

1. Antenna Specification/天线标准

Antenna Specification/天线技术参数

Electrical Specification/电气特性

Item/目录	Specification/规格		Comment/备注
Freq. Range/频段范围	2400-2500(MHz)	5150-5850(MHz)	
Impedance/阻抗	50 (Ω)		
VSWR/驻波比	≤ 2.0		
Directional/辐射方向	Omni directional		
Polarization/极化形式	Vertical		
Peak Gain/峰值增益	3.0(dBi)		
Test condition/测试条件	passive test (无源测试)		
Total Efficiency/无源效率	>70%	>65%	

Mechanical Specification/机械指标

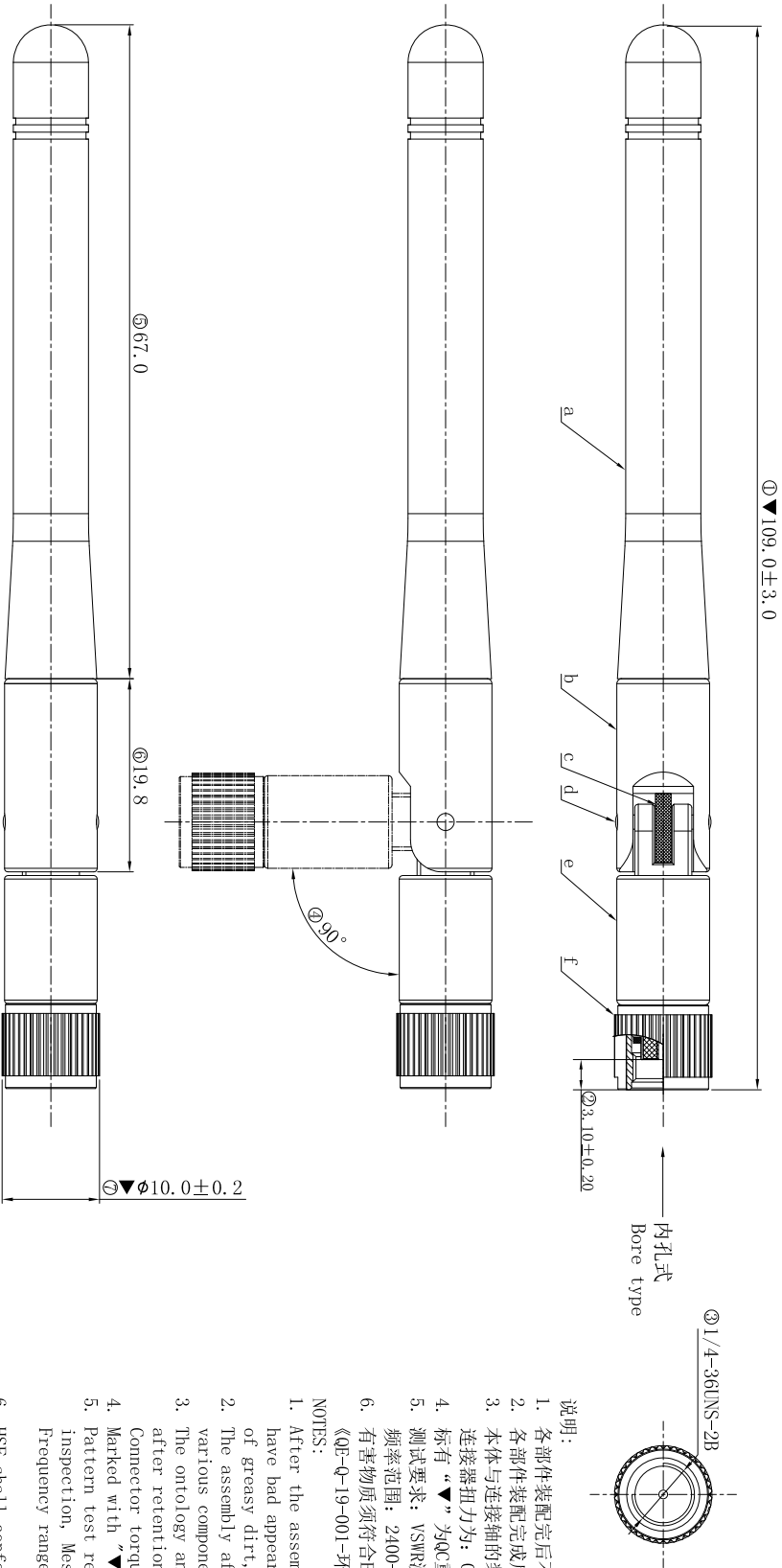
Antenna type/天线类型	胶棒天线/ Glue stick antenna		
Connector Type/连接器类型	RP-SMA-J(公头母针)		
RF Cable Type/射频线型号	RG178		
Connector Torque Test/连接器扭力	N/A		
Connector Pull Test/连接器拉力	$\geq 3.0\text{Kgf}$		
Salt Spray/盐雾测试	48 (H)		

Environmental Specification /环境指标

Operating temp/工作温度	$-40^{\circ}\text{C} \sim +75^{\circ}\text{C}$		
Storage temp/存储温度	$-40^{\circ}\text{C} \sim +75^{\circ}\text{C}$		

2. Antenna Picture/天线图片

REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
X1	ECN23*	初版发行/Initial release	10/09'23	梁兑泉 liuquan, liang	丁菊斌 dijin, din	牛宝星 boxiong, niu



- 说明:
- 各部件装配完后不得有油污、划痕、变形等外观不良.
 - 各部件装配完成后无明显色差.
 - 本体与连接轴的装配后保持力: 3KG MIN;
 - 连接器扭力为: 0.2~0.6 Kg·cm.
 - 标有“▼”为QC重点检测尺寸.
 - 测试要求: VSWR测试全检, 网分测试.
 - 频率范围: 2400~2500&5150~5850 Mhz, VSWR: ≤2.0;
 - 有害物质须符合EC1

《QE-Q19-001-环境有害物质管理基准》管控标准.

NOTES:

- After the assembly of different parts can not have bad appearance
- The assembly after the completion of the various components without clear off color.
- The ontology and the connecting shaft assembly after retention: 3KG MIN;
- Connector torque is: 0.2~0.6 Kg - cm.
- Pattern test requirements: the VSWR test all inspection, Mesh points test
- Frequency range: 2400~2500&5150~5850 Mhz, VSWR: ≤2.0;
- HSF shall conform to the standard QE-Q19-001 Environmental Hazardous Substances Management.

f	连接器/connector	1	RP-SMA-J, 公头母针, 黑色, 塑料/RP-SMA-J, female needle with male head, black, plastic
e	下固/Lower solid	1	下固, OD9.5*24.8mm, PC+PBT, 黑色/Lower solid, OD9.5*24.8mm, PC+PBT, black
d	铆钉/Rivet	2	OD1.7*3.7mm, POM, 黑色/OD1.7*3.7mm, POM, black
c	线缆/Cable	1	RG178, 棕色/RG178, brown
b	上固/Upper solid	1	上固, OD9.5*29 mm, PC+PBT, 黑色/Upper solid, OD9.5*29 mm, PC+PBT, black
a	杆套/Rod sleeve	1	杆套, OD9.5*67 mm, TPPE, 黑色/Rod sleeve, OD9.5*67 mm, TPPE, black
ITEM	PART NAME	QTY	MATERIAL / FINISH
DWG. NO:			TITLE:

SCALE: 1:1	DRAWN: 梁兑泉 liuquan, liang	DATE: 10/09'23	PARTS NO. (INTENDED USE): 818000000	REV. X1
UNIT: mm	CHECK:	DATE:	ANT_EX_2458_109*9_6_BK-PR_RP-SMA-J	SHEET: 1/1
SIZE: A4	APPROVE:	DATE:		

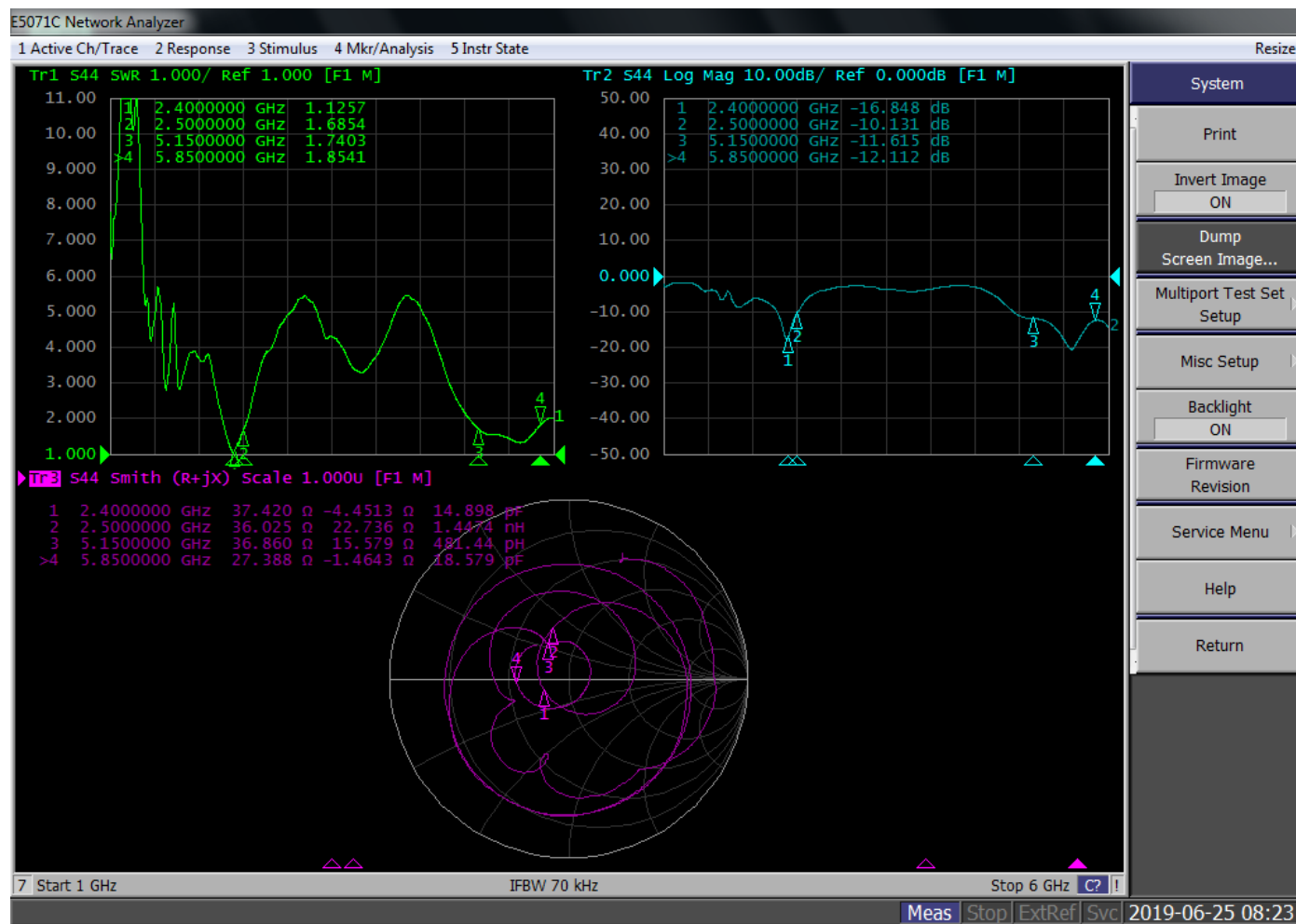
GENERAL TOLERANCE	SCALE: 1:1	DRAWN: 梁兑泉 liuquan, liang	DATE: 10/09'23	PARTS NO. (INTENDED USE): 818000000	REV. X1
XX. ± 2.00	XX. ° ± 3°	CHECK:	DATE:	ANT_EX_2458_109*9_6_BK-PR_RP-SMA-J	SHEET: 1/1
X. ± 1.00	X. ° ± 2°	APPROVE:	DATE:		
.X ± 0.50	.X ° ± 1°				
.XX ± 0.30					



ELECTRIC
CONNECTOR
TECHNOLOGY

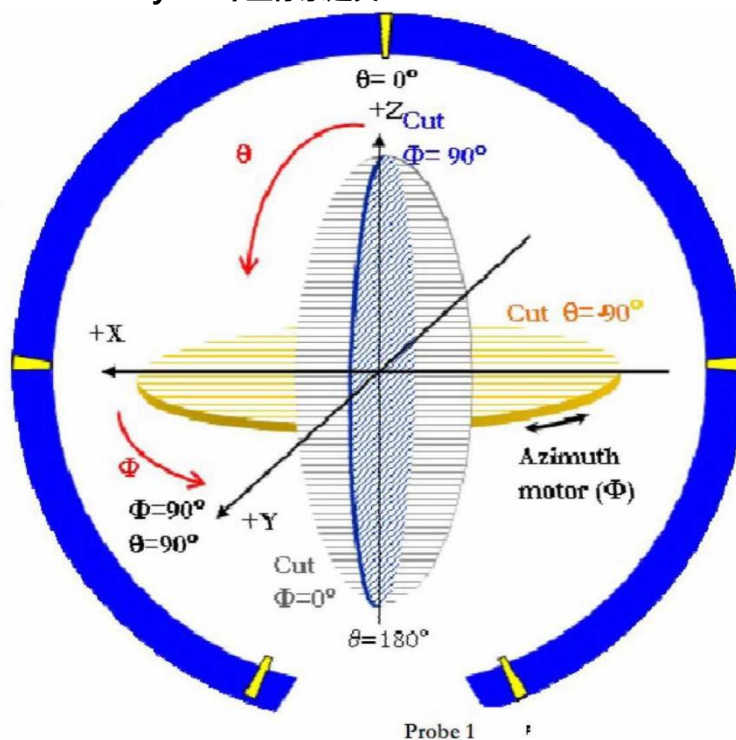
4. Antenna test result/测试结果

4.1 Return loss/Smith chart/VSWR/回波损耗/史密斯图/驻波比



4.2The gain and total efficiency test/增益和效率测试

4.2.1 The definition of coordinate system/坐标系定义-Satimo SG24



The coordinate system of Chamber/暗室坐标系



The production test position/天线测试放置位置

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4.2.2 The test result of total efficiency and total gain/天线效率及增益测试结果

2400MHz-2500MHz

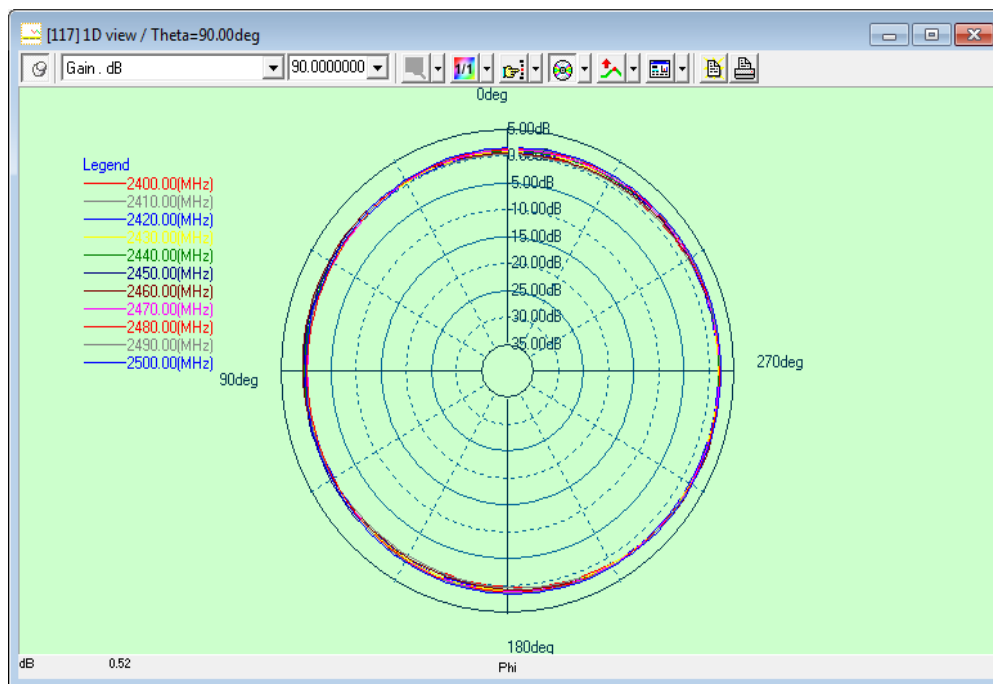
Frequency	Efficiency(%)	Gain (dBi)
2400MHz	72%	2.41
2410MHz	77%	2.66
2420MHz	76%	2.74
2430MHz	74%	2.52
2440MHz	75%	2.62
2450MHz	73%	2.23
2460MHz	72%	2.21
2470MHz	77%	2.75
2480MHz	72%	2.36
2490MHz	74%	2.56
2500MHz	71%	2.15
AVG	74%	2.47

5150MHz-5850MHz

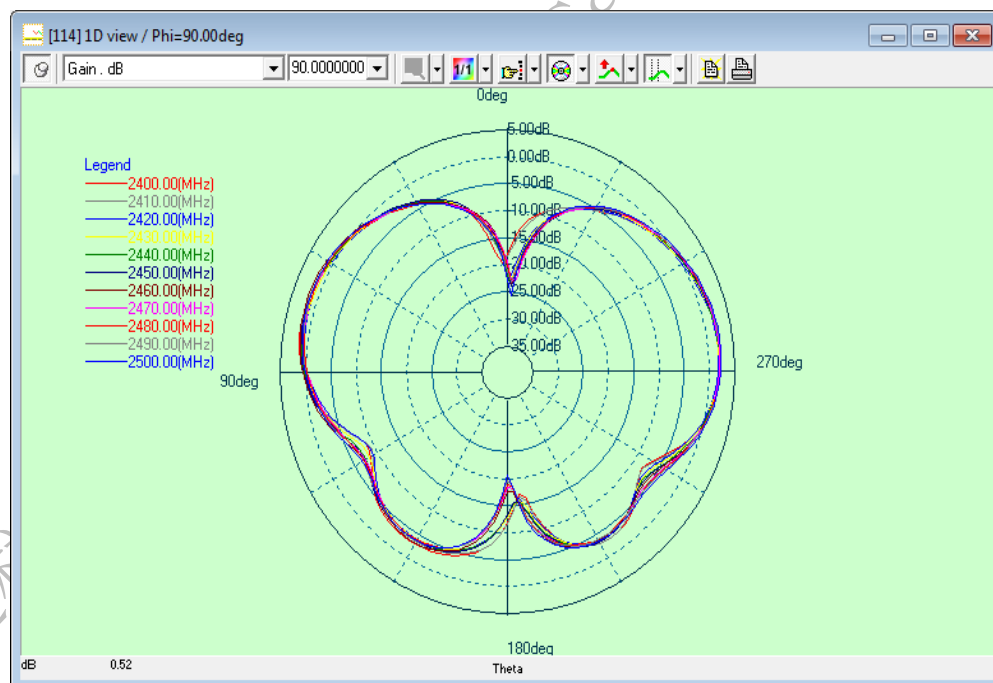
Frequency	Efficiency(%)	Gain (dBi)
5150MHz	72%	2.58
5200MHz	72%	2.60
5250MHz	71%	2.64
5300MHz	69%	2.53
5350MHz	73%	3.05
5400MHz	75%	3.26
5450MHz	73%	3.17
5500MHz	73%	3.12
5550MHz	74%	3.44
5600MHz	72%	3.00
5650MHz	67%	2.56
5700MHz	70%	2.90
5750MHz	71%	2.79
5800MHz	72%	2.61
5850MHz	75%	3.20
AVG	72%	2.90

4.2.3 The antenna radiation pattern(2D)/天线辐射方向图 (2D)

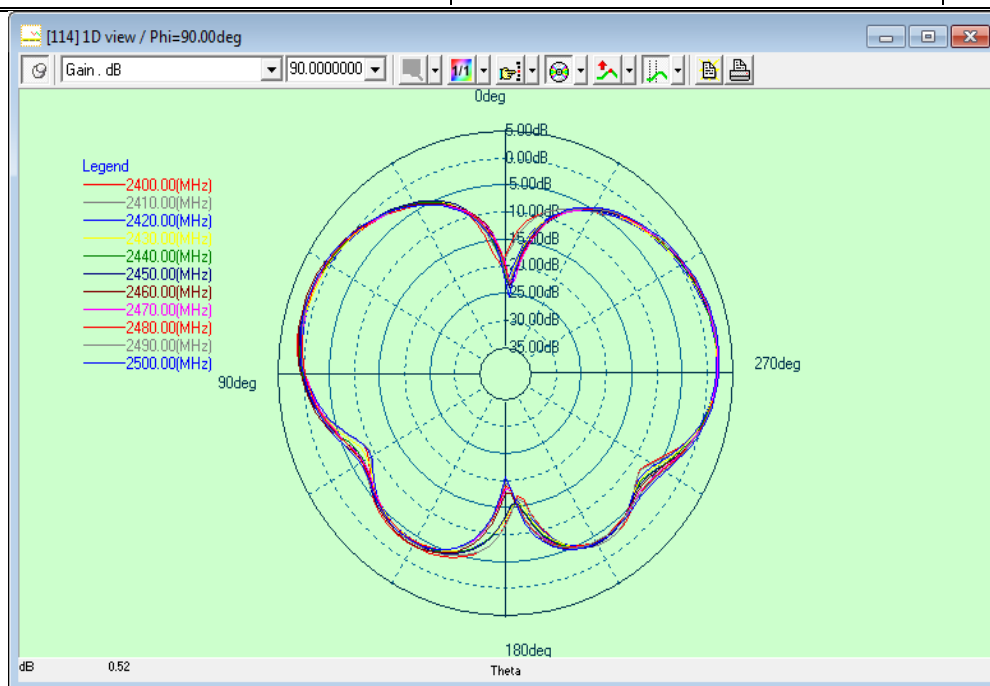
2400-2500MHz



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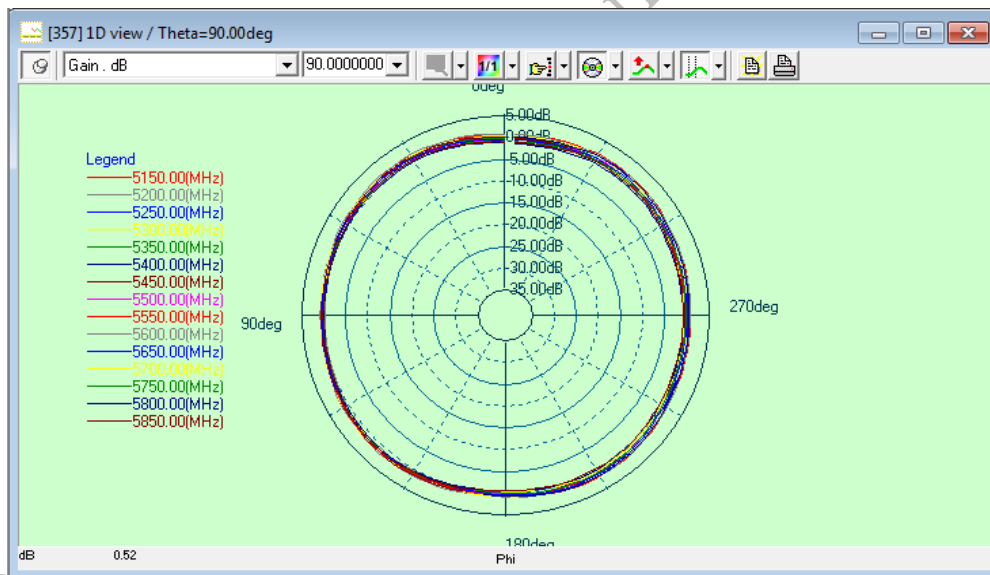


YOZ



XOZ

5150-5850MHz



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Product Specification

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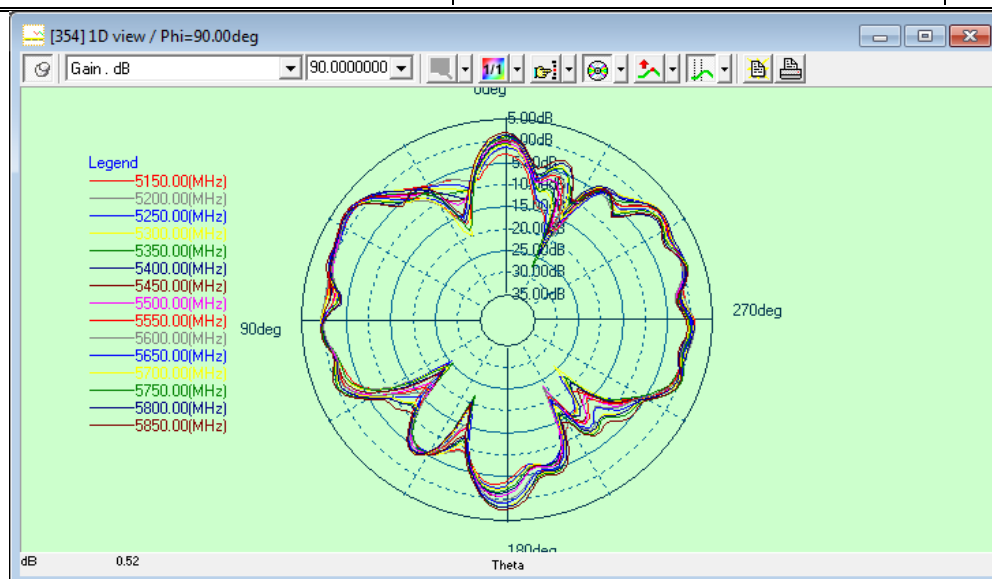
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Rev.:

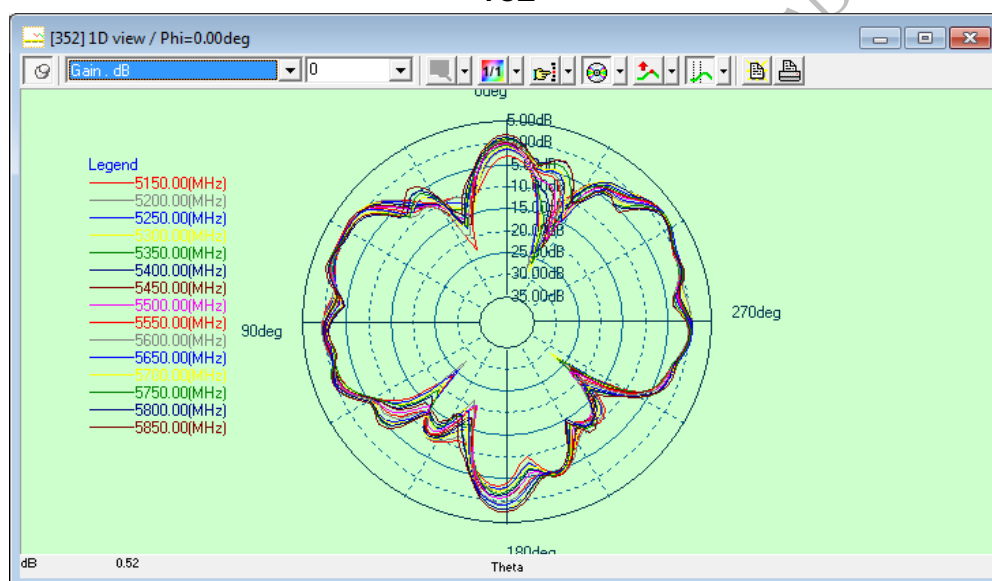
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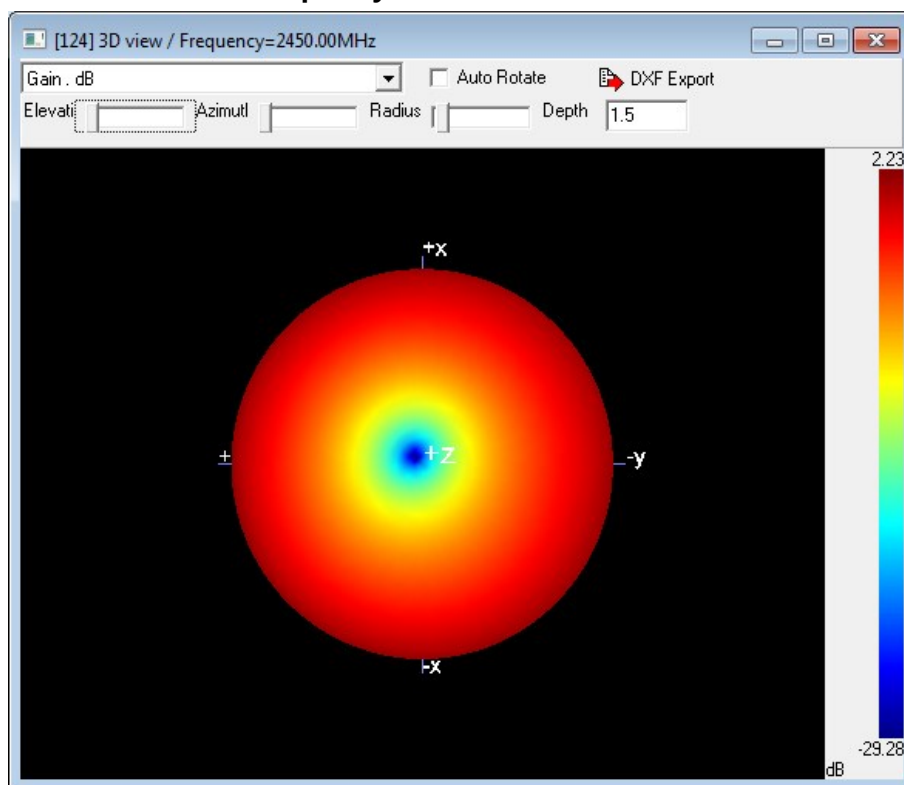
YOZ



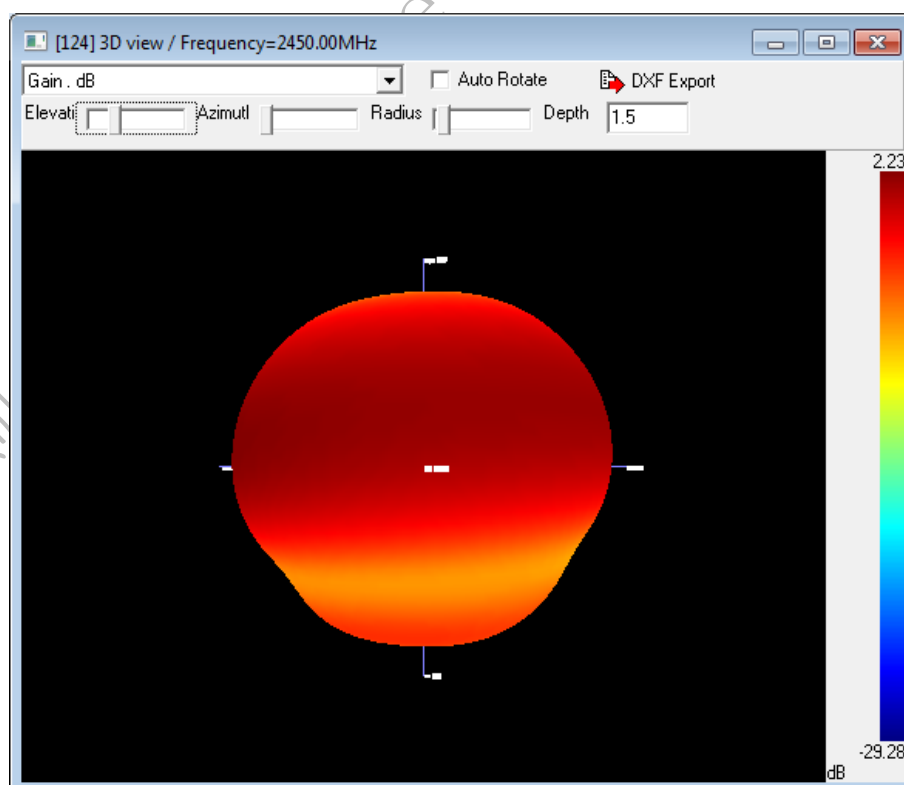
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4.2.4 The antenna radiation pattern(3D)/天线辐射方向图 (3D)

Frequency/频点 2450MHz



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Product Specification

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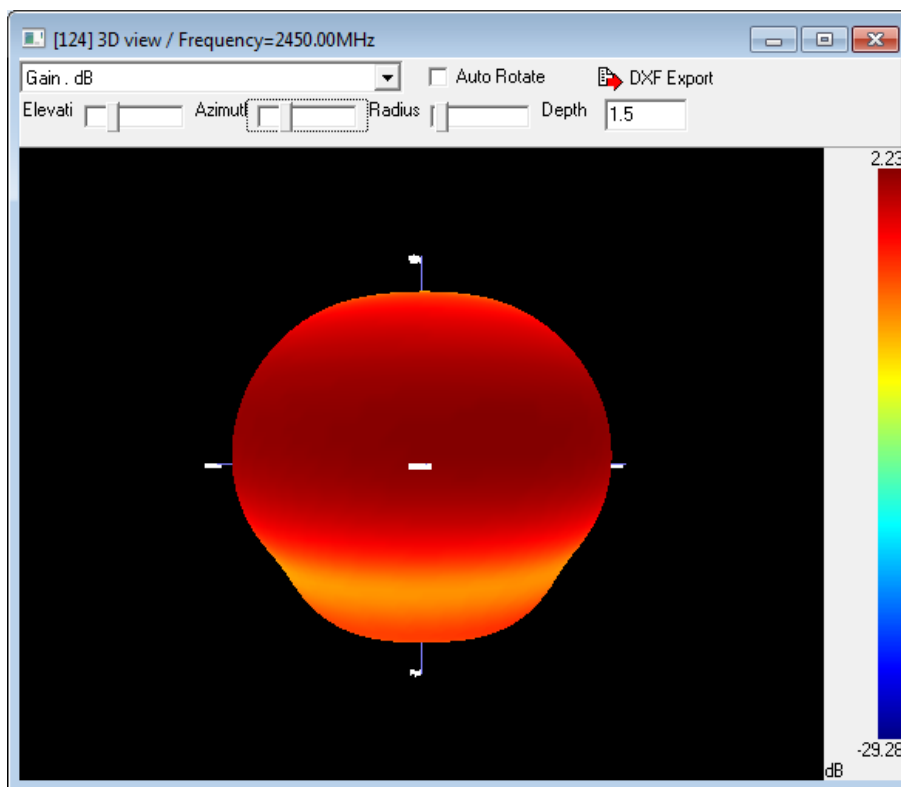
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Rev.:

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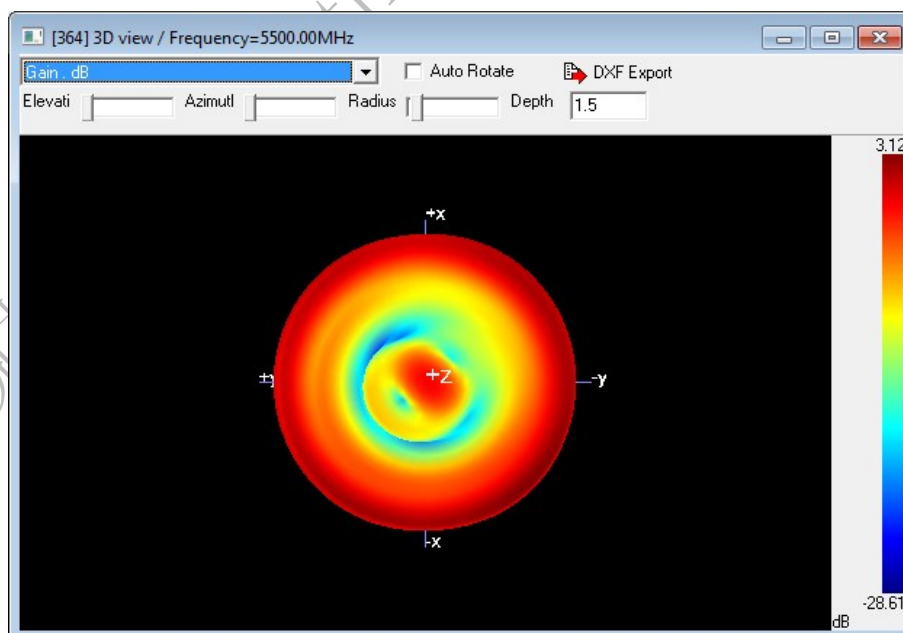
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XOZ

Frequency/频点 5500MHz



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