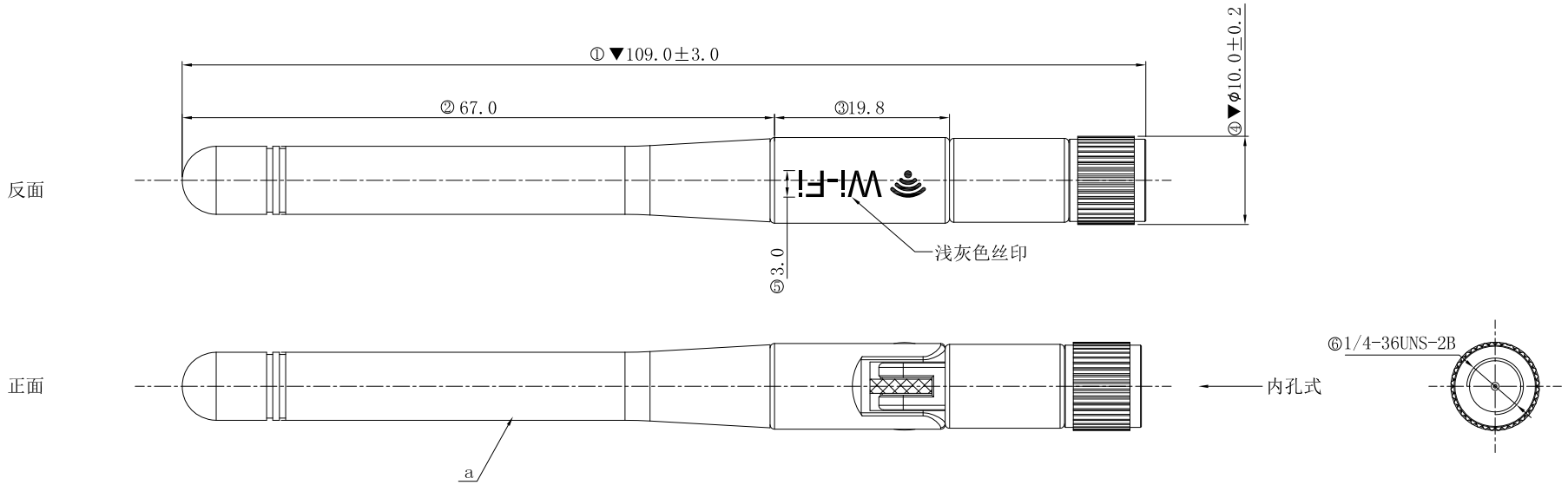
1. Antenna Specification/天线标准

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	2400~2500MHz 5150~5850MHz	
Impedance/阻抗	50 (Ω)	
VSWR/驻波比	2400-2500 MHz<2.0 5150-5850 MHz<2.0	
Directional/辐射方向	Omni directional	
Polarization/极化形式	Vertical	
Peak Gain/峰值增益	2400MHz-2500MHz: 1.78(dBi) 5150MHz-5850MHz: 4.03(dBi)	
Test condition/测试条件	passive test（无源测试）	
Total Efficiency/无源效率	2400MHz~2500MHz≥65% 5150MHz~5850MHz>55%	
Mechanical Specification/机械指标		
Antenna type/天线类型	胶棒天线	
Connector Type/连接器类型	RP-SMA-J	
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	≥3.0Kgf	
Salt Spray/盐雾测试	48 (H)	
EnvironmentalSpecification /环境指标		
Operating temp/工作温度	-40℃ ~ +75℃	
Storage temp/存储温度	-40℃ ~ +75℃	

2. Antenna Picture/天线图片

REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
A	ECN192067	正式发行	03/30'20	梁兑泉	丁第斌	张英杰
△B	ECN214691	△B *2内部结构和供应商变更	12/28'21	梁兑泉	丁第斌	牛宝星



说明:
1. 各部件装配完后不得有油污、划痕、变形等外观不良.
2. 各部件装配完成后无明显色差.
3. 丝印要求：字体Arial、H=3.00mm;
   丝印颜色：PMS Cool Gray 4C/浅灰色.
4. 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.
5. 标有“▼”为QC重点检测尺寸.
6. 频率范围：2400-2500 MHz & 5150-5850 MHz, ≤2.0;
   测试要求：VSWR测试全检，矩阵测试.
7. 有害物质须符合ECT《QE-Q-19-001-环境有害物质管理基准》管控标准.

NOTES:
1. After the assembly of different parts can not have bad appearance of greasy dirt, scratches, deformation, etc.
2. The assembly after the completion of the various components without clear off color.
3. The printing requirement: Arial font, H = 3.00mm;
   Screen printing color: PMS Cool Gray 4 c/light grey.
4. The ontology and the connecting shaft assembly after retention: 3KG MIN;
   Connector torque is: 0.2 ~ 0.6 Kg - cm.
5. Marked with "▼" key size detection for QC.
6. Frequency range: 2400-2500 MHz & 5150-5850 MHz, 2.0 or less.
   Pattern test requirements: the VSWR test all inspection, test matrix
7. HSF shall conform to the standard QE-Q-19-001 Environmental Hazardous Substances Management.

ITEM	PART NAME	Q'TY	MATERIAL / FINISH
a	胶杆天线	1	外置天线2.4/5.8G 110*10黑色胶杆公头母针

ELECTRIC CONNECTOR TECHNOLOGY

GENERAL TOLERANCE	
XX.± 2.00	XX.° ± 3°
X.± 1.00	X.° ± 2°
.X± 0.50	.X° ± 1°

SCALE: 1:1	DRAWN: 梁兑泉	DATE: 12/28'21	DWG.NO: 600-U330-01
UNIT: mm	CHECK:	DATE:	PARTS NO.(INTENDED USE): 81800U330
SIZE: A4	APPROVE:	DATE:	

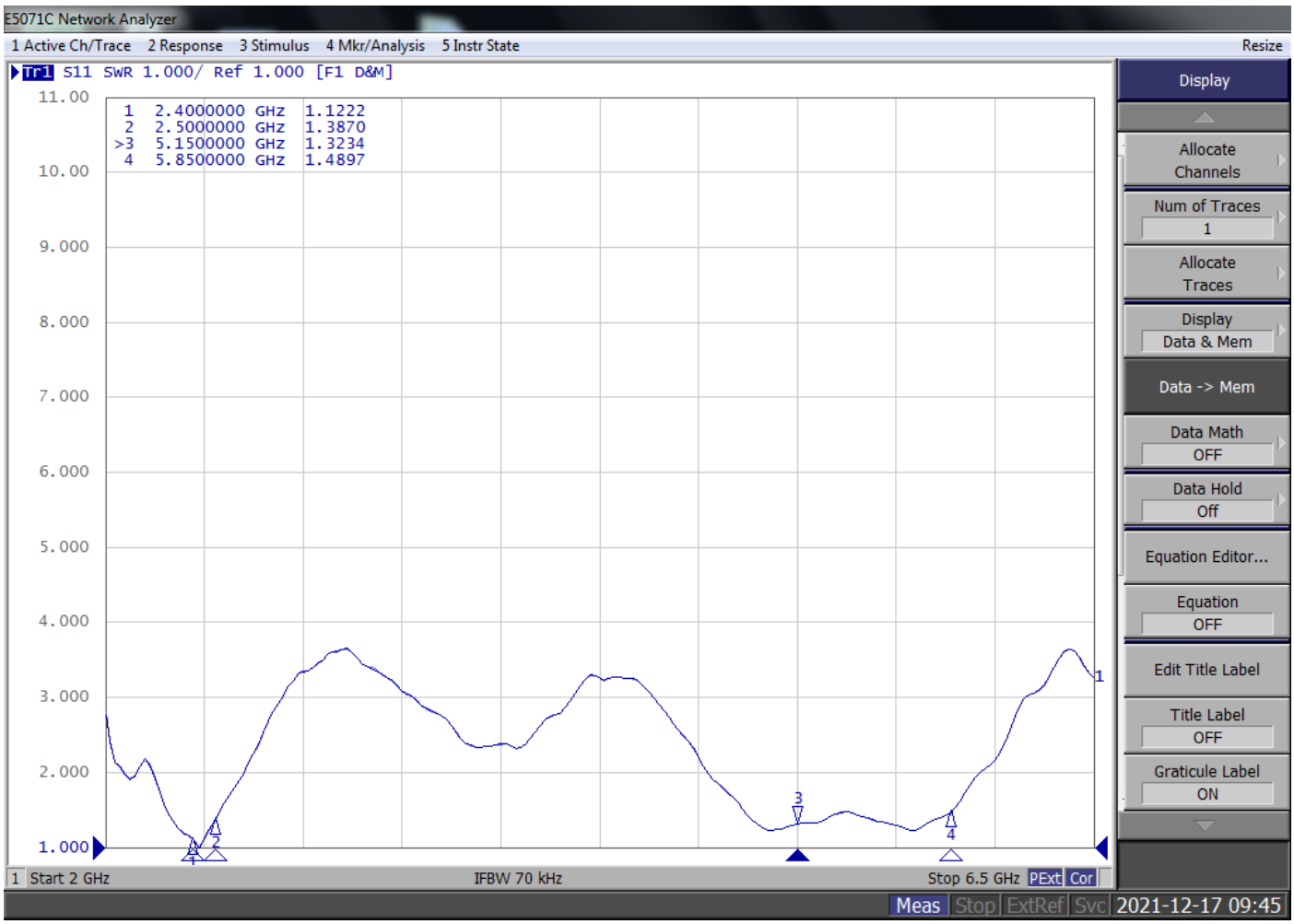
TITLE: ANT_EX_2.4/5.8G_110 *10_BK PR RP SMA-J

REV. B

SHEET: 1/1

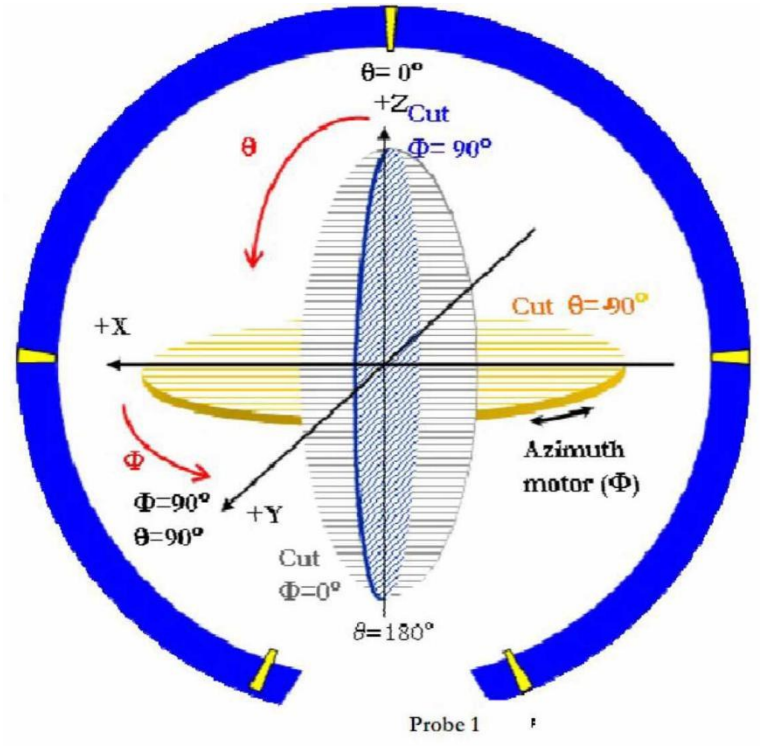
4. Antenna test result/测试结果

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

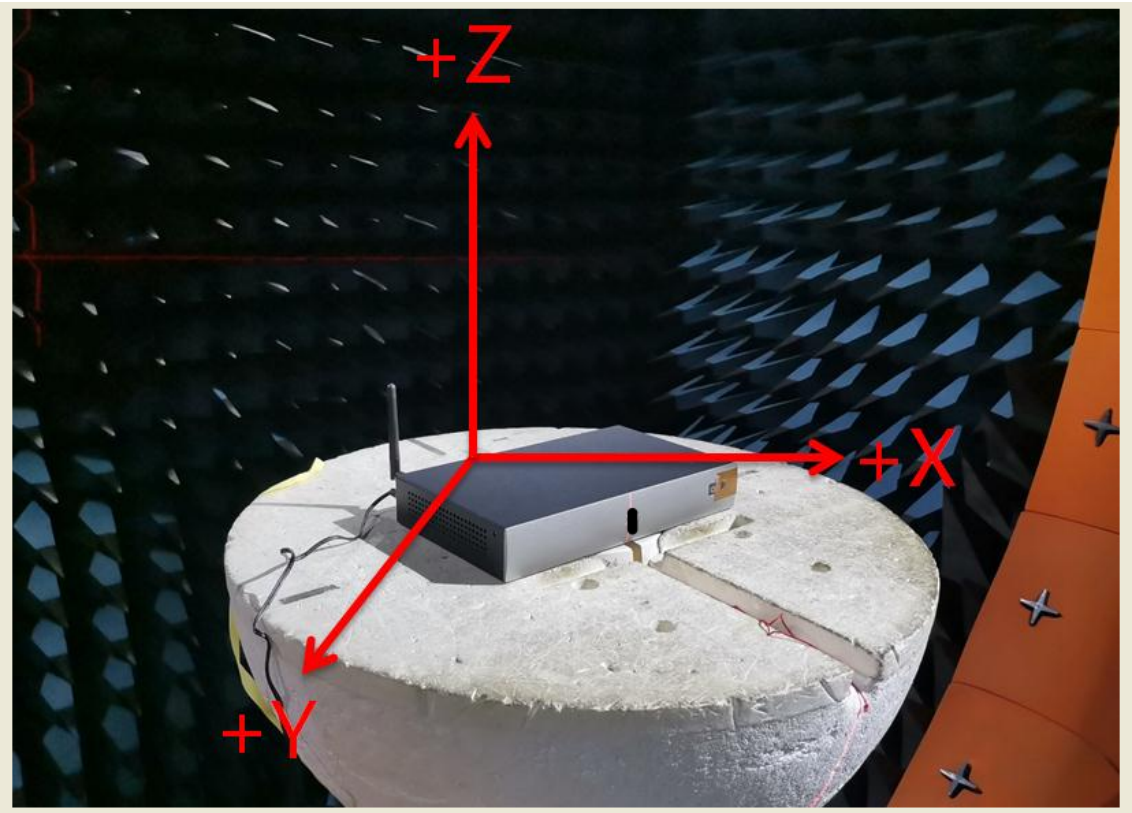


4.2The gain and total efficiency test/增益和效率测试

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

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

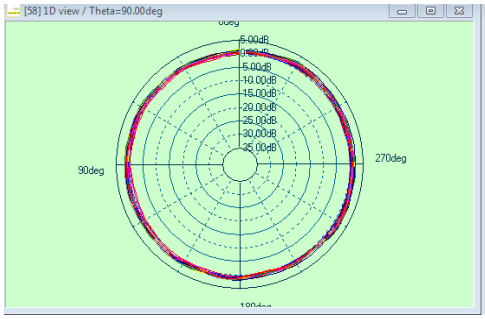
Frequency	Efficiency(%)	Gain (dBi)
2400MHz	66%	0.91
2410MHz	65%	1.07
2420MHz	66%	0.99
2430MHz	68%	1.08
2440MHz	70%	1.31
2450MHz	69%	1.23
2460MHz	70%	1.27
2470MHz	73%	1.57
2480MHz	76%	1.76
2490MHz	75%	1.78
2500MHz	72%	1.59
AVG	70%	1.32

5150MHz-5850MHz

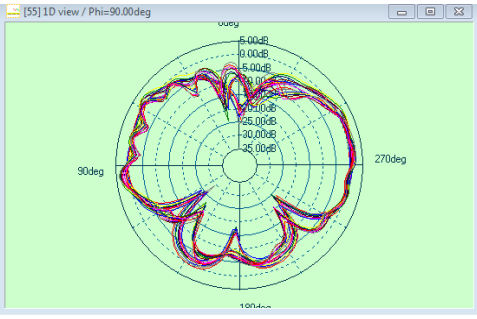
Frequency	Efficiency(%)	Gain (dBi)
5150MHz	78%	3.12
5200MHz	76%	3.00
5250MHz	73%	2.67
5300MHz	78%	2.96
5350MHz	63%	2.28
5400MHz	57%	1.94
5450MHz	68%	2.67
5500MHz	71%	3.35
5550MHz	72%	3.70
5600MHz	71%	3.86
5650MHz	71%	3.56
5700MHz	63%	2.90
5750MHz	62%	2.72
5800MHz	65%	3.26
5850MHz	75%	4.03
AVG	70%	3.07

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

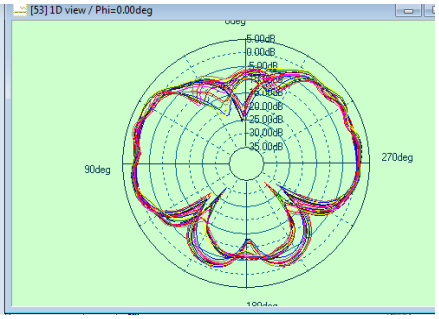
2400-2500MHz/5150-5850MHz



XOY



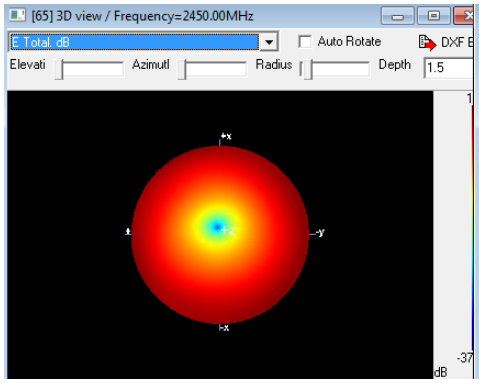
YOZ



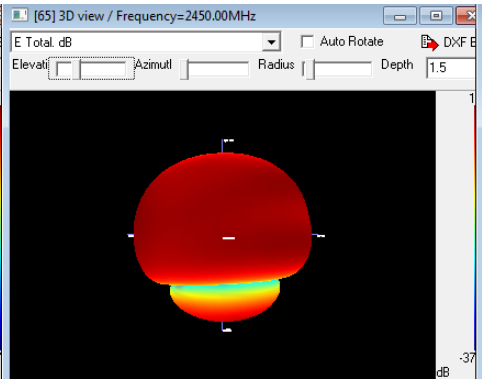
XOZ

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

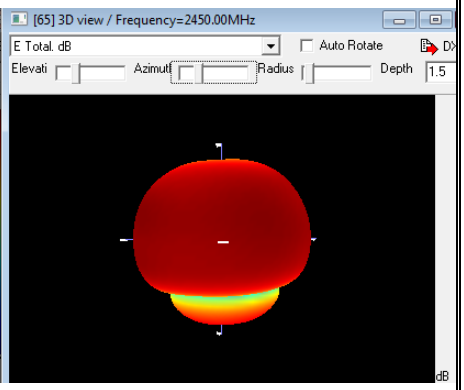
Frequency/频点 2450MHz



XOY

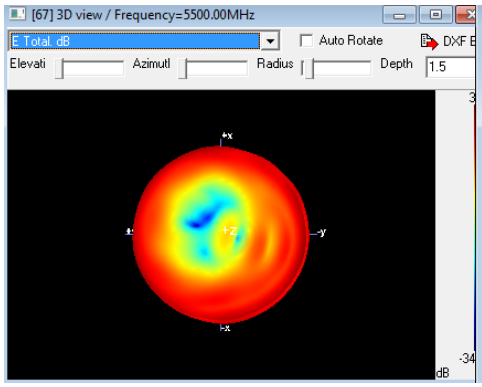


YOZ



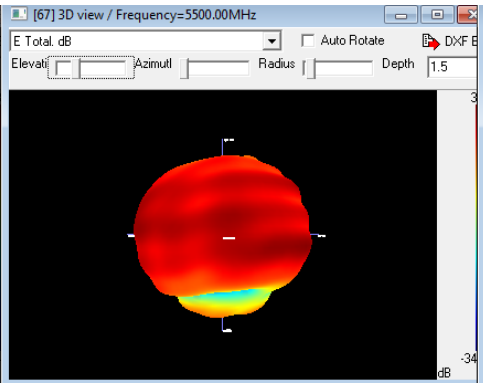
XOZ

Frequency/频点 5500MHz

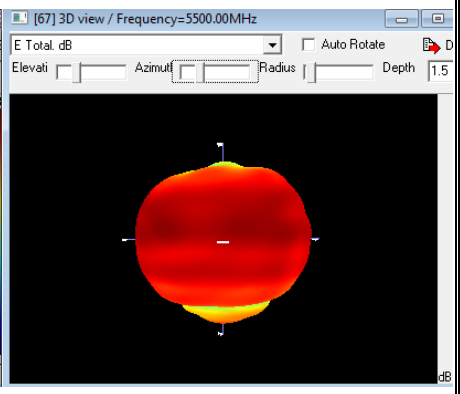


S

XOY



YOZ



XOZ