

# 三合一天线规格书

## 3-in-1 antenna specification

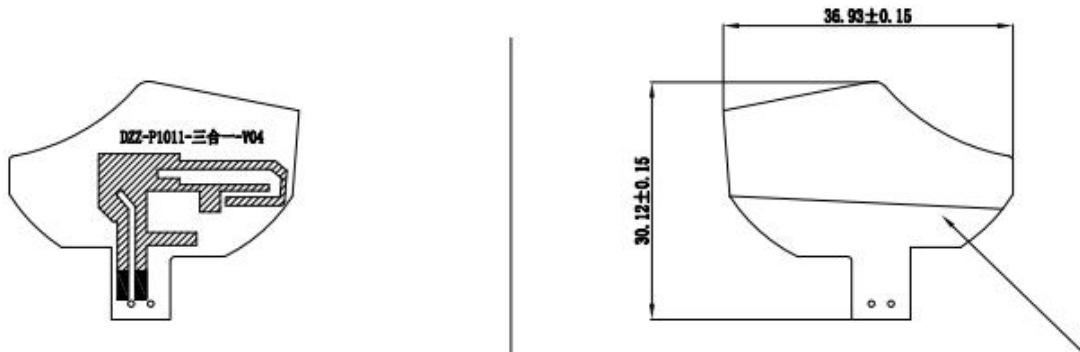
### 基本信息

#### General information

制造商 Manufacturer	Be-comfortable
天线型号 Model Name	P1011-GPS&WIFI&BT ant
日期 Date	2023-07-31
版本 Version	1.0
地址 address	深圳市宝安区西乡街道鹤洲社区恒丰工业城C6栋1606 No.1606,Build C6,HengFeng industrial city,xixiang street,baoan district,Shenzhen

### 天线外观

#### Antenna Appearance



### 技术规格

#### Technical Specifications

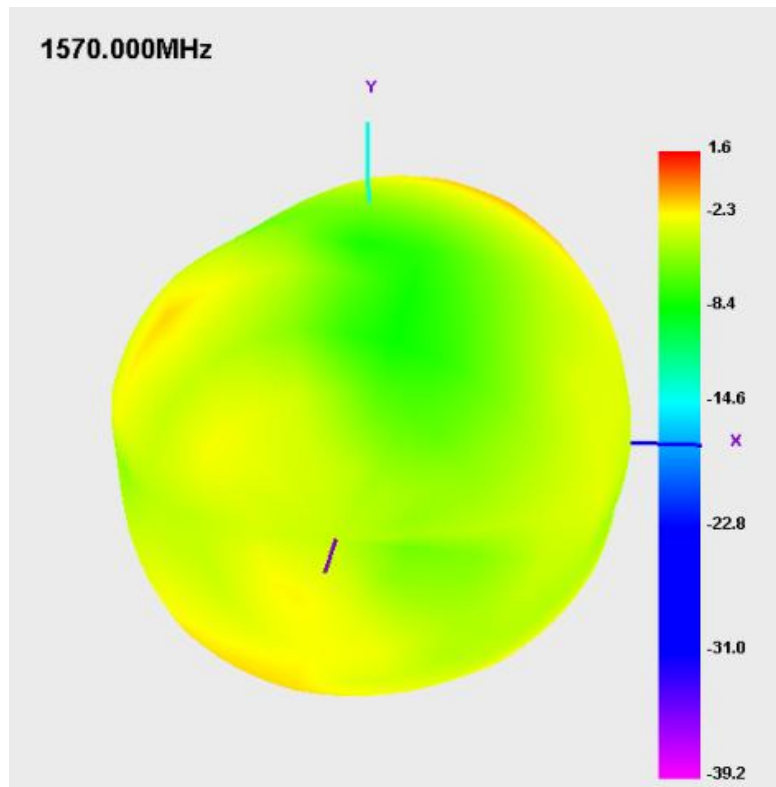
频率范围 Frequency Range	1575.42MHZ+2400-2500MHZ~5150-5850MHZ
天线类型 Antenna Type	PIFA
尺寸 Dimensions	36.93*30.12mm
阻抗 Impedance	50 ohm
最大增益 Maximum Gain	2.94dbi
驻波比 VSWR	≤3
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## Efficiency and gain

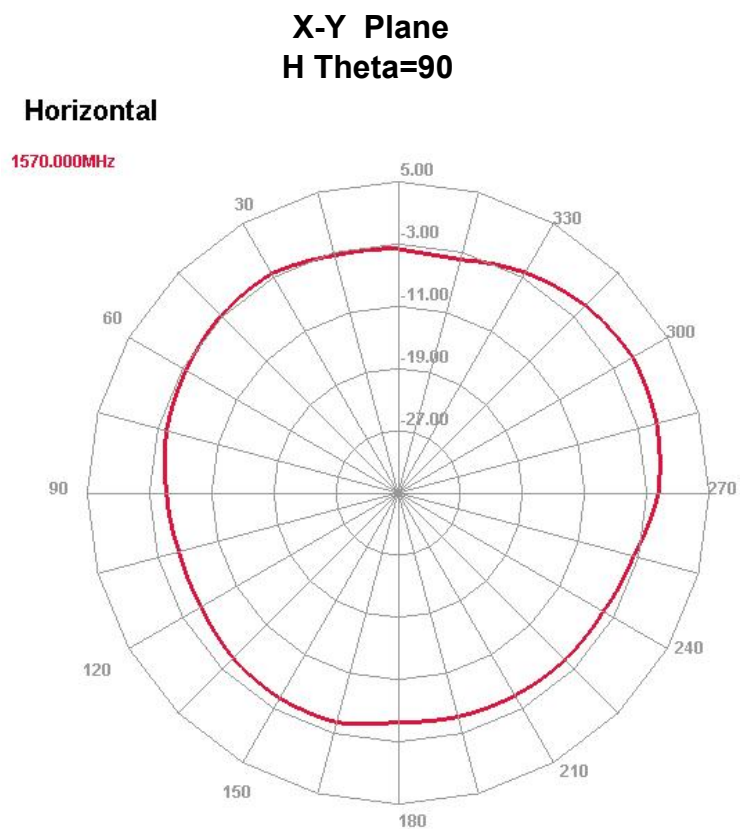
Frequency (MHz)	Gain (dB)	Efficiency (%)
1540	0.65	33.15
1550	0.55	36.19
1560	1.34	38.52
1570	1.56	39.75
1580	1.17	39.81
1590	0.93	40.2
1600	0.7	40.02

Frequency (MHz)	Gain (dBi)	Efficiency (%)	Frequency (MHz)	Gain (dBi)	Efficiency (%)
2400	1.05	45.78	5100	2.49	50.7
2410	2.26	47.89	5200	2.68	53.55
2420	2.15	49.28	5300	2.94	47.94
2430	2.67	50.89	5400	2.89	45.53
2440	2.67	52.19	5500	2.9	50.62
2450	2.73	54.5	5600	2.91	49.24
2460	2.61	54.94	5700	2.66	50.7
2470	2.41	52.73	5800	2.35	47.68
2480	2.06	52.12	5900	1.88	45.53
2490	1.7	49.76			
2500	1.59	47.49			

## Free space 3D radiation pattern



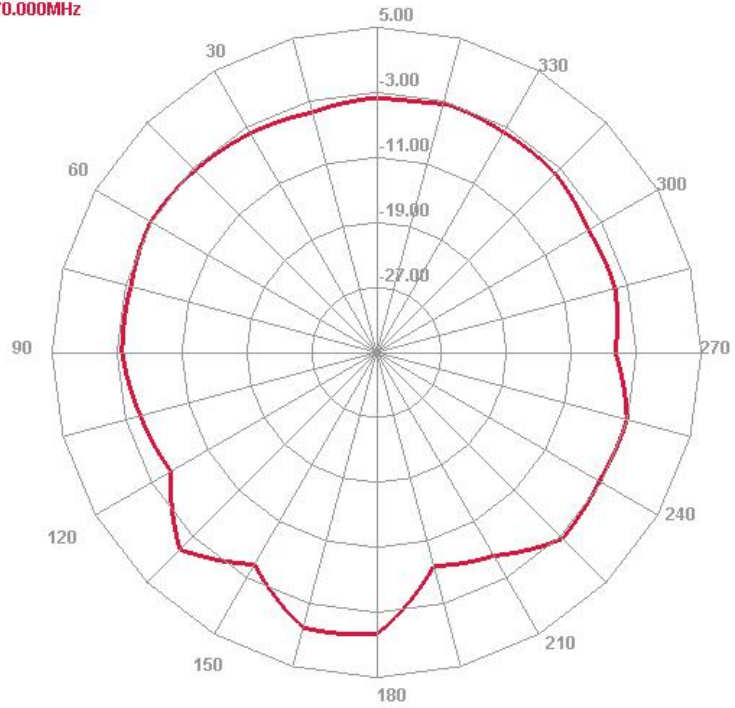
## Free space 2D radiation pattern



**X-Z Plane  
V Phi=0**

**E1 Face**

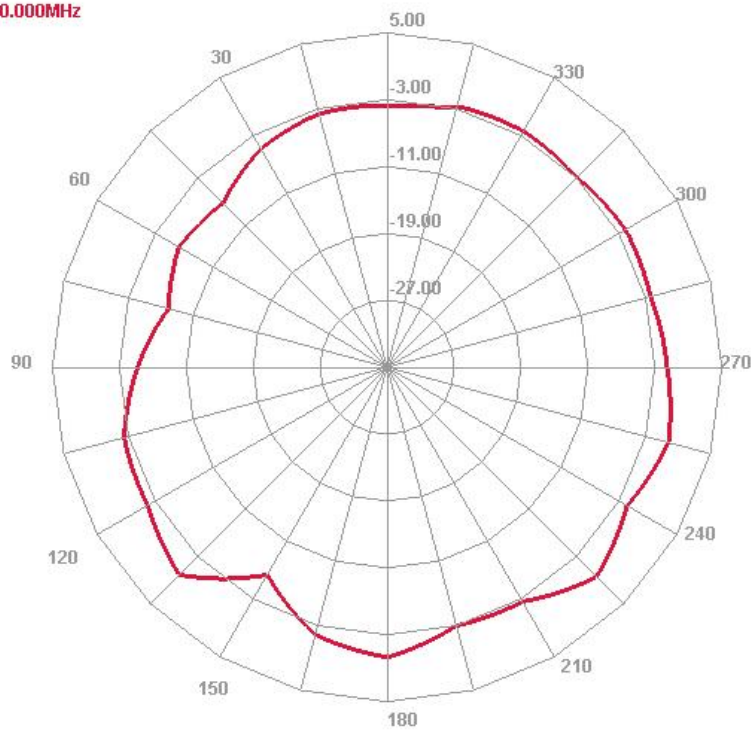
1570.000MHz

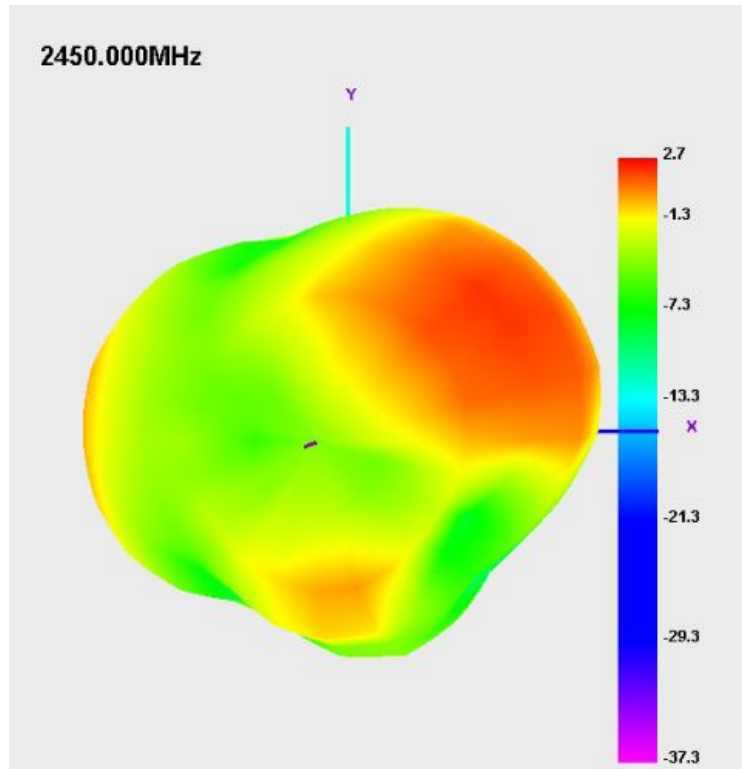


**Y-Z Plane  
V Phi=90**

**E2 Face**

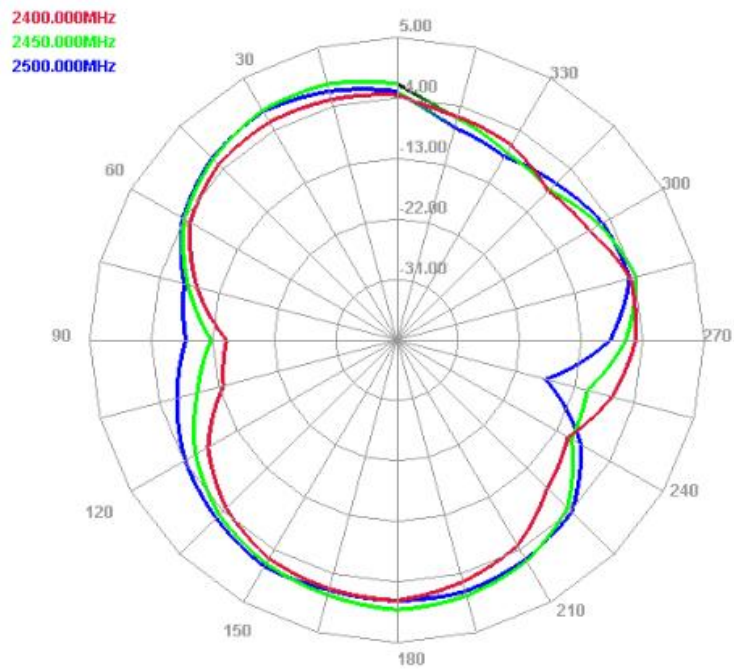
1570.000MHz





**X-Y Plane  
H Theta=90**

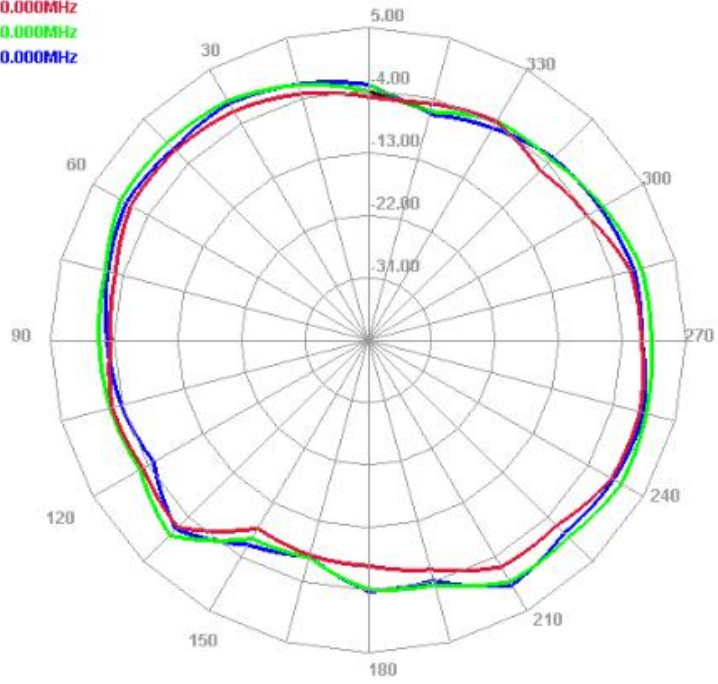
**Horizontal**



**X-Z Plane  
V Phi=0**

**E1 Face**

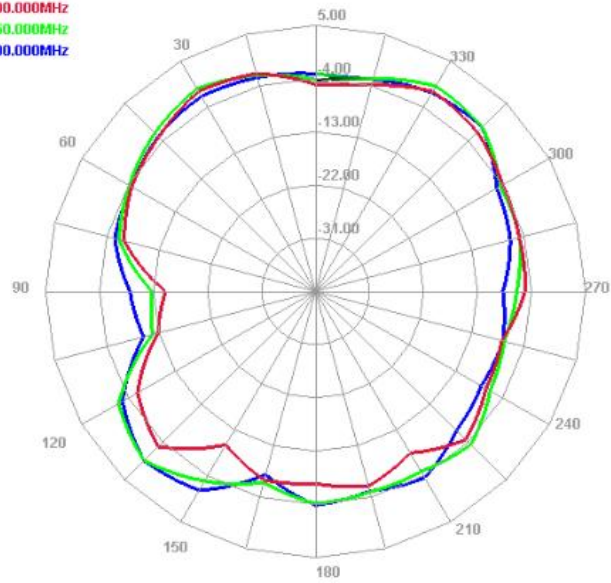
2400.000MHz  
2450.000MHz  
2500.000MHz

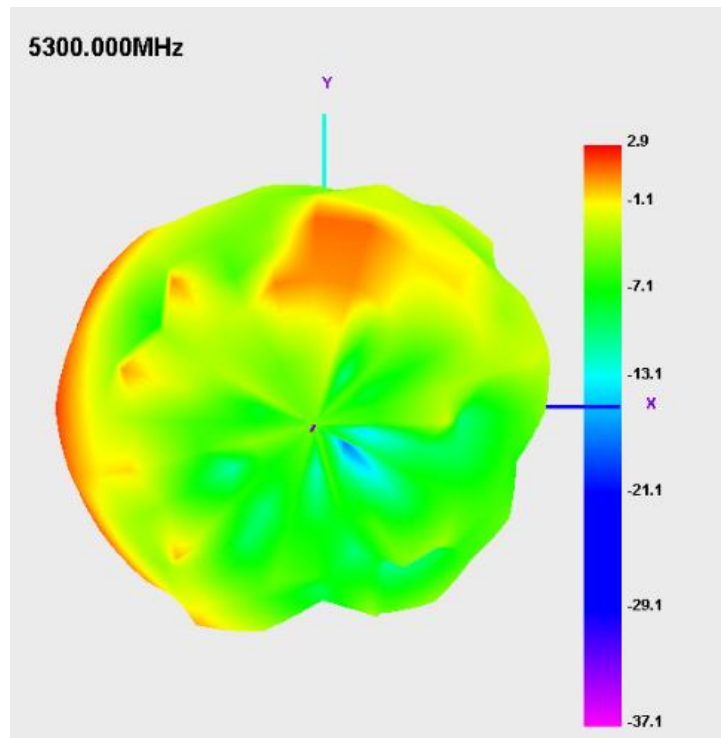


**Y-Z Plane  
V Phi=90**

**E2 Face**

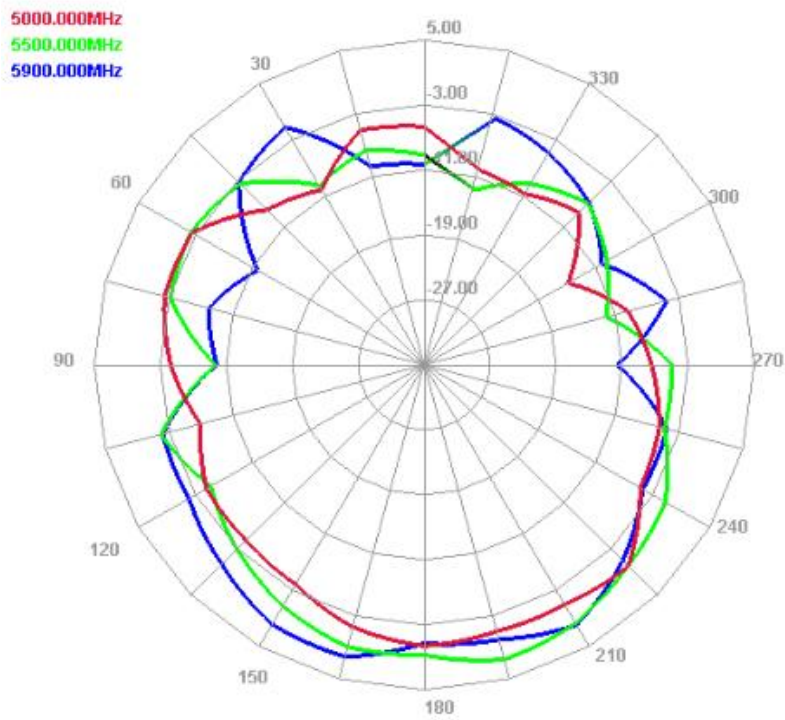
2400.000MHz  
2450.000MHz  
2500.000MHz





**X-Y Plane  
H Theta=90**

**Horizontal**

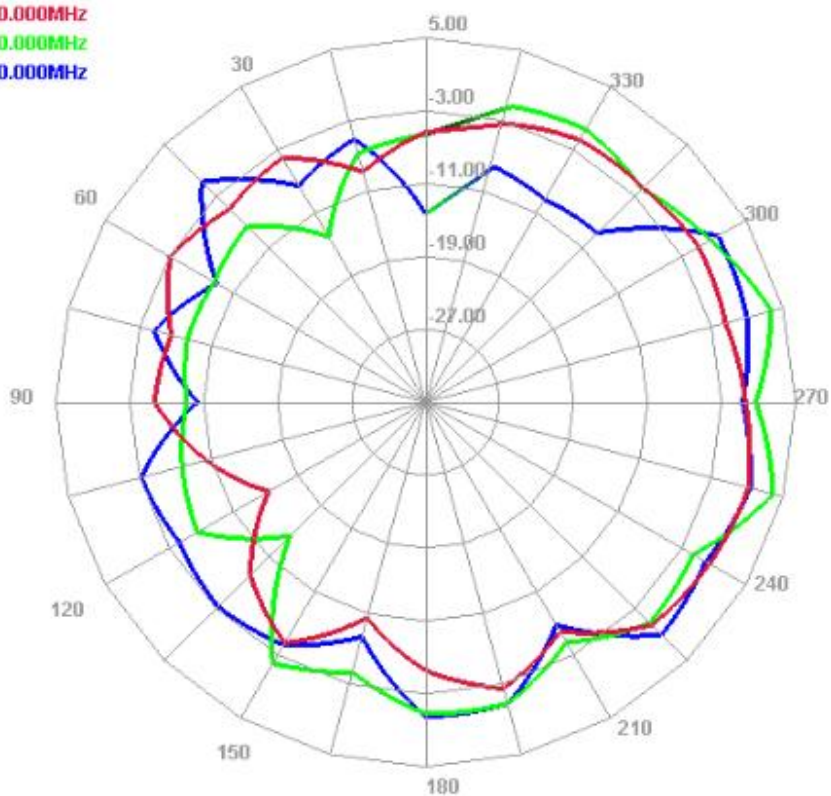




### X-Z Plane V Phi=0

#### E1 Face

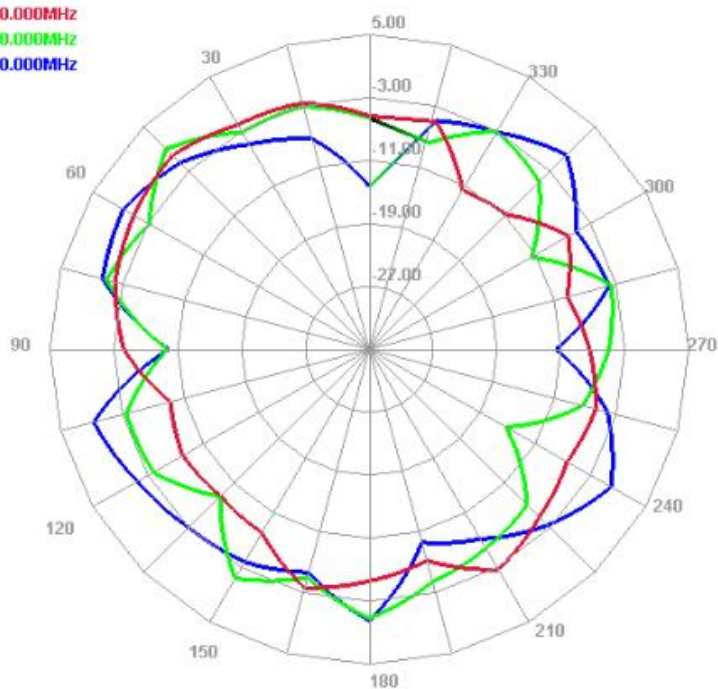
5000.000MHz  
5500.000MHz  
5900.000MHz



### Y-Z Plane V Phi=90

#### E2 Face

5000.000MHz  
5500.000MHz  
5900.000MHz

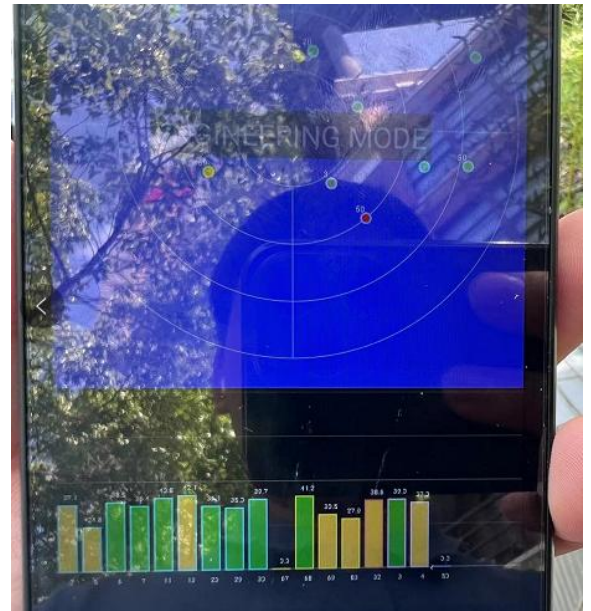




有源数据  
OTA (TRP TIS)

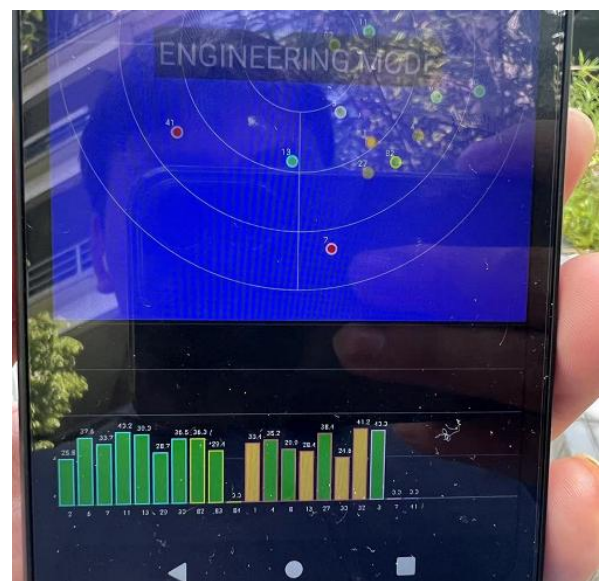
P1011A

WiFi	channels	TRP (dBm)	TIS (dBm)
2.4G 11b	1	15.22	-82.16
	7	15.29	-83.21
	13	15.32	-83.19
5G 11a	36	15.53	-76.26
	165	15.71	-75.98

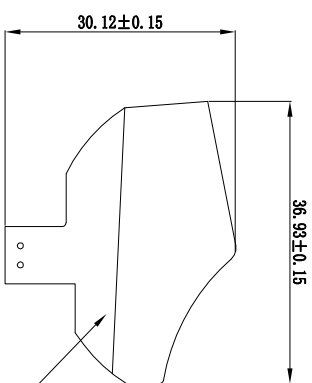
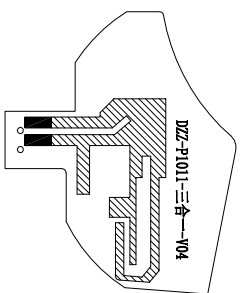
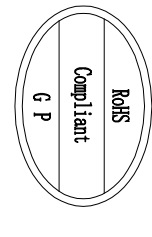


P1011B

WiFi	channels	TRP (dBm)	TIS (dBm)
2.4G 11b	1	15.22	-82.16
	7	15.29	-83.21
	13	15.32	-83.19
5G 11a	36	15.53	-76.26
	165	15.71	-75.98



1	2	3	4	5	6	7	8
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**备注:**

1. FPC material: 0.5oz electrolytic copper, 0.5MLI PI material, thickness 0.13±0.02;
2. Feed point treatment: gold plating
3. Surface treatment: black ink.
4. Back adhesive: 3ML94711E Packing method: single piece
5. Screen printing font: white
6. No standard tolerance size, mold out of the size tolerance of ±0.1, copper foil line ruler
7. Safety requirements: ROHS six
8. The quality requirements shall be implemented in accordance with the "IQC Incoming Inspection Specification"

**Shenzhen free technology Co., LTD**

0~10	±0.05	○	0.02	Third Angle	Project	P1012	Date	2023.2.16	2023.2.16
10~18	±0.10	◎	ø0.03	Part Name	三合一	F01-7034-ROA	Designed by	tianjin	tianjin
18~30	±0.12	⊥	0.02	Part No.	FPC	F01-7034-ROA	Checked by	RF	maohuitao
30~40	±0.15	∇	0.04	Material	FPC	F01-7034-ROA	Approved by	RF	maohuitao
40~	±0.20	Angle	±0.5°	DWG No.	FPC	F01-7034-ROA	Unit	mm	Scale
Location	±0.20	Angle	±0.5°	DWG No.	FPC	F01-7034-ROA	Scale	1:1	Rev

Rev	Description	Date	Remark	5	6	7	8
1	New drawing						A