

Antenna Test Report

SHENZHEN KURUIJIE

Customer:

Project: TC8093A

RF Engineer: 曾凡

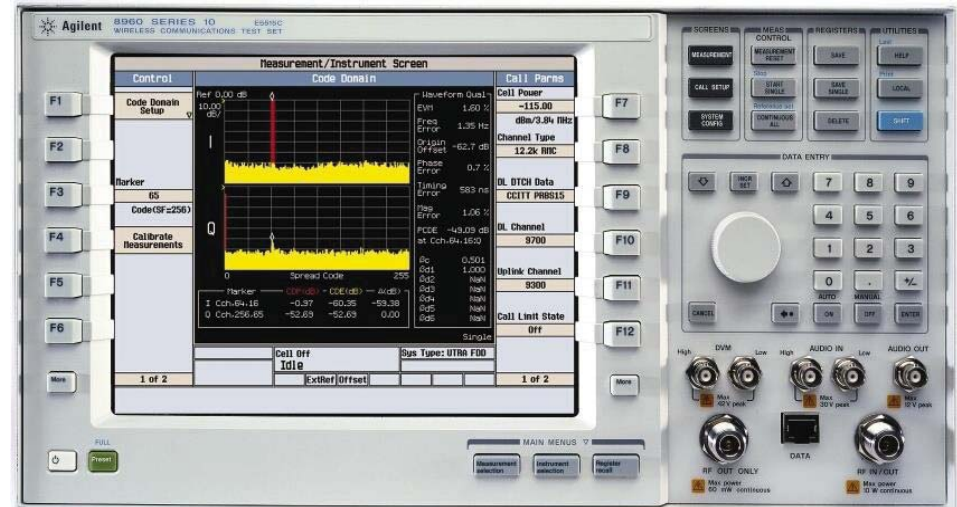
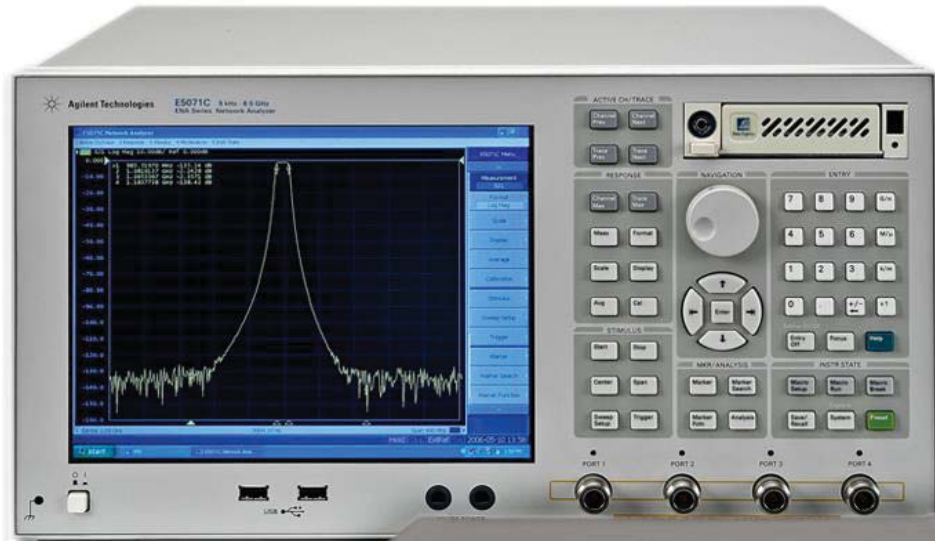
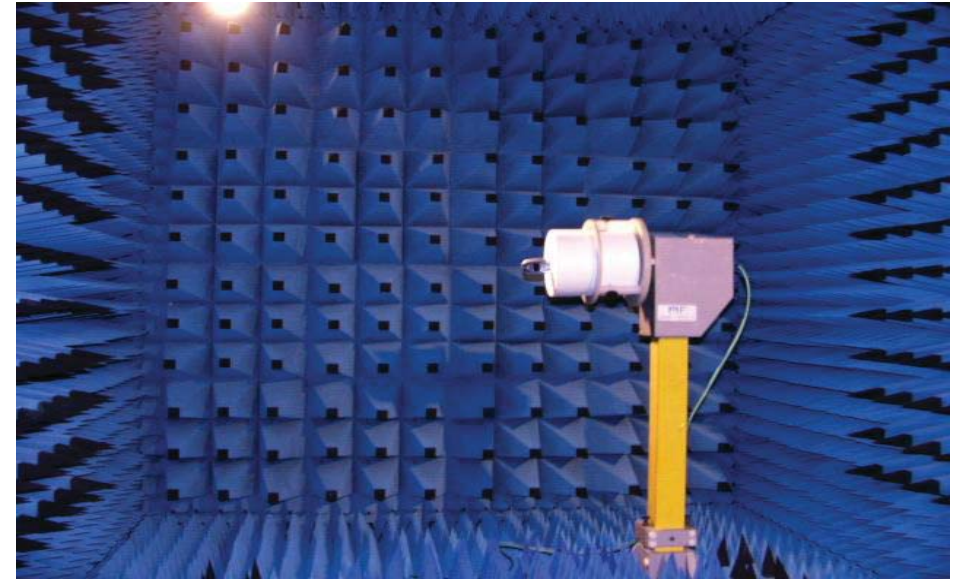
Testing Date: 2022.09.23

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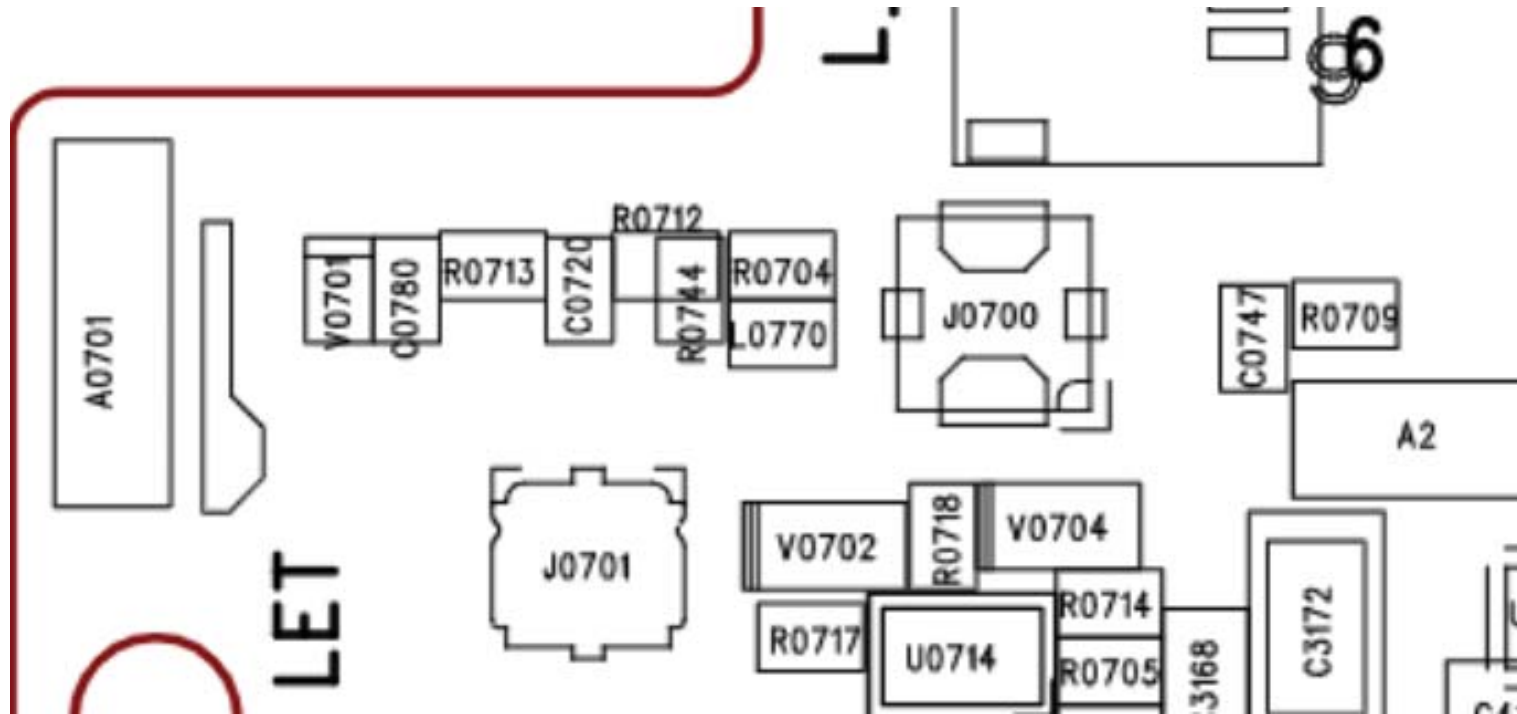
1. The Equipment of Active Test

- 1: Anechoic Chamber 7x4x3 m (3D)
- 2: Rohde & Schwarz CMW500
- 3: AGILENT 8960 5515C
- 4: Network Analyzer-AGILENT ENA5071B



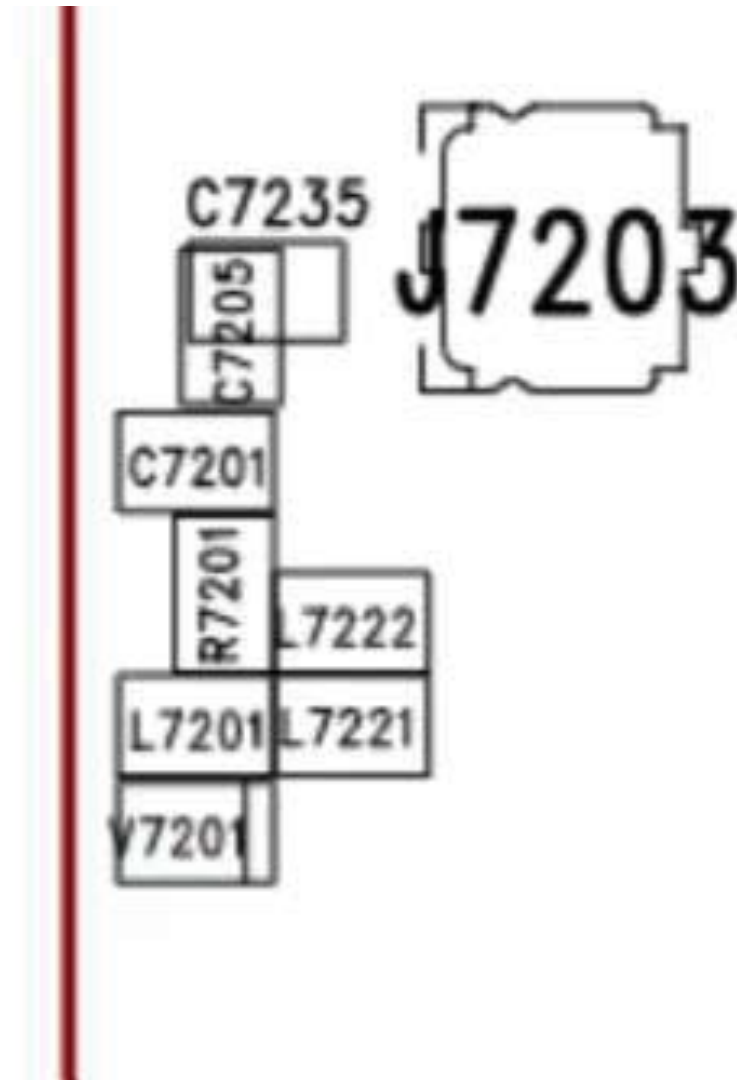
2. Matching Circuits-Main ANT

Element	Value
E1(0201)-R0744	0Ω
E2(0201)-R0704	0Ω

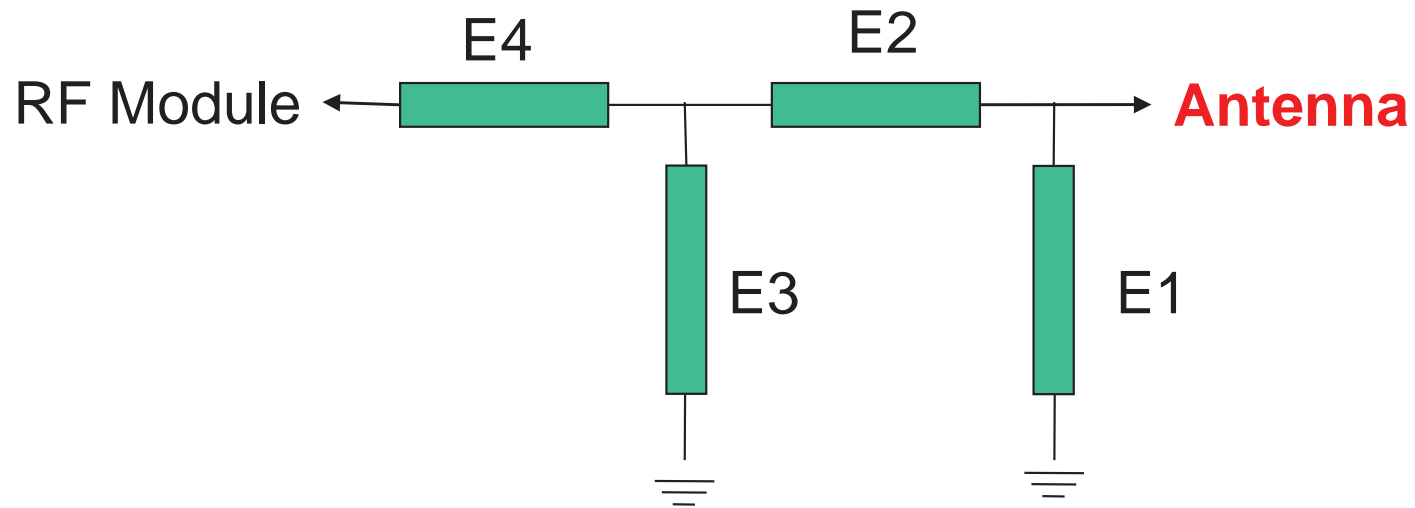


2. Matching Circuits-GWB ANT

Element	Value
E1(0201)-C7235	0Ω



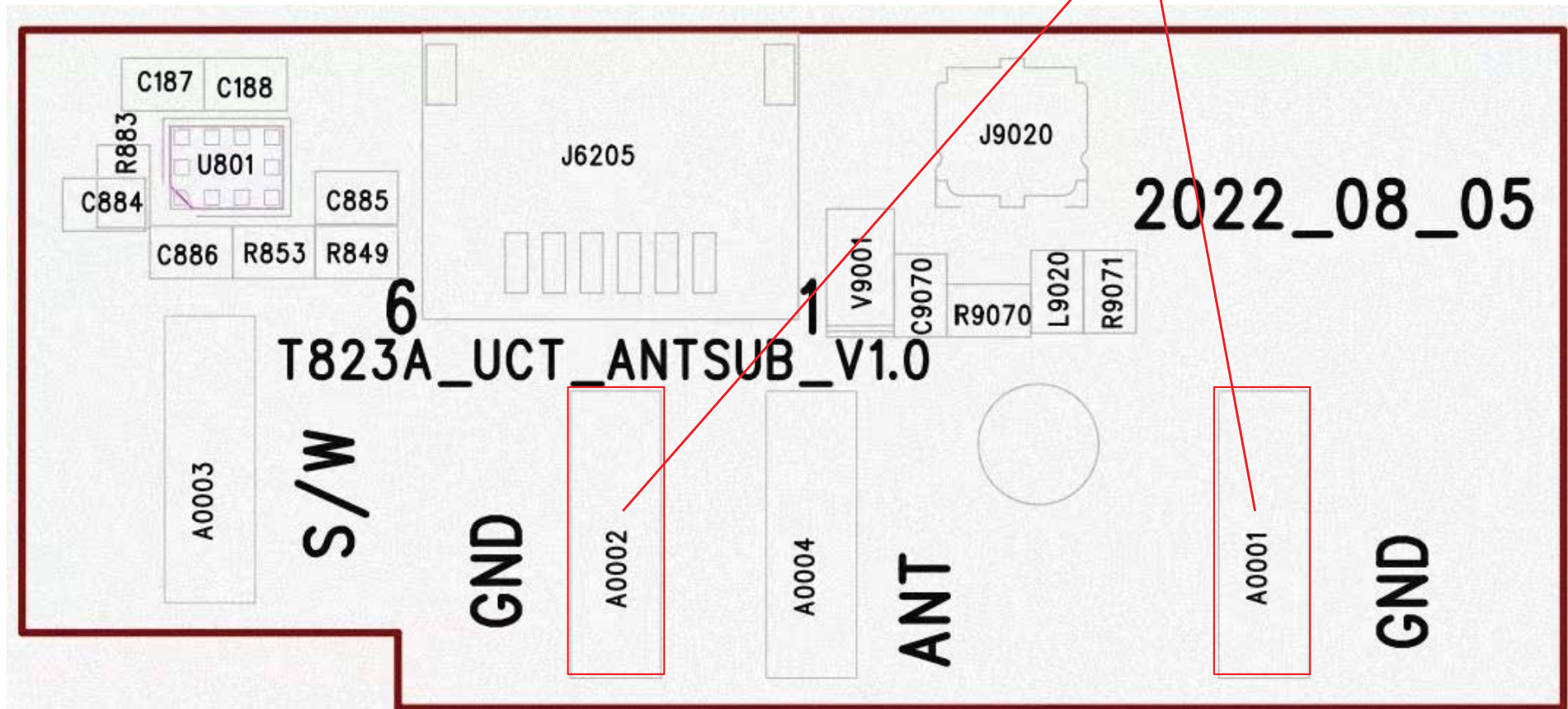
2. Matching Circuits



Element	Value
E1(0402)	
E2(0402)	
E3(0402)	

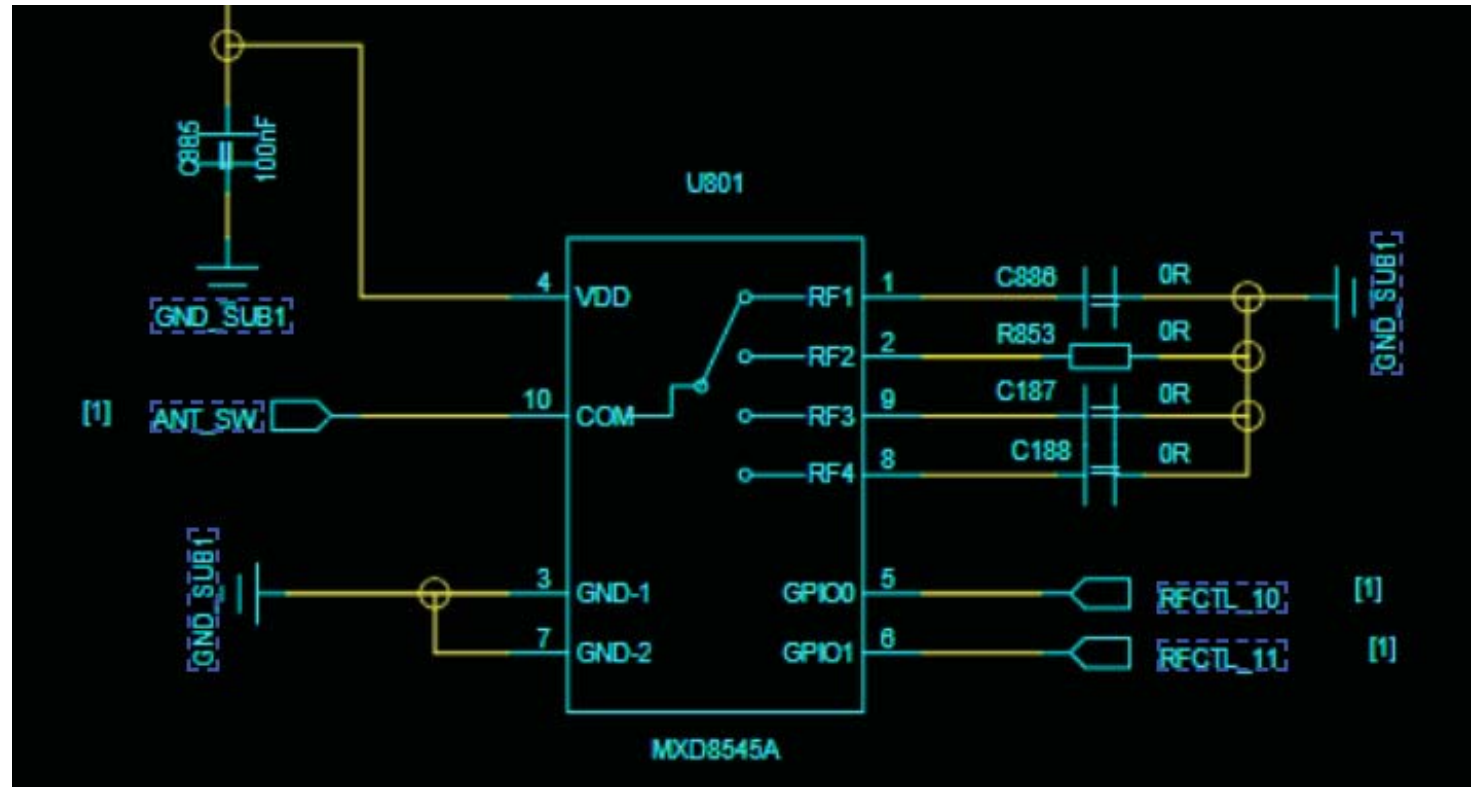
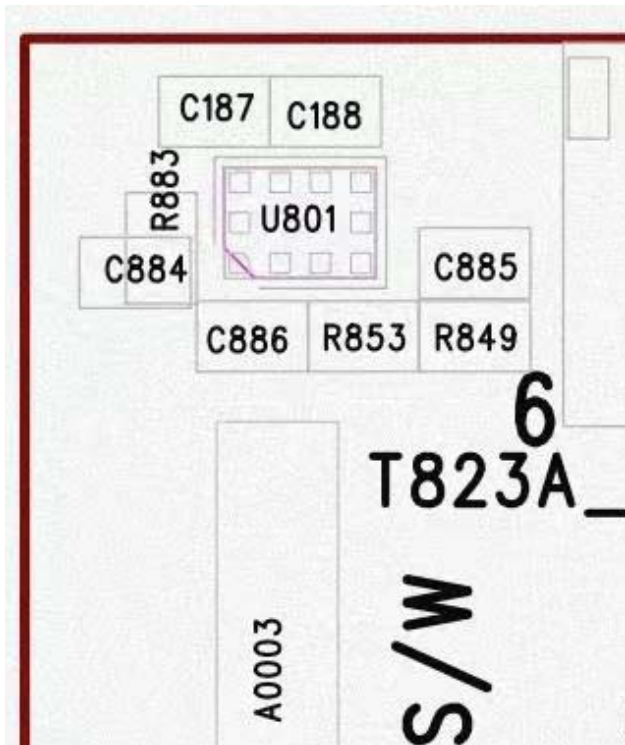
2. Matching Circuits

Element	Value
E1(0201)-C9070	NC
E2(0201)-R9070	3.9pF
E1(0201)-L9020	NC
E2(0201)-R9071	0Ω

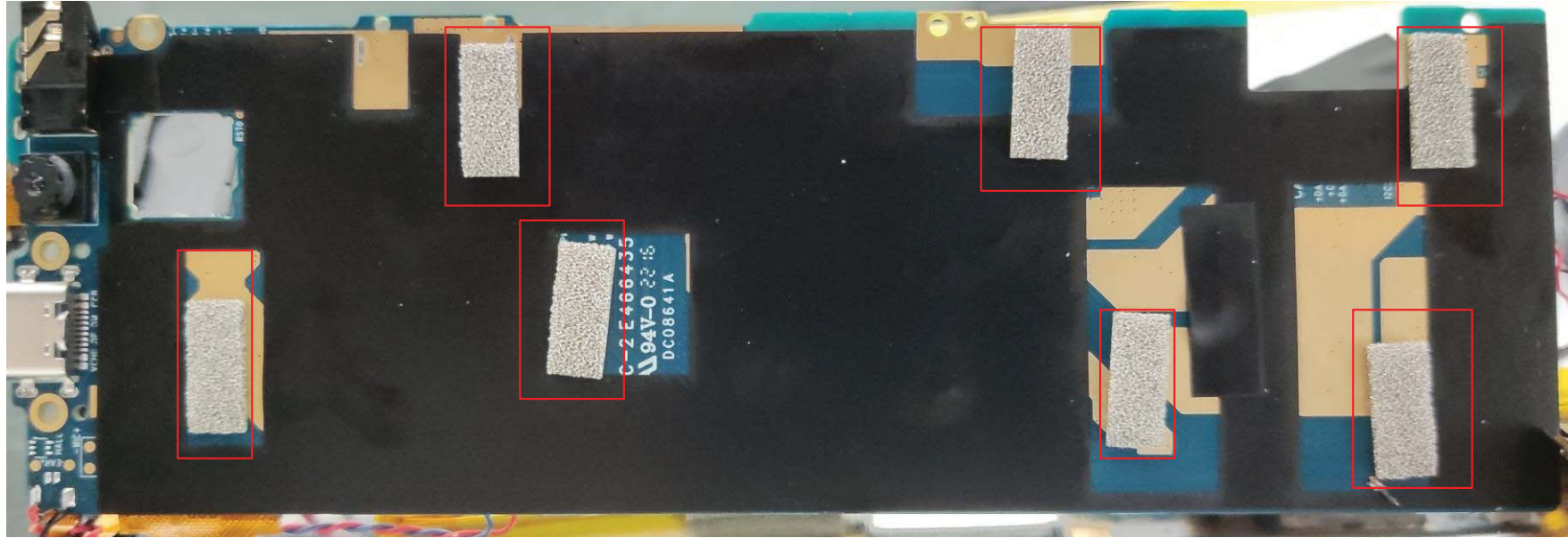


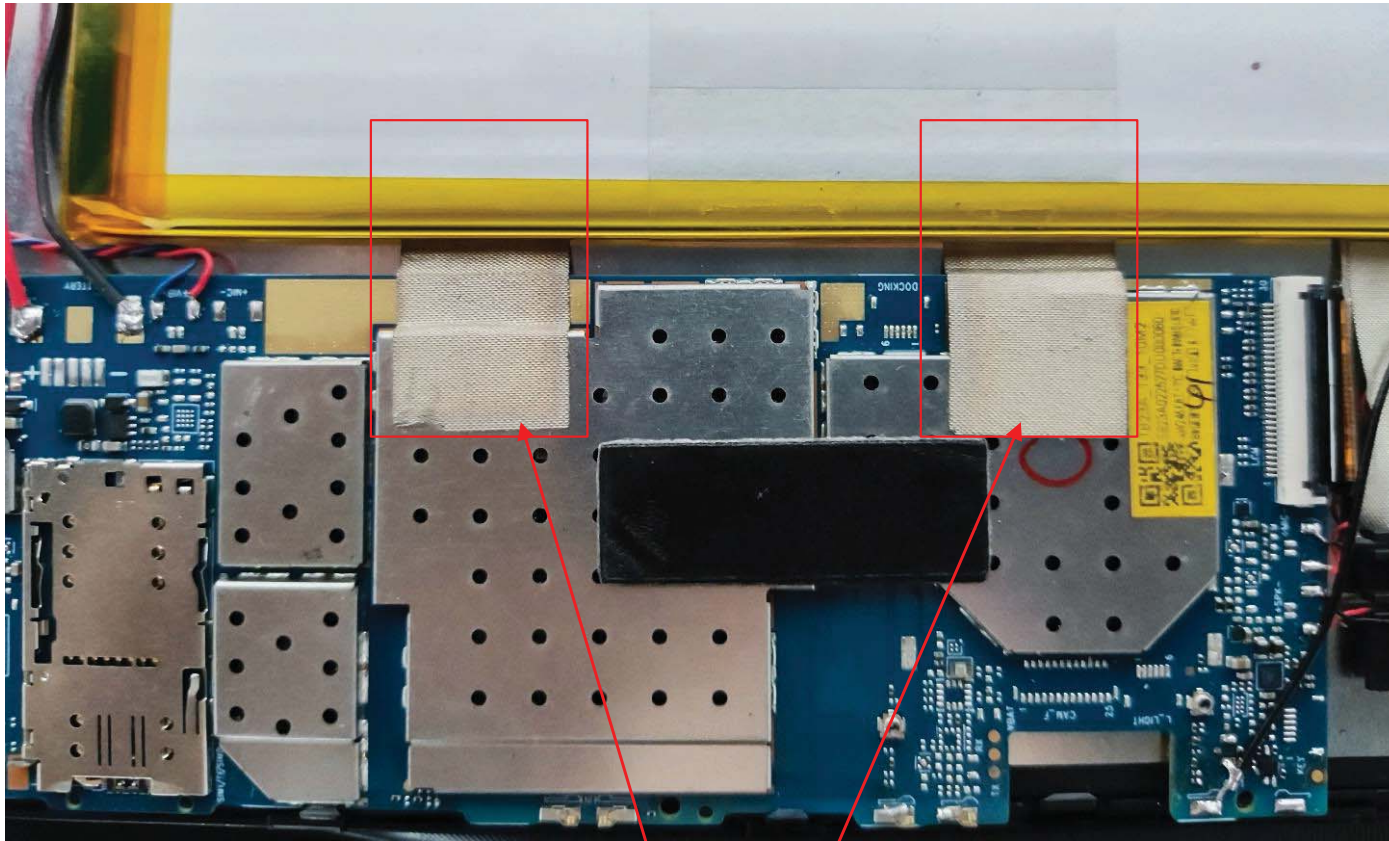
2. Matching Circuits

RF	Value	Band
RF1-C886	0Ω	GSM-GSM850/EGSM/DCS/PCS WCDMA-B2/4/5 LTE-B2/4/5/13/41/66
RF2-R853	2.7nH	LTE-B12/17
RF3-C187	4.7nH	LTE-B71

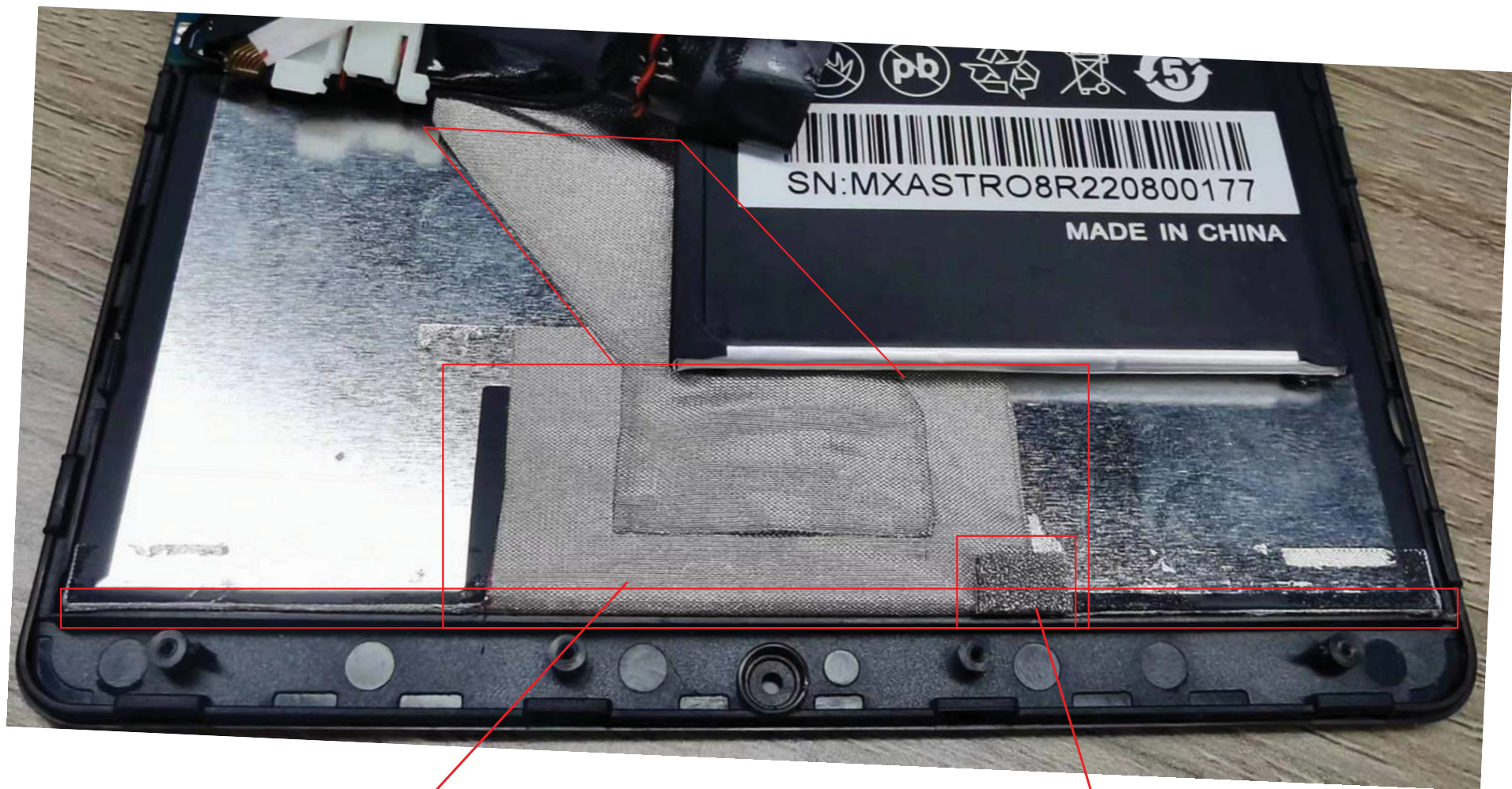


3. Environmental Disposal





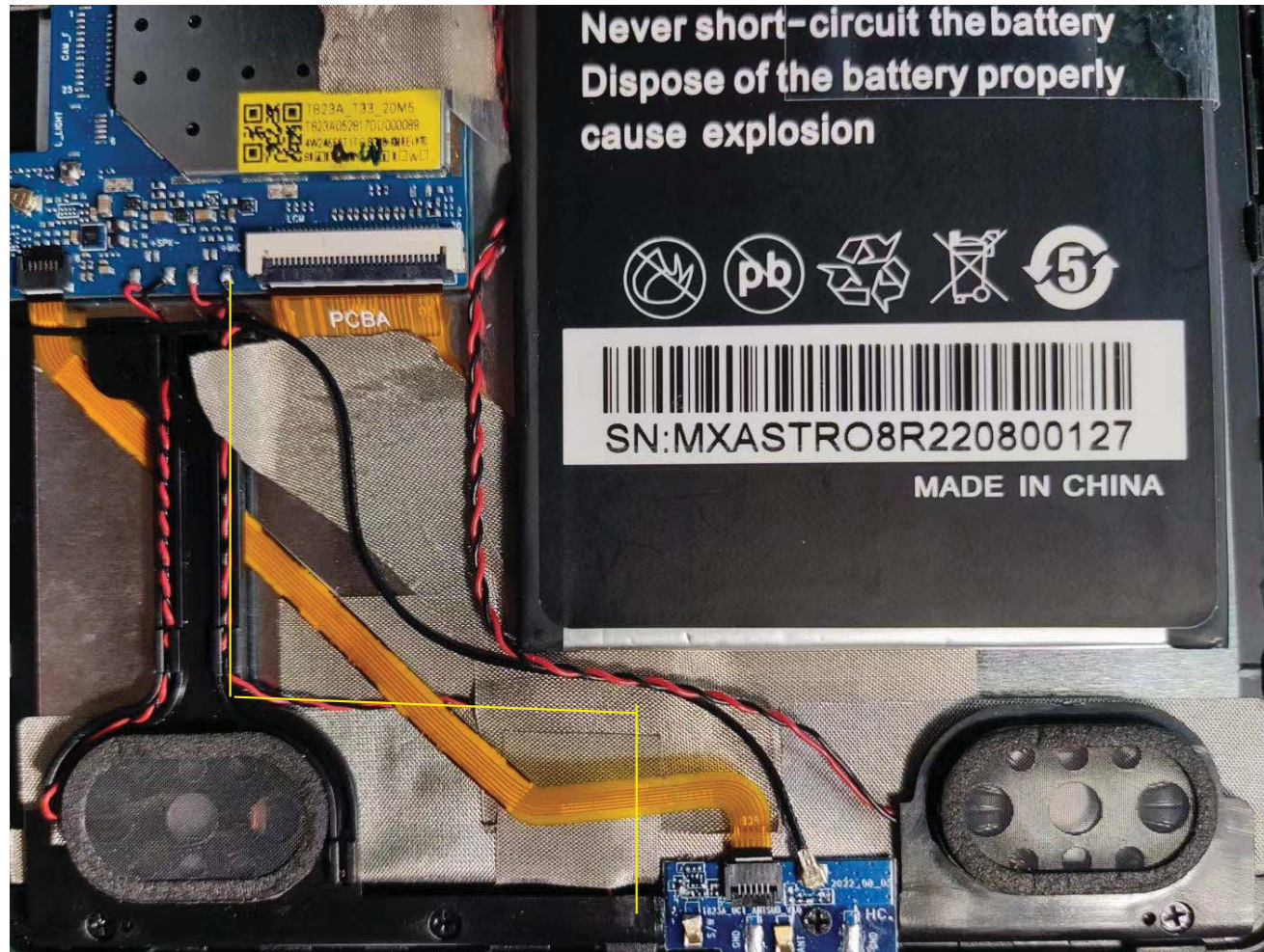
Motherboard
positive conductive
cloth will shield
connected with
metal screen frame



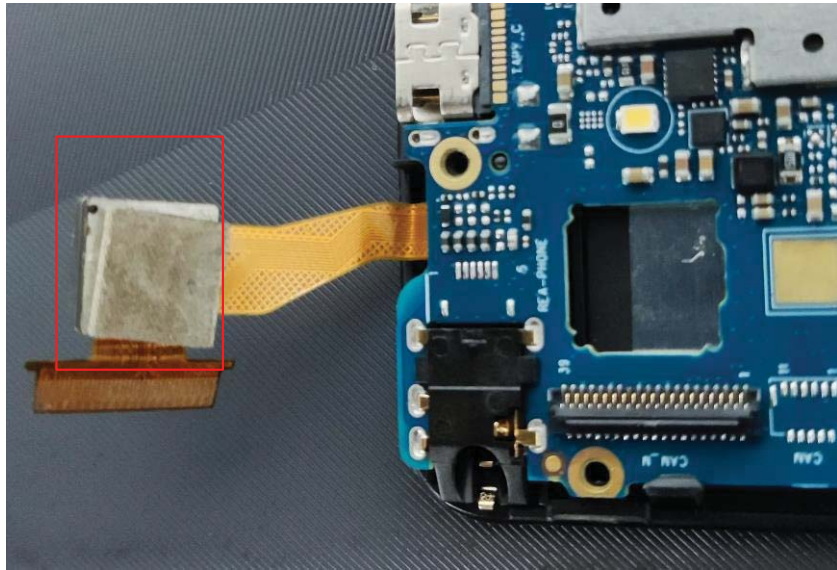
With conductive cloth
screen ribbon cable and
seat cover, and connected
with metal screen frame

Plastic shell inside the screen side also to package

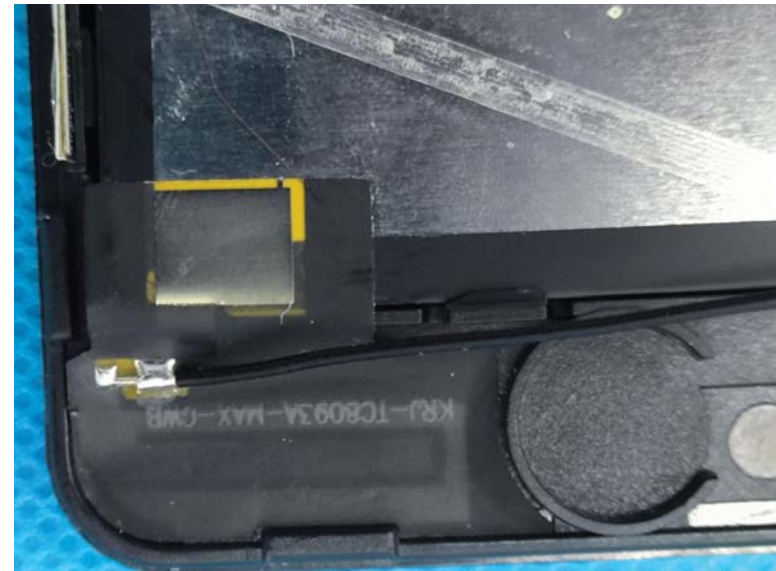
Small dew copper area below
the screen box sections 1
piece of conductive sponge,
the small plate connected
with screen box



The microphone line put way
The microphone line close to the antenna part
is put below the conductive cloth



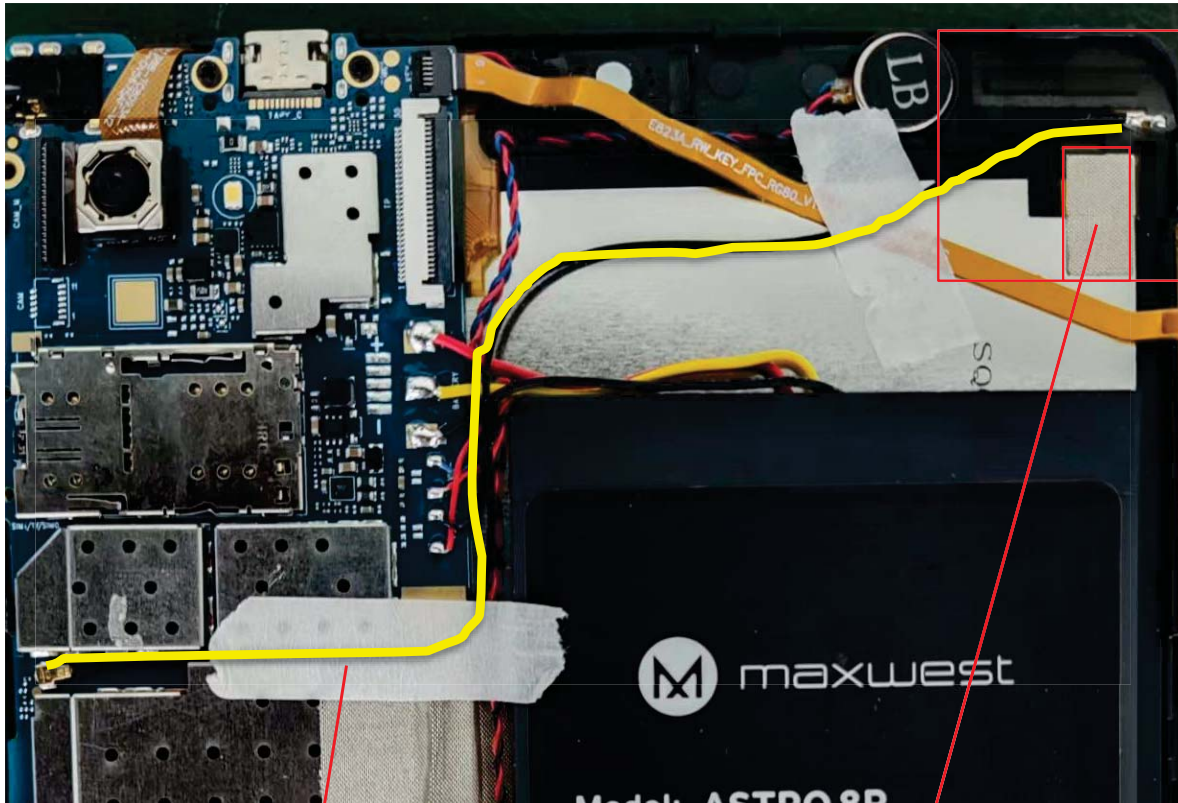
Conductive foam metal
screen frame
connected with camera



WIFI&BT&GPS ANT

Triad antenna

main antenna



Coaxial line put
way as shown in
figure the yellow
line

Dew copper area and the
triad antenna with
conductive cloth screen
box through

4. Test Data

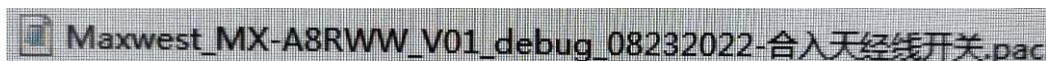
Test	GSM850 TRP			Test	GSM850 TIS
Result	128	190	251	Result	251
Txp Ave (dBm)	27.2	28.09	28.52	Sens Ave (dBm)	-104.59
Test	EGSM TRP			Test	EGSM TIS
Result	1	62	124	Result	124
Txp Ave (dBm)	26.04	25.53	25.47	Sens Ave (dBm)	-102.01
Test	DCS TRP			Test	DCS TIS
Result	512	698	885	Result	885
Txp Ave (dBm)	24.6	26.67	27.4	Sens Ave (dBm)	-106.73
Test	PCS TRP			Test	PCS TIS
Result	512	661	810	Result	810
Txp Ave (dBm)	27.1	27.23	26.39	Sens Ave (dBm)	-106.59

Test	WCDMA-2 TRP			Test	WCDMA-2 TIS
Result	9662	9800	9938	Result	9938
Txp Ave (dBm)	20.29	19.87	19.9	Sens Ave (dBm)	-104.15
Test	WCDMA-4 TRP			Test	WCDMA-4 TIS
Result	1537	1637	1738	Result	1738
Txp Ave (dBm)	19.85	19.79	20.28	Sens Ave (dBm)	-106.41
Test	WCDMA-5 TRP			Test	WCDMA-5 TIS
Result	4357	4408	4458	Result	4458
Txp Ave (dBm)	18.04	18.16	18.13	Sens Ave (dBm)	-105.72

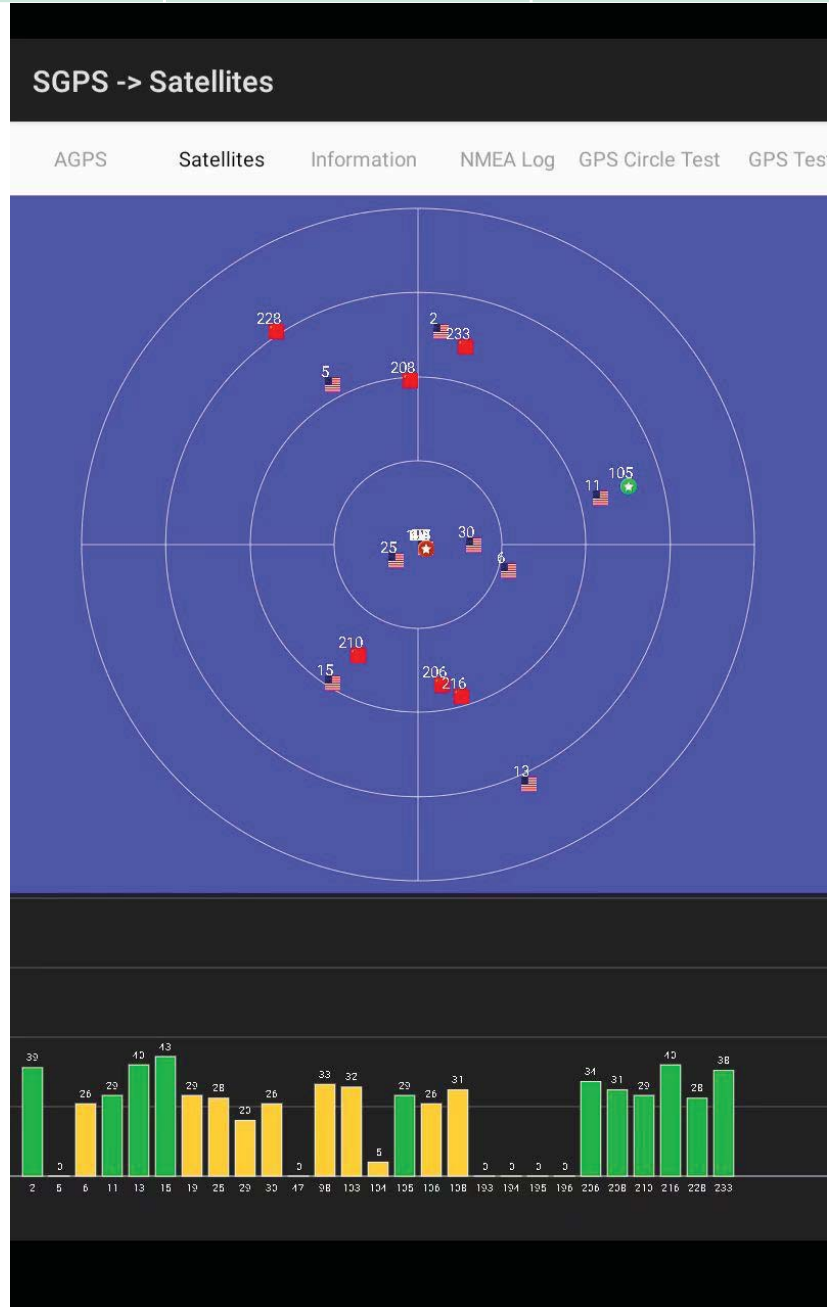
Test	Wifi 2G (b-11M)			Wifi 5G (a-54M)	
Result	1	7	13	36	165
TRP (dBm)	11.54	12.32	12.59	10.26	8.43
TIS (dBm)	-63.13	-75.96	-74.74	-69.56	-68.96

Test	LTE2 TRP			Test	LTE2 TIS
Result	18650	18900	19150	Result	1150
Txp Ave (dBm)	19.16	19.53	19.38	Sens Ave (dBm)	-90.11
Test	LTE4 TRP			Test	LTE4 TIS
Result	20000	20175	20350	Result	2350
Txp Ave (dBm)	19.48	19.37	20.52	Sens Ave (dBm)	-92.89
Test	LTE5 TRP			Test	LTE5 TIS
Result	20450	20525	20600	Result	2600
Txp Ave (dBm)	17.75	17.59	17.41	Sens Ave (dBm)	-92.06
Test	LTE12 TRP			Test	LTE12 TIS
Result	23060	23095	23130	Result	5130
Txp Ave (dBm)	16.08	16.13	16.54	Sens Ave (dBm)	-91.15
Test	LTE13 TRP			Test	LTE13 TIS
Result		23230		Result	5230
Txp Ave (dBm)		17.12		Sens Ave (dBm)	-92.11
Test	LTE17 TRP			Test	LTE17 TIS
Result	23780	23790	23800	Result	5800
Txp Ave (dBm)	16.24	16.49	16.57	Sens Ave (dBm)	-90.89
Test	LTE41 TRP			Test	LTE41 TIS
Result	40340	40740	41140	Result	41140
Txp Ave (dBm)	18.93	18.51	18.24	Sens Ave (dBm)	-91.64
Test	LTE66 TRP			Test	LTE66 TIS
Result	132022	132322	132622	Result	67086
Txp Ave (dBm)	19.58	19.64	20.17	Sens Ave (dBm)	-92.06
Test	LTE71 TRP			Test	LTE71 TIS
Result	133172	133297	133422	Result	68886
Txp Ave (dBm)	16.04	16.21	16.19	Sens Ave (dBm)	/

Trial production machine used software version, as shown in the figure below



测试位置	可用星数	最大星值	定位时间
光明华强产业园5C栋	5颗以上	43	80S



TC8093A 天线增益值

Band	Gain (dBi)
GSM850	0.43
GSM900	0.35
GSM1800 (DCS)	0.59
GSM1900 (PCS)	0.64
WCDMA-B2	0.64
WCDMA-B4	0.58
WCDMA-B5	0.43
LTE-B2	0.64
LTE-B4	0.58
LTE-B5	0.43
LTE-B12	0.21
LTE-B13	0.26
LTE-B17	0.21
LTE-B41	0.54
LTE-B66	0.59
LTE-B71	0.17
GPS-L1	0.46
WIFI	0.52
BT	0.52

