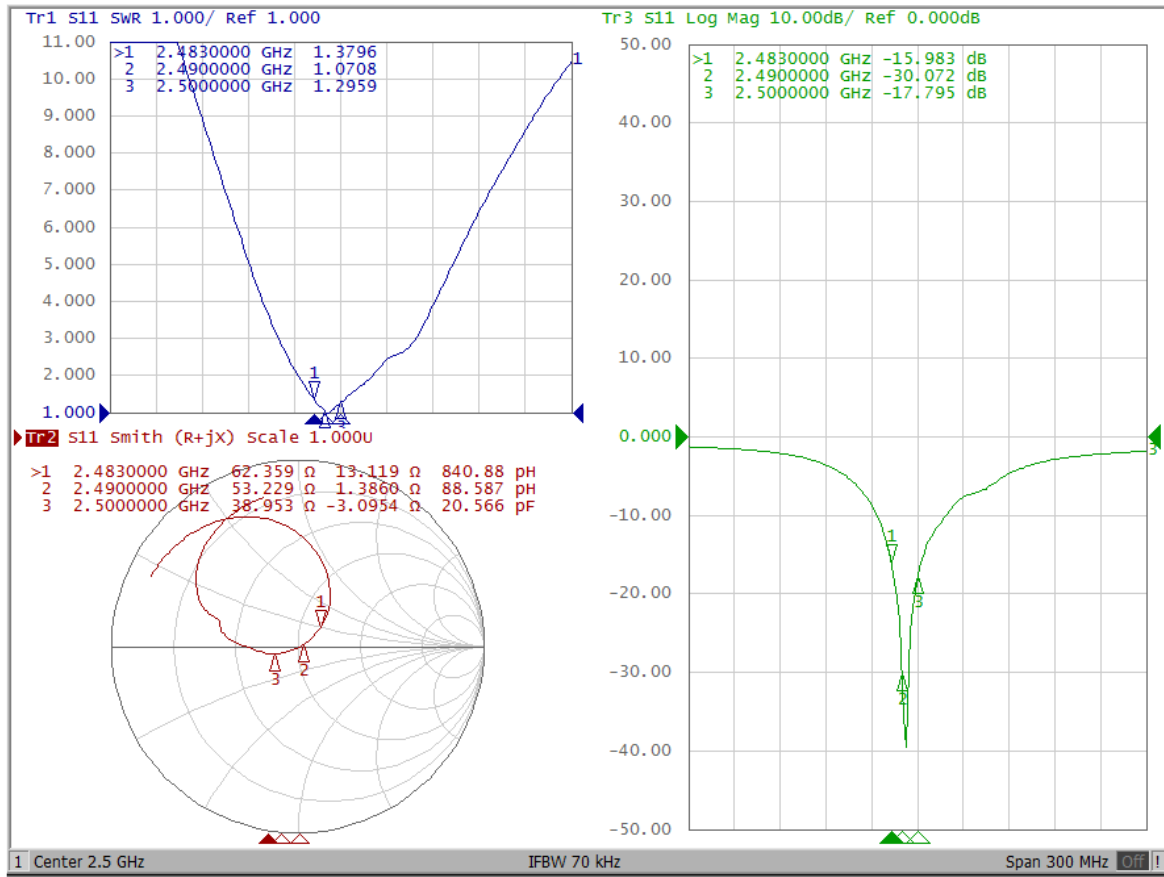


## ELECTRICAL PERFORMANCE(2483.5-2500MHz)

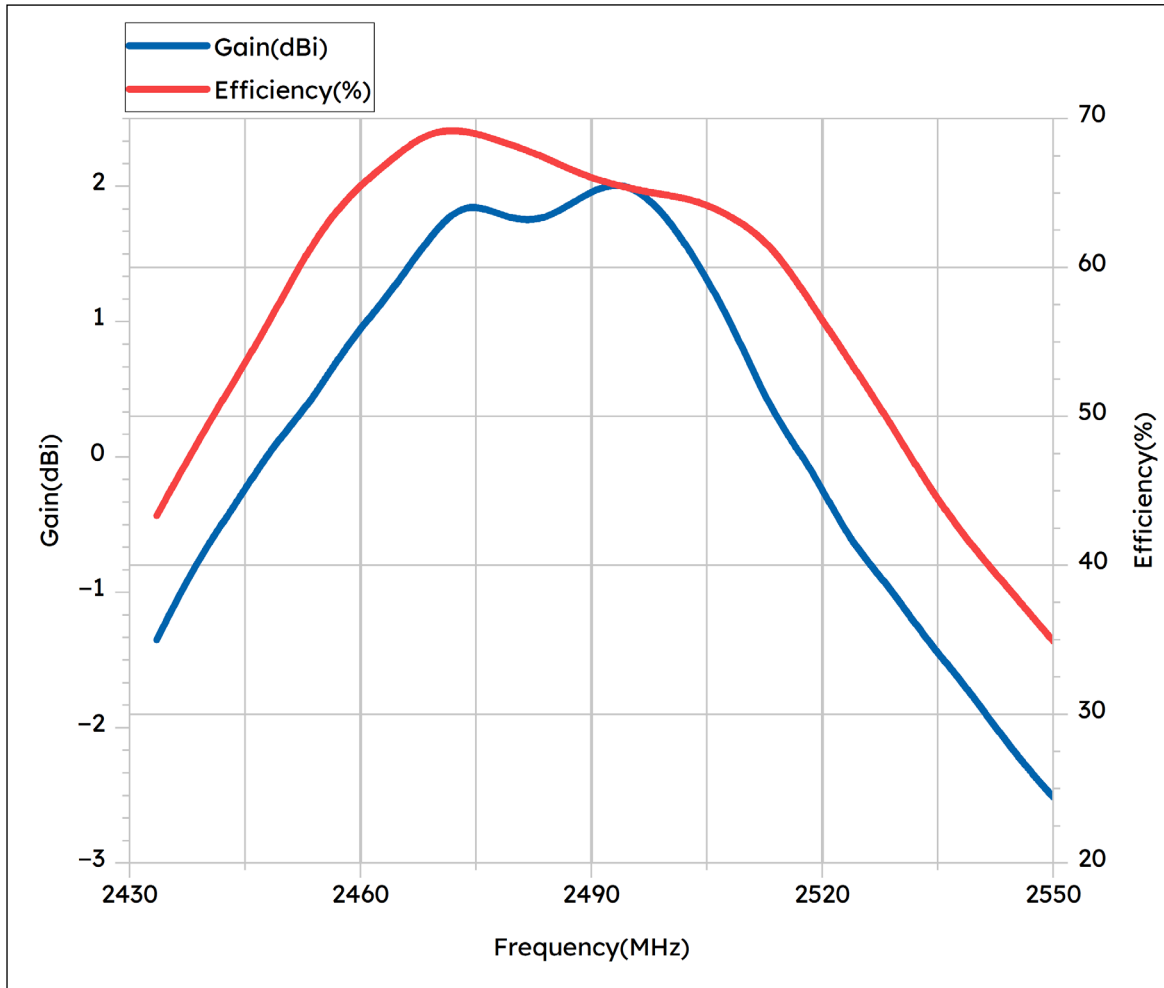
### Note

All data were measured using a 36x36 ground plane and two 40-mm-long RF1.13 cables. Application data may vary.

### S11

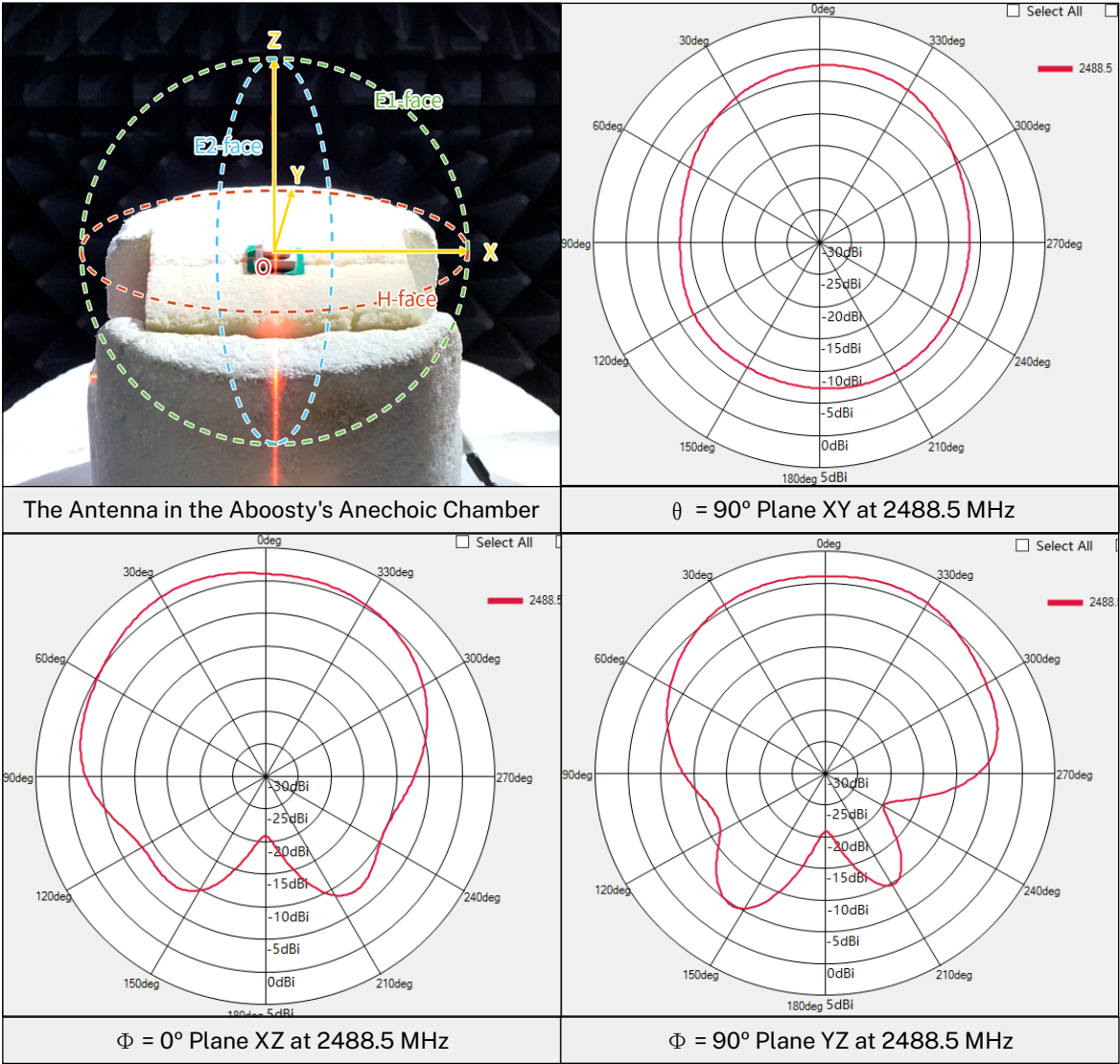


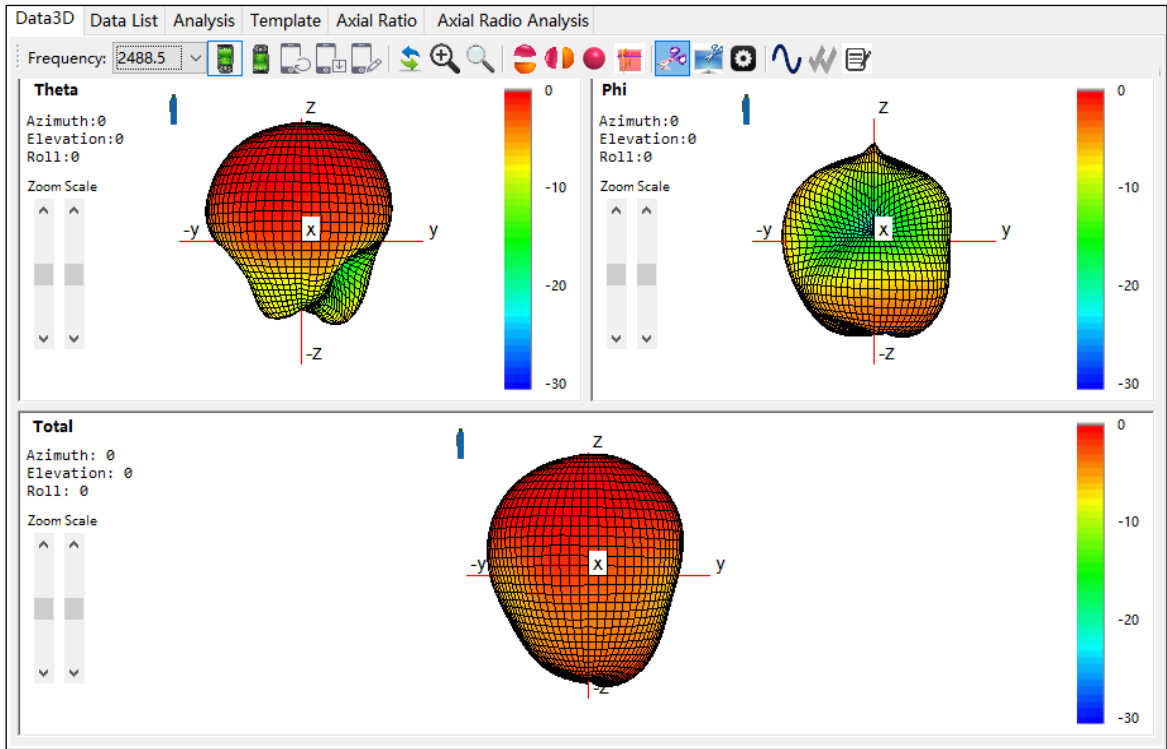
## Passive Gain (dBi) and Total Efficiency (%)



| Freq (MHz) | Gain (dBi) | Efficiency (%) | Freq (MHz) | Gain (dBi) | Efficiency (%) |
|------------|------------|----------------|------------|------------|----------------|
| 2433.5     | -1.35      | 43.35          | 2498.5     | 1.88       | 64.95          |
| 2438.5     | -0.78      | 48.07          | 2503.5     | 1.47       | 64.58          |
| 2443.5     | -0.37      | 52.32          | 2508.5     | 0.96       | 63.39          |
| 2448.5     | 0.08       | 56.66          | 2513.5     | 0.31       | 61.52          |
| 2453.5     | 0.4        | 61.57          | 2518.5     | -0.07      | 57.63          |
| 2458.5     | 0.86       | 64.91          | 2523.5     | -0.62      | 53.77          |
| 2463.5     | 1.18       | 67.03          | 2528.5     | -0.94      | 49.82          |
| 2468.5     | 1.6        | 69.16          | 2533.5     | -1.35      | 45.54          |
| 2473.5     | 1.91       | 69.29          | 2538.5     | -1.68      | 41.87          |
| 2478.5     | 1.77       | 68.44          | 2543.5     | -2.08      | 38.87          |
| 2483.5     | 1.73       | 67.53          | 2548.5     | -2.42      | 35.83          |
| 2488.5     | 1.92       | 66.27          | 2550       | -2.51      | 34.92          |
| 2493.5     | 2.06       | 65.47          |            |            |                |

2D and 3D Radiation Patterns (2488.5 MHz)

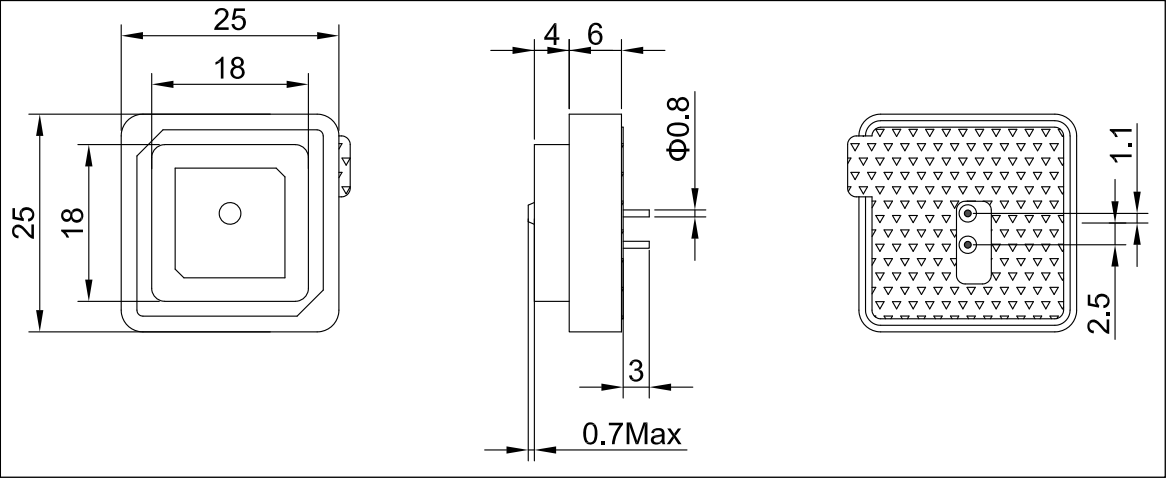




3D at 2488.5 MHz, Gain= 1.92 dBi



# MECHANICAL DIMENSIONS



# ABOOSTY WELCOME ALL ANTENNA OEM/ODM PROJECTS

## Why Choose ABOOSTY



10+ years in antenna R&D, production, and OEM/ODM



MES system supported factory; 50M+ units annual output capacity



Factory directly competitive price



Quick price and lead time estimate



Innovative and patented design solutions



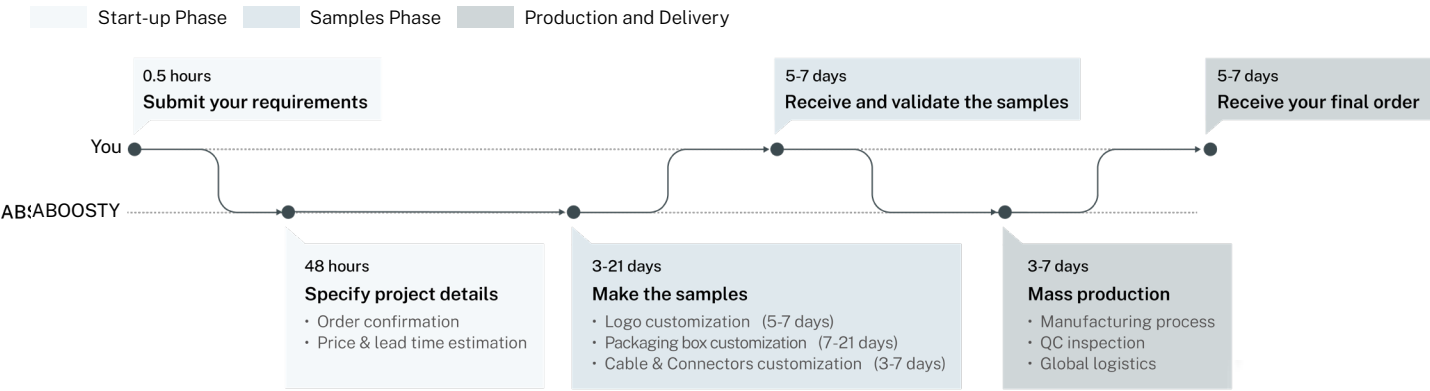
Professional team support & prompt reply within 24h

## What We Provide

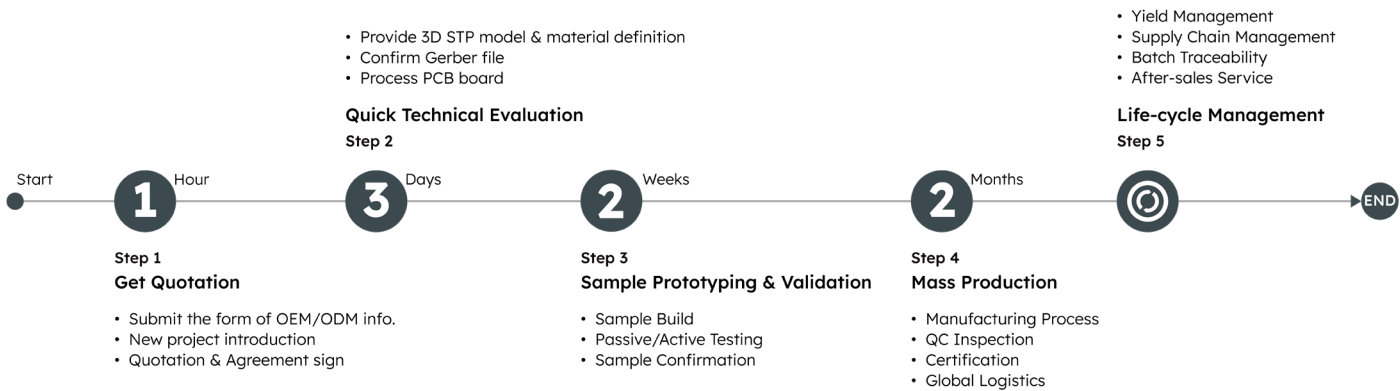
| OEM/ODM Services | Light Customization                                                                                          | Deep Customization                                                                                                                                                                                                   |
|------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  | <ul style="list-style-type: none"><li>• Logo</li><li>• Packaging</li><li>• Cables &amp; Connectors</li></ul> | <ul style="list-style-type: none"><li>• In-depth tailoring for specific applications</li><li>• Functional enhancements</li><li>• Environmental adaptations</li><li>• Vertical certifications</li><li>• ...</li></ul> |

## Custom Process

### Light Customization Process



### Deep Customization Process



**Note:** You can let us handle the PCB prototyping or do it yourself. Choosing self-prototyping may add 2 to 5 weeks to the timeline.

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with Our Antennas

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