

SPECIFICATION FOR APPROVAL

| | |
|--------------------|--|
| CUSTOMER : | Nokia Shanghai Bell Co.Ltd. |
| PART NAME : | G-1425G-B 2.4g /5g 5dBi WiFi2 |
| PART NO. : | 2.4G Φ1.13 Grey L=60mm 5G Φ1.37 Black L=220mm |
| DZZ NO. : | N12-4898-R0A |
| REV. : | V1.0 |

| | MANUFACTURERR SIGNATURE | CUSTOMER SIGNATURE |
|-------------------------|------------------------------------|-------------------------------|
| APPROVED BY: | | |
| DATE: | | |

Shenzhen be-comfortable technology.co.,LTD

深圳市得自在科技有限公司

Address: No.1606,Build C6,HengFeng industrial city,xixiang street,baoan district,Shenzhen

shanghai mengju technology co., LTD

上海市盟钜科技有限公司

103B, Build10, No.198 Zhang Heng Road , Pudong New Area,Shanghai

CONTENTS

| Item | Description | Page |
|-------------|-------------------------------|-------------|
| 1. |cover..... | 1 |
| 2. |Test Report | 7-15 |
| 3. |Drawing | 16 |
| 4. |Packing | 17 |

PCB Antenna Assembly

Specification(With housing)

1.Electrical Properties

- 1.1 Frequency range.....2400~2500MHz&5150~5850MHz
- 1.2 Impedance.....50Ω Norminal
- 1.3 VSWR (Matching Transmit Trace on board) ...≤2
- 1.4 Radiation.....Omni
- 1.5 Gain(Peak).....5dBi
- 1.6 Polarization.....Linear
- 1.7 Admitted Power.....1W
- 1.8 Cable.....Φ1.13 cable Φ1.37 cable
- 1.9 Connector.....RF CONN

2.Physical Properties

- 2.1 Working Temperature.....-20°C ~ +65°C
- 2.2 Storage Temperature.....-30°C ~ +75°C

Antenna Design for G-1425G-B

2.4G/5G 5dBi WiFi2

V1.0

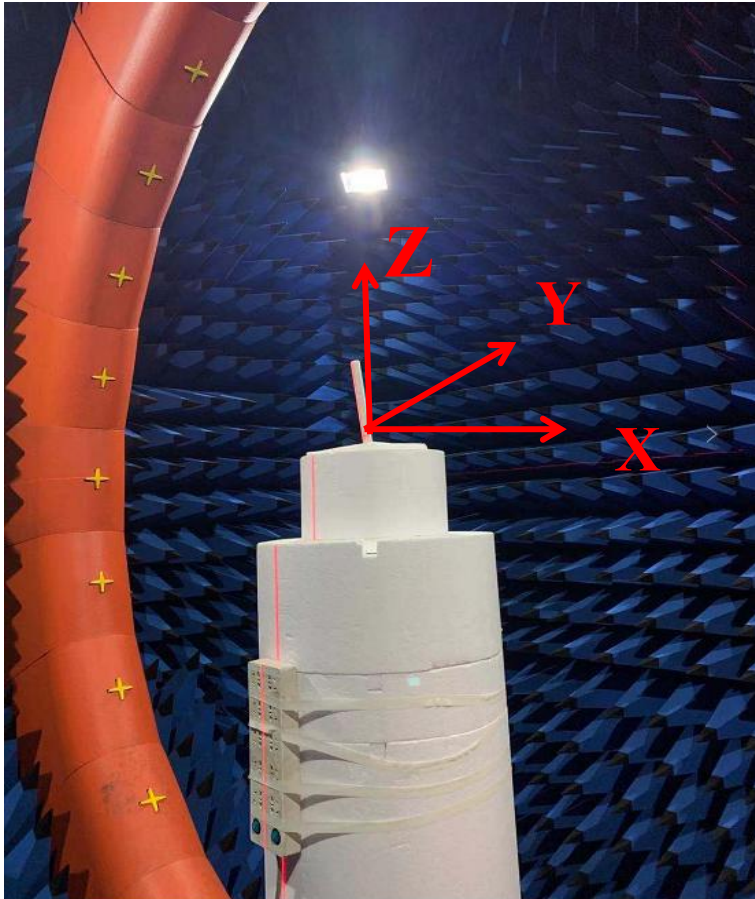
| | |
|-------------------------------------|---------------------|
| Document Number | DZZ-20211124 |
| 1st Released Date | 24/11/2021 |
| Author | Huiping Feng |
| Review By | Huiping Feng |

Specification

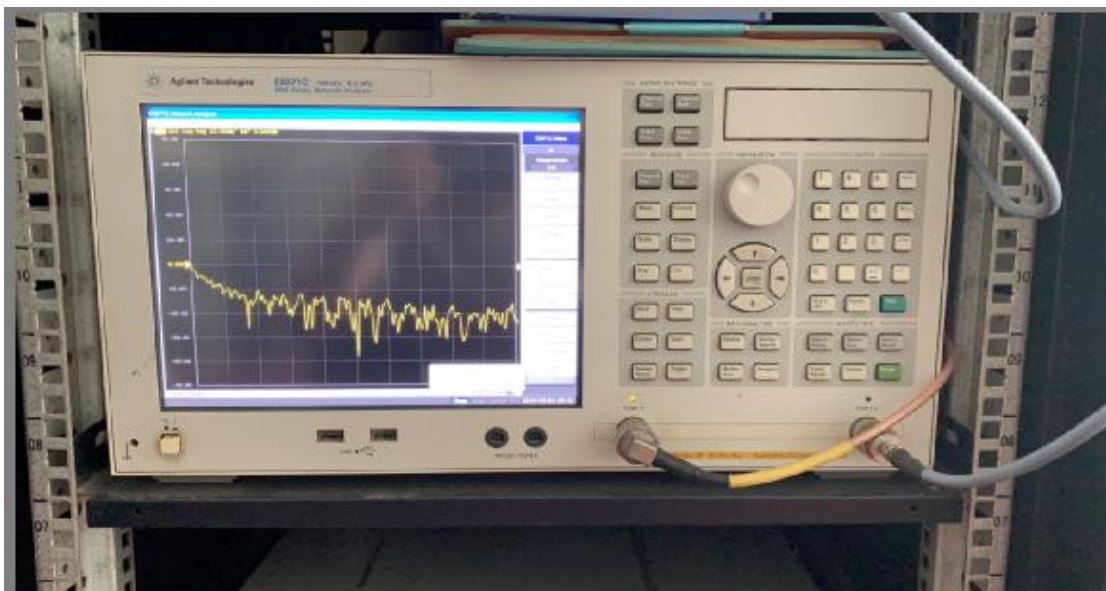
| | |
|--------------------------|--|
| Rough description | 2.4G /5G ANT |
| Item | Initial Specification |
| Dimensions | 158mm*13.5mm*0.4mm |
| Impedance | 50Ω Norminal |
| Test environment | With housing |
| Spectrum | None |
| Frequecy range | 2400~2500MHz&5150~5850MHz |
| Antenna Type | Dipole |
| VSWR | (Matching Transmit Trace on board)≤2 |
| Gain(Peak) | 5dBi |
| Radiation | Omni |
| Polarization | Linear |
| Rad. efficiency | ≥60% |
| Power | 1W |
| Connector Type | IPEX |
| Cable Type | 2.4G Φ1.13 coaxial cable 5G Φ1.37 coaxial cable |
| Cable Length | 2.4G Grey L=60mm 5G Black L=220mm |
| Isolation | None |

1. Test enviroment

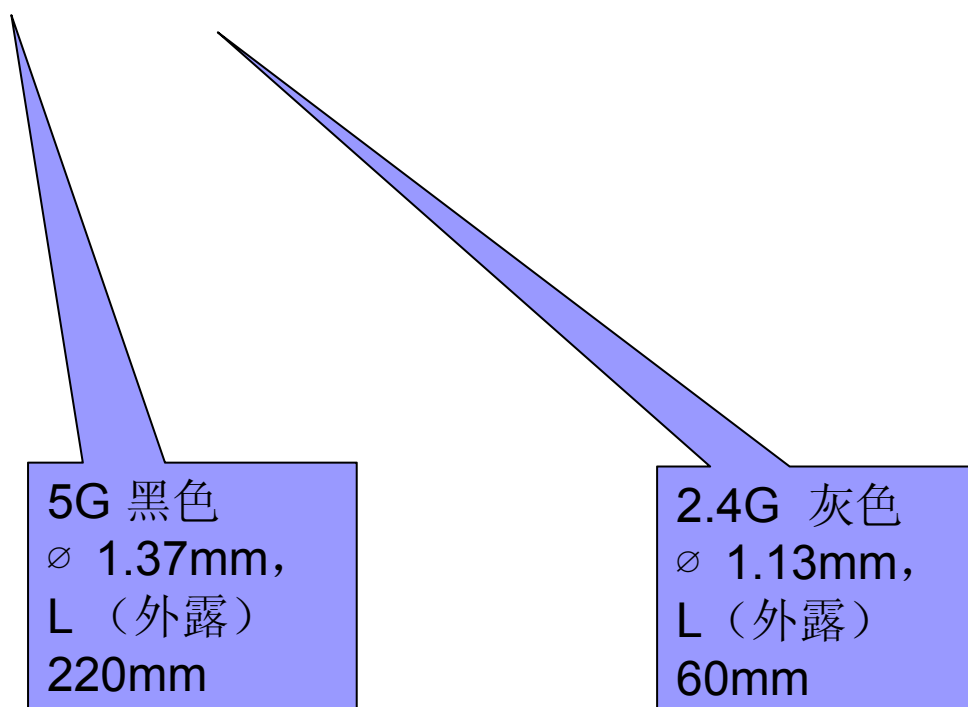
Satimo 24探头



Agilent Technologies E5071C

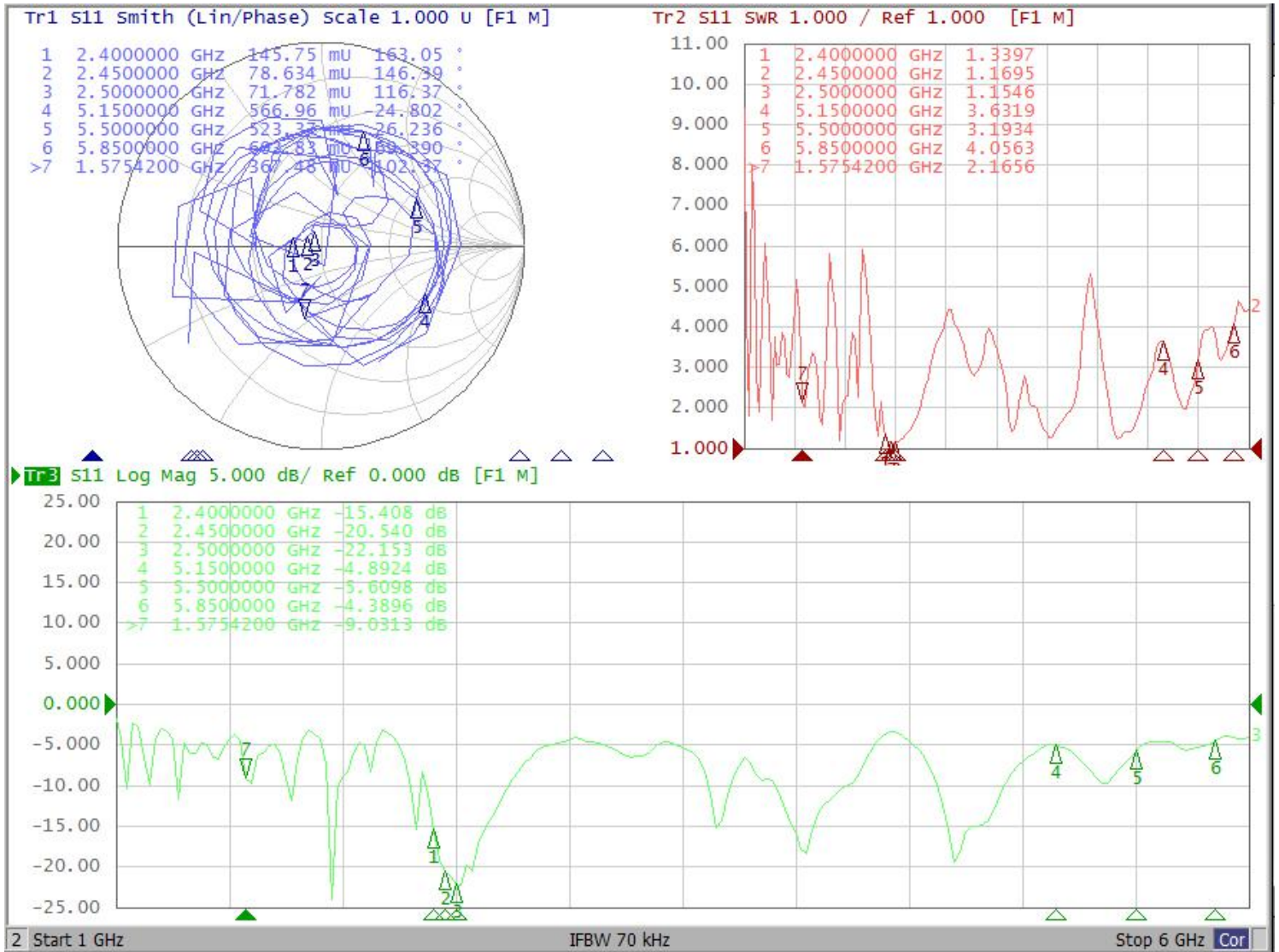


2. Test Antennas' setup and enviroment With housing



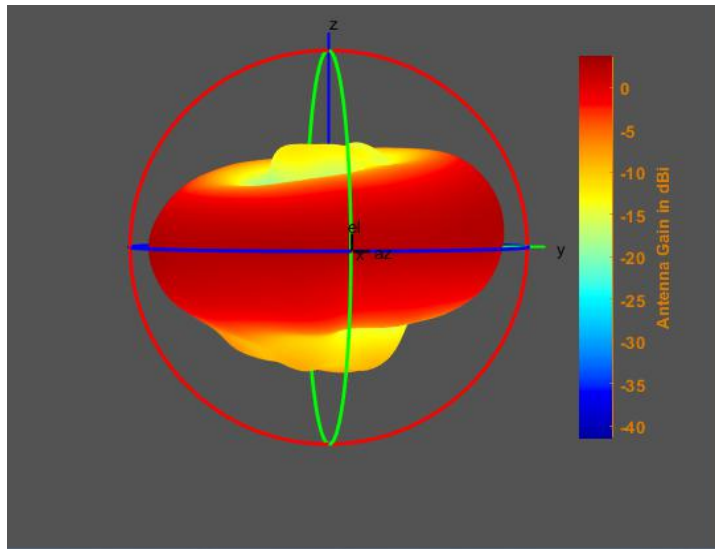
3. 2.4G Grey \varnothing 1.13mm, L 60mm

3.1 2.4G S11 VSWR Smith test results

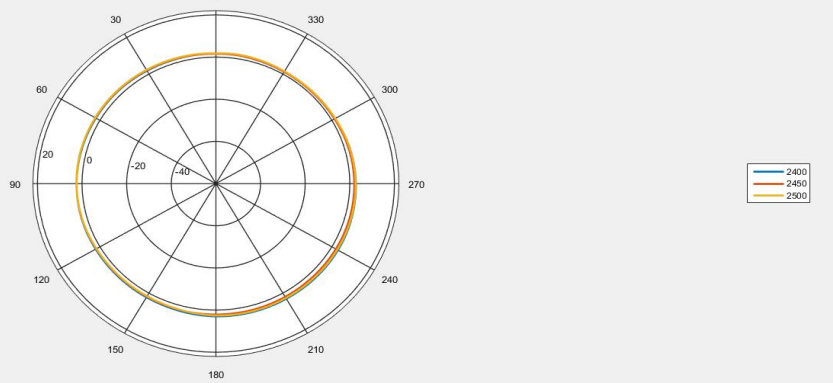


3.2 2.4G radiation pattern

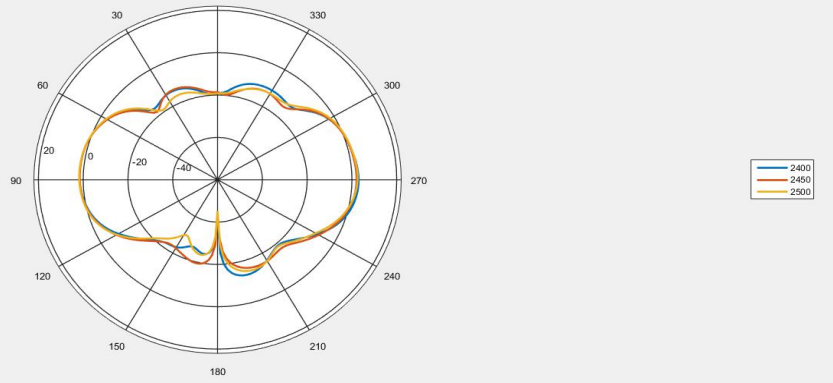
2.45GHz



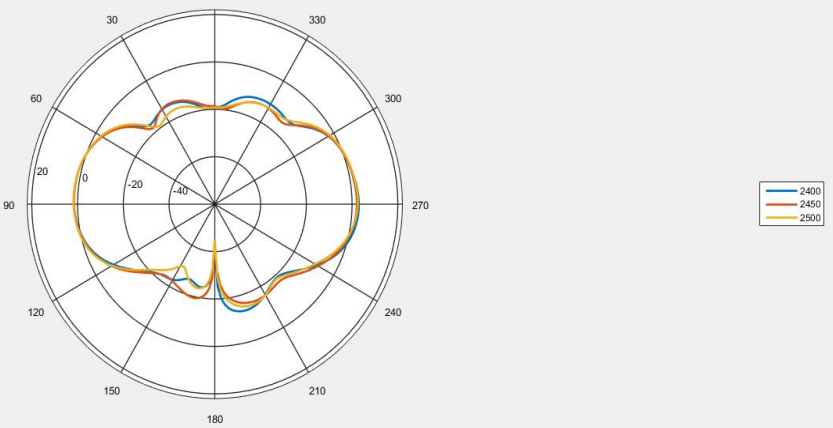
X-Y



X-Z



Y-Z

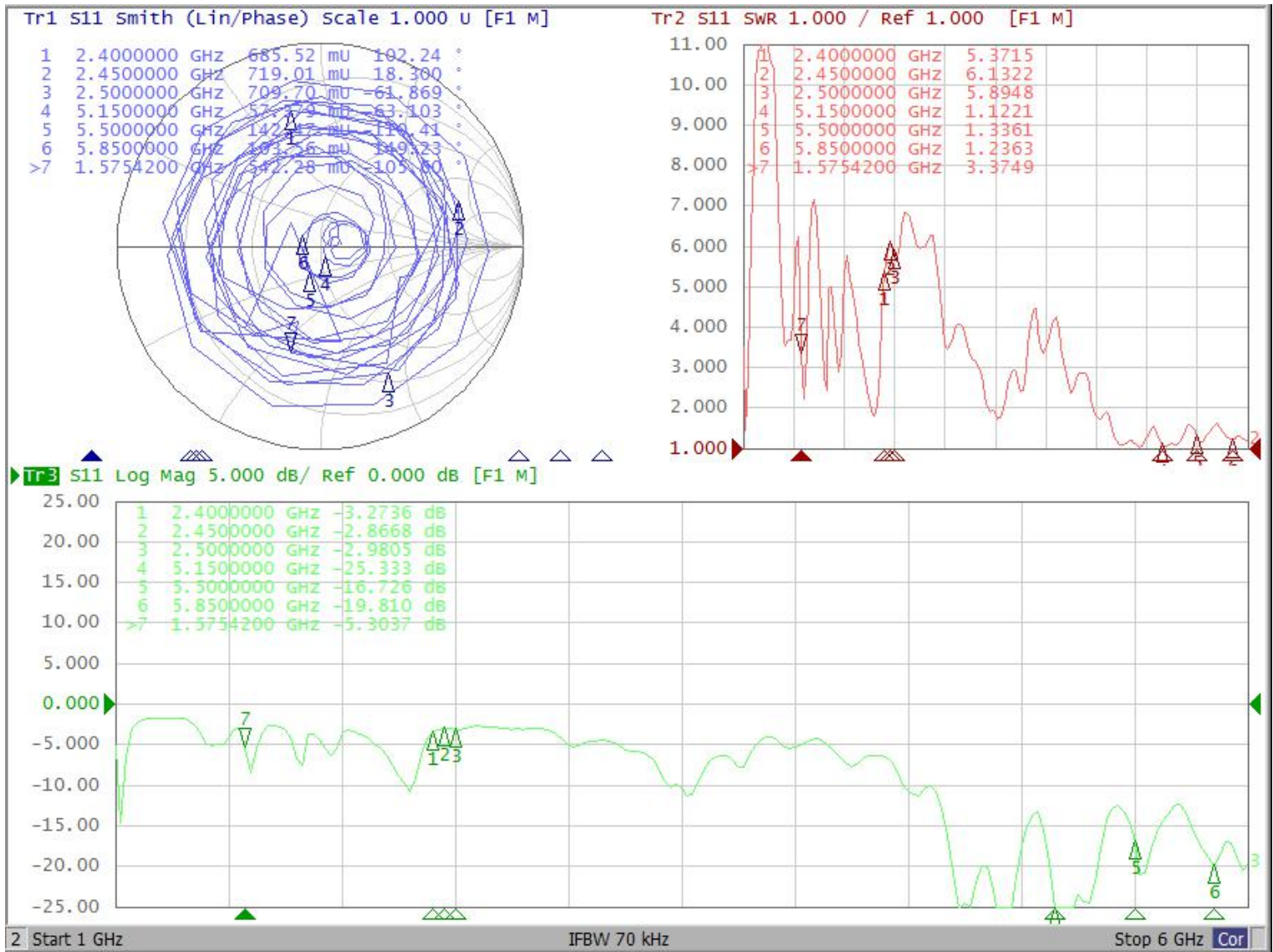


3.3 2.4G Effi

| Freq | Effi | Gain |
|-------|-------|-------|
| (MHz) | (%%) | (dBi) |
| 2400 | 66.56 | 4.62 |
| 2410 | 66.14 | 4.57 |
| 2420 | 67.78 | 4.61 |
| 2430 | 68.84 | 4.65 |
| 2440 | 67.85 | 4.57 |
| 2450 | 66.98 | 4.65 |
| 2460 | 68.24 | 4.68 |
| 2470 | 67.89 | 4.54 |
| 2480 | 67.54 | 4.49 |
| 2490 | 67.72 | 4.57 |
| 2500 | 66.22 | 4.55 |

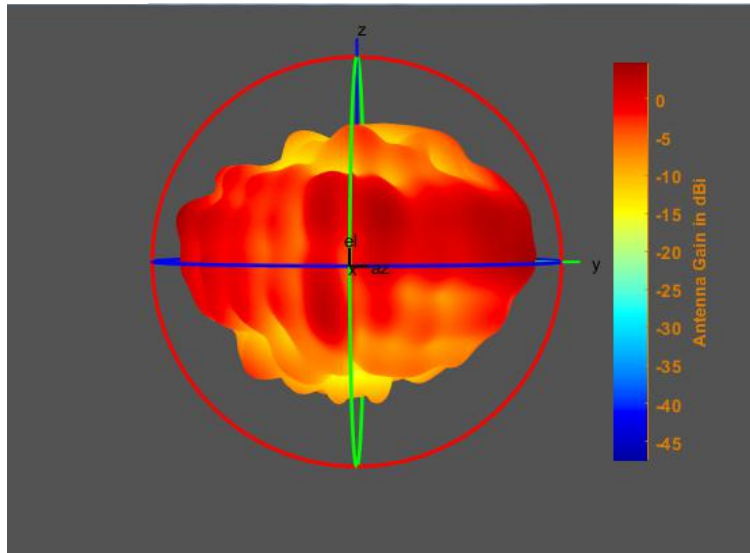
4. 5G Black \varnothing 1.37mm, L 220mm

4.1 5G S11 VSWR Smith test results

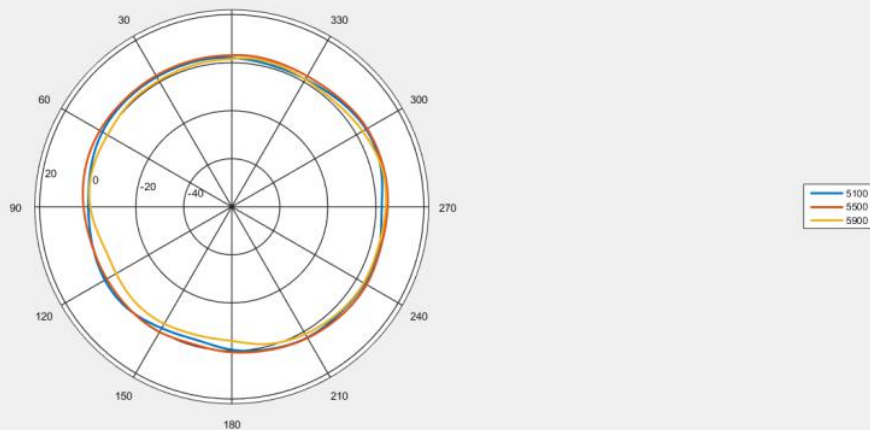


4.2 5G radiation pattern

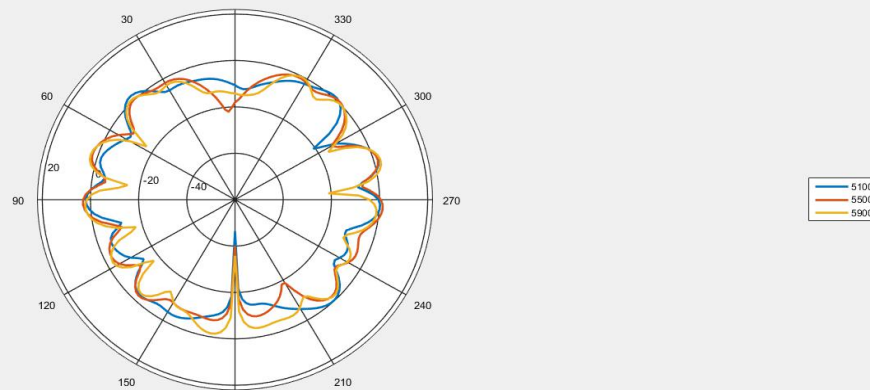
5.5GHz



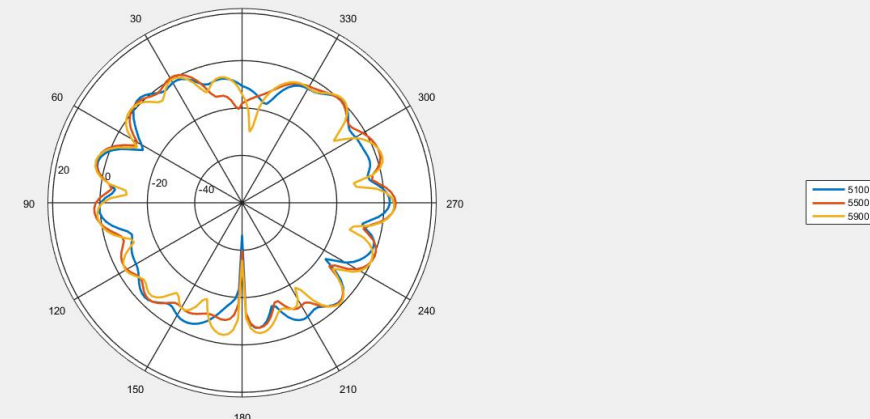
X-Y



X-Z



Y-Z



4.3 5G Effi

| Freq (MHz) | Effi (%%) | Gain (dBi) |
|---------------|--------------|---------------|
| 5100 | 63.24 | 4.42 |
| 5200 | 64.63 | 4.51 |
| 5300 | 65.34 | 4.54 |
| 5400 | 67.79 | 5.04 |
| 5500 | 69.45 | 5.01 |
| 5600 | 68.63 | 4.84 |
| 5700 | 67.33 | 4.86 |
| 5800 | 66.48 | 4.97 |
| 5900 | 65.21 | 4.69 |

5.Summary

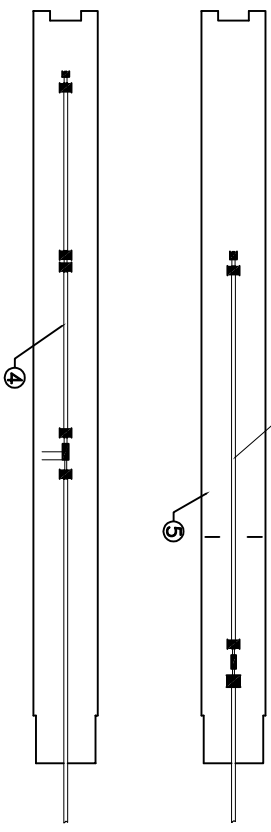
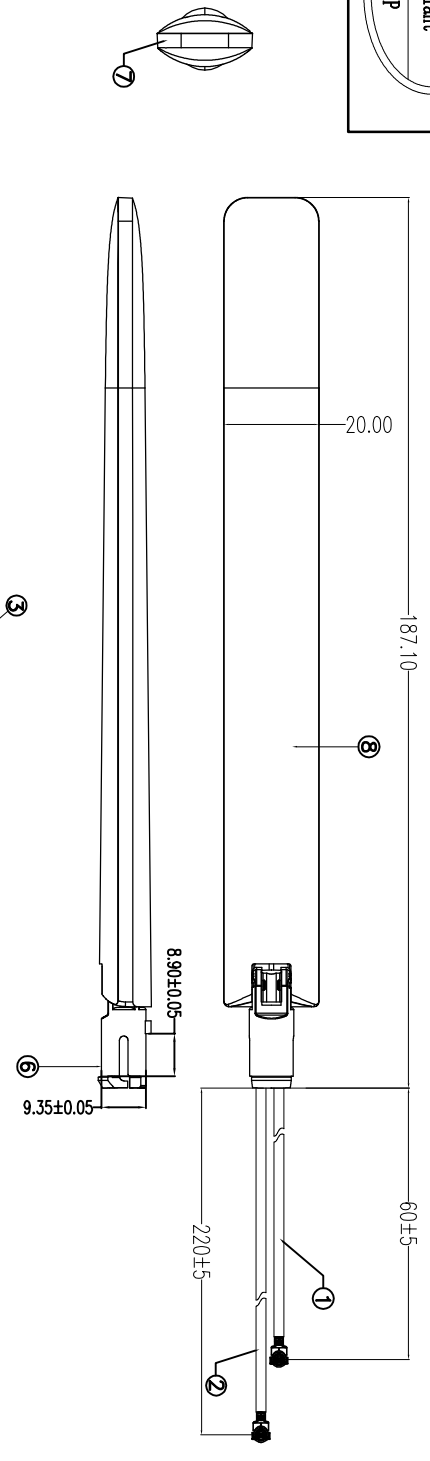
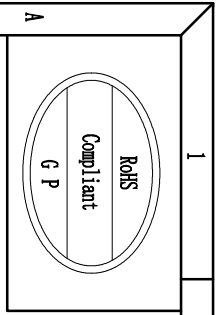
5.1 Impedance, VSWR and LOGMAG

| 2.4G_Gery_60mm_5dBi antenna | | | | (unit in GHz) |
|-----------------------------|-------|-------|-------|---------------|
| Item \Frequency | 2.4 | 2.45 | 2.5 | criteria |
| VSWR | 1.33 | 1.16 | 1.15 | ≤ 2 |
| LOGMAG | -15.4 | -20.5 | -22.1 | ≤ -10 |

| 5G_Black_220mm_5dBi antenna | | | | (unit in GHz) |
|-----------------------------|-------|-------|-------|---------------|
| Item \Frequency | 5.15 | 5.5 | 5.85 | criteria |
| VSWR | 1.12 | 1.33 | 1.23 | ≤ 2 |
| LOGMAG | -25.3 | -16.7 | -19.8 | ≤ -10 |

5.2 3D Peak Gain & Efficiency

| Frequency (GHz) | Peak Gain (dBi) | Efficiency (%) |
|--------------------|--------------------|-------------------|
| 2.4 | 4.62 | 66.5 |
| 2.45 | 4.65 | 66.9 |
| 2.5 | 4.55 | 66.2 |
| 5.10 | 4.4 | 63.2 |
| 5.50 | 5.0 | 69.4 |
| 5.90 | 4.7 | 65.2 |



| No. | Name | Material | Color | Treatment | Amount | Remark |
|-----|---------|-------------|-------|-----------|--------|--------|
| 9 | 固定柱 | POM | 白色 | | 2 | |
| 8 | 杆套 | ABS | 白色 | | 1 | |
| 7 | 塞子 | PC/PBT | 白色 | | 1 | |
| 6 | 下固 | PC/PBT | 白色 | | 1 | |
| 5 | PCB | FR4/双面板 | 黑色 | | 1 | |
| 4 | 5G过渡线 | 1.37低损线 | 黑色 | | 1 | |
| 3 | 2.4G过渡线 | 1.37低损线 | 白色 | | 1 | |
| 2 | 5G射频线 | 1.37低损线一代端子 | 黑色 | | 1 | |
| 1 | 2.4G射频线 | 1.13低损线一代端子 | 灰色 | | 1 | |

备注:
 1. 标注"*"为重点尺寸, 未标公差尺寸按照±0.15检测
 2. 未标注尺寸请依图纸.
 3. 符合ROHS

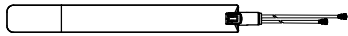
| Rev | Description | Date | Remark | Location | dwg No. | Unit | mm | Scale | 1:1 | Rev | A |
|-----|-------------|------|--------|----------|---------|------|----|-------|-----|-----|---|
| 1 | New drawing | | | N/A | | | | | | | |

| Project | | Date | |
|--------------|--------------|-------------|------------|
| G-1425-B-5DB | 外置天线2 | | 2021.11.24 |
| PartName | Part No. | Designed by | |
| | N12-4898-ROA | MD | 田进 |
| Material | N/A | Checked by | RF |
| | | Approved by | 冯惠平 |

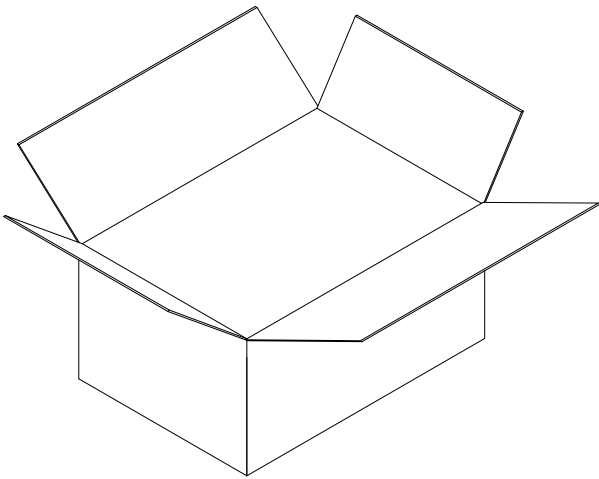
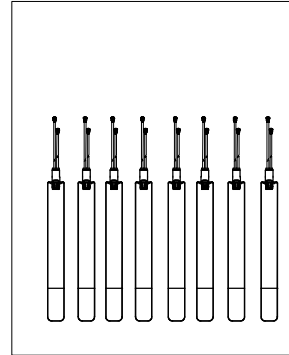
成品名称: G-1425-B-5DB外置天线

版本: A

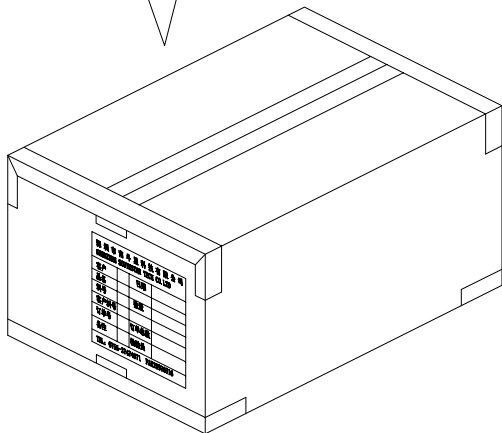
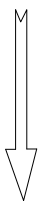
一: 成品天线



二: 用PE袋装起来



四: 装一箱, 以实际包装为准



五: 封箱, 外箱贴我司生产标签和
ROHS标签。

批准: _____

确认: _____

拟制: 田进