

SPECIFICATION FOR APPROVAL

CUSTOMER :	Nokia Shanghai Bell Co.Ltd.
PART NAME :	G-1425G-B 2.4g /5g 5dBi WiFi1
PART NO. :	2.4G Φ1.13 Grey L=200mm 5G Φ1.37 Black L=70mm
DZZ NO. :	N12-4897-R0A
REV. :	V1.0

	MANUFACTURERR SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY:		
DATE:		

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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 WiFi1

V1.0

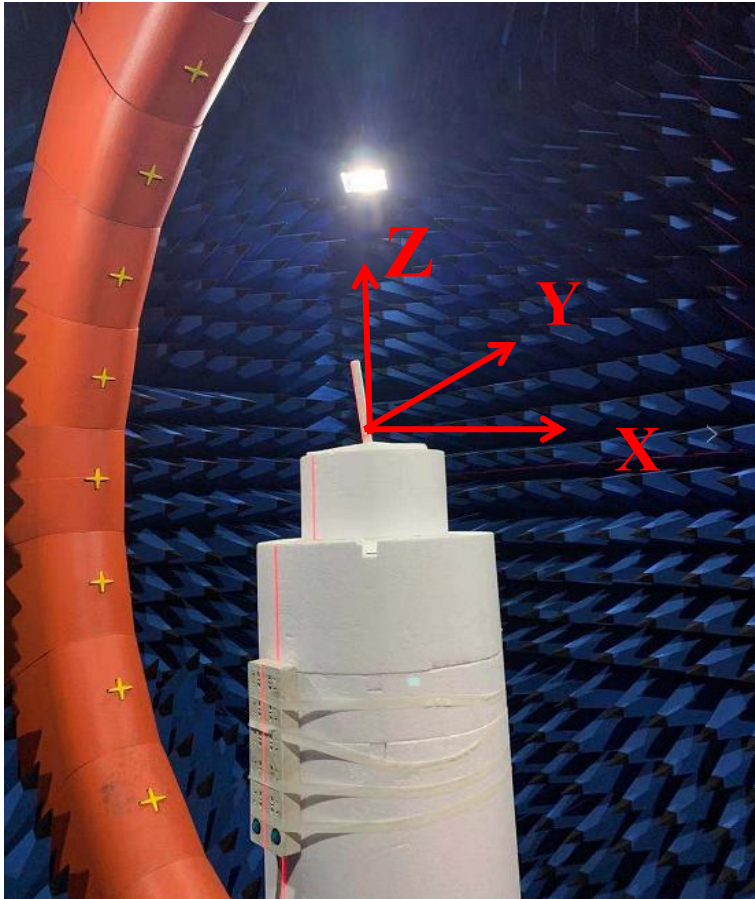
Document Number	DZZ-20211124
1st Released Date	24/11/2021
Author	Huiping Feng
Review By	Huiping Feng

Specification

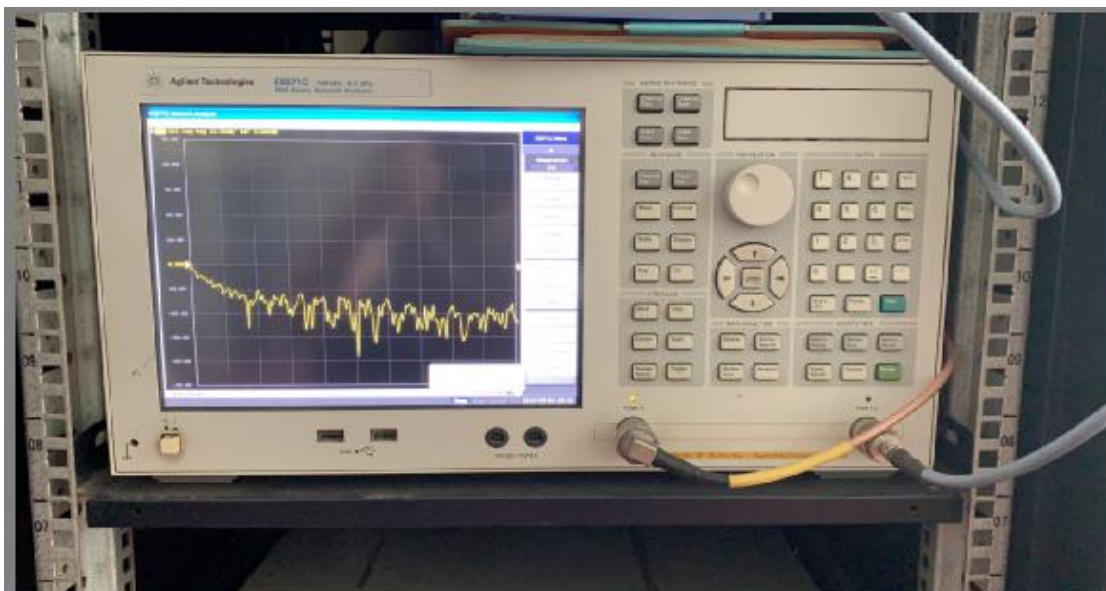
Rough description	2.4G /5G ANT
Item	Initial Specification
Dimensions	158mm*13.5mm*0.4mm
Impedance	50Ω Norminal
Test environment	With housing
Spectrum	None
Frequecy range	2400~2500MHz&5150~5850MHz
Antenna Type	Dipole
VSWR	(Matching Transmit Trace on board)≤2
Gain(Peak)	5dBi
Radiation	Omni
Polarization	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=200mm 5G Black L=70mm
Isolation	None

1. Test enviroment

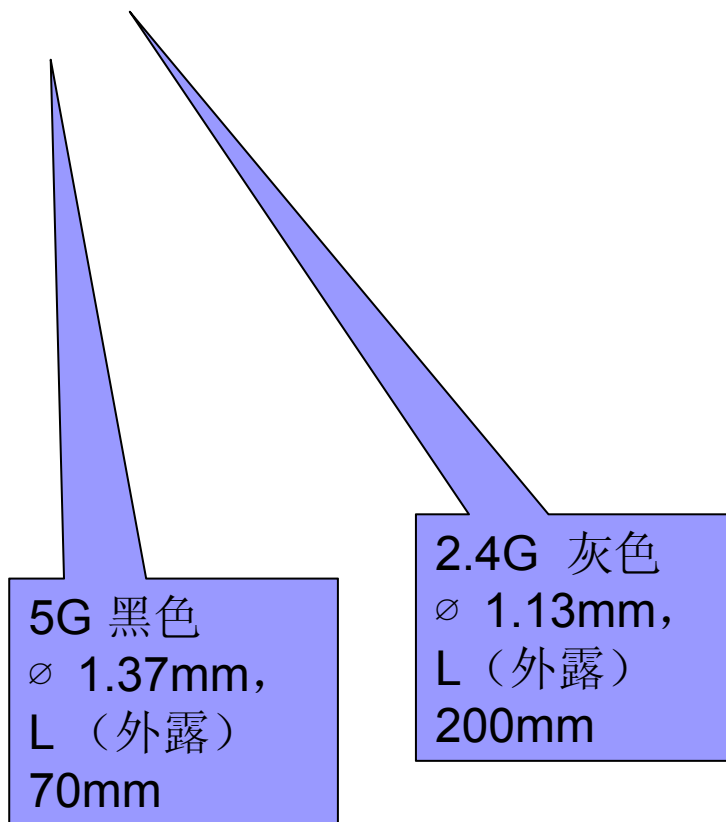
Satimo 24探头



Agilent Technologies E5071C

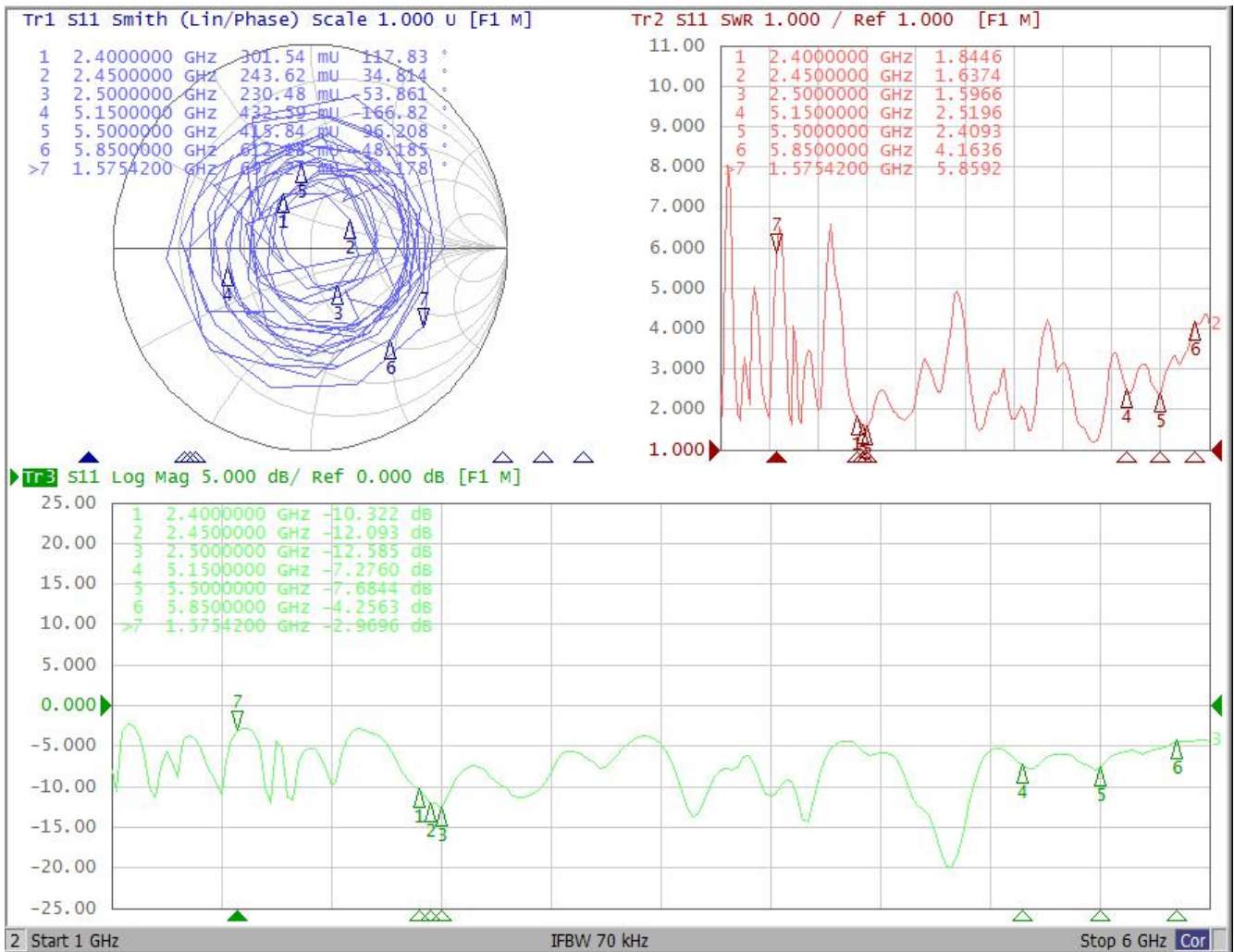


2. Test Antennas' setup and enviroment With housing



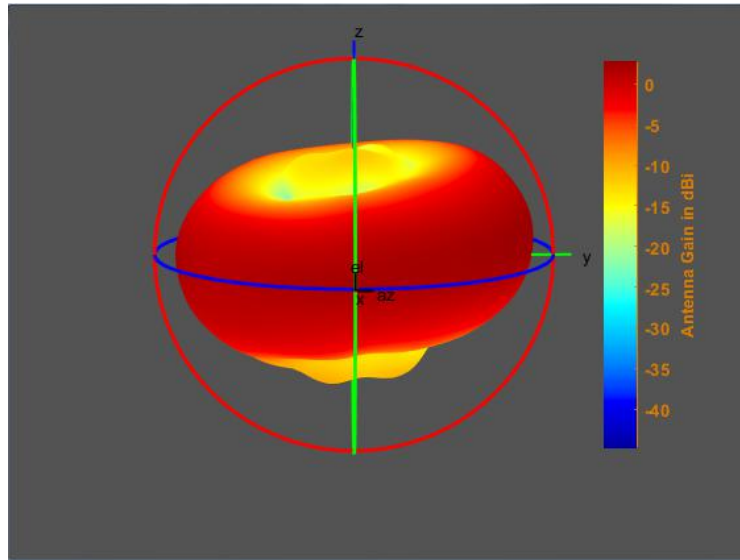
3. 2.4G Grey \varnothing 1.13mm, L 200mm

3.1 2.4G S11 VSWR Smith test results

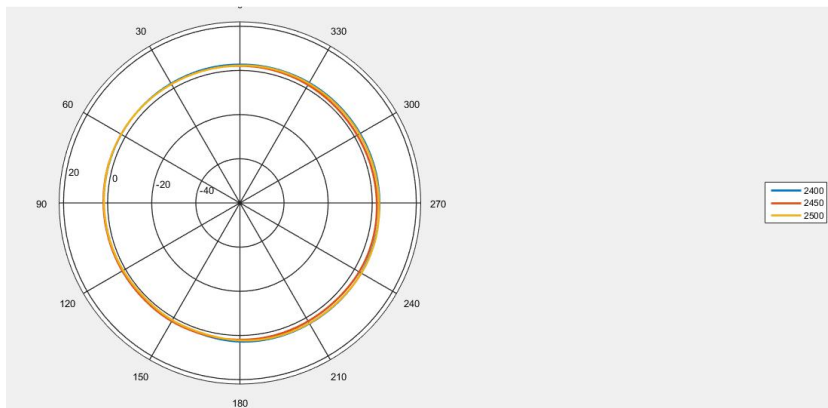


3.2 2.4G radiation pattern

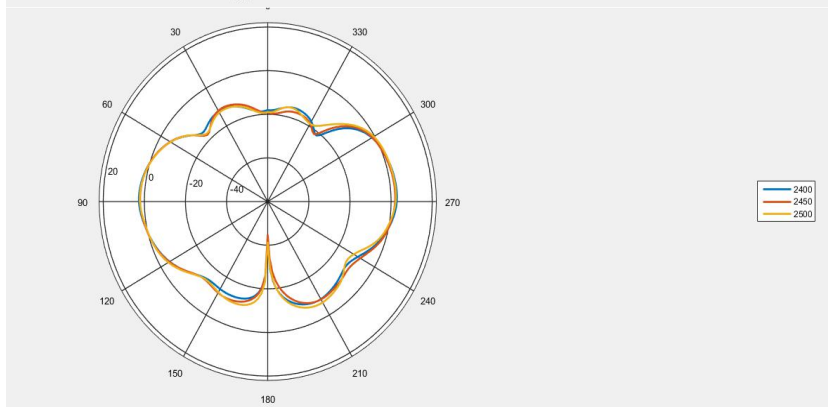
2.45GHz



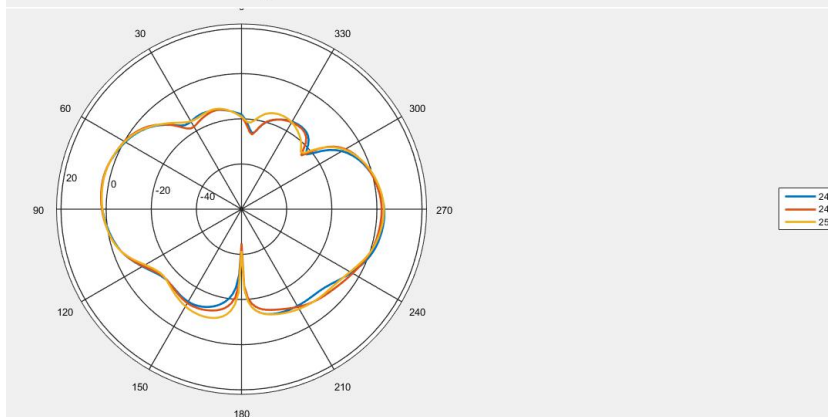
X-Y



X-Z



Y-Z

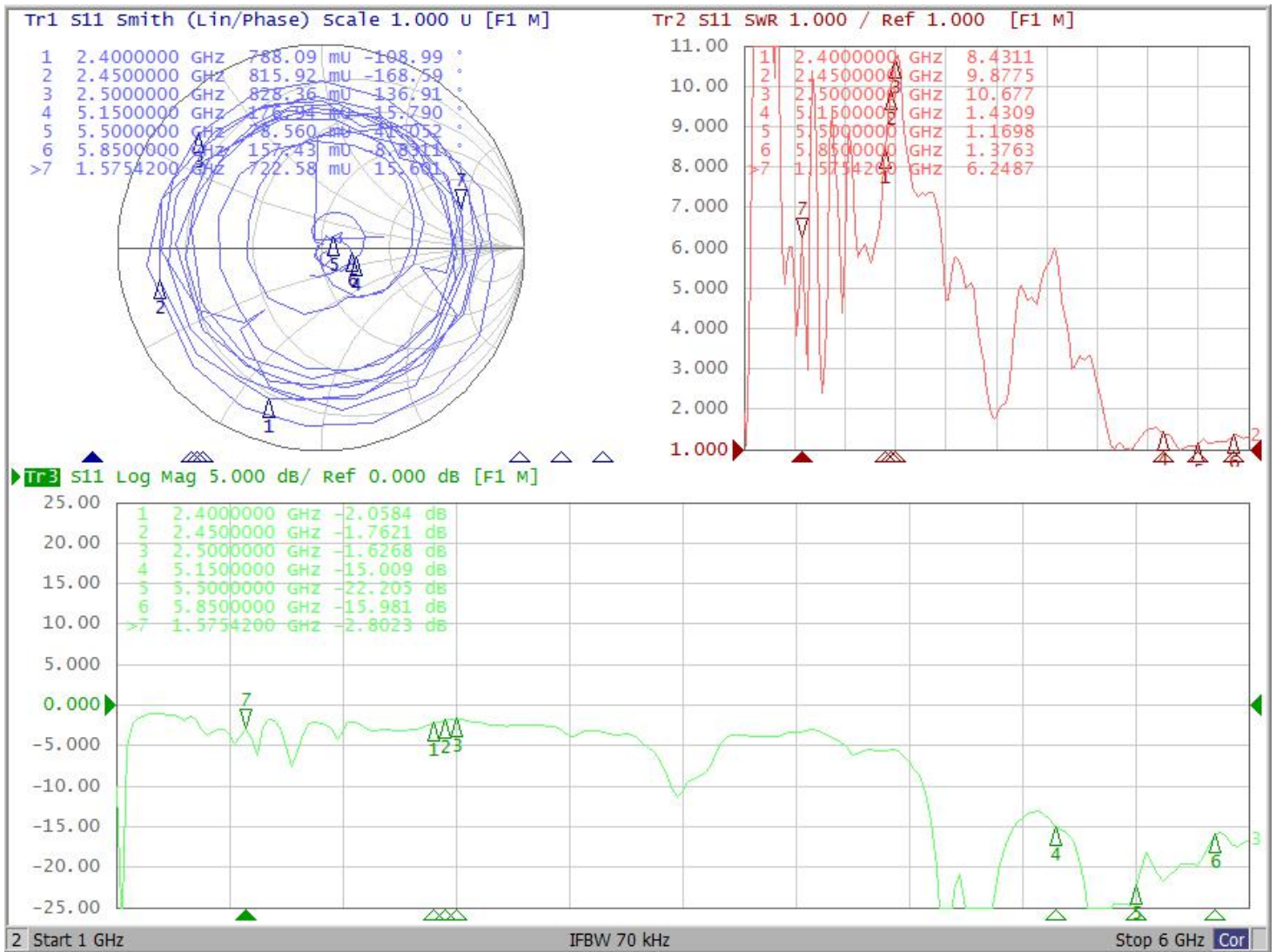


3.3 2.4G Effi

Freq	Effi	Gain
(MHz)	(%%)	(dBi)
2400	64.84	4.41
2410	65.61	4.52
2420	66.31	4.51
2430	66.46	4.52
2440	67.12	4.55
2450	66.84	4.53
2460	66.12	4.64
2470	65.63	4.52
2480	64.84	4.58
2490	64.52	4.62
2500	63.62	4.59

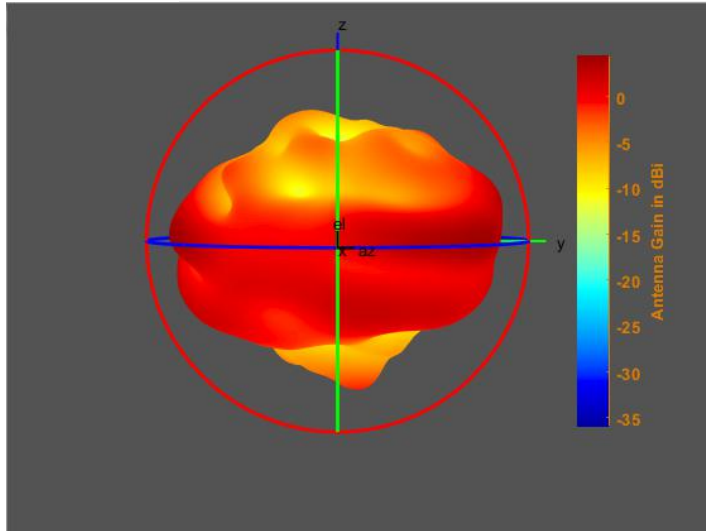
4. 5G Black \varnothing 1.37mm, L 70mm

4.1 5G S11 VSWR Smith test results

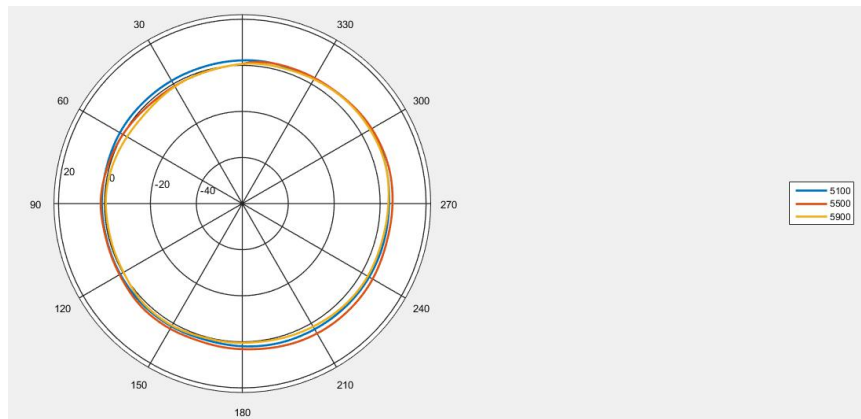


4.2 5G radiation pattern

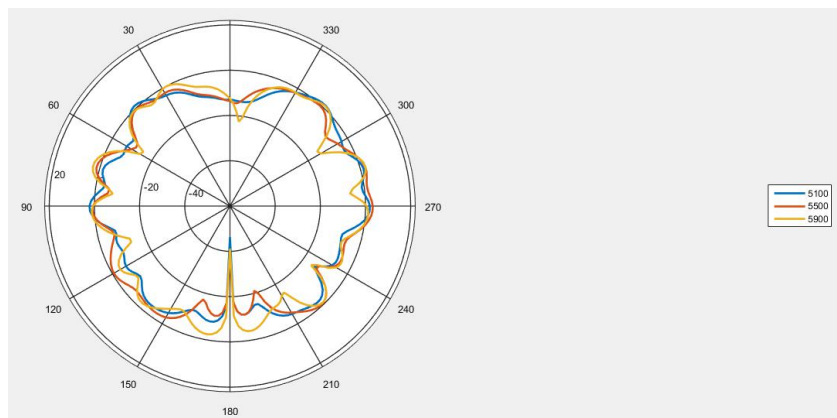
5.5GHz



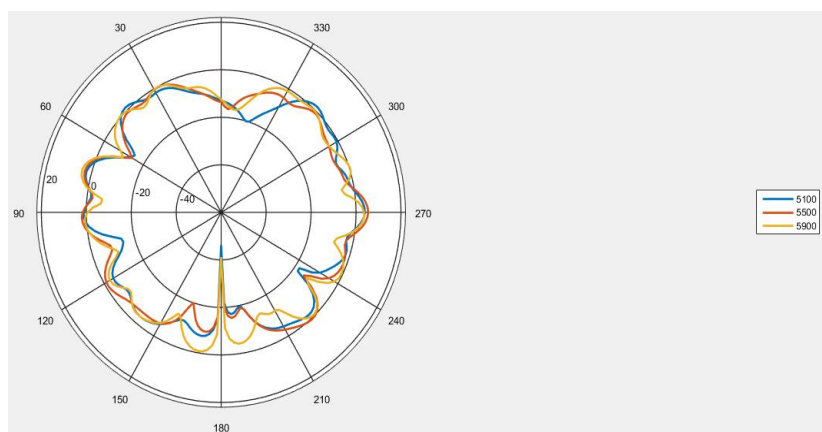
X-Y



X-Z



Y-Z



4.3 5G Effi

Freq (MHz)	Effi (%%)	Gain (dBi)
5100	65.28	4.75
5200	65.33	4.89
5300	66.43	4.96
5400	68.84	5.10
5500	70.42	5.06
5600	69.84	4.97
5700	69.54	4.87
5800	68.33	5.06
5900	66.87	4.96

5.Summary

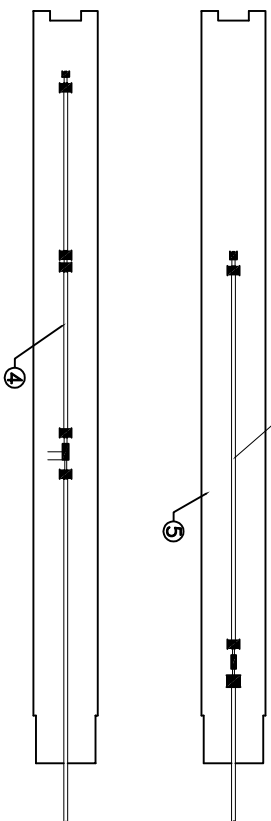
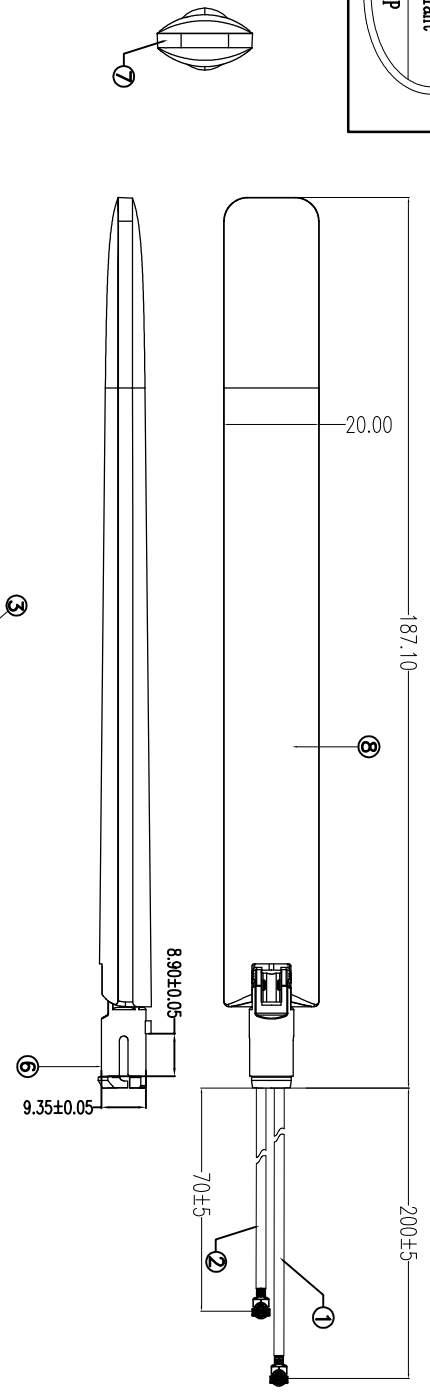
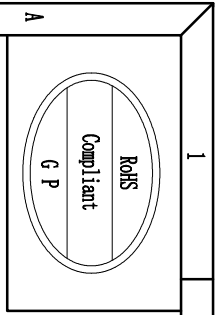
5.1 Impedance, VSWR and LOGMAG

2.4G_Gery_200mm_5dBi antenna				(unit in GHz)
Item \Frequency	2.4	2.45	2.5	criteria
VSWR	1.84	1.63	1.59	≤ 2
LOGMAG	-10.3	-12.0	-12.5	≤ -10

5G_Black_70mm_5dBi antenna				(unit in GHz)
Item \Frequency	5.15	5.5	5.85	criteria
VSWR	1.43	1.16	1.37	≤ 2
LOGMAG	-15.0	-22.0	-15.9	≤ -10

5.2 3D Peak Gain & Efficiency

Frequency (GHz)	Peak Gain (dBi)	Efficiency (%)
2.4	4.4	64.8
2.45	4.5	64.8
2.5	4.5	63.6
5.10	4.7	65.2
5.50	5.0	70.4
5.90	4.9	66.8



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

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跳线	1.37低损线	黑色		1	
3	2.4G跳线	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	

Rev	Description	Date	Remark
1	New drawing		

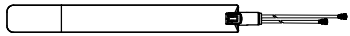
Project		Date	
G-1425-B-5DB	外置天线1		2021.11.24
PartName	Part No.	Designed by	
	M12-4897-ROA	Checked by	田进
Material	N/A	RF	冯惠平
Location	N/A	Approved by	
Angle	±2.0	Unit	mm
Third Angle	Angle ±0.5°	Scale	1:1
0~10 ±0.2	10~18 ±0.5	Rev	A
18~30 ±0.8	30~40 ±1.0		
40~			

深圳得自在科技有限公司
 SHEN ZHEN Be Comfortable CO., LTD

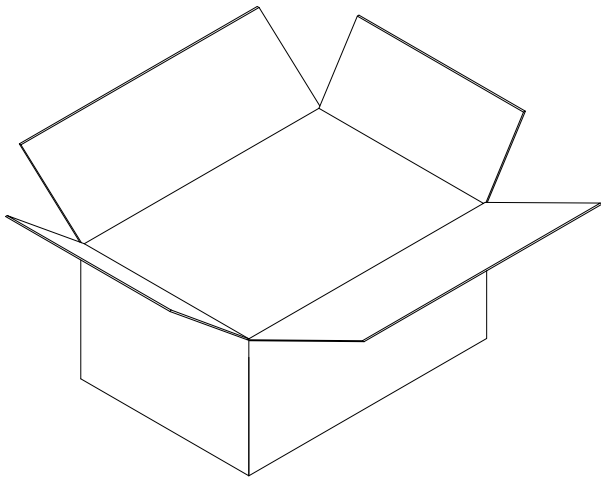
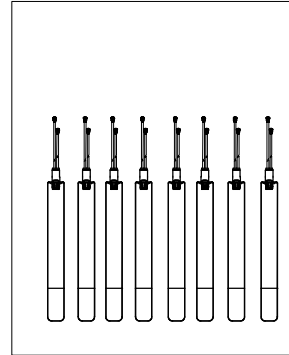
成品名称: G-1425-B-5DB外置天线

版本: A

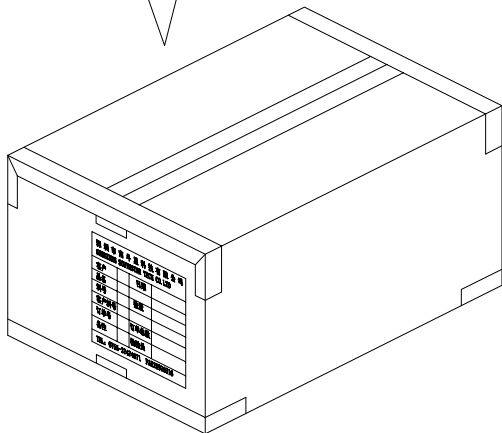
一: 成品天线



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