

SPECIFICATION

DATE: 20230220

DATASHEET REVISION: V1.1

MANUFACTURE: KunShan Innowave Communication Technology Co., Ltd.

Test Software Version: Libra Version -3.0.3.1

Address:

101, Building 7, Zijing Innovation Park,
Dalang Street, Longhua District, Shenzhen

Antenna Placement

ANT Number	Frequency	Other information
ANT3	5150MHz-7125MHz	WIFI 5G & WIFI 6E MIM00
ANT5	2400MHz-2500MHz	2.4G WIFI MIM01
ANT6	2400MHz-2500MHz	2.4G WIFI MIM00
ANT9	13.56MHz $\pm$ 0.35MHz	NFC Size : 38mm*40mm NFC Type: FPC+FERRITE
ANT10	5150MHz-7125MHz	WIFI 5G & WIFI 6E MIM01

Summary table

Check Items	Information
Provided by lab	KunShan Innwave Communication Technology Co., Ltd. Lab
Manufacturer	KunShan Innwave Communication Technology Co., Ltd.
Manufacturer Address	101, Building 7, Zijing Innovation Park, Dalang Street, Longhua District, Shenzhen
Antenna model name	SKU2 - WiFi version
Antenna pattern / Test data (Tx Antenna, Rx antenna, WiFi6E, etc)	Included frequency, antenna gain, type
Test Setup	Test Environment, list of calibrated test equipment

Antenna Performance

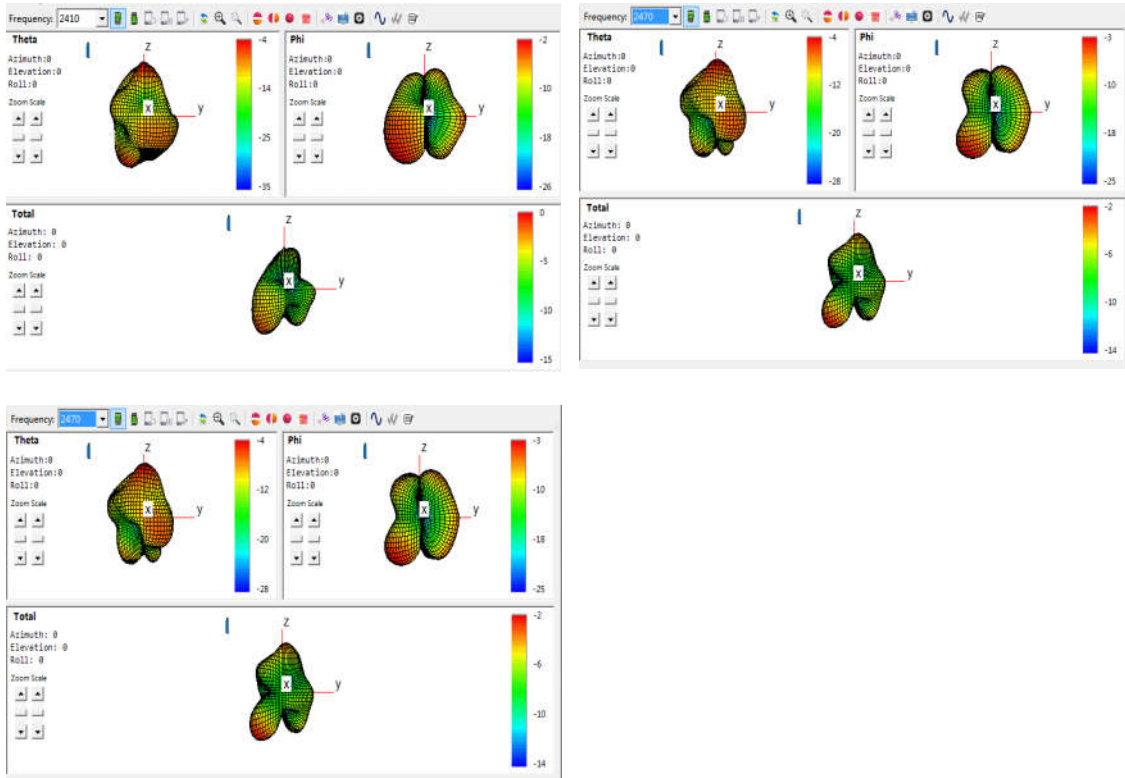
Ant.6(TX antenna)

Frequency Range	2400MHz-2500MHz;			
Impedance	50Ω			
Antenna vendor P/N	F11398502910001			
Antenna Type	PIFA			
WIFI 2.4G Peak Gain	0.1dBi			
WIFI 5G	B1	B2	B3	B4
Peak Gain	NA	NA	NA	NA
WIFI 6E	U-NII-5	U-NII-6	U-NII-7	U-NII-8
Peak Gain	NA	NA	NA	NA

Antenna Efficiency(test in anechoic chamber)

Freq(MHz)	Effi(dB)
2400	-6.42
2410	-6.37
2420	-6.31
2430	-6.24
2440	-6.32
2450	-6.38
2460	-6.51
2470	-6.26
2480	-6.39
2490	-6.48
2500	-6.69

Antenna 3D Radiation Pattern



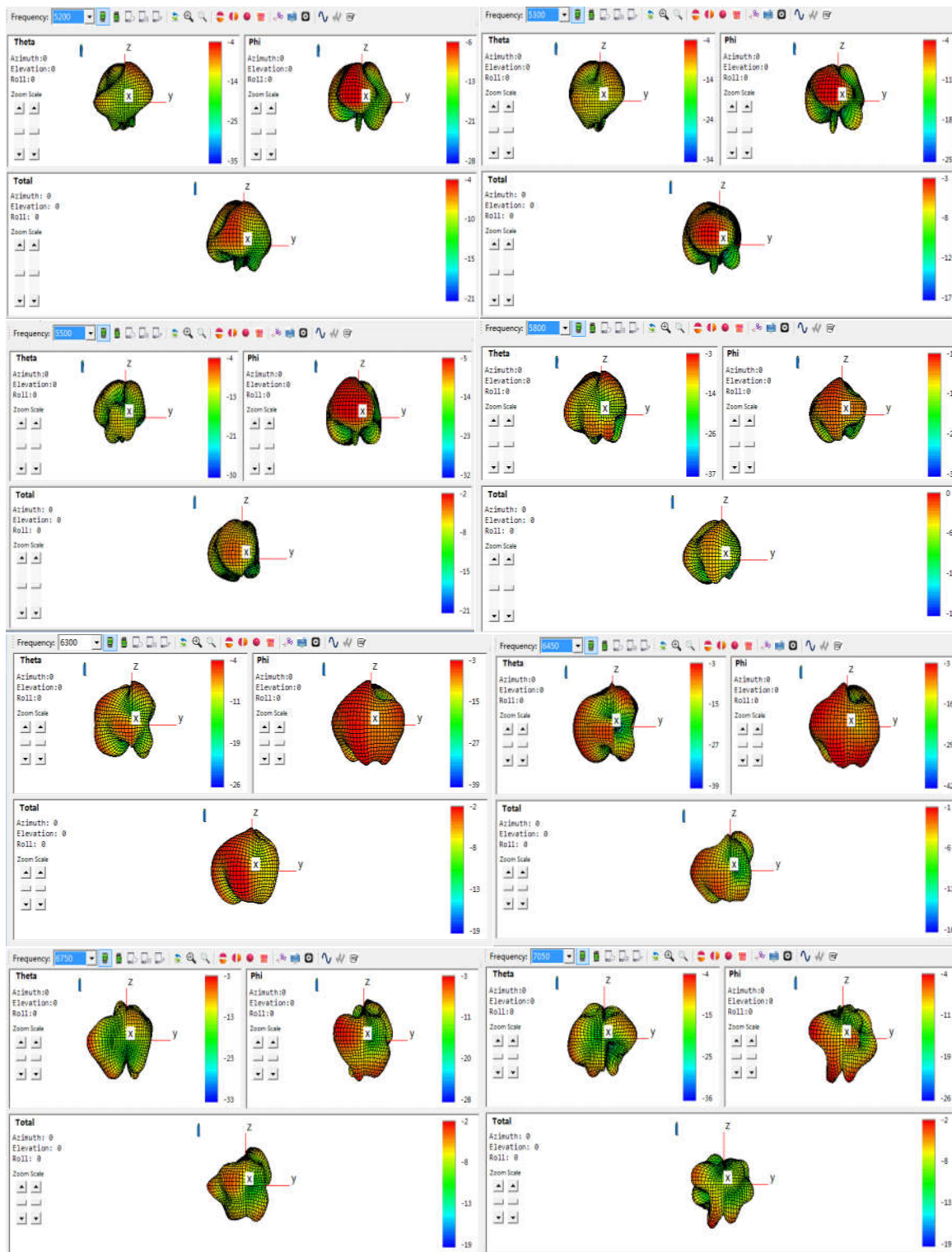
Ant.3 (TX antenna)

Frequency Range	5150-5850MHz;5925-7125MHz;			
Impedance	50Ω			
Antenna Type	PIFA			
WIFI 2.4G Peak Gain	NA			
WIFI 5G	B1	B2	B3	B4
Peak Gain(dBi)	0.32	0.86	0.65	0.25
WIFI 6E	U-NII-5	U-NII-6	U-NII-7	U-NII-8
Peak Gain(dBi)	-2.8	-2.7	-2.6	-2.9

Antenna Efficiency(test in anechoic chamber)

Freq(MHz)	Effi(dB)	Freq(MHz)	Effi(dB)
5150	-9.03	6300	-6.02
5200	-8.64	6350	-5.92
5250	-8.39	6400	-5.94
5300	-7.32	6450	-5.75
5350	-8.25	6500	-5.89
5400	-7.96	6550	-6.19
5450	-8.15	6600	-6.33
5500	-8.11	6650	-6.6
5550	-7.63	6700	-6.26
5600	-7.25	6750	-7.1
5650	-6.9	6800	-7.13
5700	-6.38	6850	-7.59
5750	-6.2	6900	-7.43
5800	-6.16	6950	-8.17
5850	-6.15	7000	-8.46
5900	-5.78	7050	-8.11
5950	-5.93	7100	-8.61
6000	-6.54	7150	-8.67
6050	-7.06	7000	-5.89
6100	-6.59	7050	-6.19
6150	-5.97	7100	-6.33
6200	-5.85	7150	-6.6
6250	-5.83		

Antenna 3D Radiation Pattern



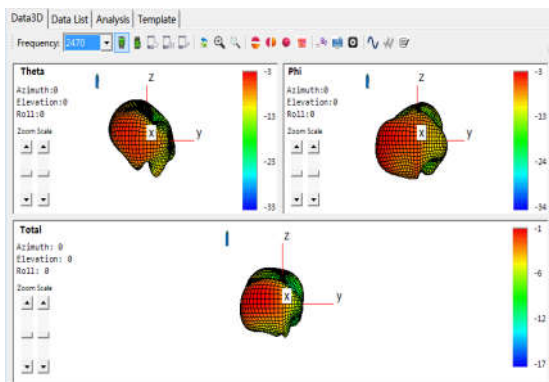
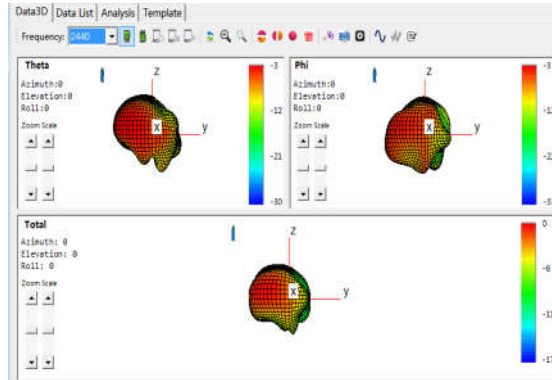
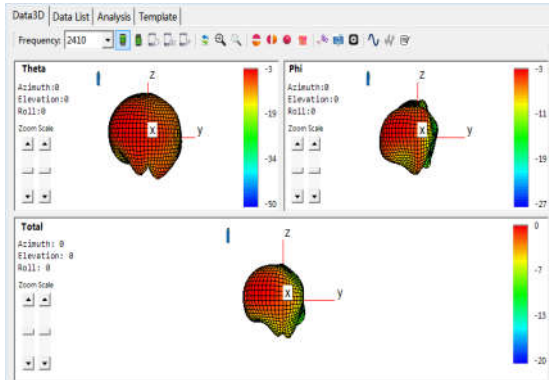
Ant.5 (TX antenna)

Frequency Range	2400-2500MHz;			
Impedance	50Ω			
Antenna vendor P/N	F11398502910001			
Antenna Type	PIFA			
WIFI 2.4G Peak Gain	0.2dBi			
WIFI 5G	B1	B2	B3	B4
Peak Gain	NA	NA	NA	NA
WIFI 6E	U-NII-5	U-NII-6	U-NII-7	U-NII-8
Peak Gain	NA	NA	NA	NA

Antenna Efficiency(test in anechoic chamber)

Freq(MHz)	Effi(dB)
2400	-5.68
2410	-5.47
2420	-5.3
2430	-5.11
2440	-5.12
2450	-5.17
2460	-5.31
2470	-5.47
2480	-5.65
2490	-5.77
2500	-5.99

Antenna 3D Radiation Pattern



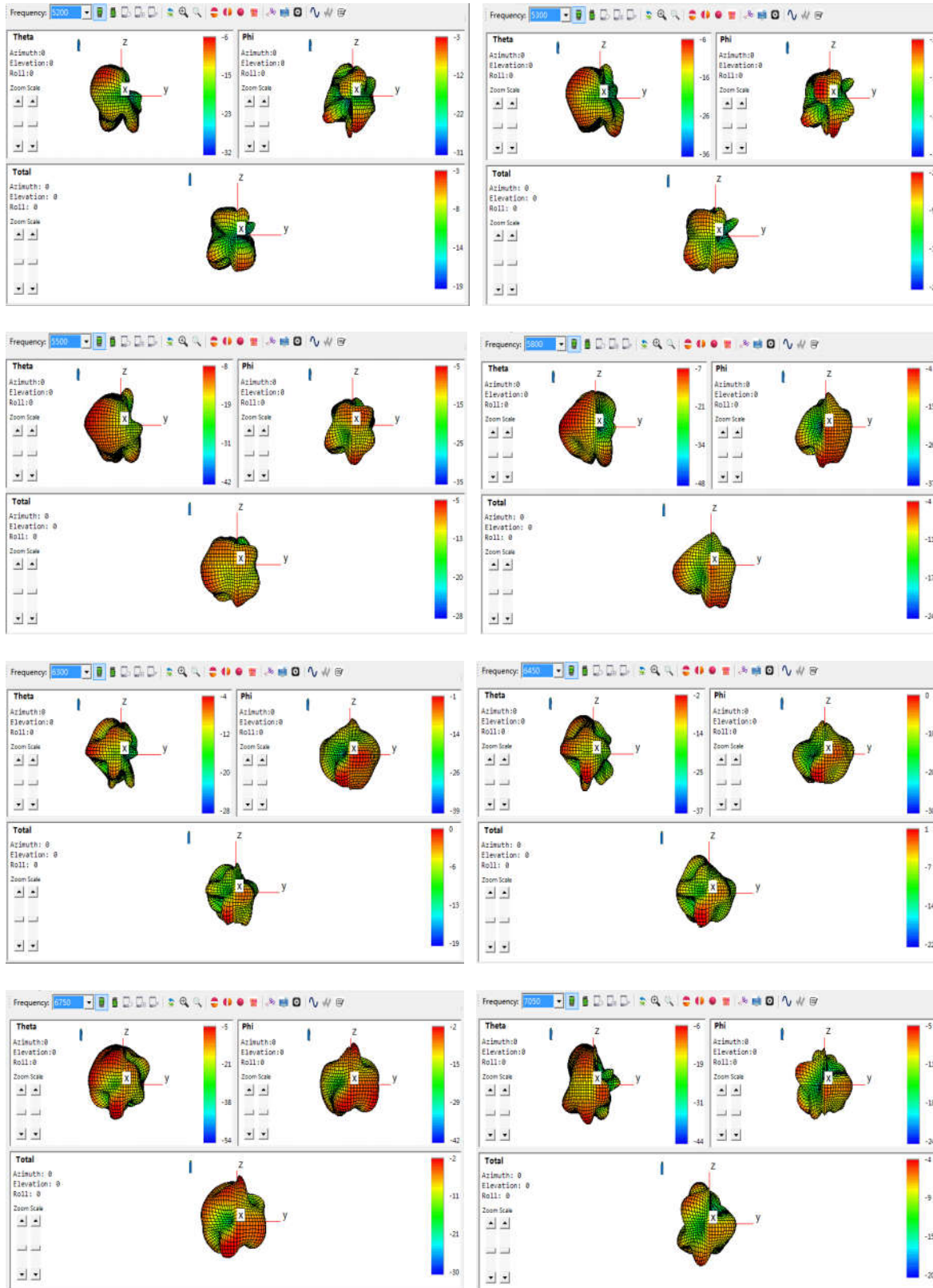
Ant.10 (TX antenna)

Frequency Range	5150-5850MHz;5925-7125MHz;			
Impedance	50Ω			
Antenna vendor P/N	F11398502910001			
Antenna Type	PIFA			
WIFI 2.4G Peak Gain	NA			
WIFI 5G	B1	B2	B3	B4
Peak Gain	0.85	1.16	1.57	0.61
WIFI 6E	U-NII-5	U-NII-6	U-NII-7	U-NII-8
Peak Gain	-2.8	-2.7	-2.6	-2.9

Antenna Efficiency(test in anechoic chamber)

Freq(MHz)	Effi(dB)	Freq(MHz)	Effi(dB)
5150	-8.98	6300	-4.96
5200	-8.55	6350	-4.95
5250	-8.24	6400	-5.08
5300	-6.74	6450	-5.05
5350	-7.71	6500	-5.23
5400	-7.51	6550	-5.31
5450	-7.12	6600	-5.59
5500	-7.17	6650	-5.51
5550	-6.89	6700	-6.16
5600	-6.5	6750	-6.36
5650	-6.37	6800	-6.77
5700	-5.61	6850	-6.9
5750	-5.31	6900	-7.57
5800	-5	6950	-7.6
5850	-4.69	7000	-8.37
5900	-4.46	7050	-8.19
5950	-4.57	7100	-8.71
6000	-4.38	7150	-8.5
6050	-4.2	7000	-4.96
6100	-4.5	7050	-4.95
6150	-4.18	7100	-5.08
6200	-4.48	7150	-5.05
6250	-4.78		

Antenna 3D Radiation Pattern



Test setup

Test Environment, list of calibrated test equipment

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Calibration Date : 20220712

Zhu Jian yuan

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Antenna Placement

ANT Number	Frequency	Other information
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ANT5	2400MHz-2500MHz	2.4G WIFI MIM01
ANT6	2400MHz-2500MHz	2.4G WIFI MIM00
ANT9	13.56MHz $\pm$ 0.35MHz	NFC Size : 38mm*40mm NFC Type: FPC+FERRITE
ANT10	5150MHz-7125MHz	WIFI 5G & WIFI 6E MIM01

Summary table

Check Items	Information
Provided by lab	KunShan Innwave Communication Technology Co., Ltd. Lab
Manufacturer	KunShan Innwave Communication Technology Co., Ltd.
Manufacturer Address	101, Building 7, Zijing Innovation Park, Dalang Street, Longhua District, Shenzhen
Antenna model name	SKU3 - Slim version
Antenna pattern / Test data (Tx Antenna, Rx antenna, WiFi6E, etc)	Included frequency, antenna gain, type
Test Setup	Test Environment, list of calibrated test equipment

Antenna Performance

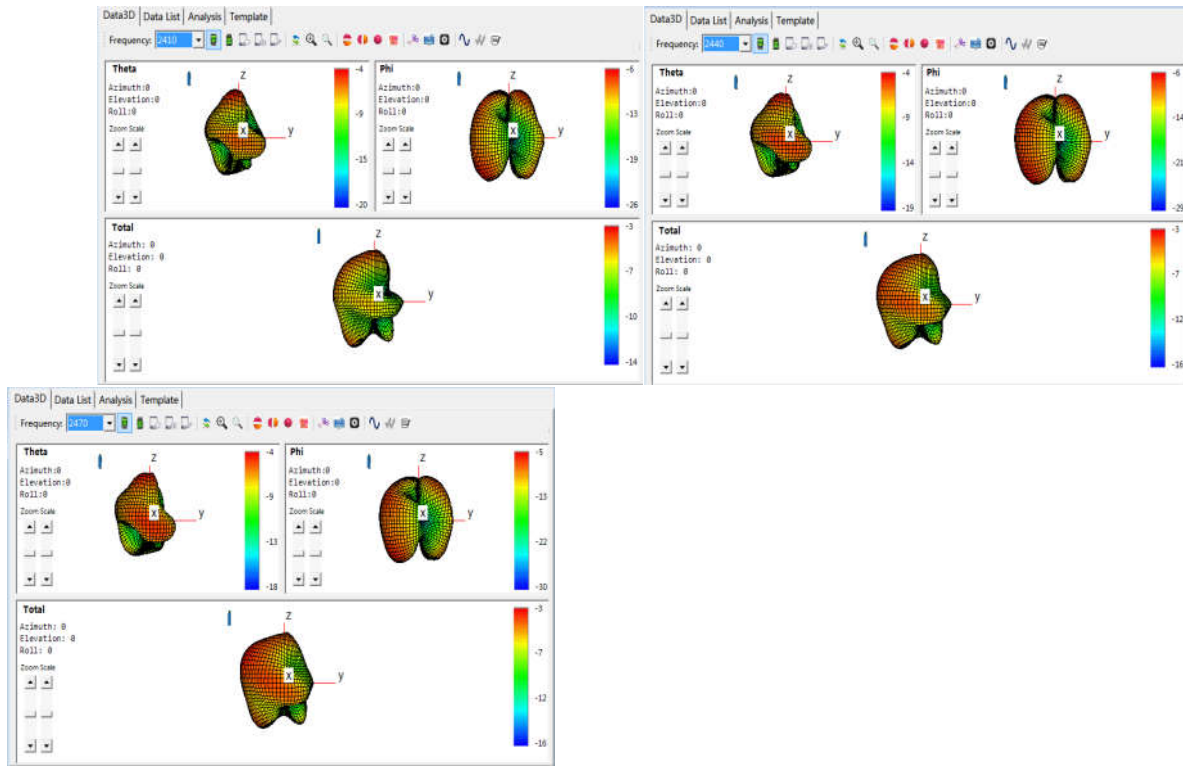
Ant.6(TX antenna)

Frequency Range	2400MHz-2500MHz;			
Impedance	50Ω			
Antenna vendor P/N	F11398502910001			
Antenna Type	PIFA			
WIFI 2.4G Peak Gain	-1.37dBi			
WIFI 5G	B1	B2	B3	B4
Peak Gain	NA	NA	NA	NA
WIFI 6E	U-NII-5	U-NII-6	U-NII-7	U-NII-8
Peak Gain	NA	NA	NA	NA

Antenna Efficiency(test in anechoic chamber)

Freq(MHz)	Effi(dB)
2400	-7.09
2410	-7.02
2420	-6.72
2430	-6.46
2440	-6.24
2450	-5.95
2460	-5.74
2470	-5.47
2480	-5.22
2490	-4.88
2500	-4.74

Antenna 3D Radiation Pattern



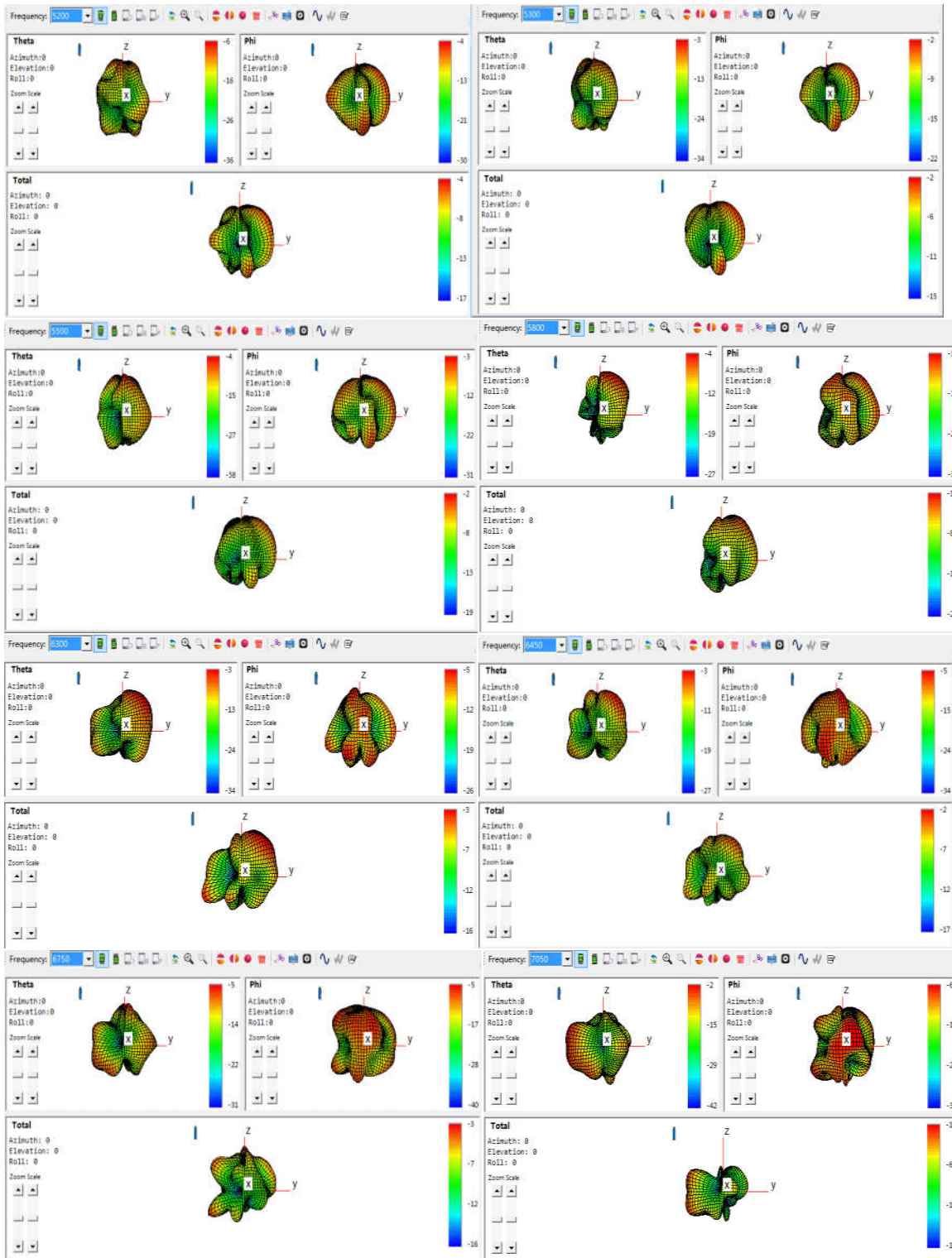
Ant.3 (TX antenna)

Frequency Range	5150-5850MHz;5925-7125MHz;			
Impedance	50Ω			
Antenna Type	PIFA			
WIFI 2.4G Peak Gain	NA			
WIFI 5G	B1	B2	B3	B4
Peak Gain(dBi)	0.32	0.86	0.65	0.25
WIFI 6E	U-NII-5	U-NII-6	U-NII-7	U-NII-8
Peak Gain(dBi)	-2.8	-2.7	-2.6	-2.9

Antenna Efficiency(test in anechoic chamber)

Freq(MHz)	Effi(dB)	Freq(MHz)	Effi(dB)
5150	-7.51	6300	-7.15
5200	-7.56	6350	-6.85
5250	-7.21	6400	-6.94
5300	-6.18	6450	-6.9
5350	-7	6500	-6.91
5400	-7.12	6550	-7.1
5450	-7.11	6600	-6.79
5500	-7.5	6650	-7.17
5550	-7.61	6700	-7.41
5600	-7.62	6750	-7.5
5650	-7.65	6800	-7.71
5700	-7.38	6850	-7.76
5750	-7.71	6900	-7.4
5800	-7.81	6950	-6.94
5850	-7.94	7000	-7.72
5900	-7.96	7050	-7.41
5950	-8	7100	-7.81
6000	-7.72	7150	-7.47
6050	-7.52	7000	-7.15
6100	-7.21	7050	-6.85
6150	-6.8	7100	-6.94
6200	-6.81	7150	-6.9
6250	-6.91		

Antenna 3D Radiation Pattern



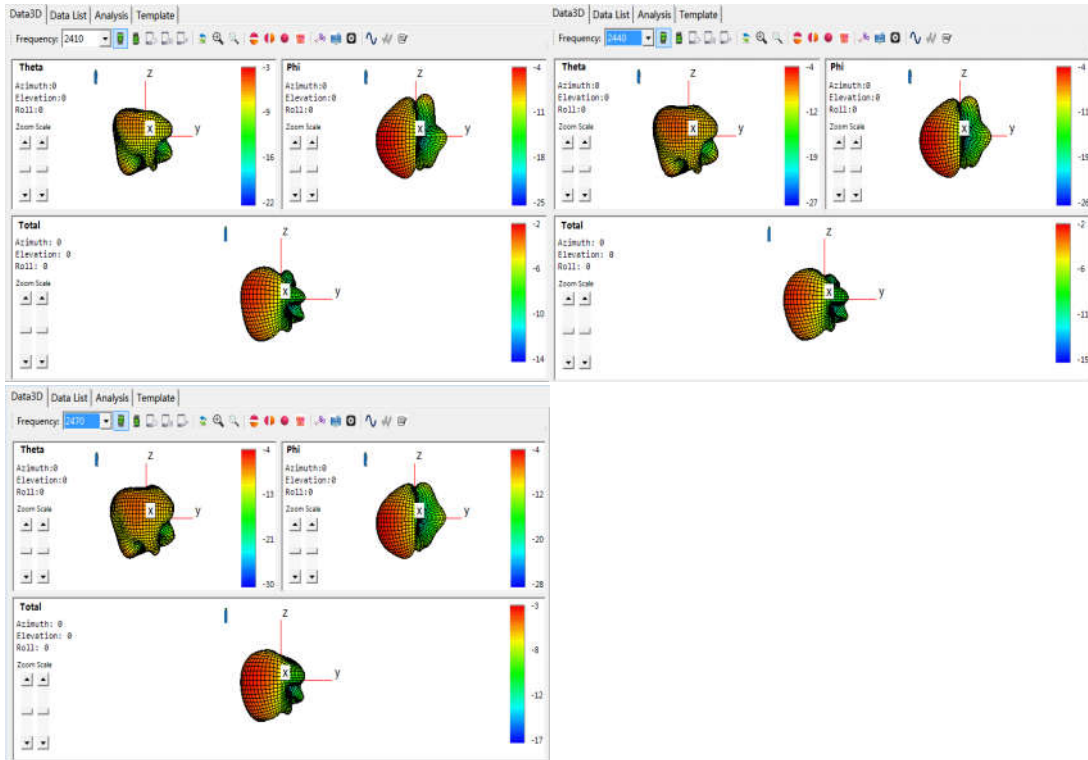
Ant.5 (TX antenna)

Frequency Range	2400-2500MHz;			
Impedance	50Ω			
Antenna vendor P/N	F11398502910001			
Antenna Type	PIFA			
WIFI 2.4G Peak Gain	-0.98dBi			
WIFI 5G	B1	B2	B3	B4
Peak Gain	NA	NA	NA	NA
WIFI 6E	U-NII-5	U-NII-6	U-NII-7	U-NII-8
Peak Gain	NA	NA	NA	NA

Antenna Efficiency(test in anechoic chamber)

Freq(MHz)	Effi(dB)
2400	-5.7
2410	-5.75
2420	-5.78
2430	-5.83
2440	-5.93
2450	-5.99
2460	-6.12
2470	-6.18
2480	-6.29
2490	-6.35
2500	-6.56

Antenna 3D Radiation Pattern



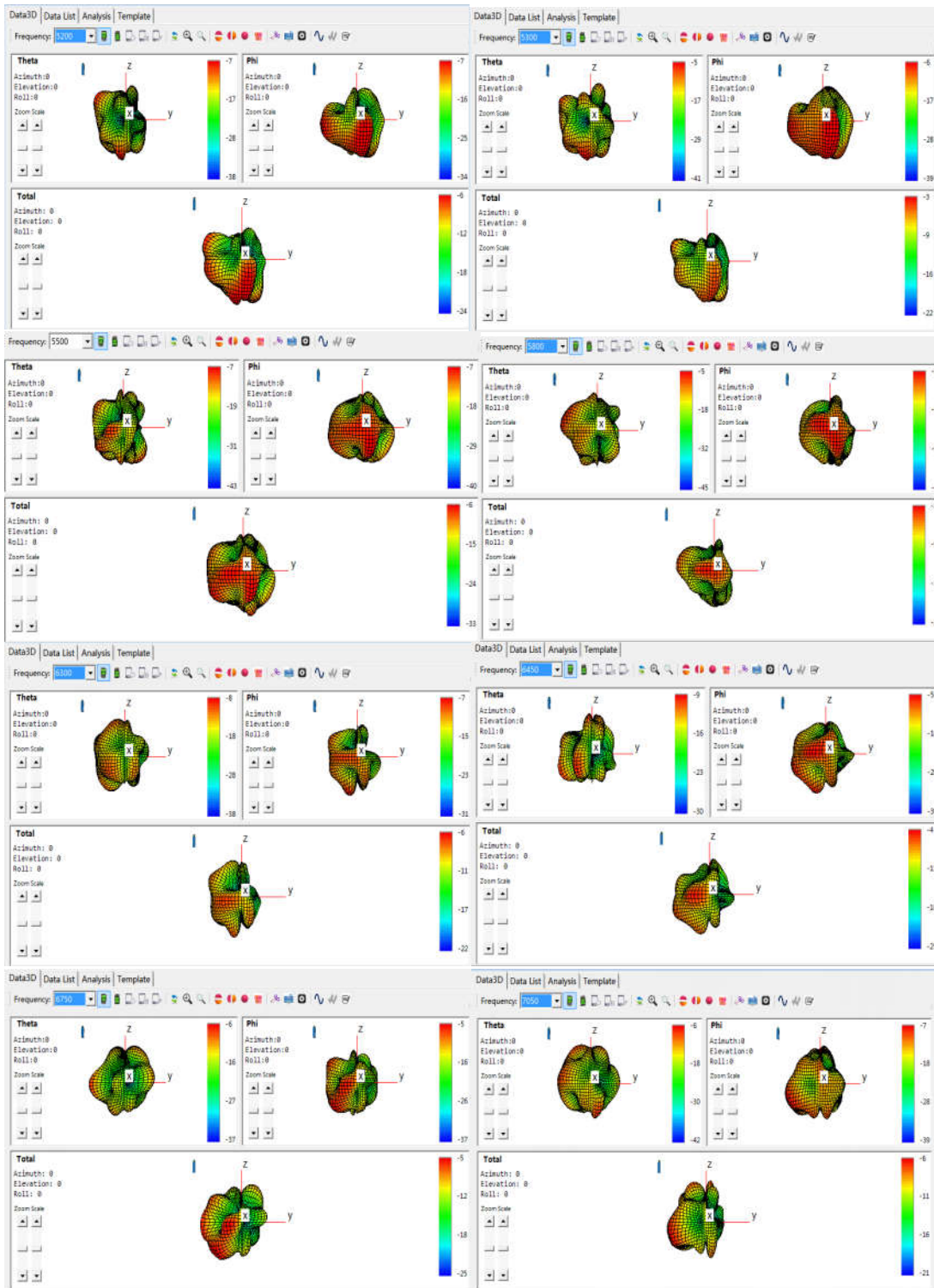
Ant.10 (TX antenna)

Frequency Range	5150-5850MHz;5925-7125MHz;			
Impedance	50Ω			
Antenna vendor P/N	F11398502910001			
Antenna Type	PIFA			
WIFI 2.4G Peak Gain	NA			
WIFI 5G	B1	B2	B3	B4
Peak Gain	0.85	1.16	1.57	0.61
WIFI 6E	U-NII-5	U-NII-6	U-NII-7	U-NII-8
Peak Gain	-2.8	-2.7	-2.6	-2.9

Antenna Efficiency(test in anechoic chamber)

Freq(MHz)	Effi(dB)	Freq(MHz)	Effi(dB)
5150	-8.6	6300	-12.01
5200	-8.09	6350	-11.55
5250	-7.92	6400	-12.37
5300	-8.11	6450	-11.34
5350	-8.31	6500	-11.03
5400	-8.87	6550	-10.47
5450	-9.09	6600	-11.21
5500	-9.32	6650	-11.2
5550	-9.27	6700	-11.39
5600	-8.71	6750	-12.07
5650	-8.58	6800	-10.75
5700	-7.68	6850	-11.52
5750	-7.77	6900	-11.22
5800	-8.22	6950	-11.11
5850	-8.52	7000	-10.99
5900	-8.92	7050	-10.64
5950	-9.7	7100	-10.86
6000	-10.51	7150	-10.6
6050	-10.98	7000	-12.01
6100	-10.91	7050	-11.55
6150	-11.52	7100	-12.37
6200	-11.75	7150	-11.34
6250	-11.63		

Antenna 3D Radiation Pattern



Test setup

Test Environment, list of calibrated test equipment

AglientE5071C ↑

Calibration Date : 20220712

Zhu Jian yuan