

Shenzhen Kaipu deep communication technology Co., LTD

Antenna specification

customer name: Hua Yi

project name: PN1512

sample name: WIFI Antenna

Color/Version: black/A

Sample signing date: 2024-08-01

☐ ROHS

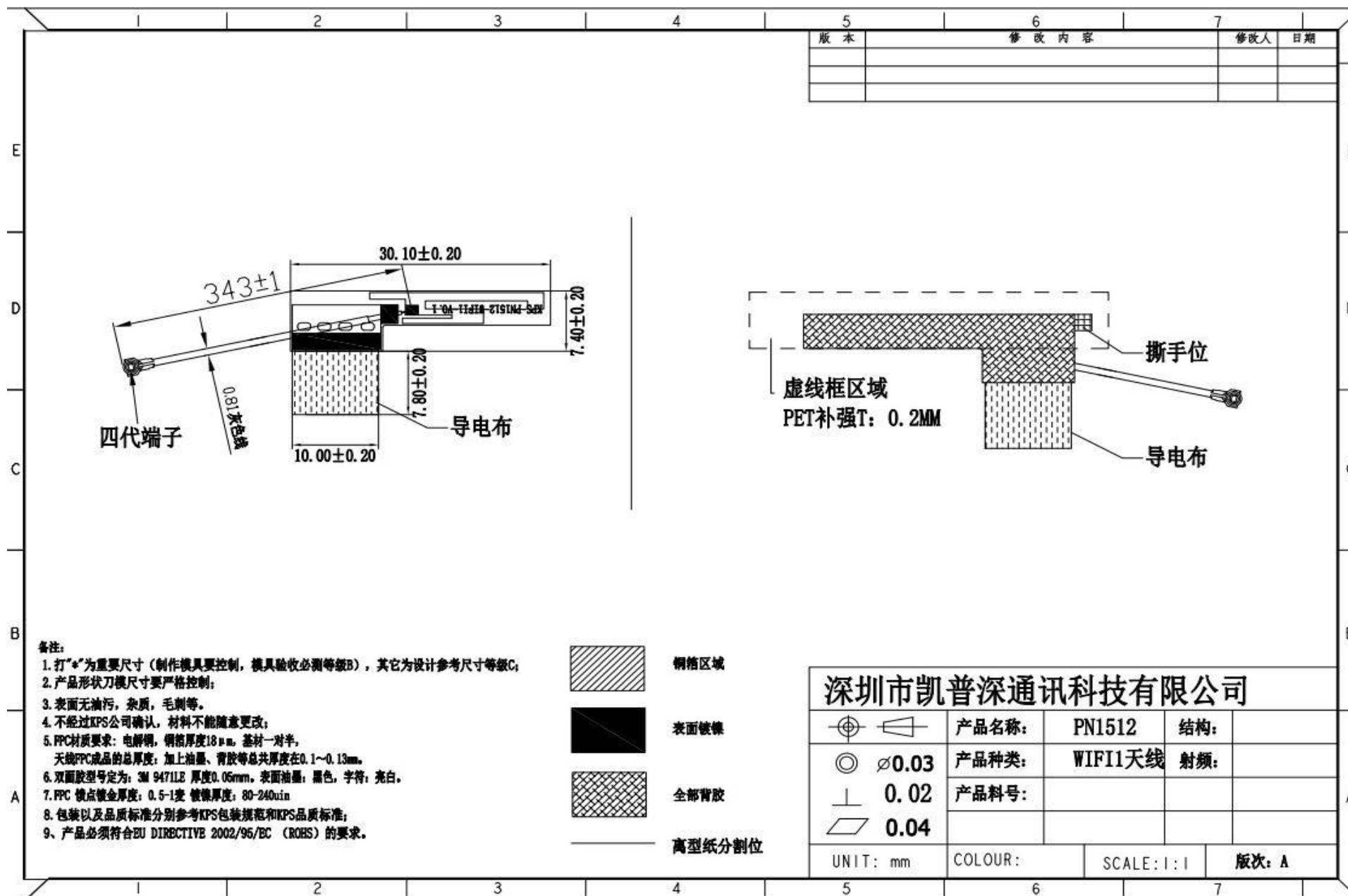
Name of supplier: Shenzhen Kaipu deep communication technology Co., LTD

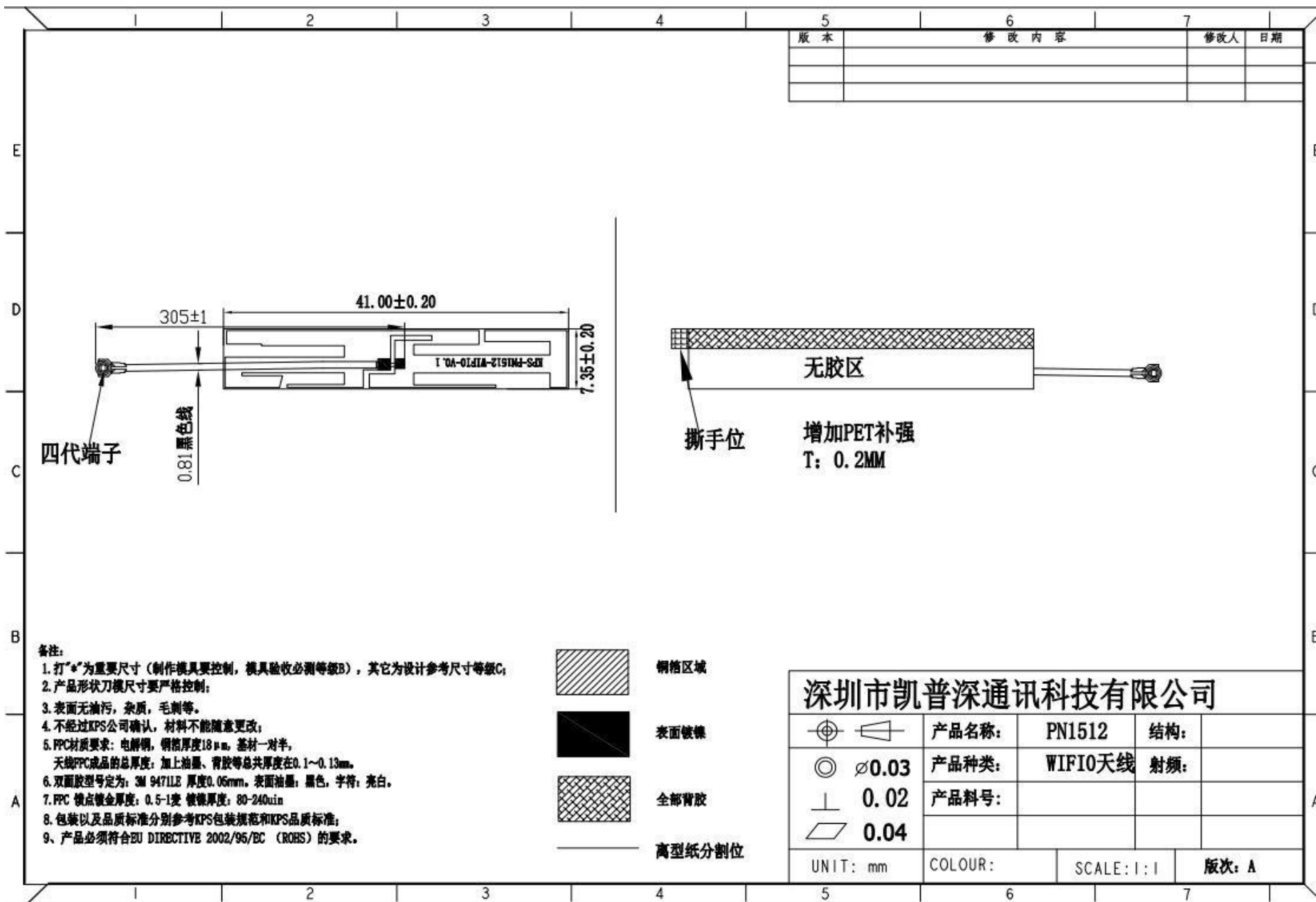
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3.1: Antenna structure diagram



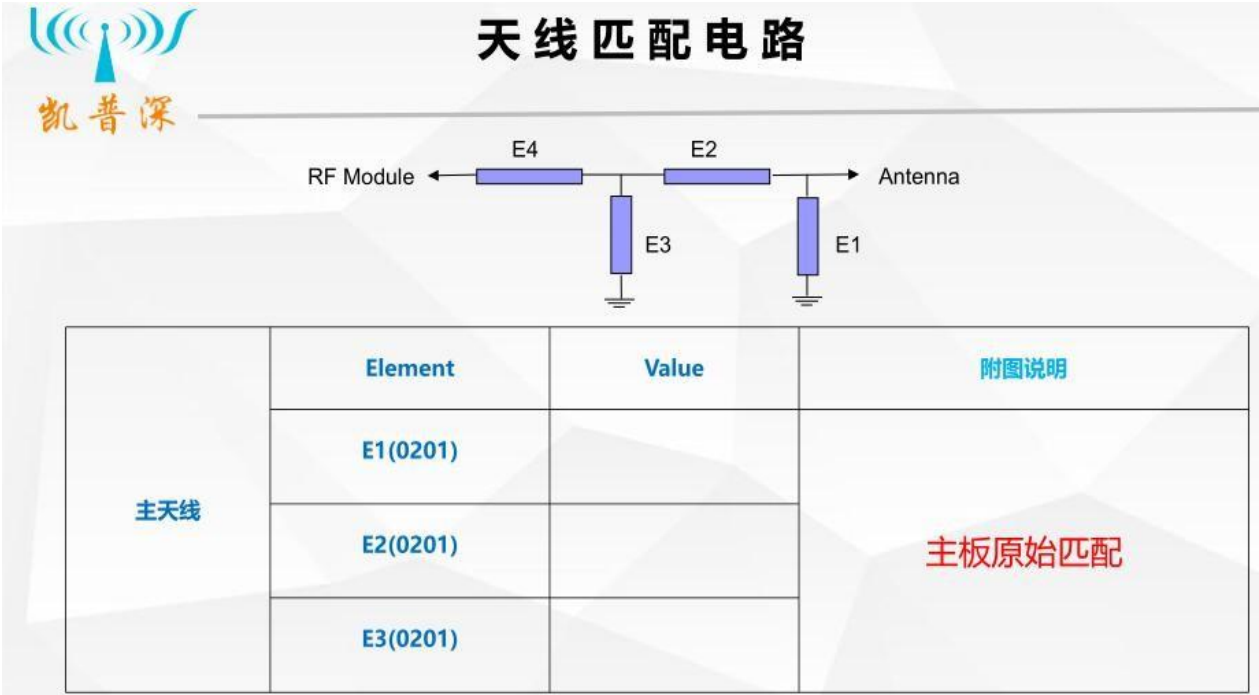


4.1Antenna performance

4.1-1 Specification standard

Antenna operating frequency band in 2400m-2500m, 5150m-5850m resonance.

4.1-2 Antenna matching circuit.



4.2 VSWR test

4.2-1 Test Settings

The standing wave ratio (VSWR) test device is connected successively: E571B network analyzer →50 ohm coaxial line Cable→ 150mm long copper pipe → test fixture.

Processing of test fixtures: From the antenna 50 ohm test point on the PCB of the machine, a hard cable leads the SMA-J connector to the copper tube with a choke, and then connects the other devices in turn.

4.2-2 voltage standing wave ratio test:

The following table shows: /WIFI antenna operating band edge frequency points standing wave ratio:

Fre(MHZ)	2400	2500	5150	5500	5850
VSWR	1.35	1.75	1.95	5.11	1.96

4.2-3 Passive test results

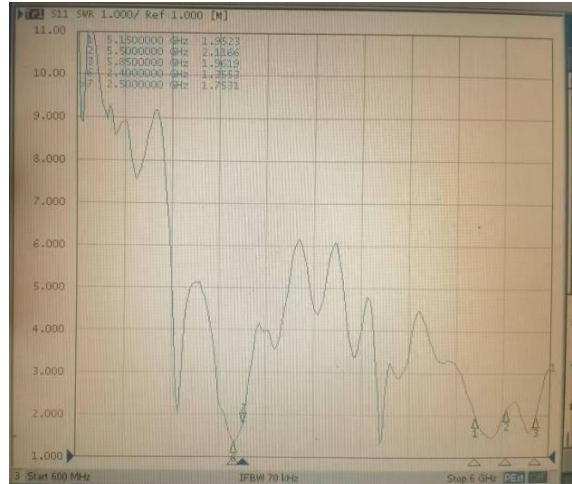


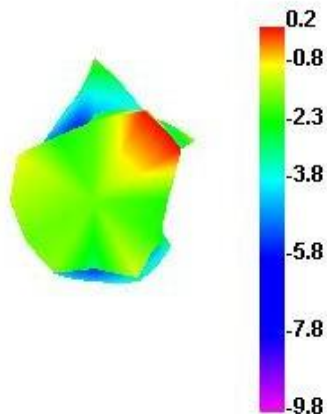
Figure 1: WIFI antenna standing wave ratio

4.2-3 Antenna passive parameters

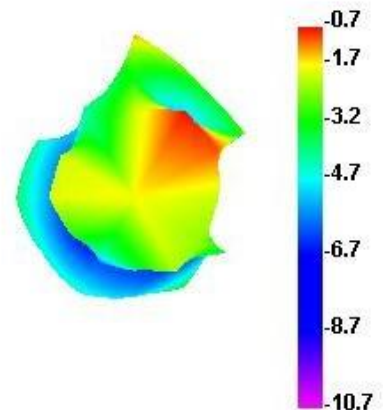
Passive Test For WIFI2.4

Freq (MHz)	Effi (%)	Gain (dBi)
2400	24.09	0.92
2410	23.92	0.78
2420	24.41	0.86
2430	23.75	0.84
2440	24.54	0.92
2450	24.83	1.09
2460	24.06	0.99
2470	24.06	0.91
2480	23.86	0.99
2490	23.36	0.83
2500	21.89	0.76

2400.000MHz



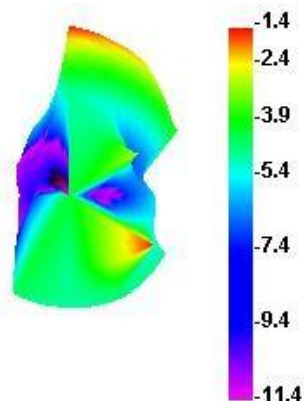
2500.000MHz



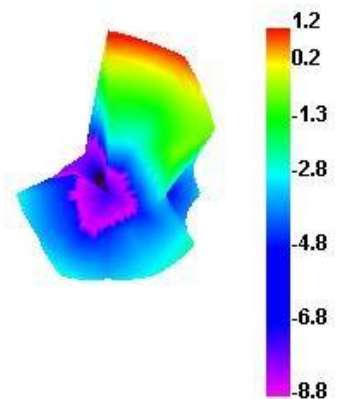
Passive Test For WIFI5.8

Freq (MHz)	Effi (%)	Gain (dBi)
5000	21.59	0.53
5050	22.38	0.49
5100	23.84	0.52
5150	24.19	0.58
5200	23.47	0.67
5250	23.13	0.65
5300	24.03	0.73
5350	24.42	0.81
5400	24.01	0.89
5450	23.93	1.01
5500	24.85	1.22
5550	25.75	1.16
5600	26.04	1.3
5650	25.9	1.23
5700	26.51	1.45
5750	25.58	1.63
5800	24.89	1.57
5850	24.13	1.51
5900	23.02	1.39

5150.000MHz



5850.000MHz



4.2-4 Overall active test
data: WIFI antenna test data



WIFI 有源测试数据

WIFI-2.4G B 11M	channle	TRP (dbm)	TIS (dbm)
	L	10.9	-63.1
	M	11.1	-67.2
	H	9.2	-65.7
WIFI-5.8G A 54M	channle	TRP (dbm)	TIS (dbm)
	L	10	-67.1
	M	10.6	-66.9
	H	9.5	-69.5