



Antenna Test Report

TC: MeiDiFei

MN: AP26

RF: GuanWei

MD: HuangQingqing

MP: 19918388579

Date: 2023. 06. 27.

REV :V1. 0



ANTENNA

深圳市星源创科技有限公司

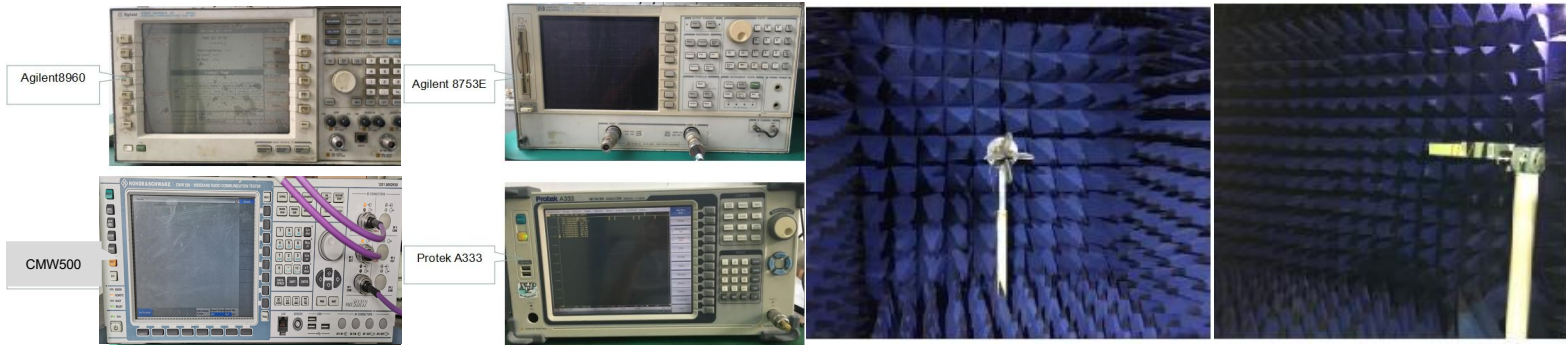
SHENZHEN Xingyuanchuang TECHNOLOGY CO., LTD

Test information

	Antenna band	Antenna state	Antenna form	Match changes	Note
ANT	BT/WIFI	2.4/5G	FPC	PIFA	NO

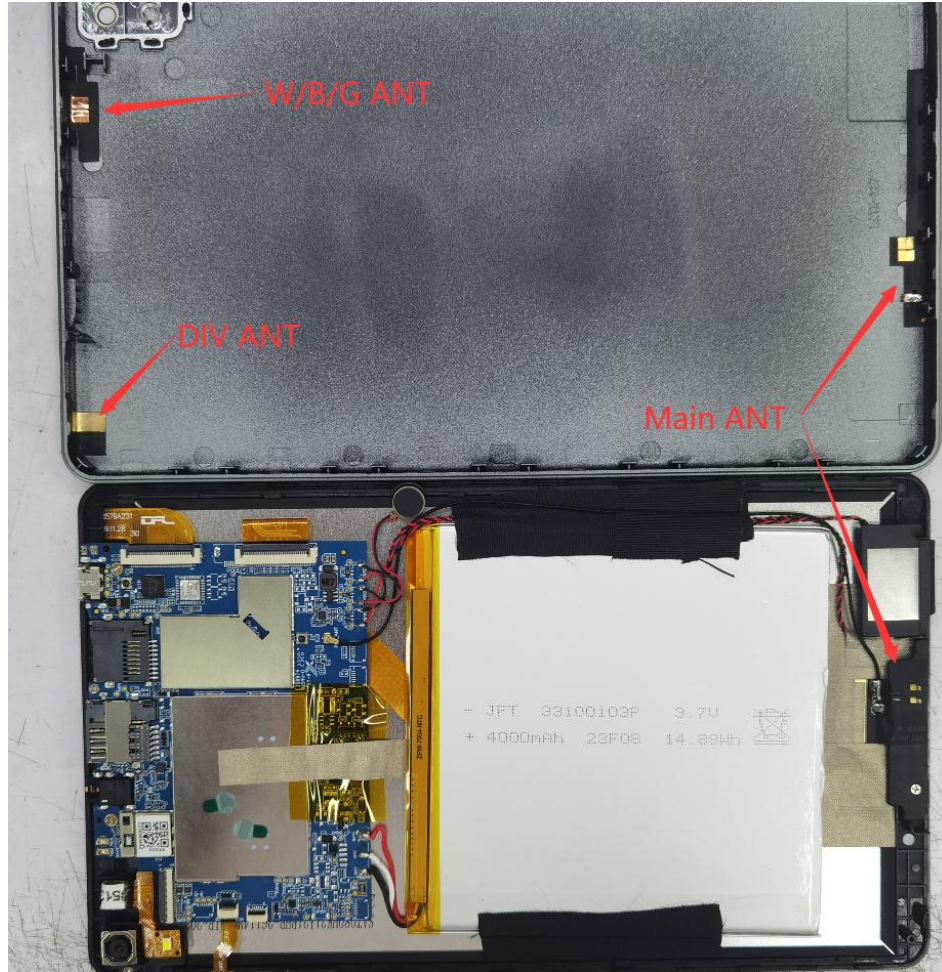
Test environment

	Test items	Test equipment
1. S-parameter	1. VSWR 2. Rrtun Loss	Agilent8753ES
2. Active	1. TRP 2. TIS 3. LCD OFF/ON	1. 5*3*3m (3D) Chamber 2. Agilent8960 CMW500
3. Passive	1. Gain 2. Efficiency	1. 5*3*3m (3D) Chamber 2. Agilent 8753ES

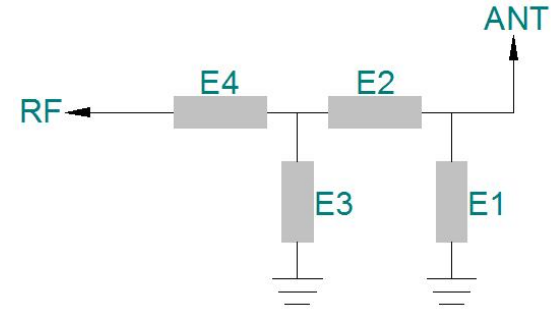




Antenna position



Matching circuit



	Capacitors (PF)	Inductance (NH)
E1(0402)		
E2(0402)		
E3(0402)		
E4(0402)		

Matching circuit schematic & Bitmap



Wifi Antenna test

WIFI

Test environment: Open Space

Test distance: 10m

The test results are shown in the right diagram

BT

Test environment: Open Space(Access)

Test tool: Bluetooth speakers

Test distance: 10m

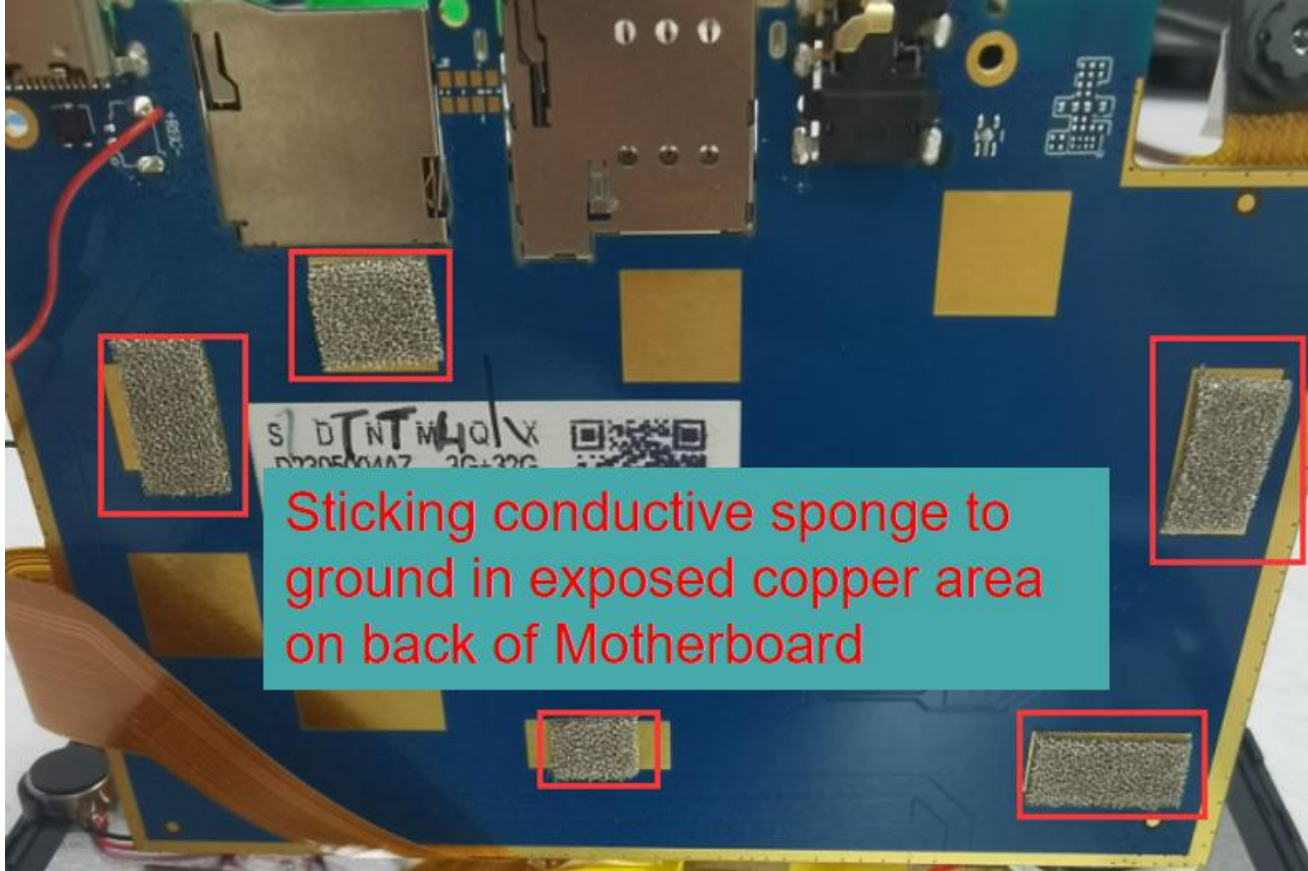
Results: the music played smoothly and without noise





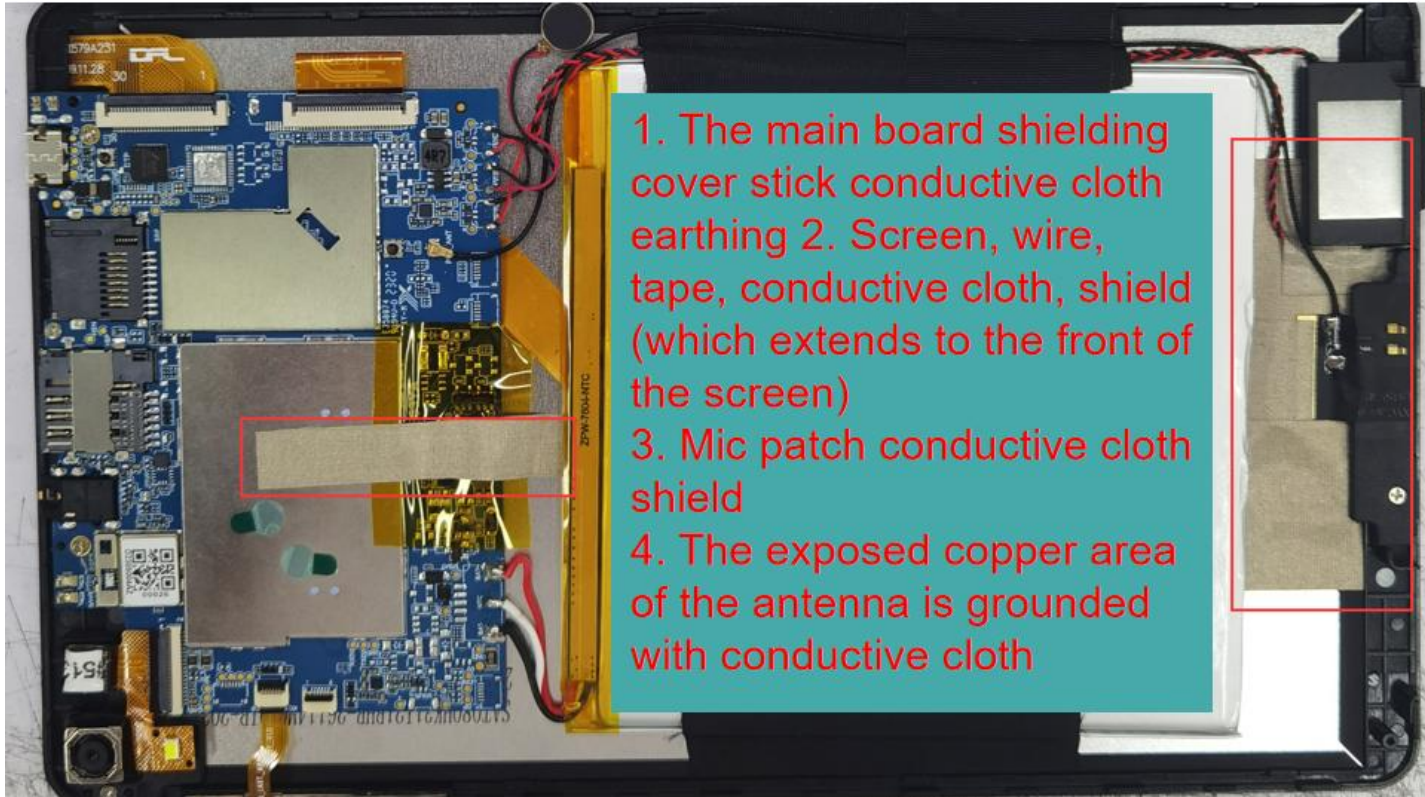
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Environmental treatment



Sticking conductive sponge to ground in exposed copper area on back of Motherboard

Environmental treatment

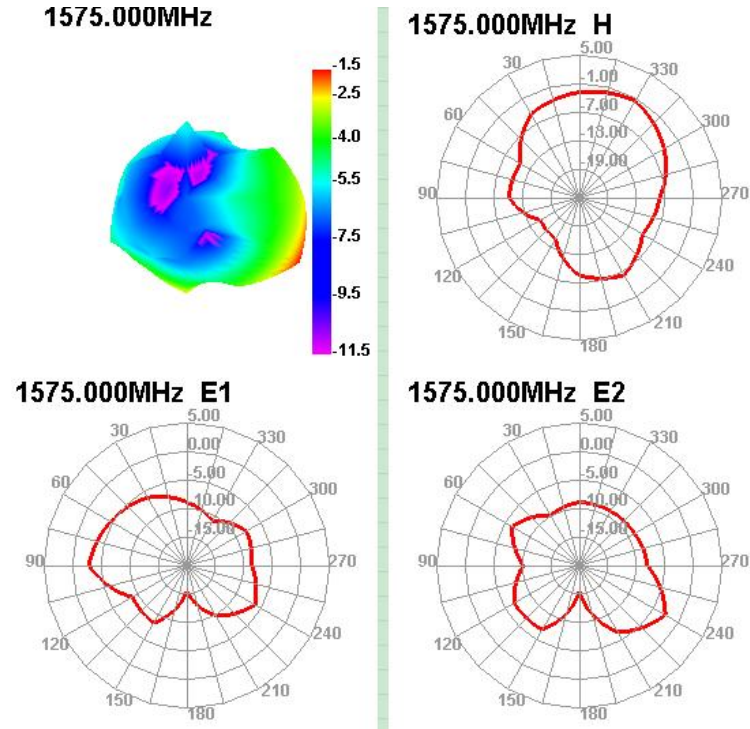


1. The main board shielding cover stick conductive cloth earthing
2. Screen, wire, tape, conductive cloth, shield (which extends to the front of the screen)
3. Mic patch conductive cloth shield
4. The exposed copper area of the antenna is grounded with conductive cloth



Passive test data

ANT Direction of figure(GPS)





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Passive test data

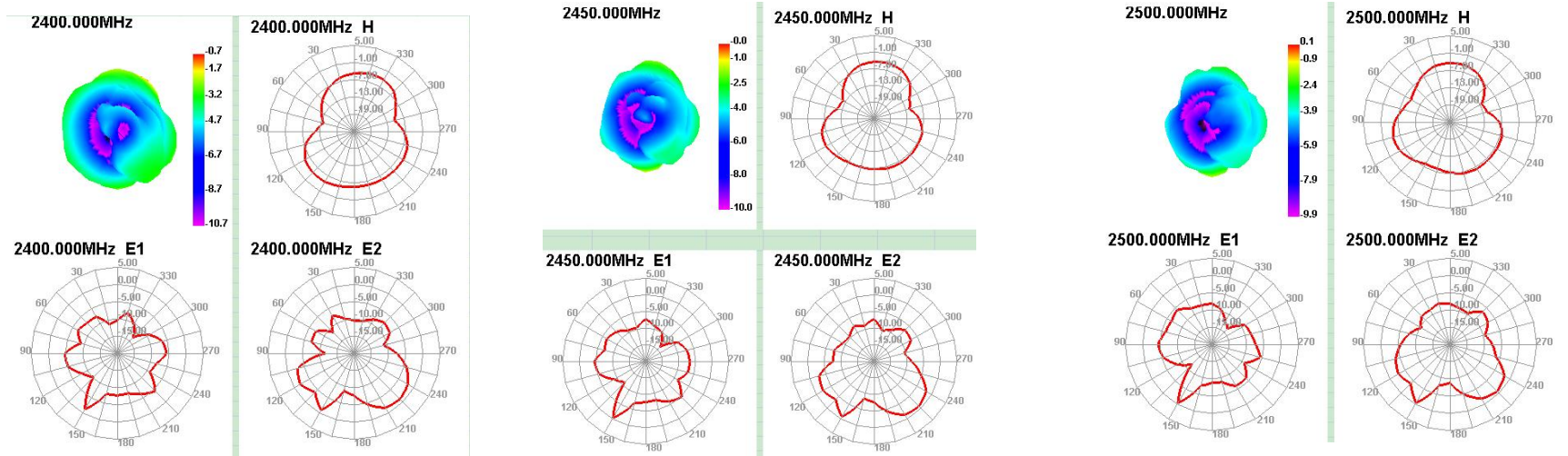
ANT GAIN&Efficiency-WIFI2.4G/BT

Passive Test For WIFI2.4

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	25.25	-5.98	-0.69	-2.84	8.093	17.16	-0.69	-17.1	5.29	0	45.79	46.02
2410	25.23	-5.98	-0.53	-2.68	8.068	17.16	-0.53	-16.74	5.45	0	46	46.28
2420	24.39	-6.13	-0.49	-2.64	7.743	16.648	-0.49	-17.71	5.64	0	45.66	45.93
2430	24.12	-6.18	-0.42	-2.57	7.633	16.487	-0.42	-18.29	5.76	0	45.82	46.17
2440	24.72	-6.07	-0.19	-2.34	7.84	16.876	-0.19	-17.23	5.88	0	45.92	46.28
2450	25.46	-5.94	-0.04	-2.19	8.136	17.328	-0.04	-15.99	5.9	0	45.95	46.38
2460	25.83	-5.88	0.03	-2.12	8.335	17.49	0.03	-15.44	5.91	0	45.93	46.31
2470	25.6	-5.92	-0.01	-2.16	8.347	17.257	-0.01	-15	5.91	0	46.24	46.64
2480	25.78	-5.89	0.07	-2.08	8.469	17.309	0.07	-14.76	5.96	0	46.17	46.56
2490	26.3	-5.8	0.23	-1.92	8.726	17.573	0.23	-15.17	6.04	0	46.38	46.78
2500	24.91	-6.04	0.12	-2.03	8.32	16.591	0.12	-15.36	6.15	0	46.26	46.65

Passive test data

ANT Direction of figure(2.4/BT)





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Passive test data

ANT GAIN&Efficiency-WIFI 5G

Passive Test For WIFI5G								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
5150	14.21	-8.48	-2.92	-5.07	7.417	6.788	-2.92	-21.94
5170	14.03	-8.53	-2.45	-4.6	7.51	6.521	-2.45	-20.13
5190	17.7	-7.52	-1.44	-3.59	9.259	8.441	-1.44	-19.27
5210	16.77	-7.76	-1.99	-4.14	8.492	8.275	-1.99	-21.42
5230	18.97	-7.22	-1.84	-3.99	9.681	9.292	-1.84	-23.64
5250	17.31	-7.62	-2.99	-5.14	9.189	8.118	-2.99	-23.39
5270	21.19	-6.74	-2.27	-4.42	11.595	9.599	-2.27	-20.68
5290	18.76	-7.27	-2.53	-4.68	10.506	8.259	-2.53	-18.4
5310	19.57	-7.08	-2.32	-4.47	11.219	8.353	-2.32	-18.86
5330	20.35	-6.91	-2.38	-4.53	11.96	8.387	-2.38	-19.52
5350	23.62	-6.27	-1.83	-3.98	13.93	9.687	-1.83	-18.58
5370	23.87	-6.22	-1.57	-3.72	14.02	9.848	-1.57	-19.55
5390	22.86	-6.41	-1.62	-3.77	13.443	9.413	-1.62	-19.09
5410	29.22	-5.34	-0.01	-2.16	16.9	12.32	-0.01	-16.25
5430	27.03	-5.68	0.46	-1.69	15.208	11.82	0.46	-19.37
5450	29.96	-5.23	1.3	-0.85	16.709	13.255	1.3	-20.7
5470	27.01	-5.68	0.57	-1.58	14.866	12.145	0.57	-21.45
5490	27.76	-5.57	0.07	-2.08	14.668	13.087	0.07	-19.69
5510	27.41	-5.62	-0.34	-2.49	13.684	13.726	-0.34	-17.92
5530	26.82	-5.72	-0.28	-2.43	12.916	13.9	-0.28	-18.17
5550	25.89	-5.87	-0.65	-2.8	12.421	13.467	-0.65	-17.89
5570	22.83	-6.41	-1.78	-3.93	10.777	12.055	-1.78	-17.84
5590	20.29	-6.93	-2.72	-4.87	9.198	11.091	-2.72	-19
5610	18.7	-7.28	-2.41	-4.56	8.366	10.336	-2.41	-22.37
5630	17.34	-7.61	-2.39	-4.54	8.002	9.341	-2.39	-29.38
5650	18.55	-7.32	-1.97	-4.12	8.787	9.764	-1.97	-24.36
5670	15.58	-8.07	-2.71	-4.86	7.387	8.192	-2.71	-19.01
5690	16.93	-7.71	-1.89	-4.04	8.228	8.706	-1.89	-17.98
5710	11.37	-9.44	-3.43	-5.58	5.699	5.674	-3.43	-21.8
5730	13.49	-8.7	-2.45	-4.6	6.746	6.742	-2.45	-23.05
5750	11.07	-9.56	-3.44	-5.59	5.442	5.625	-3.44	-24.25
5770	15.63	-8.06	-2.15	-4.3	7.542	8.086	-2.15	-19.98
5790	16.06	-7.94	-2.18	-4.33	7.737	8.324	-2.18	-17.1
5810	20.28	-6.93	-1.37	-3.52	9.937	10.341	-1.37	-16.19
5830	20.53	-6.88	-1.32	-3.47	10.299	10.226	-1.32	-14.63
5850	23.63	-6.27	-0.43	-2.58	12.298	11.328	-0.43	-14.48

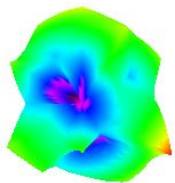


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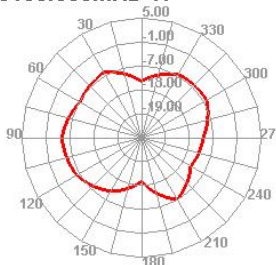
Passive test data

ANT Direction of figure(5G)

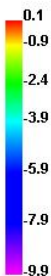
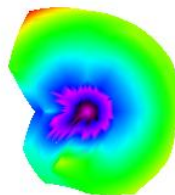
5150.000MHz



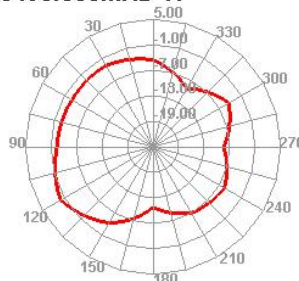
5150.000MHz H



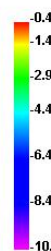
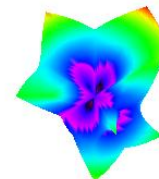
5490.000MHz



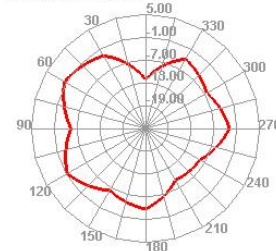
5490.000MHz H



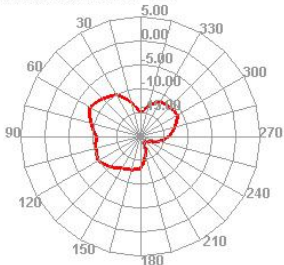
5850.000MHz



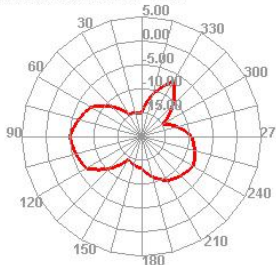
5850.000MHz H



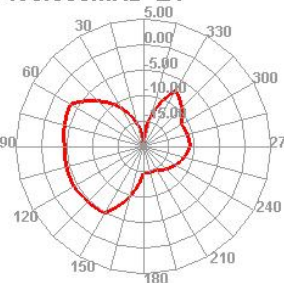
5150.000MHz E1



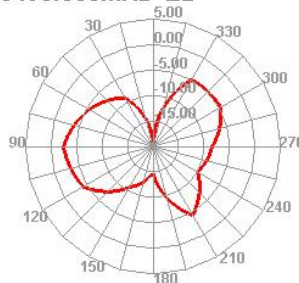
5150.000MHz E2



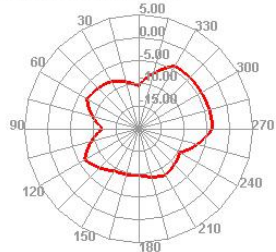
5490.000MHz E1



5490.000MHz E2



5850.000MHz E1



5850.000MHz E2

