



东莞市森岭智能科技有限公司

DONGGUAN SLEing INTEL-TECH CO., LTD

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

2400-2500/5150-5850MHz

单重:

weight

WIFI MAIN Antenna L=145mm(Ø0.81+MHF4)

供 方 料 号 :

SUP PART NO

SLEingB243630160

日 期 :

DATE

2023.11.10



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
Jackey 2023-11-10	Jerry	ZY	LSY	Jerry

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 SLEing INTEL-TECH CO., LTD

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正本由承办单位保存



东莞市森岭智能科技有限公司

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	2023.11.10	初版发行 (First Issue)	胡赵海 (Jerry)	周琨 (Jackey)



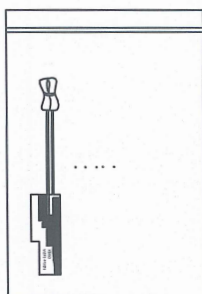
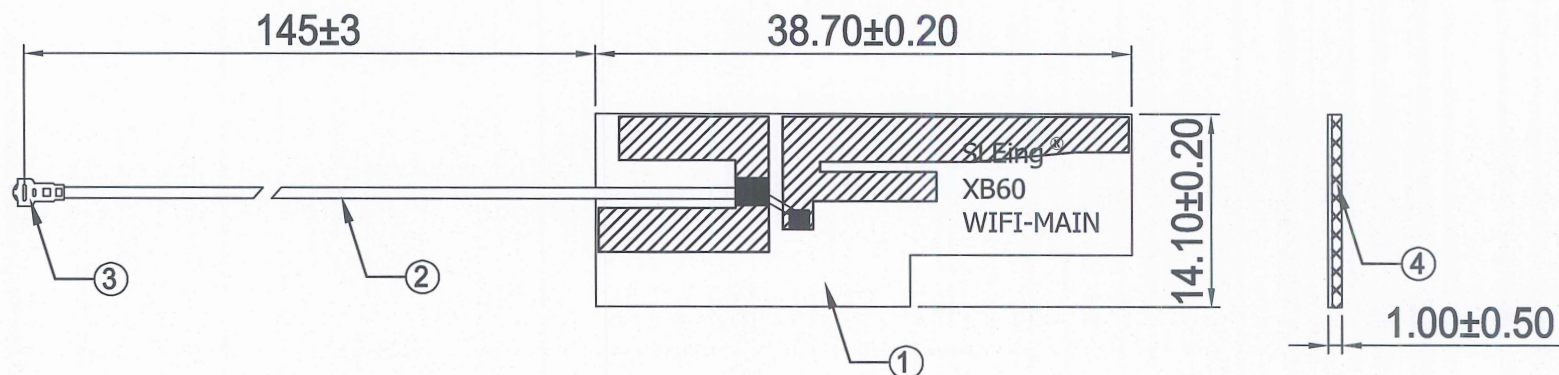
承认书项目表 (Spec Item)

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

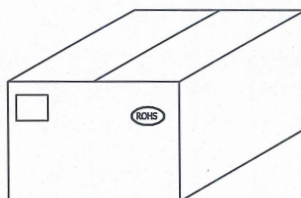
Give clear indication of:

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	2023.11.10



50pcs/Bundle
Packing:100pcs/bag



外箱须贴ROHS标签与物料标签各1PCS

Specification:
Frequency Rang:2400~2500/5150~5850MHz(带机测试)
Return Loss:-9dB or less
VSWR:2.0 Max

SLEing® 森岭
东莞市森岭智能科技有限公司
DONGGUAN SLEing INTEL-TECH CO.,LTD

CUSTOMER	东莞市森岭智能科技有限公司
PART NO	2023.11.10
TITLE	工程部
S.L P/NO	SLEingB243630160

NO	PART NAME	DESCRIPTION	REMARK	Q'TY	UNIT	SCALE	TOLERANCE UNLESS OTHERWISE SPECIFIED	SIZE	DRAWED	CHECKED	APPROVED
1	Foam	EVA,L38.7*W14.1*T0.5mm,Black		1							
3	Connector	MHF Plug for Φ0.81 Cable	第四代端子	1							
2	Cable	Φ0.81mm Coaxial Cable(低损)Black,50Ω		1							
1	FPCB	FPC,L38.7*W14.1*T0.4mm,Color:Black	300LSE Adhesive	1							
1	Foam	EVA,L38.7*W14.1*T0.5mm,Black		1							



A4	Jerry	ZY	Jackey
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电性测试报告

Test Reports

Electrical Properties	
Frequency	2400-2500/5150-5850 MHz(带机测试)
Impedance	50 Ohm Nominal
V.S.W.R	≤ 3.0
Return Loss	-6.0dB Max
Radiation	Omni-directional
Gain (Peak)	2.4G: 2.05 dBi/5.8G: 5.45 dBi
Polarization	Linear, Vertical
Admitted Power	2 W
Connector	MHF
Physical Properties	
Antenna Material	FPCB
Cable Type	$\Phi 0.81\text{mm}$ Black
Operating Temp	-40°C-85°C
Storage Temp.	-5°C-30°C



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天线组装图

Antenna assembly diagram

Device



Antenna



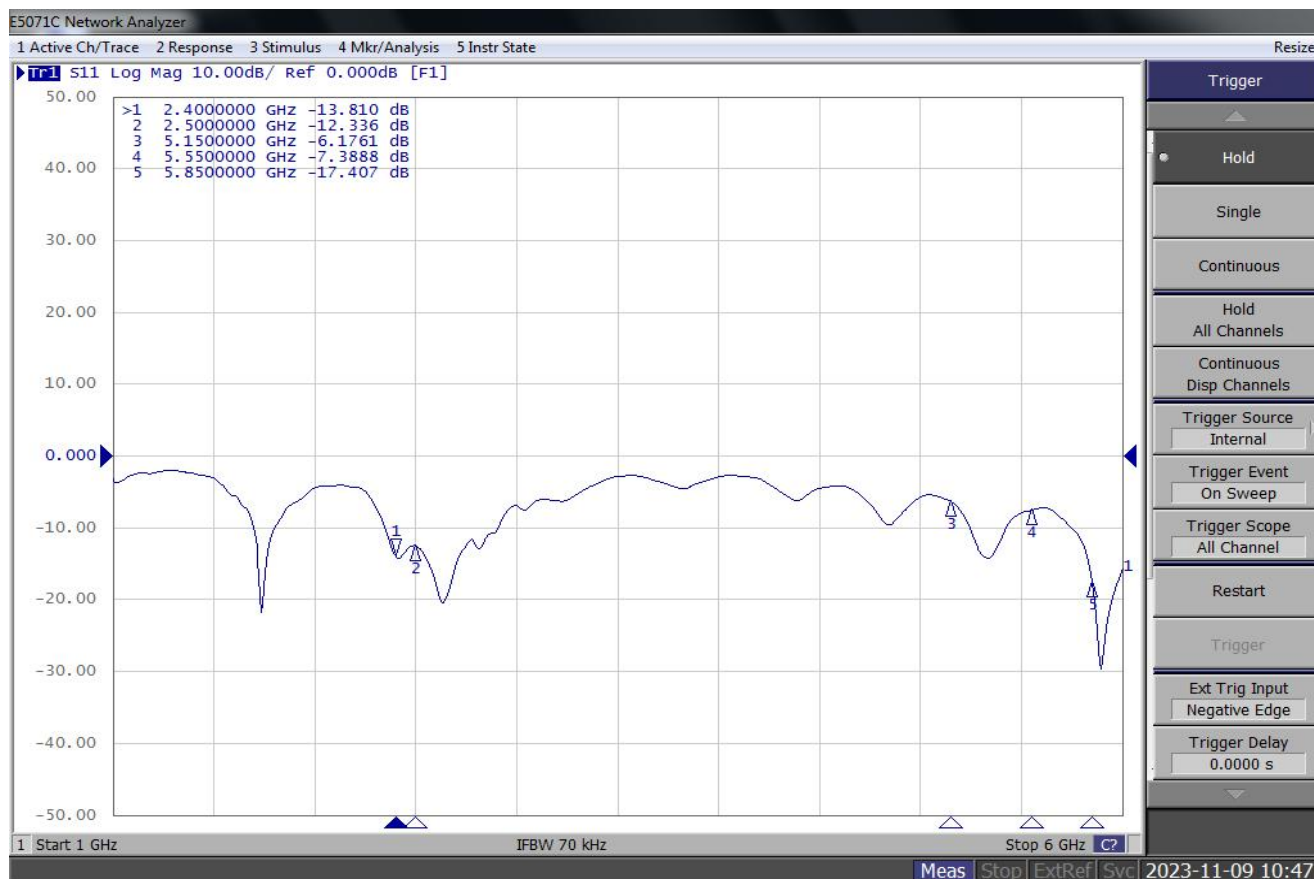
S参数测试

S Parameter Test

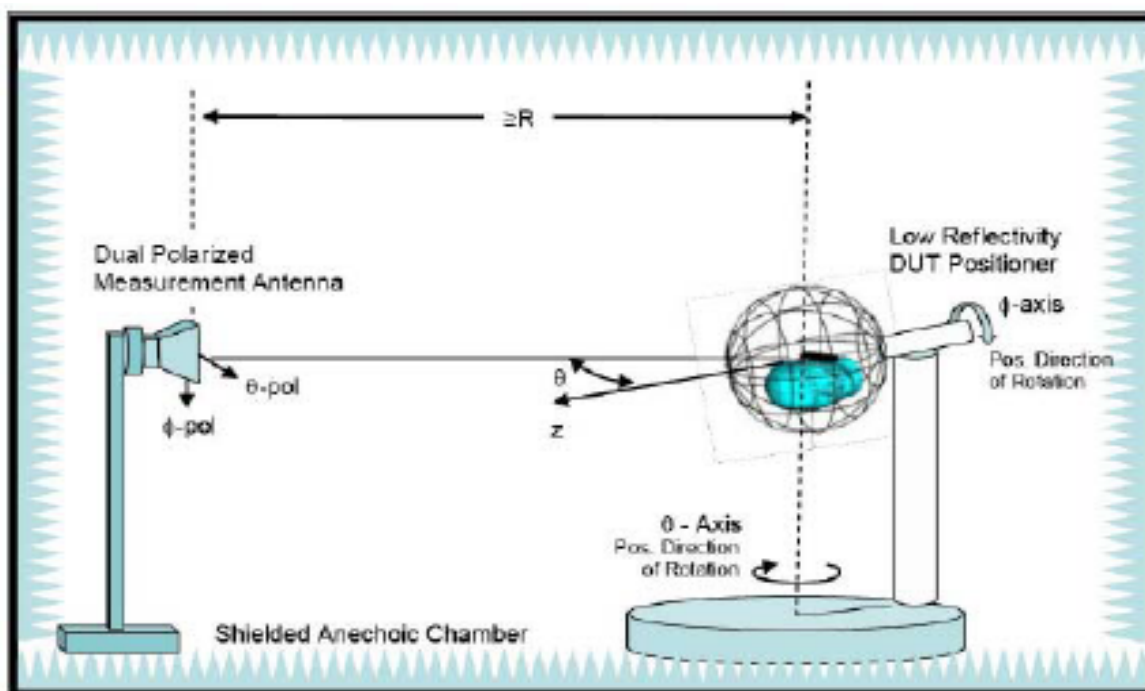
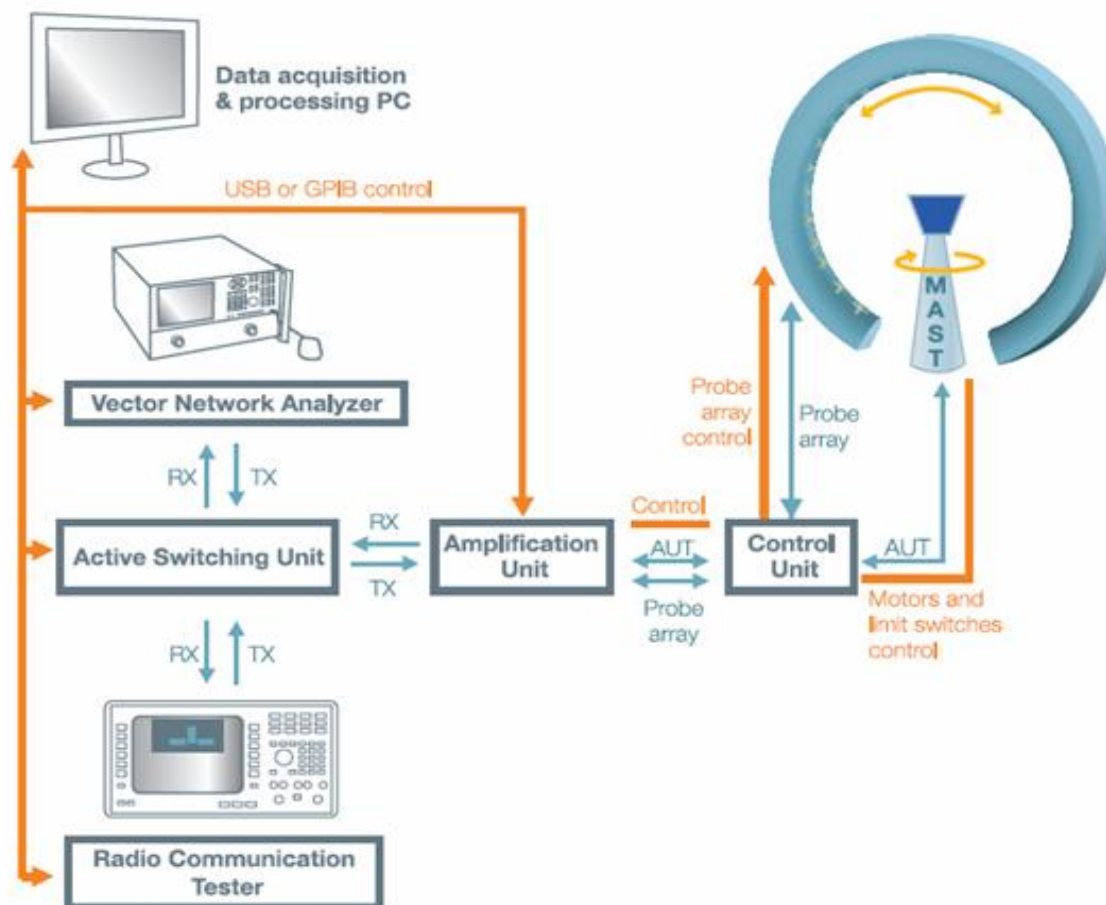
Agilent E5071C Network Analyzer



RF Antenna (Return Loss)



测试设备 Test Setup





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测试效率 Test Efficiency

Main天线无源数据

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
Efficiency (dBi)	-6.07	-5.77	-5.66	-5.68	-5.50	-5.55	-5.59	-5.64	-5.56	-5.65	-5.52
Gain (dBi)	1.23	1.46	1.91	1.53	2.05	1.76	1.80	1.79	1.65	1.60	1.67
Efficiency (%)	24.74	26.50	27.16	27.02	28.19	27.88	27.58	27.31	27.80	27.22	28.08

12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
-4.86	-4.36	-3.56	-3.29	-3.26	-3.43	-3.55	-3.67	-3.80	-3.80	-3.71	-3.59	-3.33	-3.43	-3.42
2.65	3.08	3.86	4.39	4.83	4.66	4.45	4.73	5.03	5.05	5.27	5.15	5.06	4.99	5.45
32.68	36.62	44.08	46.85	47.16	45.44	44.11	42.94	41.73	41.70	42.51	43.80	46.47	45.38	45.50

测试功率灵敏度 Test TRP/ TIS

WLAN Antenna Performance					
WLAN Whole Band TRP (dBm) _____					
WLAN Whole Band TIS (dBm) _____					
		Channel No.	Freq. (MHz)	TRP (dBm)	TIS (dBm)
Phone Tx (Uplink Path)	<u>1</u>	1	--	9.68	--
	<u>2</u>	6	--	10.08	--
	<u>3</u>	11	--	10.39	--
	<u>4</u>	--	--	--	--
	<u>5</u>	--	--	--	--
Phone Rx (Downlink Path)	<u>1</u>	1	--	--	-80.49
	<u>2</u>	6	--	--	-81.53
	<u>3</u>	11	--	--	-82.19
	<u>4</u>	--	--	--	--
	<u>5</u>	--	--	--	--

11B 有源数据

WLAN Antenna Performance					
WLAN Whole Band TRP (dBm) _____					
WLAN Whole Band TIS (dBm) _____					
		Channel No.	Freq. (MHz)	TRP (dBm)	TIS (dBm)
Phone Tx (Uplink Path)	<u>1</u>	36	--	11.82	--
	<u>2</u>	60	--	12.94	--
	<u>3</u>	149	--	12.16	--
	<u>4</u>	--	--	--	--
	<u>5</u>	--	--	--	--
Phone Rx (Downlink Path)	<u>1</u>	36	--	--	-65.91
	<u>2</u>	60	--	--	-65.15
	<u>3</u>	149	--	--	-65.13
	<u>4</u>	--	--	--	--
	<u>5</u>	--	--	--	--

11A 有源数据