

SPECIFICATION FOR APPROVAL

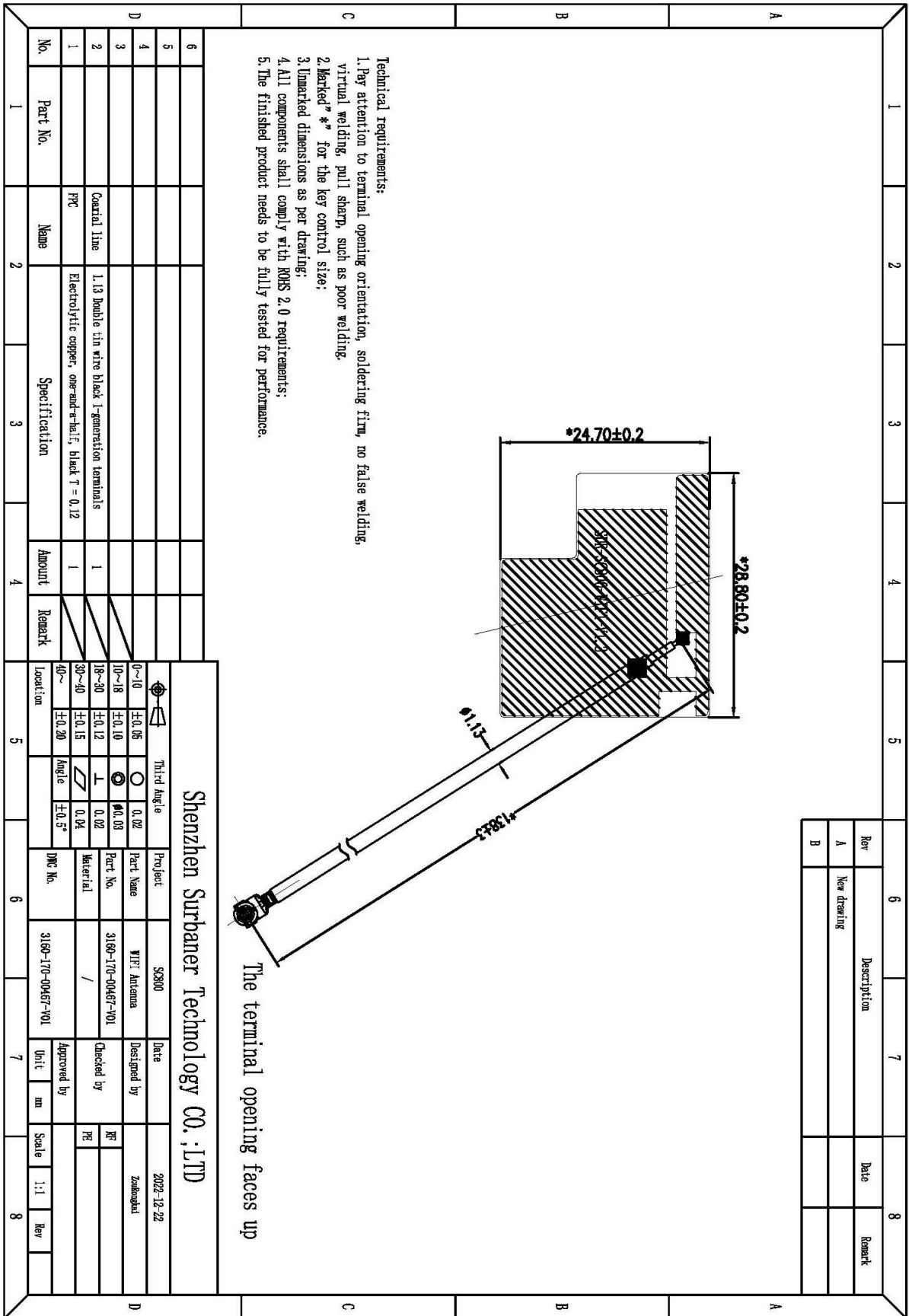
Customer Name	Shang Ji Technology Co. , Ltd.		
Customer Project Name	SC800	Surbaner Project Name	SC800
Customer P/N	A86020058	Surbaner P/N	3160-170-00467-V01
Band	2400-2500MHz		
Version number	A0		
Designer Information			
RF Engineer	LinDeyou	R&D Director	LinDeyou
ME Engineer	ZouRongka i		

Surbaner Approval			Customer Approval		
	Prepared By	Checked By	Approval By	Checked By	Approval By
Signature	LiuShengrong	LinDeyou	ZengBinghao		
Date	Dec 27, 2022	Dec 27, 2022	Dec 27, 2022		

Change Log				
Version	Change Description	Person in Charge	Approval By	Date

## Catalogue

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## Sample Dimensions Test Report

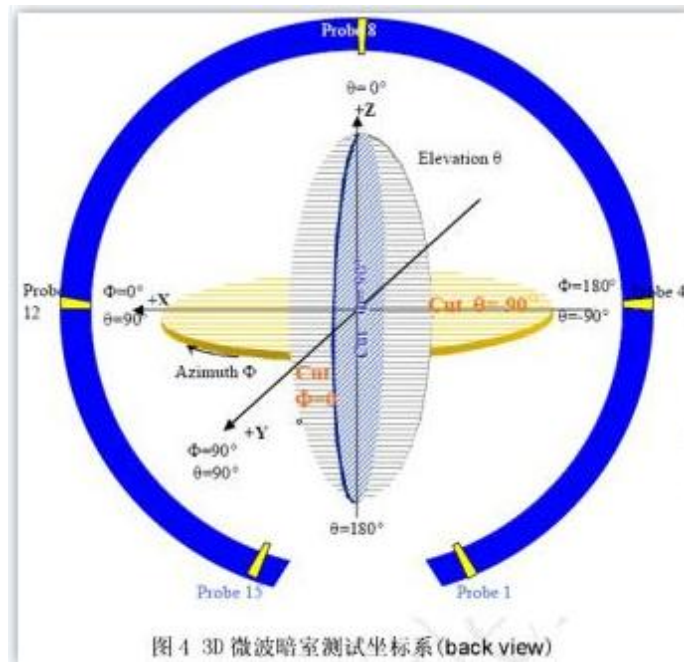
Customer Name	Shang Ji	Customer P/N	A86020058	Surbaner P/N	3160-170-00467-V01
Test Date	2022/12/27	Sample Qty.	3	Inspector	<b>ZengXingrong</b>
Dimension No.	Standard	Sample 1	Sample 2	Sample 3	Pass/NG
①FPC length	28.80±0.2mm	28.81	28.80	28.79	Pass
②FPC Width	24.70±0.2mm	24.71	24.70	24.69	Pass
③FPC Thickness	0.12±0.05mm	0.12	0.121	0.12	Pass
④Long line	138±3mm	138.1	138	138	Pass
⑤					
⑥					
⑦					
Conclusion					PASS
Inspector & Date	<b>ZengXingrong</b> 2022/12/27		Approval & Date		

## RF Performance Test Report

Customer Name	Shang Ji	Project Name	SC800	Surbaner P/N	3160-170-00467-V01
Band	2400-2500MHz	Test Date	2022/9/26	Inspector	LinDeyou

### Antenna Test Equipment Introduction

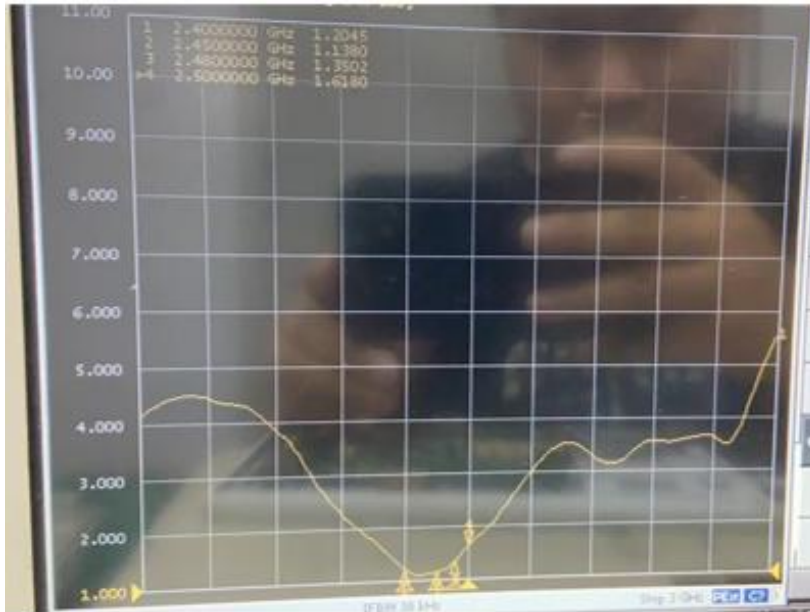
Test of antenna input characteristics using Agilent E5071C and Agilent 5062A vector network analyzer; The radiation pattern of the antenna are tested using the Satimo starlab 3D near field Anechoic Chamber, and the instrument is used to agilent8960 E5515 and Agilent E4438C. The test coordinates of the darkroom are as follows:



### 1.S11 Parameter-VSWR

Measuring Method is a 50Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the S11 parameter, Keeping this fixture away from metal at least 20cm.

### S11 Parameter-VSWR-WIFI



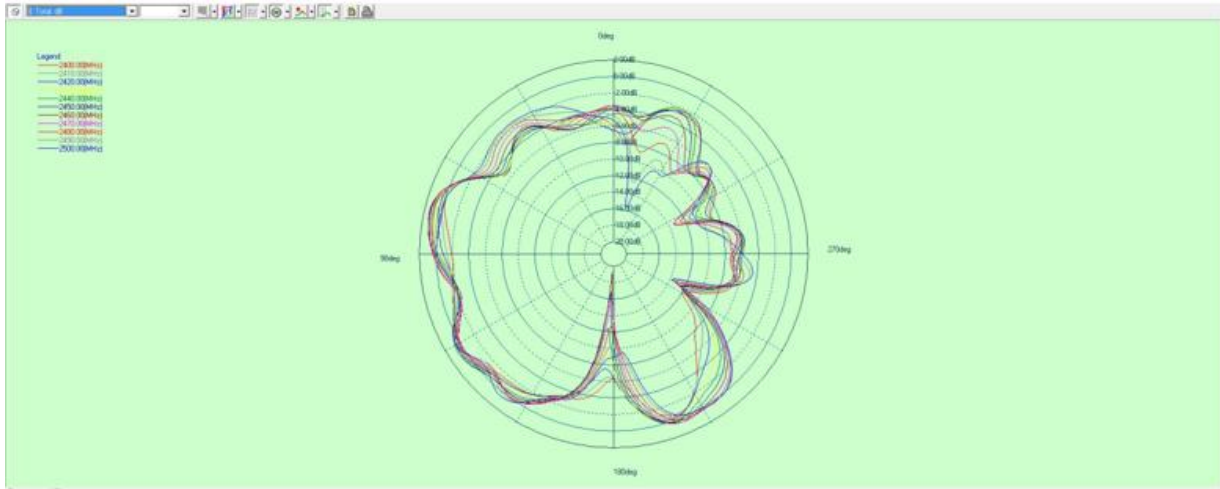
Frequency(MHz)	2400	2450	2480	2500
VSWR	1.20	1.13	1.35	1.61

### 2.Gain & Efficiency

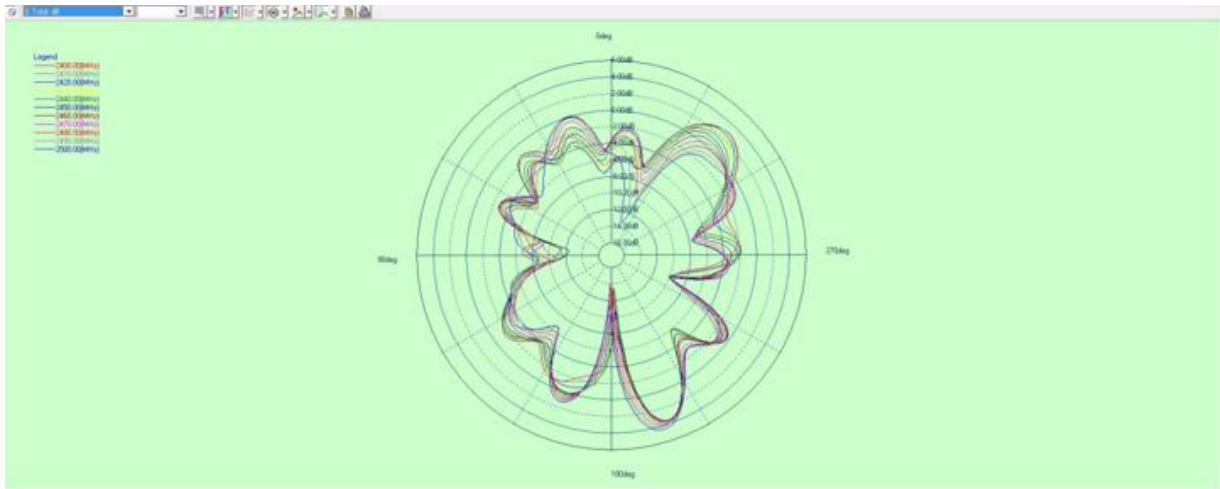
Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
2400	38.5%	1.05
2410	39.5%	0.75
2420	40.2%	0.78
2430	41.4%	0.69
2440	42.9%	0.88
2450	42.1%	1.11
2460	43.0%	1.1
2470	42.3%	1.34
2480	42.9%	1.22
2490	42.8%	1.14
2500	42.7%	1.32



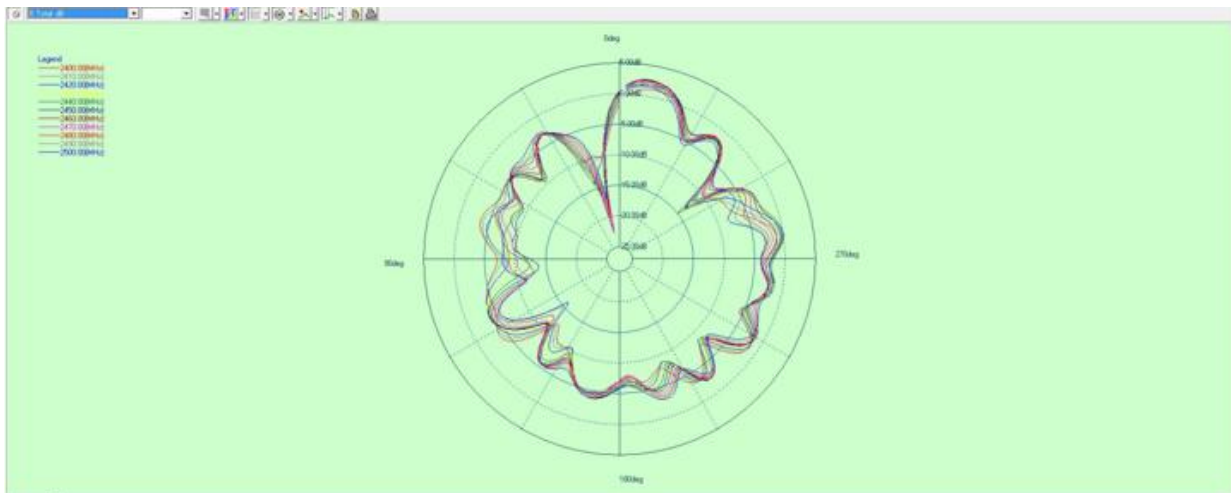
## 2D Pattern



$\Phi = 0$



$\Phi = 90$



$\Theta = 90$

### 3.OTA

Test Equipment	R&S CMW270			
Test Condition	3D chamber			
Band	Wireless Protocol	Channel	TRP(dBm)	TIS(dBm)
WIFI	802.11 b/11Mbps	1	14.47	-78.98
		6	14.78	-81.95
		11	15.96	-81.89
	802.11 g/54Mbps	1	8.55	-65.55
		6	9.24	-65.51
		11	13.35	-65.72
	802.11 n/65Mbps	1	7.21	-62.31
		6	7.81	-62.47
		11	10.23	-62.35



## Reliability Test Report

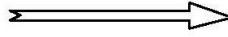
Customer Name	Shang Ji	Customer P/N	A86020058	Surbaner P/N	3160-170-00467-V01	
Test Date	2022/12/26	Sample Qty.	3	Inspector	HeChunhui	
Test Item	Requirement	testing equipment	Sample 1	Sample 2	Sample 3	PASS/NG
High temperature storage	After 24H exposure at70°C, the electrical performance was normal after 2H recovery	Constant temperature and humidity box	OK	OK	OK	Pass
Cryogenic storage	Exposed to -30°C for hours, the electrical properties were normal after 2 hours of recovery	Constant temperature and humidity box	OK	OK	OK	Pass
Work in high temperature	The electrical performance is normal after 24 hours of electrification at 60°C	Constant temperature and humidity box	OK	OK	OK	Pass
Low temperature operation	Under the condition of -20°C, the electrical performance is normal after 24 hours	Constant temperature and humidity box	OK	OK	OK	Pass
Salt spray tester	(5 + 0.5)% nacl, pH 6.5-7.2, temperature of the test chamber (35 ± 2) ° C <input checked="" type="checkbox"/> 24H <input type="checkbox"/> 48H	Salt spray tester	OK	OK	OK	Pass
Riveting and drawing force of connector	0.81 Diameter ≥8N 1.13 Diameter ≥10N RG174 Diameter ≥60N RG178 Diameter ≥40N	Push-pull meter	≥10N	≥10N	≥10N	Pass
Conclusion						Pass
Inspector & Date	He Chunhui 2022/12/27		Approval & Date			

## Code for product packaging

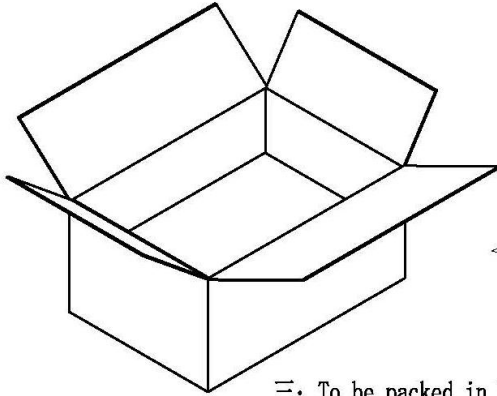
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Project name: SC800	Version: A
Customers: Shang Ji	Name of finished product: Wi-fi antenna

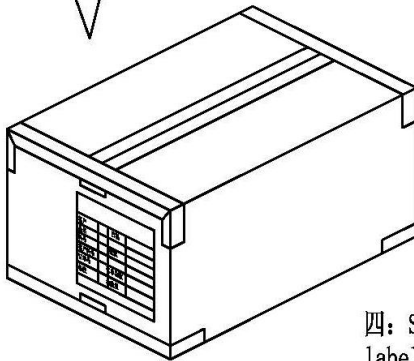
一: Finished antenna



二: 50PCS product per PE bag (subject to actual packing).



三: To be packed in boxes of 500 pcs per 10 bags (whichever is the actual packing) .



四: Seal and affix our production label and ROHS label to the outer case.

Approved: \_\_\_\_\_

Confirm: \_\_\_\_\_

Made: ZouRongkai

## Product ROHS ingredient declaration table

Product name	Uniform material		Levels of hazardous substances (PPM)										HS test report no	HS test report date
			Pb	Cd	Hg	Cr6+	PBBs	PBDEs	DEHP	BBP	DBP	DIBP		
Wi-fi antenna	FPC	Text ink	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ETR22501510	22/5/17
		3M Glue	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	CANEC2200386501	22/1/12
		Goldfinger	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	A2220136788101001E	22/4/15
		LPI-HF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SHAEC2202460504	22/2/21
		Anti-weldingink	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ETR22705905	22/8/5
		Reinforcement	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	A2220085983102002	22/3/14
	Antioxidants	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	A2220207344101001E	22/5/30	
	Wire	Fluoride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NGBML2200124301	22/1/27
		Tinned copper wire	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SHAEE22000472905	22/8/10
		Black masterbatch	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	HKTEC2202547207	22/6/10
	Terminal	Tin phosphor bronze	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	CANEC2201952008	22/2/18
		Plastic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ETR22800771	22/8/10
Gold plated		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	A2220404860101001C	22/9/17	

Install Wizard or Other

The installation process:

Take the 1PCS product, tear off the release paper on the back of the FPC by hand, then align the position of the FPC locating hole with the position of the housing locating hole (locating rib position or locating line) , and attach it to the housing smoothly, as shown in the following figure:

Points to note during installation:

- Put It on the antenna to ensure that the FPC is completely attached to the shell;
- The positioning hole is aligned with the position of the housing positioning column;
- The FPC edge is aligned with the shell edge;
- Please align the terminal first and then fasten it vertically when the terminal is fastened to the PCBA end of the motherboard;
- When dismantling the antenna terminal, tools (such as special crowbar) should be used to vertically tilt the terminal, not directly pull the wire to dismantle.