



SHENZHEN Xingyuanchuang TECHNOLOGY CO., LTD

Antenna Test Report

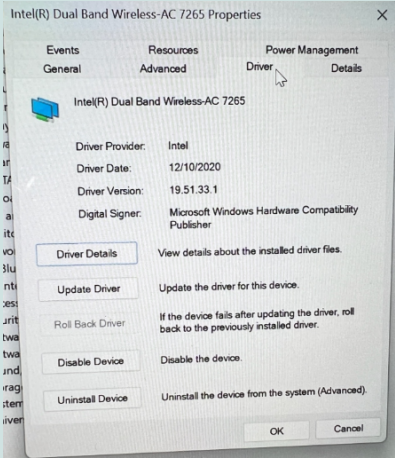
Date: 2023. 4. 22
REV :V1. 0



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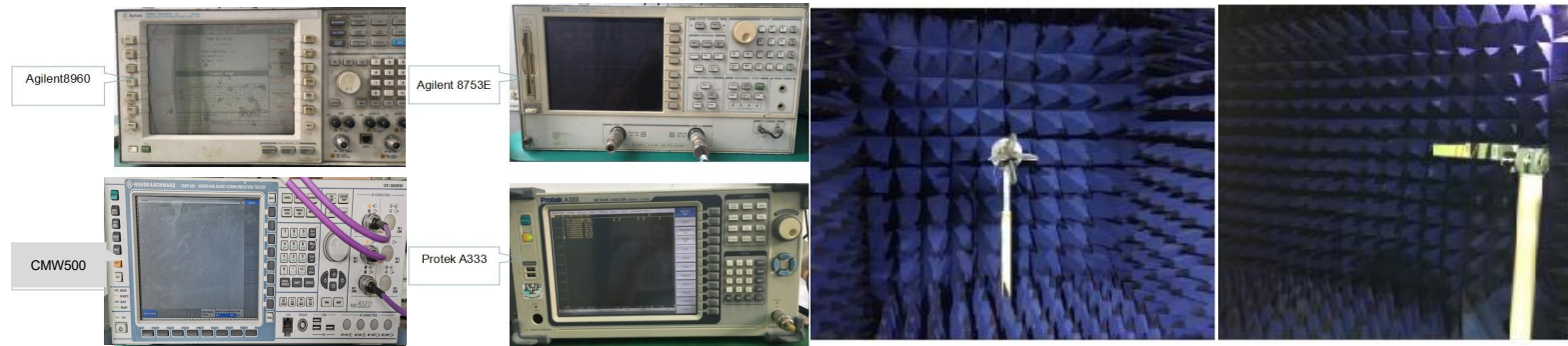
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Test information

WIFI ANT Test information		
Frequency	2. 4G (2402~2483) Mhz	5G (5150~5850) Mhz
Module information		
Driver version information		

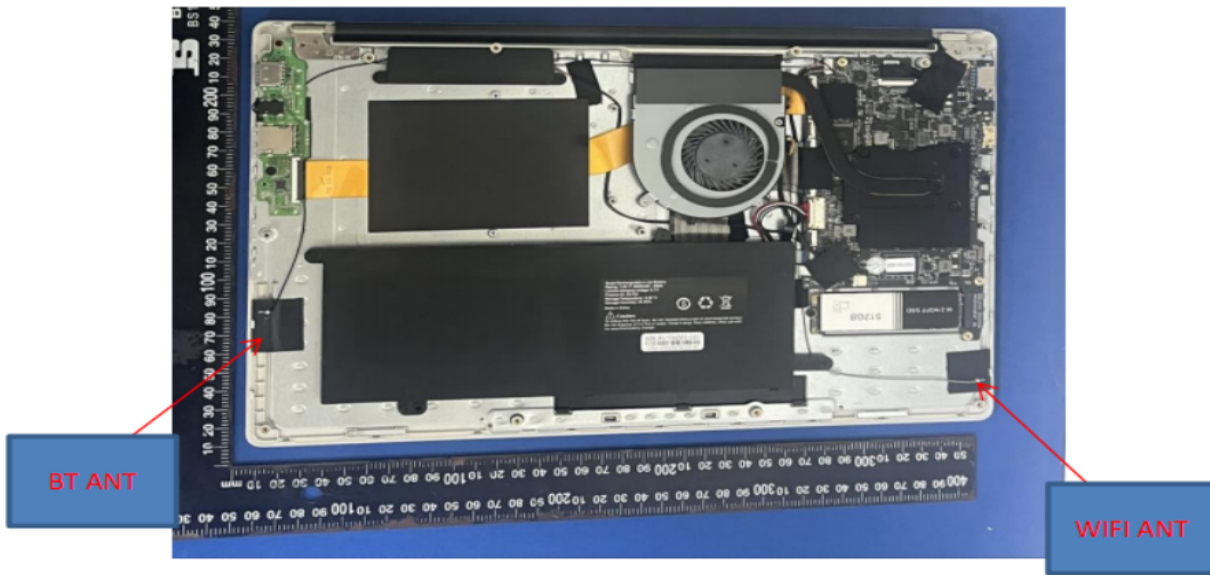
Test environment

	Test	Test equipment
(S-parameter)	1. (VSWR) 2. (Rrtun Loss)	Network analyzer : Agilent8753ES
2. (Active)	1. (TRP) 2. (TIS) 3. Screen on/off	1. Anechoic Chamber: 5*3*3m (3D) Chamber 2. Tester: Agilent8960 CMW500
3 (Passive)	1. (Gain) 2. (Efficiency)	1. Anechoic Chamber: 5*3*3m (3D) Chamber 2. Tester: Agilent 8753ES





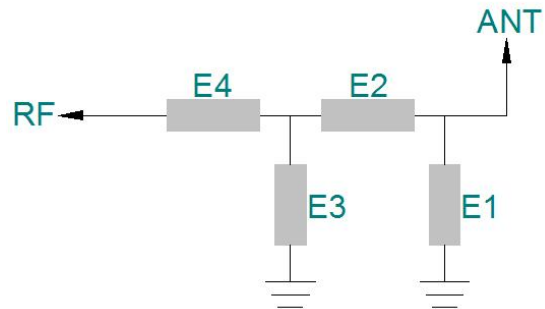
Antenna position





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Matching circuit



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

Matching circuit schematic diagram&tag diagram

Passive test data

WIFI ANT S11-VSWR&Return Loss



Frequency (MHZ)	2400	2450	2483	5150
VSWR	1.7	1.8	1.23	1.23
Return Loss (DB)	- 11.67	- 11.05	- 17.47	- 19.62



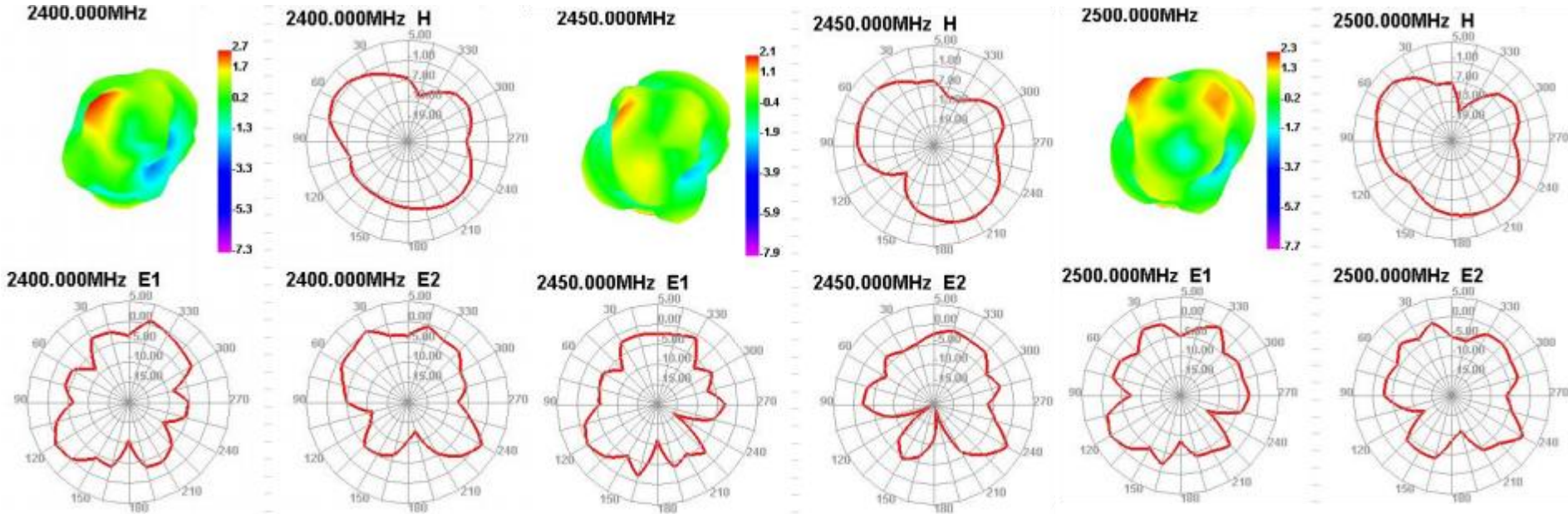
Passive test data

GAIN&Efficiency-WIFI 2.4G

Passive Test For WIFI2.4								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)
2400	51.84	-2.85	2.66	0.51	27.809	24.033	2.66	-15.68
2410	49.47	-3.06	2.44	0.29	26.485	22.987	2.44	-18.95
2420	46.99	-3.28	2.04	-0.11	24.653	22.334	2.04	-20.5
2430	43.68	-3.6	1.55	-0.6	22.145	21.538	1.55	-16.38
2440	42.94	-3.67	1.6	-0.55	21.269	21.667	1.6	-20.59
2450	44.56	-3.51	2.07	-0.08	22.285	22.276	2.07	-21.72
2460	48.03	-3.18	2.27	0.12	24.786	23.248	2.27	-19.43
2470	50.81	-2.94	2.29	0.14	26.769	24.041	2.29	-19.83
2480	54.35	-2.65	2.39	0.24	29.018	25.328	2.39	-19.36
2490	55.46	-2.56	2.37	0.22	29.793	25.668	2.37	-19.18
2500	54.67	-2.62	2.33	0.18	29.495	25.176	2.33	-18.72

Passive test data

2.4G WIFI ANT Direction of figure





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5G WIFI GAIN&Efficiency

Passive test data

Passive Test For WIFI5G								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)
5150	44.63	-3.5	1.74	-0.41	28.399	16.233	1.74	-18.52
5170	43.4	-3.63	1.69	-0.46	27.634	15.764	1.69	-18.08
5190	45.23	-3.45	1.91	-0.24	28.748	16.481	1.91	-18.19
5210	42.2	-3.75	1.51	-0.64	26.782	15.414	1.51	-17.21
5230	44.42	-3.52	1.74	-0.41	28.28	16.143	1.74	-18.12
5250	42.26	-3.74	1.33	-0.82	26.988	15.269	1.33	-18.06
5270	46.4	-3.34	1.67	-0.48	29.709	16.686	1.67	-17.22
5290	48.69	-3.13	2.15	0	31.403	17.289	2.15	-15.58
5310	47.64	-3.22	2.17	0.02	31.027	16.614	2.17	-14.99
5330	49.61	-3.04	2.24	0.09	32.53	17.079	2.24	-14.82
5350	52.7	-2.78	2.4	0.25	34.663	18.038	2.4	-15.49
5370	51.08	-2.92	2.18	0.03	33.702	17.38	2.18	-16.01
5390	48.98	-3.1	1.99	-0.16	32.494	16.486	1.99	-18.01
5410	58.96	-2.29	2.75	0.6	39.27	19.692	2.75	-17.54
5430	56.08	-2.51	2.49	0.34	37.379	18.698	2.49	-17.51
5450	56.31	-2.49	2.36	0.21	37.479	18.834	2.36	-17.97
5470	55.27	-2.58	2.58	0.43	36.832	18.438	2.58	-19.81
5490	53.72	-2.7	2.47	0.32	35.895	17.825	2.47	-21.88
5510	53.04	-2.75	2.24	0.09	35.512	17.528	2.24	-21.31
5530	53.7	-2.7	2.25	0.1	35.949	17.751	2.25	-18.56
5550	53.68	-2.7	2.41	0.26	35.785	17.894	2.41	-18.13
5570	52.72	-2.78	2.29	0.14	35.17	17.554	2.29	-17.84
5590	52.2	-2.82	2.25	0.1	34.964	17.235	2.25	-17.18
5610	52.06	-2.83	2.15	0	34.993	17.069	2.15	-22.56
5630	51.06	-2.92	1.79	-0.36	34.238	16.826	1.79	-27.25
5650	51.83	-2.85	1.9	-0.25	34.582	17.243	1.9	-18.87
5670	51.95	-2.84	1.85	-0.3	34.582	17.372	1.85	-19.26
5690	48.75	-3.12	1.58	-0.57	32.392	16.358	1.58	-23.43
5710	52.08	-2.83	1.89	-0.26	34.346	17.73	1.89	-28.04
5730	49.35	-3.07	1.84	-0.31	32.27	17.081	1.84	-23.78
5750	51.1	-2.92	2.15	0	33.139	17.964	2.15	-24.59
5770	50.01	-3.01	2.06	-0.09	32.178	17.834	2.06	-25.15
5790	50.28	-2.99	2.09	-0.06	31.955	18.324	2.09	-22.97
5810	51.48	-2.88	2.27	0.12	32.306	19.177	2.27	-20.77
5830	55.63	-2.55	2.7	0.55	34.607	21.027	2.7	-20.33
5850	54.01	-2.67	2.52	0.37	33.468	20.546	2.52	-22.58

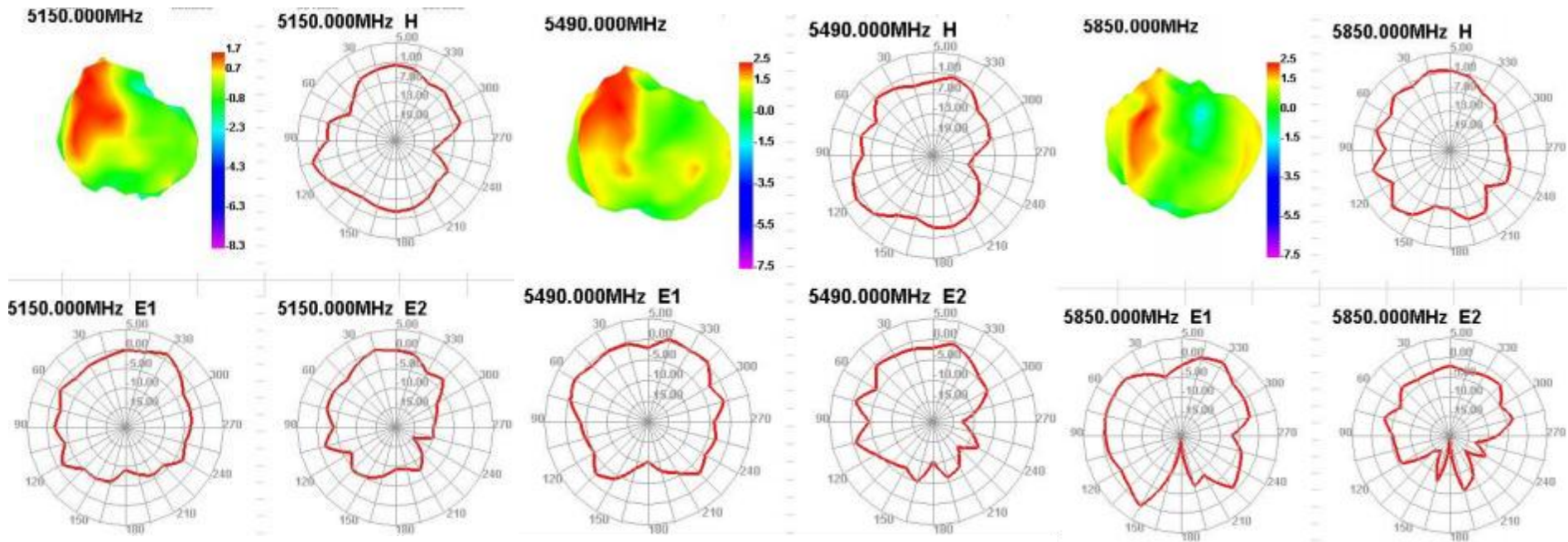


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Passive test data

5G WIFI ANT Direction of figure





BT ANT VSWR&Return Loss

Passive test data



Frequency (MHZ)	2400	2450	2483
VSWR	1.43	1.75	1.37
Return Loss (DB)	- 15.02	- 11.42	- 15.95



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Passive test data

GAIN&Efficiency-BT ANT

Passive Test								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)
2400	43.99	-3.57	1.68	-0.47	18.274	25.712	1.68	-19.75
2410	46.33	-3.34	1.99	-0.16	19.122	27.207	1.99	-21.58
2420	49.06	-3.09	2.22	0.07	20.206	28.858	2.22	-22.07
2430	50.73	-2.95	2.32	0.17	20.817	29.912	2.32	-20.65
2440	53.83	-2.69	2.54	0.39	22.048	31.785	2.54	-18.74
2450	56.64	-2.47	2.78	0.63	23.115	33.52	2.78	-17.73
2460	57.57	-2.4	2.99	0.84	23.441	34.127	2.99	-16.54
2470	57.98	-2.37	3.17	1.02	23.582	34.396	3.17	-15.23
2480	60.15	-2.21	3.49	1.34	24.508	35.646	3.49	-15.88
2490	58.92	-2.3	3.55	1.4	24.093	34.831	3.55	-17.26
2500	56.8	-2.46	3.46	1.31	23.345	33.45	3.46	-19.05

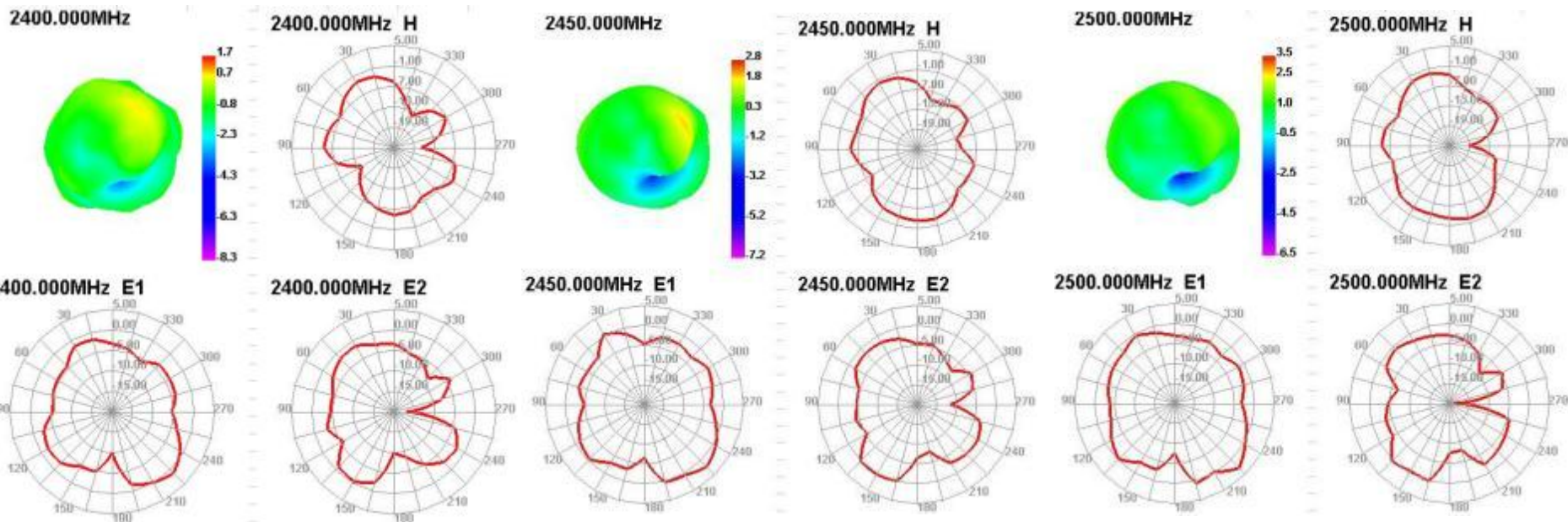


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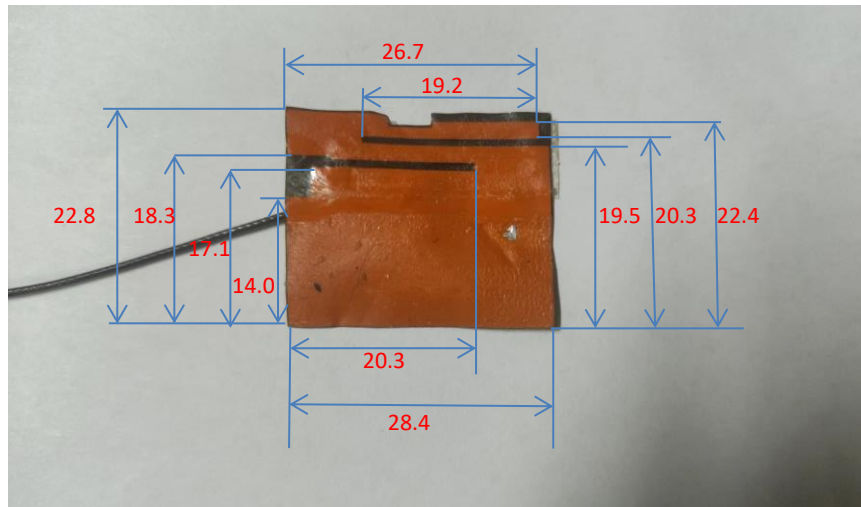
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Passive test data

BT ANT Direction of figure



Wi-Fi Antenna dimension (unit:mm)



Wi-Fi Antenna dimension (unit:mm)

