

承 认 书

SPECIFICATION FOR APPROVAL

Specifications and models: WIFI 主天线-DN50-140H-YD-PCB-黑色-四代单头端子-线长 L302mm SLEingB104300310(SL)

IP3 serial number: M. T. A. 0000155

Manufacturer: DONGGUAN SLEing INTEL-TECH CO.,LTD

Supplier: DONGGUAN SLEing INTEL-TECH CO.,LTD

零件性质 ☒ 一般的 (STANDARD) ☐ 特别的 (指定的 or SPECIAL)

料 件 承 认 项 目 《执行标准（参考承认 check list）》				
承认事项		技术确认栏/时间		
外观是否符合整机要求	☐	ID 工程师:		
确认电性能, pin 定义, 功耗是否符合整机要求	☐	硬件工程师:		
确认物料是否符合整机 EMC/SAFETY/RF 要求	☐	EMC 工程师:		
参考《物料承认 check list》机构部分确认	☐	结构工程师:		
驱动等确认是否符合整机要求	☐	驱动工程师:		
Thermal 确认是否符合整机要求	☐	散热工程师:		
确认是否满足整机 BIOS/EC 要求	☐	SW 工程师:		
确认是否满足整机的系统兼容性/可靠性测试	☐	DQA 系统工程师:		
环保审查记录（适用 ROHS 指令）	☐	环保工程师:		
确认供应商外观检验标准/关键工艺	☐	SQE 工程师:		
确认是否符合客户要求	☐	项目经理（PM）:		
FAI 全尺寸报告、CPK 报告、包装方式（package）、 单体可靠性报告等。	☐	CE 工程师:		
样品附 ☒ 研发 ☐ 品质 ☐ 采购 ☒ 供应商 ☐ 客户 ☒ 组装厂				
IQC 检验注意事项:				
版本	变更内容描述		变更日期	修订人
A	初版发行		2022.10.17	JERRY
B	增加方向图		2024.01.31	JERRY
拟制			审核	

承认书项目表

序号	项目	备注	页码
1	承认书封面 (Spec Cover)		1
2	承认书项目表 (Spec Item)		2
3	产品规格书 (PRODUCT SPECIFICATION)		3-13
4	产品包装规范 (Product packaging specification)		14
5	CPK Report		15
6	QC工程图 (QC engineering drawing)		16
6	BOM		17
7	环保物料统计清单 (Environmental protection material statistics list)		18

说明:

1. 承认书内容需依查核表项目依顺序排列。
2. 承认书依客户要求打印份数, SGS报告需加盖工程章.
3. 所有材料一律经过客户确认后, 任何材料/制程/可能影响产品品质及环境品质的变更, 都必需重新送样给客户确认后方可导入。
4. SGS报告有效期为一年。
5. 依实际承认书所附件内容在查核表中勾选: “有” 为已提供, “无” 根据客户要求提供。



DONGGUAN SLEing INTEL-TECH CO., LTD
SPECIFICATION APPROVAL SHEET

CUSTOMER _____

CUS PART NO _____

REV _____

X3

WIFI-MAIN Antenna 2.4-2.5/5.15~5.85 GHz

SPECIFICATION _____

PCB L=302mm(Ø0.81+MHF4)

weight _____

SUP PART NO _____

SLEingB104300310

DATE _____

2022.03.23



SUP APPROVED

APPROVED	CHECKED	QA CHECKED	DESIGNED
	Jerry	JS	H2H

DONGGUAN SLEing INTEL - TECH CO., LTD

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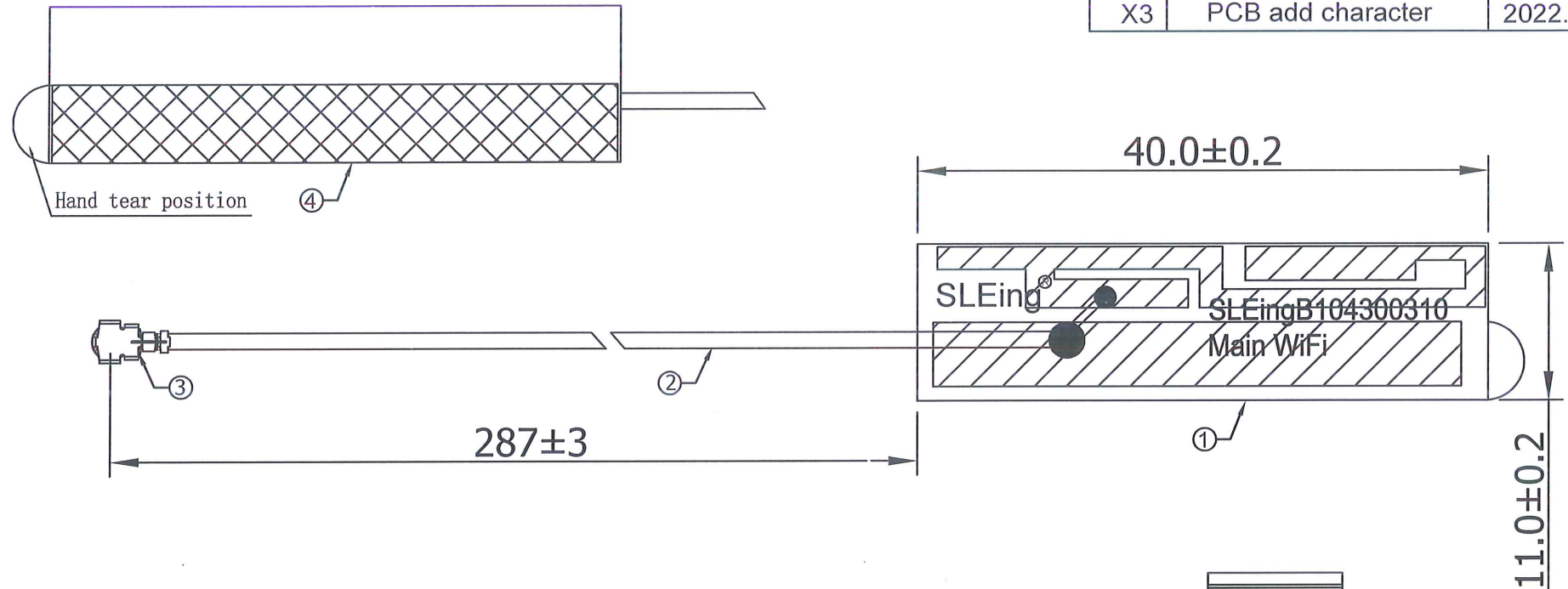
www.sleing.com

The original shall be kept by the unit

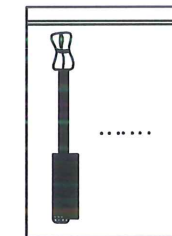
[illegible]

[illegible]

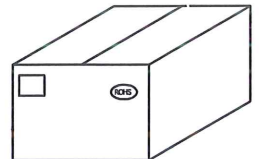
REV.	CONTENT	DATE
X1	First Sample	2021.12.21
X2	Change cable length and increase back gun	2022.01.12
X3	PCB add character	2022.03.23



Specification:
Frequency Rang:2.4~2.5/5.15~5.85GHz(With machine test))
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		WIFI MAIN ANTENNA	
S.L P/NO		SLEingB104300310	
SIZE	DRAWN	CHECKED	APPROVED
A4	Jerry	Jerry	JongRei

NO	PART NAME	DESCRIPTION	REMARK	Q'TY
4	Back gum	#513 L39.6*W5.5*T0.1mm		1
3	Connector	MHF Plug for Φ0.81 Cable	Generation 4 connector	1
2	Cable	Φ0.81mm Coaxial Cable Black(low loss),50Ω		1
1	PCB	PCB,L40.0*W11.0*T0.8mm,Color:Black		1

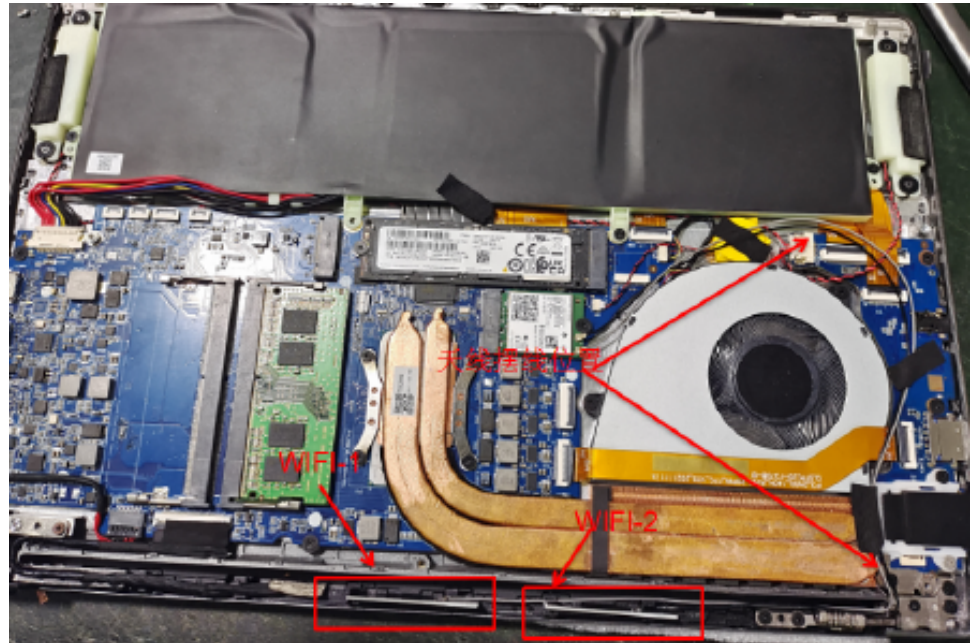
TOLERANCE UNLESS OTHERWISE SPECIFIED	UNIT:mm	ANGLES ±0.5°	X. ±0.3
SHEET: 1/1		0.XX ±0.05	XX. ±0.5
SCALE: 1/1		XXX. ±2.0	

Test Reports

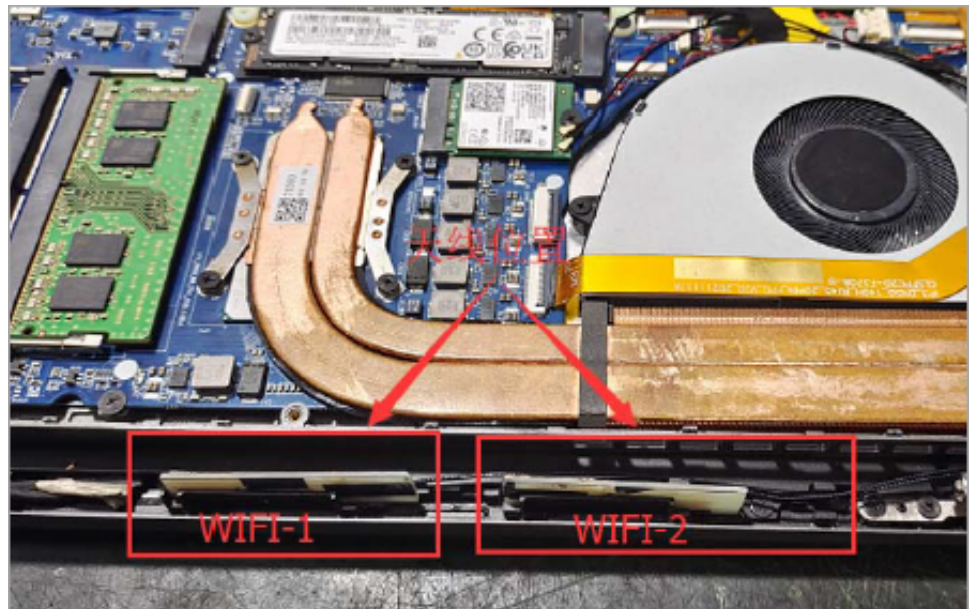
Electrical Properties	
Frequency	2.4-2.5/5.15-5.85 GHz(With machine test)
Impedance	50 Ohm Nomina
V.S.W.R	≤ 1.92
Return Loss	10dBi Max
Radiation	Omni-directional
Gain (Peak)	2.4G 3.83dBi / 5.8G 3.37 dBi/7.15G 4.99dBi
Polarization	Linear, Vertical
Admitted Power	2 W
Connector	MHF
Physical Properties	
Antenna Material	FPCB
Cable Type	$\Phi 0.81\text{mm}$ Black
Operating Temp	-20°C -75°C
Storage Temp.	-20°C -75°C

Antenna Profile

Device



Antenna

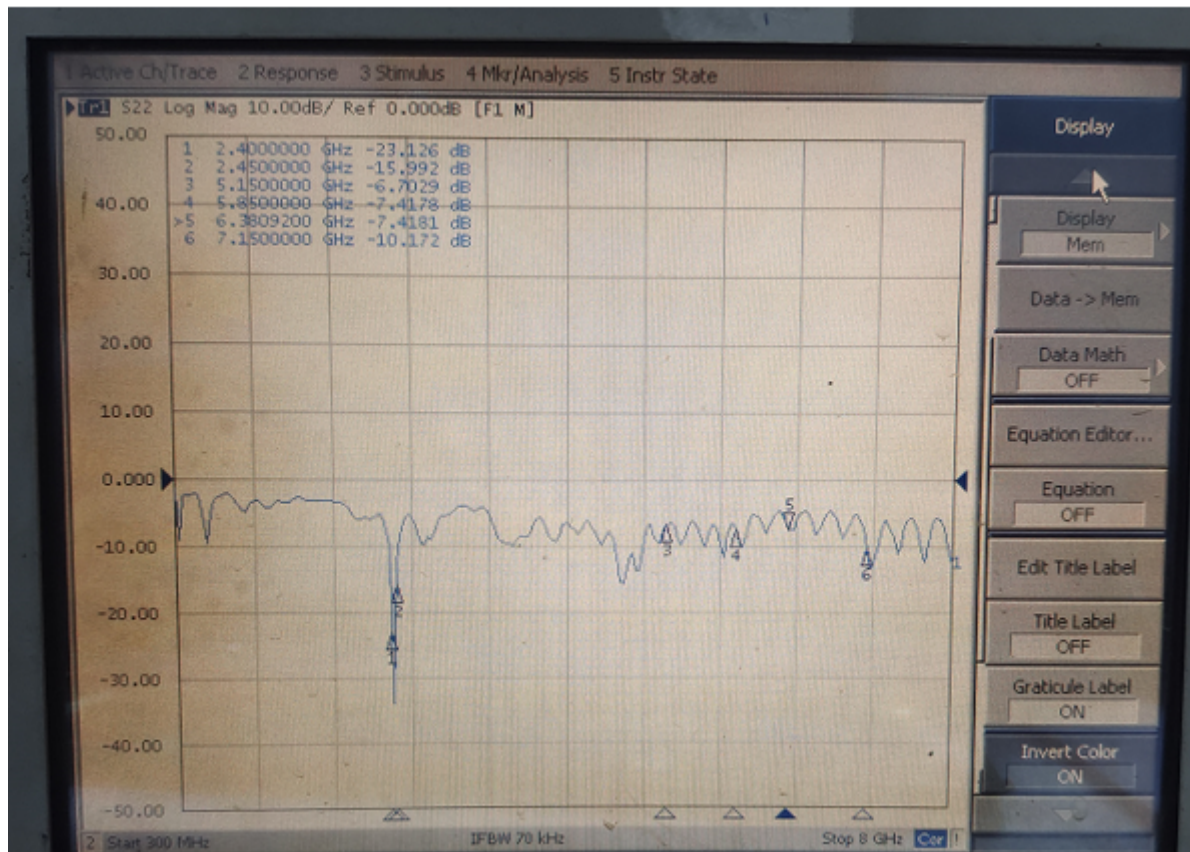


S Parameter Test

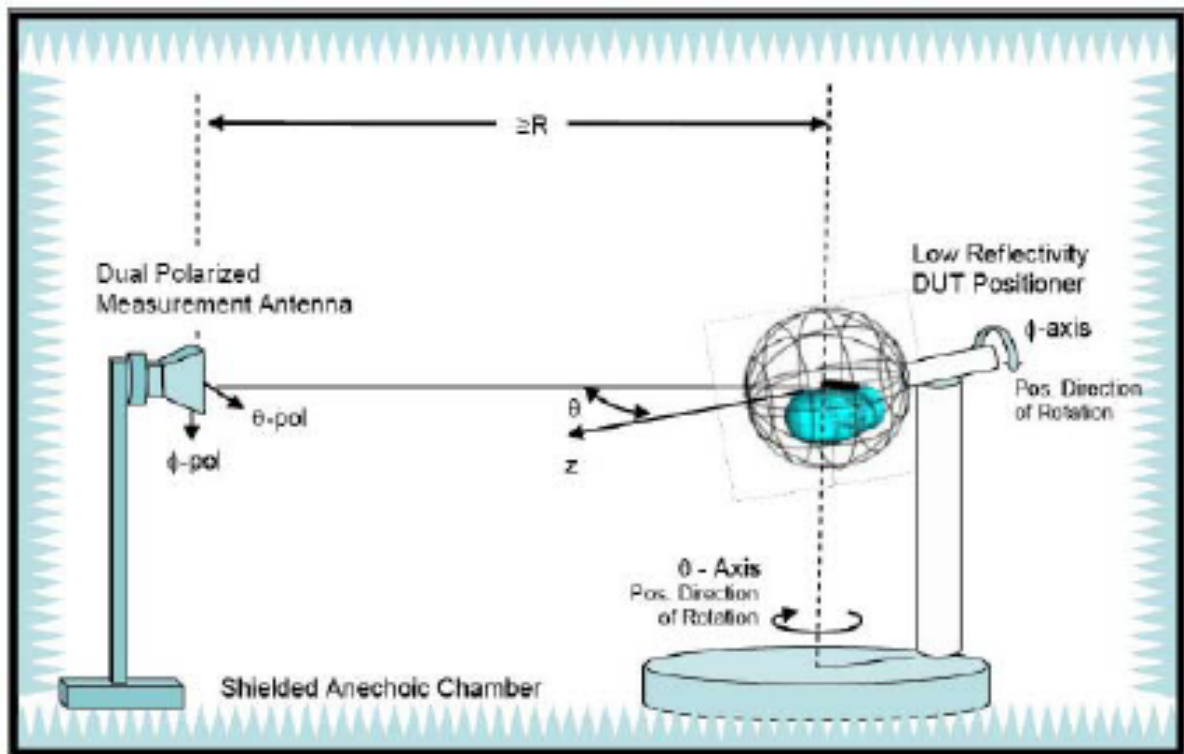
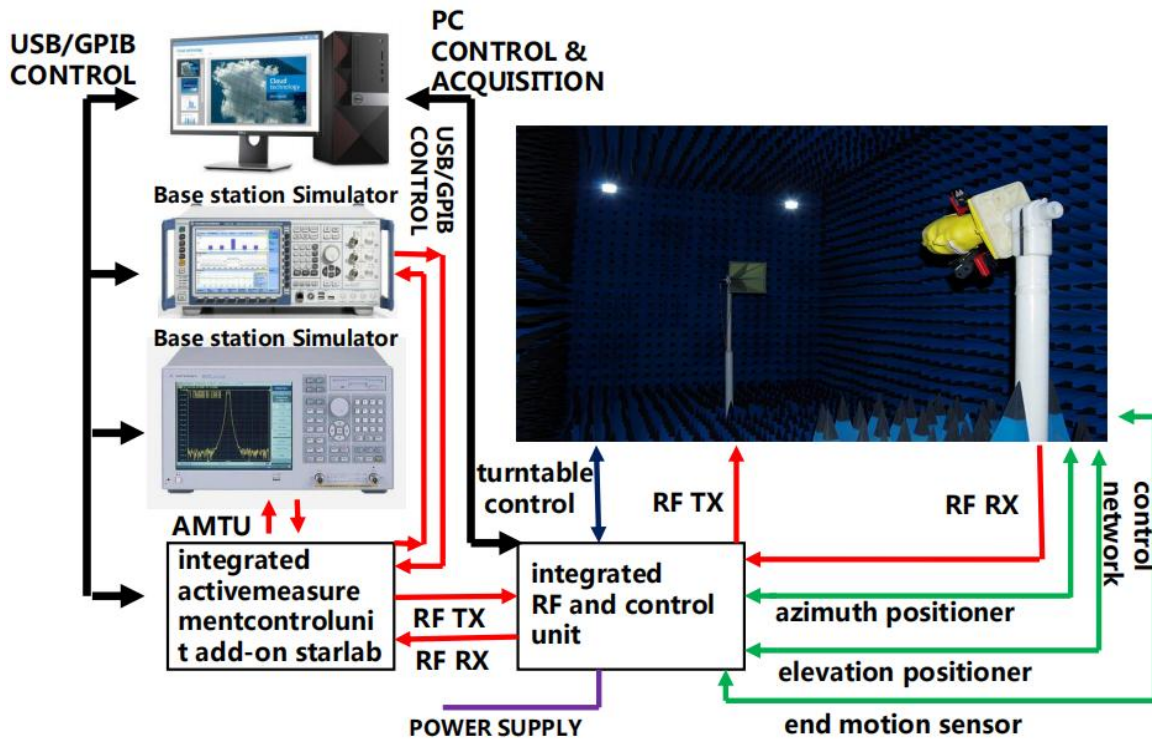
Agilent E5071C Network Analyzer



RF Antenna (Return Loss)



Test Setup



Test Efficiency

Test Point ID	Freq. (MHz)	Gain (dBi)	Efficiency (%)
1	2400.0	1.02	24.0%
2	2410.0	1.68	29.3%
3	2420.0	1.64	28.6%
4	2430.0	2.09	31.8%
5	2440.0	2.85	36.7%
6	2450.0	2.15	32.8%
7	2460.0	3.83	27.1%
8	2470.0	3.25	25.3%
9	2480.0	2.76	24.8%
10	2490.0	2.68	20.8%
11	2500.0	1.05	18.7%
12	5150.0	1.34	37.9%
13	5200.0	2.13	38.1%
14	5250.0	1.13	36.5%
15	5300.0	1.95	37.7%
16	5350.0	1.44	38.2%
17	5400.0	2.02	53.8%
18	5450.0	1.33	45.8%
19	5500.0	0.51	34.4%
20	5550.0	0.42	31.1%
21	5600.0	1.07	40.0%
22	5650.0	0.06	35.9%
23	5700.0	0.57	36.3%
24	5750.0	1.98	40.6%
25	5800.0	2.01	39.9%
26	5850.0	3.37	31.2%

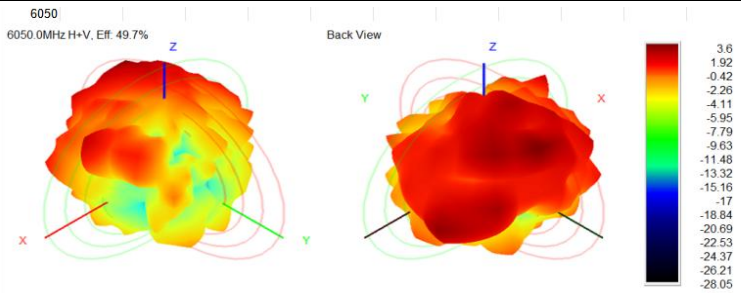
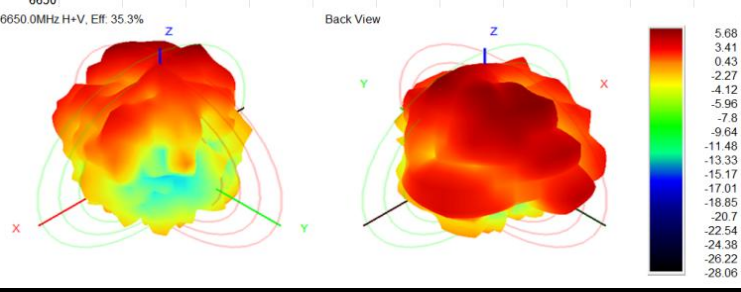
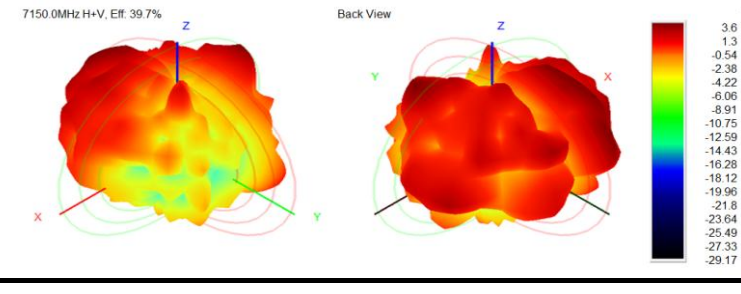
Test Point ID	Freq. (MHz)	Gain (dBi)	Efficiency (%)
2	5900.0	1.51	33.2%
3	5950.0	0.69	25.1%
4	6000.0	2.94	41.7%
5	6050.0	3.60	49.7%
6	6100.0	2.27	35.1%
7	6150.0	2.16	33.1%
8	6200.0	2.32	33.9%
9	6250.0	1.42	28.6%
10	6300.0	0.00	28.0%
11	6350.0	3.20	33.1%
12	6400.0	4.99	43.1%
13	6450.0	4.58	45.6%
14	6500.0	4.75	47.0%
15	6550.0	3.99	43.7%
16	6600.0	4.56	34.2%
17	6650.0	5.68	35.3%
18	6700.0	3.12	34.3%
19	6750.0	1.97	32.7%
20	6800.0	1.78	33.8%
21	6850.0	1.54	34.1%
22	6900.0	1.73	24.3%
23	6950.0	0.24	23.7%
24	7000.0	1.51	33.2%
25	7050.0	0.69	25.1%
26	7100.0	2.94	41.7%
27	7150.0	3.60	39.7%
28	7200.0	2.27	35.1%

方向图

Patten

	3D
2460	2460.0MHz H+V, Eff: 27.1% Back View 3.83 1.23 -0.21 -2.06 -4.9 -6.74 -8.58 -10.42 -12.27 -14.11 -15.95 -17.79 -19.64 -21.48 -23.32 -25.16 -27 -28.85
5200	5200.0MHz H+V, Eff: 38.1% Back View 2.13 0.88 -0.97 -2.81 -4.65 -6.49 -8.33 -10.18 -12.02 -13.86 -15.7 -17.54 -19.39 -21.23 -23.07 -24.91 -26.75 -28.6
5300	5300.0MHz H+V, Eff: 37.7% Back View 1.95 0.88 -0.76 -2.6 -4.44 -6.28 -8.13 -9.97 -11.81 -13.65 -15.49 -17.34 -19.18 -21.02 -22.86 -24.7 -26.55 -28.39
5450	5450.0MHz H+V, Eff: 45.8% Back View 1.33 0.09 -1.25 -3.09 -4.94 -6.78 -8.62 -10.46 -12.3 -14.15 -15.99 -17.83 -19.67 -21.51 -23.36 -25.2 -27.04 -28.88
5850	5850.0MHz H+V, Eff: 31.2% Back View 3.37 1.68 -0.16 -2.25 -4.84 -6.89 -8.53 -10.37 -12.21 -14.05 -15.9 -17.74 -19.58 -21.42 -23.27 -25.11 -26.95 -28.79

方向图 Pattern

	3D
6050	6050 6050.0MHz H+V, Eff: 49.7%  Back View Color scale: 3.6, 1.92, -0.42, -2.26, -4.11, -5.95, -7.79, -9.63, -11.46, -13.32, -15.16, -17, -18.84, -20.69, -22.53, -24.37, -26.21, -28.05
6550	6650 6650.0MHz H+V, Eff: 35.3%  Back View Color scale: 5.68, 3.41, 0.43, -2.27, -4.12, -5.96, -7.8, -9.64, -11.48, -13.33, -15.17, -17.01, -18.85, -20.7, -22.54, -24.38, -26.22, -28.06
7150	7150 7150.0MHz H+V, Eff: 39.7%  Back View Color scale: 3.6, 1.3, -0.54, -2.38, -4.22, -6.06, -7.91, -9.75, -11.59, -13.43, -15.28, -17.12, -18.96, -20.8, -22.64, -24.49, -26.33, -28.17

产品包装规范

日期： 2022.03.23

page: 1of1

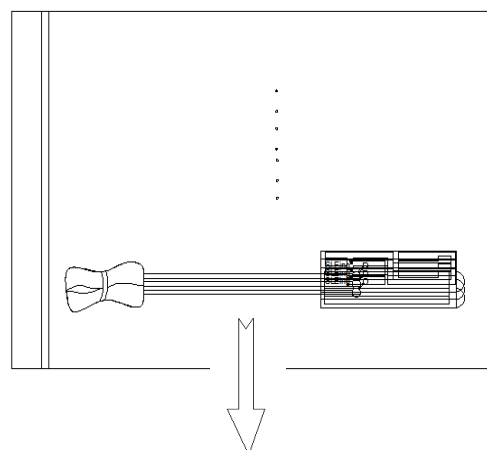
成品名称	DN50-140H-YD WIFI主天线	客户	欢创
成品料号	SLEingB104300310	版本	A

一：成品天线

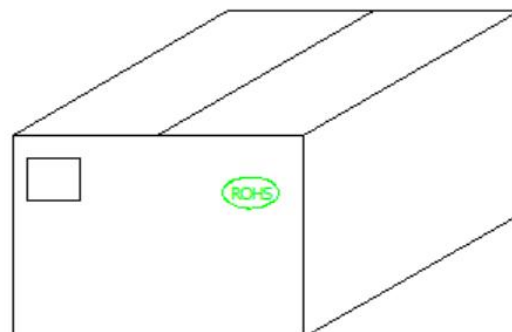


单PCS天线

二：装袋：每50PCS扎一扎(端子用珍珠棉扎好)，每袋装2扎，共100PCS, 包装袋上按客户要求贴上相应标签及ROHS标签



三：装箱：每箱装10-50包，共1000-5000PCS, 外箱一正面及相邻侧面贴外箱标签及ROHS标签，包装箱规格：250*200*150MM



外箱须贴ROHS标签与物料标签各1PCS

制定	胡赵海	审核	胡赵海	核准	朱正锐
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CPK Report

Part Number(料号)	SLEingB104300310	Vendor(供应商)	森岭智能
Description(零件名称)		Inspected(确认者)	胡赵海
Tool Number(模号)		Inches/MM(英寸/毫米)	毫米
Cavity(穴号)		Material Name(材质名称)	
		Material Code(材质牌号)	
Revision(版本)	A	Date(日期)	7-Mar-22

Dim. Designator(尺寸序号)	外形尺寸	外形尺寸	外形尺寸	外形尺寸
Nominal(公称尺寸)	40.2	11.00	287.00	
+ Tolerance(正公差)	0.2	0.20	3.00	
- Tolerance(负公差)	-0.2	-0.20	-3.00	
Upper Limit(规格上限)	40.4	11.20	290.00	
Lower Limit(规格下限)	40.0	10.80	284.00	
1	40.26	11.03	287.31	
2	40.21	10.98	287.16	
3	40.14	10.98	287.75	
4	40.23	11.04	287.84	
5	40.25	10.96	286.69	
6	40.22	11.00	286.98	
7	40.20	11.04	287.37	
8	40.20	11.05	287.85	
9	40.26	10.96	287.72	
10	40.23	11.02	287.37	
11	40.25	10.99	287.17	
12	40.18	11.04	287.59	
13	40.25	11.05	287.43	
14	40.24	10.97	287.68	
15	40.26	11.02	287.46	
16	40.25	10.96	287.15	
17	40.27	11.01	286.82	
18	40.28	11.04	287.10	
19	40.20	11.02	287.54	
20	40.25	10.98	286.57	
21	40.19	10.97	287.59	
22	40.28	11.01	287.58	
23	40.24	11.00	286.96	
24	40.22	10.98	287.85	
25	40.21	11.01	287.26	
26	40.22	11.07	286.68	
27	40.16	10.99	287.52	
28	40.19	11.00	287.30	
29	40.15	11.09	287.72	
30	40.21	11.03	287.42	
MAX.	40.28	11.09	287.85	
MIN.	40.14	10.96	286.57	
AVERAGE	40.22	11.01	287.35	
STDEV	0.04	0.03	0.36	
CP	1.80	1.97	2.77	
Cpk	1.59	1.87	2.45	
TOOLING(测量工具)	数显卡尺	数显卡尺	数显卡尺	

审核：胡赵海

制表：吴学义

东莞市森岭智能科技有限公司

BOM表

Product NO.: SLEingB104300310

Project name: WIFI MAIN Antenna

Edition: A

NO.	Name of parts	Parts and material	Material specifications	Units	Use level	Remark
1	PCB		L40.0* W11.0* T0.8mm, Black	PCS	1	
2	Cable线		L=302mm, Wire diameter 0.81, Black	PCS	1	
3	MHF connector		The four generation terminal is equipped with 0.81 wire	PCS	1	

Prepared: Jerry

Checked: Jerry

Approved: Jongrei

Number as: SL-EN-F26-A0

环保检测报告统计清单

物料名称: WIFI 主天线
英众料号: M.T.A.0000155
供应商型号: SLEingA104300310
出具报告人: 胡赵海

NO.	IP3 产品料号 Part Number	制造商 及代理商	物料名称 Part Name	材料名称 Name	均质材料 Mfr Part Number	均质材料有害物质含量Hazardous Substances Concentration in Homogeneous Material(PPM)										测试机构 Test Lab, organization	报告编号 Test Report Number	测试日期 Test Date (YY-MM-DD)	第三方检测报告插入 Insert a third party test report	
						Cd	Pb	Hg	Cr6+	PBB	PBDE	DBP	BBP	DEHP	DIBP					
						<100	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000					
	M. T. A. 0000155	森岭智能	WIFI 主天线	PCB	基材铜箔	<2	<2	<2	<8	<5	<5	<50	<50	<50	<50	SGS	NGBML2105022604	2021. 11. 04	 FR-4.0 ROHS 中文.pdf	
					阻焊油墨	<2	<2	<2	<8	<5	<5	<50	<50	<50	<50	SGS	CANEC2215361304	2022. 07. 21	 LB-1900 感光阻焊油墨 RO	
					字符油墨	<2	<2	<2	<8	<5	<5	<50	<50	<50	<50	SGS	CANEC2215592404	2022. 07. 26	 LB-702W-1 热固文字白油 RoH	
					OSP	<2	<2	<2	<8	<5	<5	<50	<50	<50	<50	SGS	SZXEC2200159501	2022. 01. 24	 ROHS2.0 镉元素 HBCDD 硫(中文)	
				CABLE	金属	<2	<2	<2	<8	<5	<5	<50	<50	<50	<50	CTI	A2220074535101002E	2022. 03. 03	 A2220074535101002E-海联通-金	
					非金属	<2	<2	<2	<8	<5	<5	<50	<50	<50	<50	CTI	A2220074535101001E	2022. 03. 10	 A2220074535101001E-海联通-非	
				端子	铜	<2	<2	<2	<0.1	<5	<5	<50	<50	<50	<50	SGS	CANEC2209440608	2022. 05. 19	 C5210.PDF	
					绝缘胶	<2	<2	<2	<8	<5	<5	<50	<50	<50	<50	TUV	238523170A6001	2021. 12. 23	 3000 Series_BK_RoHS	