Part approval form

Tabulation date：2022/12/07

Part name	CH20 WIFI antenna	Supplier	Kunshan Ruixiang Xun Communication Technology Co., LTD
Millet part number		Project name	CH20
Supplier part number	F12596612910001	Part attribute	Structural stock　Electronic material　Packing material　Module element

Part description:

remark:

Part recognition information list:

1. Product specification Complete ☐
2. test report ☐
3. Key parts list ☐

remark：

1) Product specification content: complete specification, circuit diagram, structure diagram, BOM table, etc

2) Test report content: (" Y "indicates required)

	Structural stock	Electronic material	Packing material	Module element
Reliability test	Y	Y	Y	Y
Electrical characteristic test				Y
Safety and environmental testing	Y	Y	Y	Y
CPK report	Y			
Material composition list	Y		Y	Y

Countersign and distribute

Countersign	Distribute	Job title	mark	signature	date
☐	☐	Quality			
☐	☐	Structural design			
☐	☐	Electronic design			
☐	☐	Production PM			
☐	☐	NPI			
☐	☐	Purchase			
☐	☐	software			
☐	☐	ID			
☐	☐				
☐	☐				

viewpoint

☐ Grant issue

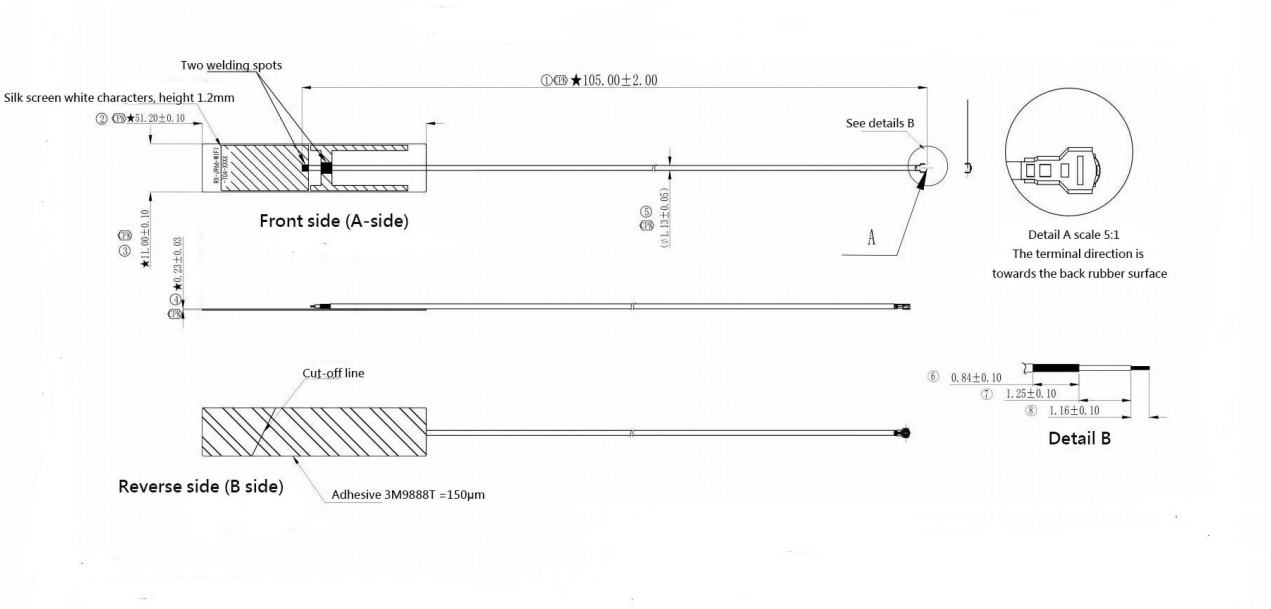
☐ Grant of change

☐ Temporary performance, valid for

Supervisor approval		Quality supervisor approval	

Catalogue

Engineering drawing:



Electrical performance of antenna:

Specification standard

The printer wifi (2.4G) antenna works at 2400-2500MHz, generating resonance.

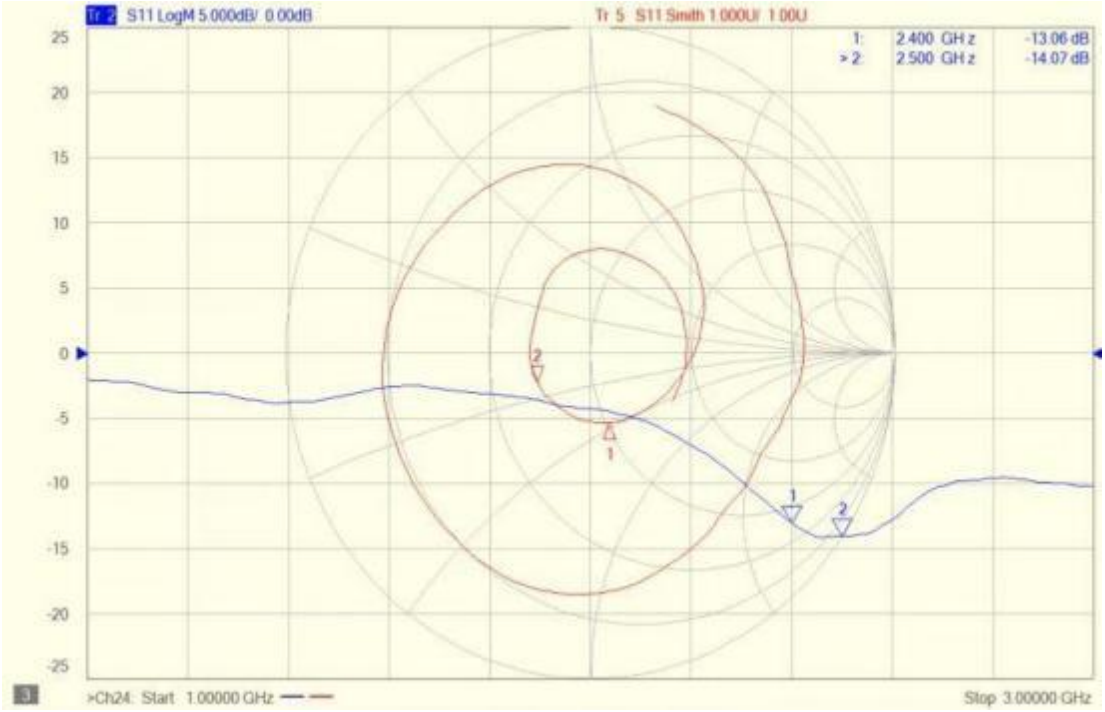
Antenna matching circuit

The matching circuit is designed to match the motherboard and the antenna, so that the antenna of the equipment can achieve the best RF performance in the working frequency band.

Match: No match is available

Returnloss test

Test results & Waveforms



S11

Passive efficiency:

Freq(MHz)	Effi(dB)	Gain(dBi)
2400	-2.38	5.42
2410	-2.28	5.49
2420	-2.09	5.54
2430	-2.25	5.53
2440	-2.31	5.45
2450	-2.19	5.44
2460	-2.32	5.04
2470	-2.49	4.55
2480	-2.45	4.47
2490	-2.72	4.23
2500	-2.82	4.17

Active OTA data:

	CH	TRP (11M)	CH	Tis (11M)
11b	1	13.91	1	-82.64
	7	14.28	7	-83.75
	13	13.63	13	-83.85
	CH	TRP (11M)	CH	Tis (11M)
11g	1	13.66	1	-69.63
	7	13.58	7	-68.69
	13	13.79	13	-70.02
	CH	TRP (6.5M)	CH	Tis (65M)
11gn	1	13.18	1	-63.45
	7	13.96	7	-63.57
	13	13.67	13	-66.27

Throughput test data:

11B	TX right side (RSSI-50)	RX right side (RSSI-50)	TX reverse side (RSSI-50)	RX reverse side (RSSI-50)	TX right side (RSSI-80)	RX right side (RSSI-80)
1	5Mbps	2Mbps	5Mbps	5Mbps	5Mbps	2Mbps
7	5Mbps	2Mbps	5Mbps	5Mbps	5Mbps	2Mbps
13	5Mbps	2Mbps	4Mbps	4Mbps	4Mbps	2Mbps

11G	TX right side (RSSI-50)	RX right side (RSSI-50)	TX reverse side (RSSI-50)	RX reverse side (RSSI-50)	TX right side (RSSI-80)	RX right side (RSSI-80)
1	25Mbps	25Mbps	19Mbps	16Mbps	9Mbps	1Mbps
7	25Mbps	25Mbps	25Mbps	17Mbps	10Mbps	1Mbps
13	24Mbps	23Mbps	25Mbps	17Mbps	11Mbps	1Mbps

11N	TX right side (RSSI-50)	RX right side (RSSI-50)	TX reverse side (RSSI-50)	RX reverse side (RSSI-50)	TX right side (RSSI-80)	RX right side (RSSI-80)
1	87Mbps	96Mbps	70Mbps	82Mbps	25Mbps	31Mbps
7	85Mbps	96Mbps	71Mbps	88Mbps	27Mbps	31Mbps
13	86Mbps	95Mbps	72Mbps	92Mbps	28Mbps	31Mbps

11B	RSSI-50	RSSI-80
attenuation	31	60
11G	RSSI-50	RSSI-80
attenuation	31	60
11N	RSSI-50	RSSI-50
attenuation	31	60