

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

2.4~2.5/5.15~5.85GHz

WIFI-2 Antenna L=85mm(Ø1.13+MHF)

单重:

weight

供 方 料 号 :

SUP PART NO

SLEingB242500085

日 期 :

DATE

2023.08.22

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>Touym</i>	<i>H29</i>	<i>JPM</i>	<i>LSX</i>	<i>Xuy</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

中国广东省东莞市松山湖工业东路24号现代企业加速器6栋402

Room 402, No. 6 Plant, Accelerator of Modern Enterprise, No. 24 Industry
East Road Songshanlake District, Dongguan City, Guangdong

Tel: +86-076989208968

Fax: +86-0769-89208969

www.sleing.com

正本由承办单位保存



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DONGGUAN SLEing INTEL-TECH CO.,LTD

变更记录

MODIFICATION RECORD SHEET

版本 (REV.)	更改日期 (Modification date)	更改内容描述 (Summary of modification content)	拟制 (Signature)	批准 (Approval)
X1	2023.08.22	初版发行 (First Issue)	胡赵海 (Jerry)	朱正锐 (Jongrei)



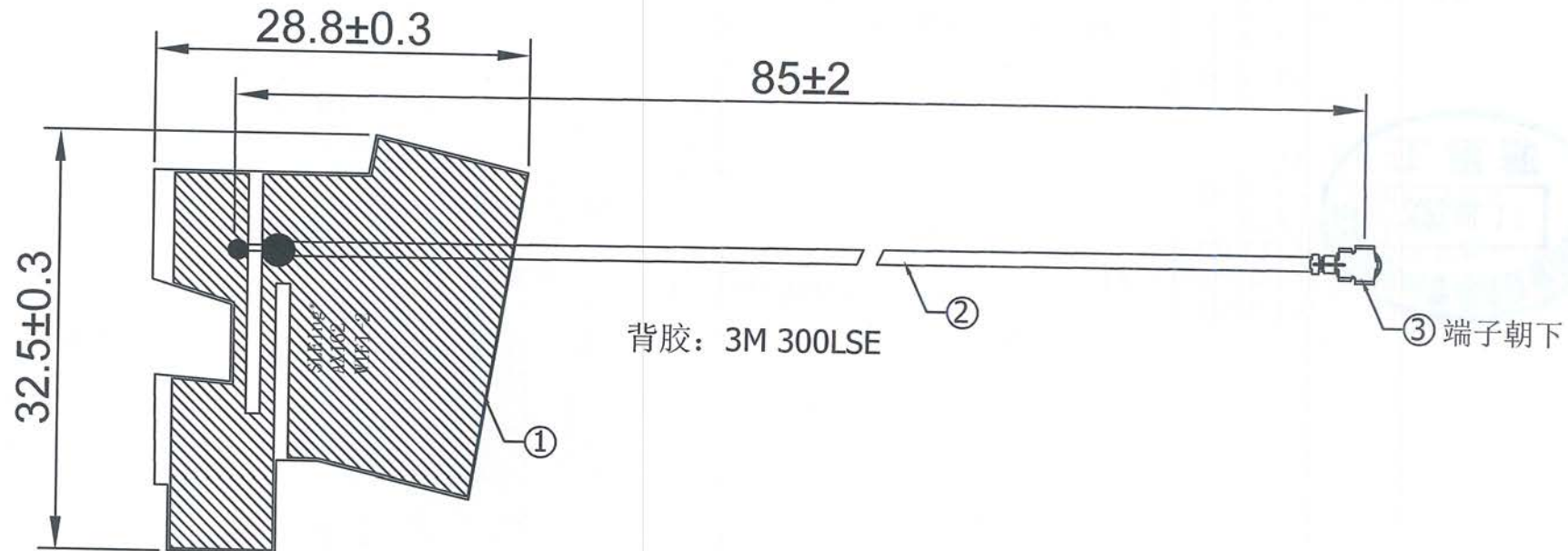
承认书项目表 (Spec Item)

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
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8	测试设备 (Test Setup)		8
9	测试效率 (Test Efficiency)		9
10	OTA		10

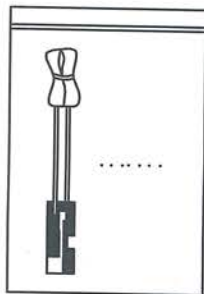
Give clear indication of:

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.

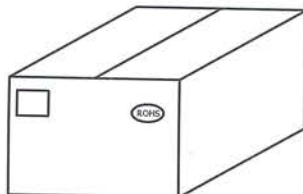
REV.	CONTENT	DATE
X1	First Sample	2023.08.22



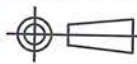
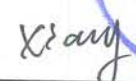
Specification:
Frequency Rang:2.4~2.5/5.15~5.85GHz(带机测试)
Return Loss:-10dB or less
VSWR:1.92 Max



50pcs/Bundle
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	
 TOLERANCE UNLESS OTHERWISE SPECIFIED			SIZE	DRAWN
			CHECKED	APPROVED
3	Connector	MHF Plug for Φ1.13 Cable	  	
2	Cable	Φ1.13mm Coaxial Cable Dark Grey,50Ω		
1	FPCB	FPC,L32.5*W28.8*T0.1mm,Color:Black		
NO	PART NAME	DESCRIPTION		
		REMARK		
		Q'TY		



TOLERANCE UNLESS
OTHERWISE SPECIFIED

UNIT:mm

ANGLES ±0.5°

X. ±0.3

SHEET: 1/1

0.XX ±0.05

XX. ±0.5

SCALE: 1/1

XXX. ±2.0

A4

2023.08.22

工程部



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DONGGUAN SLEing INTEL-TECH CO.,LTD

电性测试报告

Test Reports

Electrical Properties	
Frequency	2.4~2.5/5.15~5.85GHz(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 Dark Grey
Operating Temp.	-40~+85 °C
Storage Temp.	-5~+30 °C

天线组装图

Antenna Profile

Device

如图所示，放入主板，将天线端子扣在端口（黄色框所标）上，然后将天线端子打胶固定以防止天线端子脱落。

图中:红线为 WIFI-1 天线走线，天线线长 180mm，直径 1.13mm，1 代端子（黑色同轴线）
蓝线为 WIFI-2 天线走线，天线线长 85mm，直径 1.13mm，1 代端子（灰色同轴线）。



Antenna

3. WIFI-2 天线粘贴方式如下图所示，注意粘贴过程中不能出现起翘、偏移、破损和鼓包；



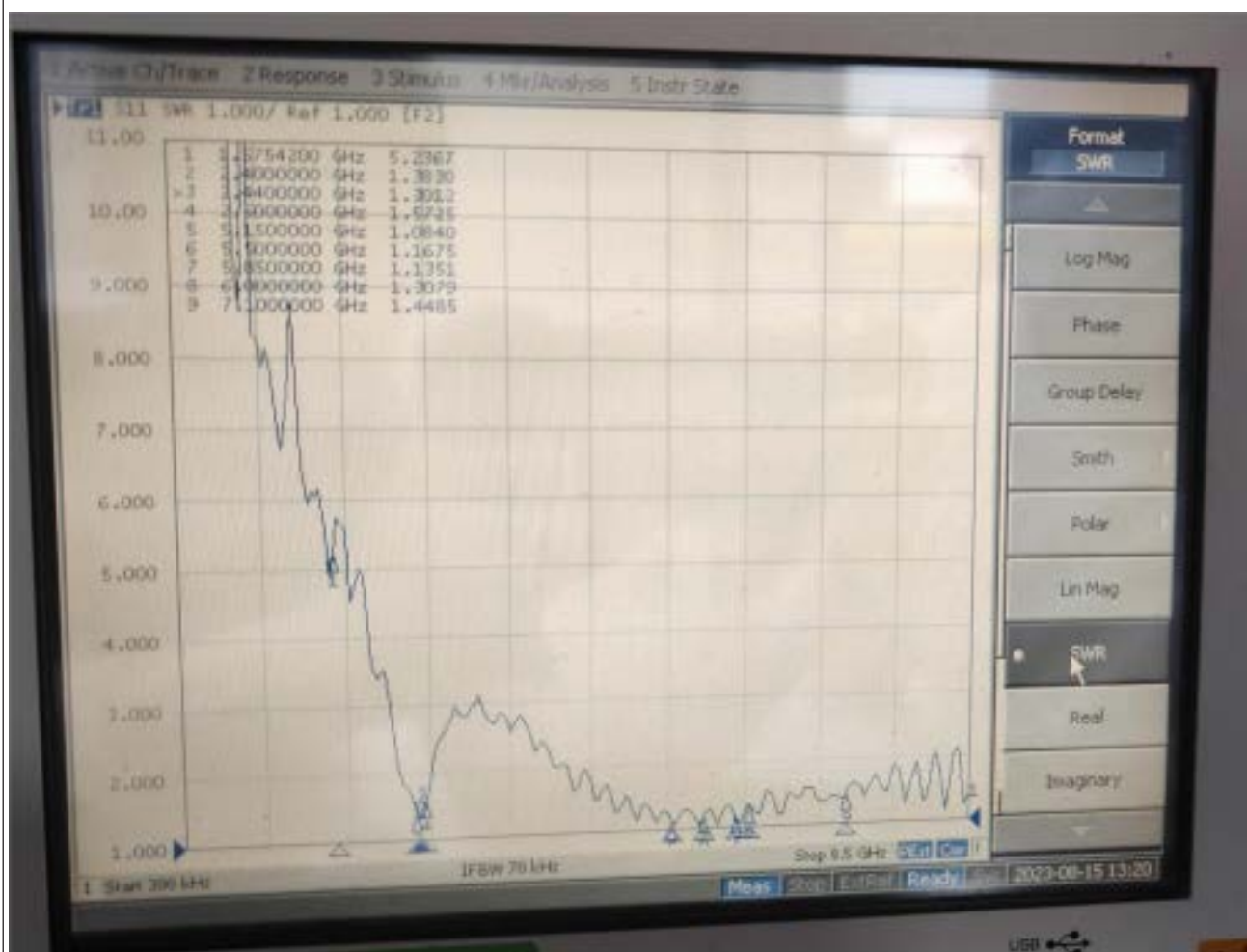
S 参数测试

S Parameter Test

Agilent E5071C Network Analyzer



WiFi 驻波 Antenna (NO.1)



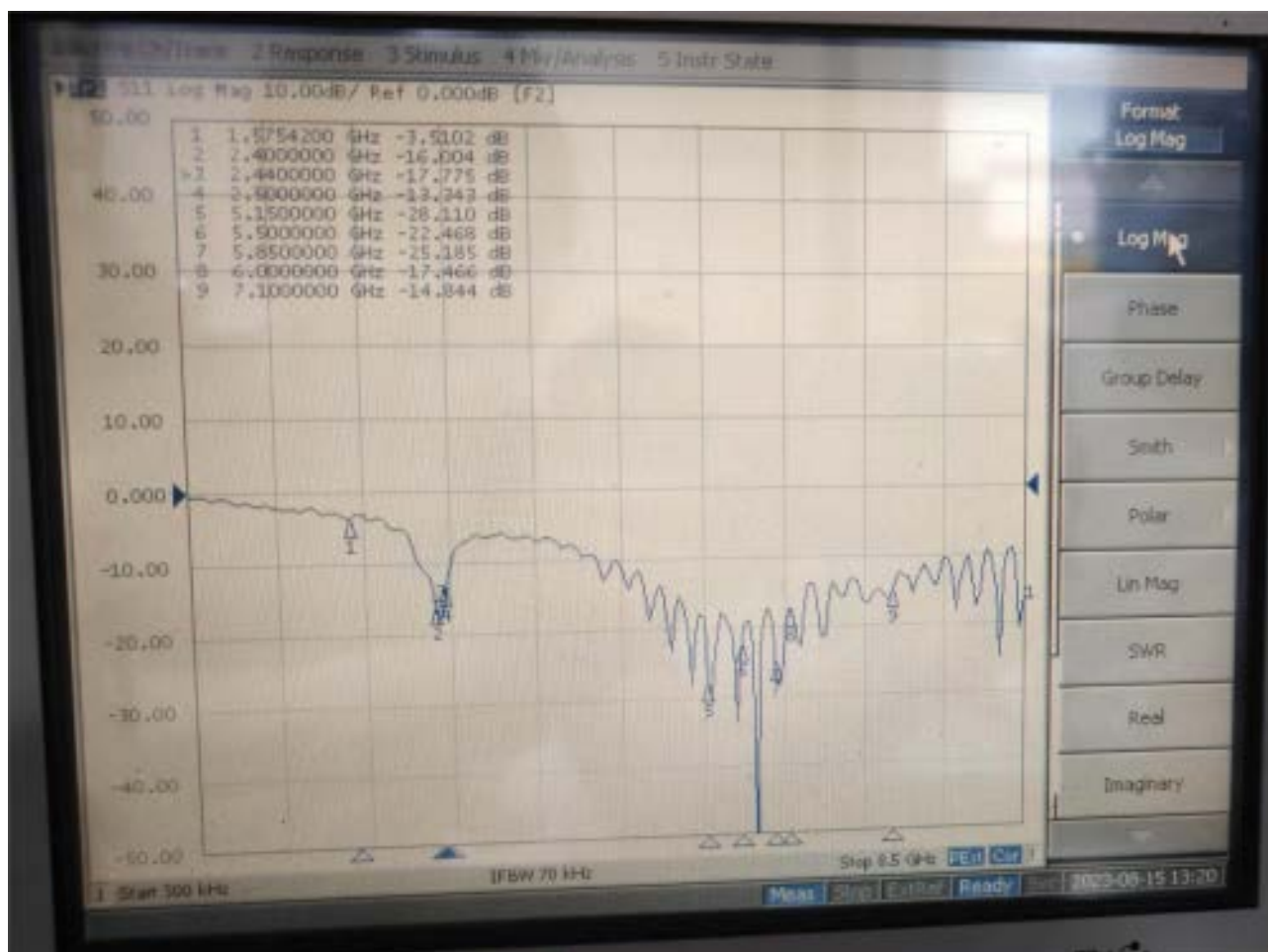
S 参数测试

S Parameter Test

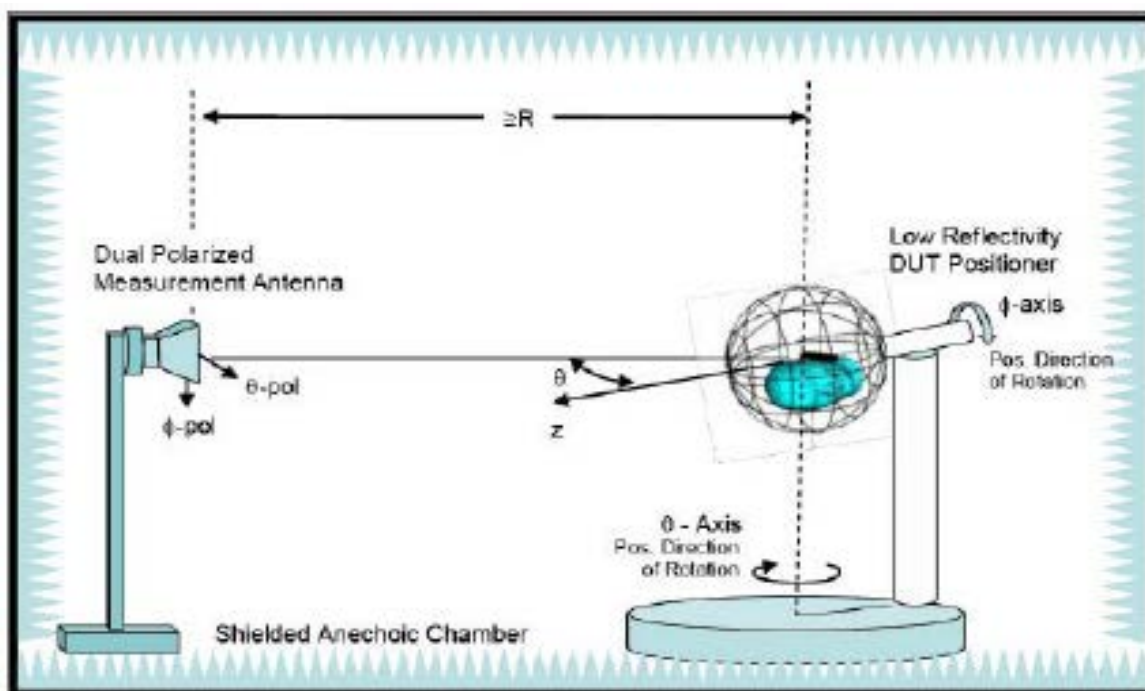
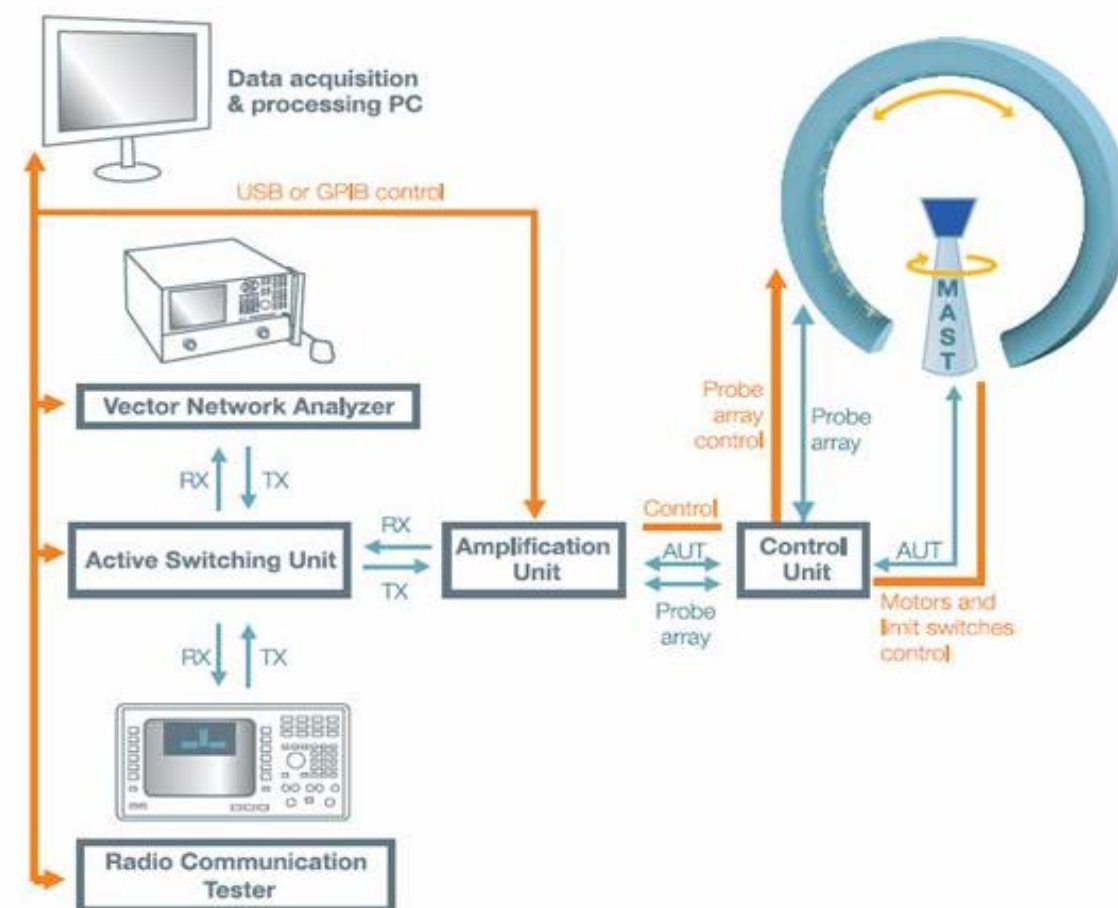
Agilent E5071C Network Analyzer



WiFi 回波损耗 Antenna (NO.1)



测试设备 Test Setup

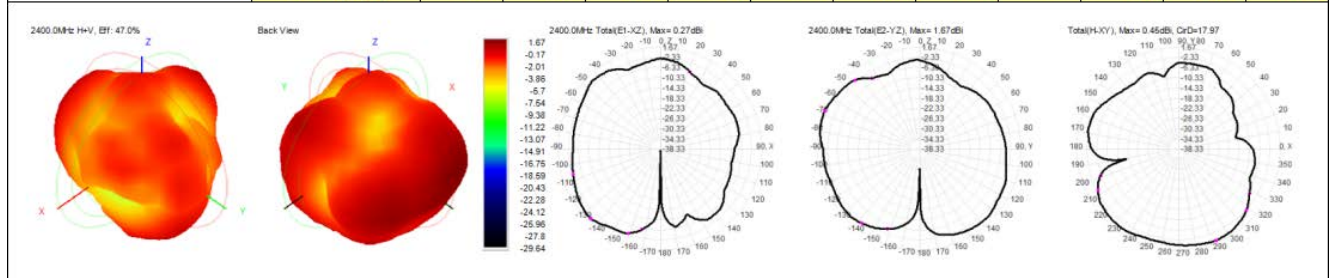


测试效率

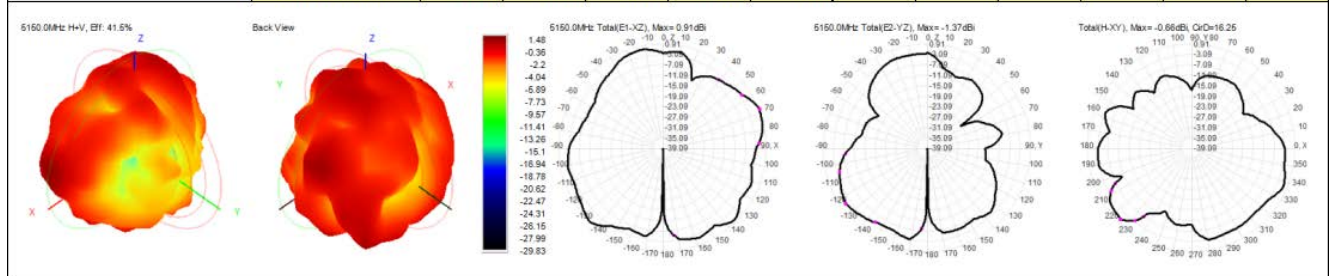
Test Efficiency

AX162 WIFI-2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)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
	Gain (dBi)	1.67	1.87	1.89	1.51	1.51	1.83	2.01	2.07	1.89	1.57	1.48
	Efficiency (%)	47.01	47.27	47.62	47.90	48.13	49.19	50.59	51.31	50.45	50.65	50.72



5G WiFi	Frequency ID	1	2	3	4	5	6	7	8	9	10	11
	Frequency (MHz)	5150.0	5200.0	5250.0	5300.0	5350.0	5400.0	5450.0	5500.0	5550.0	5600.0	5650.0
	Gain (dBi)	1.48	1.55	1.23	0.61	0.77	1.04	1.41	1.65	1.24	1.30	1.82
	Efficiency (%)	41.47	42.19	40.27	38.96	38.56	38.84	37.74	38.44	38.05	37.42	37.43
	Frequency ID	12	13	14	15	16	17	18	19	20	21	22
	Frequency (MHz)	5700.0	5750.0	5800.0	5850.0	5900.0						
	Gain (dBi)	2.10	2.14	2.02	1.80	1.59						
	Efficiency (%)	37.93	37.65	38.02	37.90	37.74						
	Frequency ID	12	13	14	15	16	17	18	19	20	21	22
	Frequency (MHz)	5700.0	5750.0	5800.0	5850.0	5900.0						





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OTA

Operating Band	Bandwidth	Free Space Requirements		Channal	Testing Results		Gap	
		TRP	TIS		TRP	TIS (LCD ON)	TRP	TIS (LCD ON)
WIFI 2.4G	11b 11Mbps	12	-80	1	12.4	-83.6	0.4	3.6
		12	-80	7	12.6	-82.1	0.6	2.1
		12	-80	11	12.1	-83.1	0.1	3.1
		12.0	-80.0	Avg	12.4	-82.9	0.4	2.9
WIFI 5G	11a 6Mbps	11	-86	36	13.4	-87.5	2.4	1.5
		11	-86	100	13.7	-88.3	2.7	2.3
		11	-86	157	13.1	-89.0	2.1	3.0
		11.0	-86.0	Avg	13.4	-88.2	2.4	2.2

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DONGGUAN SLEing INTEL-TECH.CO.,LTD

地址：东莞市松山湖工业东路现代企业加速器 6 栋 402

电话：0769-89208968

传真：0769-89208969