



Shenzhen Yishengbang Technology Co., Ltd.

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Customer: 伟合佳

Project: US720

Product: WIFI/GPS+4G Antenna—FPC

Report date: 2023-08-31

Prepared by : chen shi lian

Checked by : Eason Huang

Approved by :

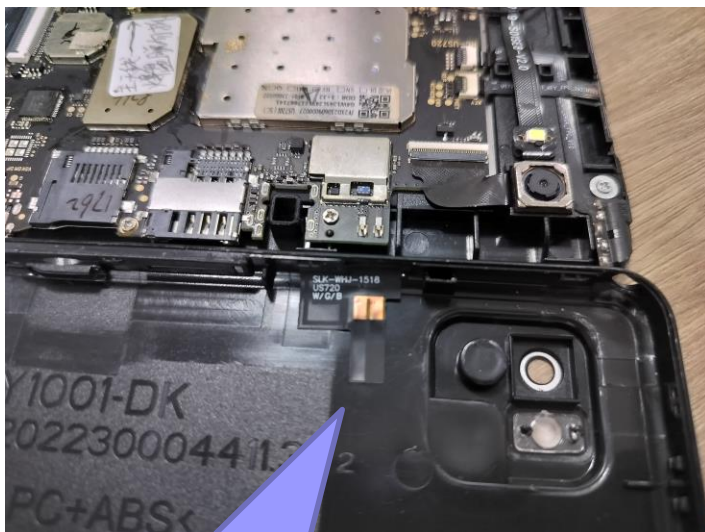
Purpose

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

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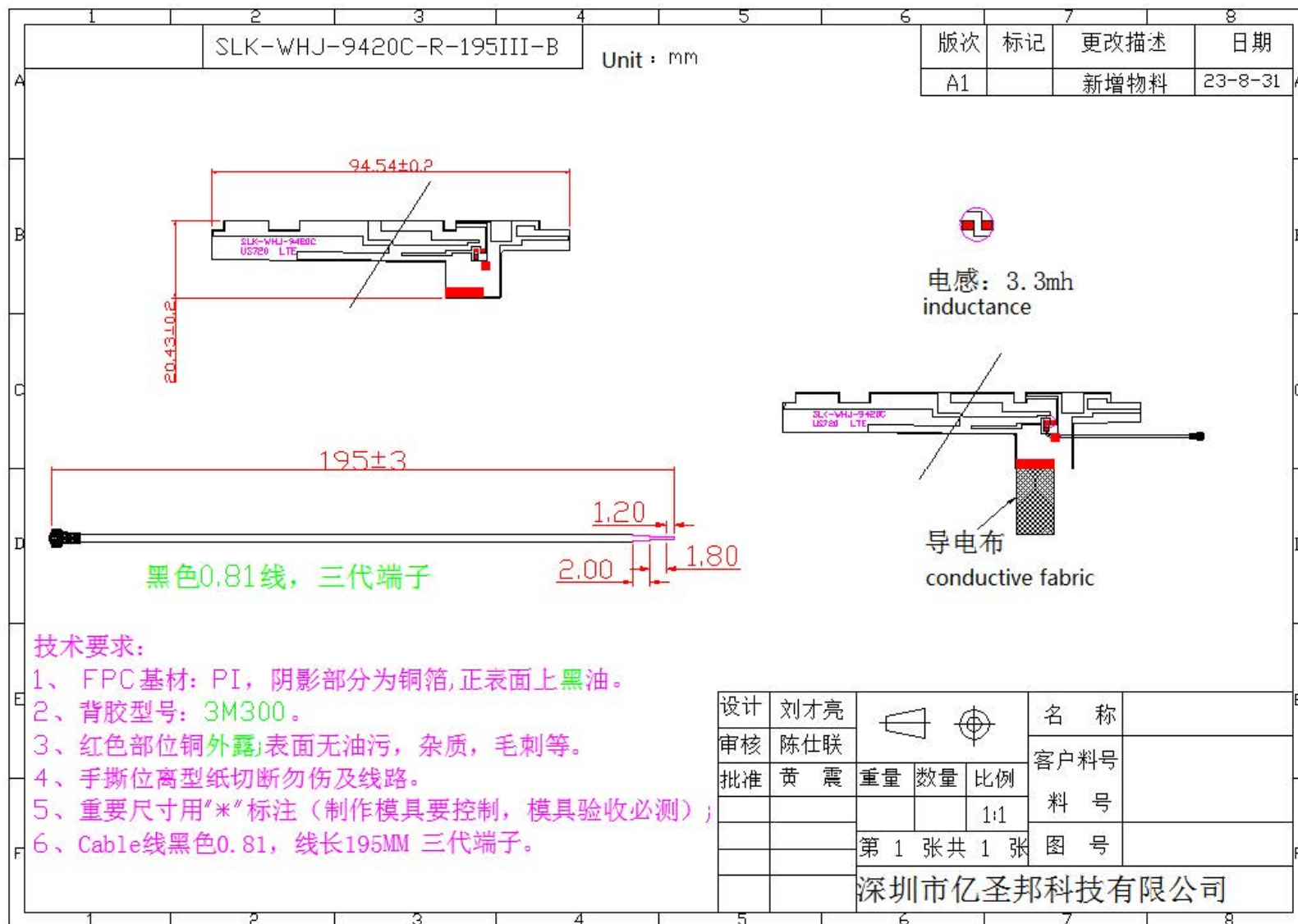
1. Product Overview & Dimension



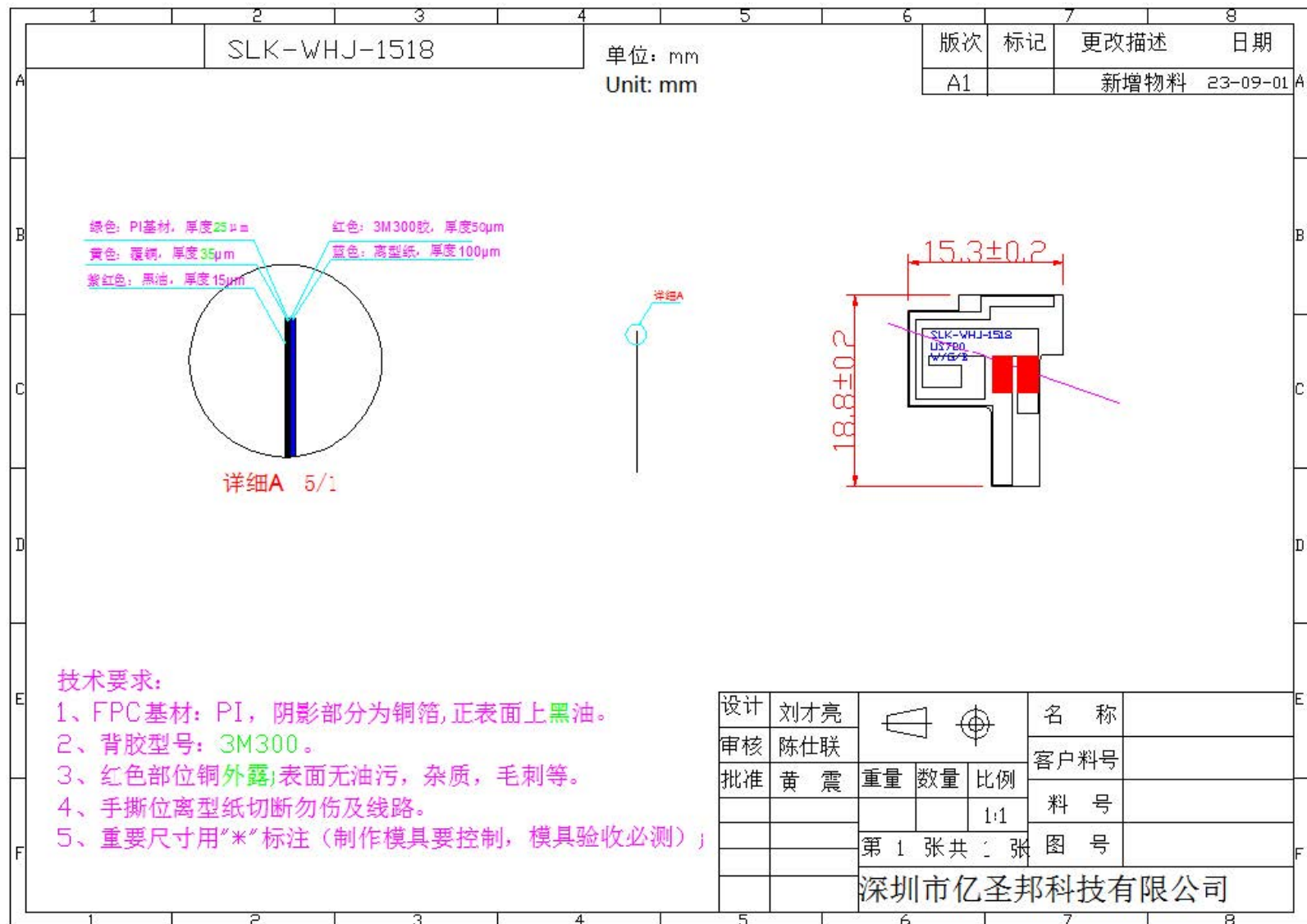
WIFI/GPS Ant

4G AUX Ant

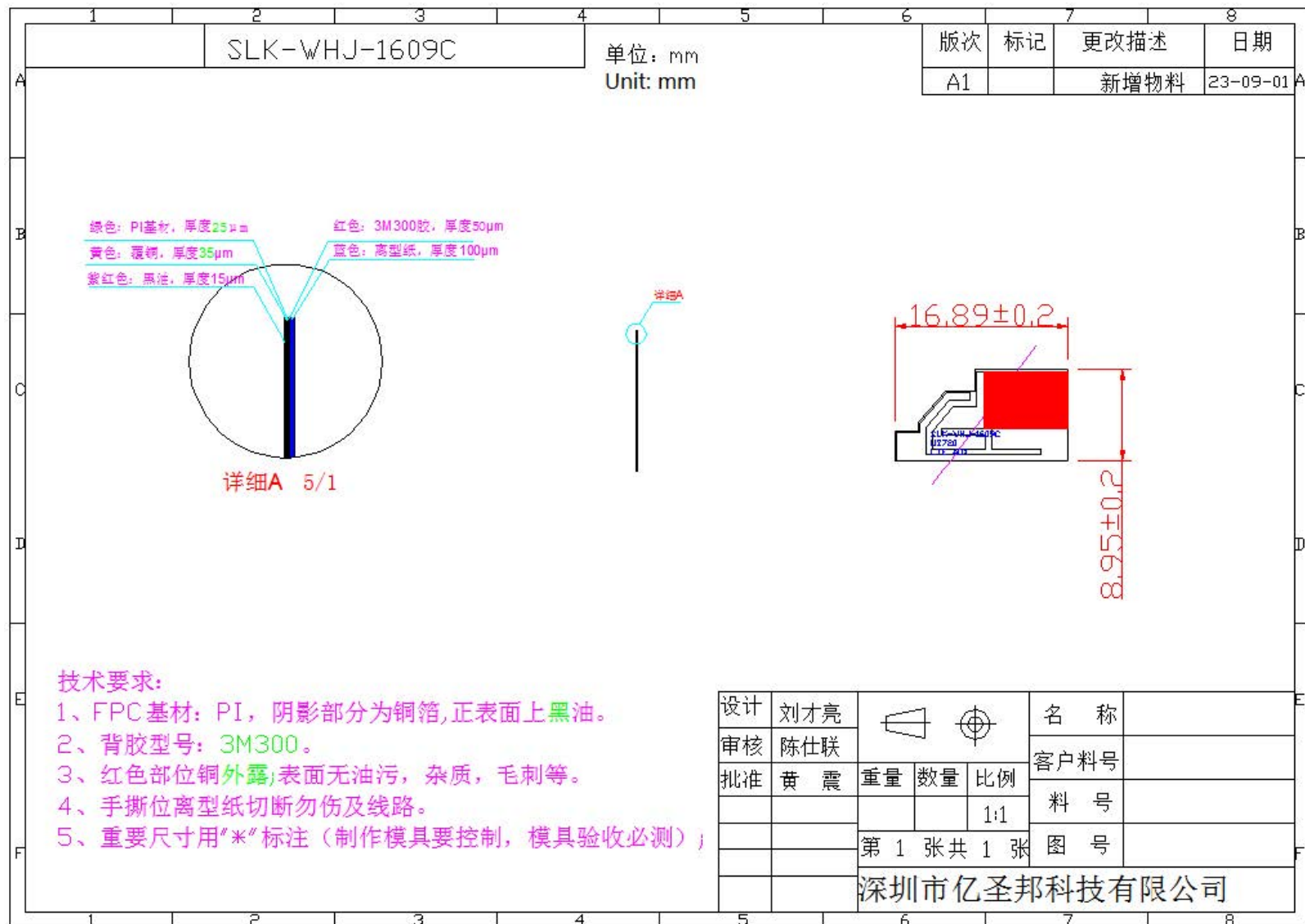
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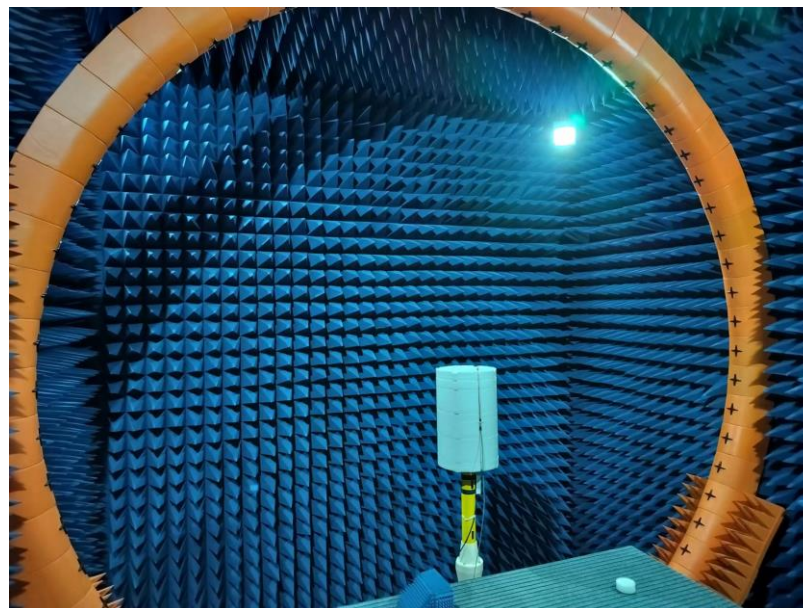
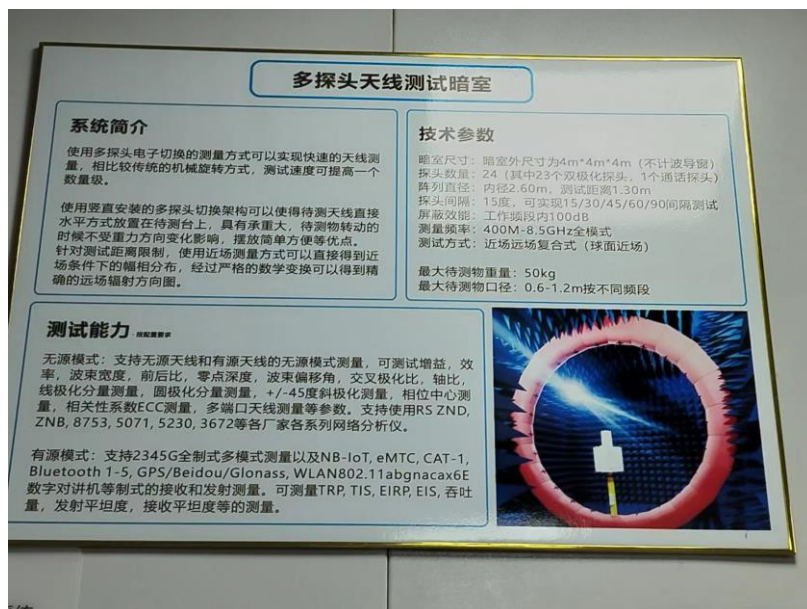


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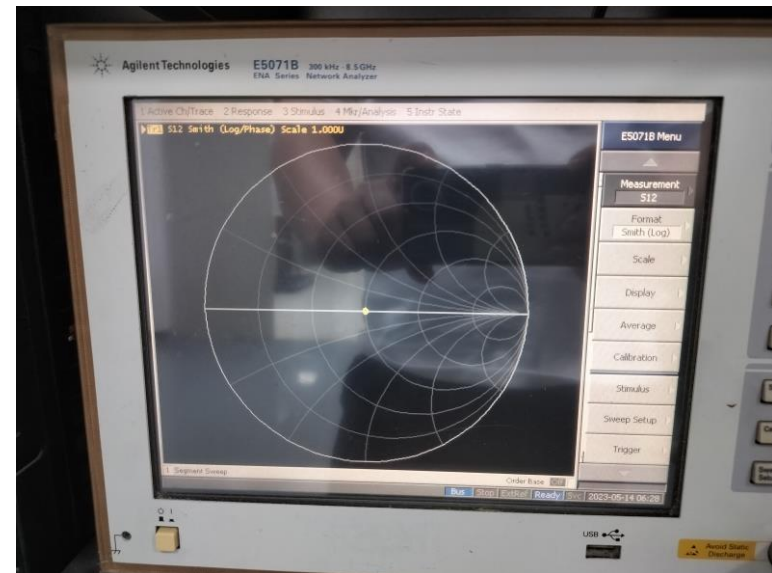
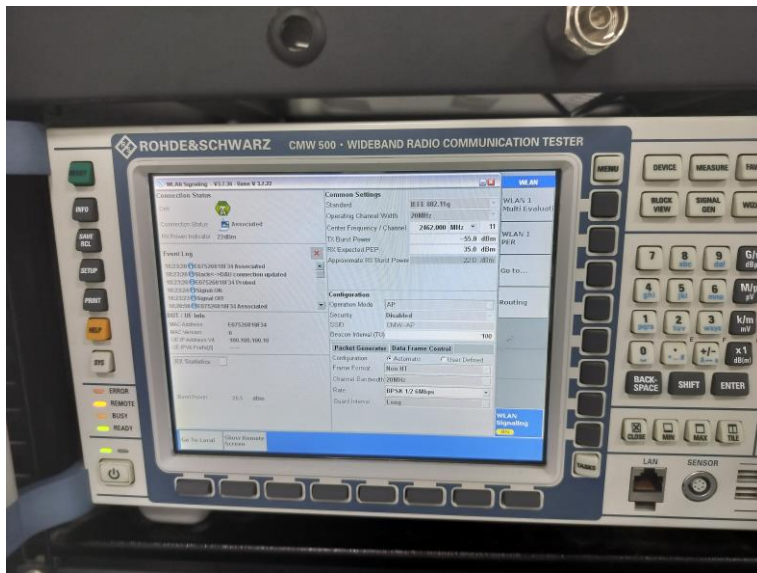
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Darkroom brand



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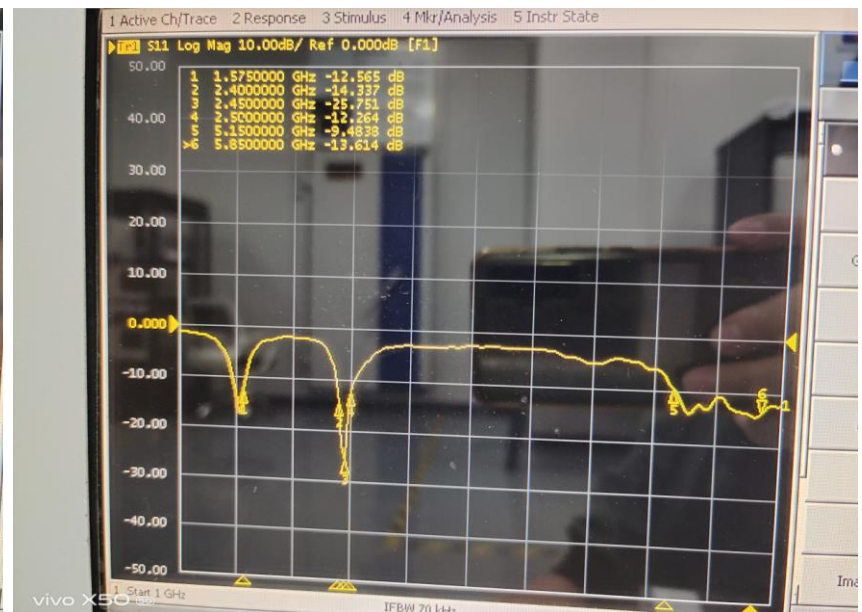
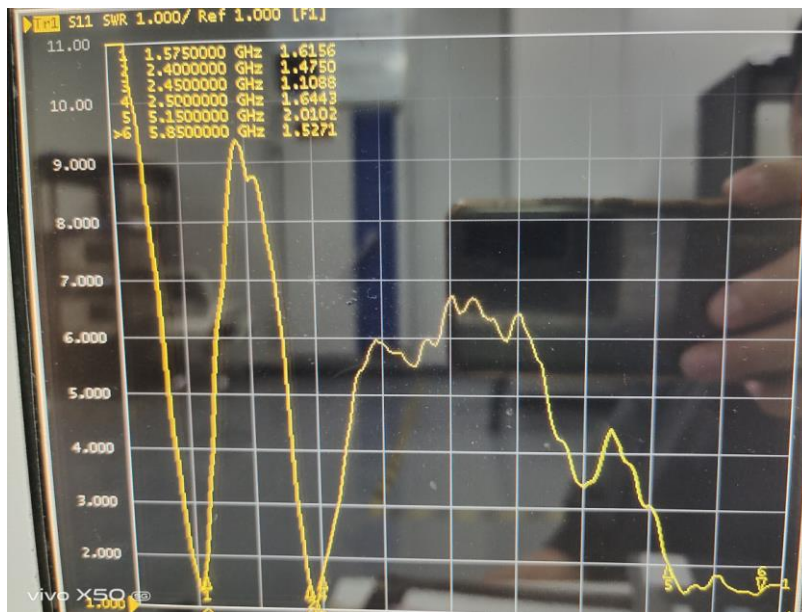
1. Product Overview & Dimension

Darkroom brand



2. Test Result

2.1 WIFI/GPS Antenna VSWR/S11



2. Test Result

2.2 WIFI/GSP Antenna Gain/Efficiency/3D DATA

Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)
1570.0	-4.65	0.16	34.25
1575.0	-4.77	0.30	33.33
1580.0	-4.53	0.19	35.22
2400.0	-4.18	0.89	38.23
2410.0	-4.04	1.19	39.44
2420.0	-4.09	1.13	39.01
2430.0	-4.36	1.12	36.65
2440.0	-3.99	1.27	39.86
2450.0	-4.05	0.85	39.34
2460.0	-3.96	1.16	40.15
2470.0	-4.26	1.13	37.51
2480.0	-4.36	0.74	36.64
2490.0	-4.24	1.02	37.64
2500.0	-4.19	0.97	38.09
5113.0	-4.94	2.75	32.03
5250.0	-4.72	2.07	33.74
5350.0	-4.86	2.61	32.69
5550.0	-4.66	2.72	34.21
5750.0	-4.53	2.51	35.23
5850.0	-4.17	2.44	38.31

Item	Gain
GPS	0.3dbi
BT	1.27dbi
2.4G WLAN	1.27dbi
5G WLAN	2.75dbi

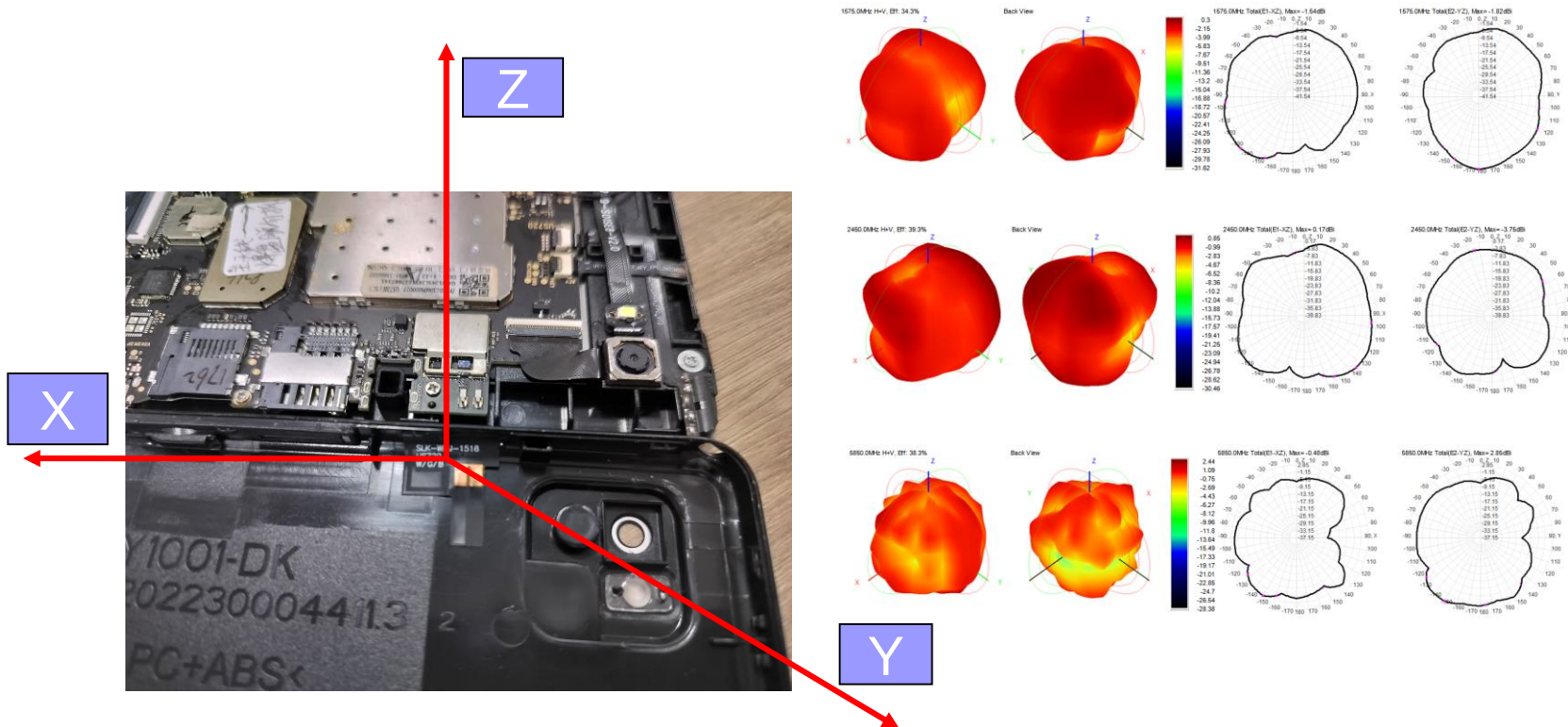
2. Test Result

2.2 WIFI active test

WIFI			
Band	1	6	11
B-TRP-11MBps	12.64	12.56	12.6
B-TIS-11MBps	-79.4	-79.04	-80.64
G-TRP-54MBps	11.29	12.37	11.76
G-TIS-54MBps	-67.02	-67.23	-67.45
N-TRP-MCS7	11.32	12.42	11.75
N-TIS-MCS7	-64.69	-65.09	-64.17
Band	36	149	165
A-TRP-54MBps	9.24	9.38	8.68
A-TIS-54MBps	-70.84	-71.07	-70.85

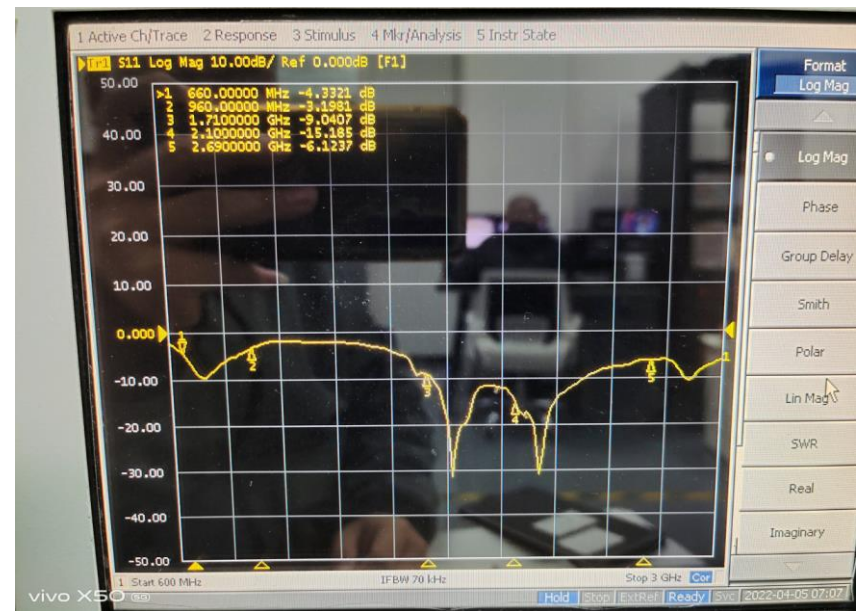
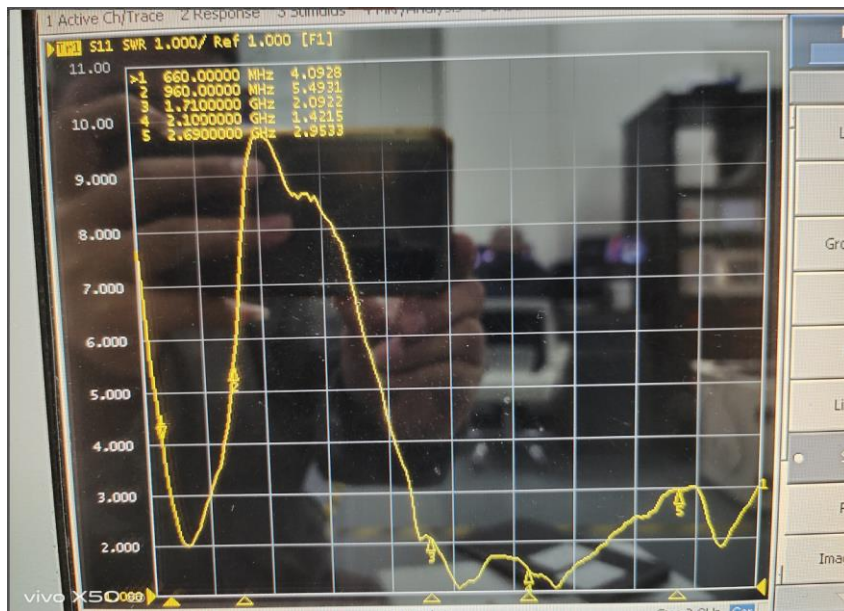
2. Test Result

2.2 WIFI/GPS Antenna Gain/Efficiency/3D DATA



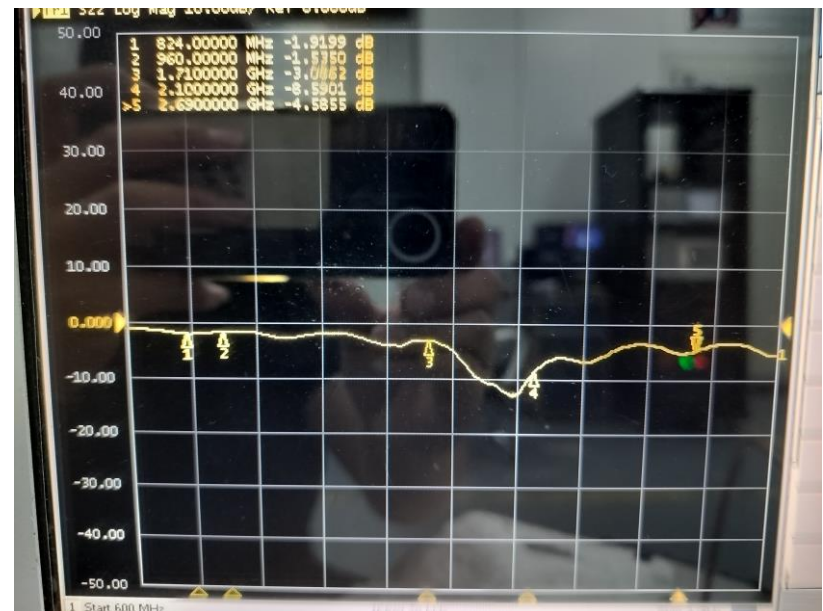
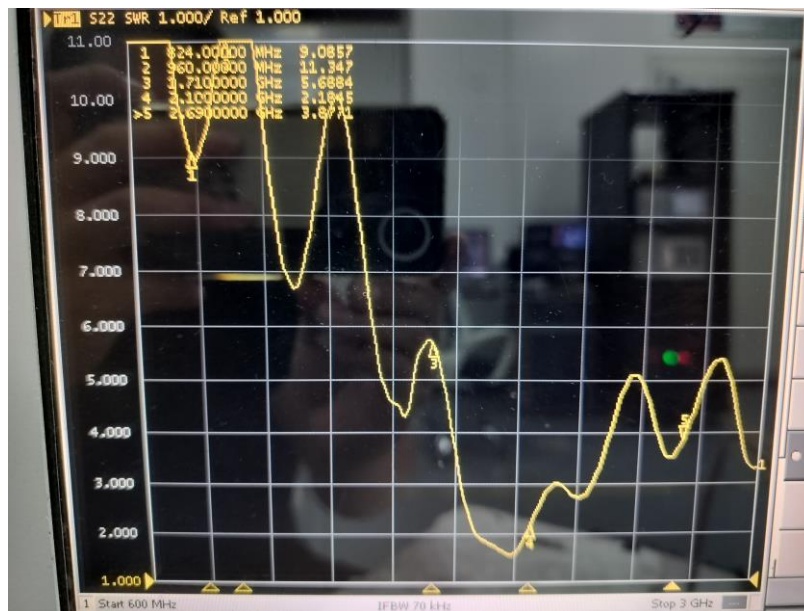
3. Test Result

3.1 4G MAIN Antenna VSWR/S11



3. Test Result

3.2 4G AUX Antenna VSWR/S11



3. Test Result

3.3 4G Antenna TRP/TIS

2G	LTE-L	LTE-M	LTE-R	TIS	Gain (dBi)
GSM850	25.24	24.59	24.18	-102.09	0.7
GSM900	26.09	25.33	24.97	-102.13	0.8
GSM1800	24.26	24.87	24.47	-102.33	1
GSM1900	24.77	24.08	24.16	-102.08	1.2
3G	LTE-L	LTE-M	LTE-R	TIS	Gain (dBi)
WCDMA-B1	17.78	18.07	18.14	-103.23	1.3
WCDMA-B2	18.28	17.91	17.42	-103.41	1.2
WCDMA-B4	17.46	18.04	18.25	-102.57	1
WCDMA-B5	16.14	15.43	14.82	-102.44	0.7
WCDMA-B8	16.09	15.29	14.91	-102.36	0.8
4G	LTE-L	LTE-M	LTE-R	TIS	Gain (dBi)
LTE-1	17.12	17.09	16.26	-93.14	1.3
LTE-2	17.59	17.12	17.28	-91.64	1.2
LTE-3	16.59	16.92	17.07	-90.37	1
LTE-4	16.87	16.18	16.22	-90.46	1
LTE5	16.22	15.89	14.91	-89.78	0.7
LTE-7	17.19	17.34	16.44	-90.18	1.6
LTE-12	15.38	15.05	14.29	-88.49	0.6
LTE-13	15.61	15.23	14.62	-88.61	0.6
LTE-41	16.07	16.28	16.33	-89.27	1.6
LTE-66	16.31	16.45	16.22	-90.47	1.1

4. Conclusions



As shown in the figure:

1. Wrap a large conductive cloth around the screen cable for shielding treatment.
2. Environmental treatment at the bottom of the motherboard, with conductive sponge attached to the copper leakage area and screen grounding treatment.