



Shenzhen Yishengbang Technology Co., Ltd

Antenna Test Report

Project: N140RTL01

Product: BT/WIFI Antenna—FPC

Report date: 2023.02.02

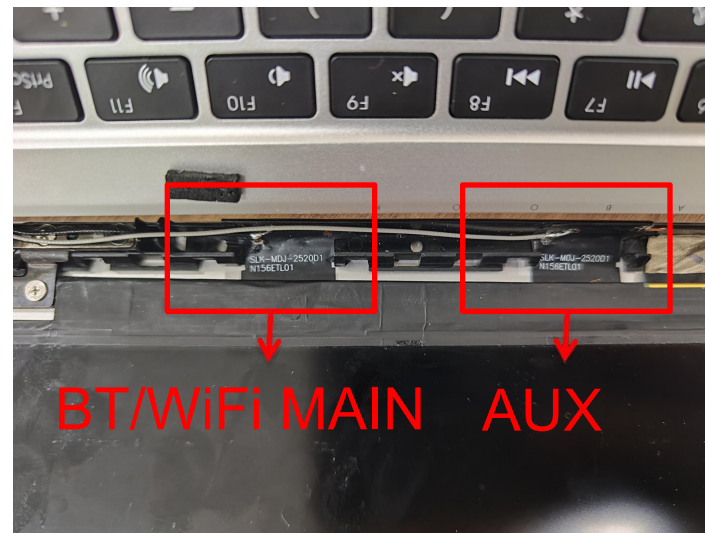
Checked by : Eason Huang



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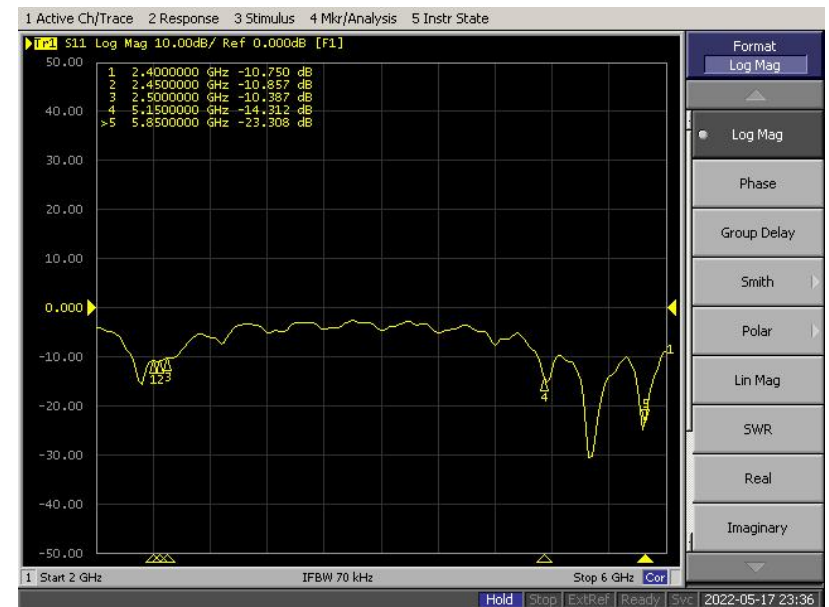
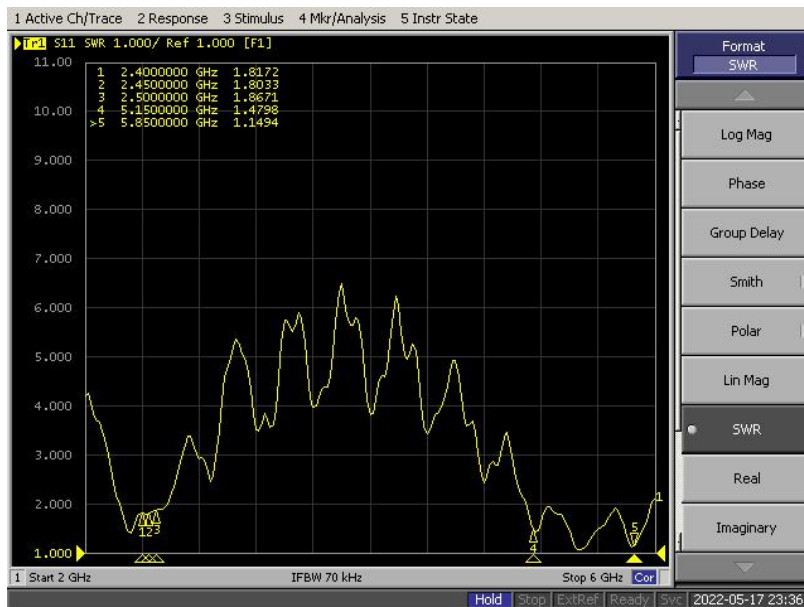
1. Product Overview



2. Test Result

2.1 VSWR/S11

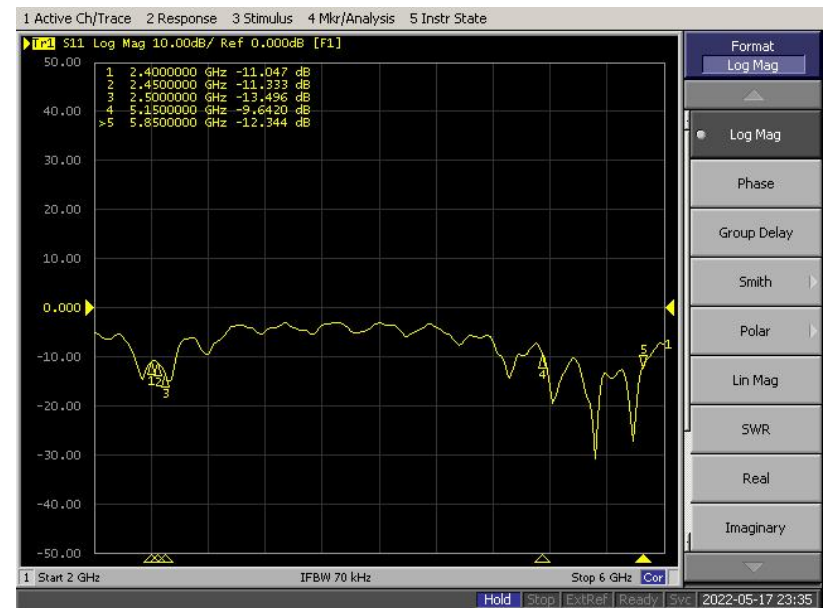
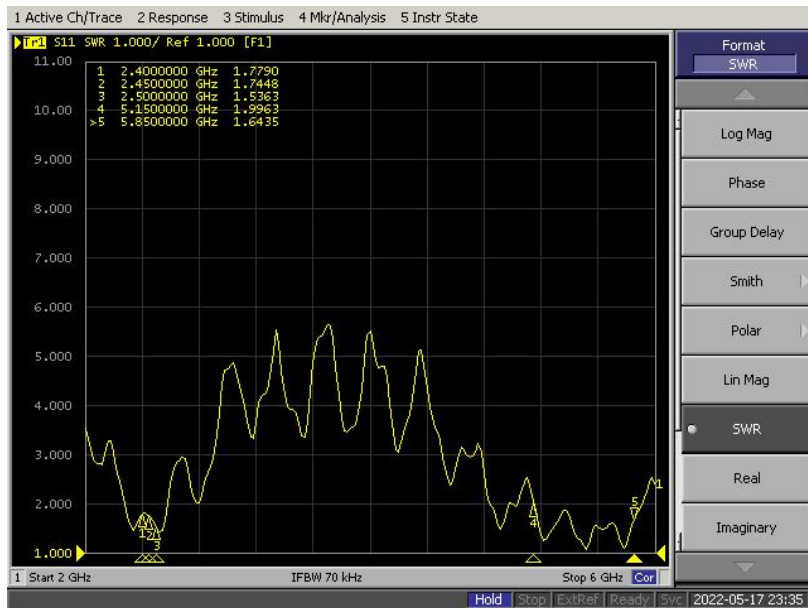
MAIN



2. Test Result

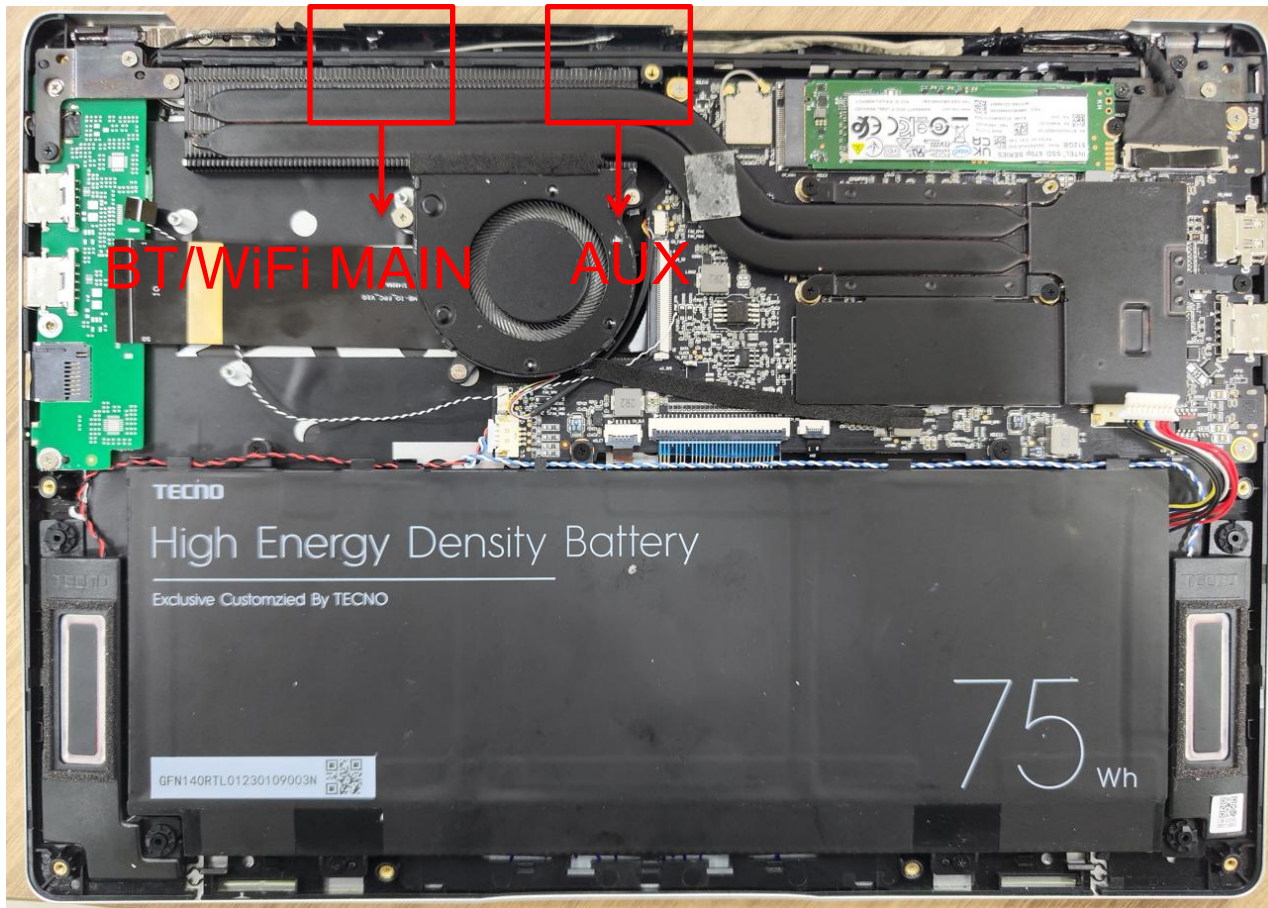
2.1 VSWR/S11

AUX



2. Test Result

2.2 Antenna Parameters



2. Test Result

2.3 WIFI Antenna TRP/TIS

WIFI	CH	power(54M)	sensitivity (54M)	WIFI	CH	power(54M)	sensitivity (54M)
802.11a 54M	36	10.16	-74.91	802.11g 54M	1	11.08	-71.31
	149	10.68	-74.35		6	11.73	-70.65
	165	11.59	-71.2		11	10.97	-71.97
WIFI	CH	power(11M)	sensitivity (11M)	WIFI	CH	power(MCS7)	sensitivity (MCS7)
802.11b 11M	1	11.42	-81.85	802.11n MCX7	1	11.26	-67.84
	6	11.28	-82.57		6	11.53	-65.31
	11	11.52	-82.23		11	11.02	-65.39

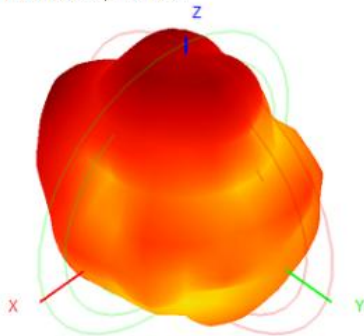
2. Test Result

2.4 WIFI/BT Antenna Gain/Efficiency/3D DATA

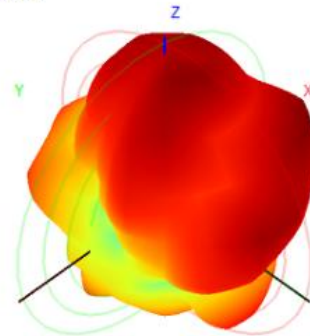
MAIN

Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0	5150.0	5350.0	5500.0	5650.0	5850.0
Efficiency (dBi)	-3.08	-3.06	-3.20	-3.29	-3.26	-3.08	-3.28	-3.56	-3.69	-3.55	-3.27	-3.42	-4.21	-4.06	-3.94	-3.67
Gain (dBi)	2.87	3.02	3.06	3.05	3.14	3.57	3.29	2.73	2.69	2.72	2.80	5.40	1.55	4.44	2.89	4.93
Efficiency (%)	49.09	49.33	47.85	46.83	47.15	49.20	46.94	44.05	42.67	44.13	47.09	45.52	37.92	39.26	40.32	42.86

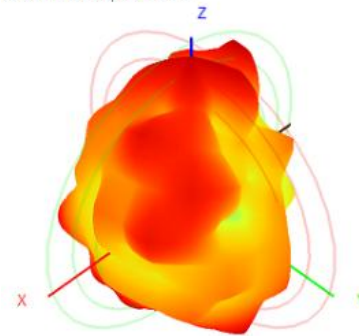
2450.0MHz H+V, Eff: 49.2%



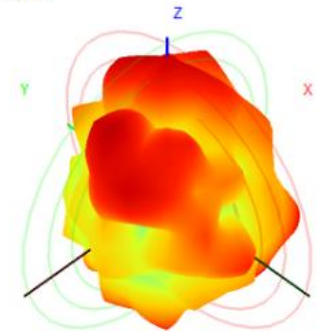
Back View



5850.0MHz H+V, Eff: 42.9%



Back View



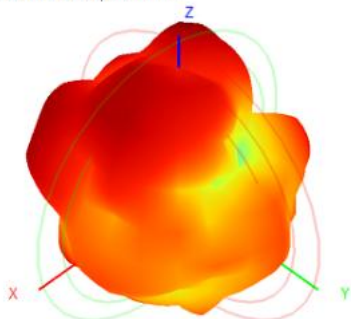
2. Test Result

2.4 WIFI Antenna Gain/Efficiency/3D DATA

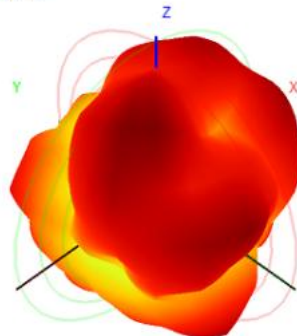
AUX

Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0	5150.0	5350.0	5500.0	5650.0	5850.0
Efficiency (dBi)	-3.8	-3.7	-3.5	-3.75	-3.69	-3.6	-3.67	-3.85	-3.93	-3.91	-3.66	-4.15	-4.09	-3.91	-3.81	-4.01
Gain (dBi)	4.02	3.98	4.16	3.96	3.78	3.65	3.43	3.21	3.35	3.53	3.77	1.79	1.67	2.68	2.84	3.16
Efficiency (%)	41.61	42.57	44.66	42.14	42.67	43.57	42.88	41.18	40.43	40.62	43.02	38.41	38.95	40.63	41.55	39.76

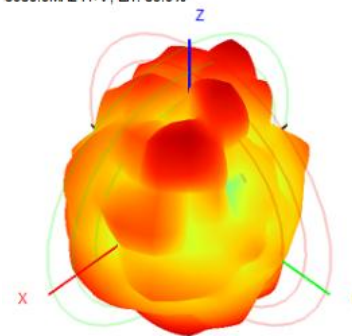
2450.0MHz H+V, Eff: 43.6%



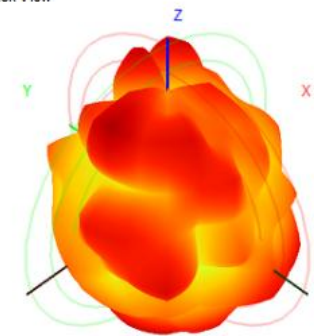
Back View



5850.0MHz H+V, Eff: 39.8%



Back View



2. Test Result

2.5 WIFI Antenna Throughput

	2.4G upload	2.4G download			5.8G upload	5.8G download
VIEW	TP-Tx	TP-Rx		VIEW	TP-Tx	TP-Rx
0	369	399		0	703	727
90	360	402		90	698	744
180	347	380		180	688	730
270	352	401		270	681	747