

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	350MHz-400MHz /1575±5MHz	
Impedance/阻抗	50 (Ω)	
Directional/辐射方向	Omni Directional	
Polarization/极化形式	Vertical	
VSWR/驻波比	≤3.5	≤3.5
Peak Gain/峰值增益	/	0.75dBi
Total Efficiency/无源效率	/	33%
Test condition/测试条件	passive test (无源测试)	

Mechanical Specification/机械指标

Antenna type/天线类型	Whip	
Connector Type/连接器类型	SMA-K(1/4-36UNS-2A)	
RF Cable Type/射频线型号	N/A	
Dimension/尺寸	OD14*90.80mm	
Salt Spray/盐雾测试	48(H)	

Environmental Specification /环境指标

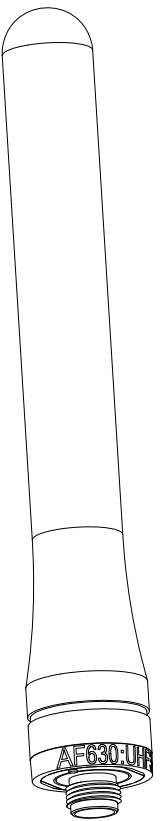
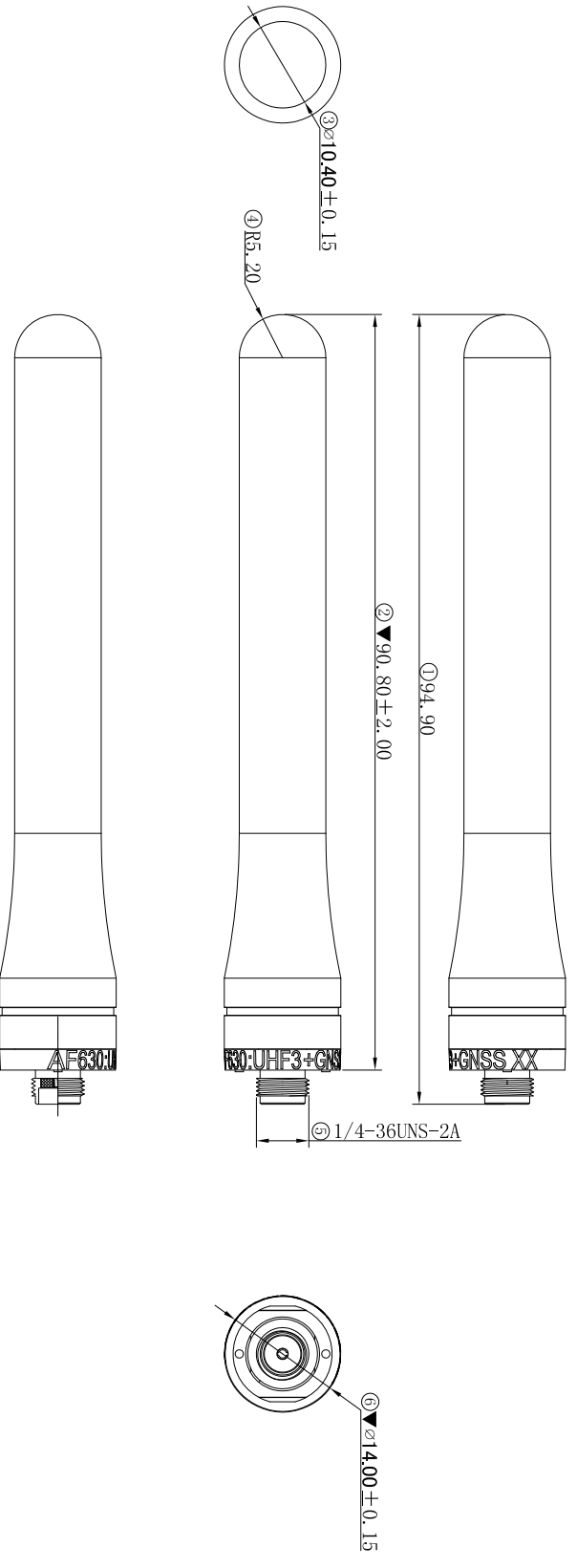
Operating temp/工作温度	-40°C ~ +80°C	
Storage temp/存储温度	-40°C ~ +80°C	

2. Antenna Picture/天线图片



海祥科技

REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
X1	ECN230482	FIRST REASE	04/17'23	梁兑泉	丁第斌	牛宗星



- 备注:
1. 材质: 塑胶壳: TPU, 黑色. SMA连接器, 镀镍.
 2. 天线频率范围: 350MHz~400MHz, VSWR≤3.5, 1575MHz, VSWR≤3.5.
- 测试要求: 全检VSWR测试, 网分测试.
- 标有“▼”为QC重点检测尺寸.
4. 盐雾48H.
 5. 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.

- NOTE:
1. Material: Plastic shell, TPU, black. SMA connector,
 2. The antenna frequency range: 350MHz~400MHz, VSWR≤3.5, 1575MHz, VSWR≤3.5.
- Pattern test requirements: all inspection VSWR test, test network points.
3. Marked “▼” key size detection for QC.
 4. Salt fog 48 h.
 5. HSF shall conform to the standard QE-Q-19-001 Environmental Hazardous Substances Management.

镭雕字符说明

AF630: UHF3 + GNSS XX

产品型号: AF630:UHF3 + GNSS XX

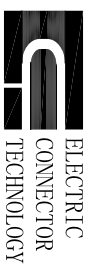
产品生产年份后两位, 例: 2023生产的镭雕23.

字符字体: Tahoma, 字符高度: T=2.20mm, 字符朝向: 字体顶部与配件进胶口&倒角面平行.

PC绿色色环配件

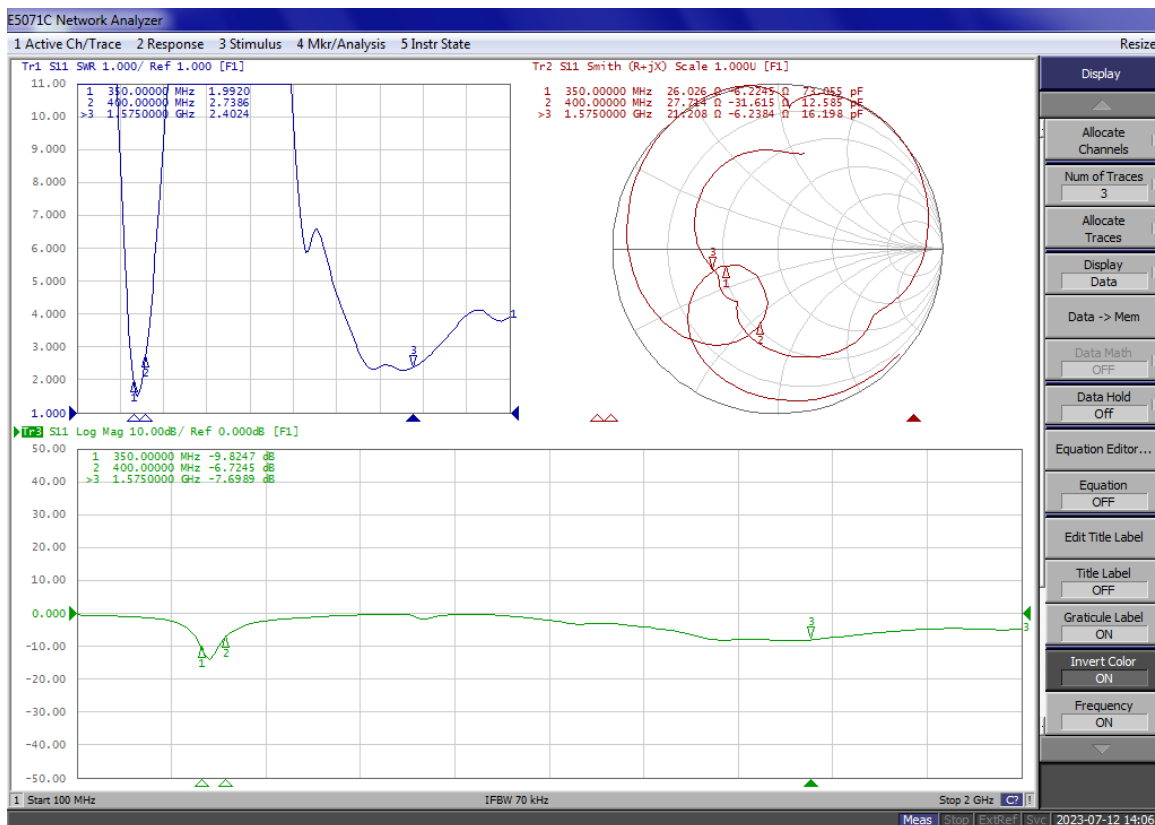
ITEM	PART NAME	Q'TY	MATERIAL / FINISH
a	半成品2	1	630_U3+GNSS-胶杆, 带件注塑TPU, 黑色, 直径14*150.8
b	配件	1	AF630-胶杆天线, 直径14.0*2.5mm_PC绿色色环配件

GENERAL TOLERANCE		SCALE: 1:1	DRAWN: 梁兑泉	DATE: 04/17'23	DWG. NO: 600-V367-01	TITLE: ANT_EX_UHF3+GNSS_TPU+shell	REV. X1
X ± 0.30	X ° ± 1°	UNIT: mm	CHECK:	DATE:	PARTS NO. (INTENDED USE): 81800V367	ANT_EX_UHF3+GNSS_TPU+shell	SHEET: 1/1
XX ± 0.10	XX ° ± 1°	SIZE: A4	APPROVE:	DATE:			



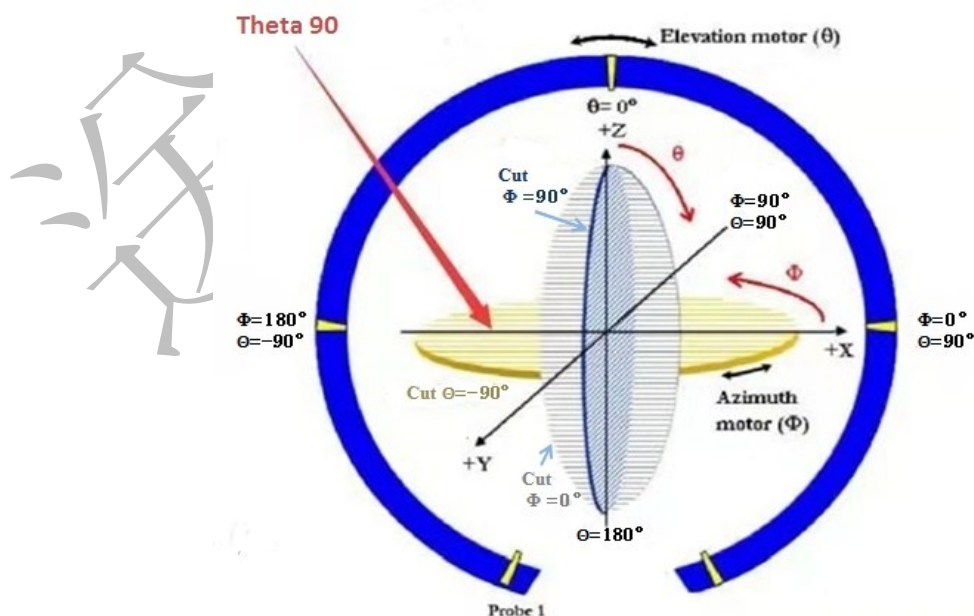
4. Antenna test result/测试结果

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

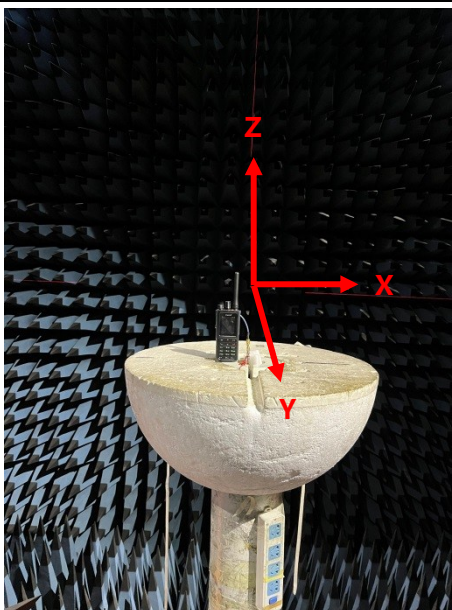


4.2 The gain and total efficiency test/增益和效率测试

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

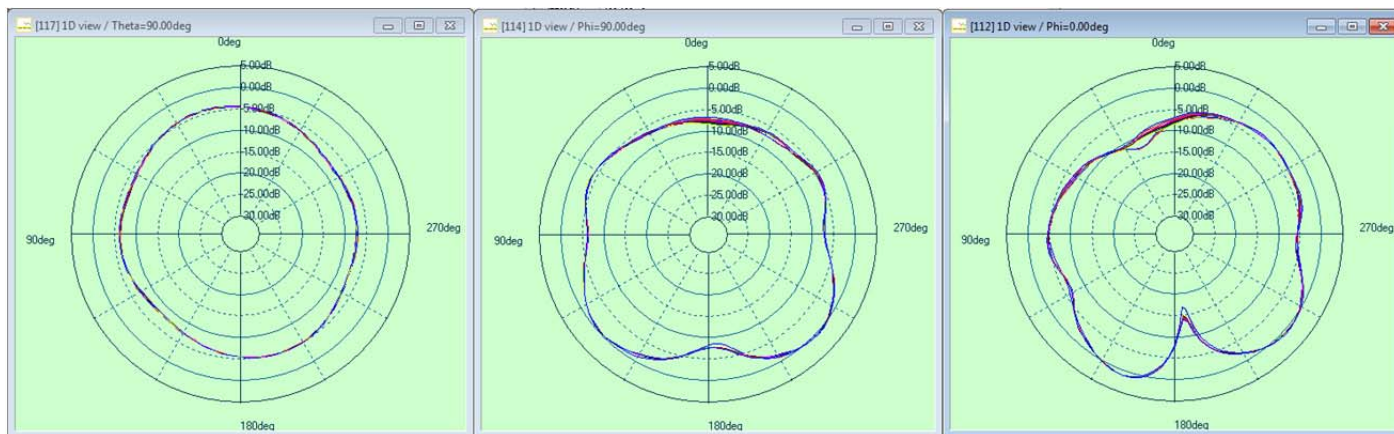
4.2.2 The test result of total efficiency and total gain/天线效率及增益测试结果

1570MHz-1580MHz

Frequency(频率) / MHz	Efficiency (效率) / %	Gain (增益) / dBi
1570MHz	33%	0.75
1571MHz	33%	0.70
1572MHz	33%	0.66
1573MHz	33%	0.70
1574MHz	33%	0.69
1575MHz	33%	0.68
1576MHz	33%	0.68
1577MHz	34%	0.71
1578MHz	34%	0.73
1579MHz	34%	0.74
1580MHz	34%	0.74
AVG	33%	0.71

4.2.3 The antenna radiation pattern(1D View)/天线辐射方向图 (1D View)

1570MHz-1580MHz



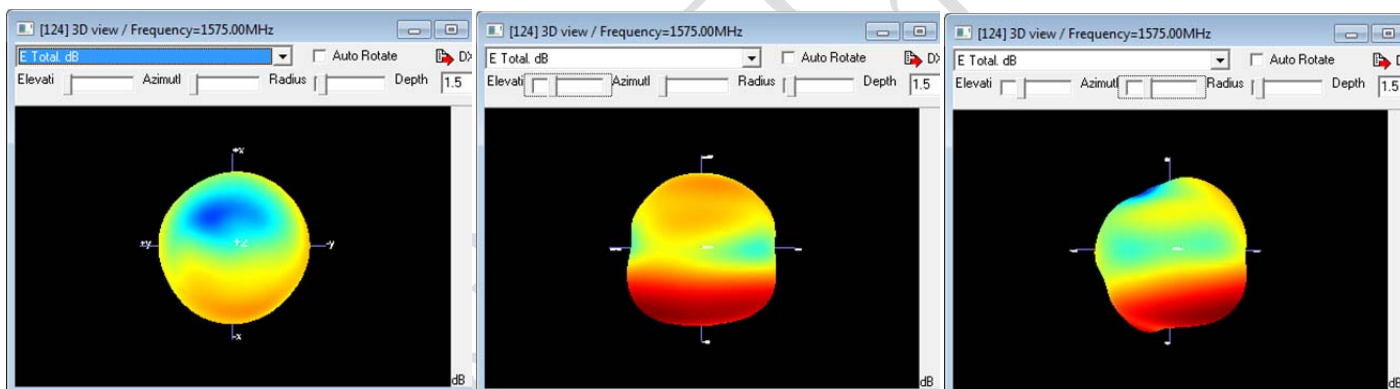
X0Y

Y0Z

X0Z

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

1575MHz



X0Y

Y0Z

X0Z