

深圳市亿圣邦科技有限公司

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Shenzhen Yishengbang Technology Co., Ltd Antenna Specification Sheet

Customer: 艾普达

Project: SD3202

Product: G/W/B

Report date: 2024.08.07

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Checked by : 黄震

Approved by : 林美财

Purpose

This report is to measure the performance of SLK for Master Antenna on艾普达. All measure data are showed below.

Content

1. Product Overview
2. Test Result
 - 2.1 WIFI+GPS Antenna VSWR/S11
 - 2.2 WIFI+GPS Antenna Gain/Efficiency/3D DATE
 - 2.3 WIFI Throughput Test
 - 2.4 GPS practical Test
- 3.Conclusions

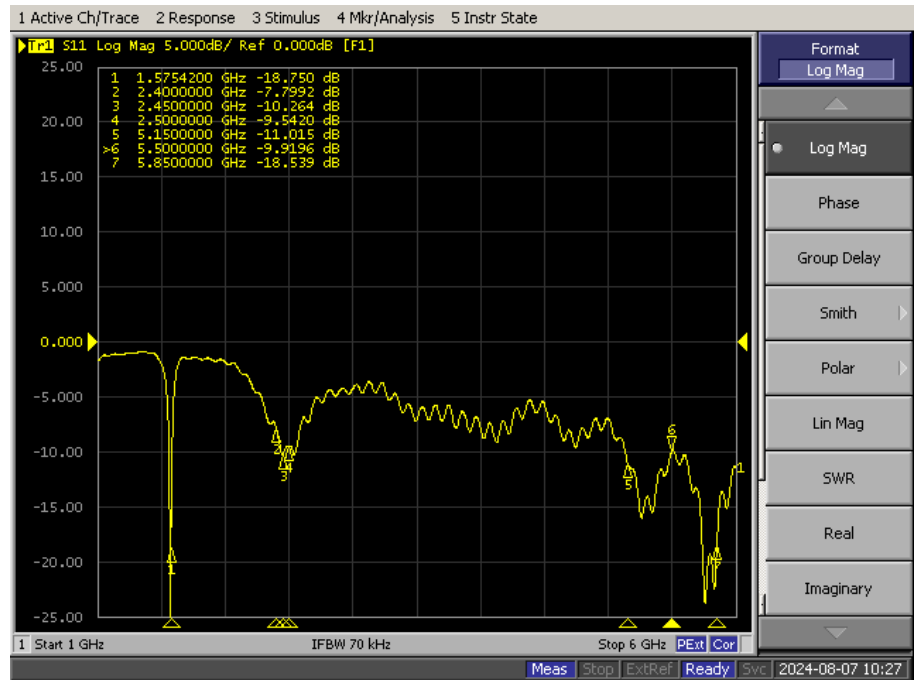
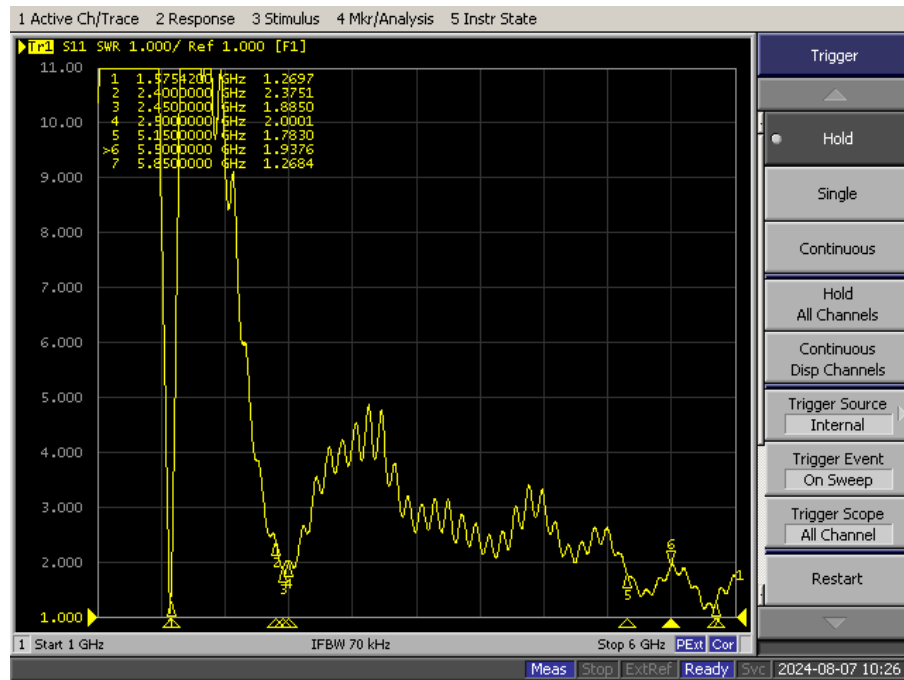
1. Product Overview & Dimension

天线贴放位置和机器环境处理照片



2. Test Result

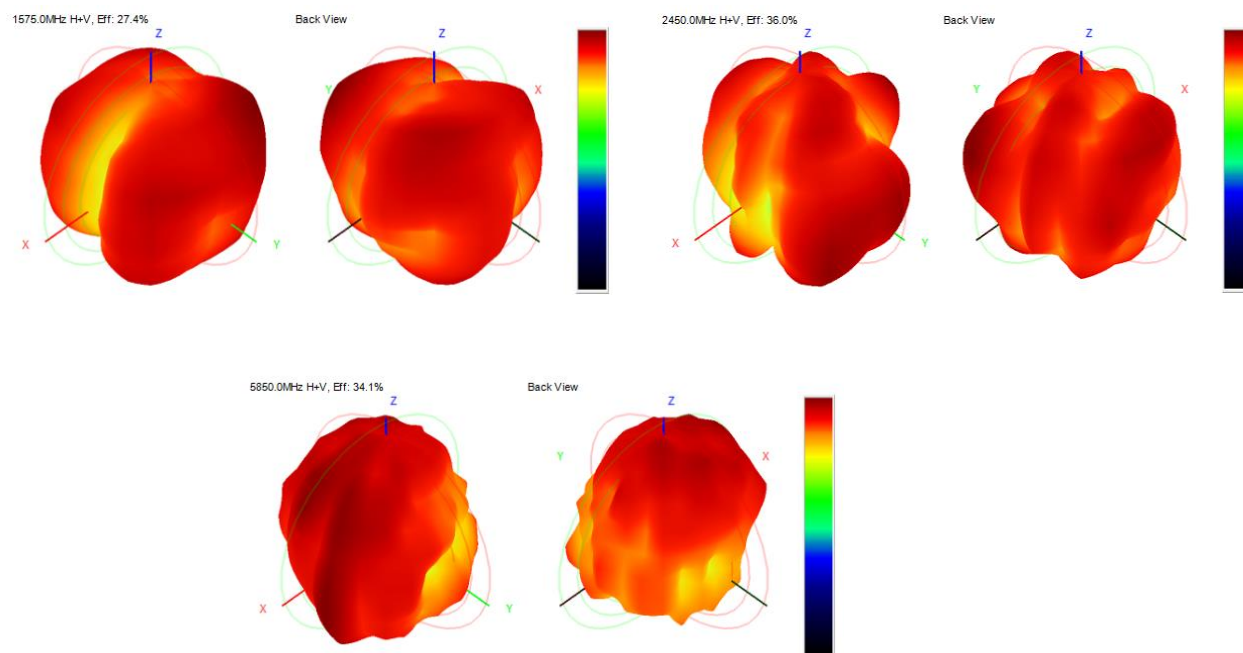
2.1 VSWR/S11 (WIFI+GPS)



2. Test Result

2.2 WIFI+GPS Antenna Gain/Efficiency/3D DATE

Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)
1570.0	-5.53	1.59	27.94
1575.0	-5.62	1.35	27.37
1580.0	-5.55	1.23	27.80
2400.0	-4.40	1.14	36.33
2410.0	-4.01	1.19	39.74
2420.0	-4.06	1.26	39.25
2430.0	-4.19	1.14	38.13
2440.0	-4.29	1.08	37.27
2450.0	-4.44	1.16	35.96
2460.0	-4.26	1.07	37.48
2470.0	-4.20	1.11	38.00
2480.0	-4.11	1.06	38.83
2490.0	-4.31	1.29	37.04
2500.0	-4.29	1.28	37.27
5150.0	-4.92	2.32	32.23
5350.0	-5.03	2.15	31.40
5550.0	-5.08	2.87	31.01
5750.0	-5.22	2.34	30.05
5850.0	-5.10	2.26	30.87



2 Test Result

2.3 WIFI Throughput Test

C:\iperf-3.1.3-win64>iperf3 -c 192.168.1.102 -i 1 -t 30
Connecting to host 192.168.1.102, port 5201
[4] local 192.168.1.110 port 55661 connected to 192.168.1.102

ID	Interval	Transfer	Bandwidth
[4]	0.00-1.01 sec	4.00 MBytes	33.4 Mbits/sec
[4]	1.01-2.01 sec	4.00 MBytes	33.5 Mbits/sec
[4]	2.01-3.01 sec	4.12 MBytes	34.6 Mbits/sec
[4]	3.01-4.01 sec	3.88 MBytes	32.5 Mbits/sec
[4]	4.01-5.01 sec	3.75 MBytes	31.5 Mbits/sec
[4]	5.01-6.01 sec	4.12 MBytes	34.6 Mbits/sec
[4]	6.01-7.01 sec	4.00 MBytes	33.6 Mbits/sec
[4]	7.01-8.01 sec	4.12 MBytes	34.6 Mbits/sec
[4]	8.01-9.01 sec	3.50 MBytes	29.4 Mbits/sec
[4]	9.01-10.01 sec	4.00 MBytes	33.5 Mbits/sec
[4]	10.01-11.01 sec	3.50 MBytes	29.4 Mbits/sec
[4]	11.01-12.01 sec	4.00 MBytes	33.5 Mbits/sec
[4]	12.01-13.01 sec	4.00 MBytes	33.6 Mbits/sec
[4]	13.01-14.00 sec	4.00 MBytes	33.7 Mbits/sec
[4]	14.00-15.01 sec	4.00 MBytes	33.4 Mbits/sec
[4]	15.01-16.01 sec	4.12 MBytes	34.6 Mbits/sec
[4]	16.01-17.01 sec	4.00 MBytes	33.5 Mbits/sec
[4]	17.01-18.01 sec	3.88 MBytes	32.5 Mbits/sec
[4]	18.01-19.01 sec	3.88 MBytes	32.5 Mbits/sec
[4]	19.01-20.01 sec	3.75 MBytes	31.5 Mbits/sec
[4]	20.01-21.01 sec	4.12 MBytes	34.6 Mbits/sec
[4]	21.01-22.01 sec	4.00 MBytes	33.5 Mbits/sec
[4]	22.01-23.01 sec	4.00 MBytes	33.5 Mbits/sec
[4]	23.01-24.00 sec	4.00 MBytes	33.9 Mbits/sec
[4]	24.00-25.00 sec	4.12 MBytes	34.6 Mbits/sec
[4]	25.00-26.00 sec	3.75 MBytes	31.4 Mbits/sec
[4]	26.00-27.00 sec	4.12 MBytes	34.6 Mbits/sec
[4]	27.00-28.00 sec	3.88 MBytes	32.5 Mbits/sec
[4]	28.00-29.00 sec	4.12 MBytes	34.6 Mbits/sec
[4]	29.00-30.00 sec	4.00 MBytes	33.5 Mbits/sec

[ID]	Interval	Transfer	Bandwidth
[4]	0.00-30.00 sec	119 MBytes	33.2 Mbits/sec
[4]	0.00-30.00 sec	118 MBytes	33.0 Mbits/sec

iperf Done.

2.4G下载

-c 192.168.1.110 -i 1 -t 30 -w 1m

[4]	0.00-10.00 sec	5.10 MBytes	42.7 Mbits/sec
[4]	10.00-11.00 sec	5.10 MBytes	42.7 Mbits/sec
[4]	11.00-12.00 sec	4.97 MBytes	41.7 Mbits/sec
[4]	12.00-13.00 sec	5.16 MBytes	43.3 Mbits/sec
[4]	13.00-14.00 sec	5.01 MBytes	42.0 Mbits/sec
[4]	14.00-15.00 sec	5.21 MBytes	43.7 Mbits/sec
[4]	15.00-16.00 sec	5.78 MBytes	48.5 Mbits/sec
[4]	16.00-17.00 sec	5.00 MBytes	41.9 Mbits/sec
[4]	17.00-18.00 sec	5.61 MBytes	47.1 Mbits/sec
[4]	18.00-19.00 sec	5.90 MBytes	49.5 Mbits/sec
[4]	19.00-20.00 sec	5.34 MBytes	44.8 Mbits/sec
[4]	20.00-21.00 sec	5.72 MBytes	48.0 Mbits/sec
[4]	21.00-22.00 sec	4.21 MBytes	35.3 Mbits/sec
[4]	22.00-23.00 sec	5.62 MBytes	47.1 Mbits/sec
[4]	23.00-24.00 sec	5.45 MBytes	45.7 Mbits/sec
[4]	24.00-25.00 sec	5.60 MBytes	47.0 Mbits/sec
[4]	25.00-26.00 sec	5.15 MBytes	43.3 Mbits/sec
[4]	26.00-27.00 sec	5.34 MBytes	44.9 Mbits/sec
[4]	27.00-28.01 sec	4.98 MBytes	41.6 Mbits/sec
[4]	28.01-29.00 sec	4.65 MBytes	39.2 Mbits/sec
[4]	29.00-30.00 sec	4.54 MBytes	38.0 Mbits/sec

[ID]	Interval	Transfer	Bandwidth
[4]	0.00-30.00 sec	159 MBytes	44.3 Mbits/sec
[4]	0.00-30.00 sec	158 MBytes	44.2 Mbits/sec

2.4G上传

2 Test Result

2.3 WIFI Throughput Test

C:\iperf-3.1.3-win64\iperf3 -c 192.168.1.109 -i 1 -t 30

Connecting to host 192.168.1.109, port 5201

[4] local 192.168.1.110 port 55469 connected to 192.168.1.109

ID	Interval	Transfer	Bandwidth
[4]	0.00-1.00 sec	30.2 MBytes	253 Mbits/sec
[4]	1.00-2.00 sec	31.4 MBytes	263 Mbits/sec
[4]	2.00-3.00 sec	28.6 MBytes	241 Mbits/sec
[4]	3.00-4.00 sec	33.1 MBytes	277 Mbits/sec
[4]	4.00-5.01 sec	34.2 MBytes	286 Mbits/sec
[4]	5.01-6.00 sec	31.2 MBytes	265 Mbits/sec
[4]	6.00-7.00 sec	30.5 MBytes	255 Mbits/sec
[4]	7.00-8.00 sec	30.2 MBytes	254 Mbits/sec
[4]	8.00-9.00 sec	22.9 MBytes	192 Mbits/sec
[4]	9.00-10.00 sec	28.2 MBytes	237 Mbits/sec
[4]	10.00-11.00 sec	27.0 MBytes	226 Mbits/sec
[4]	11.00-12.00 sec	32.1 MBytes	269 Mbits/sec
[4]	12.00-13.00 sec	25.1 MBytes	211 Mbits/sec
[4]	13.00-14.00 sec	30.0 MBytes	252 Mbits/sec
[4]	14.00-15.00 sec	31.5 MBytes	264 Mbits/sec
[4]	15.00-16.00 sec	29.4 MBytes	246 Mbits/sec
[4]	16.00-17.00 sec	31.8 MBytes	266 Mbits/sec
[4]	17.00-18.00 sec	29.2 MBytes	245 Mbits/sec
[4]	18.00-19.00 sec	31.0 MBytes	260 Mbits/sec
[4]	19.00-20.00 sec	27.9 MBytes	234 Mbits/sec
[4]	20.00-21.00 sec	25.5 MBytes	214 Mbits/sec
[4]	21.00-22.00 sec	28.0 MBytes	235 Mbits/sec
[4]	22.00-23.00 sec	30.1 MBytes	253 Mbits/sec
[4]	23.00-24.00 sec	26.8 MBytes	224 Mbits/sec
[4]	24.00-25.00 sec	27.4 MBytes	230 Mbits/sec
[4]	25.00-26.00 sec	28.5 MBytes	240 Mbits/sec
[4]	26.00-27.00 sec	29.9 MBytes	250 Mbits/sec
[4]	27.00-28.00 sec	31.9 MBytes	268 Mbits/sec
[4]	28.00-29.00 sec	34.1 MBytes	285 Mbits/sec
[4]	29.00-30.01 sec	28.9 MBytes	242 Mbits/sec

ID	Interval	Transfer	Bandwidth
[4]	0.00-30.01 sec	887 MBytes	248 Mbits/sec
[4]	0.00-30.01 sec	886 MBytes	248 Mbits/sec

iperf Done.

5G下载

-c 192.168.1.110 -i 1 -t 30 -w 1m

[4]	0.00-1.00 sec	29.8 MBytes	250 Mbits/sec
[4]	1.00-2.00 sec	32.0 MBytes	268 Mbits/sec
[4]	2.00-3.00 sec	35.0 MBytes	294 Mbits/sec
[4]	3.00-4.00 sec	33.1 MBytes	278 Mbits/sec
[4]	4.00-5.00 sec	31.8 MBytes	266 Mbits/sec
[4]	5.00-6.00 sec	33.4 MBytes	281 Mbits/sec
[4]	6.00-7.00 sec	31.1 MBytes	261 Mbits/sec
[4]	7.00-8.00 sec	30.4 MBytes	255 Mbits/sec
[4]	8.00-9.00 sec	32.2 MBytes	270 Mbits/sec
[4]	9.00-10.00 sec	32.1 MBytes	270 Mbits/sec
[4]	10.00-11.00 sec	32.4 MBytes	272 Mbits/sec
[4]	11.00-12.00 sec	33.1 MBytes	277 Mbits/sec
[4]	12.00-13.00 sec	33.4 MBytes	281 Mbits/sec
[4]	13.00-14.00 sec	29.7 MBytes	249 Mbits/sec
[4]	14.00-15.00 sec	31.5 MBytes	264 Mbits/sec
[4]	15.00-16.00 sec	31.8 MBytes	266 Mbits/sec
[4]	16.00-17.00 sec	31.4 MBytes	264 Mbits/sec
[4]	17.00-18.00 sec	31.5 MBytes	264 Mbits/sec
[4]	18.00-19.00 sec	29.9 MBytes	251 Mbits/sec
[4]	19.00-20.00 sec	30.6 MBytes	257 Mbits/sec
[4]	20.00-21.00 sec	34.0 MBytes	285 Mbits/sec

ID	Interval	Transfer	Bandwidth
[4]	0.00-30.00 sec	953 MBytes	267 Mbits/sec
[4]	0.00-30.00 sec	952 MBytes	266 Mbits/sec

iperf Done.

5G上传

2. Test Result

2.3 WIFI throughput test



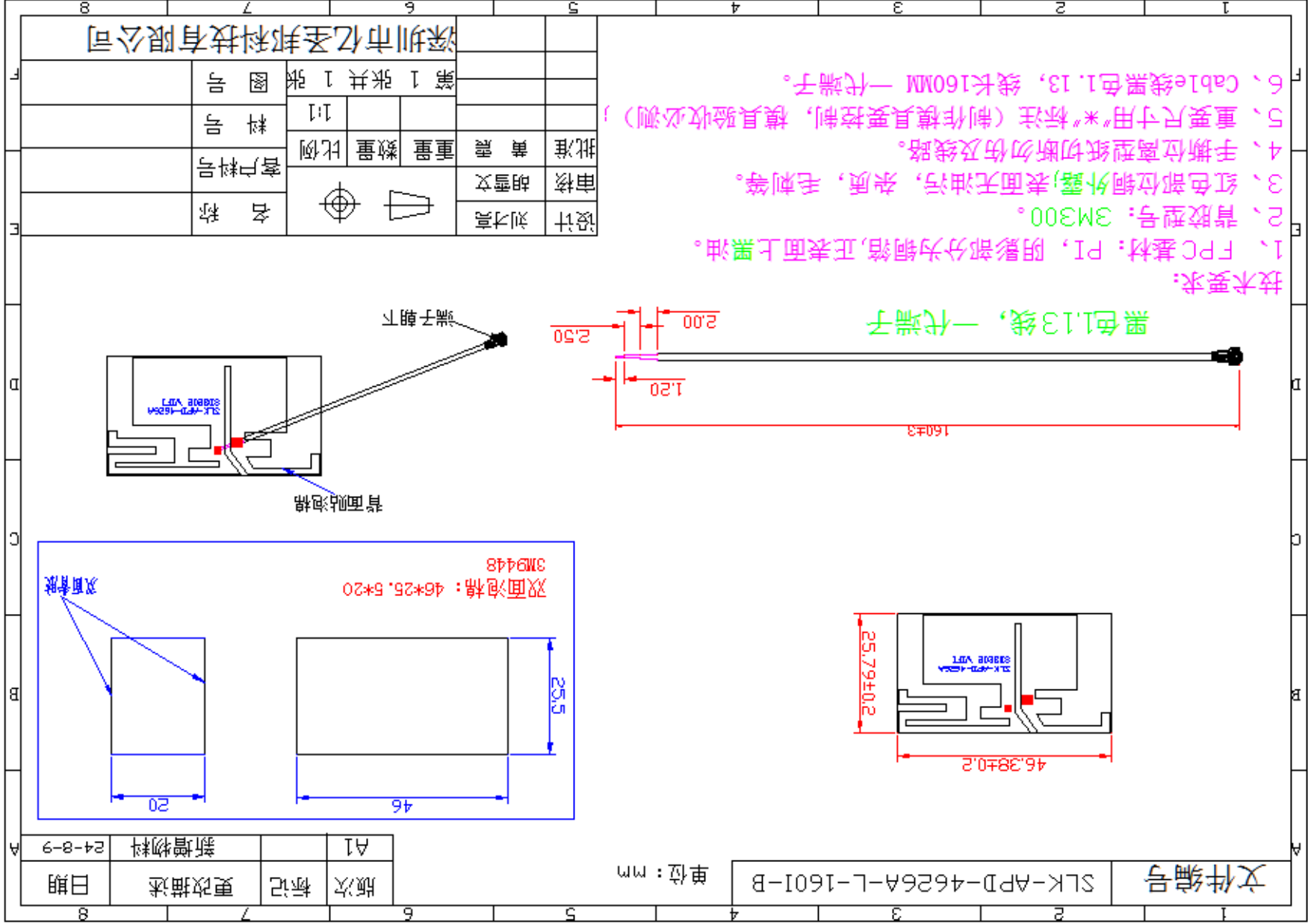
测试环境：室内10M，信号强度2.4G为-30dBm,5G为-39dBm

2. Test Result

2.4 GPS practical Test



6. Antenna Dimensions (unit: mm)





3. Conclusions

Thank you