

Shenzhen yGalax Technologies
Limited

Name: Sample Approval

Ver: V6.0

date: 2025.01.8

Sample Approval Sheet

Project Name: TC10Sample Name: WIFI antennaSample SPEC: WIFI—FPC Antenna

Customer PN.:

Transfer Date: 2025.06.06

Supplier Confirm	Project	Engineer	Quality
date			

Customer confirm	PM	Electron	MD	PD	QE
date					

conclusion	☐ MP	☐ Limits use () K	☐ ROHS
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Supplier name: Shenzhen yGalax Technologies LimitedThe Supplier address: Unit F, 4/F,
BlockA, Junxiangda Plaza, Zhongshanyuan Road,
Nanshan District, Shenzhen, China

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1. Specification overview

This specification describes the condition of built-in WIFI/BT antenna of STONEOIM JC06. It is frequency band WCDMA+LTE is manufactured by Shenzhen HaoTian Cheng Wireless Technology CO. Ltd.

2. Appearance

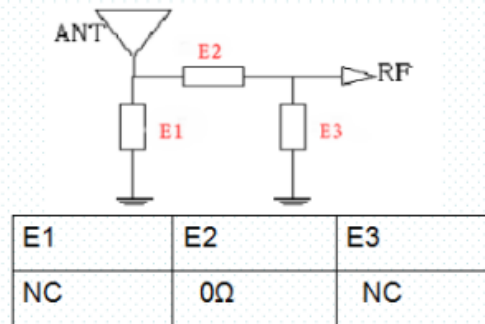


3. Electrical properties

3.1. Antenna frequency band

	WIFI
Emission spectrum(MHz)	2400~2500
Receiving frequency band(MHz)	2400~2500

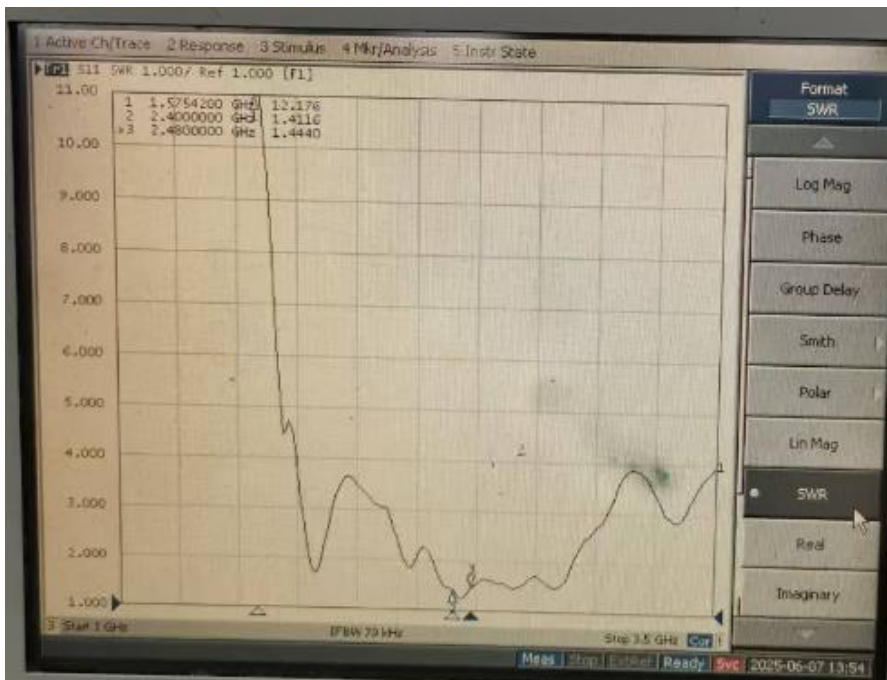
3.2. Matching circuit



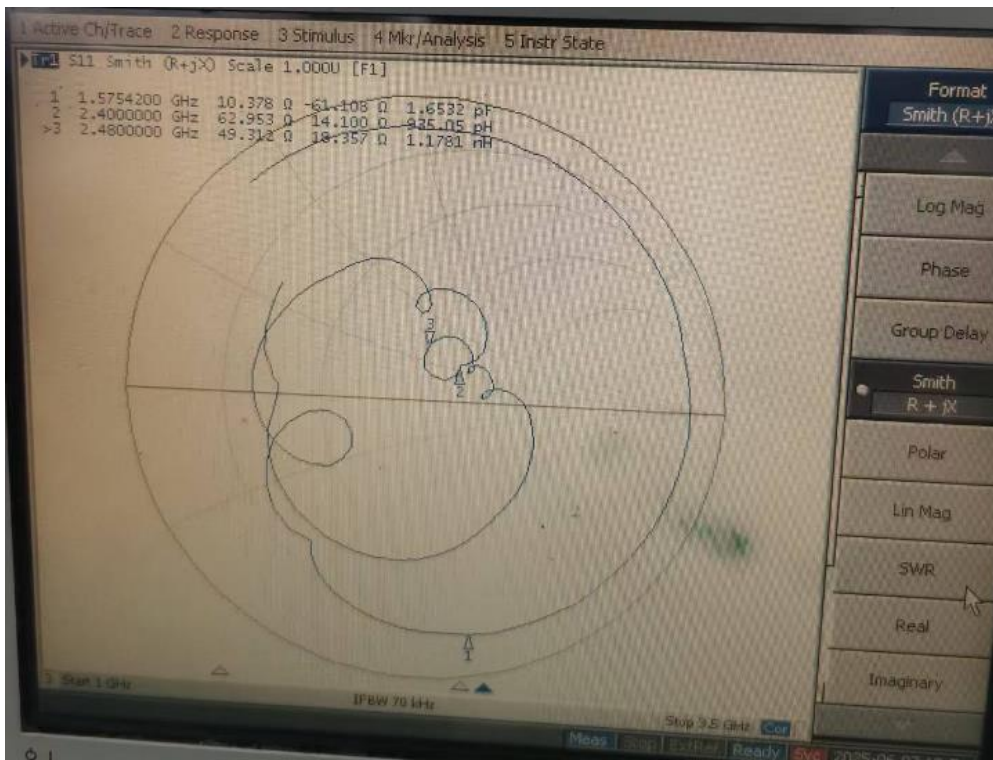
The original match, didn't change

3.3 Impedance requirements 50 ohm

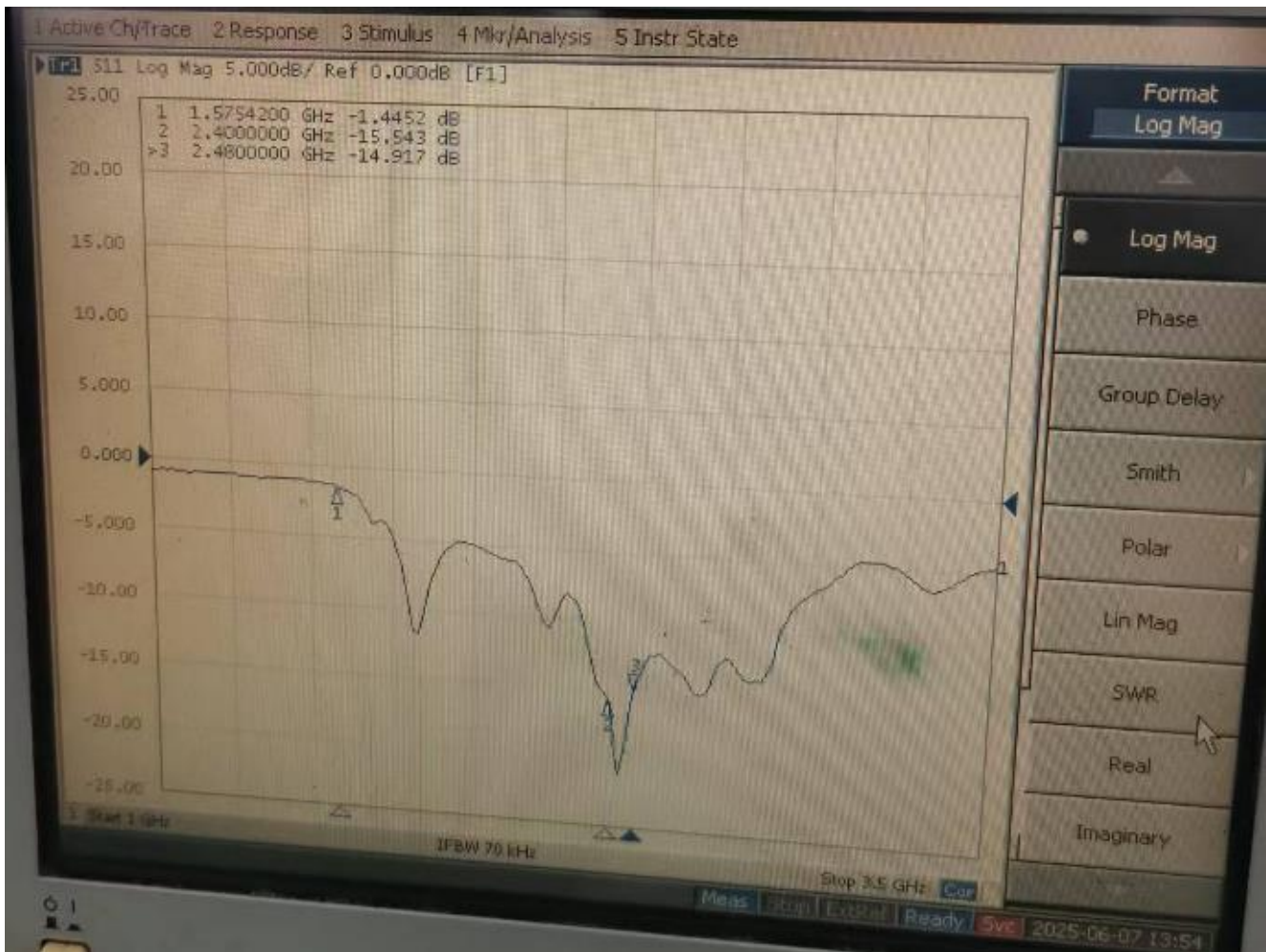
1. WIFI / Passive standing wave diagram



2.WIFI/ Passive Smith chart



3.WIFI/BT Return loss



4.WIFI/ Passive gain efficiency

Frequency	Efficiency	Efficiency / %	AvgGain/dBi
2400	-4.51	35.4	-4.51
2420	-4.58	34.83	-4.58
2440	-4.44	35.97	-4.44
2460	-4.15	38.46	-4.15
2480	-4.25	37.58	-4.25
2500	-4.17	38.28	-4.17

4. Antenna test data

WIFI	1	15.73	
	6	15.59	
	11	16.39	-83.95

3.4 Environmental treatment

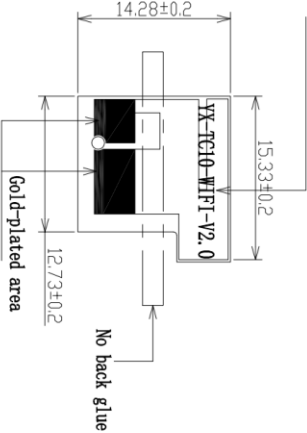
4 Appearance structure

4.1 Antenna material

Antenna material: FPC antenna, black ink, gold plating on exposed copper area.

Substrate + double sided adhesive tape + release paper

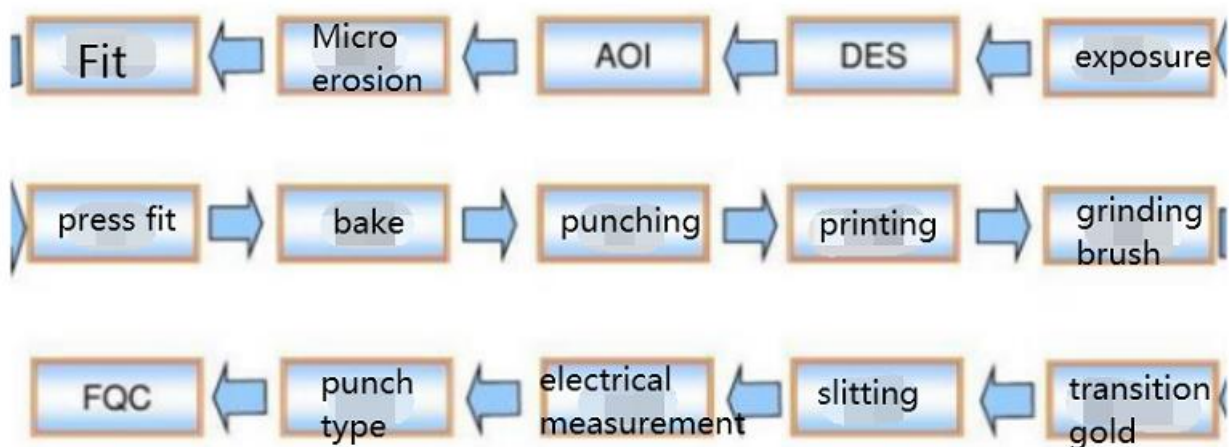
4.2 Structural drawings

A	B	C	D	E	F	G	H																																																																																
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Describe: 1. Content "XXXX" indicates production date (year and week, e.g. 2101) Note: 1. MATERIAL :18/12.5 (One and a half) electrolytic copper, PI substrate half to half. The green line shows the outline of the copper layer, and the purple line shows the shape. 2. Tolerance requirements are not noted :A. copper foil to copper foil +/-0.05 B. Copper foil to shape +/-0.15(special requirements) A. Tolerance from hole to shape +/-0.15(+/-0.10 if special requirements) 3. Nickel plating: NI: 2-7um AU: not less than 0.025um (salt spray must be over 48H), ink: 4. This FPC adhesive is 3M 9471LSE, the adhesive should be super strong! 5. Size requirements: 5.1. ST size: The minimum measurement quantity is any 35 product sizes selected from 500 for CPK analysis: 5.2. * size is the key control size; 6. Any material modification must be approved in writing by the yGalax Engineering Department and passed all tests by the yGalax Quality Department; 7. Products must meet ROHS/HF/REACH standards:																																																																																							
				Delivery method: single pcs packaging																																																																																			
<table><tr><td>ITEM</td><td>WIFI FPC(Black)</td><td>XXX</td><td>XXX</td><td>P/N</td><td>ED. PI</td><td>1</td><td>REMARK</td></tr><tr><td colspan="2">PART NAME</td><td>CLIENTELE UMME</td><td colspan="5"></td></tr><tr><td colspan="2">GENERAL TOLERANCE TABLE</td><td colspan="6">PART NAME YX0728-TC10</td></tr><tr><td colspan="2">DIVISION</td><td>ANGULAR</td><td colspan="5">TOLERANCE</td></tr><tr><td colspan="2">TOLERANCE</td><td>0-5°</td><td colspan="5">±0.5°</td></tr><tr><td colspan="2">10-50</td><td>±0.10</td><td colspan="5">±1°</td></tr><tr><td colspan="2">50-80</td><td>±0.15</td><td colspan="5">±1.5°</td></tr><tr><td colspan="2">780</td><td>±0.2</td><td colspan="5">SEE NOTE</td></tr></table>				ITEM	WIFI FPC(Black)	XXX	XXX	P/N	ED. PI	1	REMARK	PART NAME		CLIENTELE UMME						GENERAL TOLERANCE TABLE		PART NAME YX0728-TC10						DIVISION		ANGULAR	TOLERANCE					TOLERANCE		0-5°	±0.5°					10-50		±0.10	±1°					50-80		±0.15	±1.5°					780		±0.2	SEE NOTE					<table><tr><td>SIZE</td><td>FR CHD</td><td colspan="2">TITLE</td></tr><tr><td>A4</td><td>P ps</td><td colspan="2">YX0728 (WIFI FPC)</td></tr><tr><td colspan="2">NUMBER XXXXX</td><td>SCALE FULL</td><td>PAGE 1 of 1</td></tr><tr><td colspan="2"></td><td>REV</td><td>A1</td></tr></table>				SIZE	FR CHD	TITLE		A4	P ps	YX0728 (WIFI FPC)		NUMBER XXXXX		SCALE FULL	PAGE 1 of 1			REV	A1
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5. List of raw materials (BOM)

List of main materials								
number	Product information						Test report	
	Code (component Code)	Product name	重量 (g)	Name of raw material	Raw material No Chemical registration number	Raw material supplier	Certification company	Report no
1	FPC antenna	Copper foil substrate (PI)	0.0542	CU	SP14-033405-SH	Cai lungeti	SGS	SHA16-245544-02
			0.03	polyimide film				
2		Ink (black)	0.005	PRINT INK (Printing ink)	P800	Youli	SGS	
3		Adhesive paper	0.1132	3M	3M9471LSE	Weilihua	SGS	
4		Electrogold	/	additive	JSTD8001	Kingsoft	SGS	CAMEC1617433203
5	Coaxial line	wire rod	/	Teflon		Jiang Lian	SGS	
		Tabulation:	hejuan				sushaolong	

6. Production flow chart



7 .Reliability test report

Reliability test report

The customer	STONEISLAND	The customer model	TC10	Product model	WIFI/BT	DATE	2025/6/6	Inspector: GU
Number	Reliability project	The experimental method	Decision criteria	Cycle	number of experiments	1	2	3
1	Peel strength	Tension meter	From 70 to 80 n/100 mm(paste) on ABS material	time/batch	5PCS	OK	OK	OK
2	The coating adhesion	Clean surface of FPC goldfinger, then on the surface of gold finger put new 3 m600 back glue, laminating surface to cover the surface of gold finger, and residual pressure must not have bubbles with his fingers. About 10 seconds, along with gold finger side into the direction of the Angle of 90 degrees quickly pull up the tape, and repeat this three times this action.	Check the surface gold finger without coating fall off phenomenon, there is no loss of coating film of adhesive tape.	1 time/batch	5PCS	OK	OK	OK
3	Salt fog	At 35°C plus or minus 2 °C airtight environment and the salt solution with a PH value of 6.5 to 7.25(5% solution composition of 95% sodium chloride and distilled water) with 80 square centimeters to 10 cm in diameter of the atomizer in 16 hours average collection in 1 to 2ml of spray amount, continuous spray after 48 hours to take out the test.	FPC not blister. Oxidation discoloration and rust.	1 time/batch	5PCS	OK	OK	OK
4	Bending test	Positive and negative bending 180°, 30 times	Still conduction after bending, performance is good	1 time/batch	5PCS	OK	OK	OK
5	High and low temperature impact	will be set to high and low temperature test chamber cold-30°C, the temperature is set to +70 °C, the switching speed for 30 seconds, each holding 0.5H, is set to 32. After the test after back 2 hours at room temperature.	Good electrical	1 time/batch	5PCS	OK	OK	OK
6	High temperature and high humidity test	Test environment: temperature of 60 plus or minus 2 °C; Humidity is 93+/-3%(RH); Place for 48 hours; Recovery time: 2 hours	Good electrical	1 time/batch	5PCS	OK	OK	OK

Prepared: GU

checked by :XIAO

Control number: SR-FM-QRA-008

8 . GP test report of antenna and accessory materials (ROHS.SGS . MSDS) :

Some information of FPC antenna



Due to the large number of pages, the above RoHS. SGS. MSDS data will be provided in electronic form.

9 .Packing method

Superposition of FPC antenna a sheet of the shipment, packaging, and into the small box, a box to

put two packs of antenna, there are about 7000 PCS.

