

Product specification

PRODUCT NAME

SC155

CUSTOMER NAME

MATERIAL CODE

003-081-1A

Shenzhen JINGSONG Technology Co., LTD

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1.Aim

The product specifications and test methods of the mobile communication terminal antenna produced by Shenzhen Jingsong Technology Co., Ltd. are standardized to avoid errors caused by different test conditions and methods.

2.Product category and product model overview

2.1 Product model overview

This report provides an overview of the electrical results of the antenna designed for the SC155 project. The antenna design frequency band is: 2.4G/ WIFI segment。

3.Description of basic parameters and experimental equipment

3.1 Basic parameter

Product electrical performance index	
Operating frequency range	2400-2480MHz
Standing-wave ratio	2400-2480 MHz: < 1.5
Antenna gain	2400-2480 MHz: 2.47dBi
Radiation efficiency	2400-2480 MHz: > 50%
Impedance	50 ohm
Product material description	
FPC	Coaxial line
Product environment description	
Operating temperature	- 30℃ ~ + 85 ℃
Storage temperature	- 30℃ ~ + 85 ℃

3.2 Description of experimental equipment

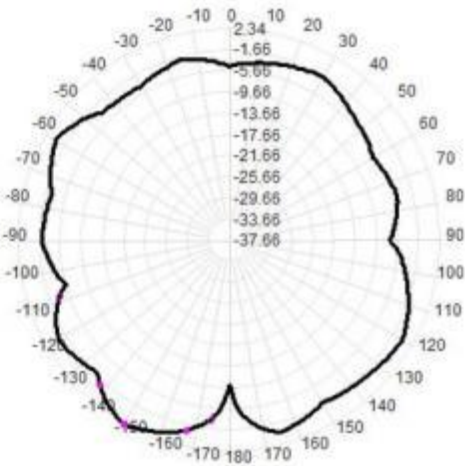
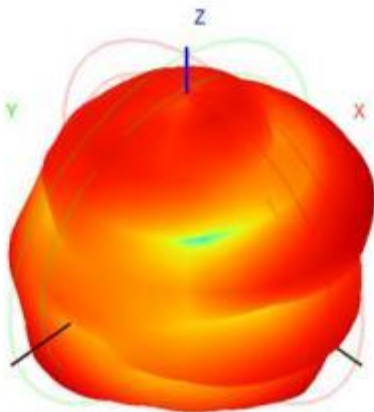
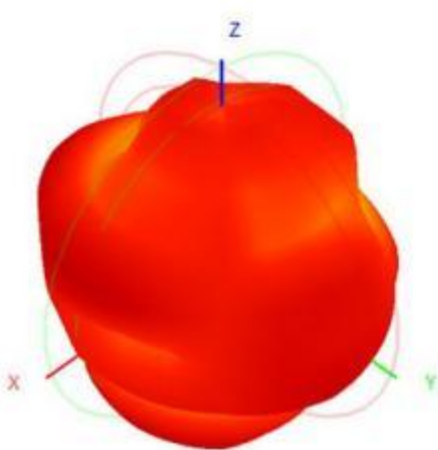
List	Testing project	Equipment
1. S Parameters	1.Return loss 2. VSWR at	Network analyzer: Agilent 8753ES
2. Coupling power test	1. Transmission power 2. Receiving sensitivity	Comprehensive tester: Agilent 8960 E5515C
3. Radiation pattern and gain	1. Radiation pattern 2. Antenna gain	1. Darkroom: 7x4x3 m (3D) 2. Network analyzer : Agilent 8753ES

4.Antenna test data

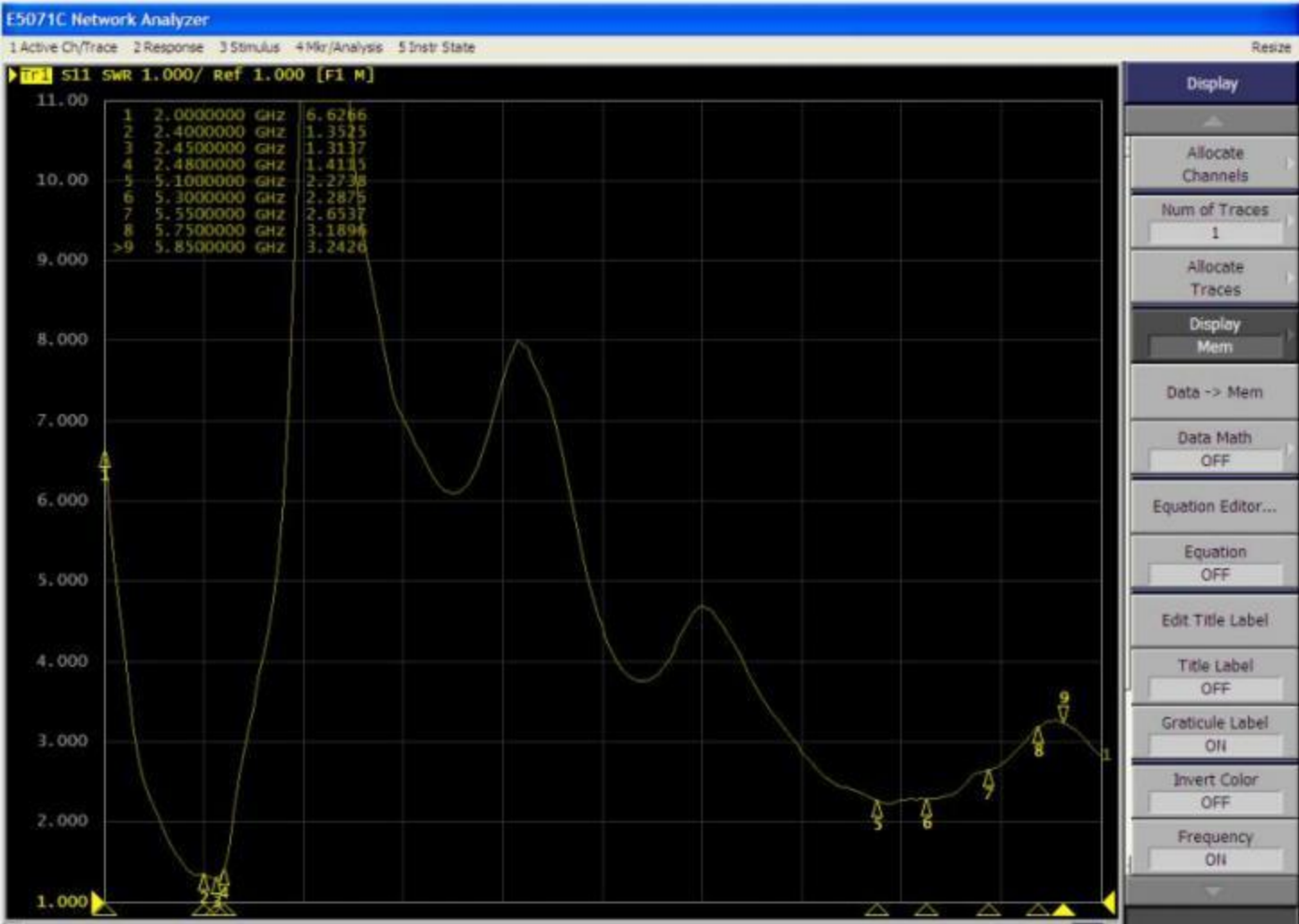
4.1 Wifi:2.4G Efficiency/gain

WIFITest data:		
WIFI 2.4G		
Freq(MHz)	Efficiency (%)	Gain (dBi)
2400	57.3	2.29
2410	57.6	2.46
2420	56.8	2.38
2430	58.3	2.47
2440	57.8	2.41
2450	58.2	2.38
2460	58.3	2.36
2470	57.9	2.47
2480	58.3	2.46

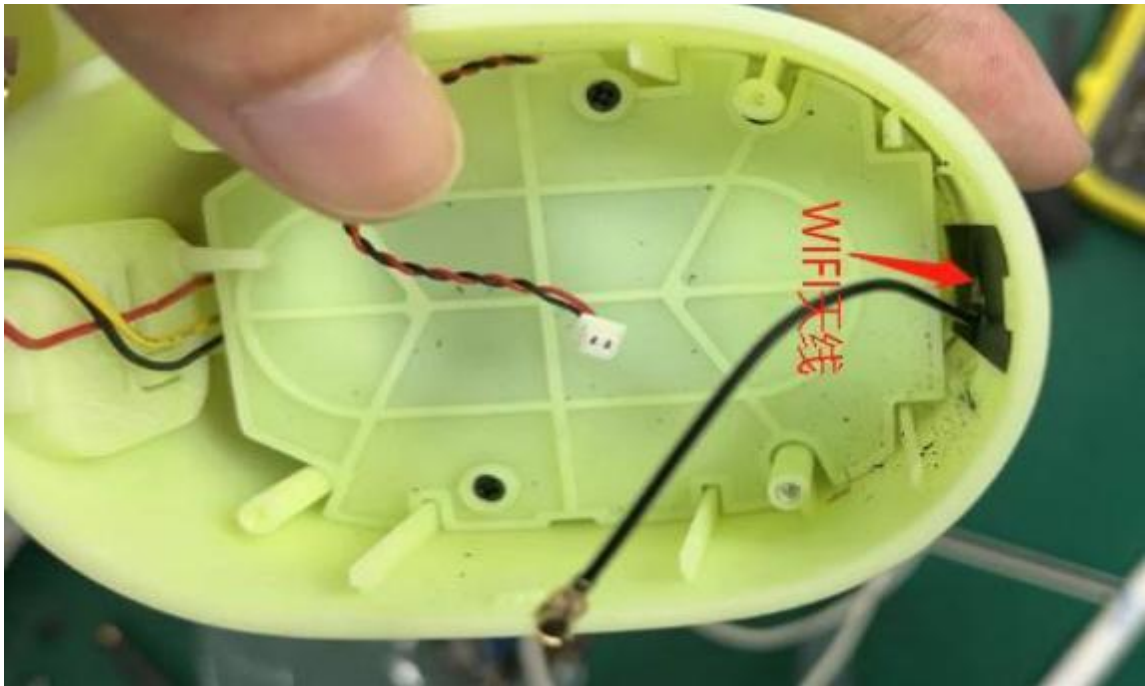
5.1 Antenna 2.4G apple diagram



6.1 Standing-wave ratio



7.1 Antenna assembly drawing



8.1 Active data

天线测试报告	802. 11B Antenna Performance Table			802. 11G Antenna Performance Table		
Channel	CH 1	CH 6	CH11	CH 1	CH 6	CH 11
Max Power(dBm)	18. 6	19. 3	19. 5	18. 8	18. 6	19. 4
TRP(dBm)	16. 7	17. 1	17. 4	16. 5	16. 8	16. 9
Sensitivity(dBm)	-89. 3	-89. 6	-89. 4	-79. 3	-78. 5	-78. 3
TIS(dBm)	-86. 3	-86. 7	-86. 1	-76. 3	-75. 8	-75. 4

天线测试报告	802. 11N Antenna Performance Table		
Channel	CH1	CH6	CH11
Max Power(dBm)	17. 3	17. 7	17. 5
TRP(dBm)	15. 8	15. 5	15. 4
Sensitivity(dBm)	-74. 6	-74. 2	-73. 5
TIS(dBm)	-71. 5	-71. 3	-70. 8



1 打*为重点检测尺寸,孔位尺寸以实配为准。

2 未注圆角 $R=0.30\text{mm}$, 图中尺寸做到中间值为佳, 其它未

标公差参见图框内说明。

3. 材料为电解铜+PI(半对半), 整体厚度小于0.10 mm (不包括3M胶)。

4. 表面黑色, 背面背整块 3M 300 LSE 胶。

5. 十字剖面部分为铜皮线路，绿色斜线剖面部分不布铜，留基材，起连接作用。

整体外形随着剖面外形轮廓走。

6. 表面不能刮防路剂, 电蚀不良, 氧化, 缺口, 压痕, 气泡, 裂纹, 毛边; 以及不允许有异物, 脏点, 偏位等现象。

7. 对照工程封样。

8. 注意端子端口方向。

材质说明				深圳市景松科技有限公司			
①	FPC天线	 	机种	SC155	日期	2023/07/18	
②	同轴线		品名	WiFi天线	设计		
③			料号	003-081-14	审核	结构	
④			材质	FPC+同轴线	确认	射频	
			模面处理				
			外观处理		单位	mm	比例
					FIT	版本	R: A

10.1 Environmental Characteristic

Test Item	Test description
1. Low Temperature	Temp.: -20 °C Time: 24 hours
2. High Temperature	Temp.: 80℃ Time: 24 hours
3. Salt Fog	5±0.1% Nad salt fog PH Value: 6.5-7.2 Temp: 35±1℃ Time:24 hours

11.1 Characteristics and Reliability Test

Test Items		Test Condition and Procedure	Requirements	Result
C1	V.S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive specification DUT	PASS
C3	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive specification DUT	PASS
M1	Vibration	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol. ≤5%	PASS
M4	Pull Test	Holding with individual specification; force applied to axis of Connector .	1. Directive specification DUT 2. Frequency Tol. ≤5%	PASS
M5	Magnetic force	The separate definition of retention product magnetic surface magnets and adsorption on the iron	1. Directive specification DUT 2. Frequency Tol. ≤ 5%	PASS
M6	Sway test	Holding with individual specification; the swing joint and wire,wire and plastic body test.	1. Directive specification DUT 2. Frequency Tol. ≤ 5%	PASS
M7	Dimension	Inspection of dimension, color, material, package, surface process.	Directive specification DUT	PASS
E2	Salt Spray	GB / T 2423.17-2008 Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%;Time: 24H	1. No Visual Damage 2. Frequency Tol. ≤5%	PASS
E3	Temperature and Humidity Chamber	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. ≤5%	PASS
E4	Thermal Shock	GB / T 2423.22 - 2008 - 40°C (30 minutes) to + 80° C (30 minutes); Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. ≤5%	PASS