



Signal Plus Technology Co., Ltd.

SPECIFICATION FOR APPROVAL

DATE: 2024.11.04

REV.: A

CUSTOMER: Shenzhen Fugao Technology Co.,Ltd

CUSTOMER P/N: External black WiFi 2.4GHz antenna with 1.37mm black cable, L=190mm, with RF connector

PART NAME: 6346F00001

SUPPLIER P/N:

Q'TY: Pcs

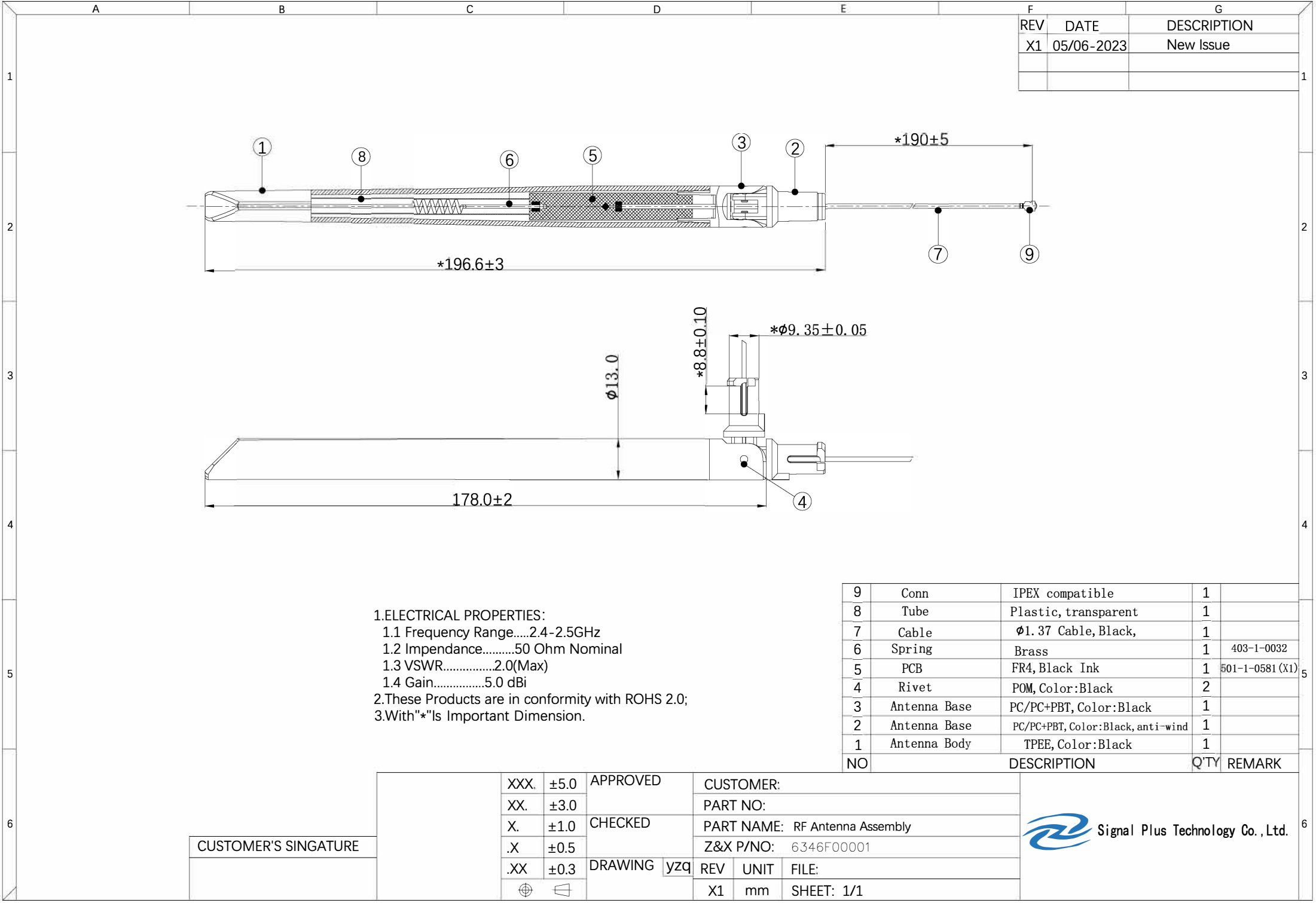
|                      |            |              |
|----------------------|------------|--------------|
| Date:                |            |              |
| CUSTOMER APPROVED BY |            |              |
| Approved by          | Checked by | Confirmed by |
|                      |            |              |

|                    |            |             |
|--------------------|------------|-------------|
| SUPPLIER SIGNATURE |            |             |
| Approved by        | Checked by | Prepared by |
| Andy               |            | Cindy       |

ZX-QT-RD-0011-A1

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| F   |            | G           |  |
|-----|------------|-------------|--|
| REV | DATE       | DESCRIPTION |  |
| X1  | 05/06-2023 | New Issue   |  |
|     |            |             |  |

1.ELECTRICAL PROPERTIES:  
1.1 Frequency Range.....2.4-2.5GHz  
1.2 Impedance.....50 Ohm Nominal  
1.3 VSWR.....2.0(Max)  
1.4 Gain.....5.0 dBi  
2.These Products are in conformity with ROHS 2.0;  
3.With"\*"Is Important Dimension.

|    |              |                                   |      |                 |
|----|--------------|-----------------------------------|------|-----------------|
| 9  | Conn         | IPEX compatible                   | 1    |                 |
| 8  | Tube         | Plastic, transparent              | 1    |                 |
| 7  | Cable        | $\phi 1.37$ Cable, Black,         | 1    |                 |
| 6  | Spring       | Brass                             | 1    | 403-1-0032      |
| 5  | PCB          | FR4, Black Ink                    | 1    | 501-1-0581 (X1) |
| 4  | Rivet        | POM, Color:Black                  | 2    |                 |
| 3  | Antenna Base | PC/PC+PBT, Color:Black            | 1    |                 |
| 2  | Antenna Base | PC/PC+PBT, Color:Black, anti-wind | 1    |                 |
| 1  | Antenna Body | TPEE, Color:Black                 | 1    |                 |
| NO | DESCRIPTION  |                                   | Q'TY | REMARK          |

|                      |      |           |          |                                |      |            |
|----------------------|------|-----------|----------|--------------------------------|------|------------|
| CUSTOMER'S SINGATURE | XXX. | $\pm 5.0$ | APPROVED | CUSTOMER:                      |      |            |
|                      | XX.  | $\pm 3.0$ |          | PART NO:                       |      |            |
|                      | X.   | $\pm 1.0$ |          | PART NAME: RF Antenna Assembly |      |            |
|                      | .X   | $\pm 0.5$ | DRAWING  | Z&X P/NO: 6346F00001           |      |            |
|                      | .XX  | $\pm 0.3$ |          | REV                            | UNIT | FILE:      |
|                      |      |           |          | X1                             | mm   | SHEET: 1/1 |



**Signal Plus Technology Co., Ltd.**

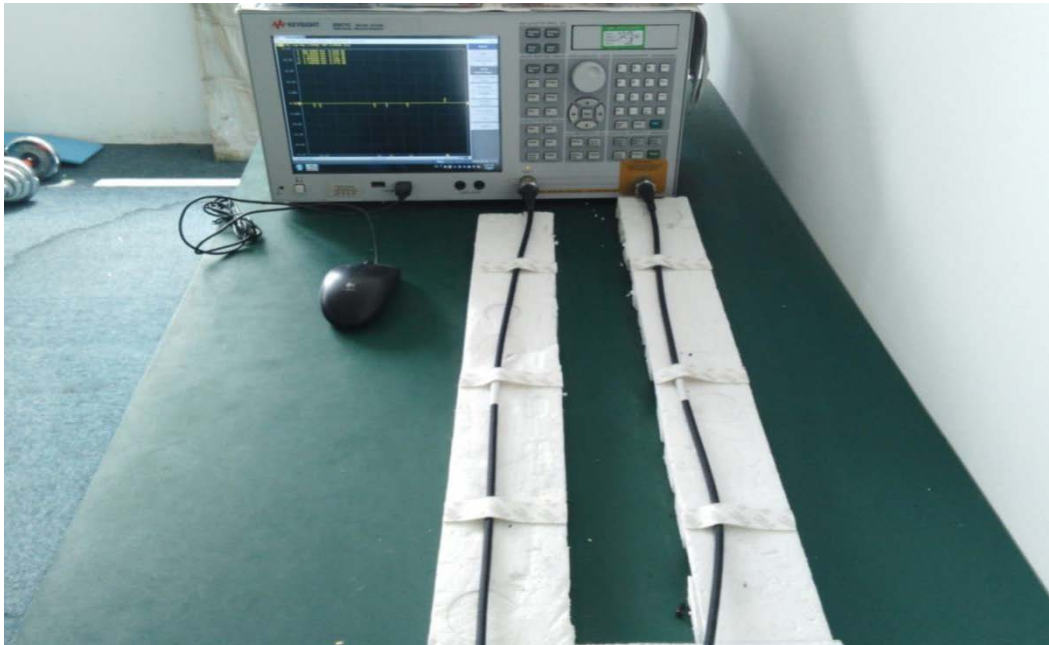
## Antenna Test Report

## 1. RF Fixture Experiment

### 1.1 Test Setup

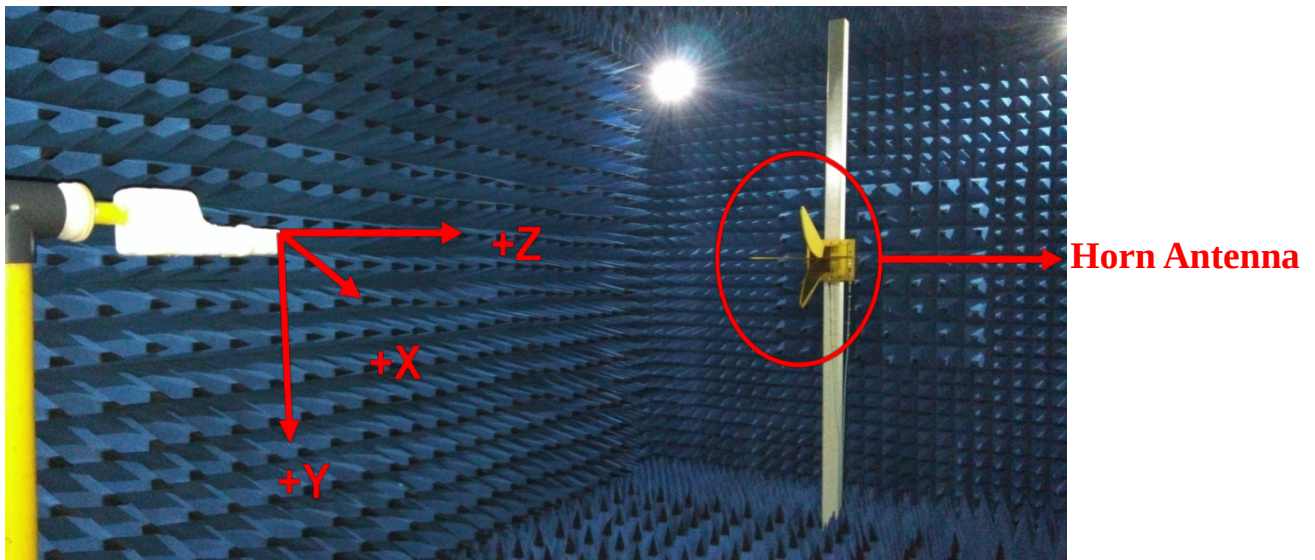
#### 1.1.1 VNA Test Setup

VSWR and Return Loss measurements ( $S_{11}$ ) were performed using an Keysight E5071C Network Analyzer. The isolation between antennas is also tested. The testing was performed with apparatus in free space.

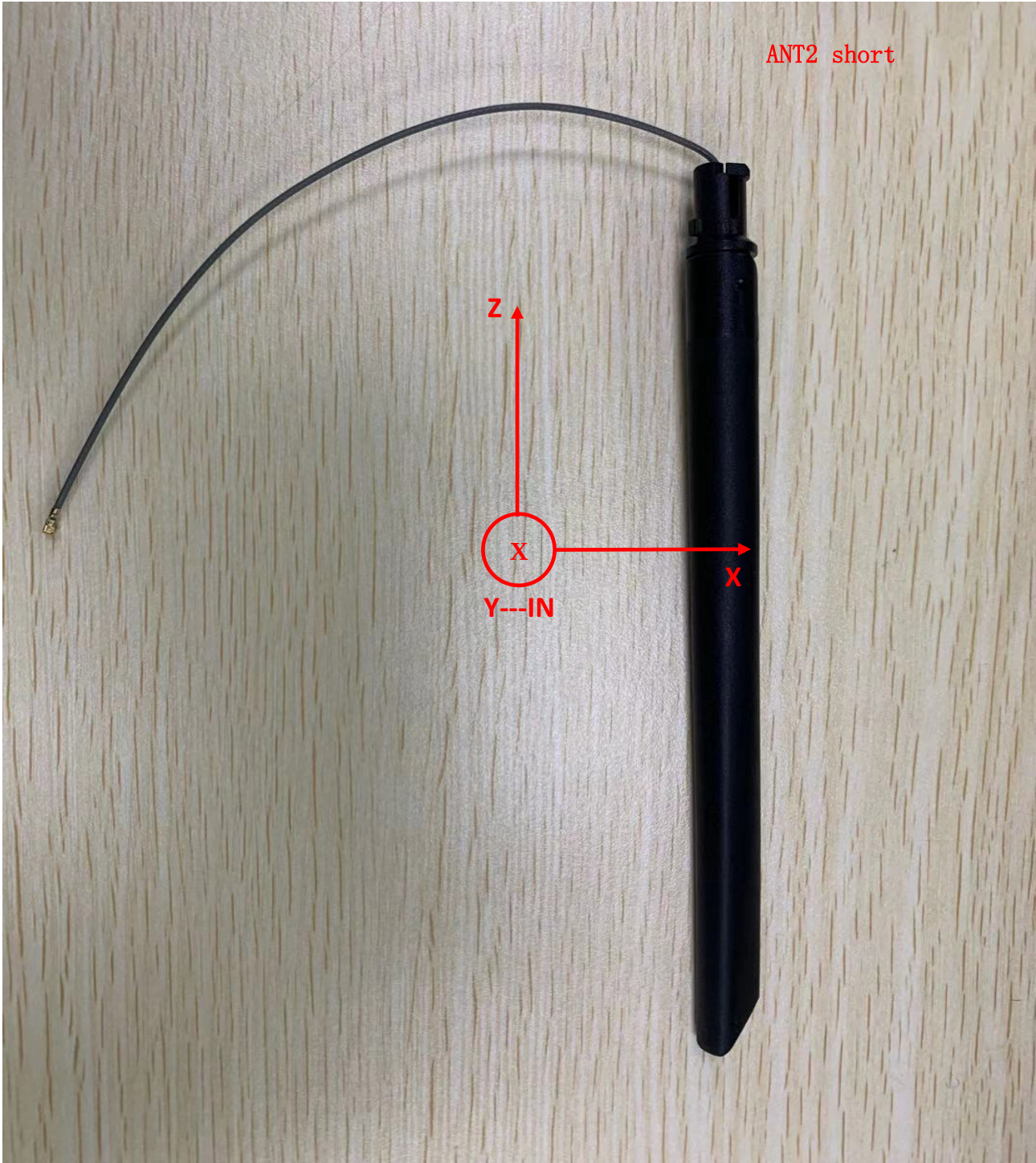


#### 1.1.2 Anechoic Chamber Test Setup

The gain of the antenna was measured in the anechoic chamber. The chamber provides less than  $-30$  dB reflectivity from 400 MHz through 6 GHz. The chamber size is: 7m\*4m\*3m. The measurement results are calibrated using a leaky wave horn standard. We can measure the antenna gain and efficiency accurately.



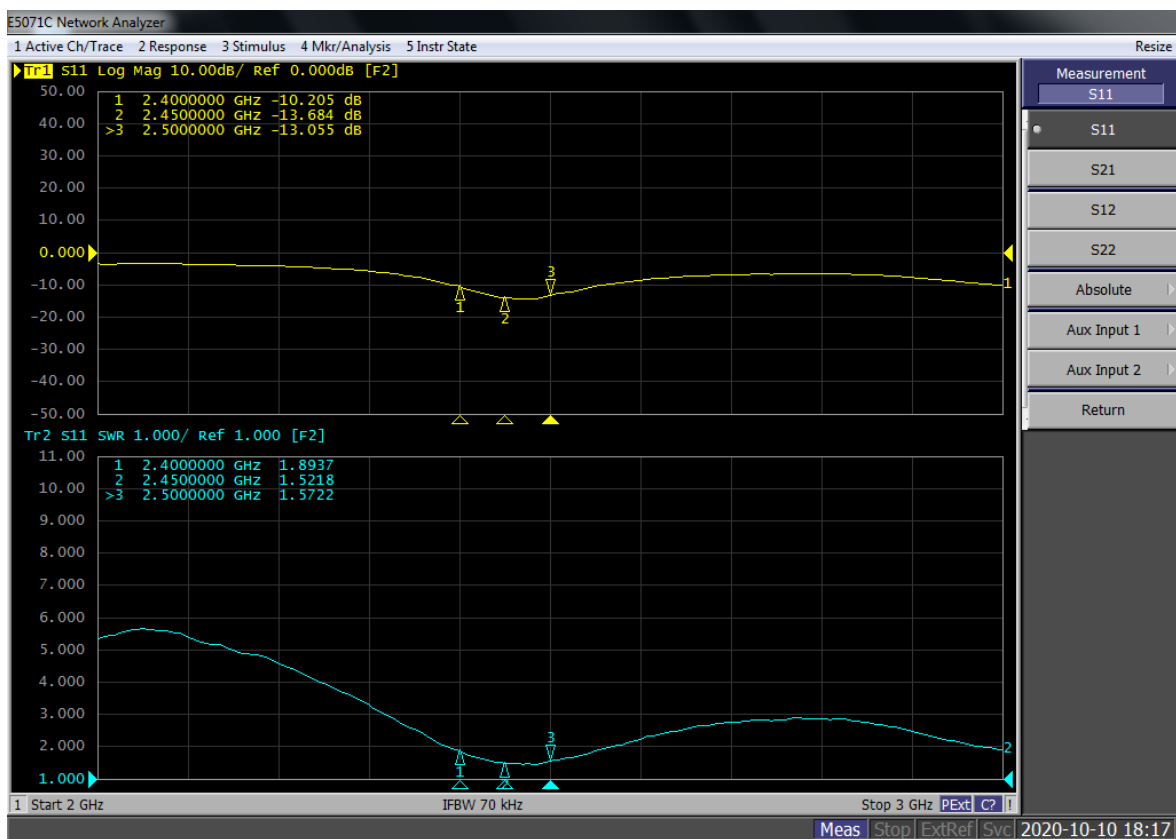
2.Antenna Solution



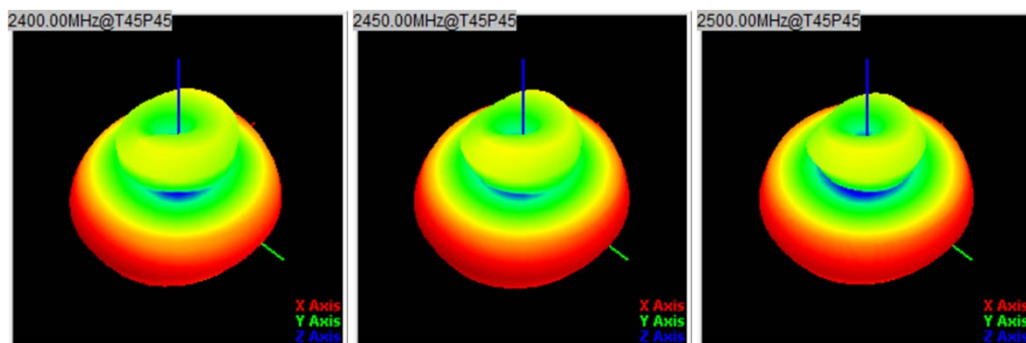
## Data Preview

| Freq.(MHz) | 2400  | 2450  | 2500  |
|------------|-------|-------|-------|
| VSWR       | 1.89  | 1.52  | 1.57  |
| Gain(dBi)  | 5.12  | 4.83  | 4.65  |
| Eff.       | 71.2% | 73.0% | 69.9% |

S11



## Radiation patterns:3D



## Radiation patterns:2D

