



SHENZHEN Xingyuanchuang TECHNOLOGY CO., LTD

1506, Tangwei Joint-Stock Business Building, Fuhai Street,
Fuyong Town, Bao 'an District, Shenzhen

Antenna Test Report

MN: T826US

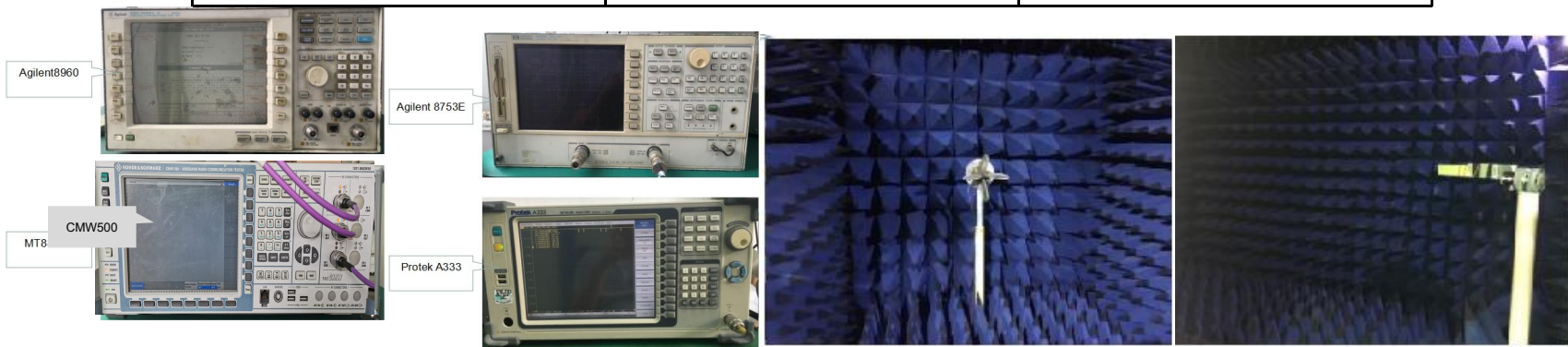
Date: 2022. 09. 26.

Test information

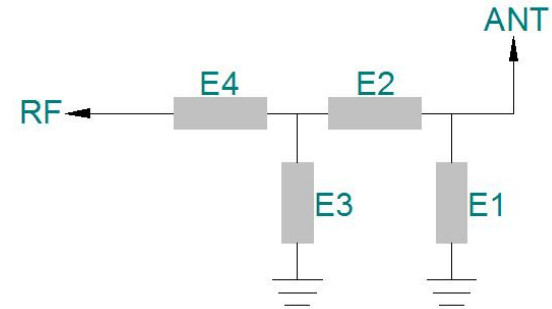
	Antenna band	Antenn a state	Antenna form	Matchc hanges	Note
Main ANT	2G	FPC	PIFA	NO	G850/900/1800/1900
	3G				WCDMA1/2/4/5/8
	4G				FDDBAND2/4/7/12/17/66/ 41
AUX ANT	BT/WIFI	FPC	PIFA	NO	2.4/5.8G
	GPS	FPC	PIFA	NO	1.575G
	DIV	FPC	PIFA	NO	

Test environment

	Test project	Test equipment
1. S-parameter	1. VSWR 2. Rrtun Loss	Network analyzer: Agilent8753ES
2. Active	1. TRP 2. TIS 3. LCD ON with LCD OFF	1. Anechoic chamber: 5*3*3m (3D) Chamber 2. General-purpose tester: Agilent8960 CMW500
3. Passive	1. Gain 2. Efficiency	1. Anechoic chamber: 5*3*3m (3D) Chamber 2. Network analyzer: Agilent 8753ES



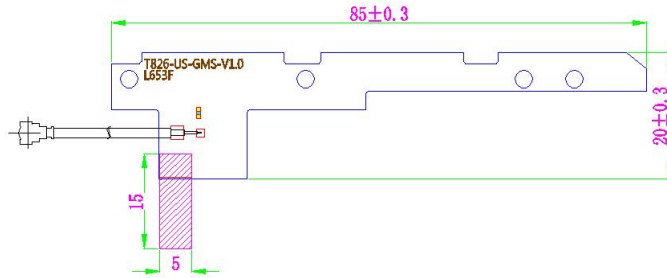
Matching circuit



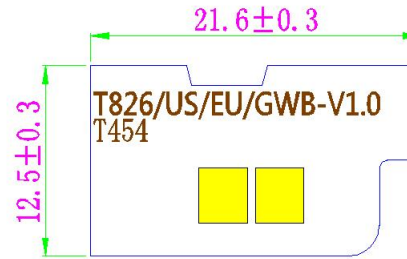
	capacitance (PF)	inductance (NH)
E1(0402)		
E2(0402)		
E3(0402)		
E4(0402)		



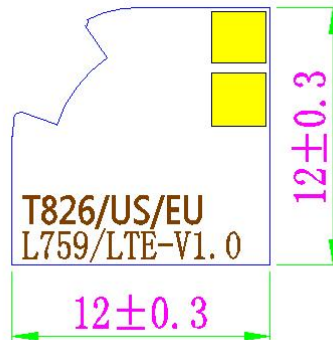
Antenna size



MAIN ANT



G/W/B ANT



DIV ANT

conduction
date

1#

2G												
Band	GSM850			GSM900			GSM-1800(DCS)			GSM-1900(PCS)		
Channel	128	192	251	1	62	124	512	698	885	512	660	810
TRP(dBm)	30.7	30.8	30.8	31	31.2	31.3	28.4	28.5	28.4	28.5	28.4	28.4
TIS			-109.5			-108.5			-109			-107.5
3G												
Band	WCDMA-1			WCDMA-2			WCDMA-4			WCDMA-5		
Channel	10562	10700	10838	9662	9800	9938	1537	1638	1738	4357	4410	4458
TRP(dBm)	21.7	22.4	22.3	22.7	21.7	21.8	22.3	22.8	22.5	22.3	22.5	22.3
TIS			-109			-109			-108.5			-110
4G(FDD 10M)												
Band	FDD-Band 2			FDD-Band 4			FDD-Band 7			FDD-Band 12		
Channel	18650	18900	19150	20000	20175	23050	20800	21100	21400	23060	23095	23130
TRP(dBm)	21.5	21.6	21.6	21.3	21.2	21.3	19.9	19.8	19.9	22.4	22.5	22.2
TIS			-96.5			-95			-94			-89
Band	FDD-Band 17			FDD-Band 66								
Channel	23780	23790	23800	132022	132422	132822						
TRP(dBm)	22.4	22.3	22.2	21.2	21.3	21.3						
TIS			-89			-96.5						
4G (TDD 20M)												
Band	TDD-Band 41											
Channel		40620										
TRP(dBm)		20.0										
TIS		-89										

conduction
date

2#

2G												
Band	GSM850			GSM900			GSM-1800(DCS)			GSM-1900(PCS)		
Channel	128	192	251	1	62	124	512	698	885	512	660	810
TRP(dBm)	31.2	31.3	31.2	31.2	31.5	31.6	28.8	29	29	28.9	28.9	28.8
TIS			-109			-108.5			-108.5			-107.5
3G												
Band	WCDMA-1			WCDMA-2			WCDMA-4			WCDMA-5		
Channel	10562	10700	10838	9662	9800	9938	1537	1638	1738	4357	4410	4458
TRP(dBm)	21.9	22	21.5	22.3	21	20.5	22.8	22.6	22.7	22.4	22.3	22.4
TIS			-108.5			-109			-108			-109.5
4G(FDD 10M)												
Band	FDD-Band 2			FDD-Band 4			FDD-Band 7			FDD-Band 12		
Channel	18650	18900	19150	20000	20175	23050	20800	21100	21400	23060	23095	23130
TRP(dBm)	21	20.8	20.9	21.6	21.1	21.4	19.9	19.7	19.8	22.3	22.1	22.4
TIS			-96			-95			-94			-87
Band	FDD-Band 17			FDD-Band 66								
Channel	23780	23790	23800	132022	132422	132822						
TRP(dBm)	22.3	22	22.4	21.3	21.3	21.4						
TIS			-87			-96.5						
4G (TDD 20M)												
Band	TDD-Band 41											
Channel		40620										
TRP(dBm)		19.9										
TIS		-90.5										

OTA test data

1#

2G												
Band	GSM850			GSM900			GSM-1800(DCS)			GSM-1900(PCS)		
Channel	128	192	251	1	62	124	512	698	885	512	660	810
TRP(dBm)	26.29	25.61	24.78	22.03	22.23	21.14	24.27	25.18	26.55	26.26	25.69	25.14
TIS(LCD OFF)												
TIS(LCD ON)			-102.87			-100.77			-106.28			-105.01
3G												
Band	WCDMA-1			WCDMA-2			WCDMA-4			WCDMA-5		
Channel	10562	10700	10838	9662	9800	9938	1537	1638	1738	4357	4410	4458
TRP(dBm)	18.02	18.59	17.36	18.53	18.96	18.36	18.49	18.83	18.92	17.01	15.85	15.26
TIS(LCD OFF)												
TIS(LCD ON)			-105.48			-104.73			-104.73			-102.95
4G(FDD 10M)												
Band	FDD-Band 2			FDD-Band 4			FDD-Band 7			FDD-Band 12		
Channel	18650	18900	19150	20000	20175	23050	20450	20525	20600	23060	23095	23130
TRP(dBm)	18.3	18.31	18.41	18.06	18.08	18.54	15.62	15.34	15.33	15.81	15.66	15.75
TIS(LCD OFF)												
TIS(LCD ON)			-92.47			-91.48			-93.05			-92.4
Band	FDD-Band 17			FDD-Band 66								
Channel	23780	23790	23800	132022	132422	132822						
TRP(dBm)	15.5	15.18	16.18	17.36	16.35	16.95						
TIS(LCD OFF)												
TIS(LCD ON)			-90.4			-91.35						
4G (TDD 20M)												
Band	TDD-Band 41											
Channel		40620										
TRP(dBm)		17.59										
TIS(LCD OFF)												
TIS(LCD ON)		-90.72										

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OTA test data

2#

2G												
Band	GSM850			GSM900			GSM-1800(DCS)			GSM-1900(PCS)		
Channel	128	192	251	1	62	124	512	698	885	512	660	810
TRP(dBm)	26.95	26.3	25.43	22.7	21.23	20.5	24.56	26.02	26.73	26.2	25.25	24.79
TIS(LCD OFF)												
TIS(LCD ON)			-102.75			-99.4			-105.55			-105.78
3G												
Band	WCDMA-1			WCDMA-2			WCDMA-4			WCDMA-5		
Channel	10562	10700	10838	9662	9800	9938	1537	1638	1738	4357	4410	4458
TRP(dBm)	17.85	18.67	18.02	18.03	18.28	18.09	18.34	18.5	18.86	16.89	15.34	15.16
TIS(LCD OFF)												
TIS(LCD ON)			-104.33			-105.67			-104.92			-101.51
4G(FDD 10M)												
Band	FDD-Band 2			FDD-Band 4			FDD-Band 7			FDD-Band 12		
Channel	18650	18900	19150	20000	20175	23050	20450	20525	20600	23060	23095	23130
TRP(dBm)	18.66	18.22	18.02	18.51	18.17	18.64	16.66	16.34	15.15	15.45	15.79	16.1
TIS(LCD OFF)												
TIS(LCD ON)			-92.14			-93.56			-93.87			-91.5
Band	FDD-Band 17			FDD-Band 66								
Channel	23780	23790	23800	132022	132422	132822						
TRP(dBm)	15.6	15.35	16.27	18.54	18.26	17.57						
TIS(LCD OFF)												
TIS(LCD ON)			-88.5			-91.91						
4G (TDD 20M)												
Band	TDD-Band 41											
Channel		40620										
TRP(dBm)		17.53										
TIS(LCD OFF)												
TIS(LCD ON)		-89.66										

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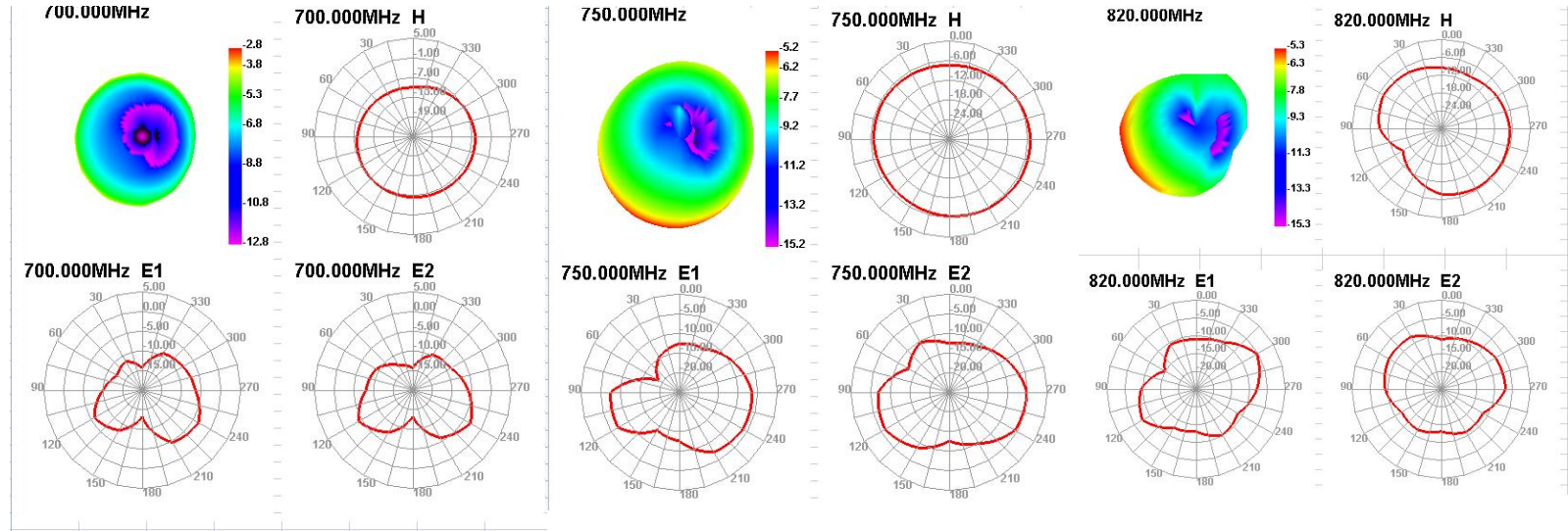
Passive test data

ANT1 GAIN&Efficiency-MAIN ANT Passive (690~960MHz)

Passive Test For 690-960MHz												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
690	15.4	-8.13	-3.99	-6.14	4.822	10.576	-3.99	-16.77	4.13	30	38.39	38.05
700	20.23	-6.94	-2.8	-4.95	6.144	14.082	-2.8	-14.34	4.14	30	37.95	37.71
710	28.44	-5.46	-1.21	-3.36	7.984	20.457	-1.21	-13.54	4.25	60	38.33	38.1
720	30.17	-5.2	-0.92	-3.07	8.132	22.04	-0.92	-16.73	4.28	60	38.12	37.78
730	24.5	-6.11	-2.14	-4.29	6.954	17.547	-2.14	-19.75	3.97	60	37.65	37.31
740	19.54	-7.09	-3.67	-5.82	6.199	13.344	-3.67	-19.2	3.42	60	37.21	36.99
750	15.37	-8.13	-5.17	-7.32	5.53	9.838	-5.17	-18.89	2.96	90	37.03	36.95
760	12.16	-9.15	-6.45	-8.6	4.865	7.298	-6.45	-19.26	2.7	30	36.73	36.72
770	8.52	-10.7	-8.22	-10.37	3.782	4.737	-8.22	-20.74	2.48	30	35.81	35.92
780	7.58	-11.2	-8.39	-10.54	3.679	3.902	-8.39	-21.26	2.81	120	35.67	35.88
790	8.84	-10.54	-7.49	-9.64	4.607	4.232	-7.49	-20.27	3.04	60	35.94	36.19
800	10.38	-9.84	-6.49	-8.64	5.611	4.766	-6.49	-18.53	3.35	60	36.77	36.98
810	11.1	-9.55	-5.77	-7.92	6.269	4.829	-5.77	-16.84	3.78	30	36.63	36.88
820	11.95	-9.23	-5.33	-7.48	6.902	5.045	-5.33	-15.26	3.89	30	36.69	36.92
830	13.37	-8.74	-4.98	-7.13	7.712	5.657	-4.98	-15.05	3.76	30	36.46	36.76
840	15.35	-8.14	-4.54	-6.69	8.752	6.602	-4.54	-13.91	3.6	30	36.63	37.05
850	16.26	-7.89	-4.23	-6.38	9.377	6.885	-4.23	-14.92	3.65	30	36.69	37.16
860	17.47	-7.58	-3.97	-6.12	10.184	7.288	-3.97	-16.23	3.6	30	36.82	37.25
870	17.17	-7.65	-4.19	-6.34	10.142	7.028	-4.19	-17.74	3.46	30	36.68	37.07
880	17.2	-7.64	-4.6	-6.75	10.209	6.993	-4.6	-17.21	3.05	30	36.82	37.19
890	17.05	-7.68	-4.44	-6.59	10.115	6.935	-4.44	-14.84	3.24	30	37	37.41
900	17.4	-7.59	-4.12	-6.27	10.215	7.185	-4.12	-14.41	3.47	30	37.06	37.58
910	16.05	-7.94	-4.56	-6.71	9.035	7.02	-4.56	-14.19	3.39	0	37.17	37.66
920	12.63	-8.99	-6.16	-8.31	6.523	6.103	-6.16	-15.63	2.83	0	37.7	38.16
930	10.91	-9.62	-6.63	-8.78	5.215	5.69	-6.63	-16.19	2.99	60	37.46	37.87
940	9.96	-10.02	-6.21	-8.36	4.73	5.226	-6.21	-17.9	3.81	60	37.44	37.81
950	8.09	-10.92	-6.6	-8.75	3.875	4.218	-6.6	-21.78	4.32	60	37.77	38.07
960	6.45	-11.91	-7.41	-9.56	3.17	3.278	-7.41	-28.6	4.5	60	37.78	37.92

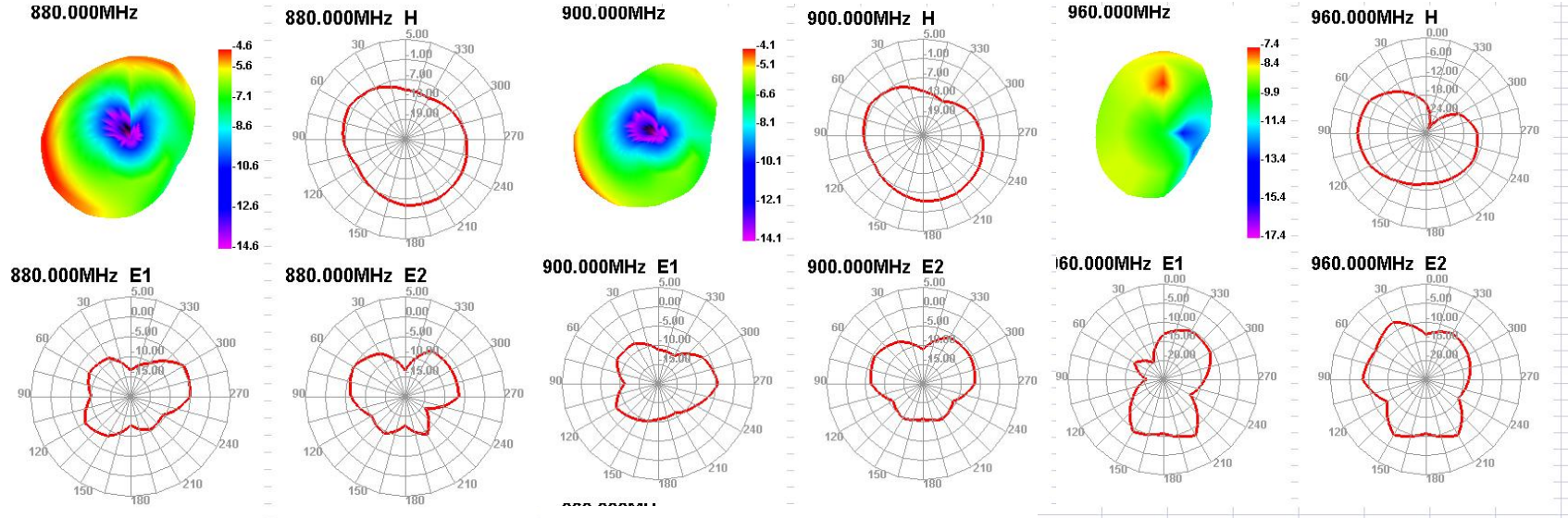
Passive test data

ANT1 GAIN&Efficiency-MAIN ANT Passive (700~820MHz)



Passive test data

ANT1 GAIN&Efficiency-MAIN ANT Passive (880~960MHz)





Passive test data

ANT1 GAIN&Efficiency-MAIN ANT Passive (1690~2080MHz)

Passive Test For 1690-2750MHz												
Freq (MHz)	Effi (%)	Effi (dBi)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
1690	27.9	-5.54	-1.43	-3.58	10.223	17.679	-1.43	-16.61	4.11	120	42.4	41.72
1700	28.96	-5.38	-1.04	-3.19	10.589	18.373	-1.04	-14.85	4.34	90	42.9	42.32
1710	26.04	-5.84	-1.41	-3.56	9.68	16.361	-1.41	-16.63	4.43	90	42.52	42.01
1720	25.62	-5.91	-1.56	-3.71	9.842	15.781	-1.56	-17.35	4.35	90	42.4	41.88
1730	27	-5.69	-1.54	-3.69	10.764	16.232	-1.54	-16.3	4.14	30	42.83	42.29
1740	22.75	-6.43	-2.56	-4.71	9.405	13.349	-2.56	-16.14	3.87	30	42.89	42.17
1750	22.99	-6.38	-2.39	-4.54	9.895	13.097	-2.39	-16.93	3.99	30	42.92	42.22
1760	27.62	-5.59	-1.61	-3.76	12.374	15.247	-1.61	-16.7	3.98	30	43.13	42.41
1770	29.59	-5.29	-1.56	-3.71	13.772	15.822	-1.56	-16.62	3.73	30	43.26	42.64
1780	28.02	-5.52	-1.76	-3.91	13.42	14.602	-1.76	-17.22	3.77	30	43.6	43.04
1790	25.03	-6.02	-1.96	-4.11	12.371	12.659	-1.96	-17.9	4.05	30	43.12	42.67
1800	27.07	-5.68	-1.53	-3.68	13.874	13.193	-1.53	-17.36	4.15	30	42.97	42.55
1810	29.19	-5.35	-1.32	-3.47	15.354	13.831	-1.32	-16.26	4.03	30	42.94	42.49
1820	25.66	-5.91	-2.22	-4.37	13.801	11.862	-2.22	-16.36	3.69	30	43.24	42.77
1830	28.33	-5.48	-1.79	-3.94	15.453	12.874	-1.79	-16.45	3.69	30	43.09	42.62
1840	30.14	-5.21	-1.62	-3.77	16.623	13.518	-1.62	-16.7	3.59	30	43.08	42.67
1850	32.15	-4.93	-1.41	-3.56	17.774	14.378	-1.41	-17.04	3.52	30	43.4	43.05
1860	31.42	-5.03	-1.29	-3.44	17.509	13.912	-1.29	-17.3	3.74	0	43.4	43.07
1870	33.19	-4.79	-0.86	-3.01	18.791	14.403	-0.86	-17.35	3.93	0	43.15	42.96
1880	39.06	-4.08	-0.17	-2.32	22.6	16.459	-0.17	-16.48	3.92	0	43.26	43.08
1890	34.42	-4.63	-0.52	-2.67	20.178	14.241	-0.52	-17.28	4.11	0	42.84	42.68
1900	34.54	-4.62	-0.31	-2.46	20.483	14.053	-0.31	-17.24	4.31	0	42.94	42.77
1910	39.13	-4.07	0.39	-1.76	23.538	15.595	0.39	-17	4.46	0	42.87	42.69
1920	41.42	-3.83	0.99	-1.16	25.47	15.953	0.99	-16.9	4.82	30	42.9	42.78
1930	42.81	-3.68	1.24	-0.91	26.857	15.949	1.24	-16.66	4.93	30	43.03	42.87
1940	41.53	-3.82	1.1	-1.05	26.724	14.811	1.1	-15.21	4.92	30	42.93	42.71
1950	41.13	-3.86	1.08	-1.07	26.856	14.273	1.08	-14.38	4.94	30	42.85	42.64
1960	38.23	-4.18	0.71	-1.44	25.346	12.882	0.71	-13.67	4.88	30	42.95	42.68
1970	38.71	-4.12	0.64	-1.51	25.807	12.906	0.64	-13.45	4.76	30	42.9	42.76
1980	35.58	-4.49	0.35	-1.8	24.129	11.454	0.35	-13.6	4.84	30	43.15	43.1
1990	35.29	-4.52	0.42	-1.73	24.292	10.995	0.42	-13.86	4.95	30	43.17	43.1
2000	31.19	-5.06	0.08	-2.07	22.112	9.08	0.08	-14.46	5.14	30	43.48	43.38
2010	25.53	-5.93	-0.67	-2.82	18.569	6.961	-0.67	-16.24	5.26	60	43.5	43.33
2020	24.01	-6.2	-0.79	-2.94	17.853	6.154	-0.79	-17.69	5.41	60	43.39	43.21
2030	22.77	-6.43	-0.81	-2.96	17.077	5.689	-0.81	-19.69	5.62	60	43.28	43.09
2040	19.61	-7.08	-1.1	-3.25	14.717	4.888	-1.1	-22.5	5.97	60	43.43	43.26
2050	19.02	-7.21	-0.85	-3	14.203	4.815	-0.85	-23.39	6.36	60	43.79	43.65
2060	20.12	-6.96	-0.4	-2.55	14.965	5.153	-0.4	-25.06	6.56	60	43.67	43.53
2070	22.52	-6.47	0.11	-2.04	16.56	5.962	0.11	-24.41	6.58	60	43.99	43.83
2080	20.73	-6.83	0.1	-2.05	15.113	5.614	0.1	-24.56	6.94	60	44.24	44.1



Passive test data

ANT1 GAIN&Efficiency-MAIN ANT Passive (2090~2460MHz)

Passive Test For 2090-2460MHz												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2090	21.66	-6.64	0.48	-1.67	15.646	6.016	0.48	-22.82	7.13	60	44.64	44.47
2100	23.88	-6.22	0.91	-1.24	17.338	6.54	0.91	-21.72	7.13	60	44.77	44.61
2110	25.75	-5.89	0.84	-1.31	18.722	7.031	0.84	-20.43	6.73	60	44.45	44.27
2120	24.35	-6.14	0.52	-1.63	17.821	6.525	0.52	-19.84	6.66	60	44.21	44.07
2130	18.42	-7.35	-0.35	-2.5	13.411	5.009	-0.35	-20.8	7	60	43.73	43.61
2140	24.35	-6.13	0.54	-1.61	17.718	6.635	0.54	-20.7	6.68	60	43.96	43.93
2150	23.98	-6.2	0.46	-1.69	17.231	6.754	0.46	-22.92	6.66	60	43.93	43.95
2160	28.14	-5.51	0.8	-1.35	20.018	8.118	0.8	-23.77	6.31	60	44.05	44.08
2170	29.86	-5.25	0.93	-1.22	20.862	8.995	0.93	-23.58	6.18	60	44.22	44.25
2180	30.14	-5.21	0.79	-1.36	20.786	9.358	0.79	-21.27	6	60	44	44.04
2190	30.07	-5.22	0.64	-1.51	20.374	9.695	0.64	-19.76	5.86	60	44.05	44.05
2200	33.96	-4.69	0.99	-1.16	22.644	11.32	0.99	-18.48	5.68	60	44.27	44.22
2210	39.48	-4.04	1.28	-0.87	25.853	13.63	1.28	-17.93	5.32	60	44.58	44.52
2220	38.16	-4.18	0.98	-1.17	24.528	13.634	0.98	-19.16	5.17	60	44.38	44.34
2230	35.12	-4.54	0.69	-1.46	22.187	12.928	0.69	-21.08	5.24	60	44.31	44.25
2240	37.16	-4.3	0.82	-1.33	23.113	14.049	0.82	-21.18	5.12	60	44.31	44.24
2250	38.54	-4.14	0.57	-1.58	23.603	14.934	0.57	-20.31	4.71	60	44.41	44.36
2260	36.48	-4.38	0.08	-2.07	22.102	14.375	0.08	-19.22	4.46	60	44.11	44
2270	34.54	-4.62	-0.09	-2.24	20.736	13.808	-0.09	-18.66	4.53	60	44.4	44.31
2280	32.67	-4.86	-0.32	-2.47	19.537	13.129	-0.32	-18.24	4.54	60	44.26	44.17
2290	32.98	-4.82	-0.24	-2.39	19.69	13.285	-0.24	-17.91	4.58	60	44.78	44.69
2300	31.39	-5.03	-0.59	-2.74	18.732	12.659	-0.59	-17.54	4.44	60	44.4	44.36
2310	27.99	-5.53	-1.33	-3.48	16.625	11.368	-1.33	-18.04	4.2	60	44.7	44.72
2320	27.52	-5.6	-1.5	-3.65	16.283	11.232	-1.5	-18.58	4.11	60	45.07	45.15
2330	29.29	-5.33	-1.18	-3.33	17.159	12.132	-1.18	-19.37	4.16	60	45.44	45.57
2340	28.57	-5.44	-1.39	-3.54	16.583	11.985	-1.39	-20.33	4.05	60	45.2	45.31
2350	24.08	-6.18	-1.89	-4.04	13.835	10.24	-1.89	-21.48	4.29	60	45.41	45.59
2360	23.34	-6.32	-1.91	-4.06	13.221	10.12	-1.91	-20.56	4.41	60	45.27	45.43
2370	22	-6.58	-1.96	-4.11	12.292	9.707	-1.96	-19.99	4.62	60	45.49	45.69
2380	21.84	-6.61	-1.92	-4.07	12.055	9.782	-1.92	-18.62	4.68	60	45.51	45.71
2390	22.16	-6.54	-1.91	-4.06	12.06	10.104	-1.91	-17.91	4.64	60	45.77	46.02
2400	23.23	-6.34	-1.9	-4.05	12.379	10.85	-1.9	-17.3	4.44	60	45.78	46.01
2410	22.24	-6.53	-1.76	-3.91	11.491	10.752	-1.76	-17.44	4.77	30	46.01	46.29
2420	20.26	-6.93	-1.96	-4.11	10.099	10.164	-1.96	-19.07	4.97	0	45.73	46
2430	20.78	-6.82	-1.67	-3.82	10.018	10.759	-1.67	-19.88	5.16	60	46.01	46.36
2440	24.61	-6.09	-0.95	-3.1	11.647	12.958	-0.95	-20.15	5.14	30	46.12	46.48
2450	25.68	-5.9	-0.86	-3.01	12.074	13.611	-0.86	-19.85	5.04	60	46.12	46.54
2460	22.62	-6.45	-1.54	-3.69	10.62	12.001	-1.54	-19.71	4.91	60	46.14	46.52



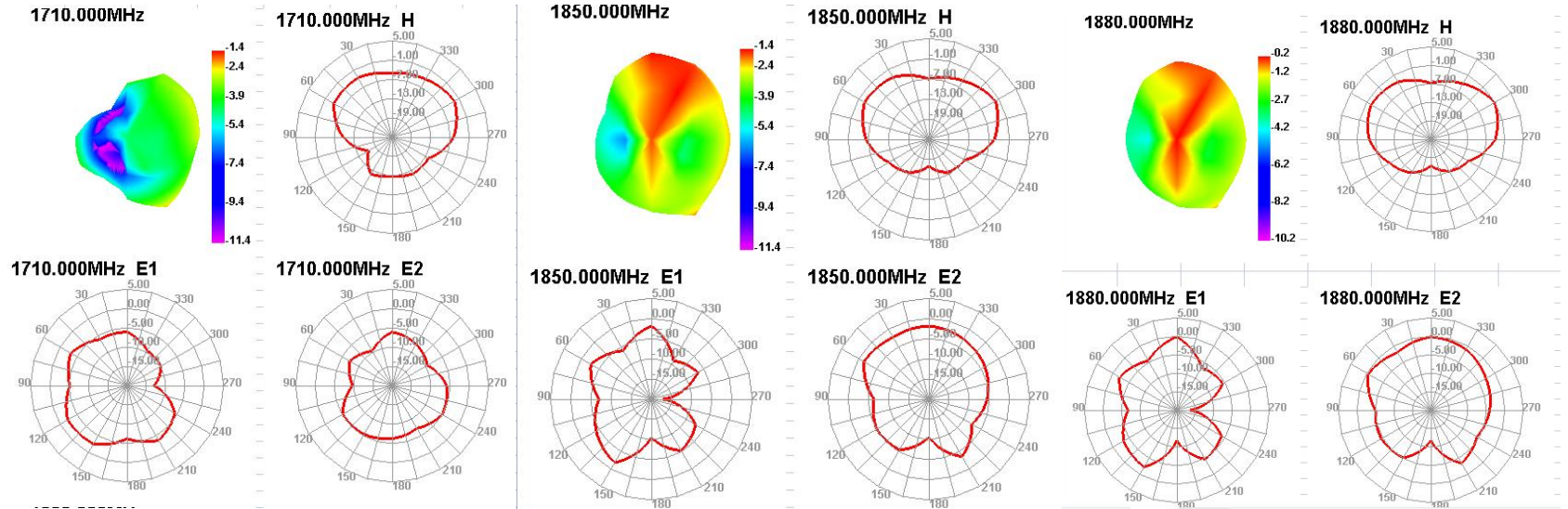
Passive test data

ANT1 GAIN&Efficiency-MAIN ANT Passive (2470~2750MHz)

Passive Test For2470-2750MHz												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2470	24.07	-6.19	-1.41	-3.56	11.219	12.852	-1.41	-18.08	4.78	60	46.4	46.8
2480	26.68	-5.74	-0.7	-2.85	12.266	14.413	-0.7	-17.07	5.04	60	46.26	46.64
2490	28.98	-5.38	-0.15	-2.3	13.145	15.837	-0.15	-15.97	5.23	60	46.51	46.91
2500	26.04	-5.84	-0.41	-2.56	11.651	14.386	-0.41	-16.13	5.43	90	46.47	46.86
2510	27.66	-5.58	0.02	-2.13	12.284	15.381	0.02	-15.65	5.6	30	46.13	46.49
2520	29.71	-5.27	0.29	-1.86	13.263	16.445	0.29	-14.51	5.56	30	46.06	46.36
2530	28.93	-5.39	0.04	-2.11	13.112	15.821	0.04	-13.11	5.43	30	45.99	46.31
2540	28.03	-5.52	-0.23	-2.38	13.002	15.023	-0.23	-12.8	5.3	30	45.89	46.15
2550	28.28	-5.48	-0.31	-2.46	13.401	14.881	-0.31	-12.36	5.17	30	46.08	46.33
2560	30.04	-5.22	-0.12	-2.27	14.593	15.442	-0.12	-11.61	5.1	30	46.01	46.24
2570	31.12	-5.07	-0.05	-2.2	15.491	15.627	-0.05	-11.23	5.02	30	46.03	46.19
2580	29.3	-5.33	-0.37	-2.52	14.862	14.442	-0.37	-11.43	4.96	30	46.01	46.21
2590	27.07	-5.67	-0.93	-3.08	14.009	13.062	-0.93	-11.91	4.74	30	45.73	45.95
2600	28.88	-5.39	-0.94	-3.09	15.215	13.662	-0.94	-12.42	4.45	30	46.04	46.24
2610	30.56	-5.15	-1	-3.15	16.488	14.068	-1	-13.71	4.15	30	45.99	46.22
2620	27.6	-5.59	-1.64	-3.79	15.334	12.268	-1.64	-16.03	3.95	0	45.99	46.17
2630	28.95	-5.38	-1.21	-3.36	16.639	12.315	-1.21	-17.75	4.17	0	45.98	46.18
2640	27.87	-5.55	-1.37	-3.52	16.424	11.451	-1.37	-20.11	4.18	0	46.5	46.72
2650	28	-5.53	-1.34	-3.49	16.772	11.231	-1.34	-21.46	4.19	30	46.45	46.68
2660	28.37	-5.47	-1.14	-3.29	17.126	11.244	-1.14	-21.73	4.34	30	46.66	46.86
2670	31.45	-5.02	-0.64	-2.79	19.046	12.403	-0.64	-21.14	4.38	30	46.65	46.9
2680	29.67	-5.28	-1.05	-3.2	17.887	11.781	-1.05	-21.22	4.22	30	46.69	46.87
2690	27.29	-5.64	-1.68	-3.83	16.337	10.957	-1.68	-19.94	3.96	30	46.47	46.69
2700	28.84	-5.4	-1.68	-3.83	17.24	11.601	-1.68	-17.32	3.72	30	46.74	46.91
2710	31.13	-5.07	-1.46	-3.61	18.562	12.571	-1.46	-15.18	3.6	30	46.56	46.76
2720	29.32	-5.33	-1.91	-4.06	17.501	11.822	-1.91	-15.48	3.41	30	46.78	46.97
2730	28.55	-5.44	-2.11	-4.26	16.904	11.646	-2.11	-15.14	3.34	90	46.57	46.86
2740	29.81	-5.26	-1.98	-4.13	17.487	12.327	-1.98	-14.25	3.28	90	46.81	47.03
2750	33.52	-4.75	-1.38	-3.53	19.351	14.164	-1.38	-13.31	3.37	90	46.89	47.24

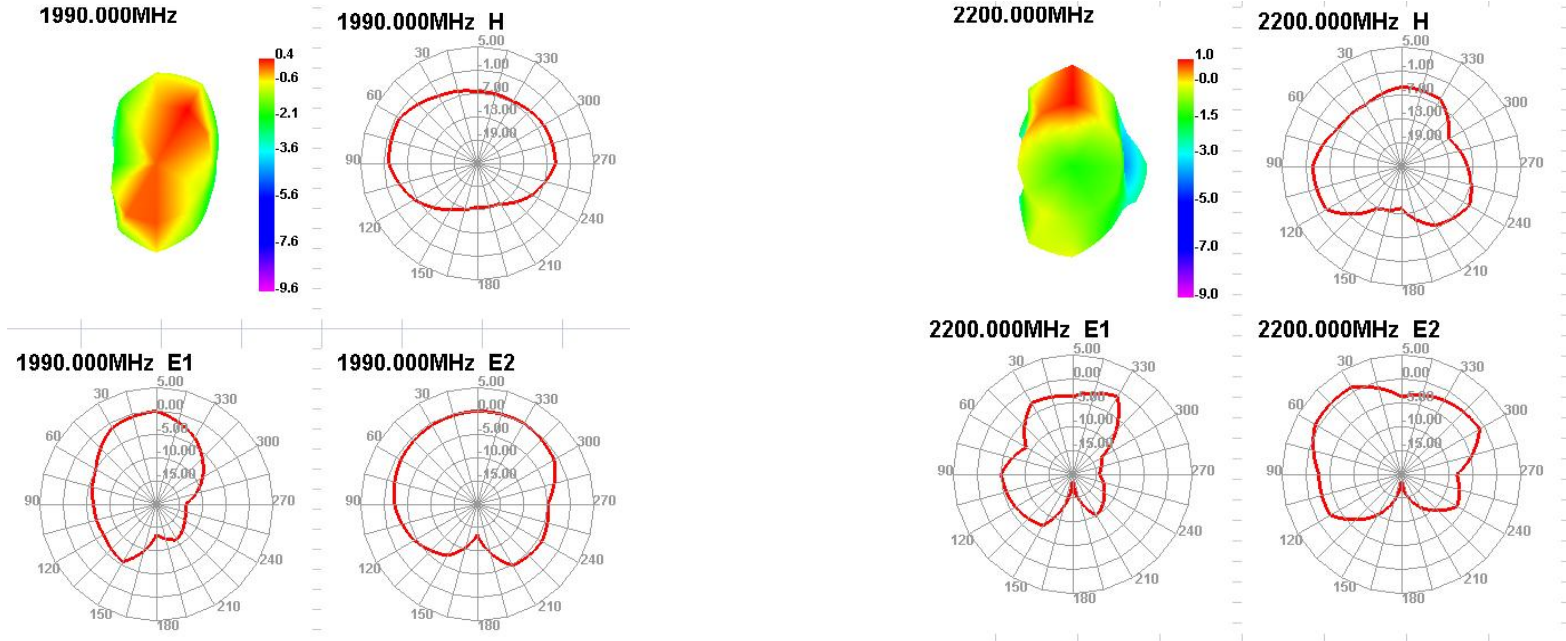
Passive test data

ANT1 GAIN&Efficiency-MAIN ANT Passive (1710~1880MHz)



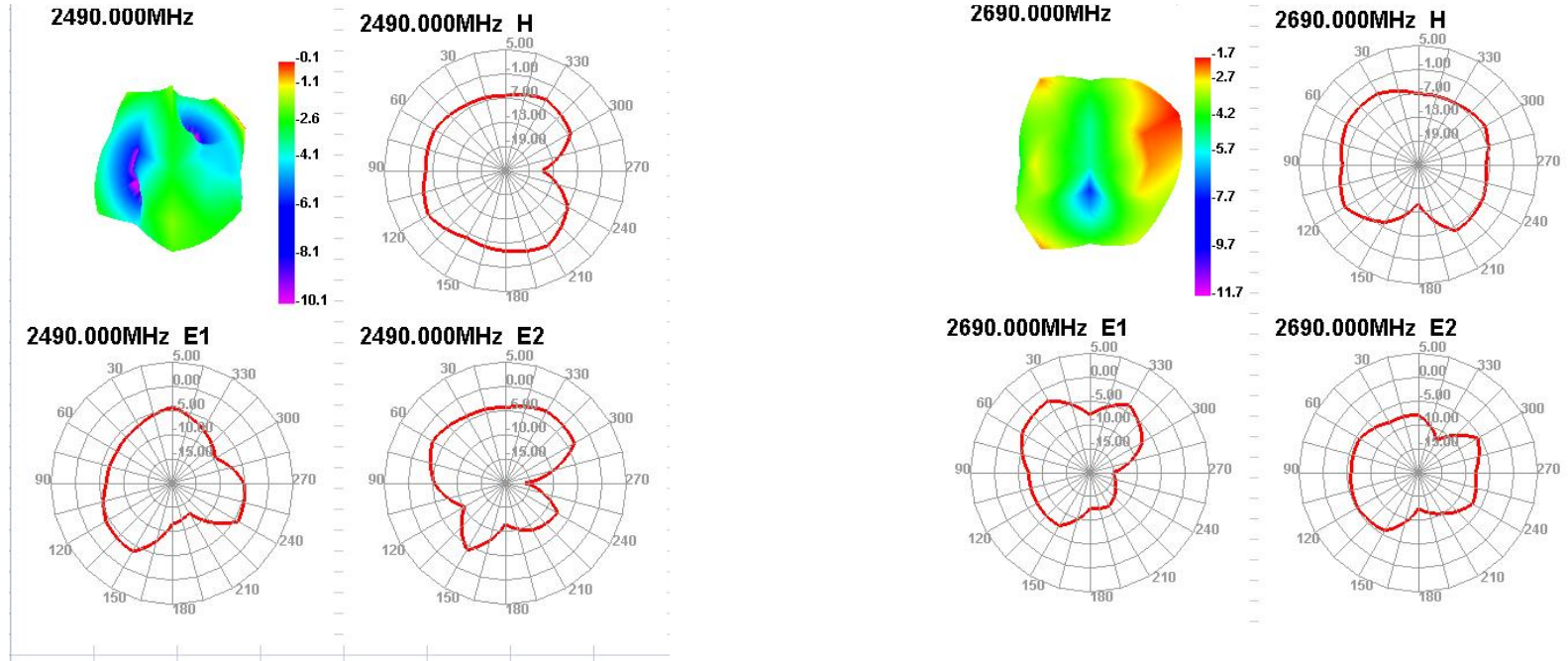
Passive test data

ANT1 GAIN&Efficiency-MAIN ANT Passive (1990~2200MHz)



Passive test data

ANT1 GAIN&Efficiency-MAIN ANT Passive (2490~2690MHz)





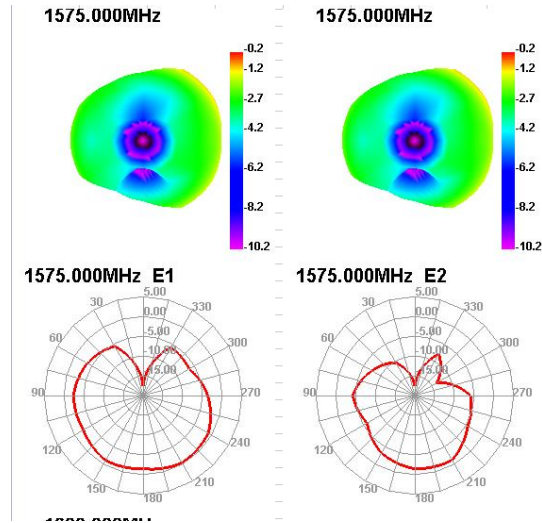
Passive test data

ANT2 GAIN&Efficiency-GPS

Passive Test For GPS												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
1500	29.09	-5.36	-0.79	-2.94	10.405	18.682	-0.79	-11.94	4.57	90	40.93	40.24
1505	30.86	-5.11	-0.33	-2.48	11.202	19.655	-0.33	-11.81	4.77	90	41.06	40.33
1510	32.66	-4.86	-0.25	-2.4	11.817	20.845	-0.25	-11.7	4.61	120	41.09	40.37
1515	32.43	-4.89	-0.39	-2.54	11.736	20.697	-0.39	-12.05	4.5	90	41.03	40.31
1520	32.48	-4.88	-0.55	-2.7	11.7	20.781	-0.55	-12.51	4.33	120	41.06	40.34
1525	33.72	-4.72	-0.56	-2.71	12.025	21.698	-0.56	-12.87	4.16	120	41.11	40.44
1530	35.11	-4.55	-0.56	-2.71	12.41	22.7	-0.56	-13.24	3.98	180	41.12	40.48
1535	36.83	-4.34	-0.5	-2.65	12.959	23.867	-0.5	-13.49	3.84	180	41.16	40.53
1540	39.41	-4.04	-0.51	-2.66	13.674	25.74	-0.51	-13.66	3.53	180	41.21	40.61
1545	40.63	-3.91	-0.55	-2.7	14.051	26.578	-0.55	-13.72	3.37	180	41.24	40.65
1550	41.47	-3.82	-0.33	-2.48	14.352	27.118	-0.33	-14.02	3.49	180	41.24	40.71
1555	42.3	-3.74	-0.19	-2.34	14.61	27.692	-0.19	-14.3	3.55	180	41.27	40.76
1560	42.62	-3.7	-0.18	-2.33	14.768	27.847	-0.18	-14.74	3.53	150	41.34	40.88
1565	42.9	-3.68	-0.11	-2.26	15.083	27.817	-0.11	-15.32	3.57	150	41.42	40.95
1570	42.46	-3.72	-0.06	-2.21	15.06	27.397	-0.06	-16.24	3.66	150	41.5	41.03
1575	41.3	-3.84	-0.19	-2.34	14.829	26.472	-0.19	-17.54	3.65	150	41.68	41.23
1580	40.24	-3.95	-0.32	-2.47	14.644	25.592	-0.32	-18.96	3.63	150	41.78	41.35
1585	39.47	-4.04	-0.31	-2.46	14.588	24.881	-0.31	-20.34	3.73	150	41.85	41.4
1590	38.5	-4.15	-0.27	-2.42	14.467	24.028	-0.27	-21.84	3.88	150	41.99	41.53
1595	38.92	-4.1	-0.2	-2.35	14.804	24.115	-0.2	-23.08	3.9	150	42.09	41.67
1600	37.59	-4.25	-0.35	-2.5	14.617	22.977	-0.35	-23.08	3.9	120	42.04	41.62

Passive test data

ANT2 GAIN&Efficiency-GPS





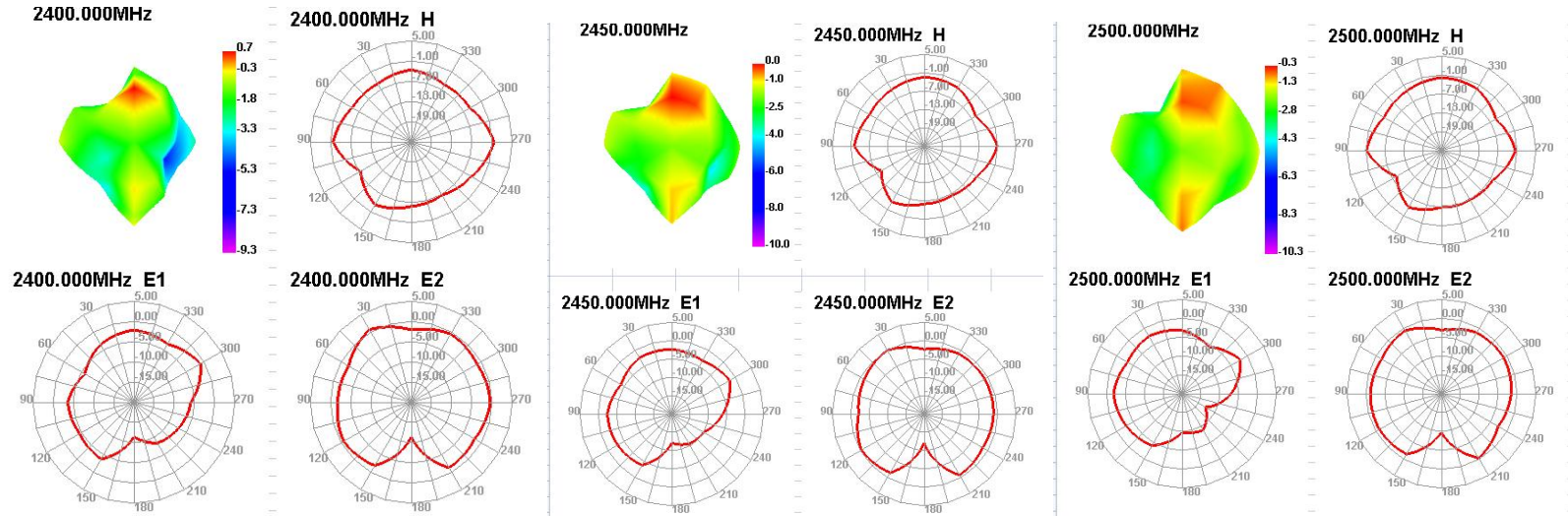
Passive test data

ANT2 GAIN&Efficiency-WIFI2.4G

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	42.48	-3.72	0.74	-1.41	24.724	17.752	0.74	-12.89	4.46	90	45.78	46.01
2410	41.77	-3.79	0.63	-1.52	24.125	17.642	0.63	-13.26	4.42	90	46.01	46.29
2420	43.35	-3.63	0.55	-1.6	24.858	18.491	0.55	-13.74	4.18	90	45.73	46
2430	41.92	-3.78	0.07	-2.08	23.928	17.988	0.07	-14.42	3.84	90	46.01	46.36
2440	41.91	-3.78	0.04	-2.11	23.95	17.956	0.04	-14.63	3.81	210	46.12	46.48
2450	44.78	-3.49	0.04	-2.11	25.718	19.063	0.04	-13.97	3.53	210	46.12	46.54
2460	45.41	-3.43	0.34	-1.81	26.198	19.212	0.34	-13.5	3.77	210	46.14	46.52
2470	42.84	-3.68	0.1	-2.05	24.694	18.144	0.1	-13.73	3.78	210	46.4	46.8
2480	44.8	-3.49	0.15	-2	25.638	19.157	0.15	-13.78	3.64	210	46.26	46.64
2490	48.2	-3.17	0.16	-1.99	27.27	20.925	0.16	-14.49	3.33	0	46.51	46.91
2500	42.68	-3.7	-0.3	-2.45	23.918	18.758	-0.3	-16.39	3.39	150	46.47	46.86

Passive test data

ANT2 GAIN&Efficiency-WIFI2.4G





Passive test data

ANT2 GAIN&Efficiency-WIFI5G

Passive Test For WIFI5G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	15.51	-8.09	-3.53	-5.68	9.2	6.309	-3.53	-16.61	4.57	30	49.82	49.4
5170	18.5	-7.33	-2.93	-5.08	11.226	7.277	-2.93	-18.35	4.4	0	50.13	49.77
5190	15.67	-8.05	-3.27	-5.42	9.808	5.864	-3.27	-23.13	4.78	90	50.42	49.95
5210	19.96	-7	-1.94	-4.09	12.86	7.104	-1.94	-20.75	5.06	90	50.88	50.49
5230	15.73	-8.03	-2.88	-5.03	10.276	5.457	-2.88	-20.86	5.15	90	50.42	50.08
5250	18.57	-7.31	-1.96	-4.11	12.174	6.392	-1.96	-22.26	5.35	90	51.02	50.72
5270	14.5	-8.39	-2.82	-4.97	9.603	4.901	-2.82	-25.33	5.56	90	50.85	50.6
5290	15.85	-8	-2.29	-4.44	10.723	5.128	-2.29	-21.29	5.71	60	51.34	51.12
5310	13.61	-8.66	-2.86	-5.01	9.305	4.307	-2.86	-22.04	5.8	60	50.44	50.36
5330	13.34	-8.75	-2.84	-4.99	9.097	4.24	-2.84	-24.26	5.91	60	51.08	51.01
5350	13.37	-8.74	-2.97	-5.12	9.109	4.262	-2.97	-24.12	5.77	60	51.02	51.01
5370	11.45	-9.41	-3.59	-5.74	7.839	3.613	-3.59	-20.2	5.82	60	50.91	50.95
5390	10.95	-9.6	-3.58	-5.73	7.594	3.359	-3.58	-18.76	6.02	60	50.46	50.43
5410	12.01	-9.2	-3.25	-5.4	8.362	3.649	-3.25	-18.05	5.96	90	51.18	51.09
5430	12.29	-9.11	-3.17	-5.32	8.529	3.757	-3.17	-17.96	5.93	90	50.69	50.7
5450	11.63	-9.34	-3.42	-5.57	8.067	3.567	-3.42	-18.56	5.92	90	50.71	50.85
5470	11.61	-9.35	-3.4	-5.55	8.018	3.587	-3.4	-17.8	5.95	90	50.93	50.83
5490	10.43	-9.82	-3.91	-6.06	7.202	3.223	-3.91	-17.35	5.91	90	50.92	50.79
5510	12.24	-9.12	-3.46	-5.61	8.423	3.813	-3.46	-17.25	5.67	30	51.18	51.16
5530	11.01	-9.58	-3.95	-6.1	7.51	3.496	-3.95	-18.25	5.63	30	51.44	51.3
5550	12.73	-8.95	-3.14	-5.29	8.587	4.141	-3.14	-18.18	5.81	30	51.89	51.76
5570	9.55	-10.2	-4.46	-6.61	6.427	3.127	-4.46	-21.22	5.74	30	51.42	51.33
5590	10.71	-9.7	-4.42	-6.57	7.043	3.671	-4.42	-21.79	5.28	30	51.71	51.76
5610	8.46	-10.73	-5.63	-7.78	5.514	2.942	-5.63	-24.05	5.1	30	51.17	51.22
5630	10.95	-9.61	-4.66	-6.81	7.078	3.874	-4.66	-22.68	4.94	30	51.78	51.77
5650	7.06	-11.51	-6.59	-8.74	4.509	2.553	-6.59	-24.53	4.92	30	51.47	51.55
5670	9.51	-10.22	-4.95	-7.1	5.978	3.533	-4.95	-24.63	5.27	30	52.12	52.28
5690	6.3	-12.01	-6.45	-8.6	3.936	2.364	-6.45	-26.44	5.55	30	52.12	52.25
5710	8.74	-10.59	-5.2	-7.35	5.383	3.355	-5.2	-21.78	5.38	60	51.95	52.05
5730	7.2	-11.43	-5.7	-7.85	4.404	2.792	-5.7	-20.46	5.73	60	51.59	51.69
5750	7.69	-11.14	-5.36	-7.51	4.592	3.103	-5.36	-19.73	5.78	30	51.12	51.15
5770	7.87	-11.04	-5.53	-7.68	4.634	3.237	-5.53	-22.53	5.51	30	51.02	51.06
5790	8.6	-10.66	-5.3	-7.45	4.986	3.61	-5.3	-21.79	5.36	30	51.08	51.16
5810	9.72	-10.12	-4.65	-6.8	5.557	4.167	-4.65	-21.28	5.47	30	51.36	51.43
5830	11.68	-9.33	-3.88	-6.03	6.547	5.128	-3.88	-21.15	5.44	30	51.65	51.66
5850	13.36	-8.74	-3.56	-5.71	7.374	5.982	-3.56	-18.87	5.18	30	51.88	52.05

Passive test data

ANT2 GAIN&Efficiency-WIFI5G

