

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	2400MHz -2500MHz/5150MHz -5850MHz	
Impedance/阻抗	50 (Ω)	
Directional/辐射方向	Omni Directional/全向天线	
Polarization/极化形式	Vertical/垂直极化	
VSWR/驻波比	≤ 2.5 / ≤ 2.0	
Peak Gain/峰值增益	2.34dBi / 5.90dBi	
Test condition/测试条件	passive test (无源测试)	
Total Efficiency/无源效率	$\geq 45\%$ / $\geq 60\%$	

Mechanical Specification/机械指标

Antenna type/天线类型	Automobile antenna	
Connector Type/连接器类型	ECT 1 代连接器/USS RF 1	
RF Cable Type/射频线型号	1.13 黑色低损线 / 1.13 low loss (Black)	
Dimension/尺寸	56.3*45*16mm	
Salt Spray/盐雾测试	48(H)	

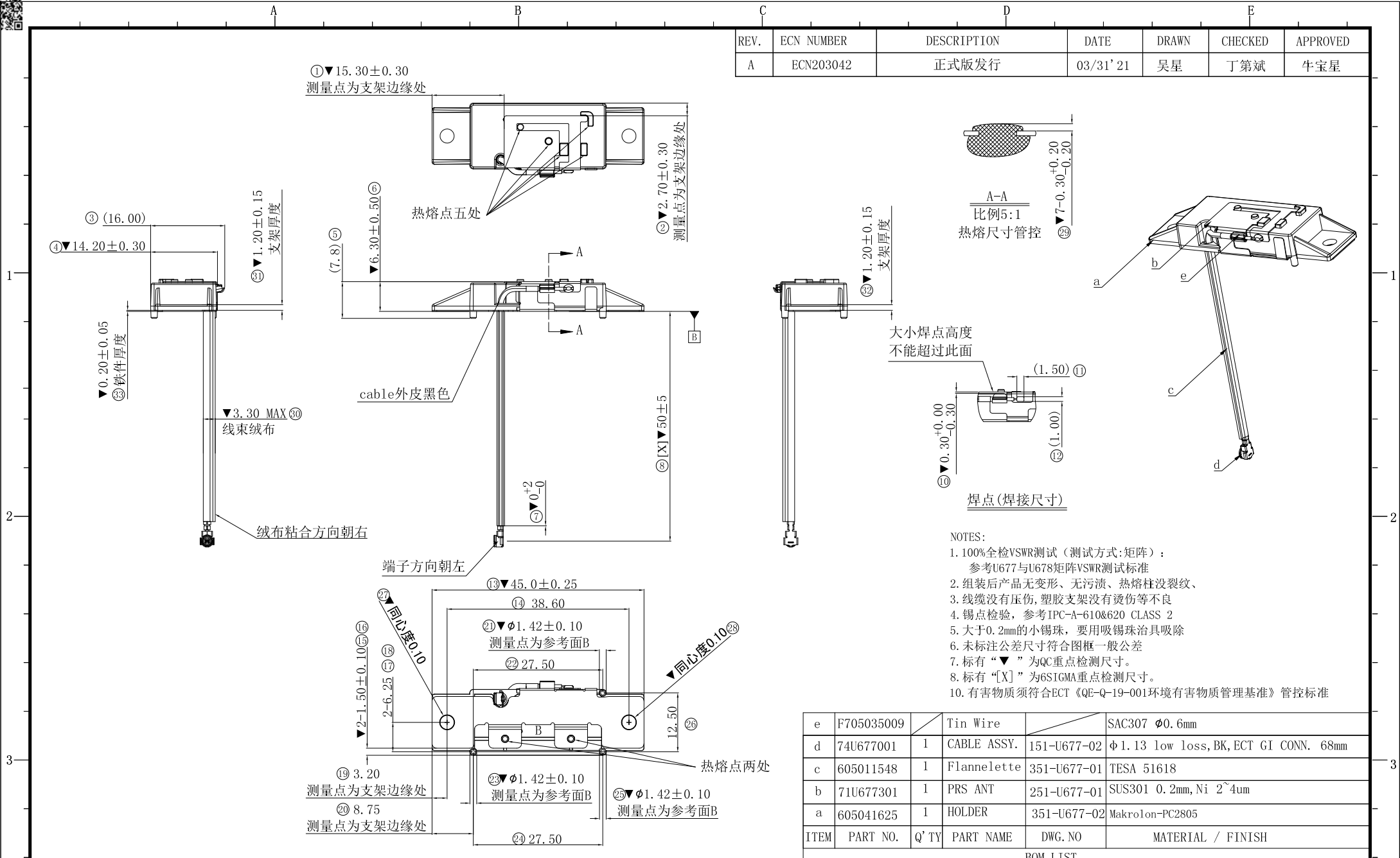
Environmental Specification /环境指标

Operating temp/工作温度	-40°C ~ +85°C	
Storage temp/存储温度	-40°C ~ +85°C	

2. Antenna Picture/天线图片



REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
A	ECN203042	正式版发行	03/31' 21	吴星	丁第斌	牛宝星



- NOTES:
- 100%全检VSWR测试(测试方式:矩阵):
参考U677与U678矩阵VSWR测试标准
 - 组装后产品无变形、无污渍、热熔柱没裂纹、
 - 线缆没有压伤,塑胶支架没有烫伤等不良
 - 锡点检验,参考IPC-A-610&620 CLASS 2
 - 大于0.2mm的小锡珠,要用吸锡珠治具去除
 - 未标注公差尺寸符合图框一般公差
 - 标有“▼”为QC重点检测尺寸。
 - 标有“[X]”为6SIGMA重点检测尺寸。
 - 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

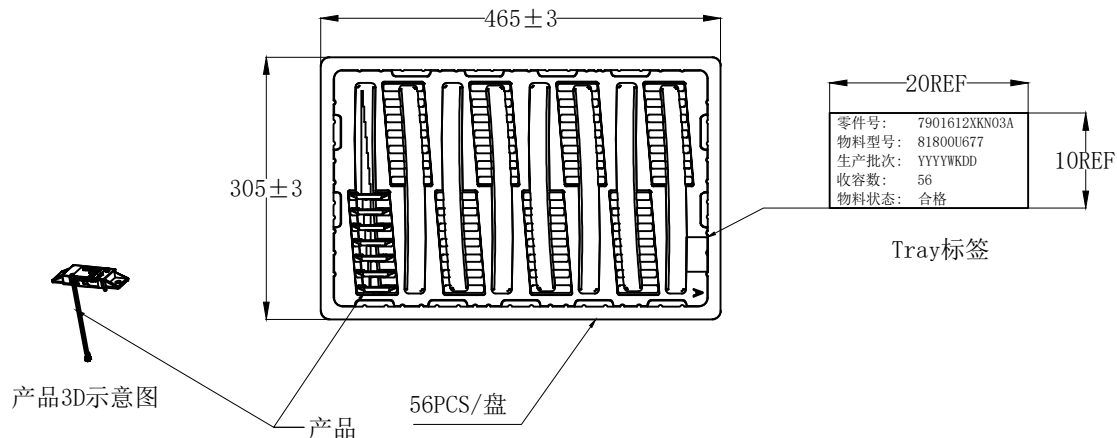
ITEM	PART NO.	Q'TY	PART NAME	DWG. NO	MATERIAL / FINISH
e	F705035009		Tin Wire		SAC307 ϕ 0.6mm
d	74U677001	1	CABLE ASSY.	151-U677-02	ϕ 1.13 low loss, BK, ECT GI CONN. 68mm
c	605011548	1	Flannelette	351-U677-01	TESA 51618
b	71U677301	1	PRS ANT	251-U677-01	SUS301 0.2mm, Ni $2 \times 4\mu$ m
a	605041625	1	HOLDER	351-U677-02	Makrolon-PC2805

BOM LIST



ELECTRIC CONNECTOR TECHNOLOGY	GENERAL TOLERANCE		SCALE:	DRAWN:	DATE:	DWG. NO:	TITLE:	REV.
	XX. \pm 0.40	XXX. $^{\circ}$ \pm 3 $^{\circ}$	1:1	吴星	03/31' 21	151-U677-01	81800U677 ANT	A
	X. \pm 0.25	XX. $^{\circ}$ \pm 3 $^{\circ}$	UNIT:	CHECK:	DATE:	PARTS NO. (INTENDED USE):		SHEET:
	.X \pm 0.20	X. $^{\circ}$ \pm 2 $^{\circ}$	mm	APPROVE:	DATE:	81800U677	1/1	
.XX \pm 0.13	.X $^{\circ}$ \pm 1 $^{\circ}$	SIZE:	A4					

Rev.	ECN Number	Description	Date	Drawn	Checkd	Approved
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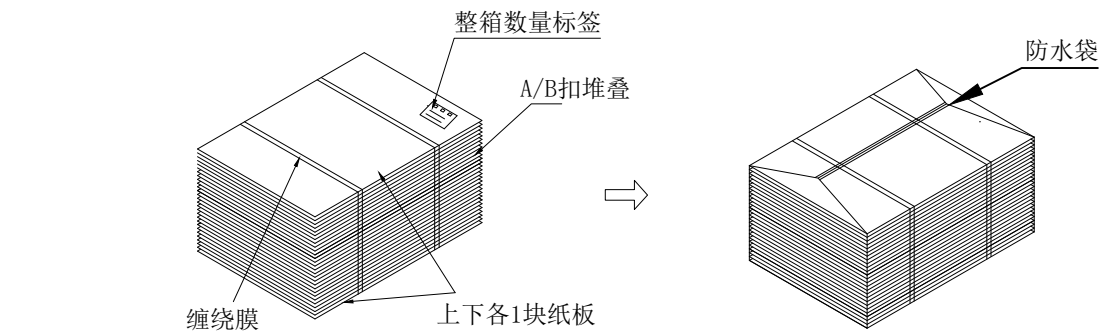


管制重点:

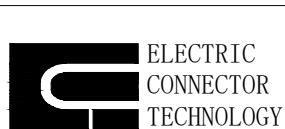
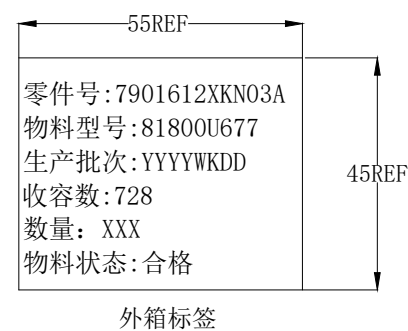
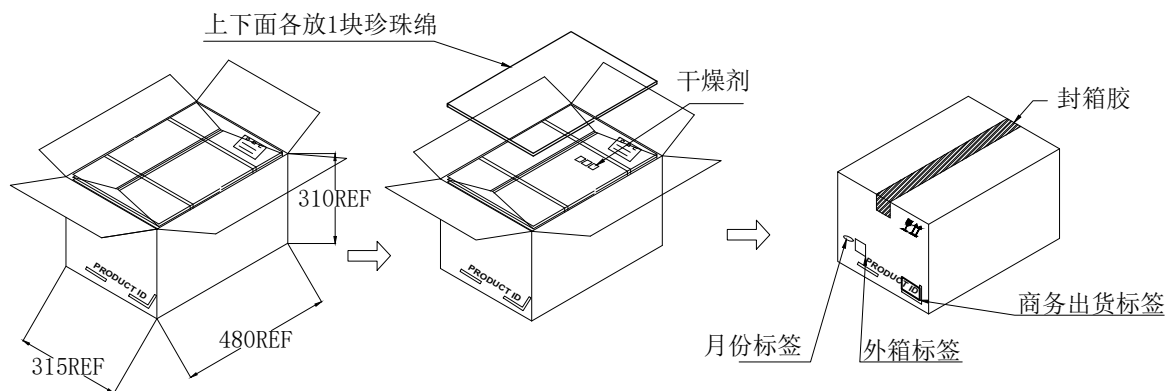
1. 包装前检查吸塑盘有无变形, 破裂; 切边是否整齐.
2. 包装时产品轻拿轻放, 避免产品变形.
3. 整盘包装好后, 检查是否有漏装, 产品的放置方向是否正确.
4. 检查是否有产品被压死, 检查整摞层数是否正确.
5. 若有未装满之零数箱, 须以缓冲材塞满.
6. 整箱封好后, 检查标签是否贴好, 干净, 字迹清晰, 标签内容是否正确, 完善.
7. 纸箱内尺寸: L480*W315*H310mm

Control focus:

1. Before packaging, check whether the blister is deformed or broken; whether the cutting edges are neat.
2. Handle the product with care during packaging to avoid product deformation.
3. After the entire package is packaged, check whether there is any missing packaging and whether the product is placed in the correct direction.
4. Check whether any product is crushed, and check whether the number of layers in the whole stack is correct.
5. If there are unfilled fractional boxes, they must be filled with buffer materials.
6. After the whole box is sealed, check whether the label is properly attached, clean, clear handwriting, and whether the label content is correct and complete.
7. The inner size of the carton: L480*W315*H310mm



包装材料		产品包装容量			产品包装重量			
项目	料号	数量	Pcs/盘	盘/外箱	PCS/外箱	单重(kg)	净重(kg)	总重(kg)
外纸箱	604010008	1	56	13	728			
防水袋	604020010	1						
吸塑盘	604060257	13						
珍珠绵		2						
纸板	604010474	2						
干燥剂	708040129	3	每一箱放入三包干燥剂					



GENERAL TOLERANCE	
XX. ±0.40	X. ±2.0°
X. ±0.25	.X ±1.0°
.X ±0.13	.XX ±0.5°
XX ±0.05	

SCALE: 1:1

UNIT: mm

SIZE: A4

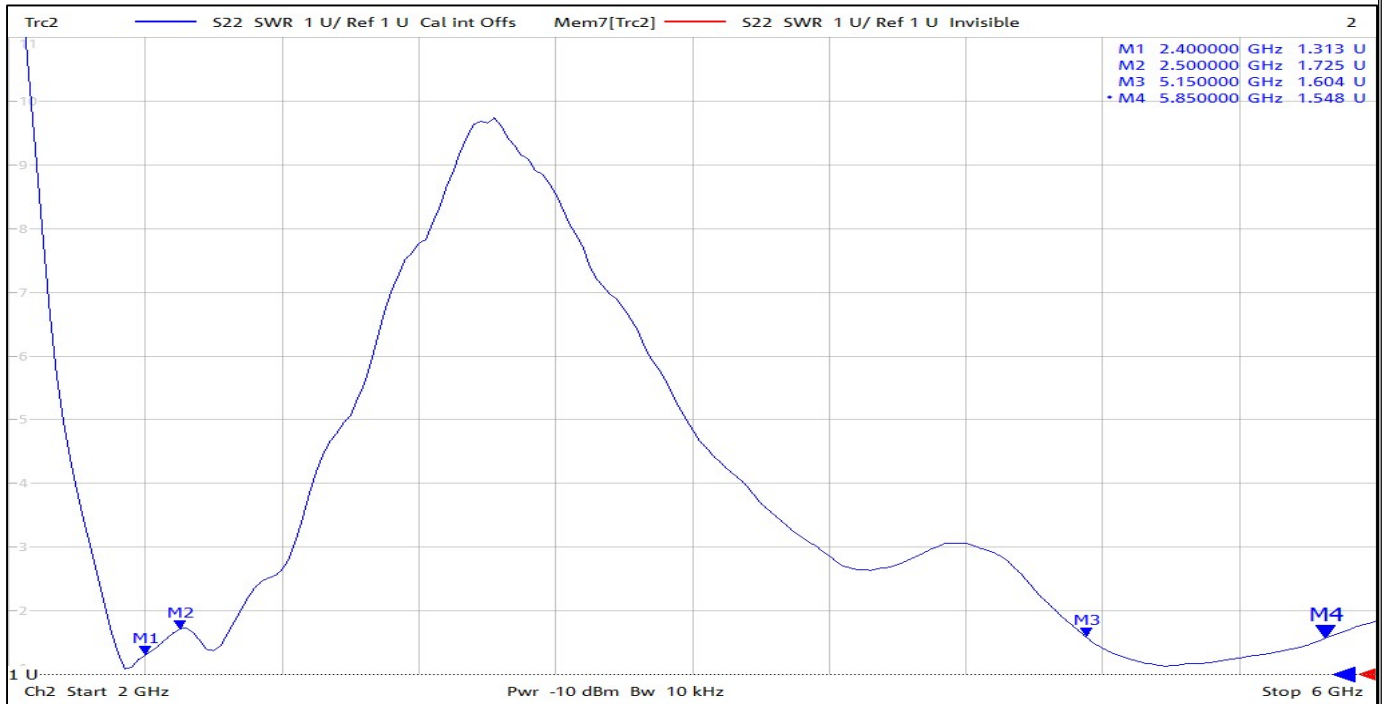
DRAWN	吴星	DATE	03/31'21
CHECK		DATE	
APPROVE		DATE	

DWG. NO.	551-U677-01
PARTS NO. (INTENDED USE)	81800U677

TITLE	81800U677 包规
REV.	A
SHEET	1/1

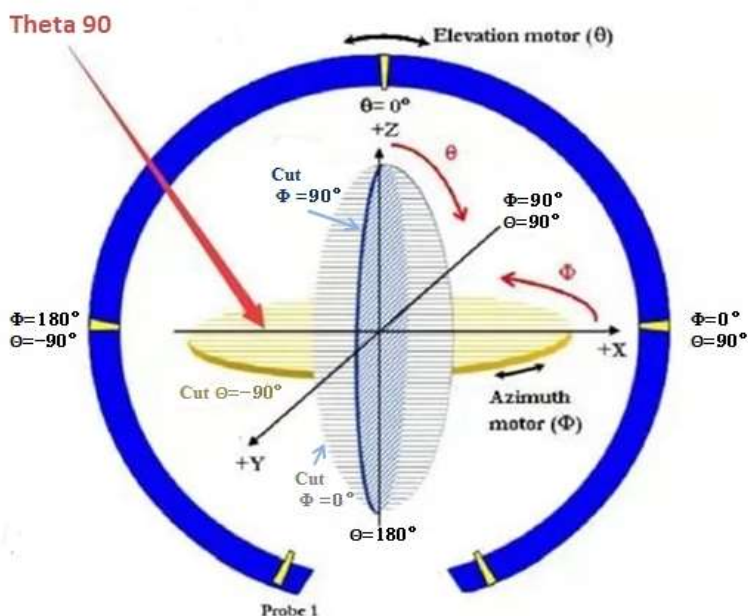
5. Antenna test result/测试结果

5.1 VSWR/驻波比

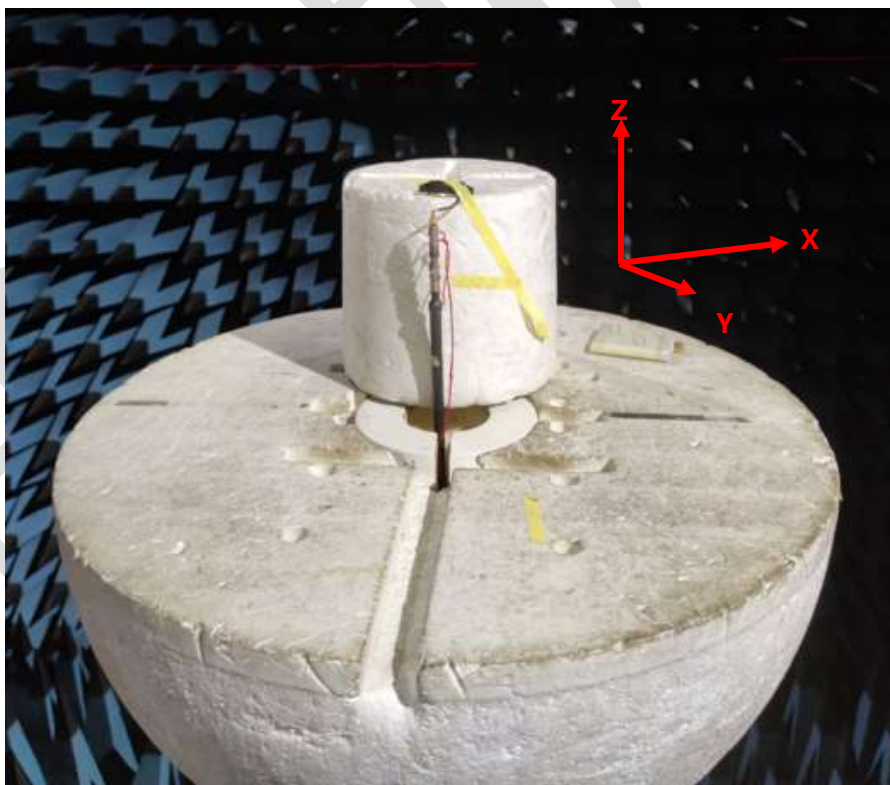


5.2 The gain and total efficiency test/增益和效率测试

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



The coordinate system of Chamber/暗室坐标系



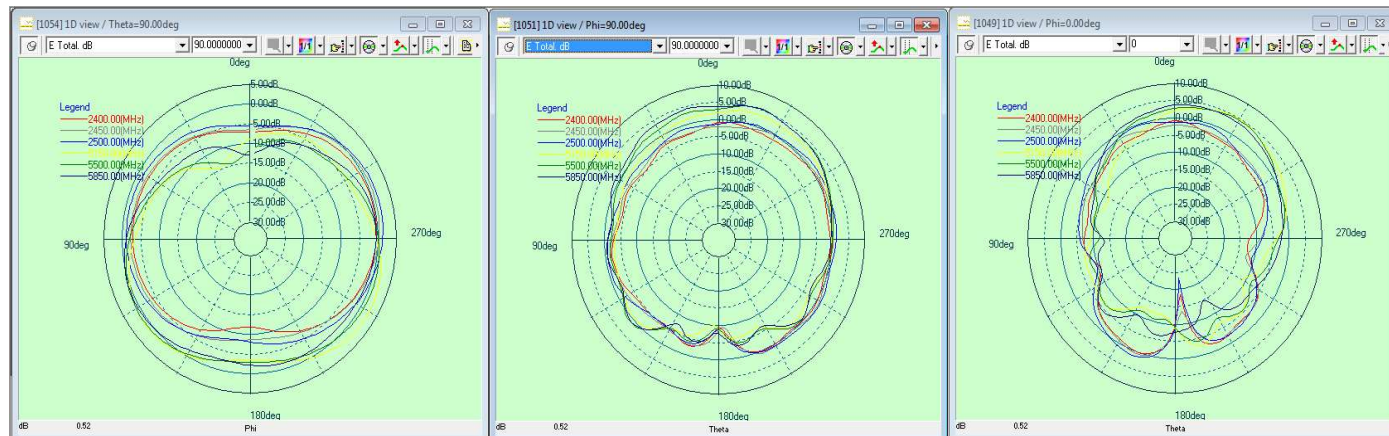
The production test position/天线测试放置位置

5.2.2 The test result of total efficiency and total gain/天线效率及增益测试结果
2400MHZ -2500MHZ/5150MHZ -5850MHZ

Frequency	Efficiency.%	Gain.dBi	Frequency	Efficiency.%	Gain.dBi
2400MHz	47%	1.12	5150MHz	64%	5.39
2410MHz	50%	1.42	5200MHz	65%	5.40
2420MHz	52%	1.86	5250MHz	64%	5.38
2430MHz	53%	2.09	5300MHz	66%	5.57
2440MHz	54%	2.04	5350MHz	66%	5.50
2450MHz	56%	1.88	5400MHz	74%	5.90
2460MHz	58%	1.95	5450MHz	69%	5.63
2470MHz	59%	1.97	5500MHz	67%	5.36
2480MHz	61%	2.21	5550MHz	70%	5.62
2490MHz	64%	2.34	5600MHz	66%	5.38
2500MHz	65%	2.30	5650MHz	67%	5.26
AVG.	56%	1.93	5700MHz	64%	5.07
			5750MHz	64%	5.00
			5800MHz	63%	5.01
			5850MHz	64%	5.00
			AVG.	66%	5.36

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

2400MHz-2500MHz/5150MHz -5850MHz



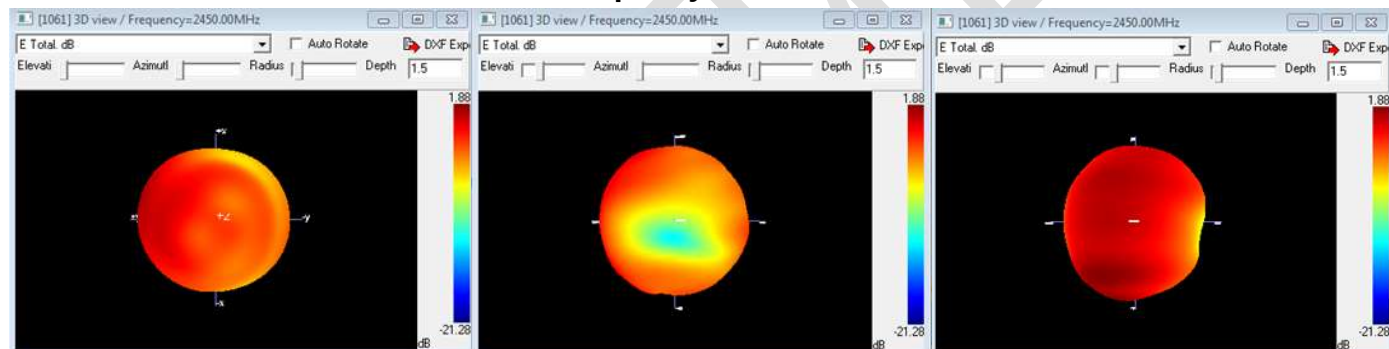
XOY

YOZ

XOZ

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

Frequency/频点 2450MHz

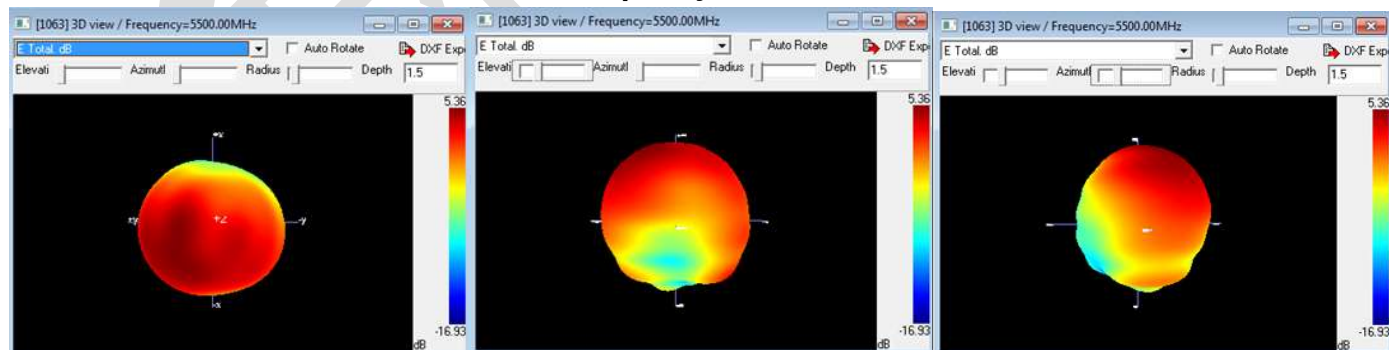


XOY

YOZ

XOZ

Frequency/频点 5500MHz



XOY

YOZ

XOZ