Antenna Test Report

Customer Name	Shenzhen Chainway Information Technology Co., Ltd
FCC ID	2AC6AMC95
Debugging frequency band	GSM-B2,3,5,8 WCDMA-B1,2,4,5,8 LTE-B1,2,3,4,5,7,8,12,17,20,28,34,38,39,40,41
Sub antenna	NFC,GPS/WIFI/BT
VERSION	V4.0
RF Engineering	Peng wei 18565640925

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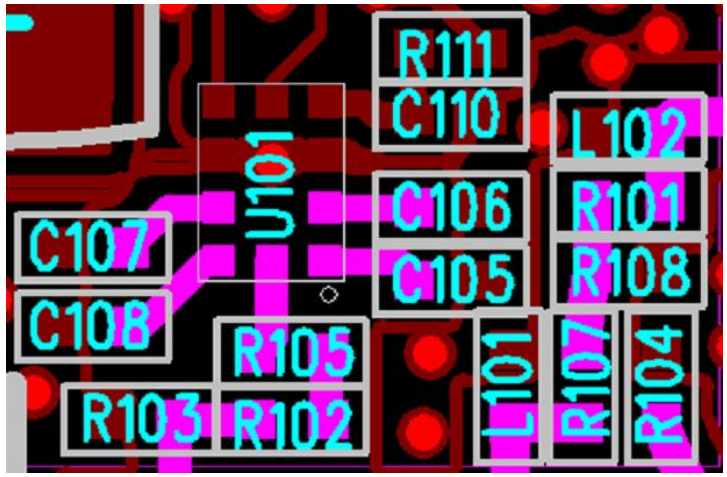
1.The Equipment of Active Test

1. ETS Chamber 7×4×3(m)/3*3*3（m）(3D Laboratory);

2. Vector network analyzer(Passive tester);

3. Network analyzer-5071E/B/Comprehensive measuring instrument-8960/LTE-RS-CMW500/MT8820C support2G、3G、4G/BT、WIFI、NB ;

2.Matching Circuit Main（Matching has changed）



Element	Matching Value
R108	0.5PF
R101	3.3NH
L102	18NH

Note: Matching details environment processing location.

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3：Antenna Test

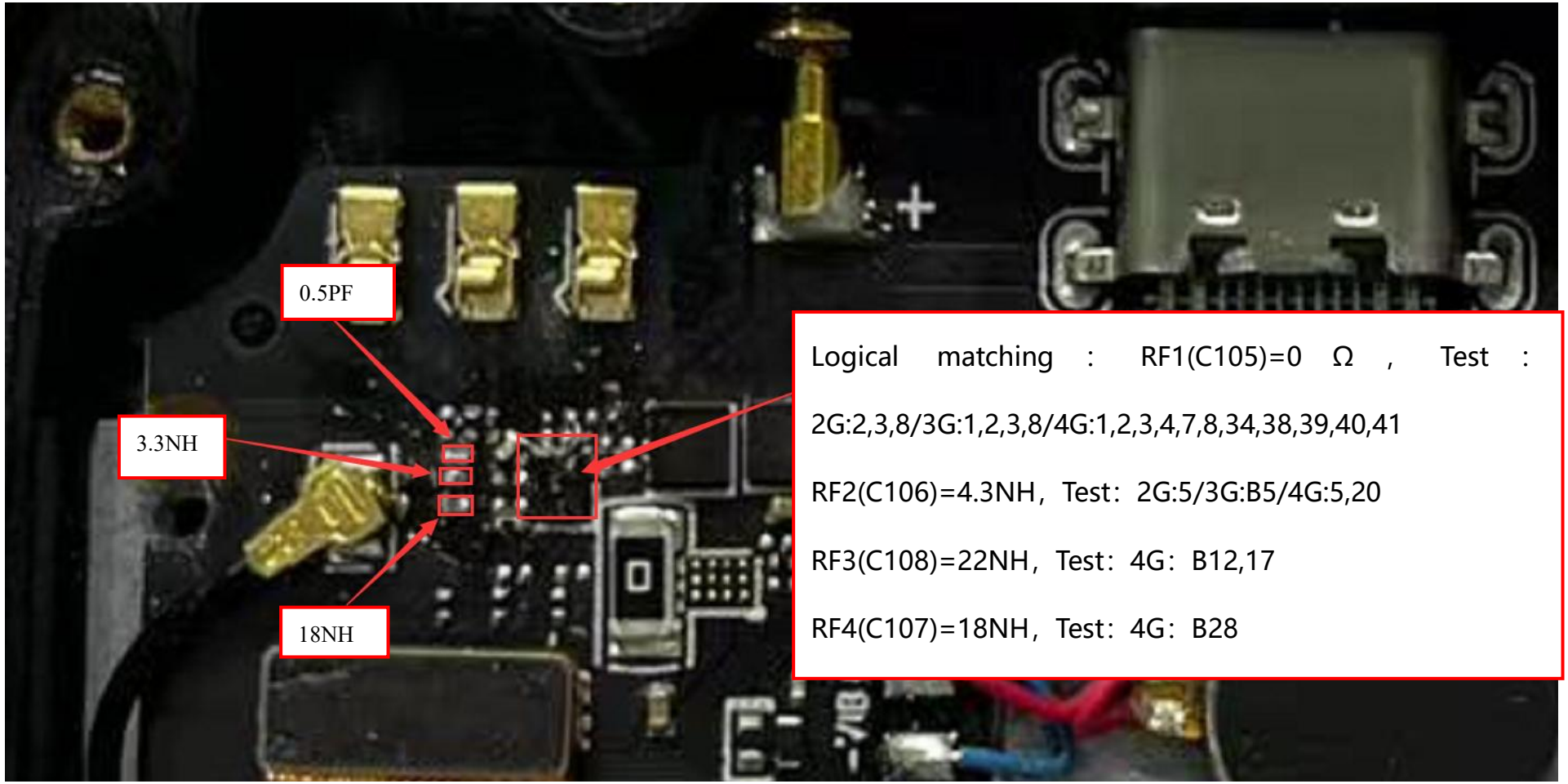
OTA Test data ：

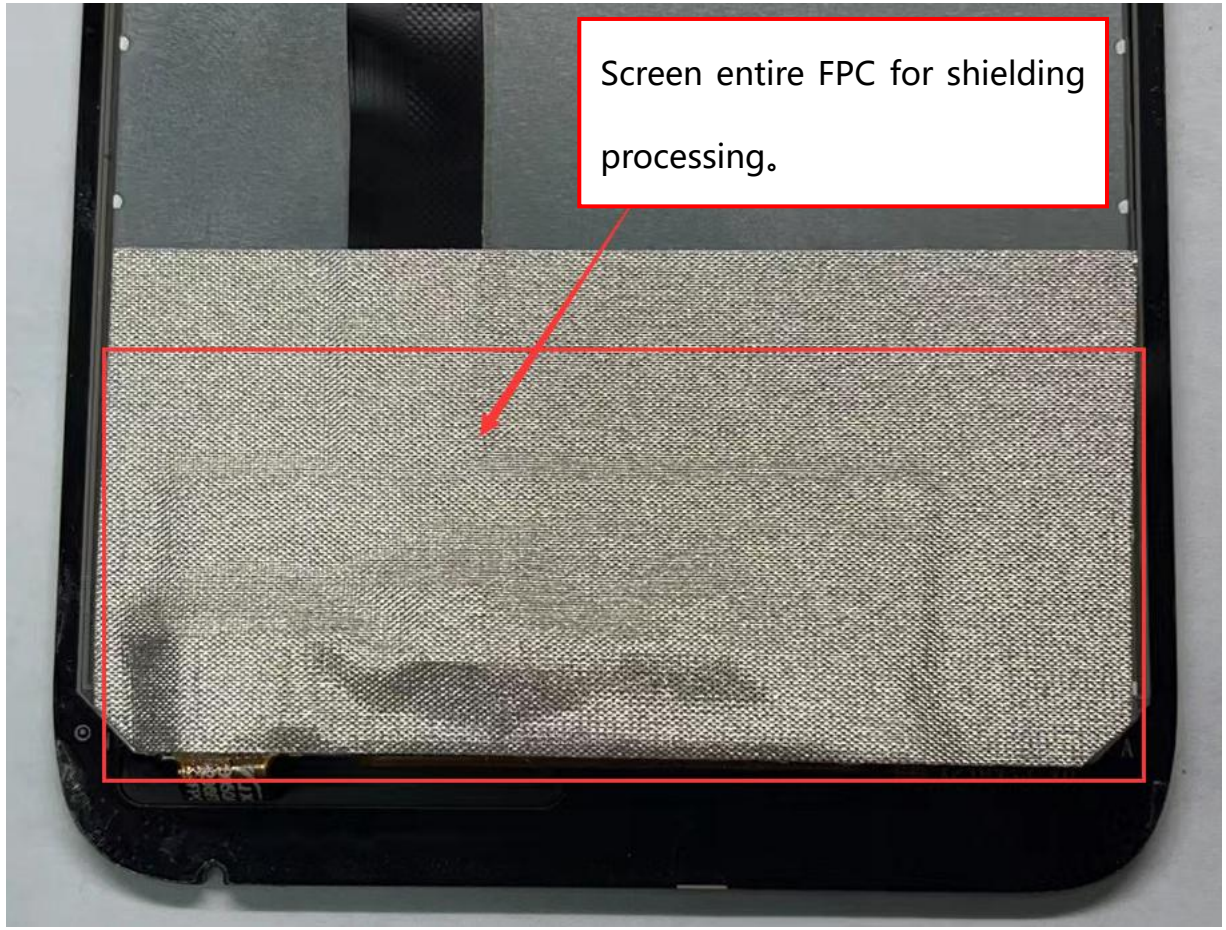
Model： X35				Antenna implementation method : FPC						Unit：dBm		
Channel	GSM850			GSM900			DCS1800			PCS1900		
	CH128	CH192	CH251	CH1	CH62	CH124	CH512	CH698	CH885	CH512	CH661	CH810
TRP	26.78	27.17	27.74	27.69	27.84	27.23	24.61	24.37	24.10	25.32	24.97	24.65
TIS			-101.74			-102.25			-103.48			-103.81
Channel	WCDMA-2100			WCDMA-1900			WCDMA-850			WCDMA-900		
	CH10562	CH10700	CH10838	CH9663	CH9800	CH9938	CH4357	CH4408	CH4458	CH2937	CH3013	CH3083
TRP	18.26	17.81	17.51	17.62	17.89	18.22	17.79	18.11	18.25	17.42	17.73	17.10
TIS			-102.32			-103.98			-103.17			-102.64

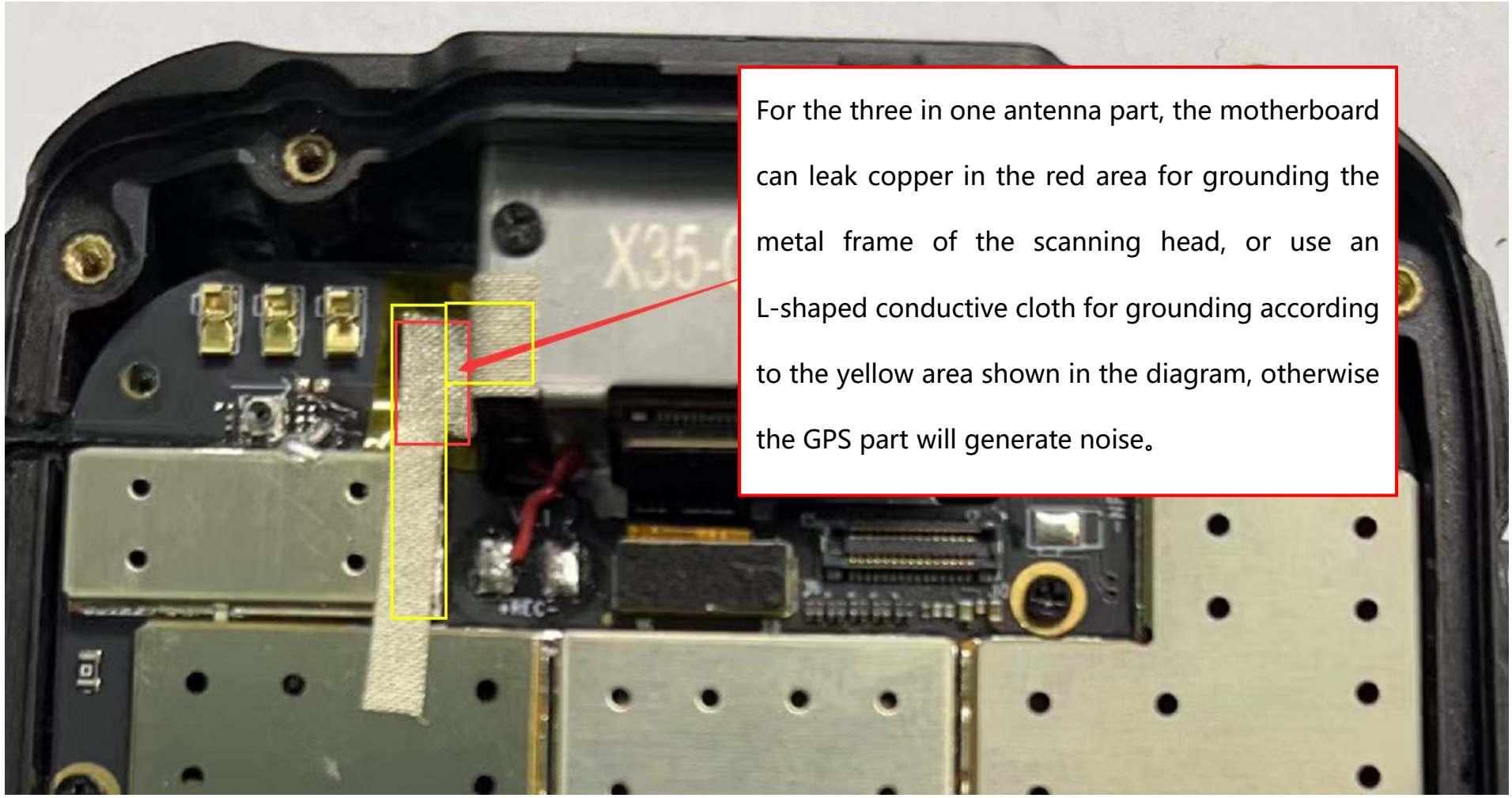
Channel	LTE-FDD-B1			LTE-FDD-B2			LTE-FDD-B3			LTE-FDD-B4		
	CH18050	CH18300	CH18550	CH18650	CH18900	CH19150	CH19250	CH19575	CH19900	CH20000	CH20175	CH20350
TRP	18.21	18.44	18.62	18.11	18.38	18.32	17.12	17.70	17.28	17.51	17.83	17.79
TIS			-91.25			-92.55			-92.07			-92.09
Channel	LTE-FDD-B5			LTE-FDD-B7			LTE-FDD-B8			LTE-FDD-B12		
	CH20450	CH20525	CH20600	CH20800	CH21100	CH21400	CH21500	CH21625	CH21750	CH23060	CH23095	CH23130
TRP	17.18	17.46	17.63	17.77	17.75	18.07	17.83	18.01	17.76	16.44	16.01	16.51
TIS			-91.12			-92.02			-90.03			-91.23
Channel	LTE-FDD-B17			LTE-FDD-B20			LTE-FDD-B28			WCDMA-1700		
	CH23780	CH23790	CH23800	CH24200	CH24300	CH24400	CH27260	CH27435	CH27610	CH1537	CH1638	CH1738
TRP	16.03	16.28	16.15	17.43	17.68	18.16	16.25	16.40	16.12	17.19	17.38	17.77
TIS			-91.04			-92.35			-89.16			-102.41

Channel	LTE-TDD-B38			LTE-TDD-B39			LTE-TDD-B40			LTE-TDD-B41		
	CH37850	CH38000	CH38150	CH38350	CH38450	CH38550	CH38750	CH39150	CH39550	CH40340	CH40620	CH41140
TRP	18.09	18.58	18.44	17.76	18.10	18.38	16.81	17.40	17.09	18.14	18.53	18.22
TIS			-92.37			-91.91			-92.03			-91.87

4：Environmental treatment

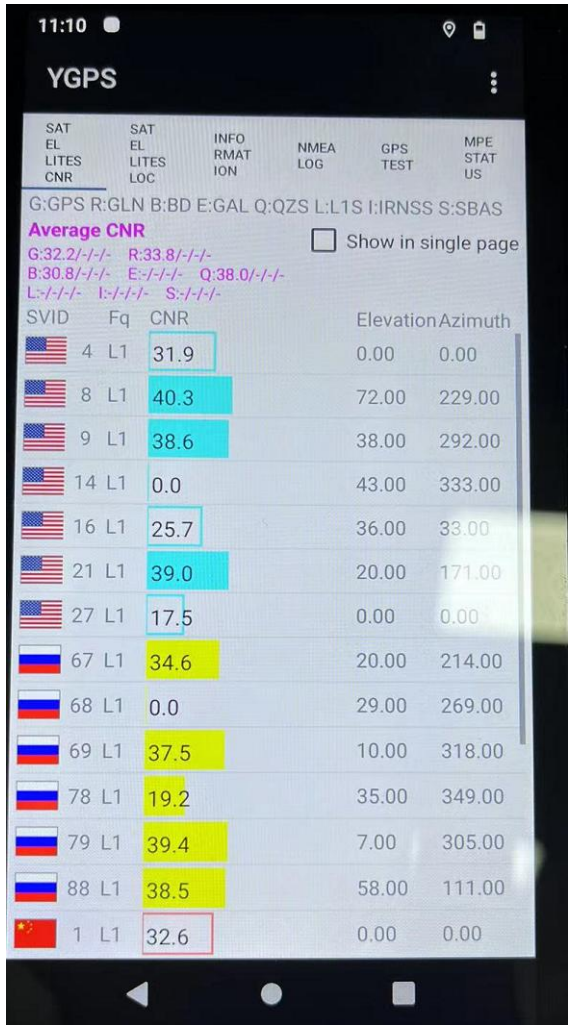



Screen entire FPC for shielding processing。


For the three in one antenna part, the motherboard can leak copper in the red area for grounding the metal frame of the scanning head, or use an L-shaped conductive cloth for grounding according to the yellow area shown in the diagram, otherwise the GPS part will generate noise。

5：GPS/WIFI/BT

GPS	Maximum signal strength	Number of search stars	Positioning time (s)	Weather
	40	18	60-90	晴
WIFI	Normal internet distance（m）		Online browsing for smooth flow distance（m）	
	12-15		10-12	
BT	Clear call distance（m）			
	10-12			



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6：NFC Antenna

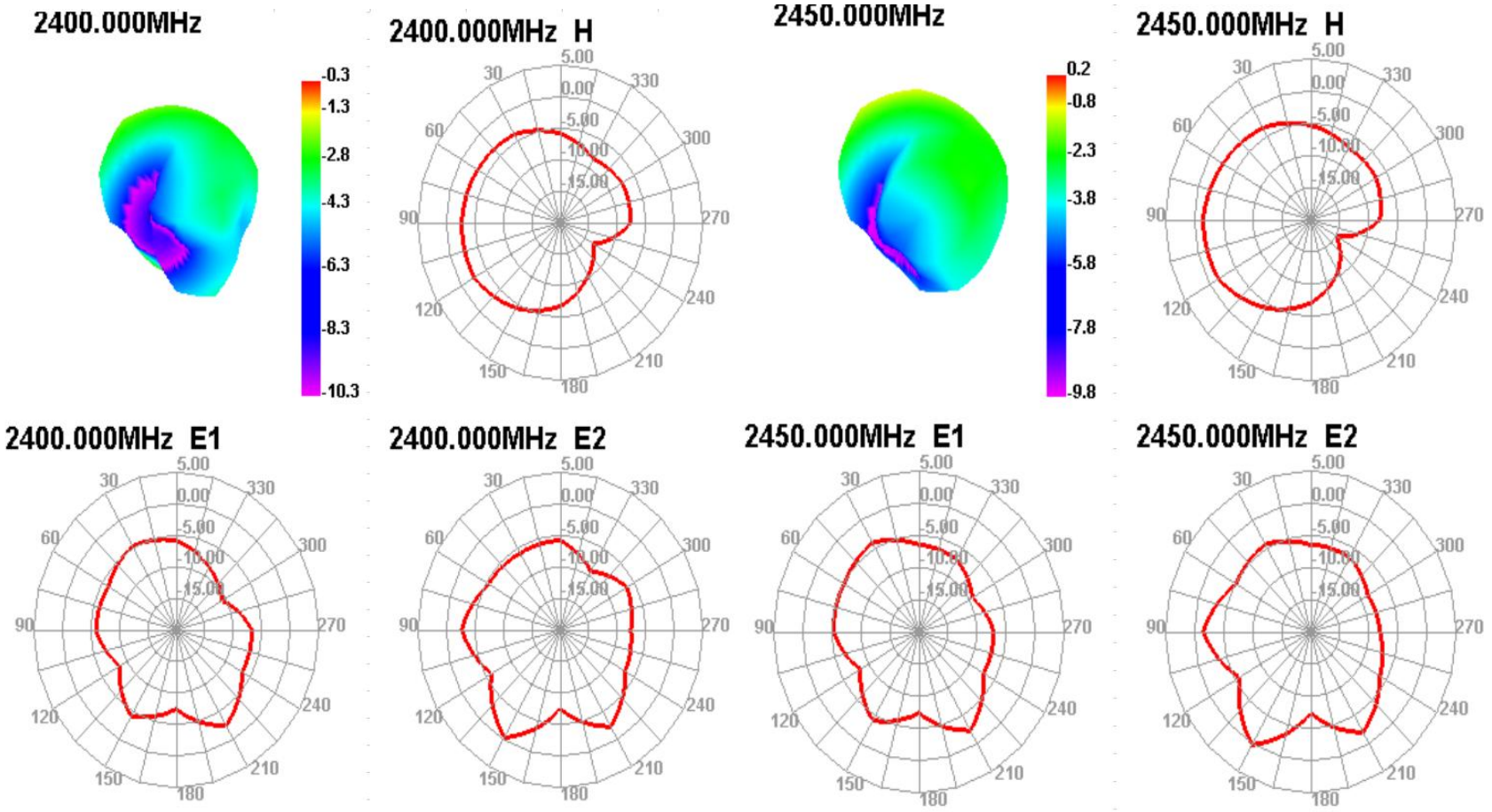
Measured data:

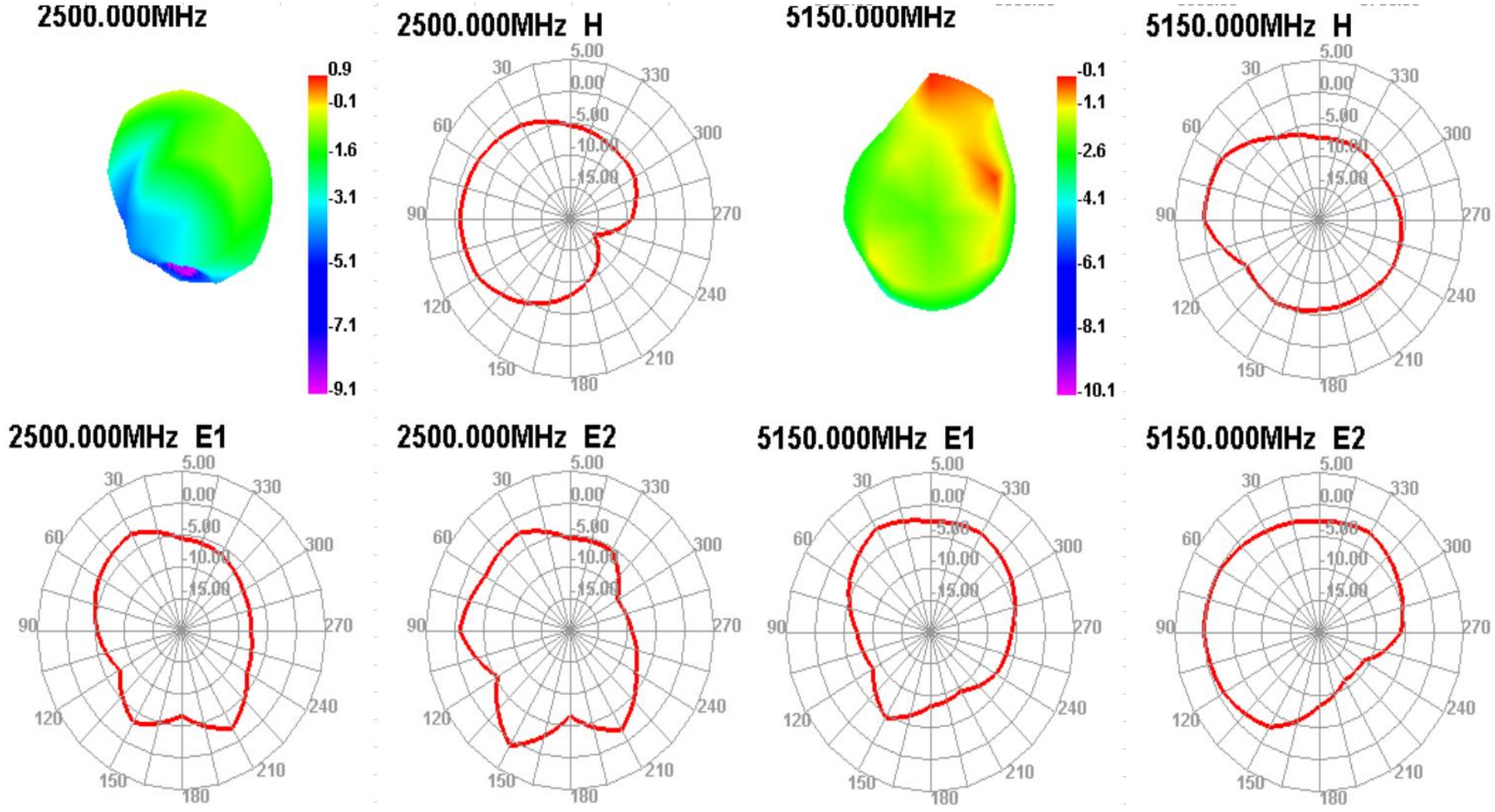
Test Card Category	Actual distance(mm)
Type 1	≥30
Type 2	≥30
Type 3	≥30
Type 4	≥15
Type 5	≥45

7：Gain

2G	850	-0.6dBi	4G	B1	+0.7dBi
	900	-0.5dBi		B2	+0.5dBi
	1800	+0.5dBi		B3	+0.5dBi
	1900	+0.5dBi		B4	+0.5dBi
3G	B1	+0.7dBi		B5	-0.6dBi
	B2	+0.5dBi		B7	+0.6dBi
	B4	+0.5dBi		B8	-0.5dBi
	B5	-0.6dBi		B12	-0.8dBi
	B8	-0.5dBi		B17	-0.8dBi
2.4-WIFI	+0.5dBi			B20	-0.6dBi
5.8-WiFi	+0.5dBi			B28	-0.8dBi
BT	+0.5dBi			B34	+0.6dBi
				B38	+0.6dBi
				B39	+0.5dBi
				B40	+0.6dBi
				B41	+0.6dBi

8：3D parameter





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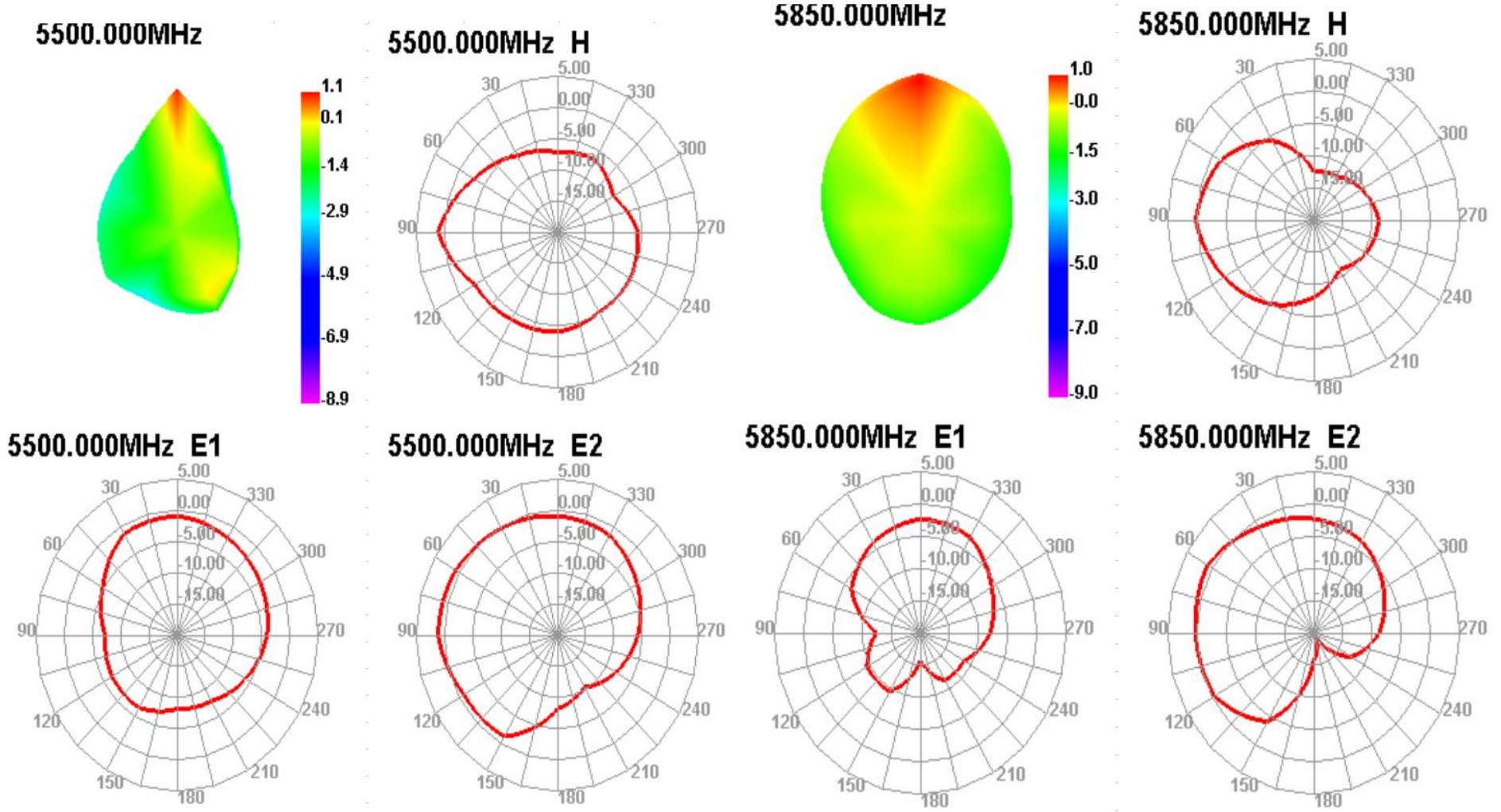

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