Product specification acknowledgement

客户名称：Motocam Technology Co., Ltd.

产品名称：S3

物料编码：

承制方		日期：2024 年 09 月 28 日
制作	品质	研发
夏威	阳广军	钟红军

客户方		日期：　　年　月　日
结论	品质	研发

Manufacturer: Motocam Technology Co., Ltd.
Address: A112, Lankun Group, No. 29, Baoshi Road, Baoan District, Shenzhen, Guangdong Province, China

1: Purpose

To standardize the product specifications and test methods of the mobile communication terminal antenna produced by Dongguan Zhenchi Hardware Products Co., Ltd. to avoid errors caused by different test conditions and methods.

2. Overview of product categories and models

2.1 category

The WIFI antenna of the mobile communication terminal is: PIFA antenna;

2.2 Product model overview

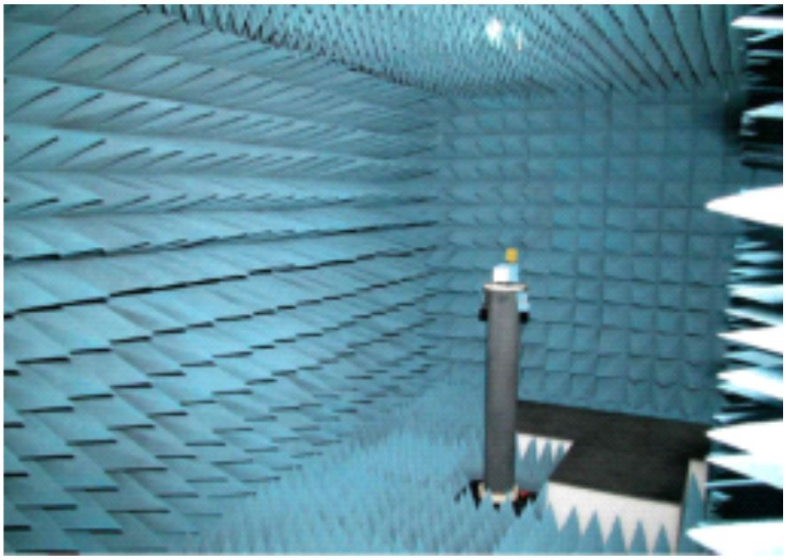
This report mainly Outlines the electrical results of the antenna designed by the S3 project. The antenna design frequency band is: 2400M-2500M band.

3.Technical indicators and equipment

3.1 Technical index

Product electrical performance index	
Operating frequency range	2400-2500MHz
Standing-wave ratio	2400-2500MHz<3.0
Antenna gain	2400-2500MHz:-1.5dBi±1dBi
Radiation efficiency	2400-2500MHz> 30%
impedance	50 ohm
Product material description	
2.4G FPC ANT	FPC antenna +0.81*33MM coaxial line + third generation terminal + welded, terminal upward.
Product environment description	
Operating temperature	- 30˚C ~ + 85 ˚C
Storage temperature	- 30˚C ~ + 85 ˚C

Instrument and equipment



ETS Chamber
天线测试暗室

L x W x H =8x4x4M

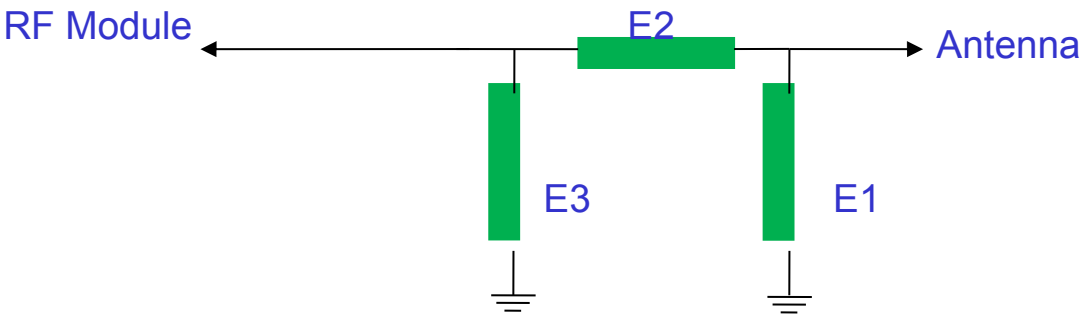
R&S CMW500

Agilent E5071B

Agilent 8960

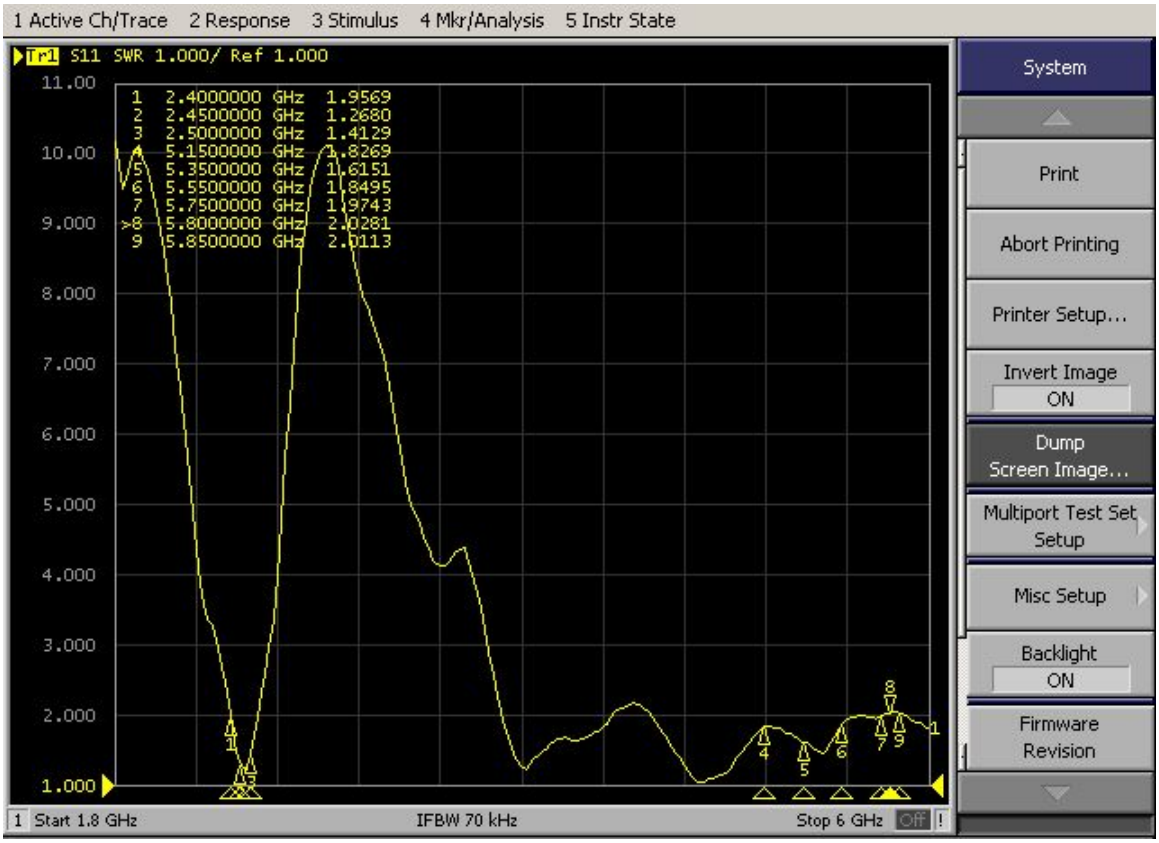
4. Matching circuit description:

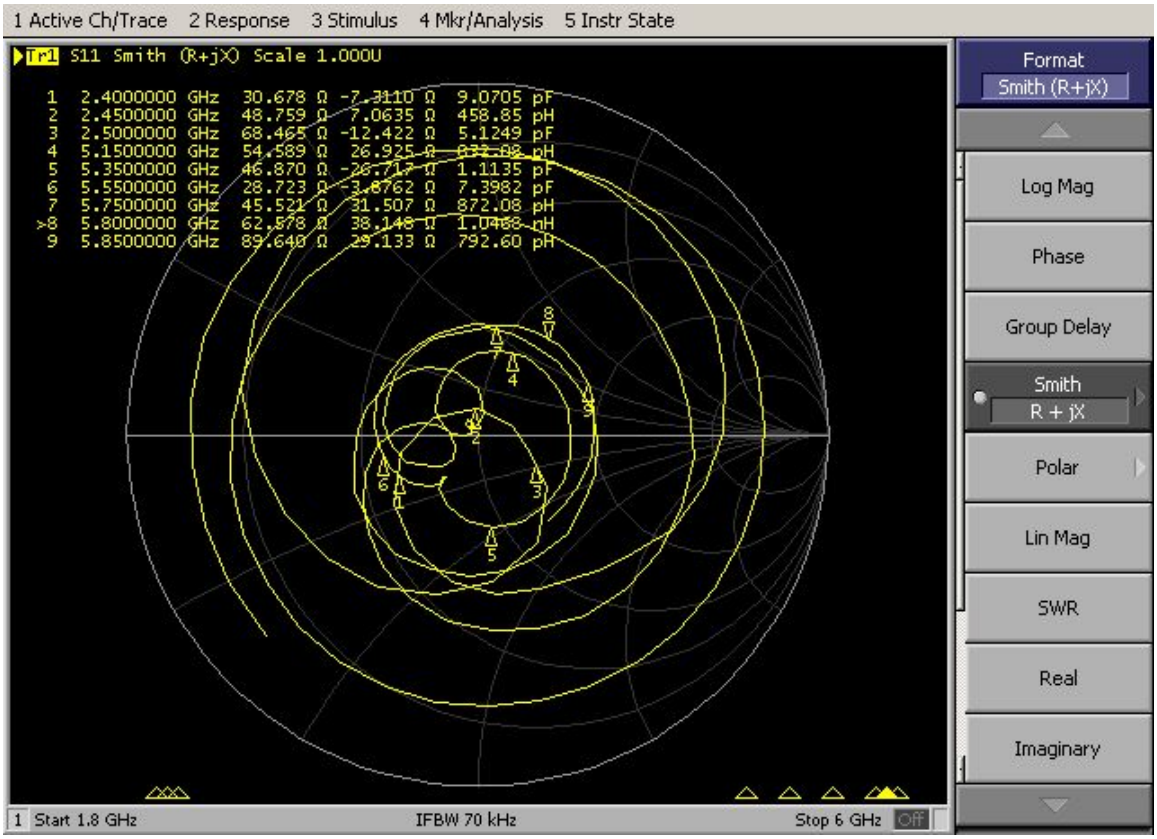
Our company has not modified the original matching circuit of the WIFI antenna



Element	Value	Vender
E1(0201)		
E2(0201)		
E3(0201)		

5. 2.4G WIFI antenna passive column wave chart &Smith chart:

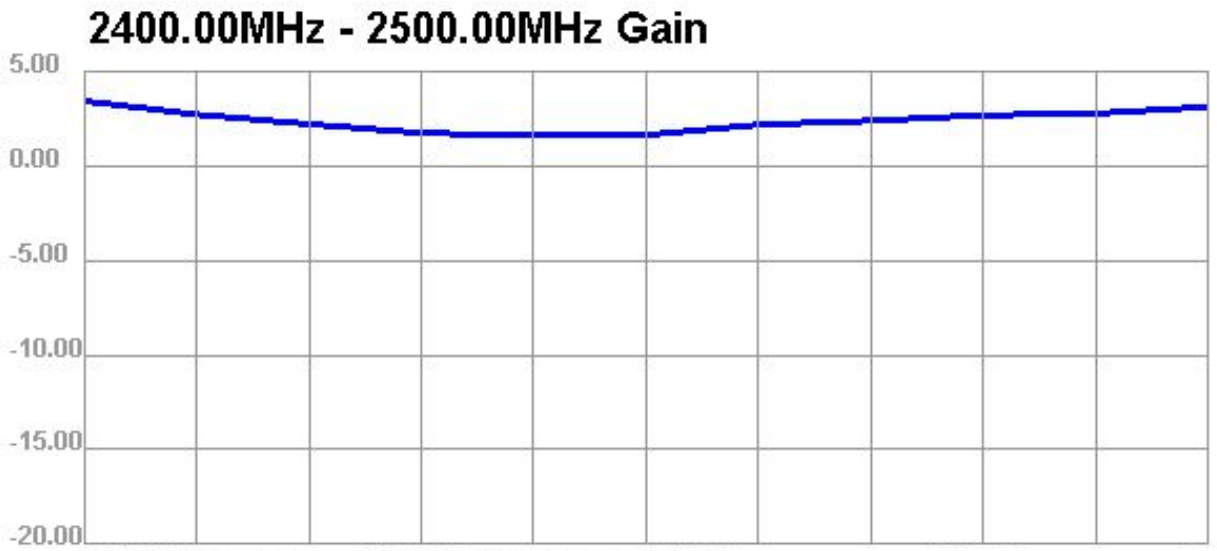


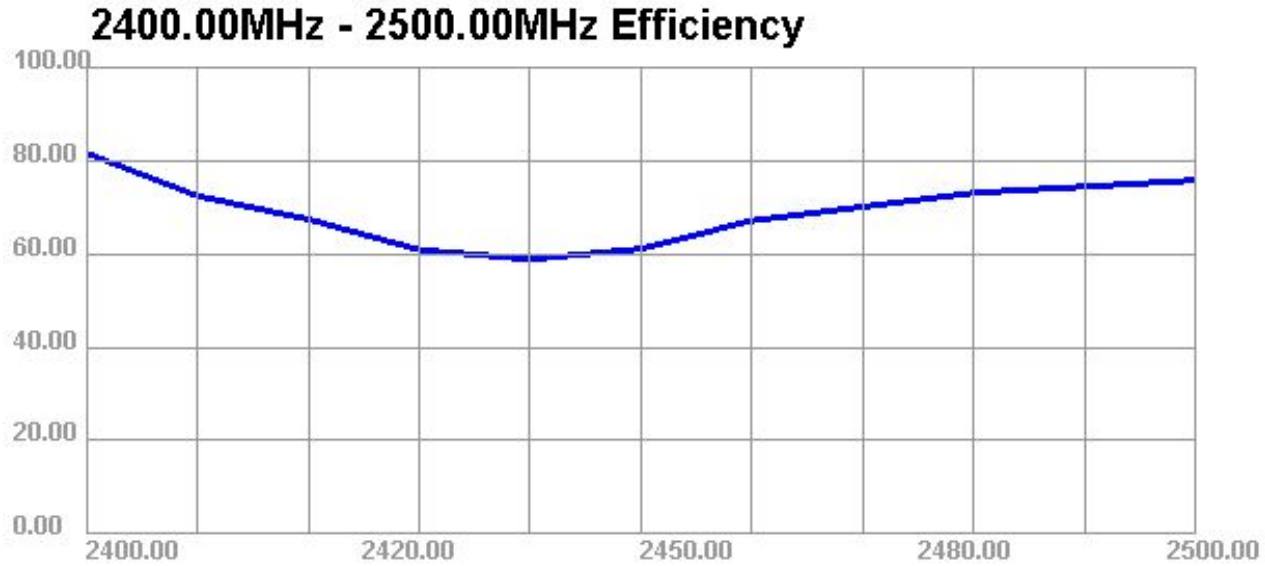


6. 2.4G antenna efficiency and gain

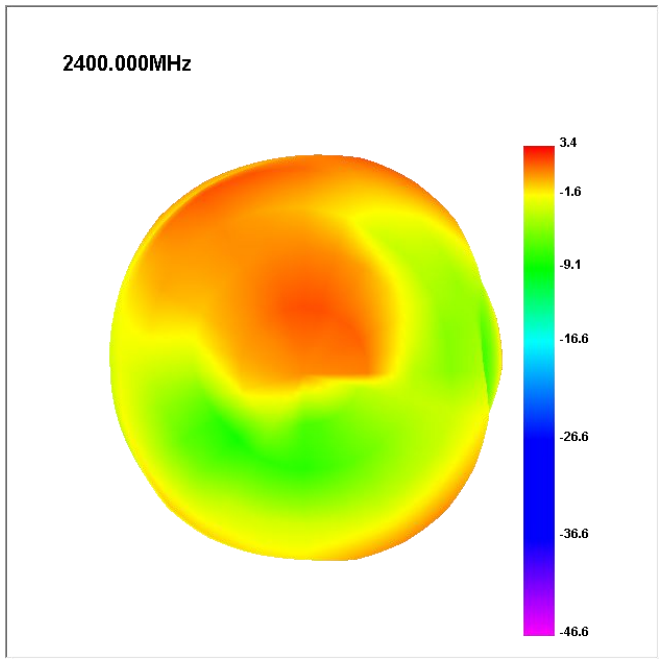
Passive Test For 2.4G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	81.6	-0.88	3.42	1.27	33.328	48.273	3.42	-16.21	4.3	30	49.66	49.8
2410	72.43	-1.4	2.71	0.56	29.39	43.036	2.71	-17.43	4.11	30	49.33	49.6
2420	67.43	-1.71	2.2	0.05	27.663	39.763	2.2	-16.39	3.91	30	49.12	49.04
2430	60.89	-2.15	1.73	-0.42	24.79	36.099	1.73	-17.22	3.89	30	48.59	48.53
2440	58.85	-2.3	1.59	-0.56	23.968	34.879	1.59	-15.72	3.89	15	48.55	48.47
2450	61.11	-2.14	1.62	-0.53	24.41	36.698	1.62	-16.54	3.76	30	48.5	48.38
2460	67.15	-1.73	2.17	0.02	26.073	41.074	2.17	-14.78	3.9	30	48.71	48.85
2470	70.12	-1.54	2.38	0.23	27.145	42.973	2.38	-15.01	3.92	30	48.79	48.82
2480	73.1	-1.36	2.67	0.52	28.49	44.61	2.67	-14.47	4.03	30	48.97	49.06
2490	74.41	-1.28	2.76	0.61	29.159	45.255	2.76	-14.11	4.05	30	48.91	49.13
2500	75.8	-1.2	3.12	0.97	29.086	46.715	3.12	-13.28	4.32	30	48.93	49.17

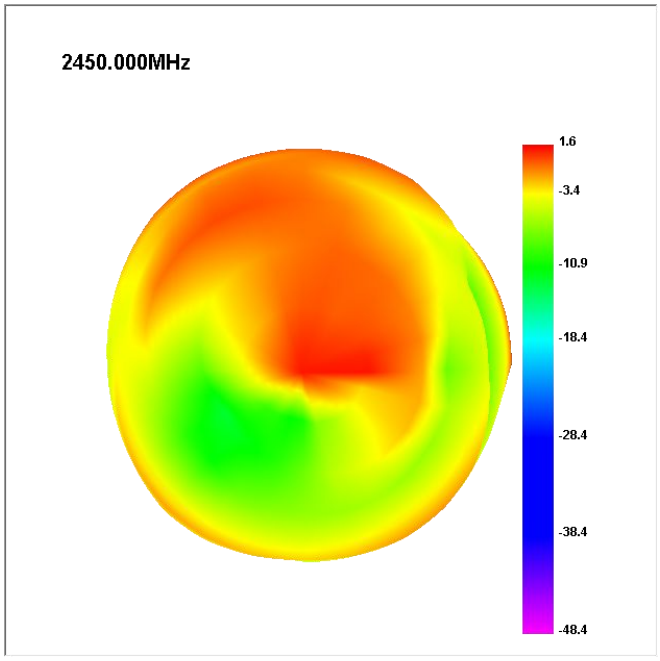
7. 2.4G gain & Efficiency chart

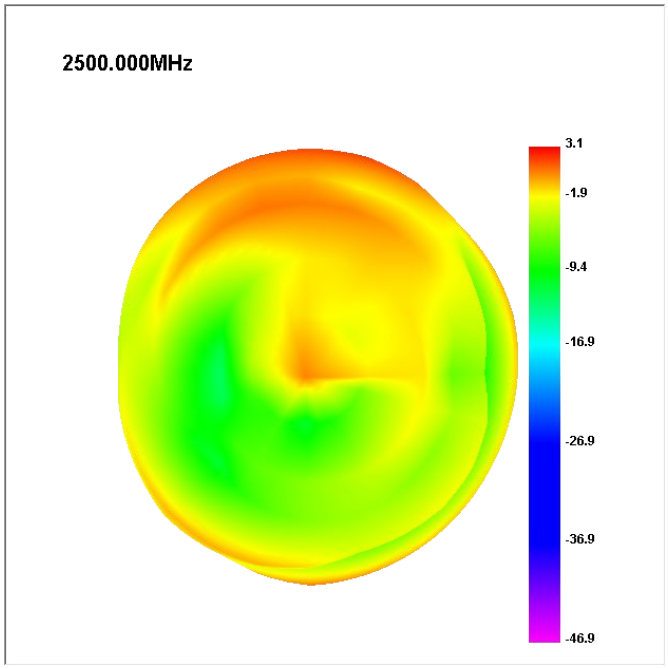


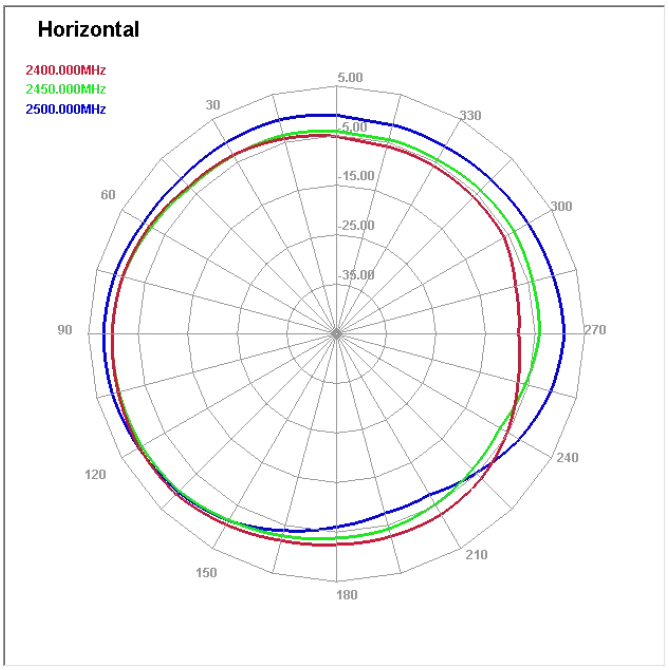
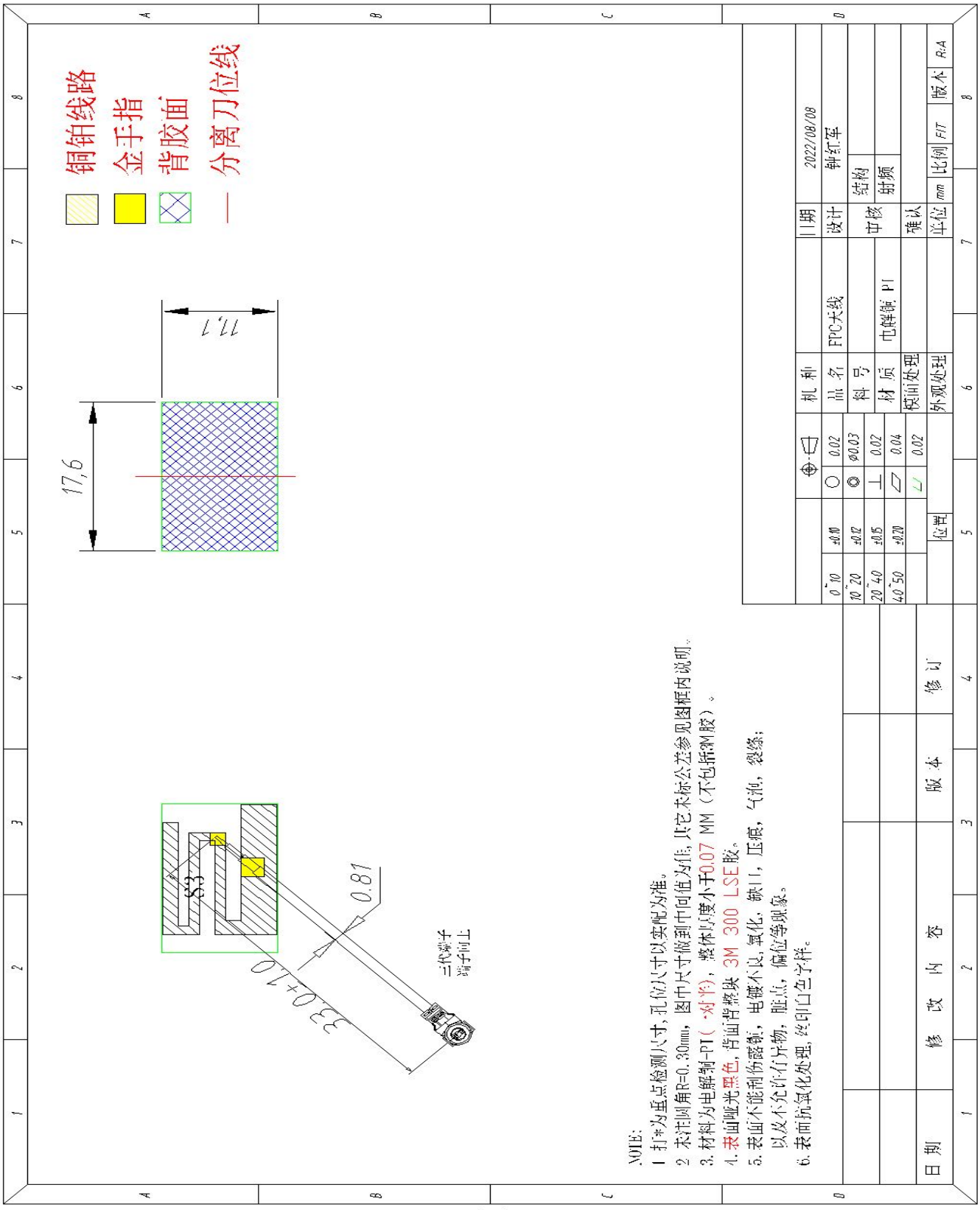


8. 2.4G 2D&3D 方向图









9. Engineering drawing: