

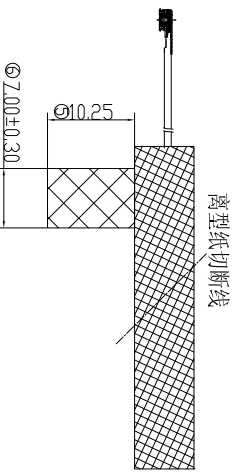
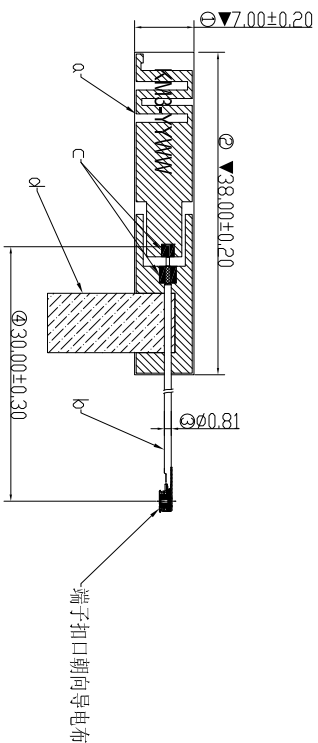
**1. Antenna specification/天线标准**

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	
Impedance/阻抗	50 ( $\Omega$ )	
VSWR/驻波比	$\leq 2.0$	
Directional/辐射方向	Omni directional	
Polarization/极化形式	Vertical	
Peak gain/峰值增益	1.13 (dBi)	
Test condition/测试条件	passive test (无源测试)	
Total efficiency/无源效率	$\geq 36\%$	
Mechanical Specification/机械指标		
Antenna type/天线类型	FPC+CABLE+导电布-内置天线	
Connector type/连接器类型	USS RF II (097)	
RF cable type/射频线型号	OD0.81(S+T)黑色	
Connector torque test/连接器扭力	N/A	
Connector pull test/连接器拉力	$\geq 1.0\text{Kgf}$	
Salt spray/盐雾测试	48 H	
Environmental specification /环境指标		
Operating temp/工作温度	$-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$	
Storage temp/存储温度	$-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$	

**2. Antenna picture/天线图片**



REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
X1	ECN*	初版发行	11/22'21	梁克泉	丁策斌	牛宝星

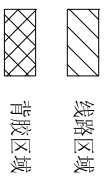


正面 (A面)

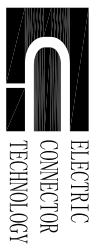
反面 (B面)

- 说明
1. 焊接不能虚焊、假焊，焊点须饱满，绝缘层不能有烫伤，装配完后外观要平整、整洁，不得有油污、划痕、变形等外观不良。
  2. 标有“▼”为QC重点检测尺寸。
  3. 测试要求：全检VSWR测试矩阵测试。  
频率范围：2400-2500 MHz, VSWR ≤2.0。
  4. 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. The welding can't virtual welding, welding, solder joints must be full, Insulation can't be scalded, after the assembly must level off, clean appearance, Can not have bad appearance of greasy dirt, scratches, deformation, etc.
  2. Marked with "q" key size detection for QC.
  3. Test requirements: pattern all inspection VSWR test, test matrix.  
Frequency range: 2400-2500 MHz, VSWR ≤2.0.
  4. HSF shall conform to the standard QE-Q-19-001 Environmental Hazardous Substances Management.

ITEM	PART NAME	Q'TY	MATERIAL / FINISH
d	导电布	1	KM3-ANT_单面导电胶布_15.00*7.00*0.20mm
c	TIN	1	0.8MM无铅锡丝
b	CABLE	1	USS RF CABLE.G2.SG.081BK.30.097
a	PPC	1	KM3-ANT-1L_FPC_38.0*7.0



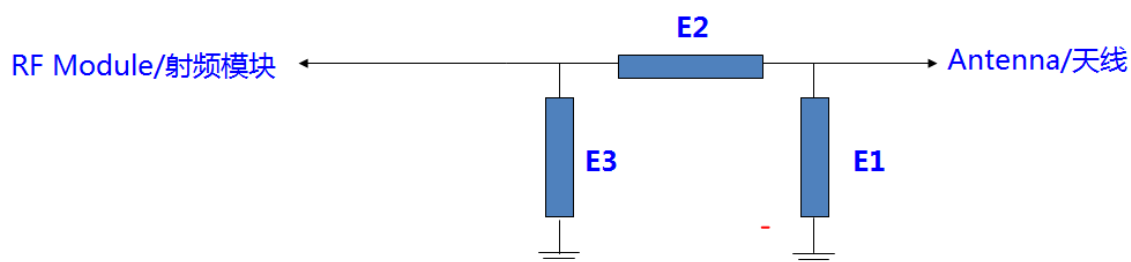
GENERAL TOLERANCE		SCALE:	DRAWN:	DATE:	DWG. NO.:	TITLE:	REV.
X ± 0.30	XXX. ± 2°	1:1	梁克泉	11/22'21	600-V020-01	ANT_IN_2.4-2.5G_38.0*7.0_KM3	X1
X ± 0.20	XX. ± 1°	UNIT:	CHECK:	DATE:	PARTS NOT INTENDED USE:		SHEET:
XX ± 0.10		mm	APPROVE:	DATE:	81800V020		1/1
		SIZE: A4					



1 2 3 A B C D E

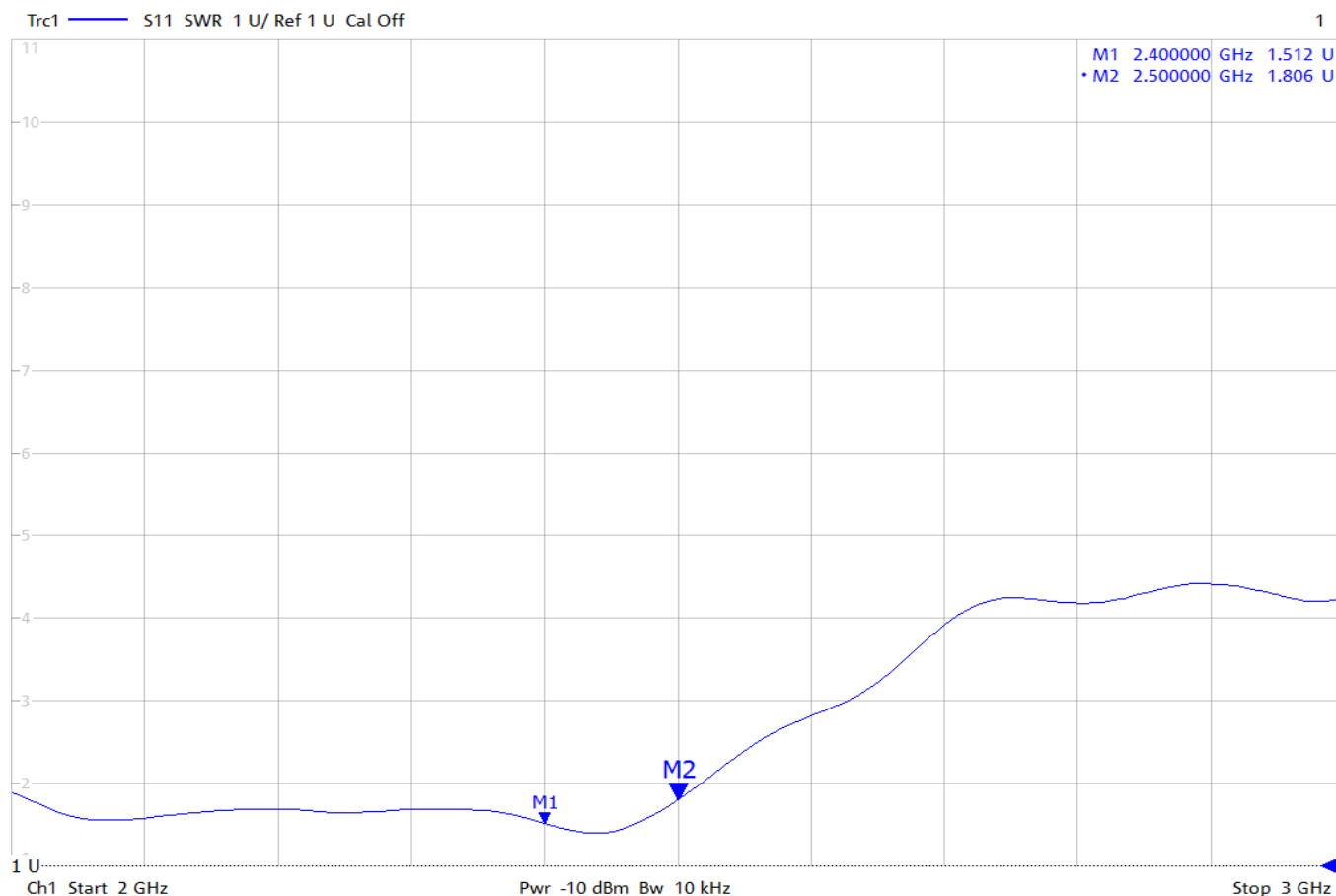
## 4. Antenna test result/测试结果

### 4.1 The matching circuits/匹配电路



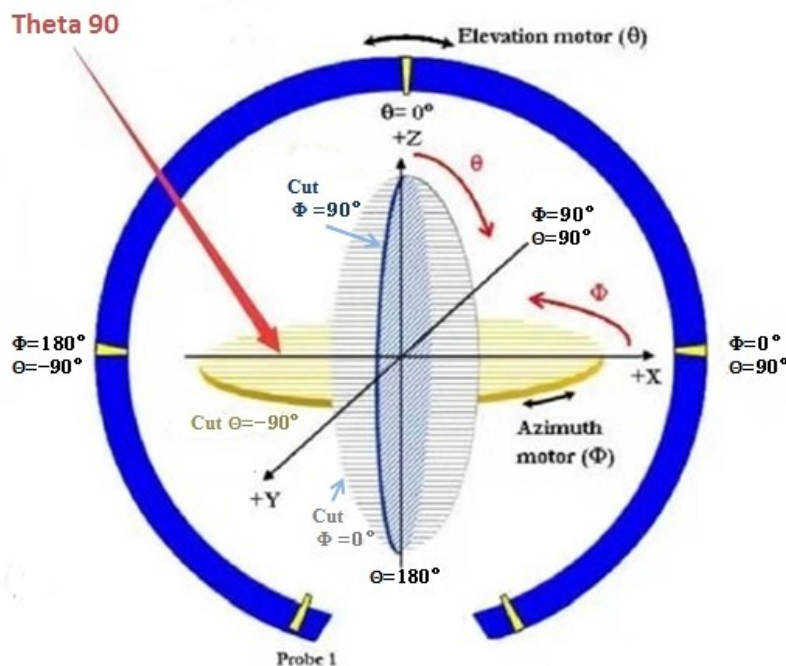
Element	Value
E1(0402)	NC
E2(0402)	0 Ω
E3(0402)	NC

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

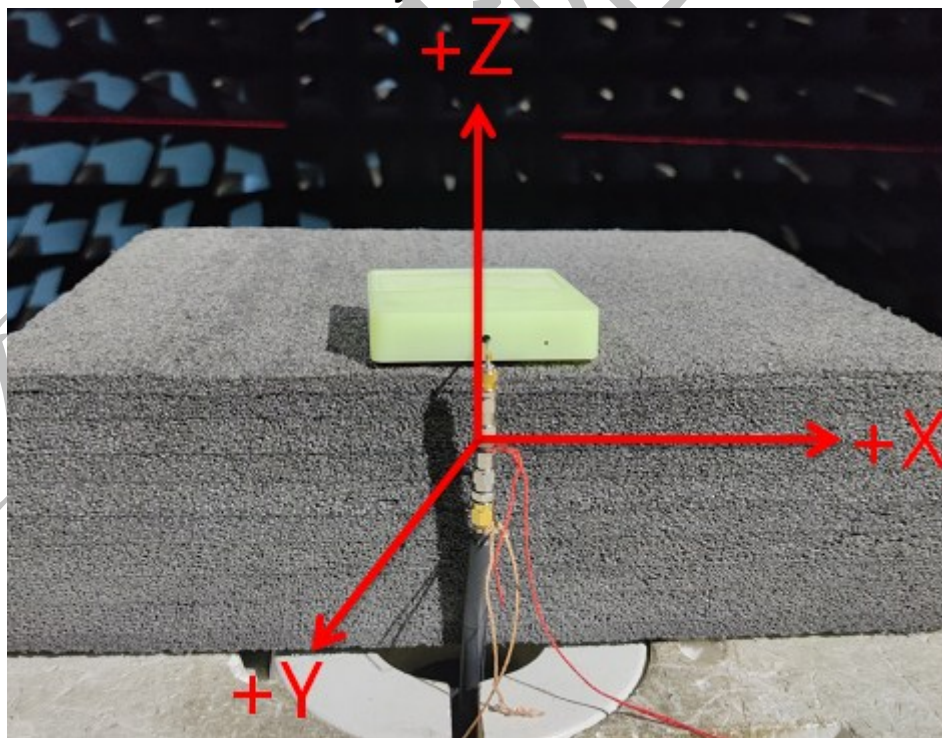


**4.3 The gain and total efficiency test/增益和效率测试**

**4.3.1 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**

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

2400MHz-2500MHz

Frequency / MHz	Efficiency / %	Gain (dBi)
2400MHz	38%	1.18
2405MHz	38%	1.15
2410MHz	38%	1.22
2415MHz	38%	1.16
2420MHz	38%	1.11
2425MHz	38%	1.05
2430MHz	38%	1.00
2435MHz	39%	1.04
2440MHz	38%	0.99
2445MHz	38%	1.01
2450MHz	38%	1.13
2455MHz	38%	1.28
2460MHz	39%	1.49
2465MHz	40%	1.57
2470MHz	40%	1.62
2475MHz	40%	1.44
2480MHz	39%	1.16
2485MHz	38%	0.94
2490MHz	38%	0.83
2495MHz	38%	0.78
2500MHz	36%	0.51
AVG	38%	1.13

