W6d Antenna report

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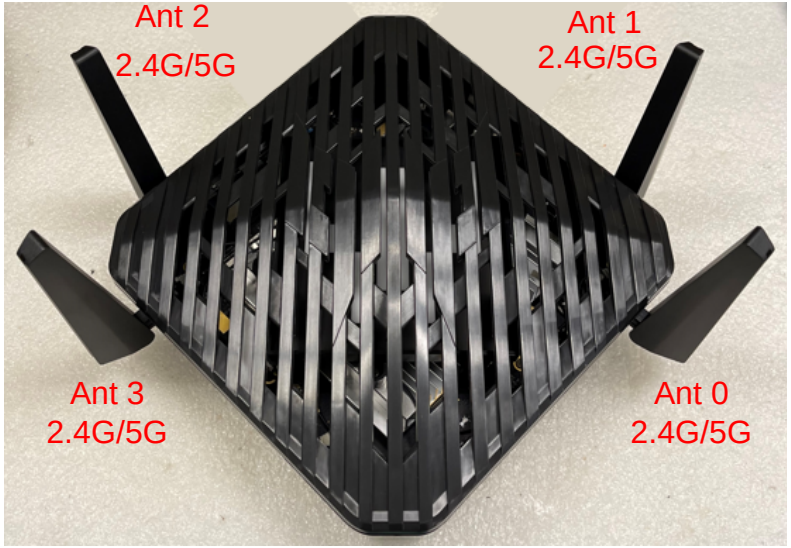
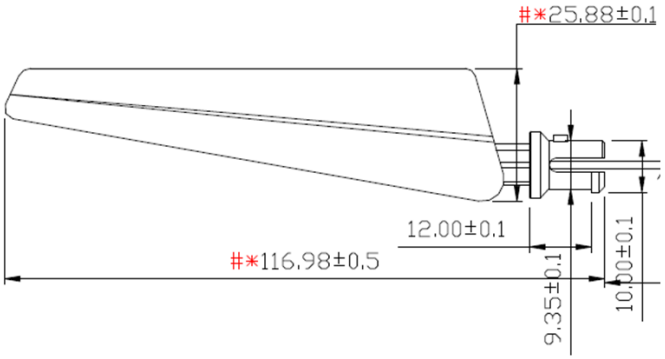
Requirements Antenna Design Measurement

Requirements of Antenna Design

RF Function	Number of ANT	Frequency Band
ANT0	1	2402-2482MHz/5150-5850MHz
ANT1	1	2402-2482MHz/5150-5850MHz
ANT2	1	2402-2482MHz/5150-5850MHz
ANT3	1	2402-2482MHz/5150-5850MHz

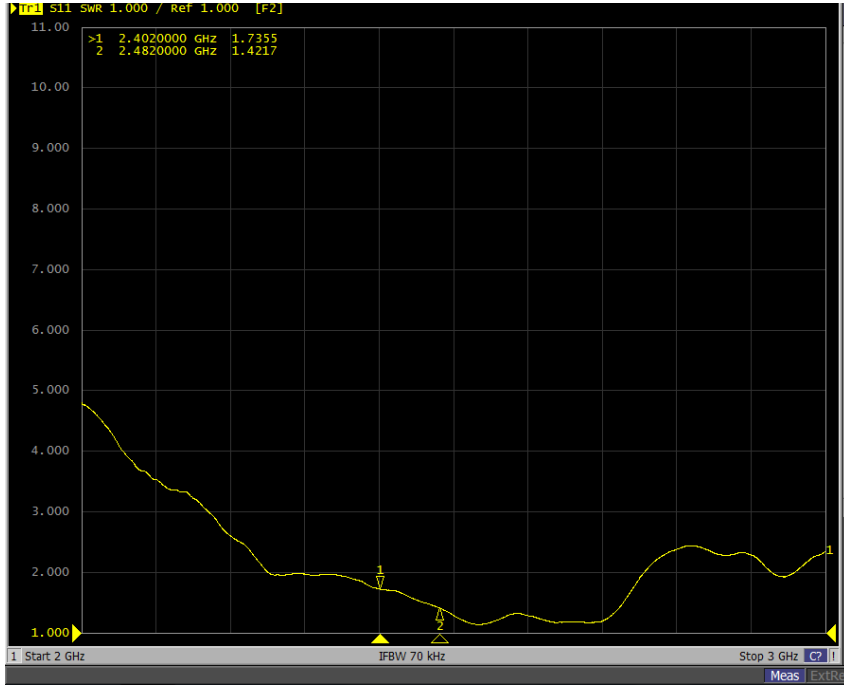
Antenna Placement & Solution



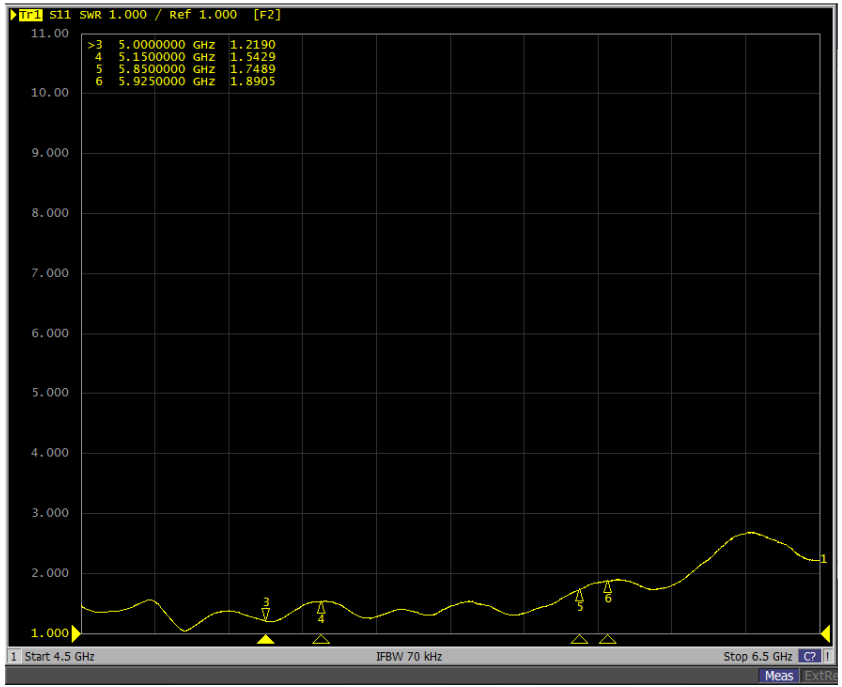


VSWR Results

ANT 0 (2.4GHz)

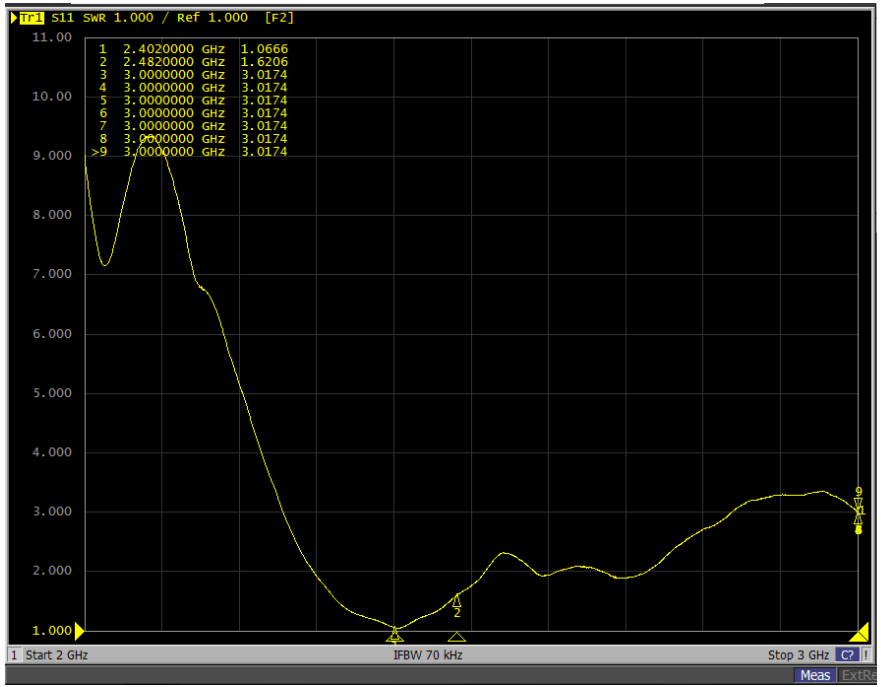


ANT 0 (5GHz)

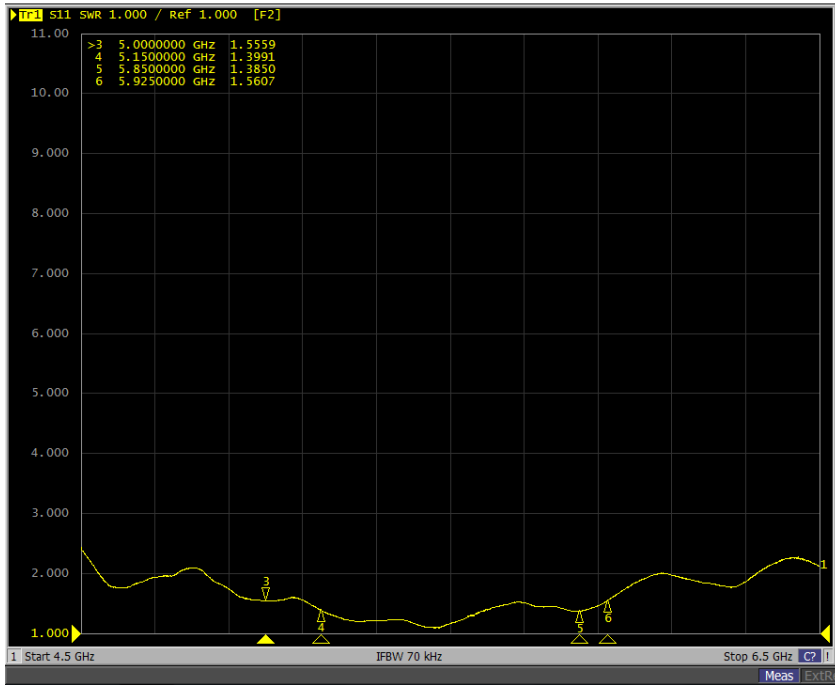


VSWR Results

ANT 1 (2.4GHz)

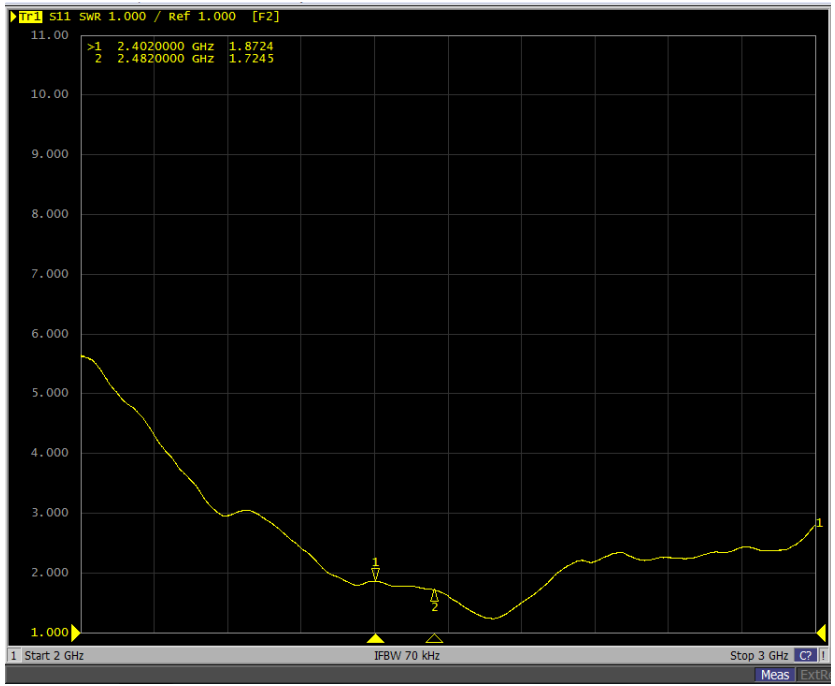


ANT 1 (5GHz)

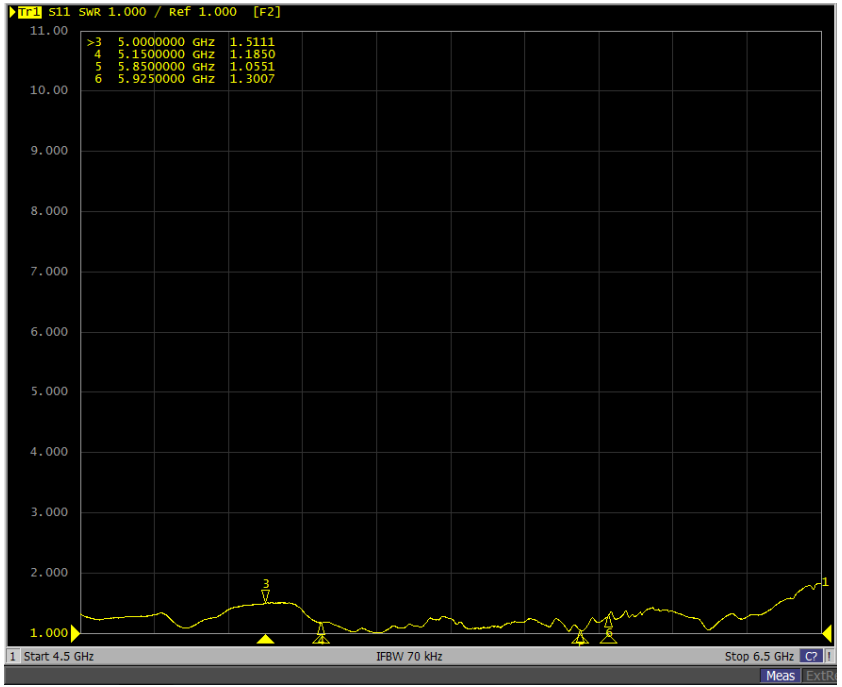


VSWR Results

ANT 2 (2.4GHz)

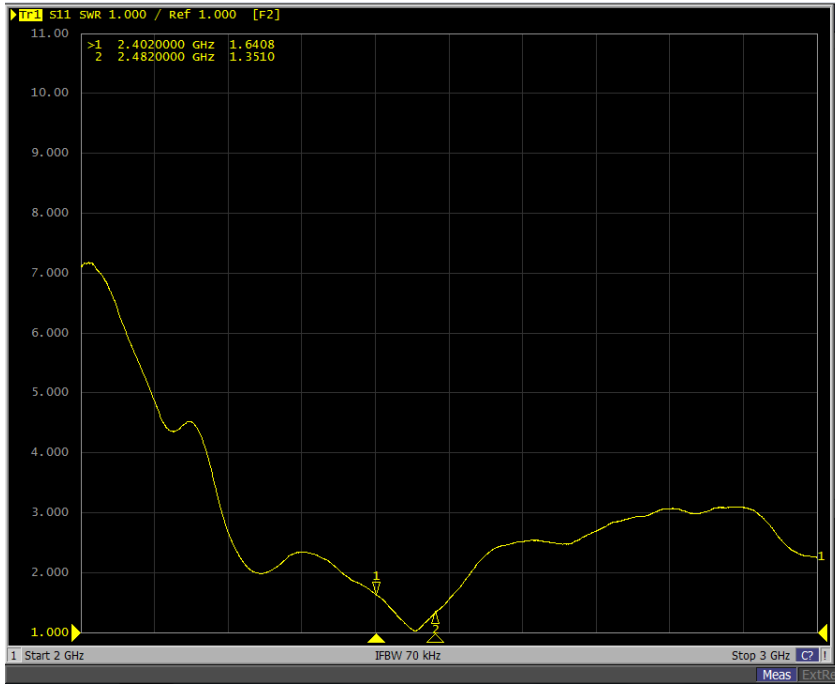


ANT 2 (5GHz)

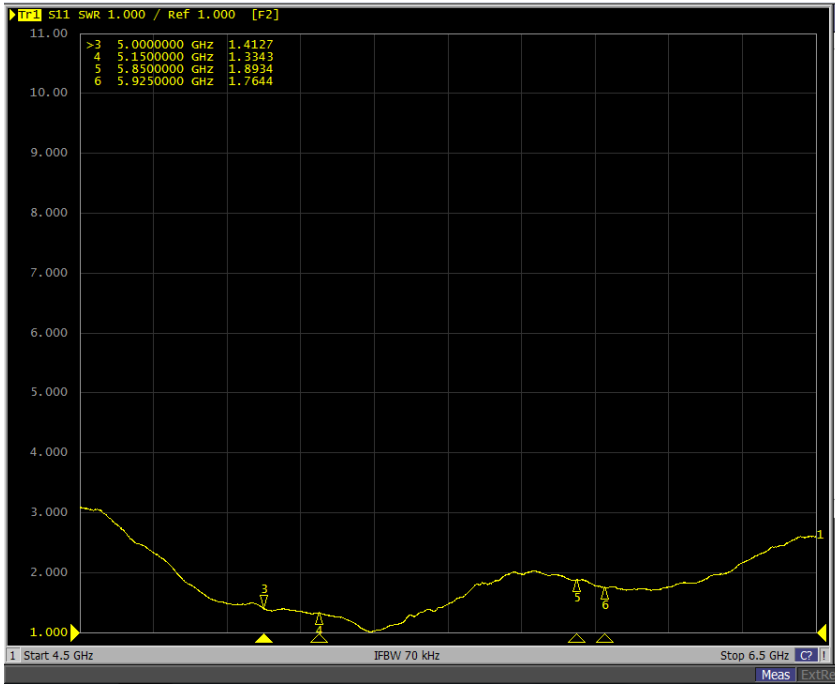


VSWR Results

ANT 3 (2.4GHz)

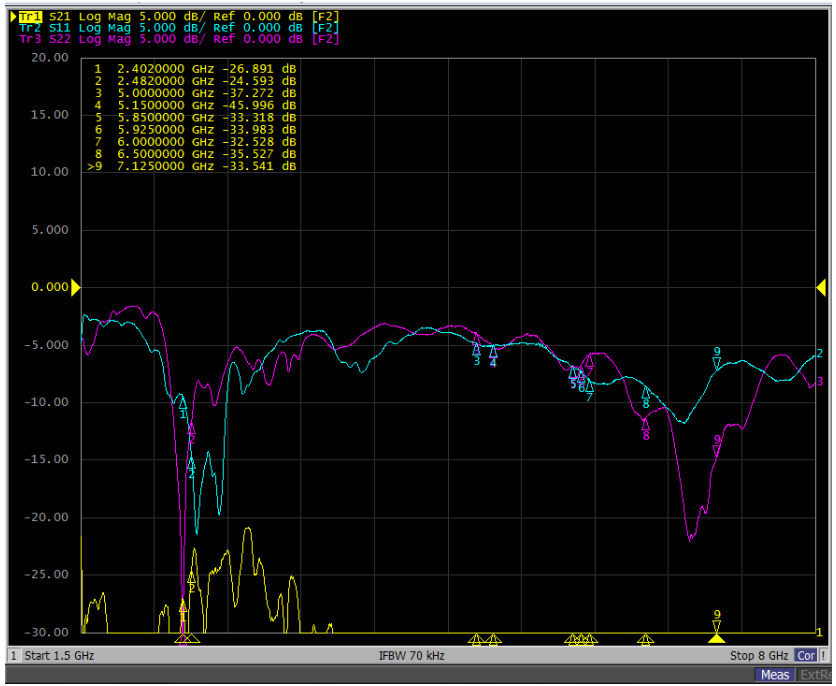


ANT 3 (5GHz)



Isolation Results

ANT 0/ANT 1 (2.4GHz)



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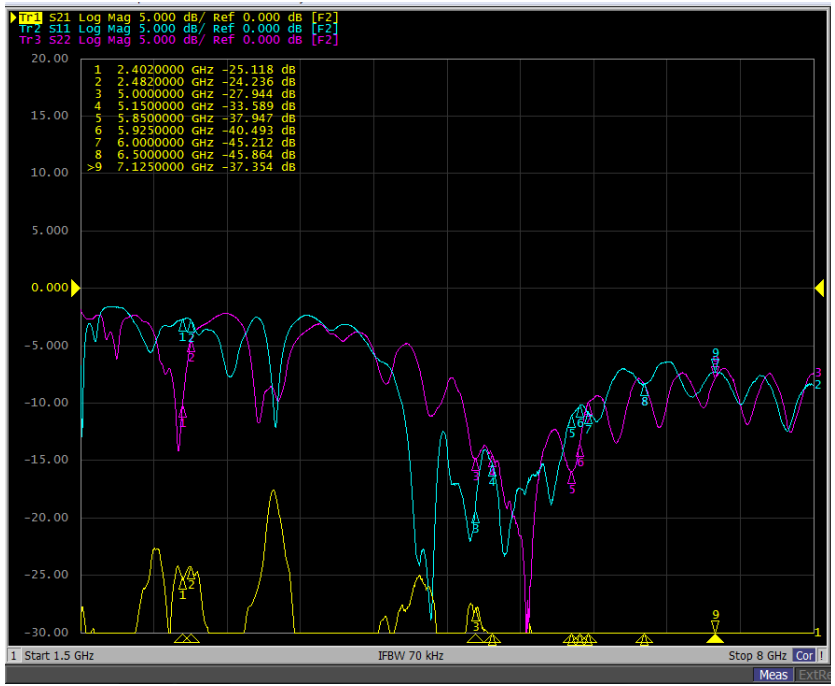
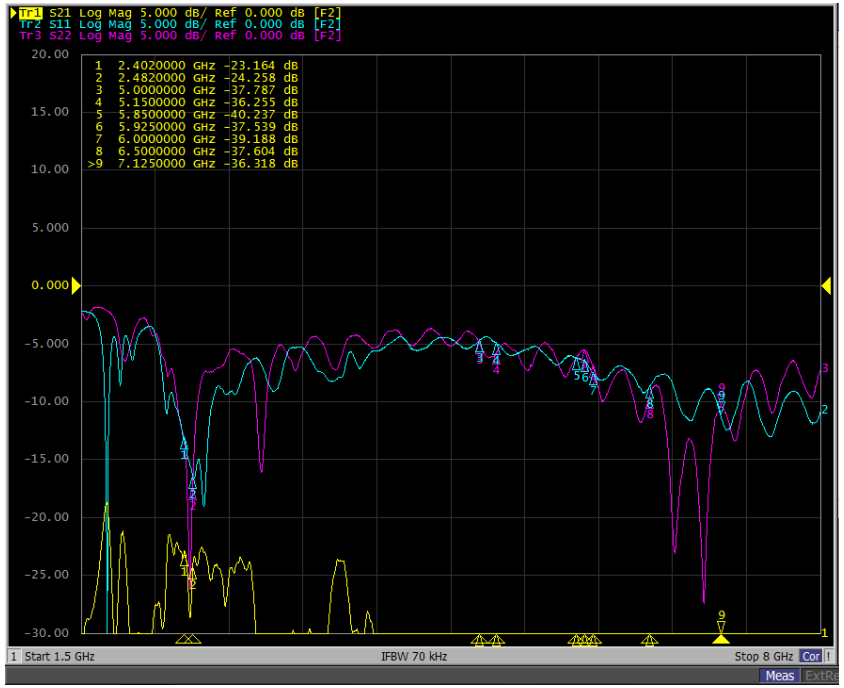
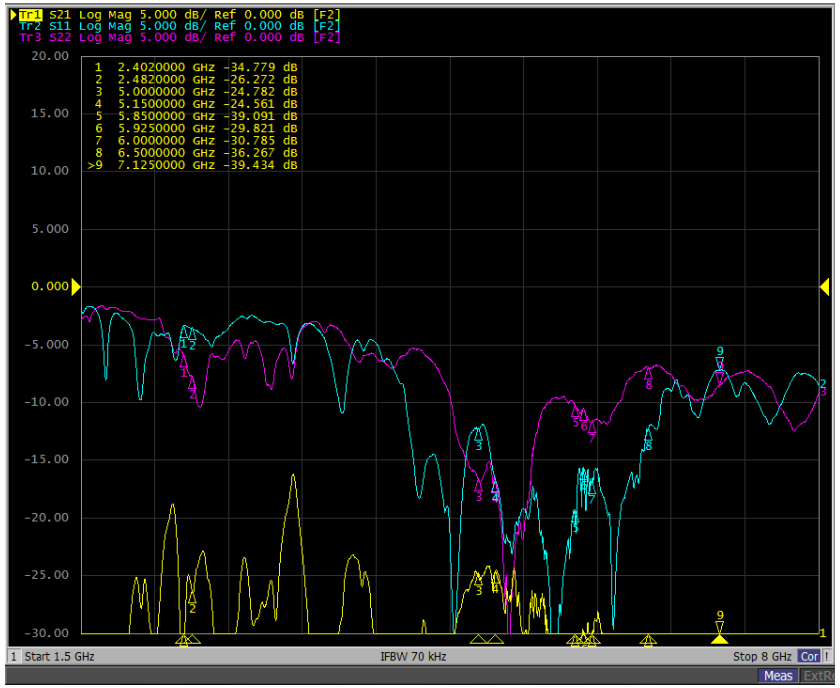


Isolation Results

ANT 2/ANT 3 (2.4GHz)

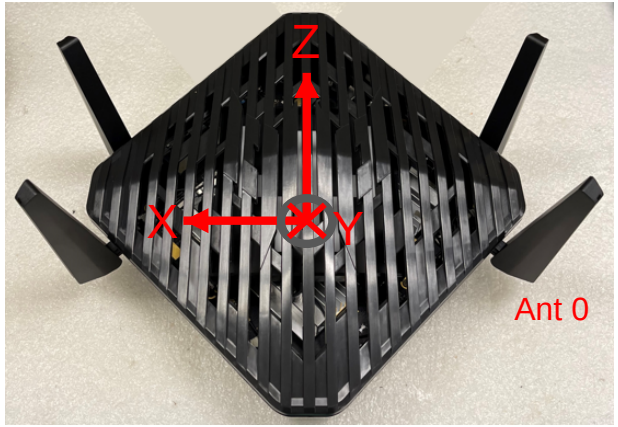


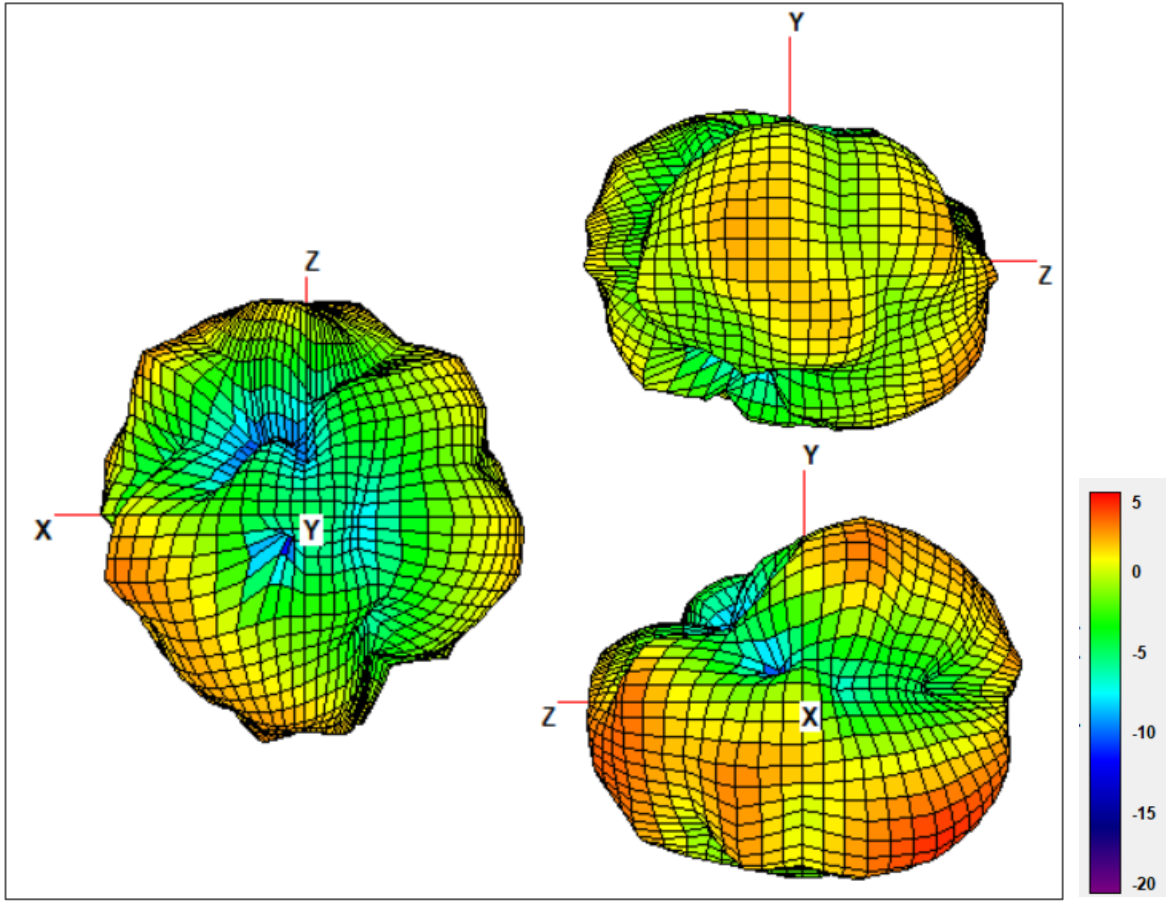
ANT 2/ANT 3 (5GHz)



3D Radiation Pattern Results

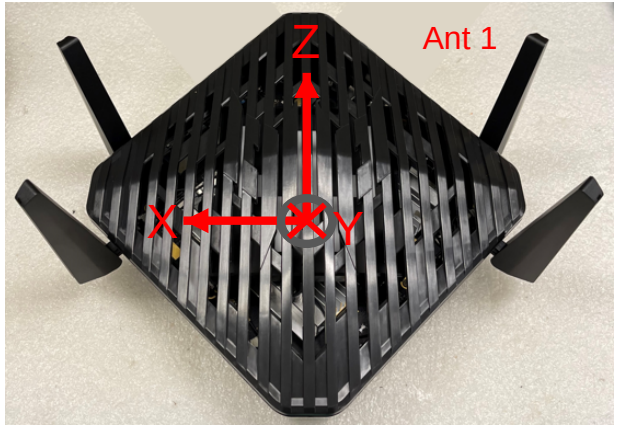
ANT 0_2.4G/5G

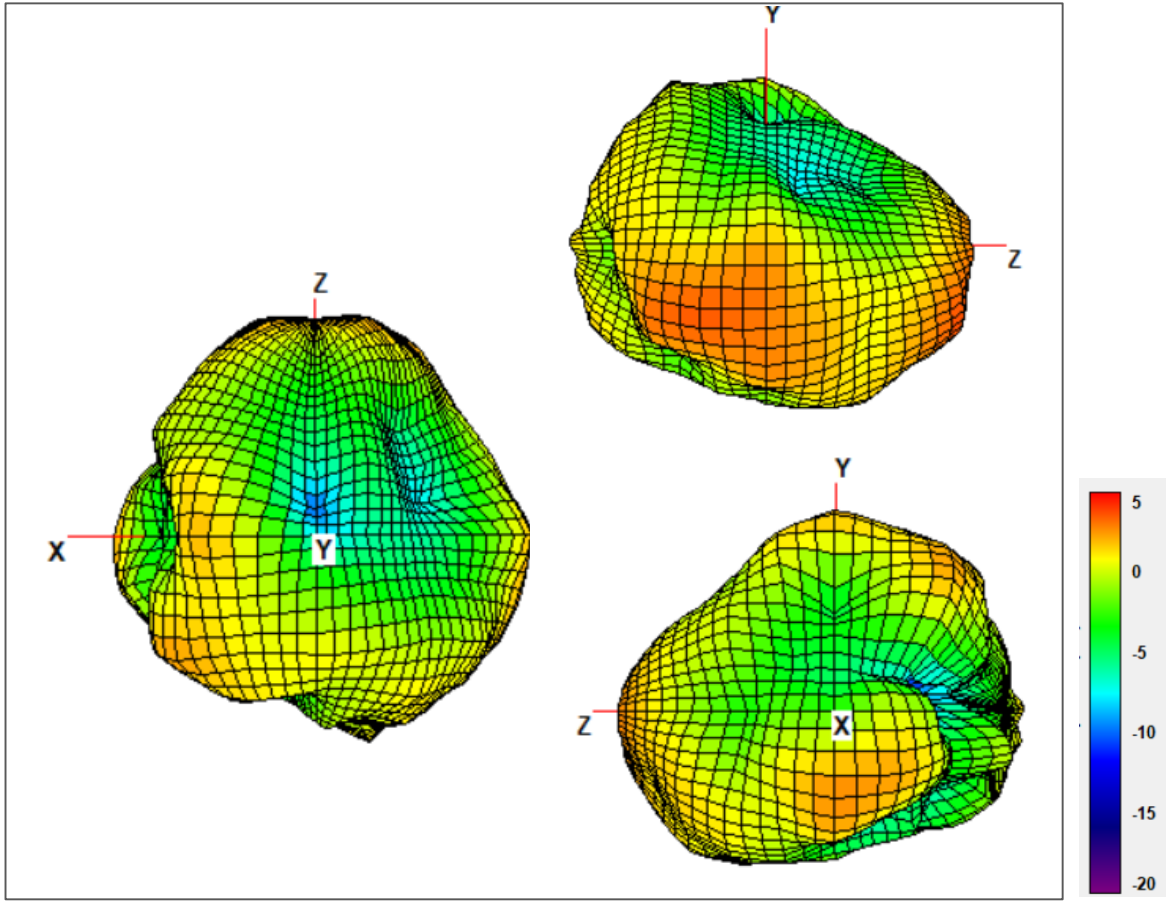




3D Radiation Pattern Results

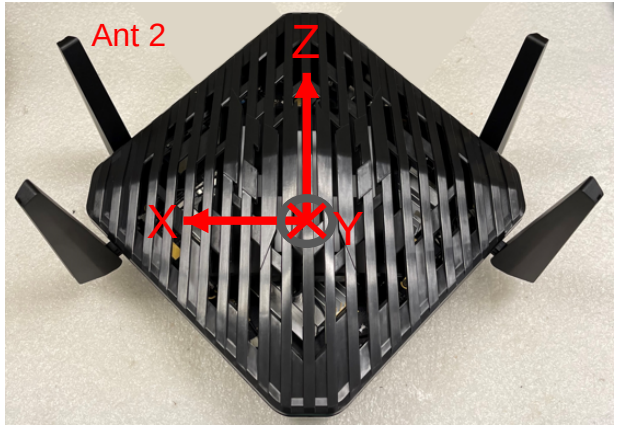
ANT 1_2.4G/5G

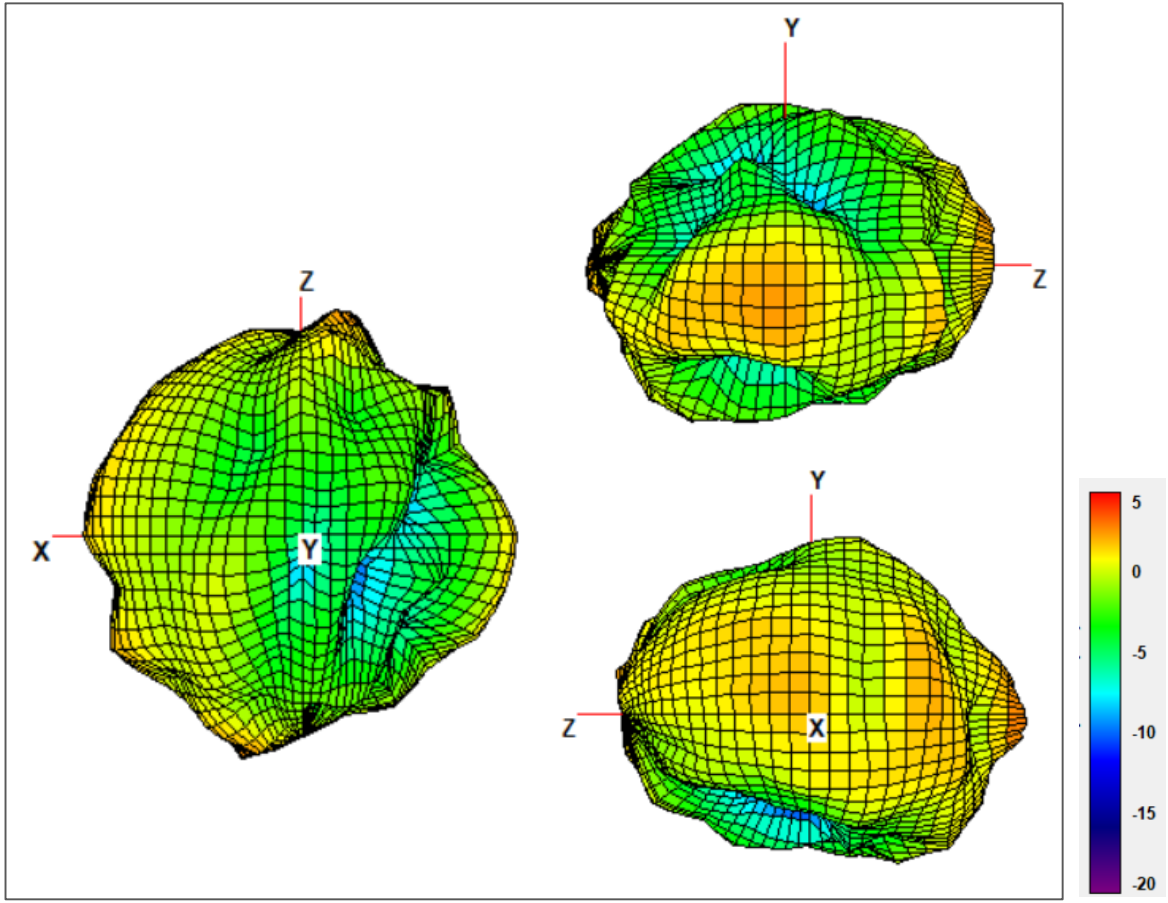




3D Radiation Pattern Results

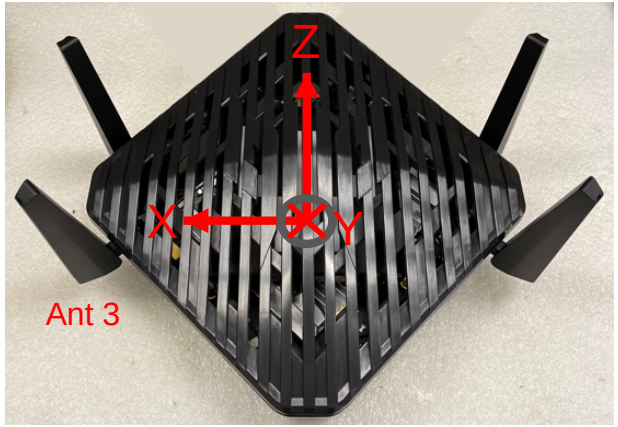
ANT 2_2.4G/5G

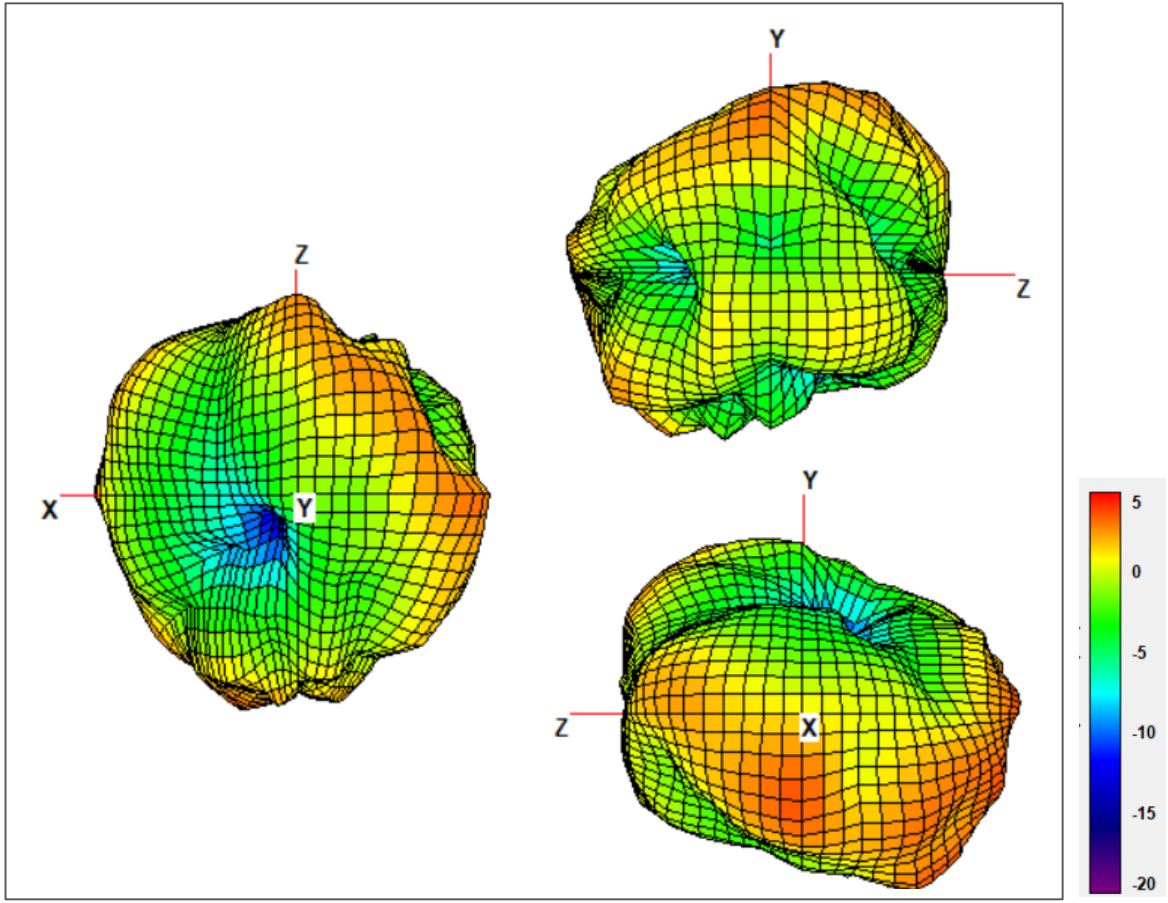




3D Radiation Pattern Results

ANT 3_2.4G/5G





Results Summary

Ant0		
Frequency MHz	Avg. Gain dB	Peak Gain dB
2402	-0.92	3.99
2412	-0.67	4.02
2422	-0.52	4.22
2432	-0.51	4.35
2442	-0.39	4.55
2452	-0.22	4.68
2462	-0.11	4.57
2472	-0.17	4.27
2482	-0.31	4.28

Ant0		
Frequency MHz	Avg. Gain dB	Peak Gain dB
5150	-1.06	5.03
5200	-0.89	5.58
5250	-0.97	4.93
5300	-1.45	4.35
5350	-1.56	4.08
5400	-1.54	3.87
5450	-1.63	3.59
5500	-1.59	4.03
5550	-1.63	4.17
5600	-1.64	4.39
5650	-1.54	4.56
5700	-1.66	3.96
5750	-1.92	3.39
5800	-1.89	3.57
5850	-1.95	3.60

Results Summary

Ant1		
Frequency MHz	Avg. Gain dB	Peak Gain dB
2402	-1.37	2.83
2412	-1.04	3.55
2422	-0.76	3.87
2432	-0.72	3.83
2442	-0.62	3.97
2452	-0.56	3.98
2462	-0.54	3.89
2472	-0.64	3.48
2482	-0.72	3.35

Ant1		
Frequency MHz	Avg. Gain dB	Peak Gain dB
5150	-1.61	4.60
5200	-1.18	4.87
5250	-1.25	4.74
5300	-1.40	4.60
5350	-1.41	4.21
5400	-1.44	4.63
5450	-1.29	5.21
5500	-1.28	5.09
5550	-1.63	4.21
5600	-1.58	4.57
5650	-1.35	4.12
5700	-1.86	3.92
5750	-1.83	3.96
5800	-1.80	3.59
5850	-1.69	3.69

Results Summary

Ant2		
Frequency MHz	Avg. Gain dB	Peak Gain dB
2402	-2.06	3.25
2412	-1.87	2.91
2422	-1.66	2.83
2432	-1.51	3.26
2442	-1.17	3.81
2452	-0.87	4.34
2462	-0.70	4.62
2472	-0.75	4.66
2482	-0.87	4.61

Ant2		
Frequency MHz	Avg. Gain dB	Peak Gain dB
5150	-0.90	5.44
5200	-0.75	5.97
5250	-0.92	5.47
5300	-1.16	4.98
5350	-1.18	5.23
5400	-1.22	5.46
5450	-1.30	5.21
5500	-1.59	4.02
5550	-1.41	5.01
5600	-1.26	5.46
5650	-1.04	5.44
5700	-1.42	5.07
5750	-1.43	5.45
5800	-1.38	5.84
5850	-1.46	6.27

Results Summary

Ant3		
Frequency MHz	Avg. Gain dB	Peak Gain dB
2402	-1.22	4.36
2412	-0.94	4.43
2422	-0.72	4.32
2432	-0.66	4.04
2442	-0.52	3.99
2452	-0.38	4.46
2462	-0.33	4.90
2472	-0.51	4.94
2482	-0.77	4.81

Ant3		
Frequency MHz	Avg. Gain dB	Peak Gain dB
5150	-1.38	4.46
5200	-0.79	5.45
5250	-0.88	4.85
5300	-1.21	4.15
5350	-1.10	4.63
5400	-1.06	4.78
5450	-0.91	5.03
5500	-1.06	5.27
5550	-1.27	5.33
5600	-1.12	5.22
5650	-0.92	5.21
5700	-1.49	4.36
5750	-1.62	4.41
5800	-1.48	4.34
5850	-1.71	4.11