



SHENZHEN Xingyuanchuang TECHNOLOGY CO., LTD

Antenna Test Report

TC: Greatwall International

MN: W14231

RF: Mr. Dai

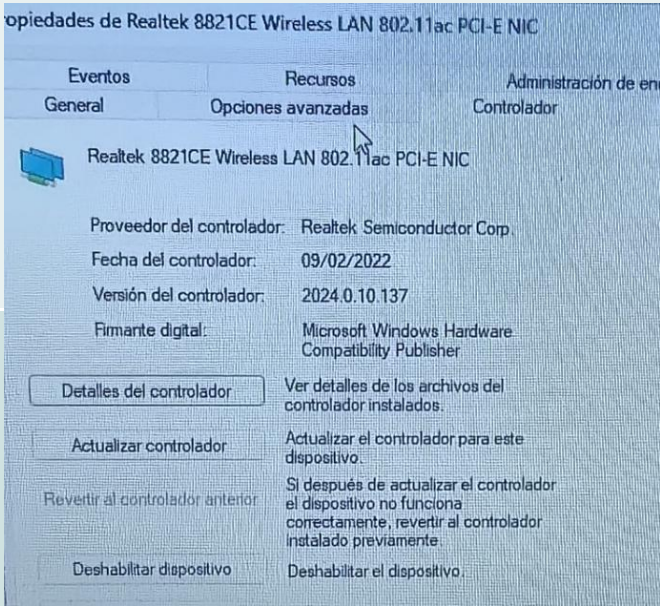
MD: Mr. Huang

MP: 19918388579

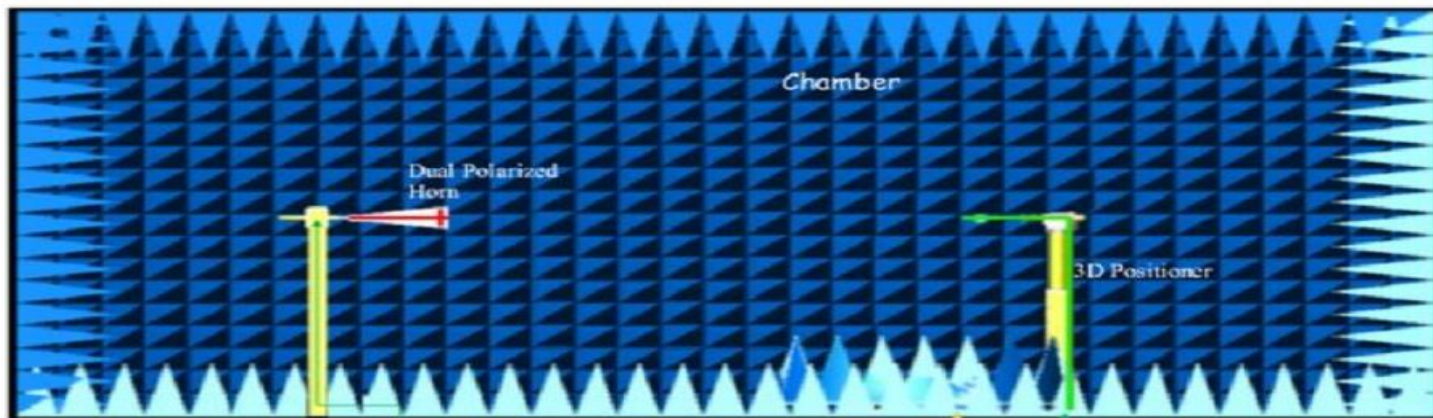
Date: 2025. 09. 10

REV :V1. 0



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

OTA Chamber Overview

0.1~12.5Ghz
RF Switch BoxWireless
Communications
Test Set 1Wireless
Communications
Test Set 2Network
Analyzer

Standard	
Passive	Agilent HP8753/E5062/E5071
GSM	Agilent 8960
CDMA2000	Agilent 8960
WCDMA	Agilent 8960
TDSCDMA	Agilent 8960
LTE	RS CMW500
BT	RS CMU500/200
WIFI	Agilent N4010



Antenna position



SHENZHEN Xingyuanchuang TECHNOLOGY CO., LTD



802.11b	Frequency	TRP		TIS	
	2412	CH1 11Mbps	13.78	CH1 11Mbps	-83.53
	2437	CH6 11Mbps	12.01	CH6 11Mbps	-81.82
	2467	CH11 11Mbps	13.72	CH11 11Mbps	-83.04
802.11a		TRP		TIS	
	5180	CH36 6Mbps	10.43	CH36 54Mbps	-65.79
	5300	CH60 6Mbps	11.10	CH60 54Mbps	-66.55
	5805	CH161 6Mbps	10.47	CH161 54Mbps	-68.75



BT Antenna test

Test environment: Open space (passage)

Test tool: Bluetooth speaker

Test distance: 15+ meters

Result: The music plays smoothly without any noise

WIFI-Throughput test-RVR

RVR Test system(2.4G-N-40M-1-CH6)																																																																																																	
TX		WiFi RvR 测试数据(2G_n_40M_CH6)_TX <table><tr><th>角度\衰减</th><th>0dB</th><th>10dB</th><th>20dB</th><th>30dB</th><th>40dB</th></tr><tr><td>0.0°</td><td>105</td><td>105</td><td>105</td><td>106</td><td>85</td></tr><tr><td>90.0°</td><td>105</td><td>104</td><td>86</td><td>91</td><td>88</td></tr><tr><td>180.0°</td><td>104</td><td>104</td><td>104</td><td>103</td><td>75</td></tr><tr><td>270.0°</td><td>91</td><td>87</td><td>91</td><td>97</td><td>81</td></tr><tr><td>平均</td><td>101.30</td><td>100.00</td><td>96.50</td><td>99.30</td><td>82.30</td></tr><tr><td>方差</td><td>6.80</td><td>8.70</td><td>9.50</td><td>6.70</td><td>5.60</td></tr></table>					角度\衰减	0dB	10dB	20dB	30dB	40dB	0.0°	105	105	105	106	85	90.0°	105	104	86	91	88	180.0°	104	104	104	103	75	270.0°	91	87	91	97	81	平均	101.30	100.00	96.50	99.30	82.30	方差	6.80	8.70	9.50	6.70	5.60	RX		WiFi RvR 测试数据(2G_n_40M_CH6)_RX <table><tr><th>角度\衰减</th><th>0dB</th><th>10dB</th><th>20dB</th><th>30dB</th><th>40dB</th></tr><tr><td>0.0°</td><td>130</td><td>129</td><td>131</td><td>131</td><td>76</td></tr><tr><td>90.0°</td><td>132</td><td>131</td><td>131</td><td>122</td><td>41</td></tr><tr><td>180.0°</td><td>132</td><td>131</td><td>131</td><td>106</td><td>44</td></tr><tr><td>270.0°</td><td>131</td><td>131</td><td>131</td><td>125</td><td>54</td></tr><tr><td>平均</td><td>131.30</td><td>130.50</td><td>131.00</td><td>121.00</td><td>53.80</td></tr><tr><td>方差</td><td>1.00</td><td>1.00</td><td>0.00</td><td>10.70</td><td>15.80</td></tr></table>					角度\衰减	0dB	10dB	20dB	30dB	40dB	0.0°	130	129	131	131	76	90.0°	132	131	131	122	41	180.0°	132	131	131	106	44	270.0°	131	131	131	125	54	平均	131.30	130.50	131.00	121.00	53.80	方差	1.00	1.00	0.00	10.70	15.80
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WIFI-Throughput test-RVR

RVR Test system(5G-AC-80M-1-CH60)

TX	WiFi RvR 测试数据(5G_ac_80M_CH60_TX)						RX						
Picture	角度\衰减	0dB	10dB	20dB	30dB	40dB	Picture	角度\衰减	0dB	10dB	20dB	30dB	40dB
	0.0°	258	248	234	153	71		0.0°	316	315	295	239	74
	90.0°	268	266	205	127	56		90.0°	324	299	276	155	38
	180.0°	270	270	266	268	115		180.0°	324	328	325	324	255
	270.0°	270	271	223	172	56		270.0°	327	324	314	237	82
	平均	266.50	263.80	232.00	180.00	74.50		平均	322.80	316.50	302.50	238.80	112.30
	方差	5.70	10.70	25.60	61.50	27.90		方差	4.70	12.90	21.60	69.00	97.10
	Remarks												

Environmental treatment



Passive test data

ANT1 S11-VSWR&Return Loss-WIFI/BT



Frequency (MHZ)	2400	2450	2500	5150	5500	5850
VSWR	1.63	1.21	1.42	1.12	1.02	1.28
Return Loss (DB)	-11.8	-20.16	-15.21	-24.66	-37.34	-18.15

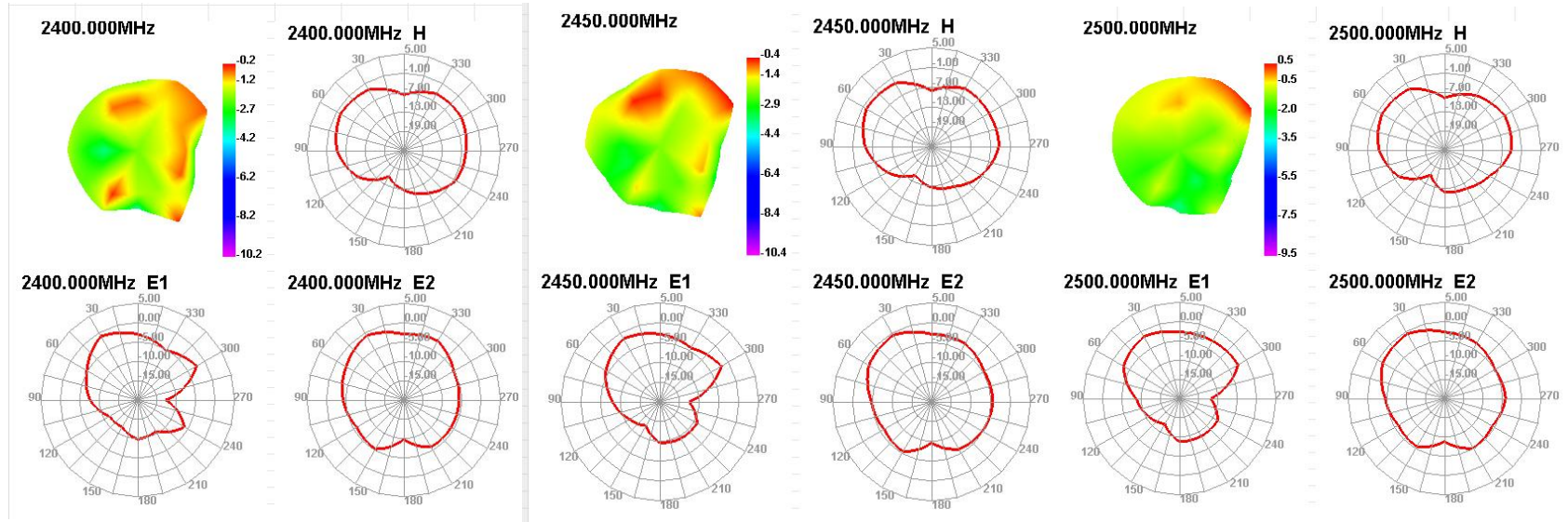
Passive test data

ANT1 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	40.06	-3.97	-0.17	-2.32	25.051	15.011	-0.17	-15.79	3.81	30	45.78	46.01
2410	37.52	-4.26	-0.65	-2.8	23.508	14.008	-0.65	-16.64	3.61	30	46.01	46.29
2420	39.68	-4.01	-0.47	-2.62	24.75	14.926	-0.47	-16.63	3.55	30	45.73	46
2430	40.02	-3.98	-0.52	-2.67	25.093	14.924	-0.52	-16.53	3.45	30	46.01	46.36
2440	39.43	-4.04	-0.47	-2.62	24.87	14.559	-0.47	-15.7	3.58	120	46.12	46.48
2450	38.58	-4.14	-0.39	-2.54	24.409	14.171	-0.39	-14.96	3.75	120	46.12	46.54
2460	38.9	-4.1	-0.06	-2.21	24.58	14.318	-0.06	-14.3	4.04	120	46.14	46.52
2470	40.59	-3.92	0.31	-1.84	25.643	14.948	0.31	-14.12	4.23	120	46.4	46.8
2480	42.13	-3.75	0.57	-1.58	26.599	15.531	0.57	-14.31	4.33	120	46.26	46.64
2490	42.88	-3.68	0.66	-1.49	26.972	15.911	0.66	-15.18	4.33	120	46.51	46.91
2500	40.52	-3.92	0.46	-1.69	25.513	15.005	0.46	-16.27	4.38	120	46.47	46.86

Passive test data

ANT1 Direction of figure(wifi2.4G/BT)



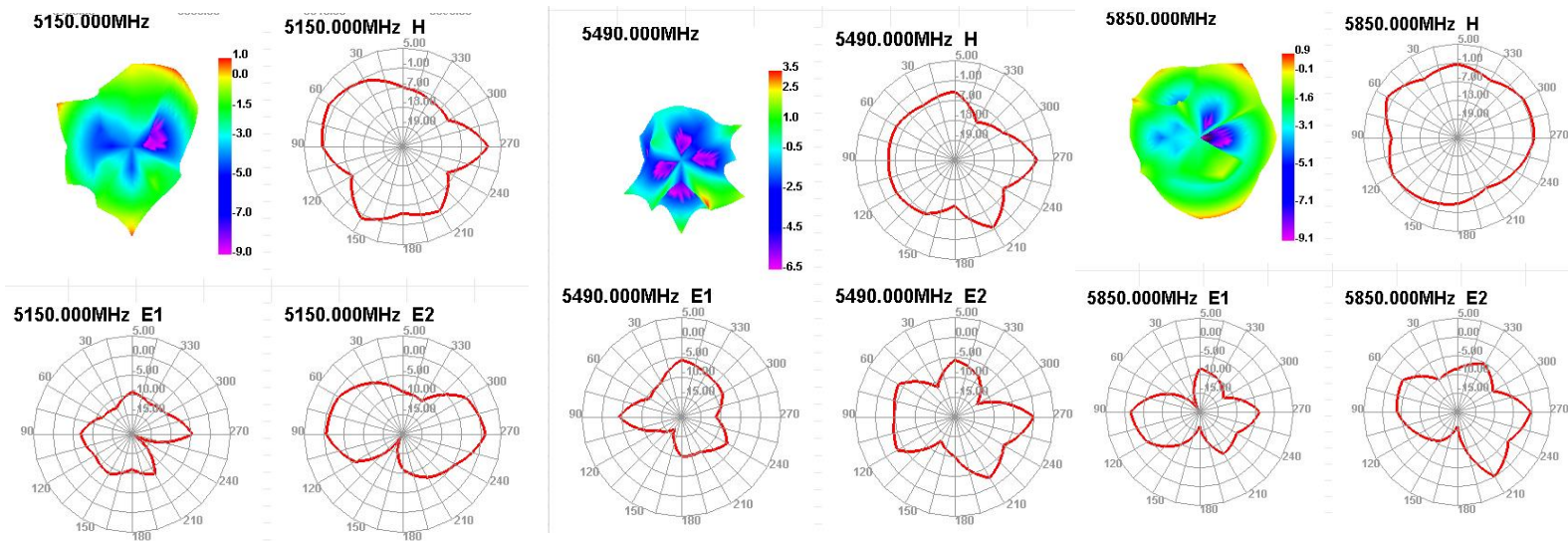
Passive test data

ANT1 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	29.29	-6.15	1.14	-1.01	17.593	11.694	1.14	-18.99	7.29	60	49.82	49.4
5170	29.53	-6.1	1.11	-1.04	17.397	12.133	1.11	-18.43	7.21	30	50.13	49.77
5190	30.83	-5.88	0.82	-1.33	17.817	13.013	0.82	-17.22	6.7	30	50.42	49.95
5210	33.5	-5.45	0.52	-1.63	18.902	14.601	0.52	-17.17	5.98	0	50.88	50.49
5230	32.47	-5.61	0.44	-1.71	18.417	14.056	0.44	-16.72	6.05	0	50.42	50.08
5250	31.02	-5.08	1.09	-1.06	15.392	15.627	1.09	-15.83	6.17	30	51.02	50.72
5270	31.84	-4.97	1.44	-0.71	15.914	15.925	1.44	-14.81	6.41	60	50.85	50.6
5290	33.35	-4.77	1.5	-0.65	16.698	16.654	1.5	-15.95	6.27	0	51.34	51.12
5310	30.06	-5.22	0.72	-1.43	15.075	14.987	0.72	-16.05	5.94	0	50.44	50.36
5330	30.14	-5.21	0.52	-1.63	15.209	14.927	0.52	-17.06	5.73	0	51.08	51.01
5350	31.09	-5.07	0.87	-1.28	15.666	15.425	0.87	-17.79	5.94	0	51.02	51.01
5370	30.3	-5.19	1.01	-1.14	15.111	15.192	1.01	-15.58	6.19	0	50.91	50.95
5390	27.33	-5.63	0.73	-1.42	13.445	13.882	0.73	-16.74	6.37	0	50.46	50.43
5410	32.65	-4.86	1.32	-0.83	16.063	16.582	1.32	-17.19	6.18	0	51.18	51.09
5430	31.39	-5.03	0.99	-1.16	15.486	15.908	0.99	-20.32	6.02	0	50.69	50.7
5450	35.07	-4.55	1.4	-0.75	17.244	17.829	1.4	-18.66	5.95	0	50.71	50.85
5470	35.29	-4.52	1.36	-0.79	17.246	18.044	1.36	-17.6	5.89	0	50.93	50.83
5490	36.82	-4.34	1.31	-0.84	17.978	18.844	1.31	-24.43	5.65	0	50.92	50.79
5510	38.09	-4.19	1.06	-1.09	19.038	19.048	1.06	-21.16	5.26	0	51.18	51.16
5530	39.81	-4	1.29	-0.86	20.143	19.669	1.29	-16.36	5.29	0	51.44	51.3
5550	42.25	-3.74	2.06	-0.09	21.406	20.847	2.06	-14.56	5.8	0	51.89	51.76
5570	40.65	-3.91	2.25	0.1	20.652	19.994	2.25	-16.52	6.16	0	51.42	51.33
5590	42.23	-3.74	2.05	-0.1	21.809	20.426	2.05	-16.04	5.79	0	51.71	51.76
5610	40.75	-3.9	2.11	-0.04	21.529	19.223	2.11	-14.92	6.01	0	51.17	51.22
5630	42.58	-3.71	2.25	0.1	22.7	19.882	2.25	-16.74	5.96	0	51.78	51.77
5650	39.19	-4.07	1.64	-0.51	21.373	17.82	1.64	-16.03	5.7	30	51.47	51.55
5670	41.41	-3.83	1.32	-0.83	23.255	18.156	1.32	-15.9	5.15	30	52.12	52.28
5690	41.62	-3.81	1.29	-0.86	23.621	17.996	1.29	-17.2	5.1	30	52.12	52.25
5710	42.48	-3.72	1.26	-0.89	24.452	18.027	1.26	-20.7	4.98	0	51.95	52.05
5730	46.29	-3.35	2.46	0.31	26.32	19.966	2.46	-21.34	5.8	30	51.59	51.69
5750	41.93	-3.78	2.91	0.76	23.562	18.365	2.91	-21.17	6.68	30	51.12	51.15
5770	47.37	-3.24	3.64	1.49	26.52	20.855	3.64	-22.08	6.88	30	51.02	51.06
5790	46.07	-3.37	4.01	1.86	25.739	20.331	4.01	-20.23	7.37	0	51.08	51.16
5810	50.85	-2.94	4.94	2.79	28.28	22.567	4.94	-25.05	7.88	30	51.36	51.43
5830	50.9	-2.93	5.62	3.47	27.723	23.175	5.62	-20.59	8.56	30	51.65	51.66
5850	55.53	-2.55	6.31	4.16	29.935	25.6	6.31	-16.81	8.86	60	51.88	52.05

Passive test data

ANT1 Direction of figure (5G)



Passive test data

ANT1 S11-VSWR&Return Loss-WIFI/BT



Frequency (MHZ)	2400	2450	2500	5150	5500	5850
VSWR	1.39	1.19	1.46	1.45	1.19	1.42
Return Loss (DB)	-15.69	-21.15	-14.60	-23.13	-21.04	-15.09

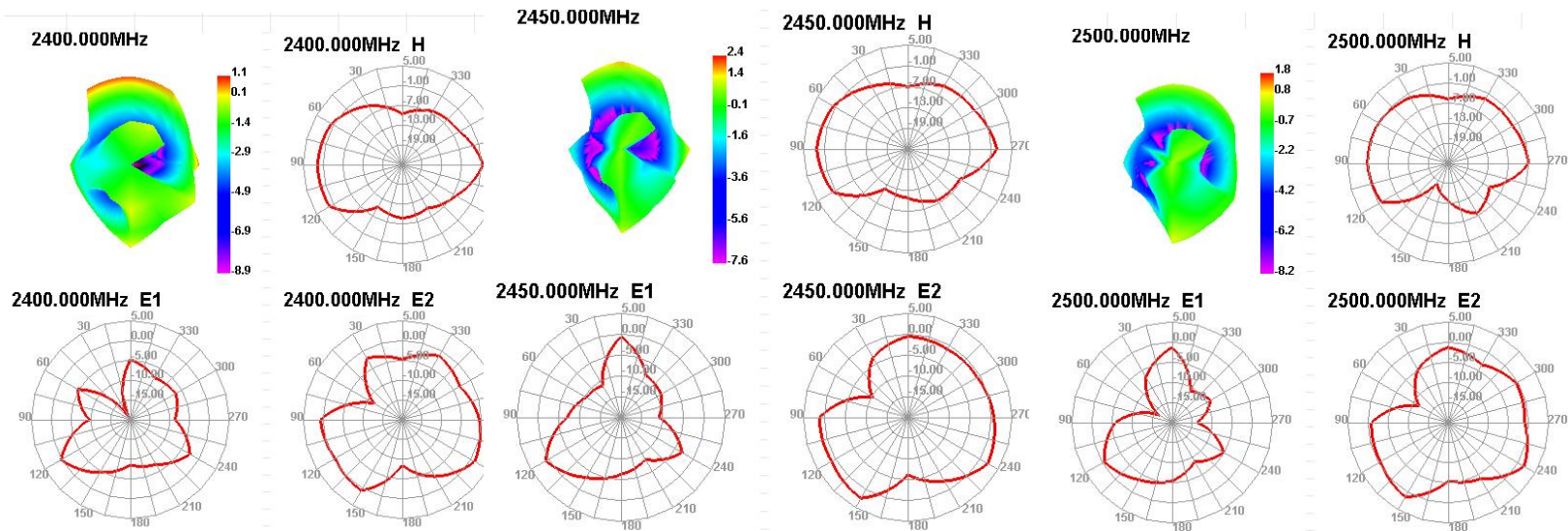
Passive test data

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	44.42	-3.52	1.14	-1.01	16.57	27.853	1.14	-20.67	4.66	0	45.78	46.01
2410	43.89	-3.58	1.45	-0.7	16.09	27.804	1.45	-17.02	5.02	0	46.01	46.29
2420	47.16	-3.26	1.88	-0.27	17.06	30.096	1.88	-15.92	5.14	0	45.73	46
2430	47.93	-3.19	2.02	-0.13	17.292	30.638	2.02	-15.33	5.21	0	46.01	46.36
2440	49.13	-3.09	2.31	0.16	17.716	31.409	2.31	-14.85	5.4	0	46.12	46.48
2450	49.04	-3.09	2.39	0.24	17.776	31.263	2.39	-14.51	5.48	0	46.12	46.54
2460	46.9	-3.29	2.2	0.05	17.208	29.687	2.2	-14.99	5.49	0	46.14	46.52
2470	48.72	-3.12	2.34	0.19	18.062	30.66	2.34	-15.52	5.47	0	46.4	46.8
2480	49.04	-3.09	2.44	0.29	18.357	30.68	2.44	-18.54	5.53	0	46.26	46.64
2490	45.41	-3.43	2.14	-0.01	16.891	28.52	2.14	-24.01	5.57	0	46.51	46.91
2500	40.23	-3.95	1.76	-0.39	14.988	25.239	1.76	-18.19	5.72	0	46.47	46.86

Passive test data

ANT2 Direction of figure(wifi2.4G)



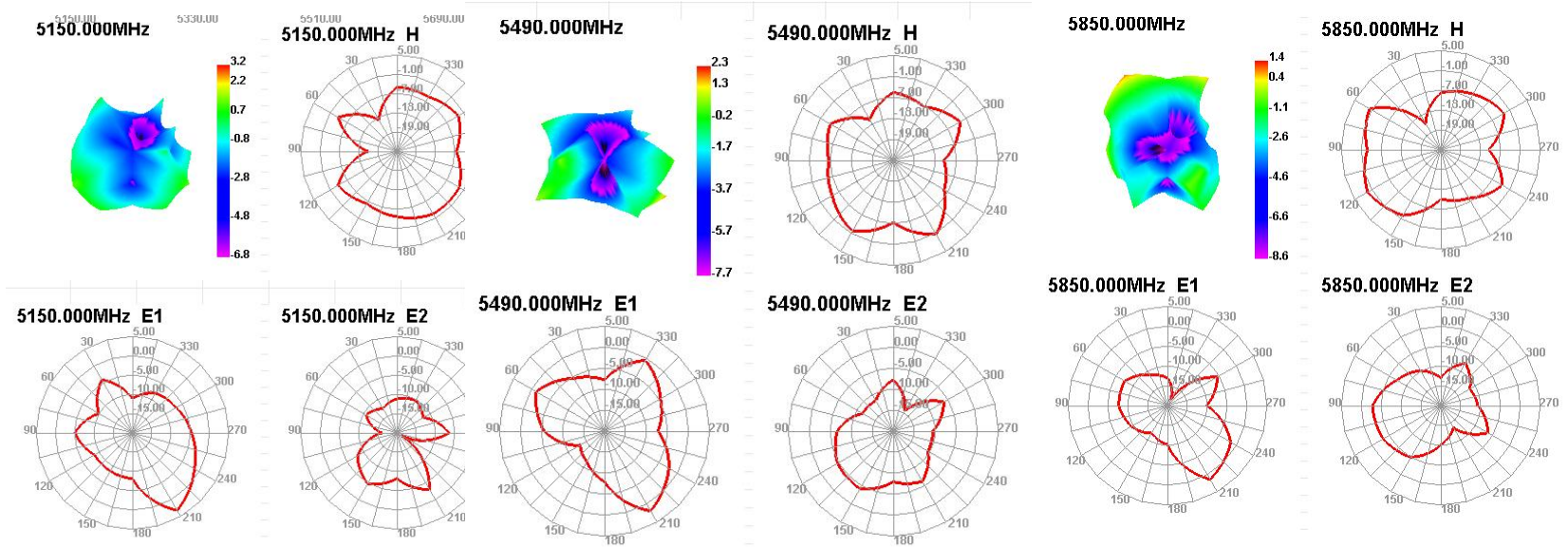
Passive test data

ANT2 GAIN&Efficiency-WIFI5G

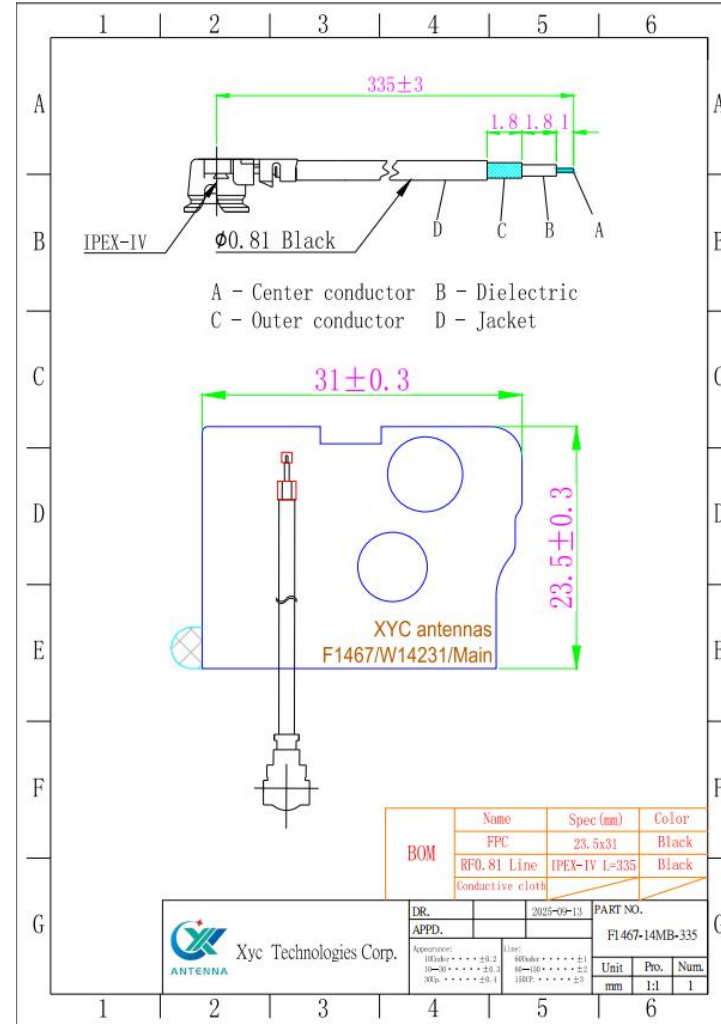
Passive Test For WIFI5G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dEd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	26.83	-6.41	0.29	-1.86	17.047	5.784	0.29	-20.86	6.71	60	49.82	49.4
5170	28.42	-6.12	0.52	-1.63	18.373	6.049	0.52	-21.36	6.64	60	50.13	49.77
5190	28.47	-6.11	0.39	-1.76	18.246	6.223	0.39	-21.25	6.5	60	50.42	49.95
5210	28.91	-5.39	0.93	-1.22	21.506	7.402	0.93	-18.97	6.32	60	50.88	50.49
5230	26.15	-5.82	0.46	-1.69	19.708	6.446	0.46	-19.8	6.28	60	50.42	50.08
5250	30.3	-5.19	1.08	-1.07	23.142	7.159	1.08	-19.35	6.27	60	51.02	50.72
5270	29.37	-5.32	0.82	-1.33	22.382	6.983	0.82	-23.53	6.15	60	50.85	50.6
5290	31.76	-4.98	1.24	-0.91	23.941	7.818	1.24	-21.25	6.22	60	51.34	51.12
5310	29.36	-5.32	0.93	-1.22	22.172	7.187	0.93	-19.8	6.25	90	50.44	50.36
5330	29.46	-5.31	1.06	-1.09	22.561	6.894	1.06	-21.01	6.37	90	51.08	51.01
5350	30.6	-5.14	1.26	-0.89	23.576	7.022	1.26	-23.49	6.4	90	51.02	51.01
5370	29.3	-5.33	1.05	-1.1	22.234	7.067	1.05	-22.48	6.38	90	50.91	50.95
5390	27.55	-5.6	0.83	-1.32	20.656	6.891	0.83	-21.21	6.42	90	50.46	50.43
5410	31.54	-5.01	1.56	-0.59	23.889	7.649	1.56	-20.74	6.57	90	51.18	51.09
5430	29.86	-5.25	1.56	-0.59	22.943	6.916	1.56	-20.29	6.81	90	50.69	50.7
5450	30.89	-5.1	1.71	-0.44	23.703	7.19	1.71	-21.37	6.82	90	50.71	50.85
5470	31.02	-5.08	1.64	-0.51	23.458	7.565	1.64	-19.82	6.73	60	50.93	50.83
5490	30.15	-5.21	1.73	-0.42	22.803	7.346	1.73	-18.98	6.93	60	50.92	50.79
5510	32.34	-4.9	2.13	-0.02	24.844	7.497	2.13	-19.09	7.04	60	51.18	51.16
5530	31.58	-5.01	2.04	-0.11	24.362	7.217	2.04	-20.12	7.05	60	51.44	51.3
5550	34.89	-4.57	2.46	0.31	26.711	8.182	2.46	-21.13	7.04	60	51.89	51.76
5570	31.15	-5.07	1.85	-0.3	23.632	7.517	1.85	-22.73	6.91	60	51.42	51.33
5590	32.68	-4.86	2.03	-0.12	24.906	7.771	2.03	-21.93	6.89	60	51.71	51.76
5610	29.56	-5.29	1.68	-0.47	22.637	6.921	1.68	-22.87	6.97	60	51.17	51.22
5630	31.69	-4.99	1.98	-0.17	24.226	7.466	1.98	-21.95	6.97	60	51.78	51.77
5650	29.56	-5.29	1.72	-0.43	22.523	7.033	1.72	-20.53	7.01	60	51.47	51.55
5670	29.35	-5.32	1.62	-0.53	22.378	6.975	1.62	-20.53	6.95	60	52.12	52.28
5690	28.92	-5.39	1.69	-0.46	22.121	6.795	1.69	-20.15	7.08	60	52.12	52.25
5710	26.27	-5.8	1.16	-0.99	19.983	6.291	1.16	-19.85	6.97	60	51.95	52.05
5730	31.05	-5.08	1.95	-0.2	23.516	7.533	1.95	-18.89	7.03	60	51.59	51.69
5750	26.26	-5.81	1.48	-0.67	19.817	6.445	1.48	-19.92	7.28	60	51.12	51.15
5770	30.14	-5.21	2.19	0.04	22.826	7.31	2.19	-18.68	7.4	60	51.02	51.06
5790	27.08	-5.67	1.67	-0.48	20.518	6.561	1.67	-19.41	7.34	60	51.08	51.16
5810	30.41	-5.17	1.85	-0.3	22.955	7.45	1.85	-20.24	7.02	90	51.36	51.43
5830	29.83	-5.25	1.57	-0.58	22.36	7.472	1.57	-19.3	6.82	90	51.65	51.66
5850	33.83	-4.71	2.05	-0.1	25.277	8.549	2.05	-17.45	6.75	90	51.88	52.05

Passive test data

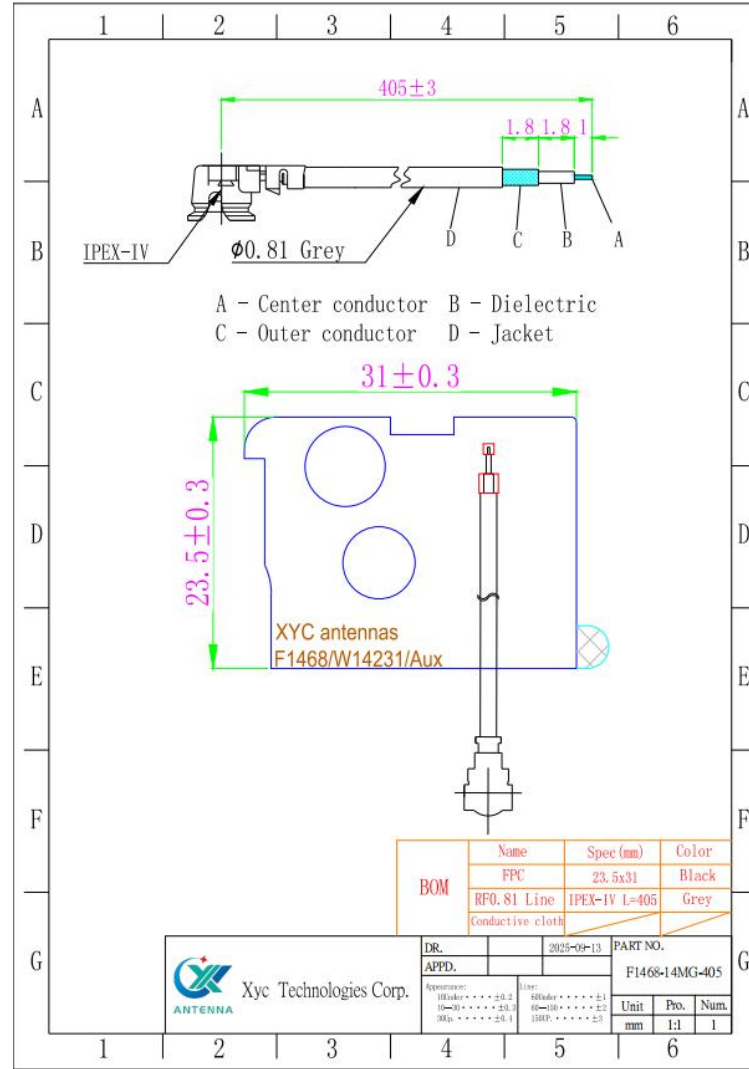
ANT2 Direction of figure(5G)



Finished product drawing-Main



Finished product drawing-Aux



Win-win cooperation

