

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)	
Directional/辐射方向	Omni Directional	
Polarization/极化形式	Vertical	
VSWR/驻波比	$\leq 3/\leq 4$	
Peak Gain/峰值增益	2.49dBi /8.63dBi	
Total Efficiency/无源效率	$> 30\%/ > 20\%$	
Test condition/测试条件	passive test (无源测试)	
Power/功率	10W	

Mechanical Specification/机械指标

Antenna type/天线类型	FPC+Cable	
Connector Type/连接器类型	USS RF 1 代	
RF Cable Type/射频线型号	OD1.13 (BK)	
Dimension/尺寸	N/A	
Salt Spray/盐雾测试	48(H)	

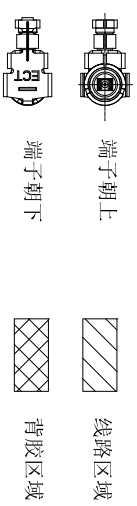
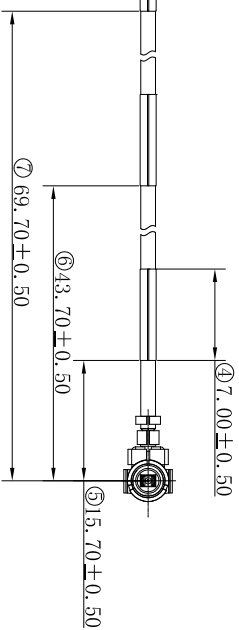
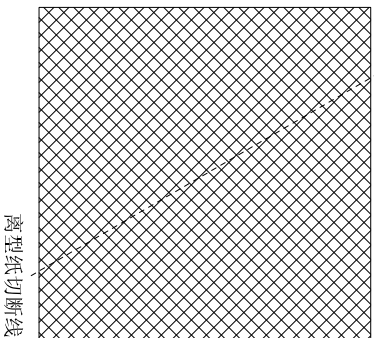
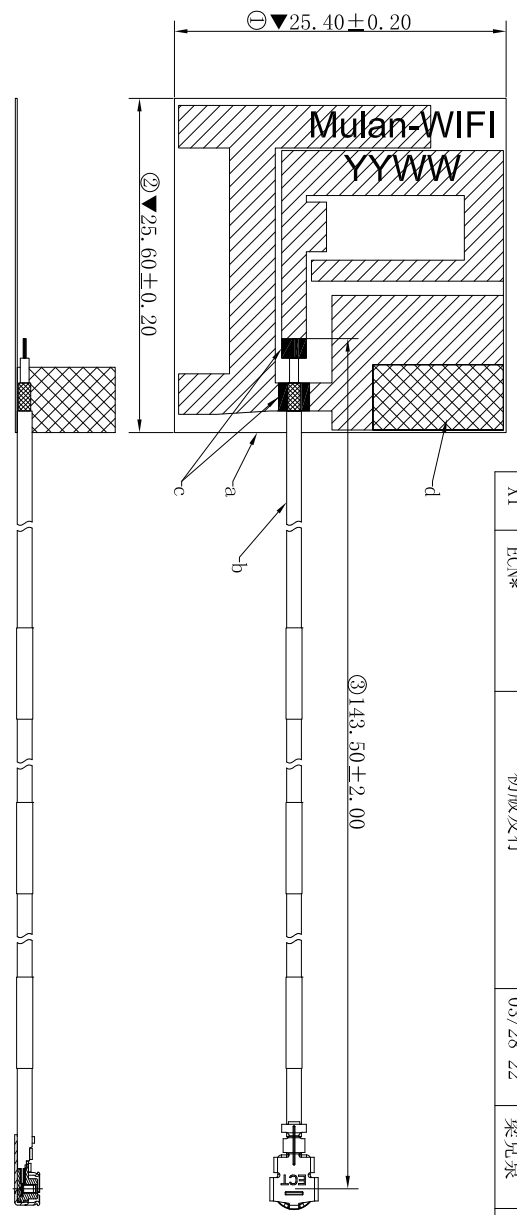
Environmental Specification /环境指标

Operating temp/工作温度	$-40^{\circ}\text{C} \sim +80^{\circ}\text{C}$	
Storage temp/存储温度	$-40^{\circ}\text{C} \sim +80^{\circ}\text{C}$	

Antenna Picture/天线图片



REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
X1	ECN*	初版发行	03/28' 22	梁克泉	丁第斌	牛宝星



- 备注:
1. 焊接不能虚焊、假焊，焊点须饱满，屏蔽层不能有烫伤。
 2. 允许最大毛边0.05MAX。
 3. 测试要求：全检VSWR测试，矩阵测试/网分测试。
测试频率：2400-2500MHz, VSWR ≤*;
5150-5850MHz, VSWR ≤*。
 4. 标有“▼”为QC重点检测尺寸。
 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. The welding can't virtual welding, welding, solder joints must be full, shielding layer cannot have burns.
 2. Allow maximum flash 0.05 MAX.
 3. The test requirements: pattern all inspection VSWR test, test matrix/ mesh points test.
Test frequency: 2400-2500MHz, VSWR ≤*;
5150-5850MHz, VSWR ≤*。
 4. Marked with “▼” key size detection for QC.
 5. HSF shall conform to the standard QE-Q-19-001 Environmental Hazardous Substances Management.

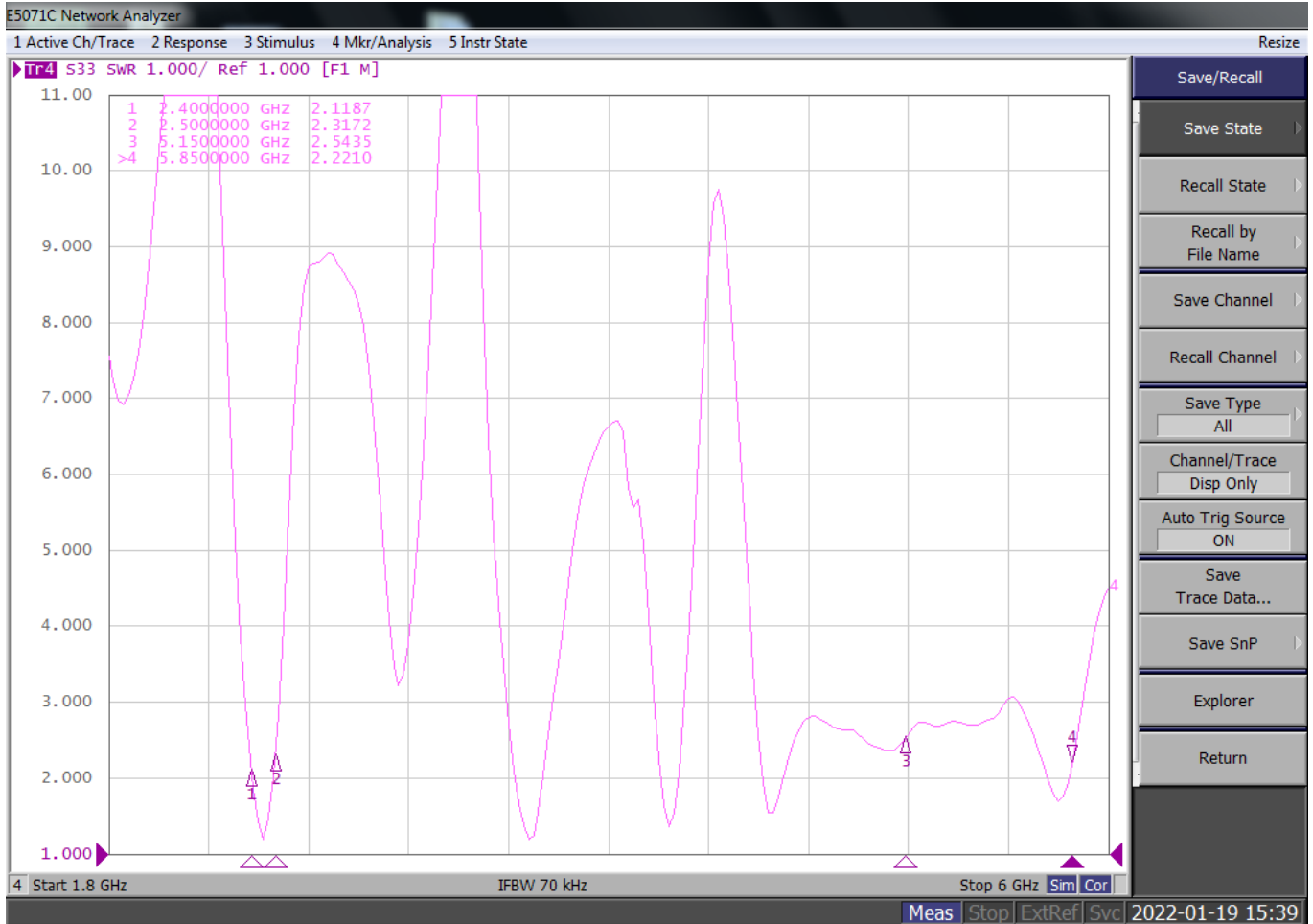
ITEM	PART NAME	MATERIAL / FINISH
d	Tin	环保锡丝, OD0.80mm
c	泡棉	Mulan-WIFI_导电海绵_10.0*5.0*7.5mm
b	CABLE(Φ0.81)	USS RF CABLE G1, SG, 113BK 143.5.3C, 089
a	PPC	Mulan-WIFI_II-BK-PPC_HF_25.60*25.40

GENERAL TOLERANCE		SCALE:	DRAWN:	DATE:	DWG. NO.:	TITLE:	REV.
.XXX ± 0.05		1:1	梁克泉	03/28' 22	600-V000-01	ANT_IN_2458_Mulan-WIFI	X2
.XX ± 0.10		UNIT:	CHECK:	DATE:	PARTS NO. (INTENDED USE):		SHEET:
X ± 0.2		mm	APPROVE:	DATE:	81800V000		1/1
		SIZE:					
		A4					



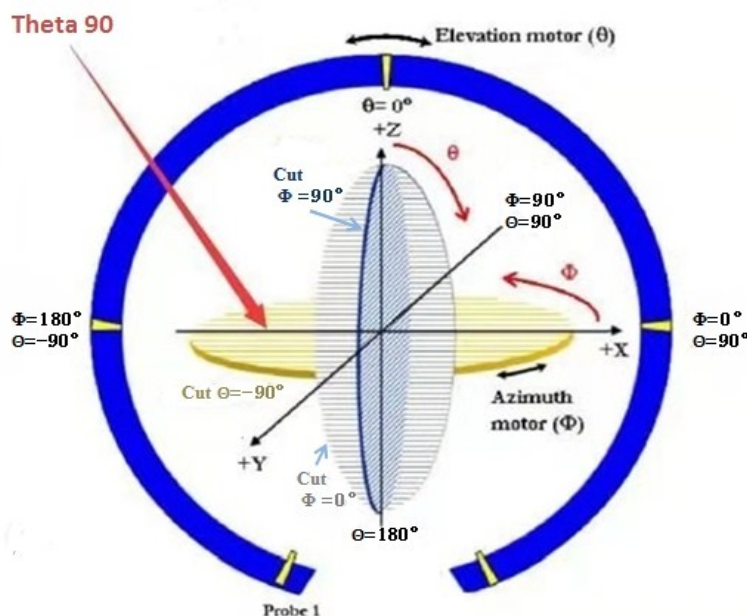
4. Antenna test result/测试结果

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

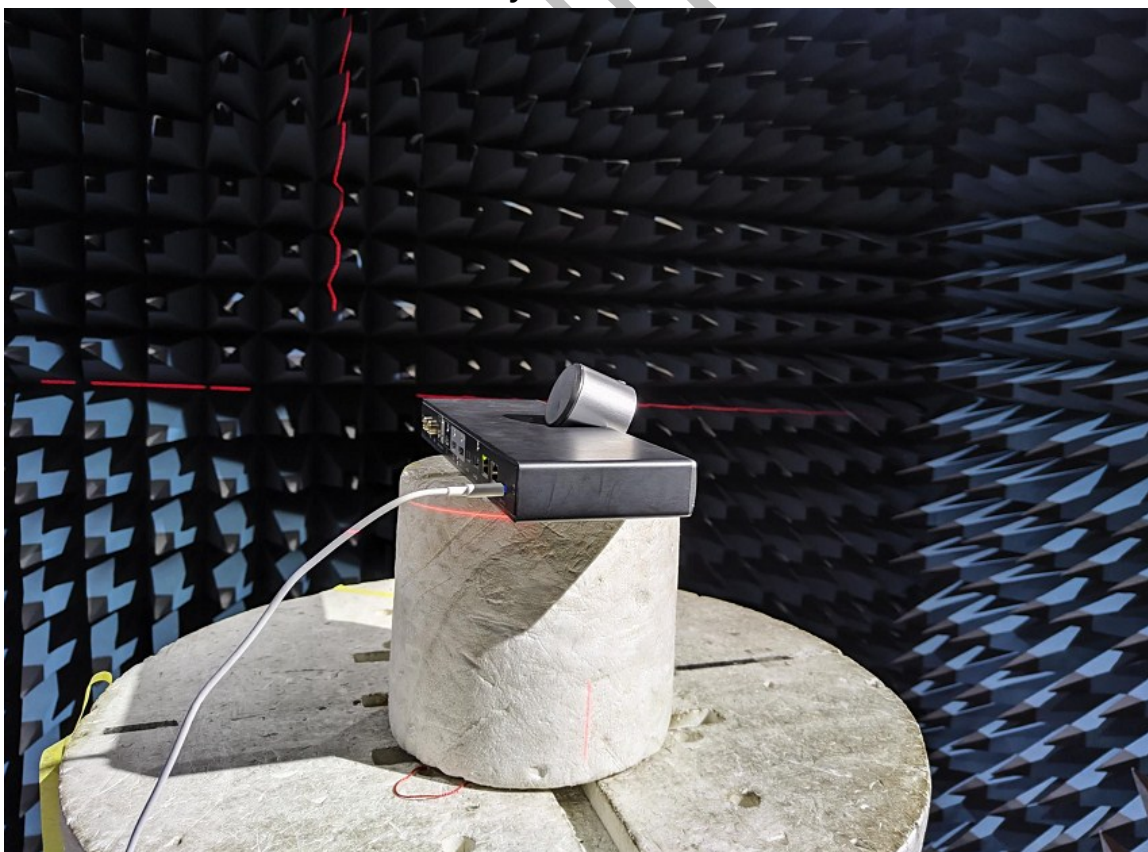


4.2 The gain and total efficiency test/增益和效率测试

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
2400MHz-2500MHz

Frequency	Gain (dBi)	Efficiency(%)
2400MHz	1.08	34%
2410MHz	1.70	38%
2420MHz	2.14	43%
2430MHz	2.41	45%
2440MHz	2.49	44%
2450MHz	2.29	42%
2460MHz	2.09	41%
2470MHz	2.06	40%
2480MHz	2.00	37%
2490MHz	1.48	32%
2500MHz	1.48	32%
AVG	1.87	39%

5150MHz-5850MHz

Frequency	Gain (dBi)	Efficiency(%)
5150MHz	4.43	31%
5200MHz	5.04	27%
5250MHz	5.81	31%
5300MHz	5.66	30%
5350MHz	5.43	28%
5400MHz	4.31	20%
5450MHz	5.44	23%
5500MHz	5.90	25%
5550MHz	5.36	25%
5600MHz	6.45	25%
5650MHz	5.83	24%
5700MHz	6.06	23%
5750MHz	6.77	24%
5800MHz	8.05	27%
5850MHz	8.63	30%
AVG	5.95	27%