

# 样品承认书

## Confirmation of products

客户名称 Customer					
项目名称 Project Name	SD8	版本 Version	A. 1	日期 Date	2024-11-14
项目料号 Project NO.	03. 12. 01. 005	客户料号 Customer NO.	54. 07. 001. 0156		
频段 Frequency Range	2400~2500MHz 5100~5800MHz	备注 Notes	WIFI1 天线		
设计 Designed By					
审核 Approved By					
客户确认 Clients' Approval					

公司名称：深圳市林荣科技有限公司

Designer: SHENZHEN LINRONG TECHNOLOGY CO., LTD

地址：深圳市龙华区大浪街道华荣路联建工业园 1 栋 3 楼

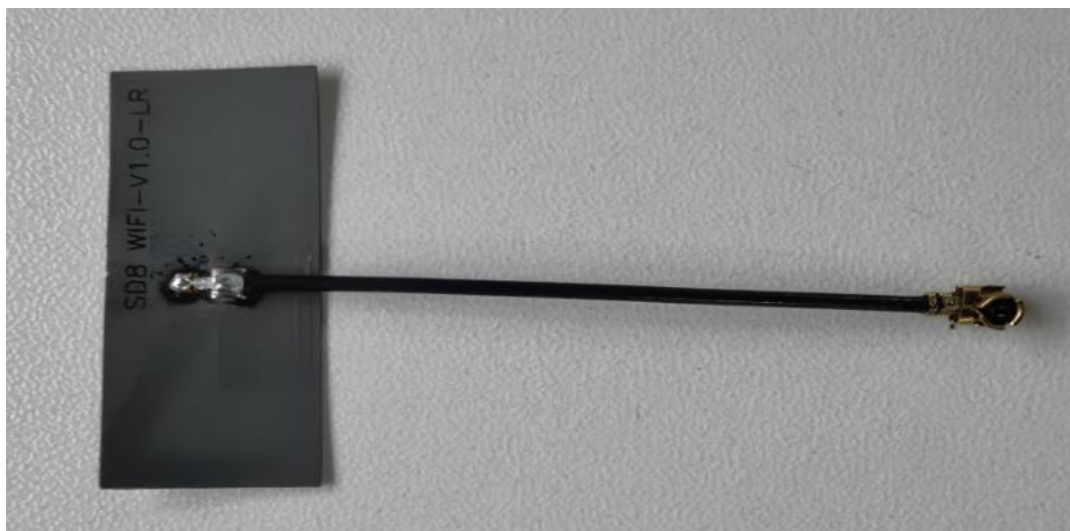
ADD: Floor 3, building 1, LianJian Industrial Park, Huarong Road, Dalang street, Longhua District, Shenzhen

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## 1、 Specification

This report mainly provides the testing conditions of various electric and structural performance parameters for cell phone antenna ----SD8 Picture 1 shows the antenna designed by LR.



## 2、 VSWR Testing

### 2.1 Testing connection

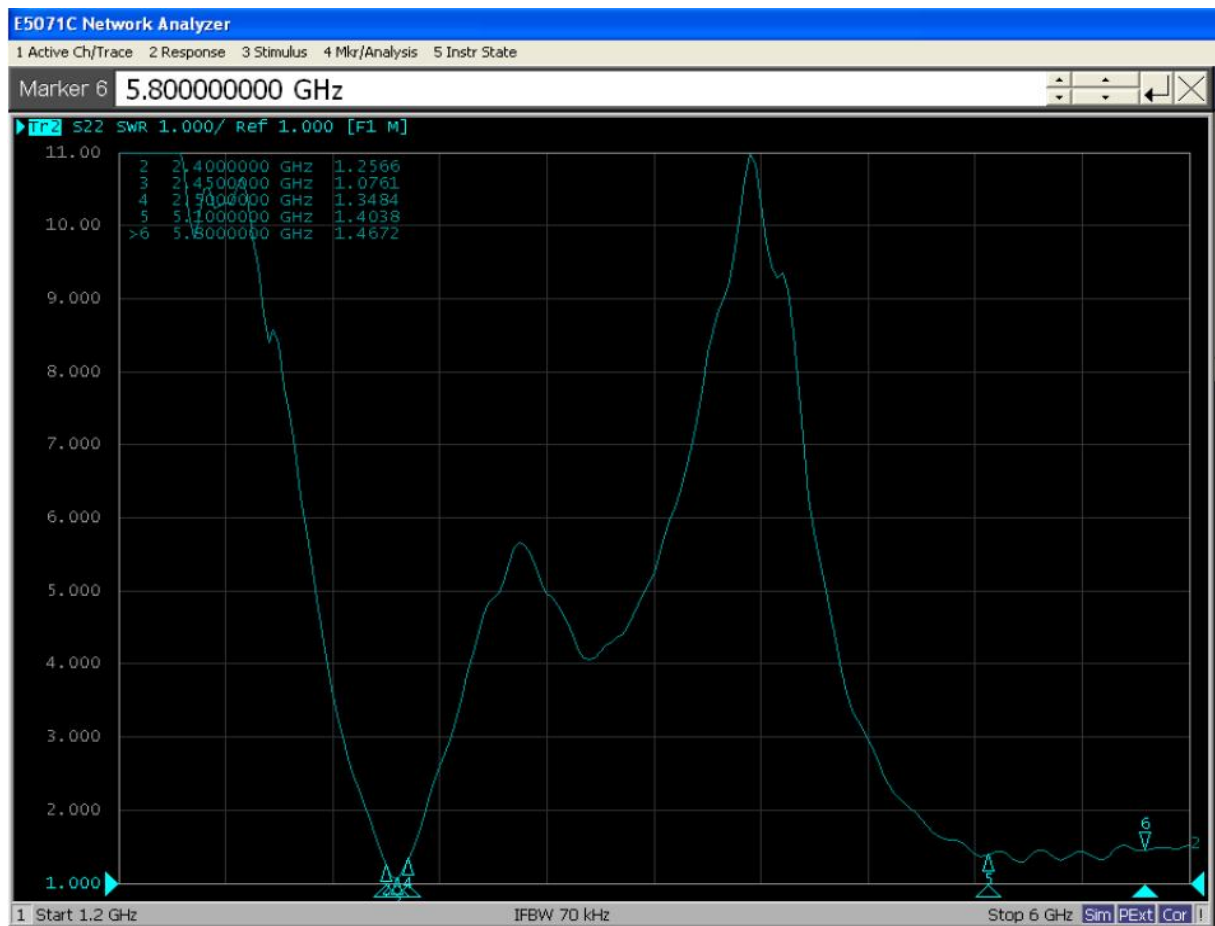
The **Return Loss** testing devices are connected in sequence: Agilent5071C Network Analyzer →Testing Cable → Customer-providing Devices.

### 2.2 VSWR

The following table expresses the VSWR value of antenna's two edges of its frequency range. With regard to the relevant diagram of VSWR

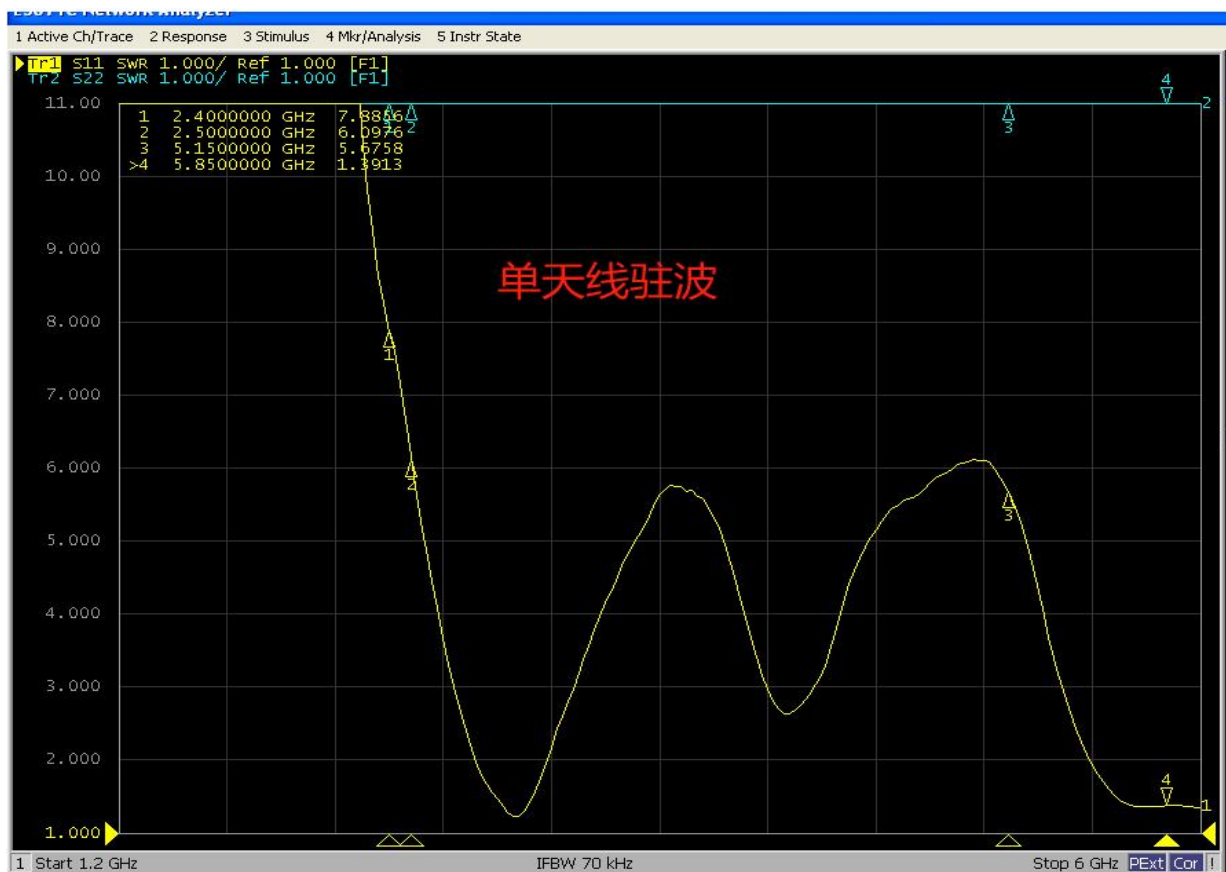
	SD8 WIFI VSWR				
Frequency (MHz)	2400	2450	2500	5100	5800
VSWR	1.25	1.07	1.34	1.40	1.46

### 2.3 Testing data



2.4+5.8G WIFI antenna VSWR

## 2.4 Single antenna test VSWR



### 3、 Power、 Sensitivity Testing

#### 3.1 Testing field

LR Microwave Anechoic Chamber : testing frequency ranges from 400MHz to 6GHz and the 40cm diameter spherical quiet zone, the chamber provides less than  $-90\text{dB}$  reflectivity from 400MHz—6GHz.

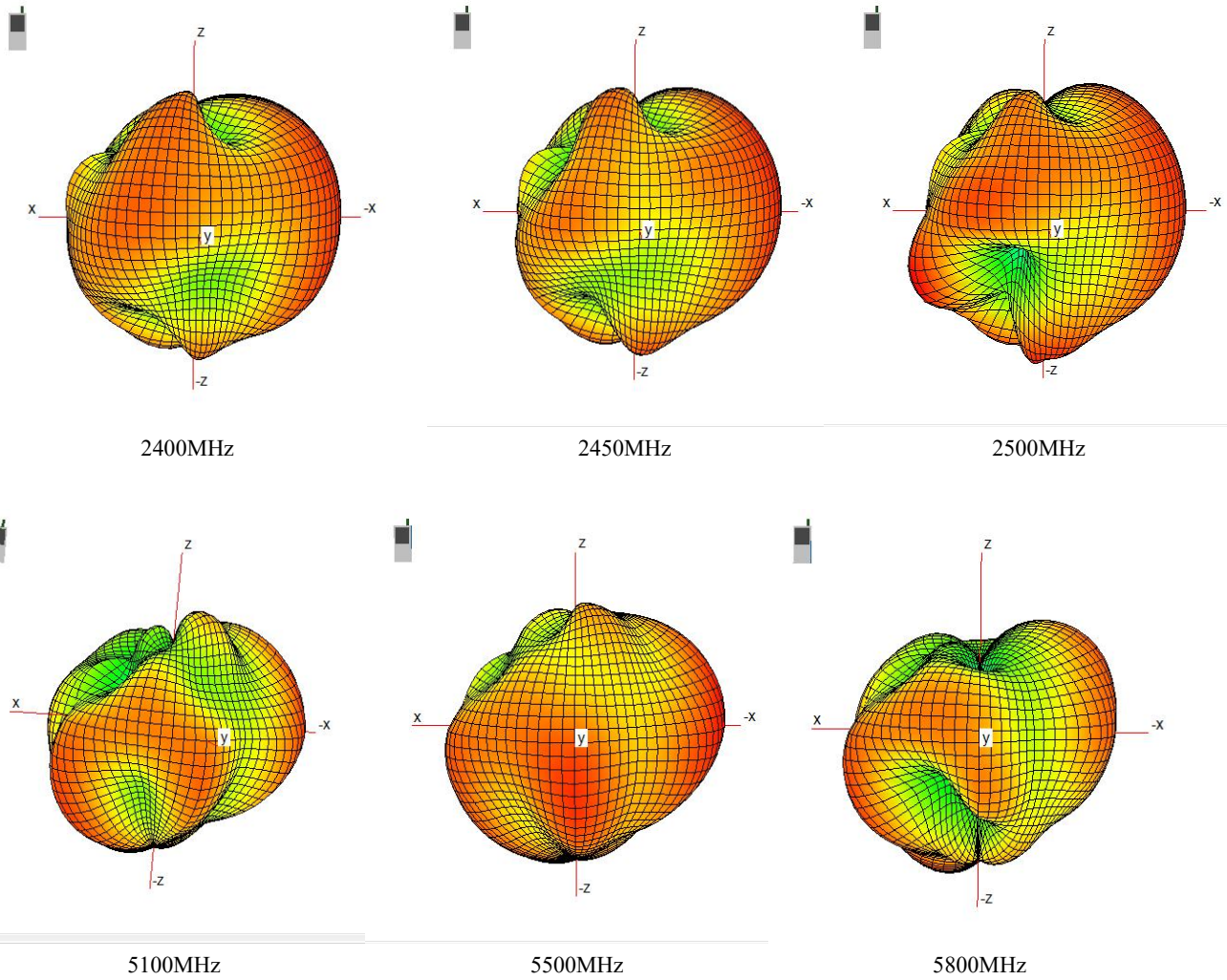
#### 3.2 Testing results

The following table indicates the testing results related to Power and Sensitivity in Microwave Anechoic Chamber, concerning the relative diagram.

#### 3.3 Active testing.

天线无源效率:

Freq (MHz)	Gain	Efficiency (%)	Freq (MHz)	Gain	Efficiency (%)
2400	2.3	67.2	5260	2.6	66.9
2405	2.4	68.3	5280	3.1	69.3
2410	2.5	69.0	5300	2.8	65.9
2415	2.6	70.4	5320	2.8	63.8
2420	2.4	70.4	5340	3.0	66.3
2425	2.2	70.7	5360	3.0	66.8
2430	2.2	70.3	5380	2.9	67.1
2435	2.2	70.4	5400	2.7	64.2
2440	2.1	70.7	5420	2.9	67.2
2445	1.8	69.9	5440	2.9	65.9
2450	1.8	69.9	5460	3.0	66.2
2455	1.8	70.0	5480	2.7	64.8
2460	1.7	70.0	5500	2.4	61.9
2465	1.6	70.0	5520	2.1	59.8
2470	1.4	68.7	5540	2.4	64.3
2475	1.5	69.1	5560	2.4	63.6
2480	1.4	70.4	5580	2.5	65.9
2485	1.4	71.8	5600	2.6	63.9
2490	1.5	72.8	5620	2.4	63.3
2495	1.5	72.8	5640	2.7	64.5
2500	1.6	73.1	5660	2.4	62.7
5100	4.2	68.4	5680	2.6	63.2
5120	4.0	68.8	5700	2.5	64.5
5140	3.5	65.8	5720	2.6	65.1
5160	3.6	70.3	5740	2.2	60.2
5180	2.9	64.9	5760	2.7	64.8
5200	2.9	67.3	5780	2.9	65.0
5220	3.0	70.6	5800	3.1	65.5
5240	2.9	67.9			



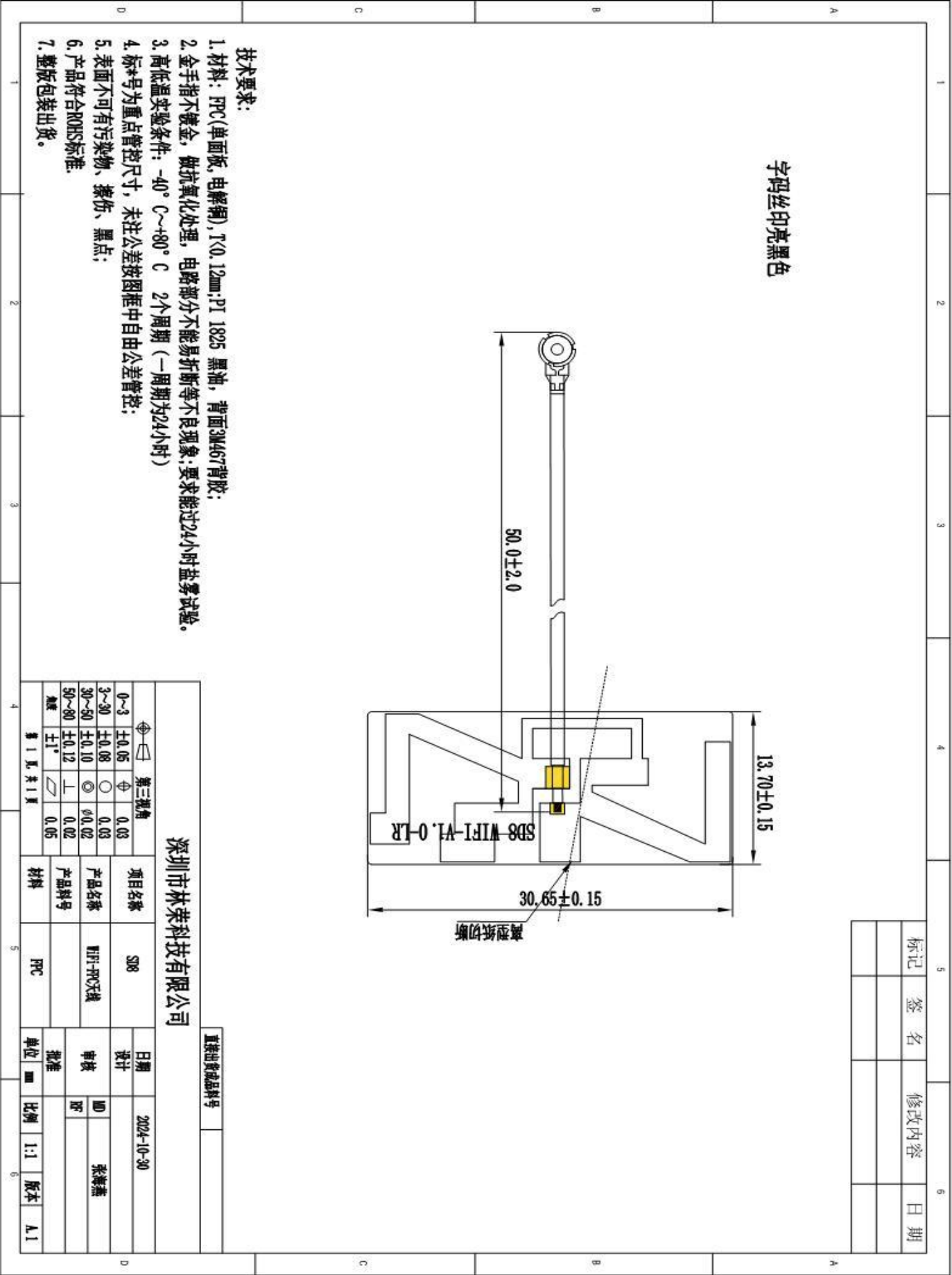
SD8 有源数据:

chNO		TRP	TIS
11B-11M	1	18.81	
	6	18.21	
	11	18.62	-80.68
11g-54M	1	18.21	
	6	18.32	
	11	18.29	-68.13
11A-54M	36	12.49	
	56	13.21	
	165	12.91	-75.66

## 4、Environmental treatment

The following is the installation method of the whole machine

# 5、Mechanical Dimension Drawing





6. Mechanical Dimension Testing report

全尺寸测量报告

Vendor(供应商)		材质名称	PRC		Part NO(料号)		03.12.01.005		Tool Number (模号)		Cav. Number(穴数)		Unit(单位)		Quality(品质签字)									
林荣科技		材质牌号	/		Part Name (零件名称)		WiFi天线		/		/		MILLIMETERS INCHES		2111-28									
日期		2024-11-6		MEASURED DIMENSION(实测尺寸)		% TOLERANCE USED (公差使用百分比)		DISPOSITION		ACCEPTABLE VARIANCE														
DIM. #	DIMENSION	DRAWING ZONE	+TOL.	-TOL.	NOTE	SAMPLE 1	SAMPLE 2	SAMPLE 3	SAMPLE 4	SAMPLE 5	UPPER	LOWER	0%-25%	25%-50%	50%-75%	75%-100%	100%+	Re-Measure	Accept	Fix Tool	Accept With Variance	DIMENSION	+TOL.	-TOL.
1	50.00		2.00	(2.00)		51.00	50.00	52.00	52.00	49.00	100%	-50%	X				X					50.00	52.00	49.00
2	30.65		0.15	(0.15)		30.68	30.70	30.65	30.64	30.67	33%	-7%	X	X								30.65	30.70	30.64
3	13.70		0.15	(0.15)		13.72	13.70	13.68	13.69	13.70	13%	-13%	X									13.70	13.72	13.68
4	1.13		0.05	(0.05)		1.12	1.12	1.13	1.12	1.13	0%	-20%	X									1.13	1.13	1.12
6	以下空白																							
7																								
8																								
9																								
10																								
11																								
12																								
13																								

备注: 除了上述标注的填写内容外,须输入的内容:  
1. DIMENSION, +TOL, -TOL, SAMPLE1, SAMPLE2, SAMPLE3  
2. 注意1中描述的内容输入时, 请:  
a. 在%TOLERANCEUSED(公差使用百分比)中无论是UPPER还是LOWER>100%, 须:  
(1) 检查输入数据是否输入错误;(2) 测量数据是否操作有误差或是仪器测量不准确;(3) 测量时间是否不适宜;(4) 排除了(1)(2)(3)外, 仍然>100%, 请设计师对每个尺寸的后面作出选择即从"Re-measure, Accept, Re Tool, Accept Variance"中选一, 若是选Accept with Variance, 必须完成后面的Dimension, +TOL, -TOL;  
b. DIMENSION栏中的即尺寸前一栏中的DIM.#必须与图面上的一致, 同时注意, 在作Cpk的尺寸的编号与FAI全尺寸测量报告中的尺寸的编号必须是相同的, 且Cpk尺寸必须被用符号标注, 此标注号必须表示的意思是该尺寸为重点管控尺寸, 要做Cpk!  
c. 测量工具代号Measure No.: A=Callipers(0.00) B=micrometer(0.000) C=Pin Gauge(0.000) D=High Gauge(0.000) E=CMM(0.000) F=Plug Gauge(0.00) G=R Gauge(0.0) I=Deep Gauge(0.000)



The declaration of Homogeneous materials  
物料环境物质调查表

序号	供应商	部件名称	材料名称	Report Number of test agency 检测机构报告编号	Test organiza tion 检测机构	The content of the substances controled by ROHS (PPM, mg/kg) RoHS管控的十项物质含量 (PPM或mg/kg表示)										Test date 检测日期	备注
						Pb	Cd	Hg	Cr <sup>6+</sup>	PBB	PBDE	DEHP	BBP	DBP	DIBP		
						铅	镉	汞	六价 铬	多溴 联苯	多溴 二苯 醚	邻苯 二甲 酸二 酯	邻苯 二甲 酸甲 苯基	邻苯 二甲 酸二 丁基	邻苯 二甲 酸二 异丁		
1	林荣科技	SD8 WIFI天线	电解铜	SHABC24000428806	SGS	2	2	2	8	N.D.	N.D.	50	50	50	50	2024-1-12	
			油墨	ETR24600712	SGS	2	2	2	0.1	N.D.	N.D.	50	50	50	50	2024-1-14	
			3M胶	CANEC24000523102	SGS	2	2	2	8	N.D.	N.D.	50	50	50	50	2024-1-11	
			cable线	SZNEC24002490604	SGS	2	2	2	8	N.D.	N.D.	50	50	50	50	2024-8-5	
			端子														
			磷青铜	CANEC24000977302	SGS	2	2	2	8	N.D.	N.D.	50	50	50	50	2024-1-12	
			塑胶件	ETR23C01965	SGS	2	2	2	8	N.D.	N.D.	50	50	50	50	2023-12-19	