



SHUN DA CHENG TECHNOLOGY CO., LTD

SPECIFICATION FOR APPROVAL

Customer Name	YiHua		
Customer Project Name	YH215EG-1	SDC Project Name	YH215EG-1
Customer P/N		SDC P/N	WF3551B-1131R-160(Grey)
Band	<u>WIFI2. 4G/5. 8G/BT</u>		
Version	A0		
Designer Information			
RF Engineer	Yong-hui Yang	R&D Diretor	FuXueRong
ME Engineer	Huang Zongbao		

Approval				Customer Approval	
	Prepared By	Checked By	Approval By	Checked By	Approval By
Signature	Huang Zongbao	FuXueRong	FuXueRong		
Date	2023. 01. 03	2023. 01. 03	2023. 01. 03		

Change Log				
Version	Change Description	Person in Charge	Approval By	Date

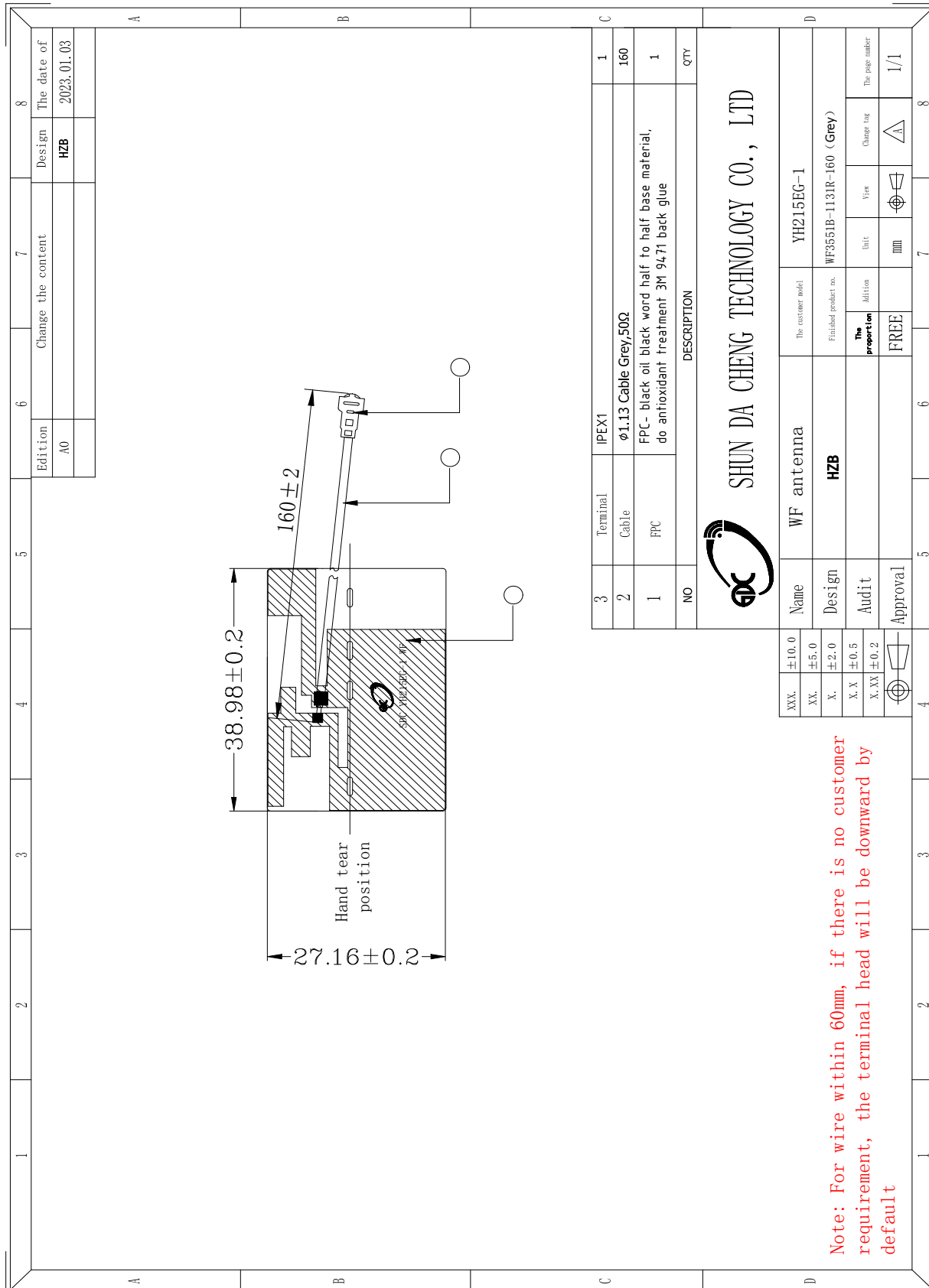


Catalogue

No.	Item	Page No.
1	Drawing or Product Image	3
2	Dimensions Test Report	4
3	RF Performance Test Report	5-9
4	Reliability Test Report1	10
5	Package Document	11
6	RoHS Control list for Sample	12
7	Install Wizard or Other	12



Drawing or Product Image





Sample Dimensions Test Report

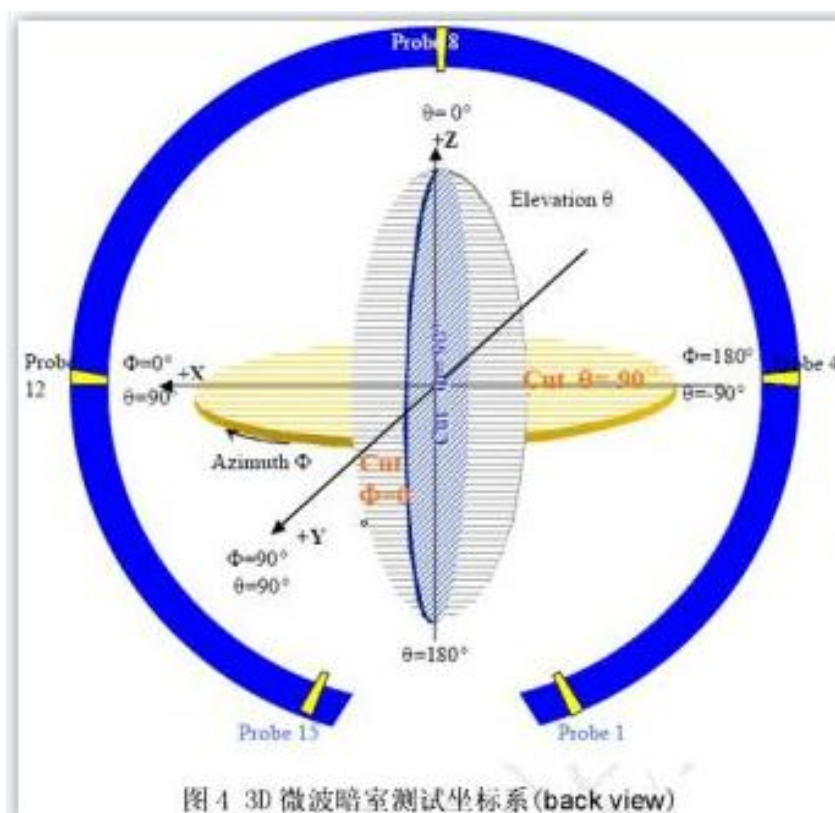
Test Date	2023. 01. 03	Sample Qty.	3	Inspector	Xu Yanfang
Dimension No.	Standard	Sample 1	Sample 2	Sample 3	Pass/NG
①length	38. 98±0. 2mm	38. 98	38. 99	38. 98	Pass
②width	27. 16±0. 2mm	27. 18	27. 16	27. 19	Pass
③thickness	0. 1±0. 03mm	0. 1	0. 1	0. 1	Pass
④Line length	160±2mm	161	160	162	Pass
⑤					
⑥					
⑦					
Conclusion					PASS
Inspector & Date	Xu Yanfang 2023. 01. 03		Approval & Date		



RF Performance Test Report

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 guangping 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:



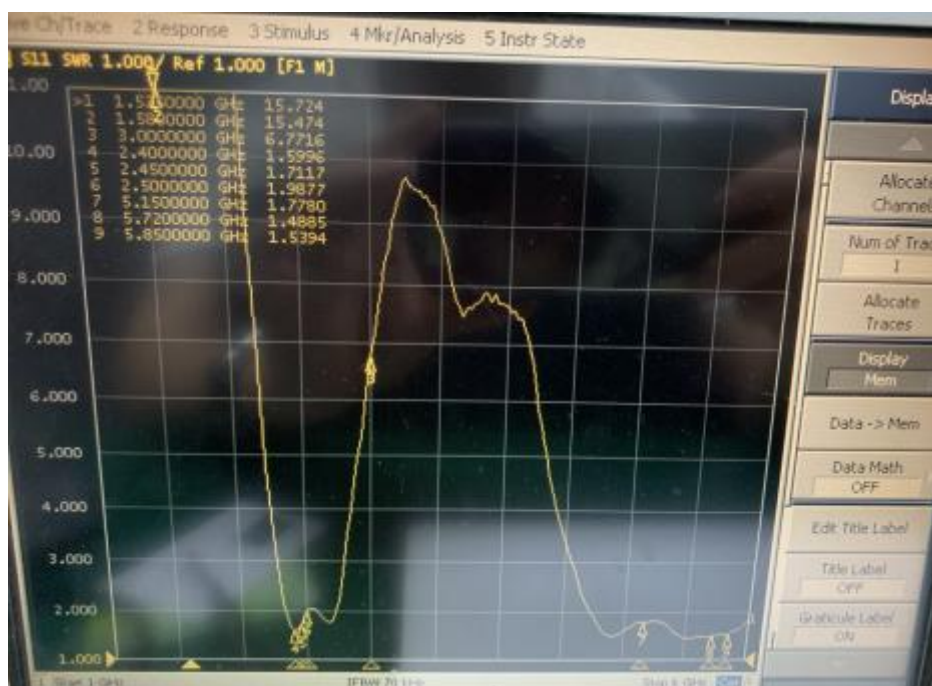
1. S11 **S11 Parameter-VSWR**

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.

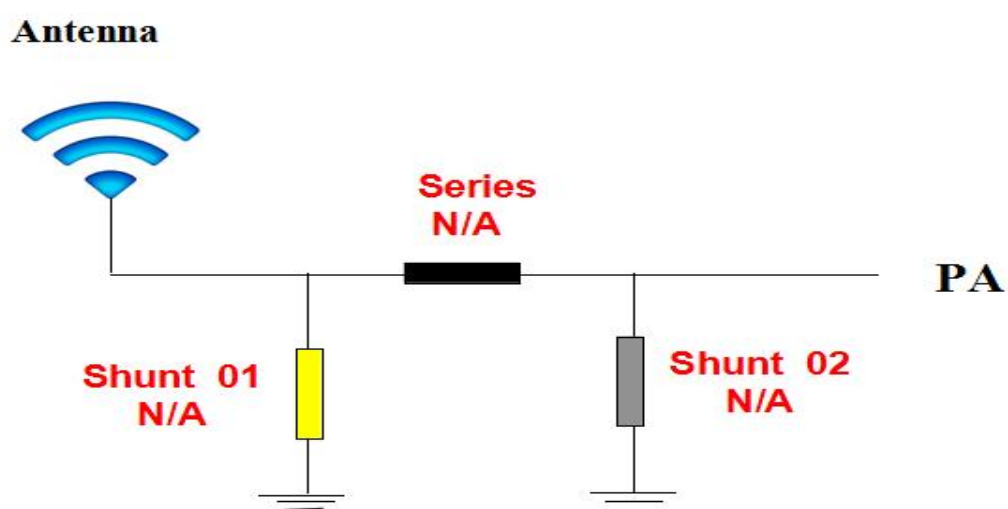
S11 Parameter-VSWR



frequency (MHZ)	2400	2450	2500	5150	5720	5850
Standing wave	1.59	1.71	1.98	1.77	1.48	1.53



2. Antenna Matching Network



3. Gain & Efficiency



WiFi		
Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
2400	46.42	1.61
2450	48.83	1.85
2500	48.67	2.01
5150	48.73	1.74
5720	46.69	1.52
5850	48.81	1.77

BT		
Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
2400	46.42	1.61
2450	48.83	1.85
2500	48.67	2.01

**4. 10m WIFI2.4G throughput test data**

2. 4G			
Channel	CH1	CH6	CH11
(Upload) Turn off Bluetooth	50. 5M	52. 6M	50. 3M
(Upload) Connect Bluetooth stereo to play music	36. 7M	39. 8M	37. 1M
(Download) Turn off Bluetooth	50. 3M	62. 1M	60. 2M
(Download) Connect Bluetooth stereo to play music	40. 5M	43. 2M	41. 3M

5. 10m WIFI5.8G throughput test data

5. 8G			
Channel	CH36	CH60	CH161
(Upload) Turn off Bluetooth	219. 5M	216. 3M	223. 8M
(Upload) Connect Bluetooth stereo to play music	177. 4M	164. 7M	168. 5M
(Download) Turn off Bluetooth	233. 6M	232. 3M	229. 6M
(Download) Connect Bluetooth stereo to play music	186. 2M	187. 7M	185. 1M



5. WIFI OTA Data

2. 4GWIFI	TRP			TIS		
Channel	CH1	CH6	CH12	CH1	CH6	CH12
802.11 b , 11M	14. 47	15. 31	16. 37	-77. 73	-80. 39	-83. 14
802.11 g , 54M	13. 28	13. 22	13. 27	-66. 57	-68. 73	-70. 18
802.11 n , MCS7 (65M)	12. 52	12. 56	12. 37	-64. 32	-66. 22	-67. 59

5G	802.11a, 54M		
Channel	CH36	CH60	CH161
TRP	8. 11	8. 04	8. 66
TIS	-68. 82	-69. 53	-70. 79

**Reliability Test Report**

Test Date	2023. 01. 03	Sample Qty.	3	Inspector	Xu Yanfang	
Test Item	Requirement	testing equipment	Sample 1	Sample 2	Sample 3	PASS/NG
High temperature storage	The test was carried out after 24H exposure at +85℃ and 2H recovery	Constant temperature and humidity box	OK	OK	OK	Pass
Low temperature storage	The test was carried out after 24H exposure at -40℃ and 2H recovery	Constant temperature and humidity box	OK	OK	OK	Pass
High temperature work	At +60℃ for 24H	Constant temperature and humidity box	OK	OK	OK	Pass
Work in low temperature	At -20℃ under the condition of power work for 24H	Constant temperature and humidity box	OK	OK	OK	Pass
Salt spray test	The pH value was 6.5 ~ 7.2, and the temperature of the experimental chamber was (35±2)℃ ☐ 24H ☒ 48H	Salt spray testing machine	OK	OK	OK	Pass
Connector riveting and drawing force	1. 13 线径 ≥10N 0. 81 线径 ≥8N RG174 ≥60N RG178 ≥50N	Push pull meter	≥10N	≥10N	≥10N	Pass
Conclusion						Pass
Inspector & Date	Xu Yanfang 2023. 01. 03		Approval & Date			



Install Wizard or Other

Installation process:

Take 1PCS of products and tear off the release paper on the back of the FPC by hand. Then align the positioning holes of the FPC with the positioning holes of the shell (positioning bars or positioning wires) and attach them to the shell smoothly. The specific positions are shown in the figure below:

Precautions for installation:

- ☐ After attaching the antenna, ensure that the FPC is fully attached to the shell;
- ☐ The positioning hole is aligned with the position of the housing positioning column;
- ☐ FPC edges are aligned with housing edges;
- ☐ When connecting the antenna with terminal to the PCBA end of the motherboard, align the terminal first and then close it vertically.
- ☐ When removing the antenna terminal, use a tool (such as a dedicated crowbar) to lift the terminal vertically. Do not pull the cable to remove the terminal directly



WiFi天线





SHUN DA CHENG TECHNOLOGY CO., LTD

ROHS certificate of the product

Certificate

Certificate Number: UNIB22051904HC-01



Product: Fpc antenna
Applicant: ShenZhen ShunDaCheng Technology Co., Ltd.
4th Floor, Building B5, Xinfu Industrial Zone, Fuyong Chongqing Road,
Baoan District, Shenzhen
Manufacturer: ShenZhen ShunDaCheng Technology Co., Ltd.
Model No.: N/A
Trade Name: N/A
Test Methods: IEC 62321-2:2021, IEC 62321-3-1:2013, IEC 62321-4:2013 +A1:2017,
IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-7-1:2015
IEC 62321-7-2:2017, IEC 62321-8:2017

The laboratory tested the product provided by the applicant according to the above test methods. According to the test results, the product conforms to RoHS Directive [(2011/65/EU and Amendment (EU) 2015/863)] issued by the European Commission. It is possible to use CE marking to demonstrate the compliance with RoHS Directive.

The certificate applies to the tested sample above mentioned only and shall not imply an assessment of the whole production. It is only valid in connection with the test report number: UNIB22051904HR-01.

Note: According to the requirements of the applicant for testing, details are shown in the test report.

RoHS

May 27, 2022
Issue Date



CE

Shenzhen United Testing Technology Co., Ltd.

Shenzhen: 2/F., Annex Building, Jiahua Yuan Tech Park, No.365, Baotian 1st Road, Fuyong, Xixiang Street,
Bao'an District, Shenzhen, Guangdong, China/518050

Guangzhou: No.47-3, Industrial Road, Zhushan, Dalong Street, Panyu District, Guangzhou, Guangdong,
China/511450

Tel: +86-755-86180996 / +86-020-39277769 Fax: +86-0755-86180156

Web Site: www.uni-lab.hk/ E-mail: hofferlun@uni-lab.hk



Certificate of Compliance