

承 认 书

SPECIFICATION APPROVAL SHEET

客 户 :

CUSTOMER

客 户 料 号 :

CUS PART NO

版次:

REV

X1

品 名 / 规格 :

SPECIFICATION

2.4~2.5/5.15~7.15GHz

WIFI Antenna L=60mm(Ø1.13+MHF)

单重:

weight

供 方 料 号 :

SUP PART NO

SLEingB248130060

日 期 :

DATE

2024.08.15

厂 商 核 准 :

SUP APPROVED

核准 APPROVED	结构审核 Structure audit	RF审核 RF CHECKED	品保审核 QA CHECKED	承办 DESIGNED
<i>Jouygm</i>	<i>H2M</i>	<i>7DM</i>	<i>LSY</i>	<i>Xiang</i>

客 户 核 准 :

CUS APPROVED

核准 APPROVED	审核 CHECKED	品保审核 QA CHECKED	承办 DESIGNED

东莞市森岭智能科技有限公司

DONGGUAN CITY SLEing INTEL-TECH CO., LTD

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正本由承办单位保存

[illegible]



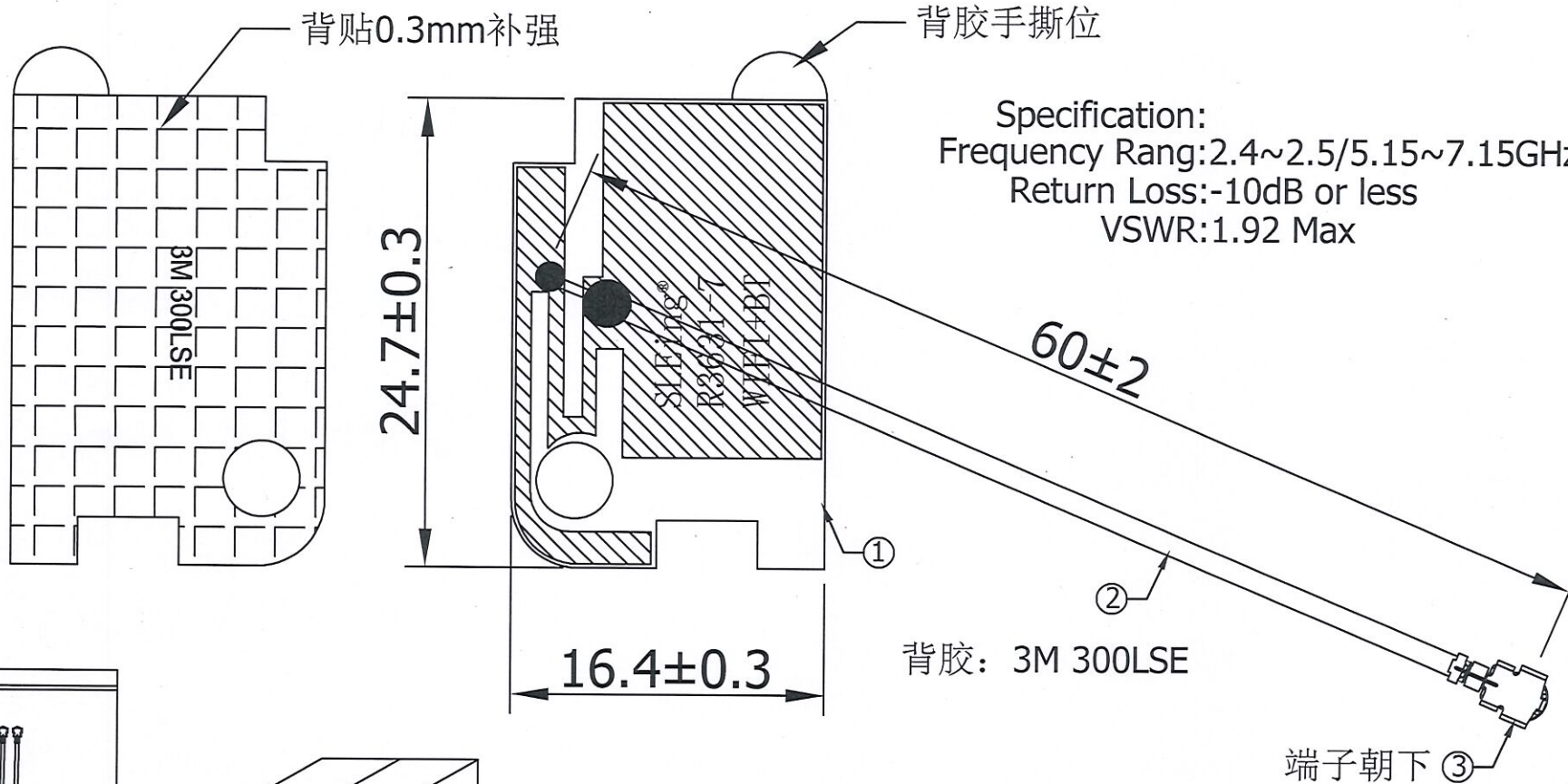
承认书项目表 (Spec Item)

序号 (NO.)	项目 (Project)	备注 (Remark)	页码 (Page)
1	承认书封面 (Spec Cover)		1
2	变更记录 (MODIFICATION RECORD SHEET)		2
3	承认书项目表 (Spec Item)		3
4	工程成品图 (Drawing)		4
5	电性测试报告 (Test Reports)		5
6	天线组装图 (Antenna assembly diagram)		6
7	S参数测试 (S Parameter Test)		7~8
8	测试设备 (Test Setup)		9
9	测试效率 (Test Efficiency)		10
10	OTA		11

Give clear indication of:

1. The contents of the acknowledgement shall be arranged in order according to the items in the check sheet.
2. The number of copies of the acceptance letter shall be printed according to the customer's requirements, and the SGS report shall be stamped with the engineering seal.
3. All materials shall be confirmed by the customer. Any material/process/changes that may affect product quality and environmental quality must be re-sent to the customer for confirmation before import.
4. SGS report is valid for one year.
5. According to the contents attached to the actual acknowledgement, check the check form: "Yes" is provided, "no" is provided according to customer requirements.

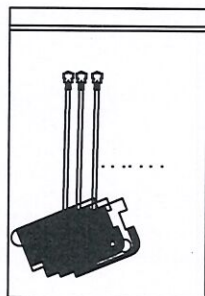
REV.	CONTENT	DATE
X1	First Sample	2024.08.15



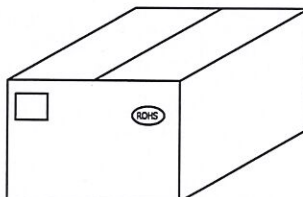
Specification:
Frequency Rang:2.4~2.5/5.15~7.15GHz(带机测试)
Return Loss:-10dB or less
VSWR:1.92 Max

背胶: 3M 300LSE

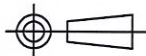
端子朝下 ③



Packing:100pcs/bag



外箱须贴ROHS标签与物料标签各1PCS

SLEing® 森岭 东莞市森岭智能科技有限公司 DONGGUAN SLEing INTEL-TECH CO.,LTD			CUSTOMER	
			PART NO	
			TITLE	
			S.L P/NO	
			SIZE	
			DRAWN	
			CHECKED	
			APPROVED	
TOLERANCE UNLESS OTHERWISE SPECIFIED			SHEET: 1/1	
UNIT:mm			SCALE: 1/1	
ANGLES ±0.5°			X: ±0.3	
XX. ±0.5			XXX. ±2.0	

NO	PART NAME	DESCRIPTION	REMARK	Q'TY
3	Connector	MHF Plug for Φ1.13 Cable	第一代端子	1
2	Cable	Φ1.13mm Coaxial Cable Black,50Ω	低损耗线	1
1	FPCB	FPC,L24.7*W16.4*T0.4mm,Color:Black	300LSE Adhesive	1



东莞市森岭智能科技有限公司

DONGGUAN SLEing INTEL-TECH CO.,LTD

电性测试报告

Test Reports

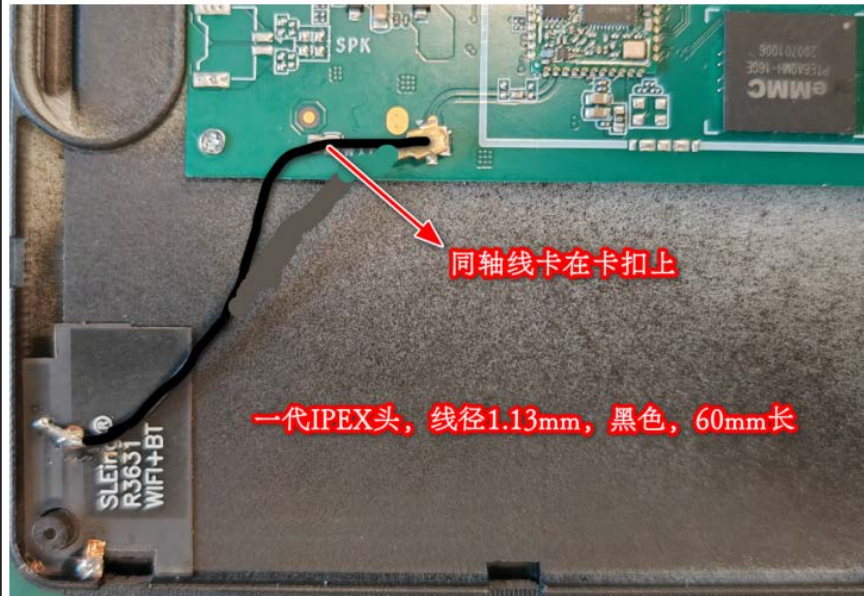
Electrical Properties	
Frequency	2.4~2.5/5.15~7.15GHz(带机测试)
Impedance	50 Ohm Nominal
V.S.W.R	≤ 1.92
Return Loss	-10 dB Max
Radiation	Omni-directional
Gain (Peak)	2 $\pm$ 0.5 dBi
Polarization	Linear, Vertical
Admitted Power	2 W
Connector	MHF
Physical Properties	
Antenna Material	FPCB
Cable Type	Φ 1.13mm Black
Operating Temp.	-40~+85 °C
Storage Temp.	-5~+30 °C

天线组装图

Antenna Profile

Device

2、一代IPEX头，线径1.13mm，黑色，线长60mm



Antenna

1、FPC天线定位，如图所示



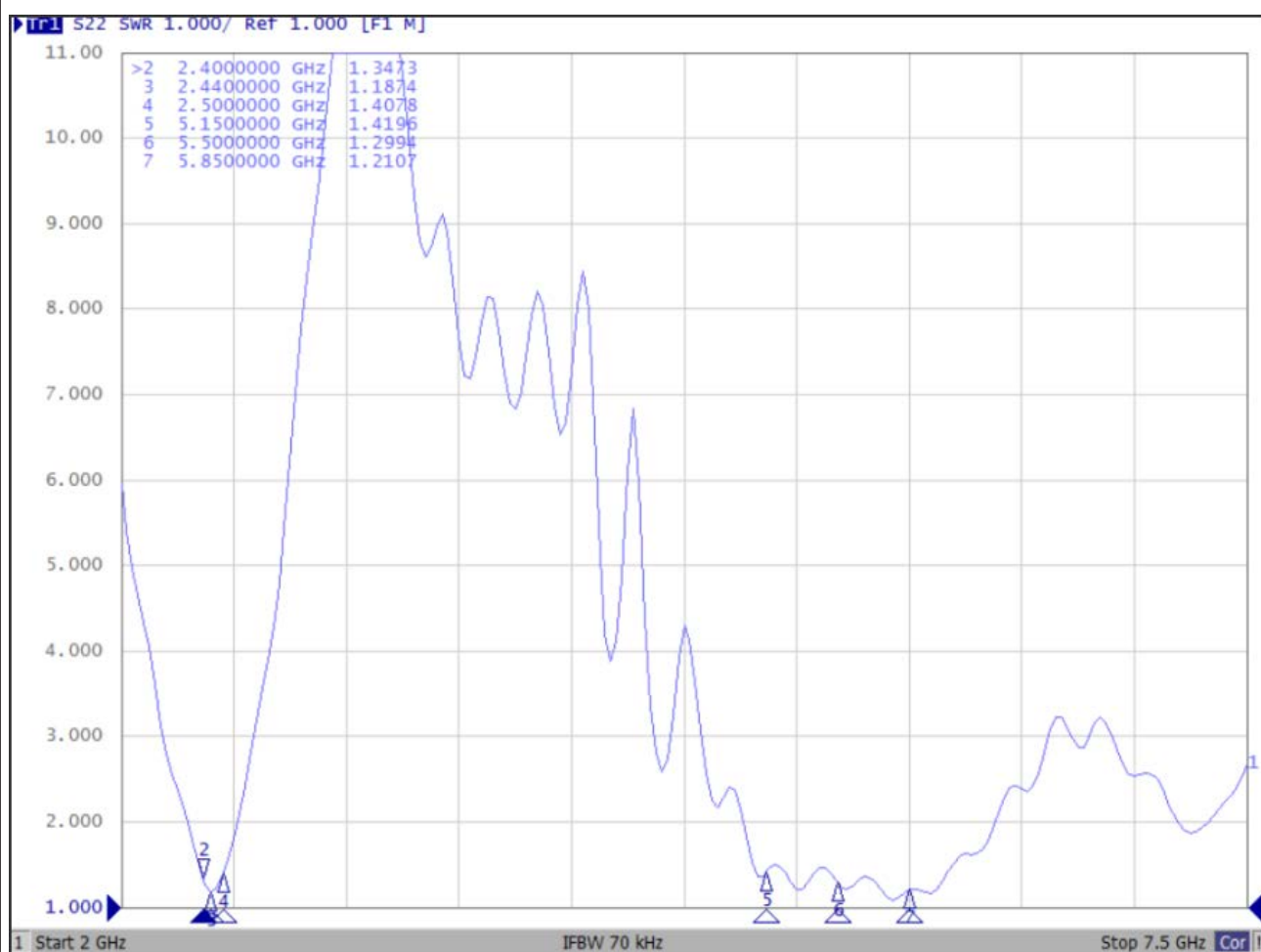
S 参数测试

S Parameter Test

Agilent E5071C Network Analyzer



WiFi 驻波 Antenna (NO.1)



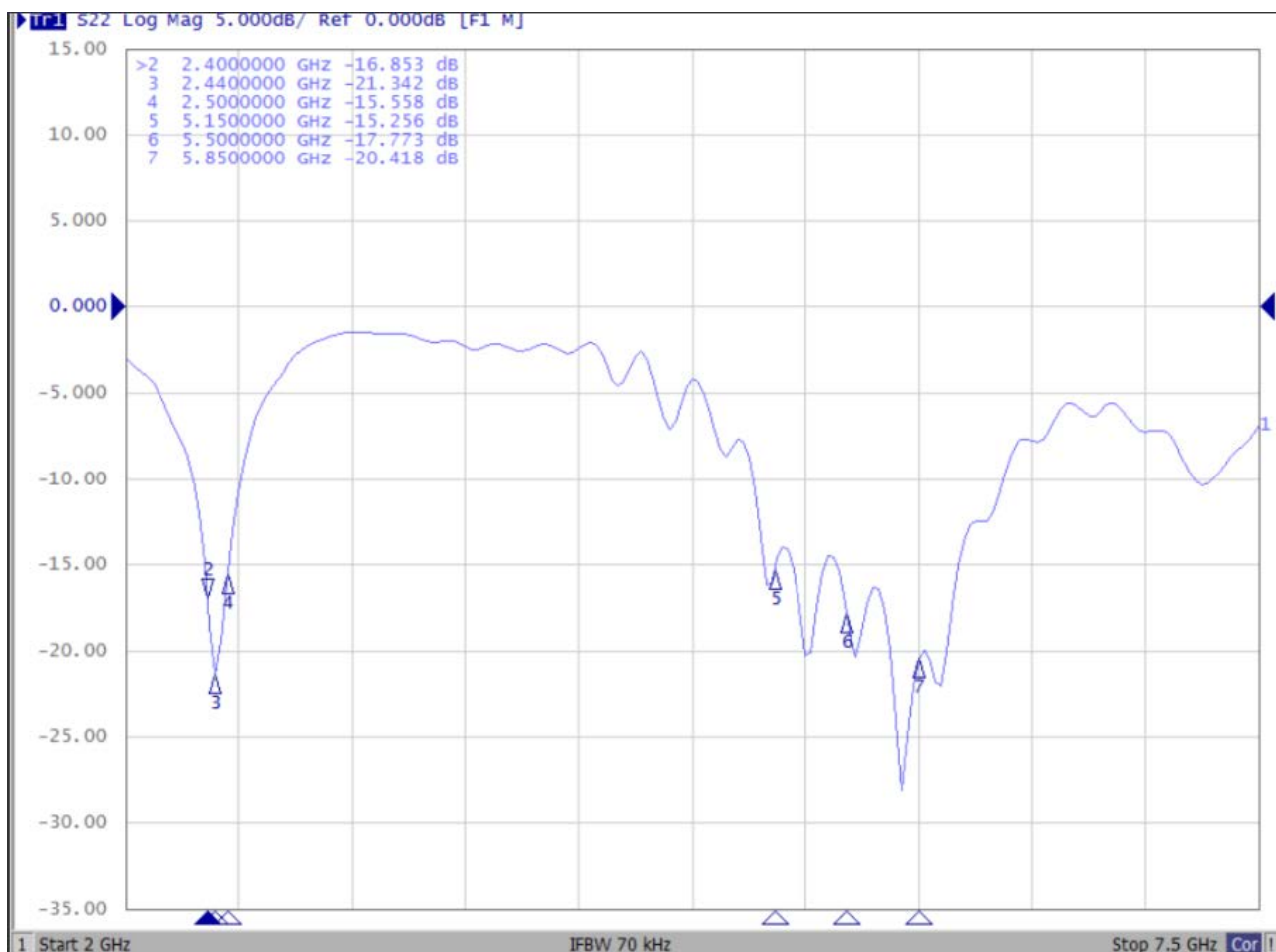
S 参数测试

S Parameter Test

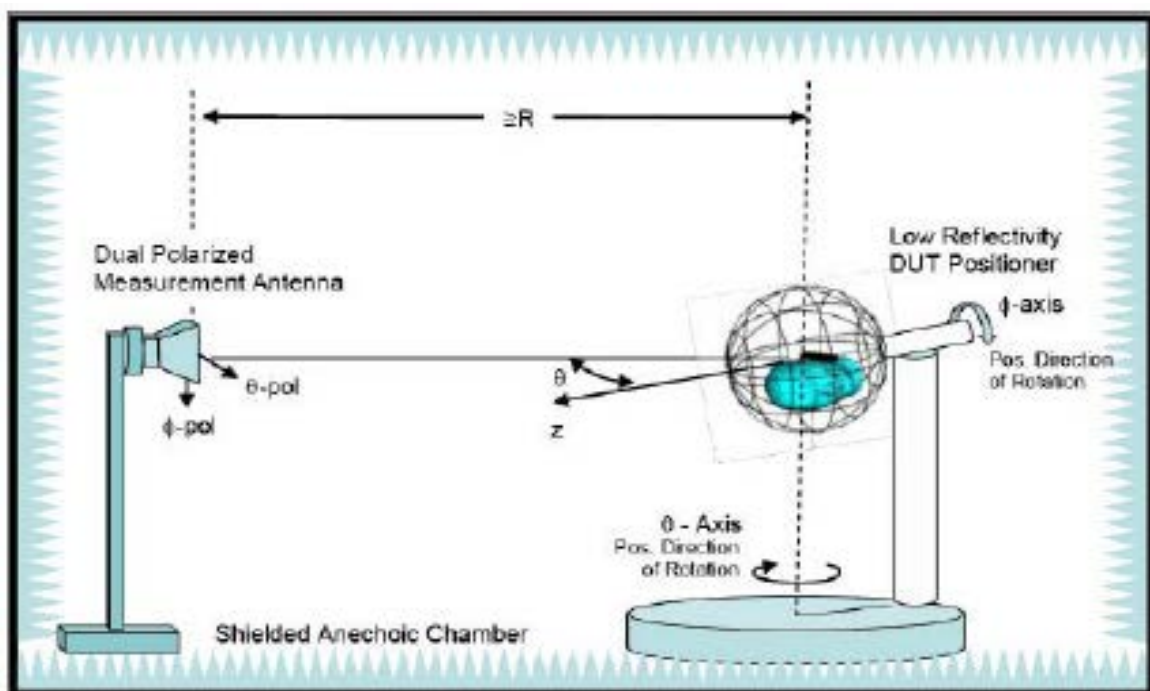
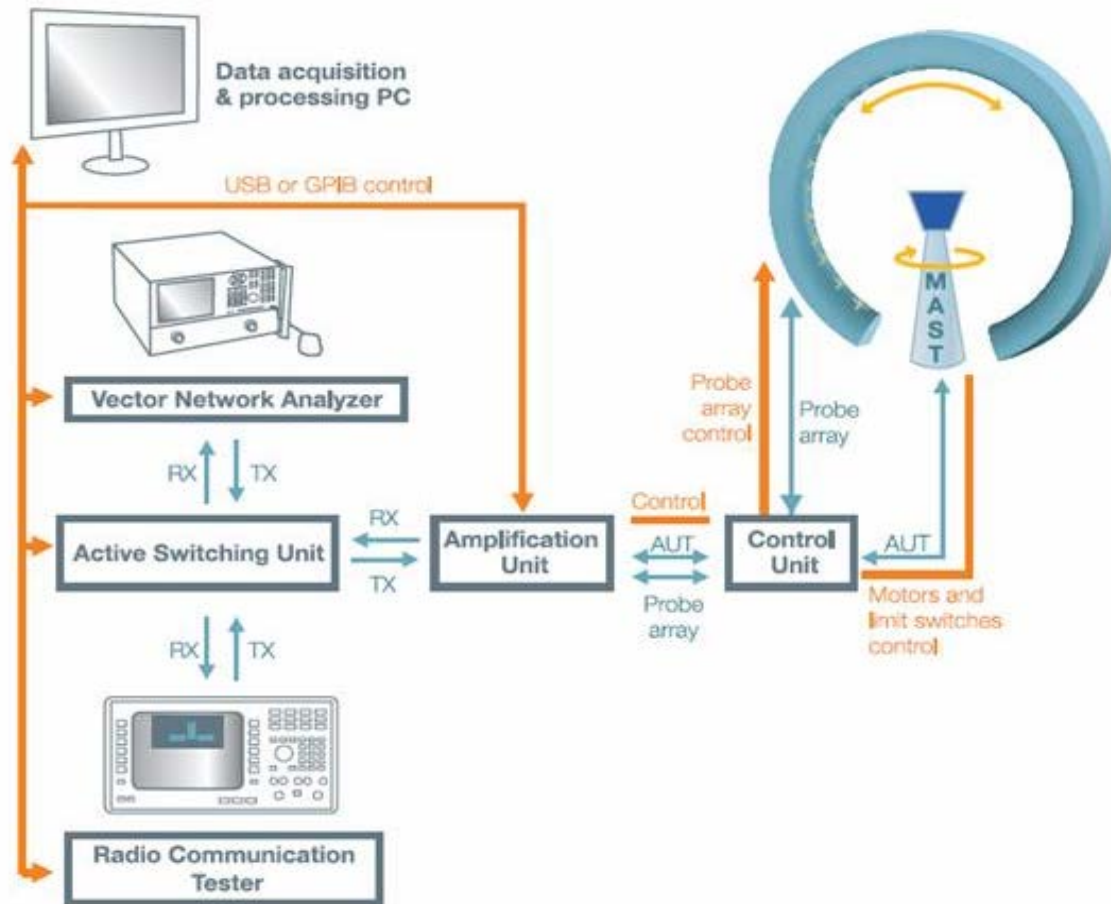
Agilent E5071C Network Analyzer



WiFi 回波损耗 Antenna (NO.1)



测试设备 Test Setup

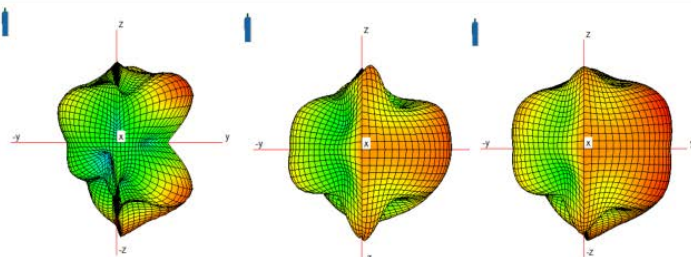


测试效率

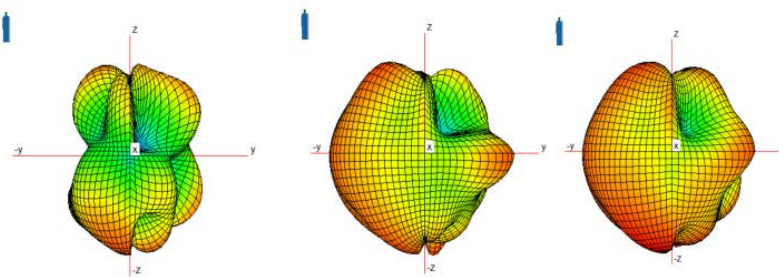
Test Efficiency

R3631-7 WIFI天线无源效率测试报告

2.4G WiFi	Frequency ID	1	2	3	4	5	6	7	8	9	10	11
	Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
	Gain (dBi)	2.23	2.39	2.10	2.08	2.36	2.37	2.30	2.25	2.21	2.91	2.33
	Efficiency (%)	53.98	53.40	53.66	53.43	53.15	52.79	52.12	52.19	51.72	52.13	52.57



5G WiFi	Frequency ID	1	2	3	4	5	6	7	8	9	10	11
	Frequency (MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650
	Gain (dBi)	2.50	1.54	1.64	1.72	1.84	1.95	2.05	2.12	2.23	2.27	2.25
	Efficiency (%)	42.31	42.13	43.08	42.95	43.57	44.26	44.51	44.88	45.44	45.14	44.34
	Frequency ID	12	13	14	15	16	17	18	19	20	21	22
	Frequency (MHz)	5700	5750	5800	5850							
	Gain (dBi)	2.64	2.66	2.69	2.72							
	Efficiency (%)	42.56	42.74	42.52	43.02							
	Frequency ID	23	24	25	26	27	28	29	30	31	32	33
	Frequency (MHz)	5900	5950	6000	6050	6100	6150	6200	6250	6300	6350	6400





OTA

Lab&System:					IMEI:			
Project name:		R3631-7			Code name:			
HW/SW Version:					Date:		2024.08.15	
Operating Band	Bandwidth	Free Space Requirements		Channal	Testing Results		Gap	
		TRP	TIS		TRP	TIS	TRP	TIS
WIFI 2.4G	11b TRP: 11Mbps TIS: 11Mbps	11	-80	1	11.7	-84.9	0.7	4.9
		11	-80	6	11.2	-84.4	0.2	4.4
		11	-80	13	11.8	-84.4	0.8	4.4
		Avg			11.5	-84.6	1.2	6.5
WIFI 5G	11a TRP: 6Mbps TIS: 6Mbps	9	-86	36	9.5	-89.5	0.5	3.5
		9	-86	64	9.3	-90.1	0.3	4.1
		6	-86	161	6.1	-90.3	0.1	4.3
		Avg			8.3	-90.0	3.9	7.9
WIFI OTA测试标准	TRP	视主板传导数据和天线效率而定，例如：50%的天线效率减3dB，25%效率减6dB, 以此类推						
	TIS	11B-11M	A类: ≤-80dBm ☒		B类: ≤-76dBm ☐		C类: ≤-72dBm ☐	
		11A-6M	A类: ≤-86dBm ☒		B类: ≤-84dBm ☐		C类: ≤-82dBm ☐	

