

Antenna Specification

Customer: YOTC

Product: 2.4G+5G Antenna (2.4G 1.37 Black L=140mm/5G 1.37
Gray L=320mm)

Model: M2-4150

Part Number: Z01-30185-R01

Written By: Li Wenke

Issued Date: 2022-12-30

R&D DEPT	ENGINEER R&D DEPT	 APPROVED
Li Wenke	Gu Zhenghua	Dengkai

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1. The basic parameters

A. Electrical Characteristics	
Frequency	2400 MHz ~2500MHz/5150 MHz ~5850MHz
VSWR	≤ 2
Efficiency	>60%
Impedance	50 Ohm
Polarization	Linear
Gain	3dBi $\pm$ 1
B. Material & Mechanical Characteristics	
Material of Radiator	
Cable Type	2.4G Φ 1.37mm Black 5G Φ 1.37mm Gray
Connector Type	2.4G 1 st IPEX 5G 1 st IPEX
Dimension	
C. Environmental	
Operation Temperature	- 20 °C ~ + 60 °C
Storage Temperature	- 40 °C ~ + 80 °C

2. Test Equipment & Conditions

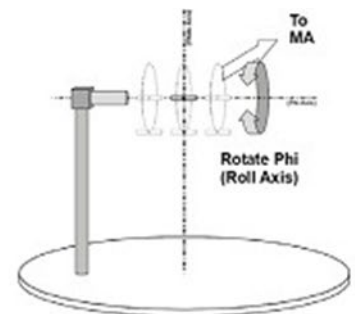
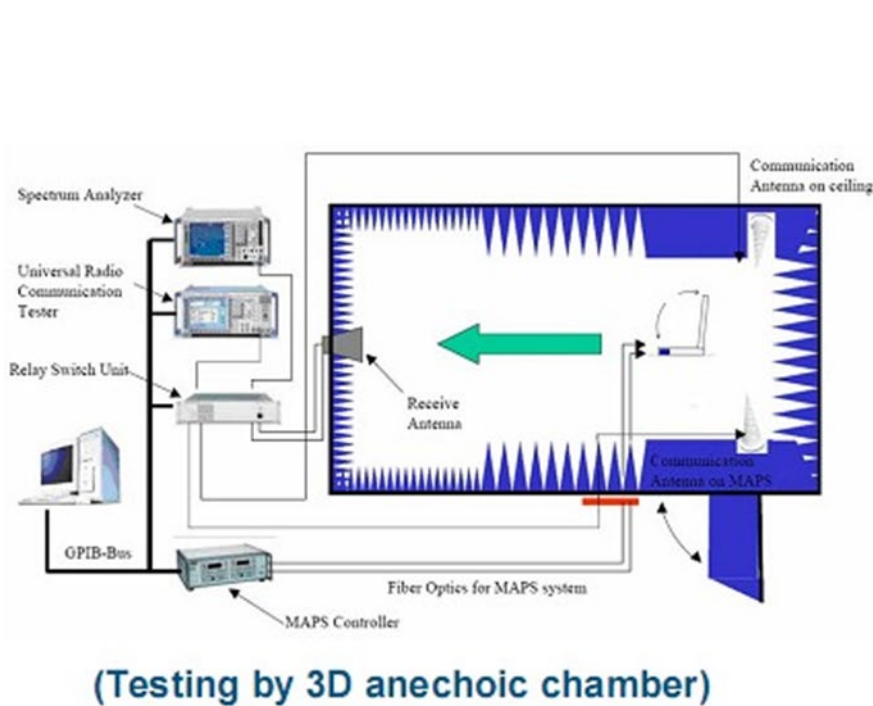
2.1 Network Analyzers :

Agilent 8753D 5071C

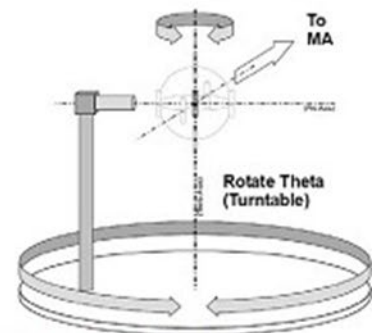
2.2 Communications Test Set:

Agilent 8960 CMW500

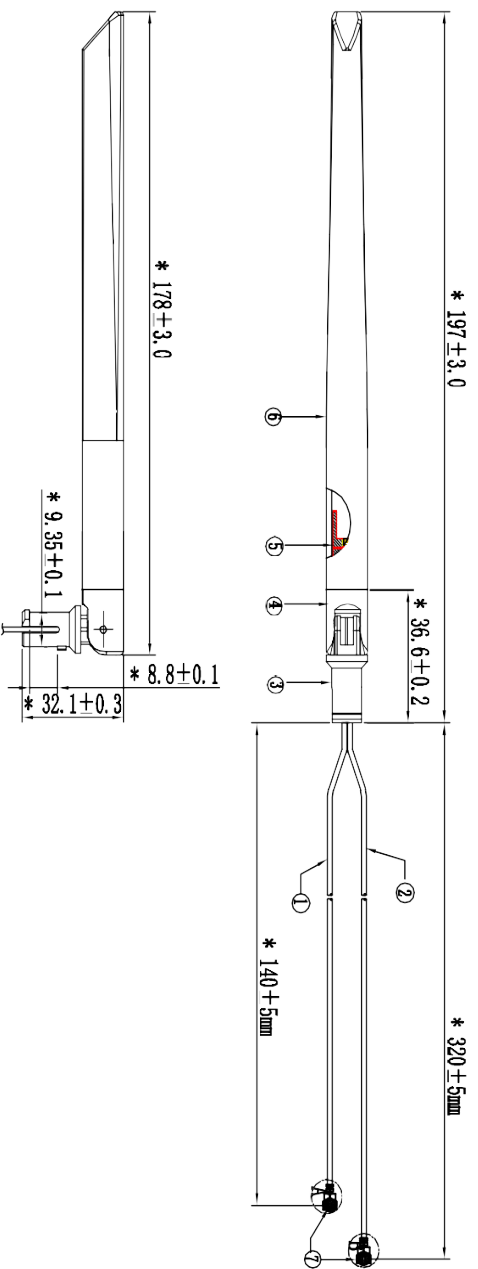
2.3 3D Chamber Test System



Phi axis test



Theta axis test



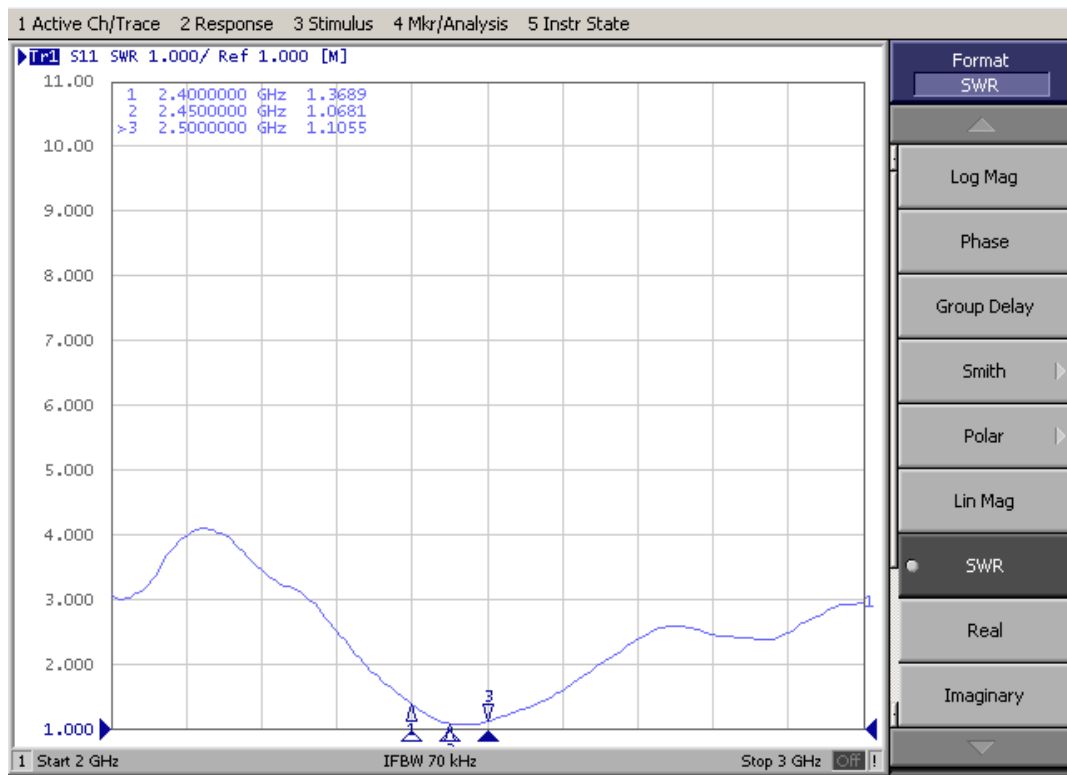
- 注:
- 1、标准*为重点尺寸,未标公差尺寸按±0.15检测
 - 2、未标尺寸参考图纸;其它尺寸以实配为准;
 - 3、产品表面无油污,刮痕,缩水等不良现象
 - 4、符合ROHS

深圳自由行通信技术有限公司

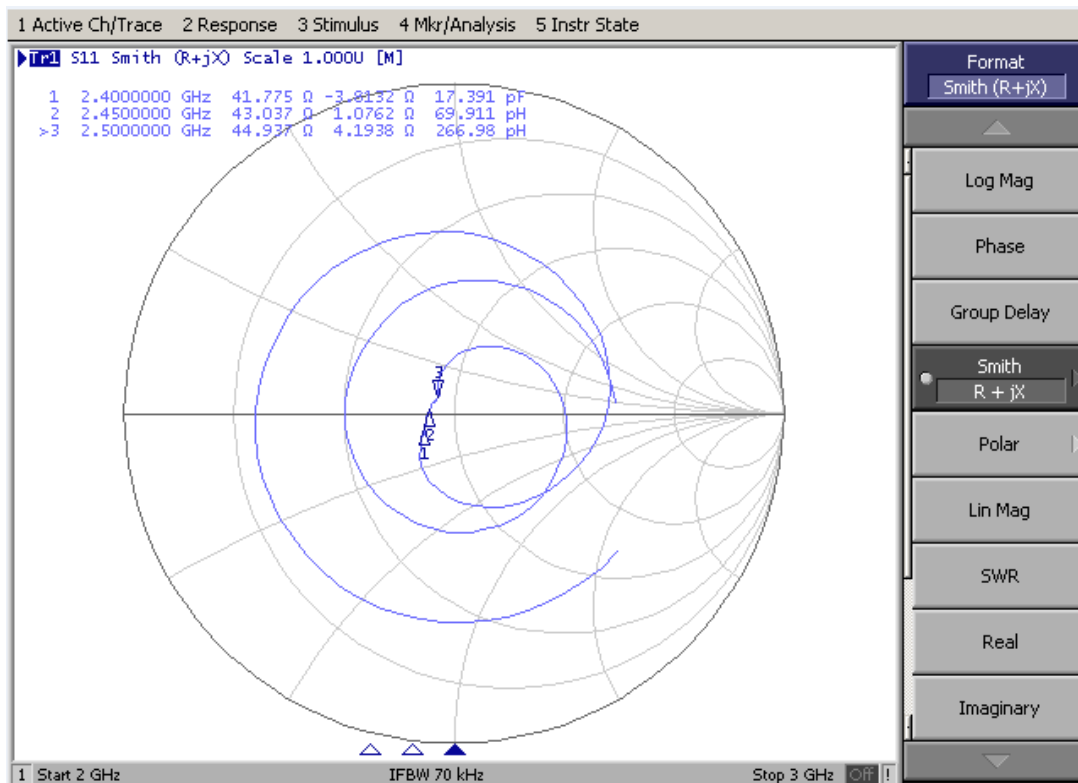
第三角法		机 种	机 型	日期	2022-12-30	页码	1/2
未注公差参见标准	0.02	品 名	2.4/5G 外置天线	设计	guide	审核	guide
10以下	+0.10	料 号	Z01-30185-R01	审核	二程	李文科	
10~20	+0.12	客户料号		确认	射频		
20~40	+0.15	外观处理					
40以上	+0.20	模面处理					
请勿实测图纸		单位	mm	比例	1:1	版本	A

3. Test Report (2.4G)

SWR



Smith (R+jX)

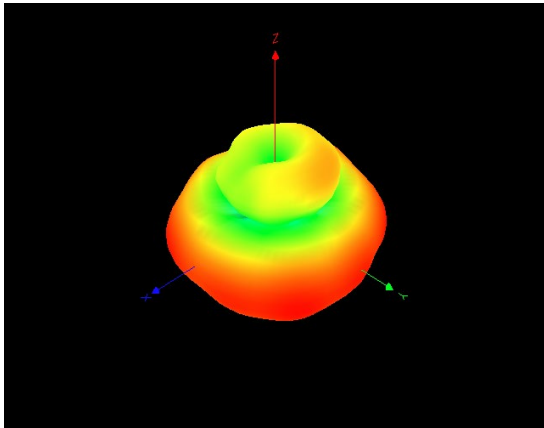


Efficiency & Gain (2.4G)

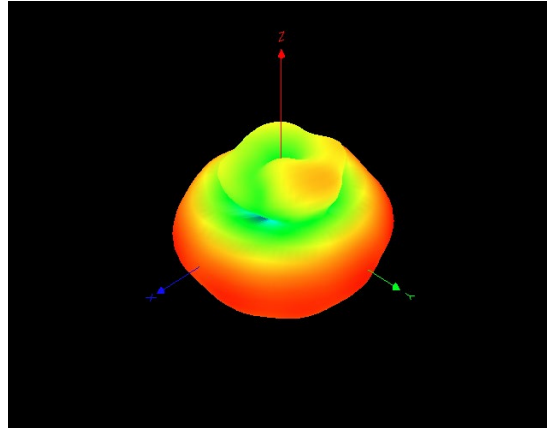
Freq(MHz)	Effi(%)	Gain(dBi)
2400	65.67	3.03
2410	62.94	2.72
2420	68.30	3.28
2430	67.37	3.05
2440	69.86	3.00
2450	67.52	2.95
2460	70.34	3.34
2470	68.24	3.08
2480	65.81	2.82
2490	69.42	3.25
2500	68.24	3.32

Patten (2.4G) 3D

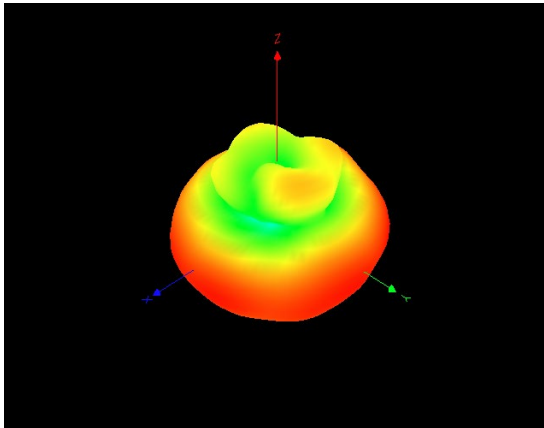
2400MHz



2450MHz

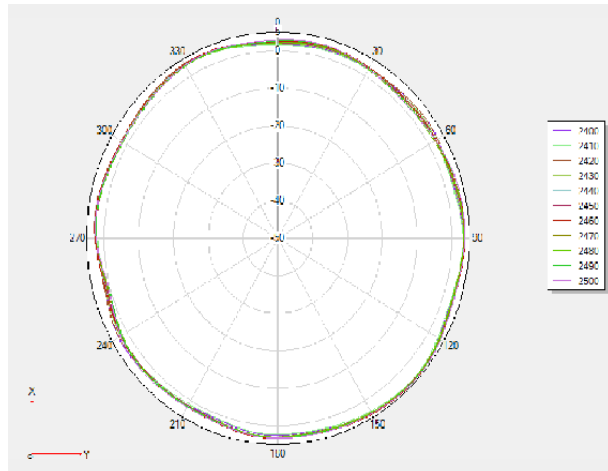


2500MHz

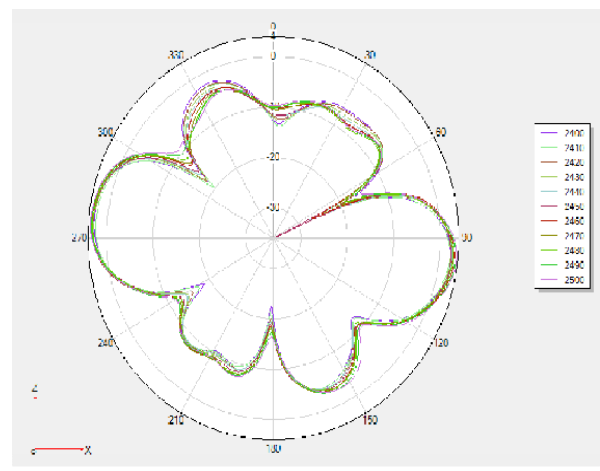


2D

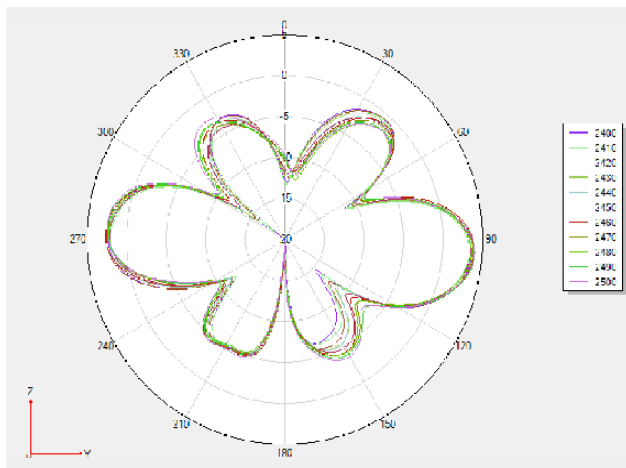
XOY



ZOX

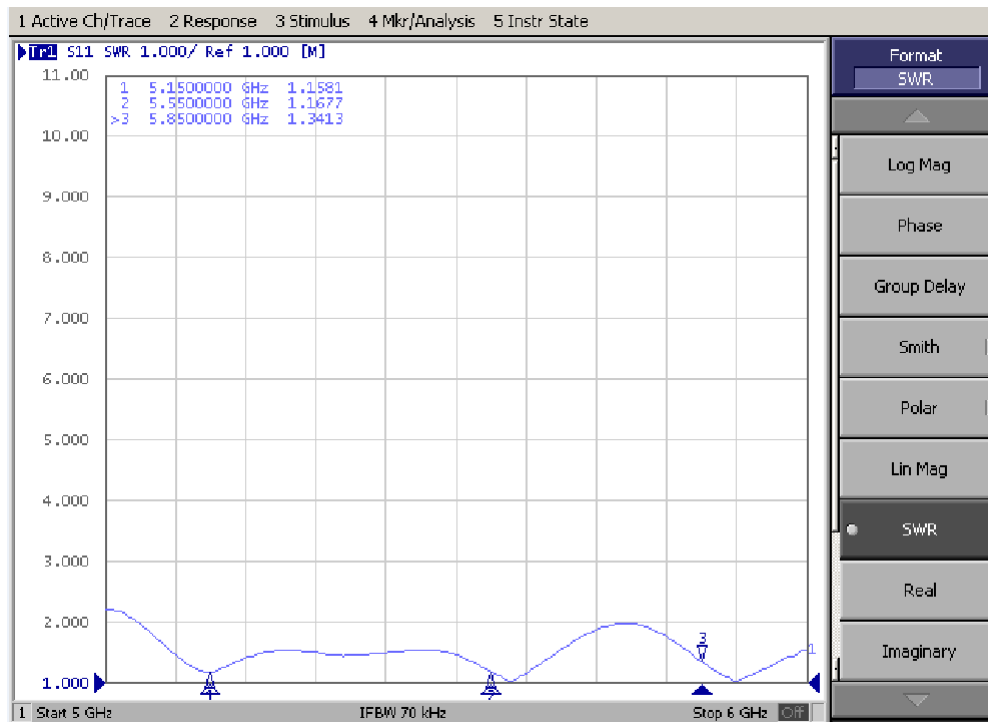


ZOY

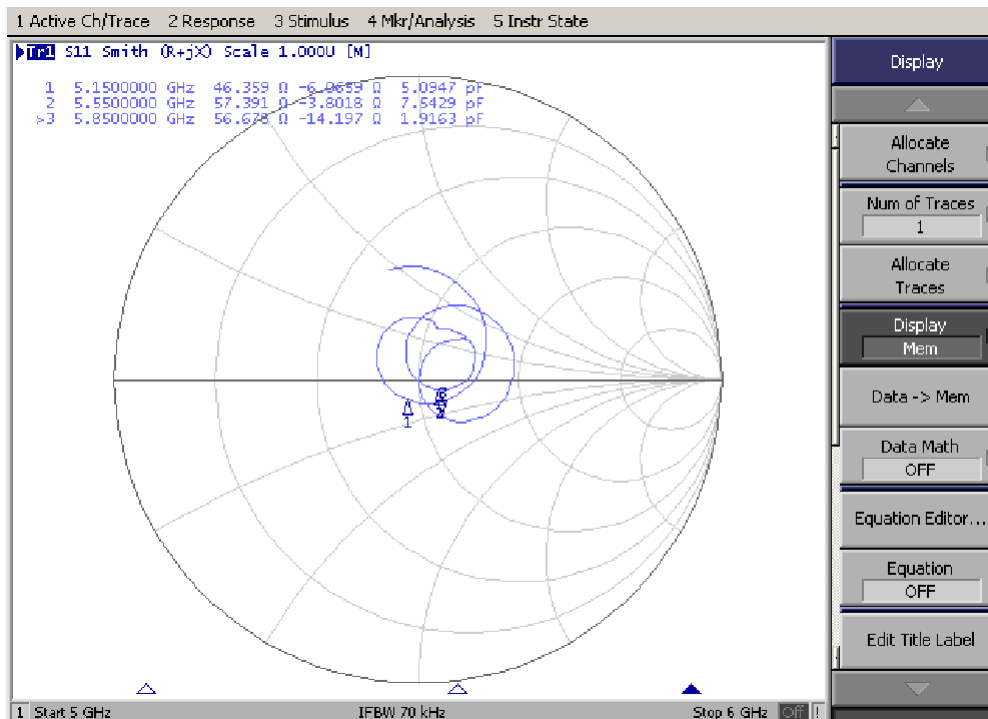


4. Test Report (5G)

SWR



Smith (R+jX)

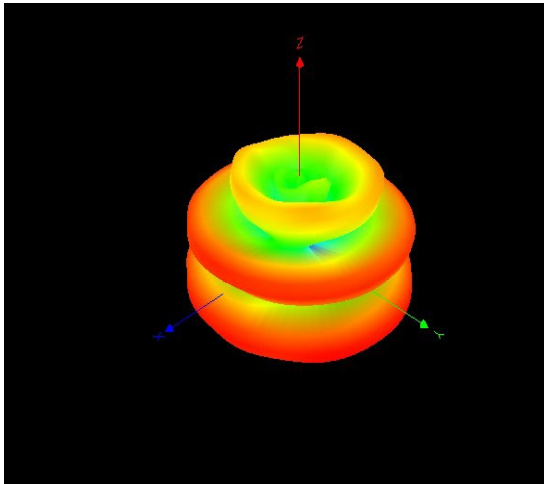


Efficiency & Gain (5G)

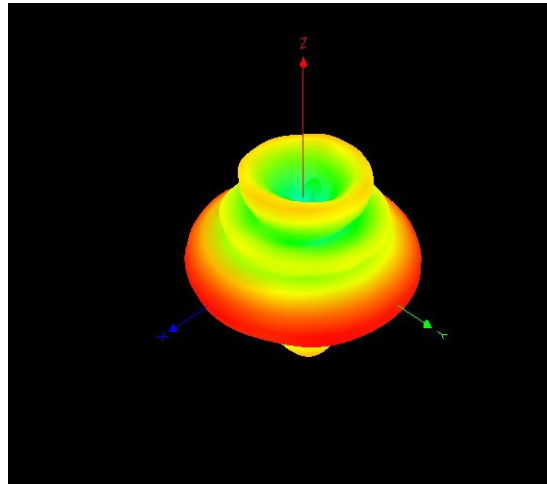
Freq(MHz)	Effi(%)	Gain(dBi)
5150	64.20	3.80
5200	63.88	3.97
5250	62.32	4.25
5300	65.34	4.07
5350	63.46	3.53
5400	67.28	3.70
5450	71.92	4.46
5500	70.81	3.81
5550	69.98	3.80
5600	73.97	4.45
5650	68.21	4.27
5700	66.75	3.73
5750	68.61	3.98
5800	66.23	4.04
5850	70.39	4.31

Patten (5G) 3D

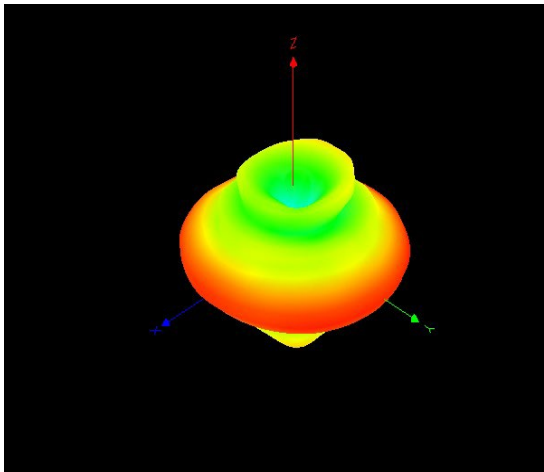
5150MHz



5550MHz

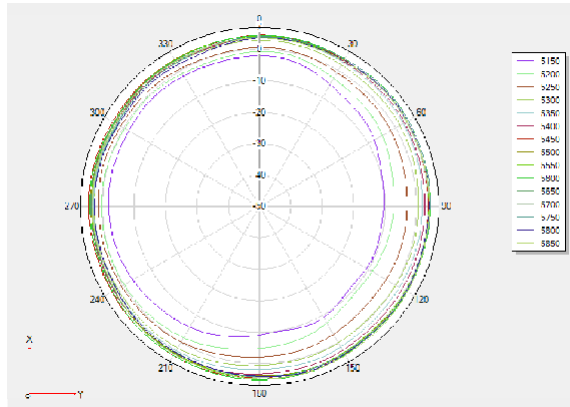


5850MHz

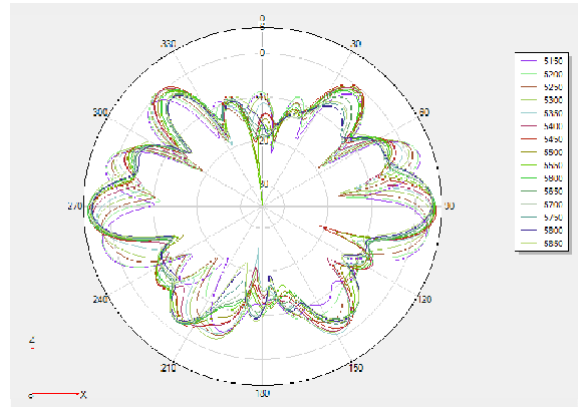


2D

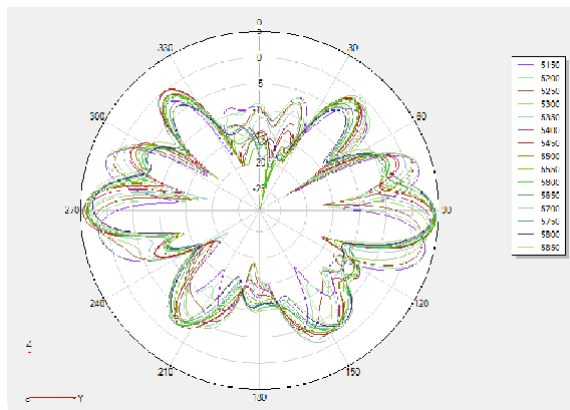
XOY



ZOX



ZOY



5. RoHS report list

No.	Parts Name	Supplier	Test Agency	Report No.	Test date	Expiration date
1	solder	Taiyuan	SGS	CANEC2202985004	2022.3.7	2023.3.7
2	Sn-P Bronze C5210	Zijin Copper	SGS	CANEC2201952008	2022.2.18	2023.2.18
3	FR-4.0	GDM	SGS	NGBML2105022604	2021.11.4	2022.11.4
4	TPE	YOURBEST	SGS	CANEC2120138401	2021.11.3	2022.11.3
5	H65 Brass	Nongda Metal	SGS	SZXEC2104021502	2022.1.4	2023.1.4
6	wire	KuJiu Wire	SGS	CANEC2118789201	2021.10.15	2022.10.15
7						
8						