Shenzhen HaoTian Cheng Wireless Technology CO. Ltd	Name：Sample Approval
	Ver：V1.0
	date：2022.12.28

Sample Approval Sheet

Project Name：H07A-2.0

Sample Name： WIFI/BT antenna

Sample SPEC： FPC Antenna + CABLE (L: 86.00 mm)

Customer PN.：

Transfer Date： 2022.12.28

Supplier Confirm	Project	Engineer	Quality
	xiaoqiang	Michael	gushuang
date	2022.12.28	2022.12.28	2022.12.28

Customer confirm	PM	Electron	MD	PD	QE
date					

conclusion	□ MP □ Limits use（ ）K

□ **ROHS**

Supplier name: Shenzhen HaoTian Cheng Wireless Technology CO. Ltd

The Supplier address: ShenZhen baoan district leave fairy two lane all the way best science and technology park building L /5 E

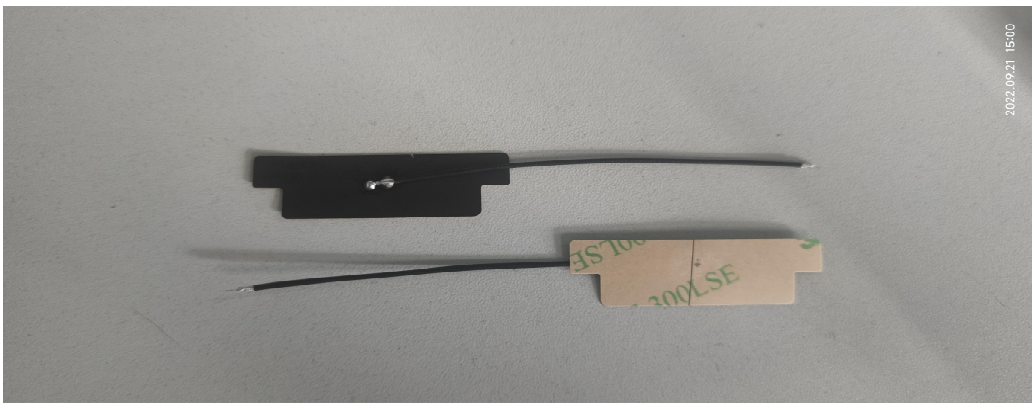
E-mail: sunjiwei@htc-wireless.com TEL：13923736137

CATALOG

1. Specification overview

This specification describes the condition of built-in wifi/bt antenna of HuaBaoLi_H07A-2.0. It is frequency band WiFi is manufactured by Shenzhen HaoTian Cheng Wireless Technology CO. Ltd。

2. Appearance

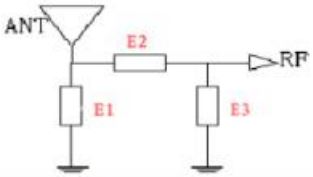


3. Electrical properties

3.1. Antenna frequency band

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

3.2. Matching circuit



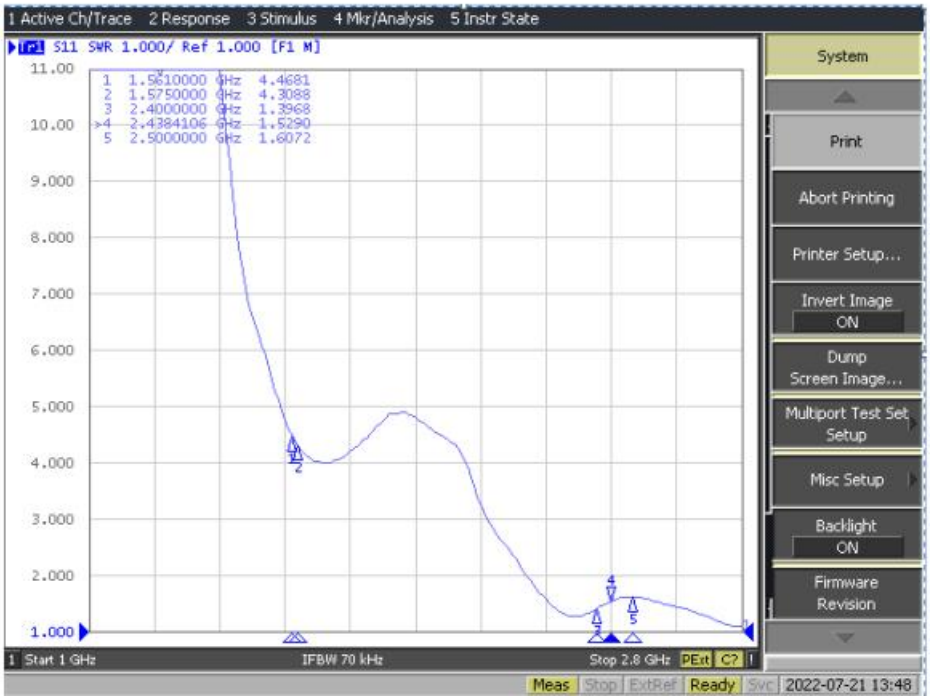
E1	E2	E3
NC	0Ω	NC

Matching circuit not changed

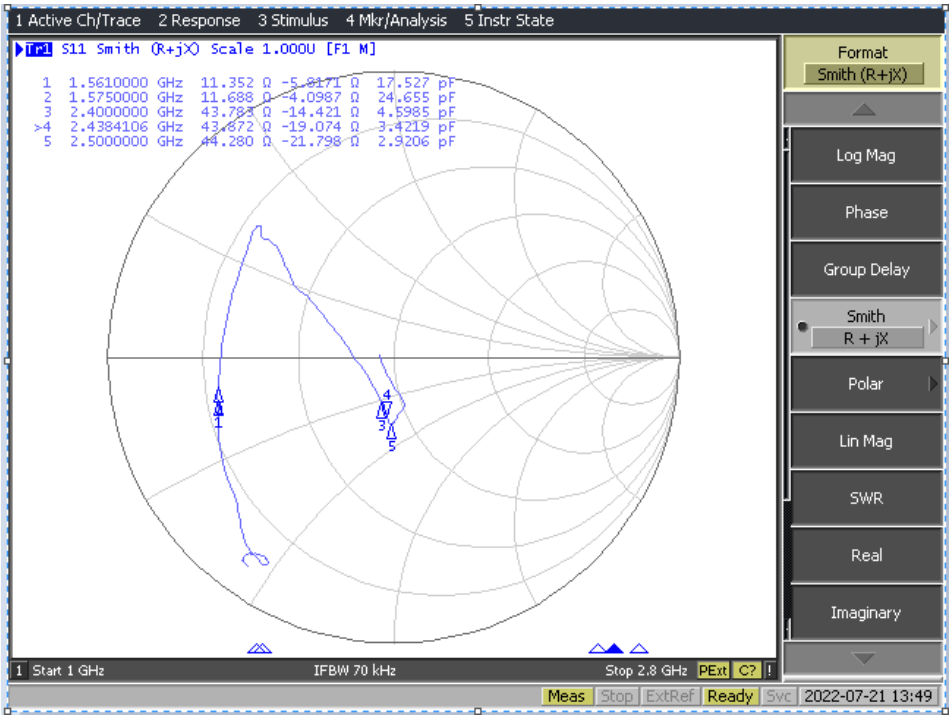
3.3 Impedance requirements

50 ohm

3.4 WIFI/BT passive standing wave diagram:



3.5 WIFI/BT Passive Smith Chart:



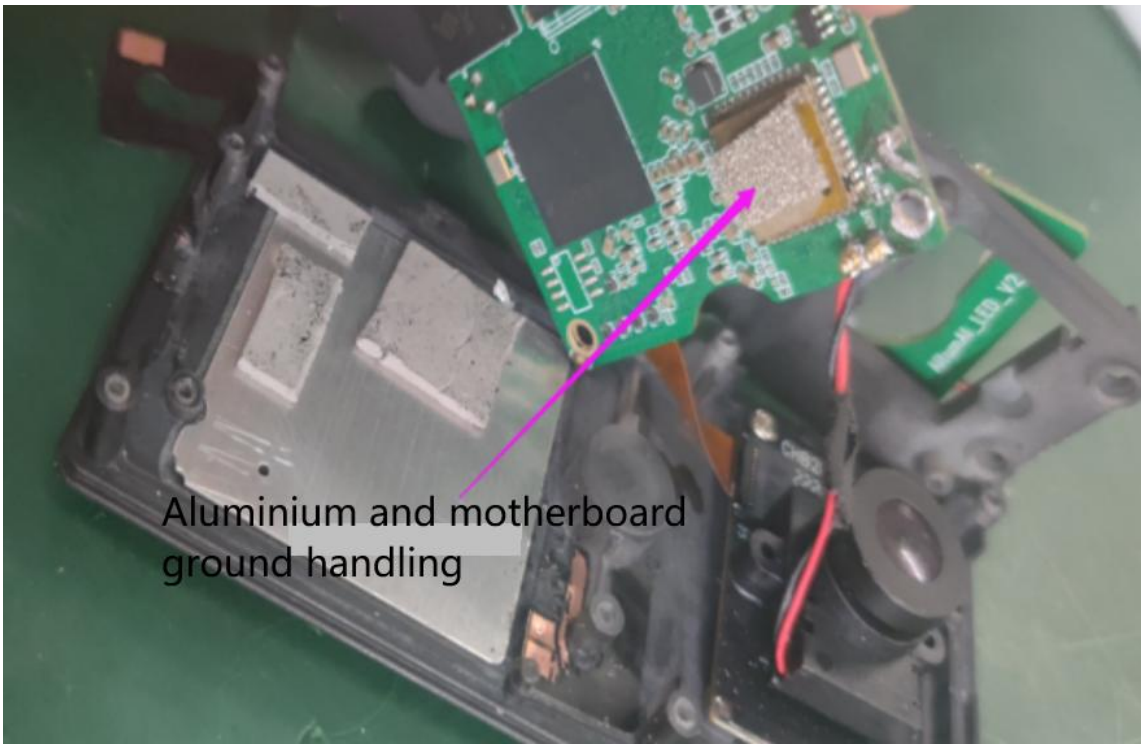
3.6 Passive efficiency gains

	A	B	C
1	Passive Test For D4		
2	Freq (MHz)	Effi (%)	Gain (dBi)
3			
4	2400	54.74	2.63
5	2405	54.42	2.56
6	2410	55.87	2.63
7	2415	55.05	2.5
8	2420	51.36	2.11
9	2425	53.04	2.23
10	2430	53.55	2.23
11	2435	51.16	2.03
12	2440	54.54	2.29
13	2445	55.64	2.34
14	2450	54.45	2.26
15	2455	58.63	2.57
16	2460	57.97	2.48
17	2465	56.32	2.36
18	2470	58.46	2.46
19	2475	55.95	2.19
20	2480	55.63	2.12
21	2485	55.34	2.02
22	2490	54.61	1.86
23	2495	57.69	2
24	2500	55.56	1.8

3.7 WIFI/BT Passive Smith Chart WIFI Antenna Test Data:

	TRP/TIS	L	M	H
WIFI-11B	TRP	14.15	14.34	14.02
	TIS	-72.65	-72.37	-72.59
WIFI-11G	TRP	13.28	13.34	13.57
	TIS	-63.16	-63.07	-62.33
WIFI-11N	TRP	12.51	12.69	13.81
	TIS	-57.83	-57.98	-58.14

3.8 Environmental treatment



4 Appearance structure

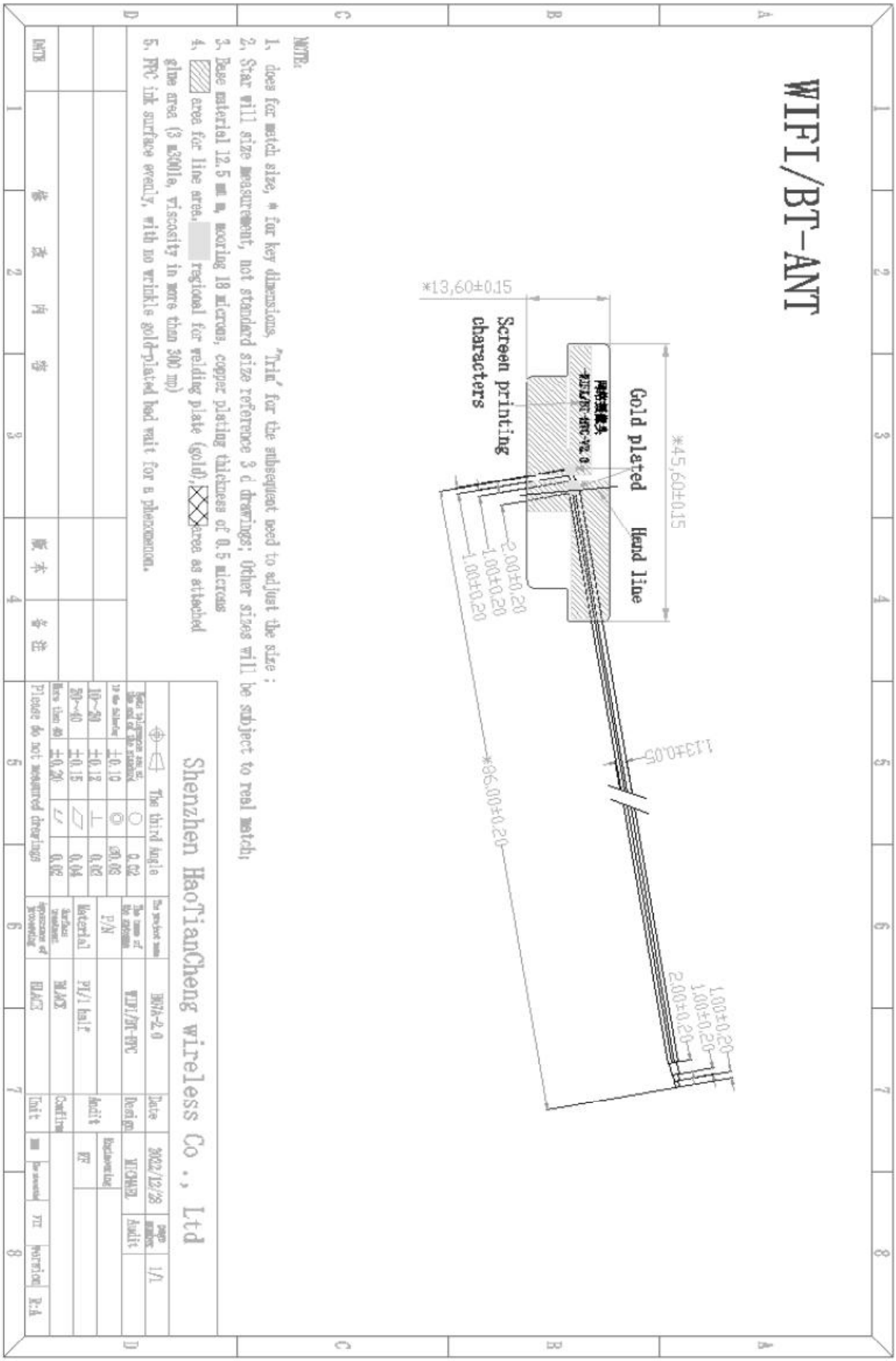
4.1 Antenna material

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

Substrate + double sided adhesive tape + release paper

Cable line: the tabal distance of 86.00 mm, wire diameter 1.13 mm, teflon material.

4.2 Structural drawings

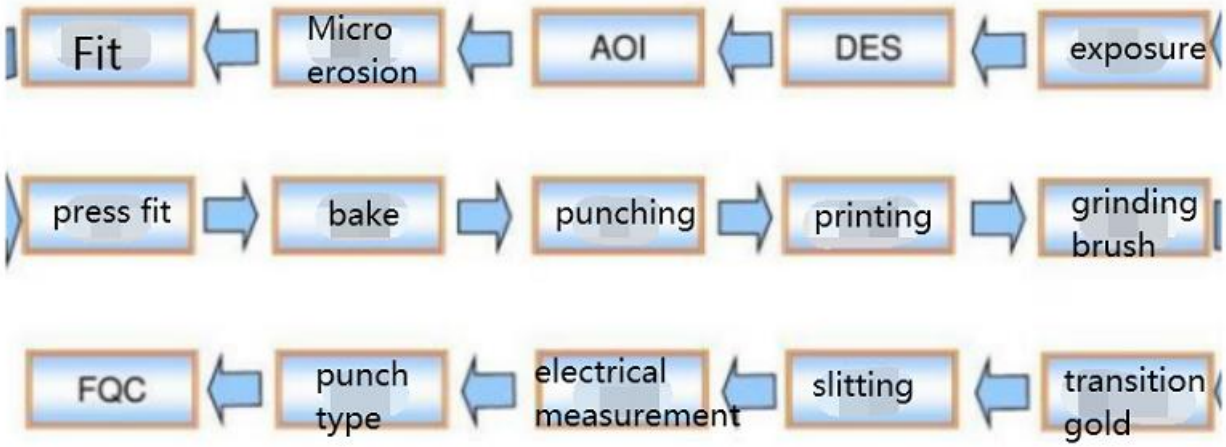


5. List of raw materials（BOM）

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	Meilihua	SGS	
4		Electrogold	/	additive	JSTD8001	Kingsoft	SGS	CANEC1617433203
5	Coaxial line	wire rod	/	Teflon		Jiang Lian	SGS	
		Tabulation:	hejuan				sushaolong	

6 .Production flow chart



7 .Reliability test report

Shenzhen HaoTian Cheng Wireless Technology CO. Ltd

Reliability test report

The customer	HuaBaoLi	The customer model	H07A-2.0	Product model	WIFI/BT	DATE	2022/12/28	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/batc	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 ℃ plus or minus 2 ℃ 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 2 ml 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 ℃, the temperature is set to + 70 ℃, the switching speed for 30 seconds, each holding 0.5 H, 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 ℃; Humidity is 93 + / - 3% (RH); Place for 48 hours; Recovery time: 2 hours.	Good electrical	1 time/batch	5PCS	OK	OK	OK

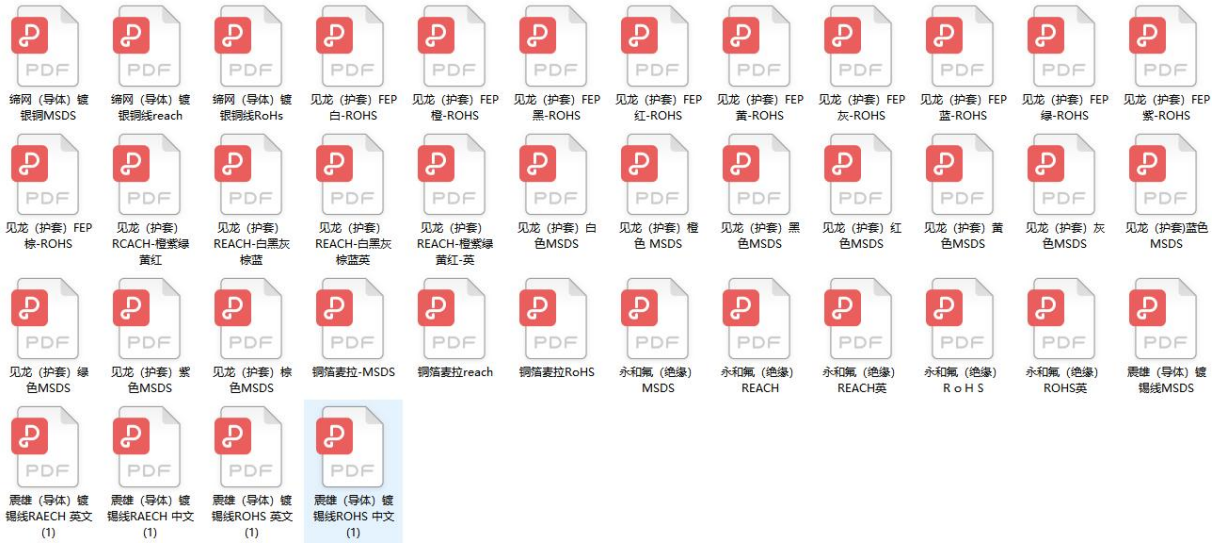
Prepared : GU checked by :XIAO Control number: SR-FM-QRA-008

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

Some information of antenna:

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

CABLE:



9 .Packing method

FPC + Cable antenna single PCS shipment, about 100 PCS, a small bag into a large bag again, the last is put into a small carton, a small box of about 3000 PCS antenna.