

SP250 WLAN Antenna Test Report

January 15, 2023
v0.3



Efficiency & Peak Gain



- **ANT #1 – 2G0**

Frequency (MHz)	2400	2412	2417	2422	2427	2432	2437	2442	2447	2450	2452	2457	2462	2467	2472	2500
Efficiency (%)	48.07	48.92	50.81	50.70	52.61	51.60	51.53	51.32	50.47	51.03	50.63	49.31	48.20	46.39	45.28	38.27
Gain (dBi)	2.53	3.03	3.19	3.34	3.80	3.84	3.95	4.37	4.37	4.72	4.87	4.94	5.21	4.96	4.84	5.01

- **ANT #2 – 2G1**

Frequency (MHz)	2400	2412	2417	2422	2427	2432	2437	2442	2447	2450	2452	2457	2462	2467	2472	2500
Efficiency (%)	44.75	45.63	47.51	47.63	50.57	49.23	49.52	49.76	49.80	50.64	50.32	49.69	48.88	47.65	46.95	42.38
Gain (dBi)	4.98	5.03	5.08	5.17	5.59	5.66	5.58	5.58	5.74	5.90	5.96	5.97	5.89	5.73	5.85	5.67

- **ANT #3 – 5G0**

Frequency (MHz)	5150	5200	5250	5300	5350	5450	5500	5550	5600	5650	5700	5750	5800	5850	5900	5950	6000
Efficiency (%)	53.88	55.31	62.69	54.70	55.81	55.79	57.16	59.58	60.86	53.30	54.53	52.91	47.05	52.28	58.05	59.40	55.56
Gain (dBi)	4.51	4.79	5.02	4.35	4.99	4.46	4.65	4.91	4.76	3.93	3.93	3.95	2.98	3.41	4.18	4.23	3.97

- **ANT #4 – 5G1**

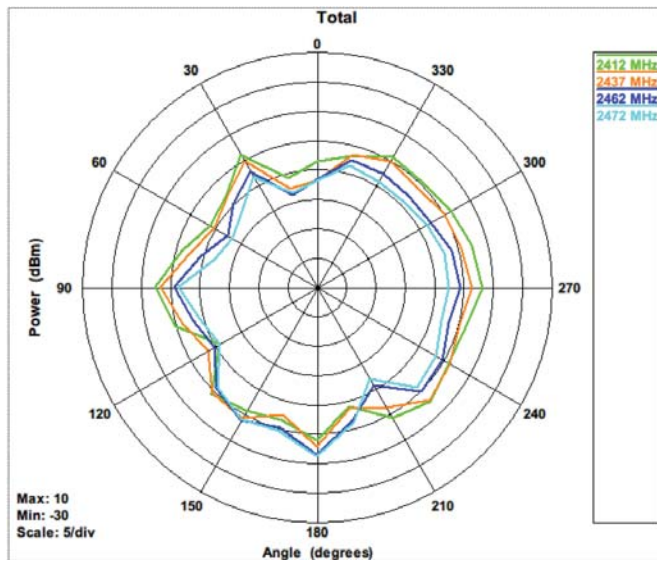
Frequency (MHz)	5150	5200	5250	5300	5350	5450	5500	5550	5600	5650	5700	5750	5800	5850	5900	5950	6000
Efficiency (%)	56.85	56.85	62.88	54.44	52.38	56.88	58.51	57.83	59.04	52.62	50.25	51.77	47.99	51.93	57.87	57.35	56.26
Gain (dBi)	4.62	4.53	5.23	4.89	4.90	5.96	6.41	5.77	5.90	5.95	5.62	5.63	4.77	4.43	4.72	4.76	5.18

Antenna Pattern – 2D for ANT# 1 (2G0)

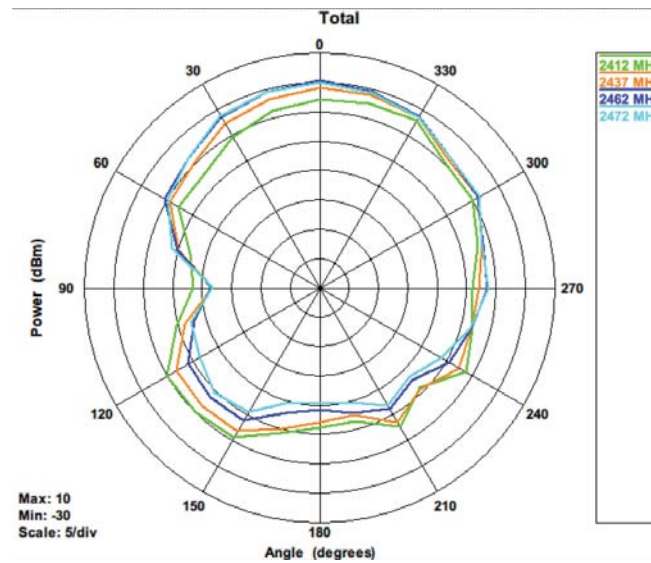


- ANT #1 - 2G0

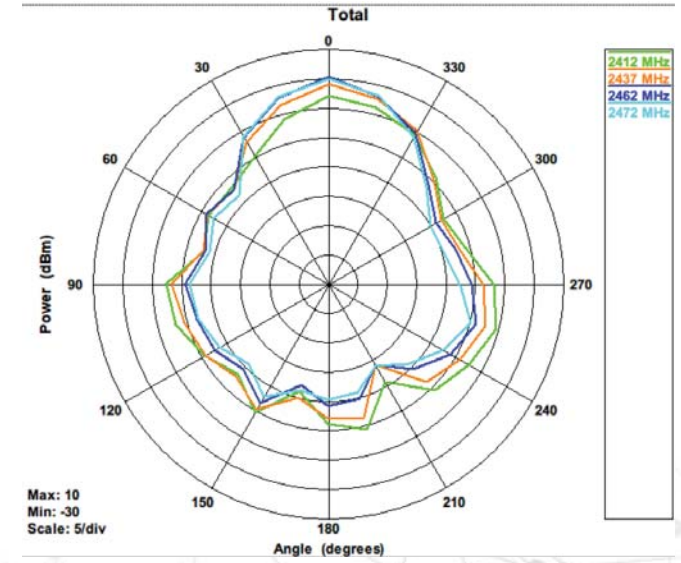
XY H-plane



XZ E1-plane



YZ E2-plane

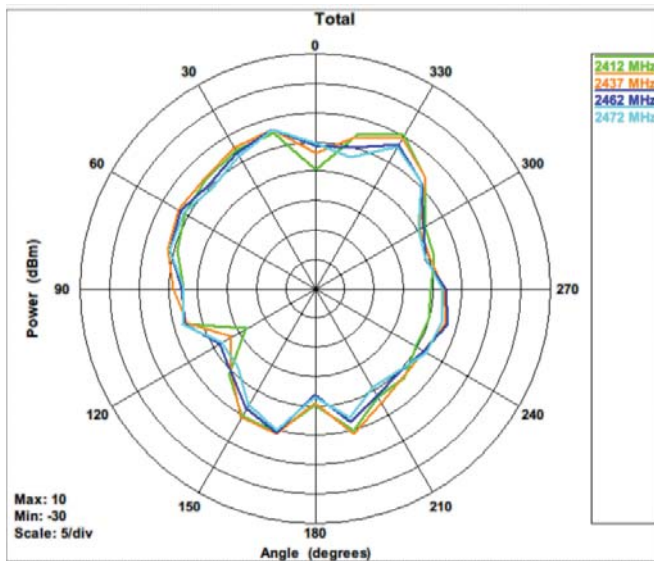


Antenna Pattern – 2D for ANT# 2 (2G1)

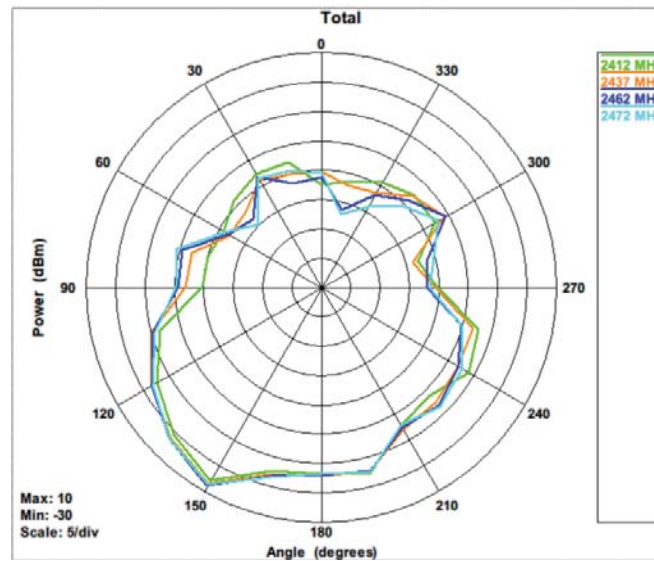


- ANT #2 - 2G1

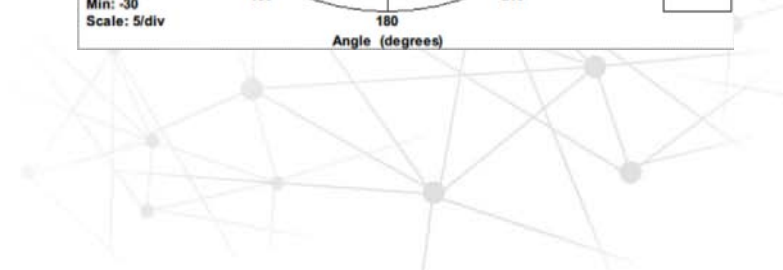
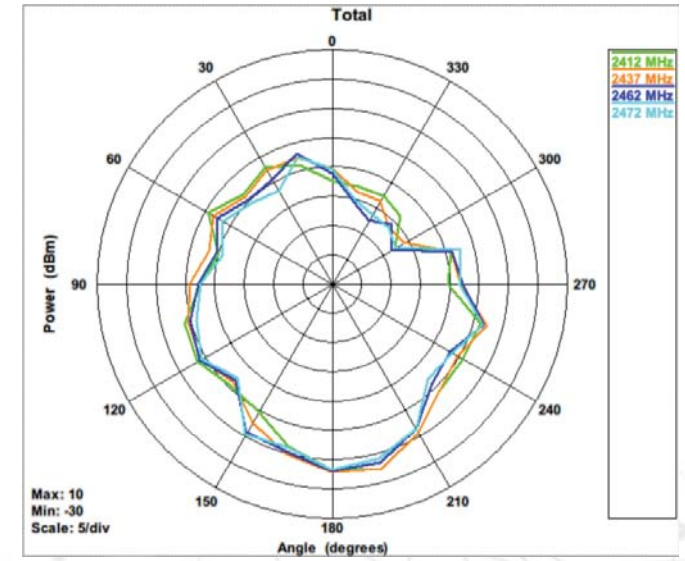
XY H-plane



XZ E1-plane



YZ E2-plane

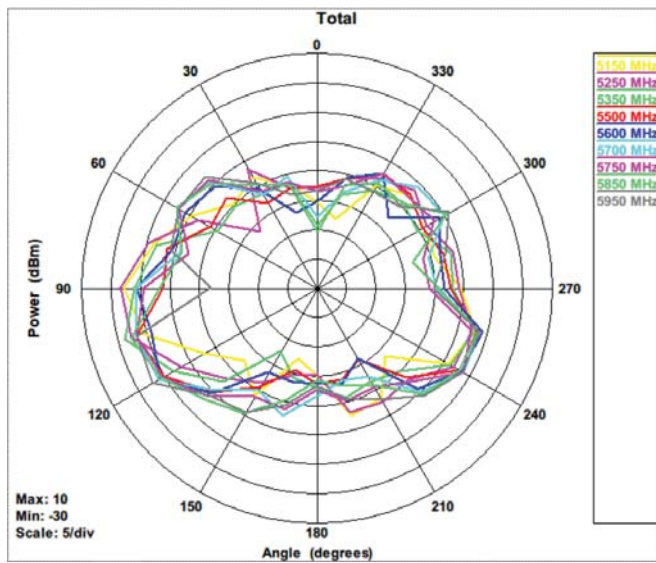


Antenna Pattern – 2D for ANT# 3 (5G0)

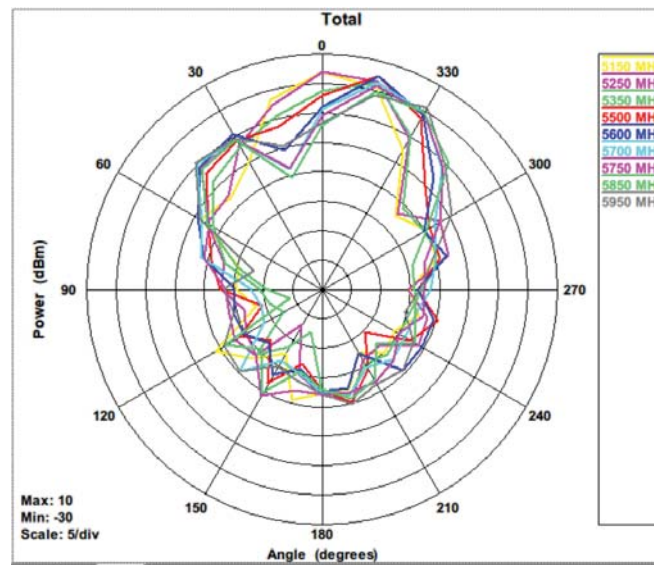


- ANT #3 - 5G0

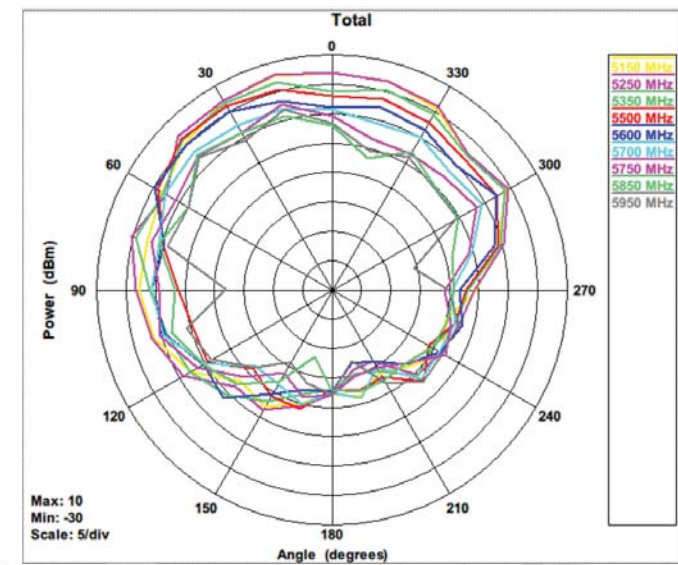
XY H-plane



XZ E1-plane



YZ E2-plane

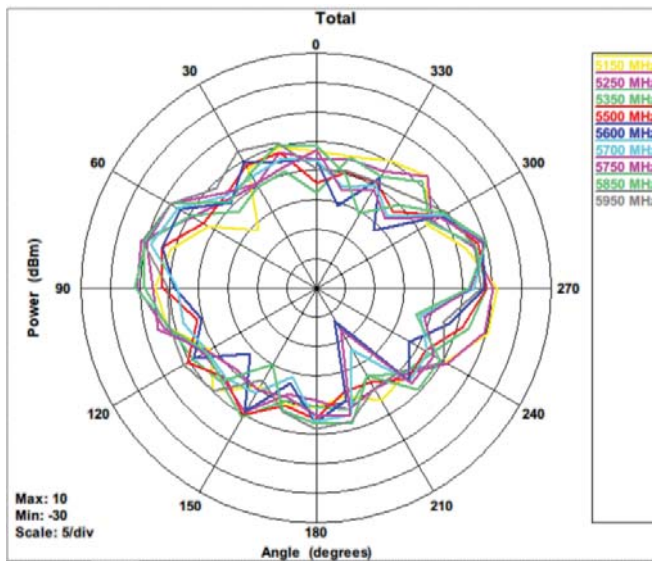


Antenna Pattern – 2D for ANT# 4 (5G1)

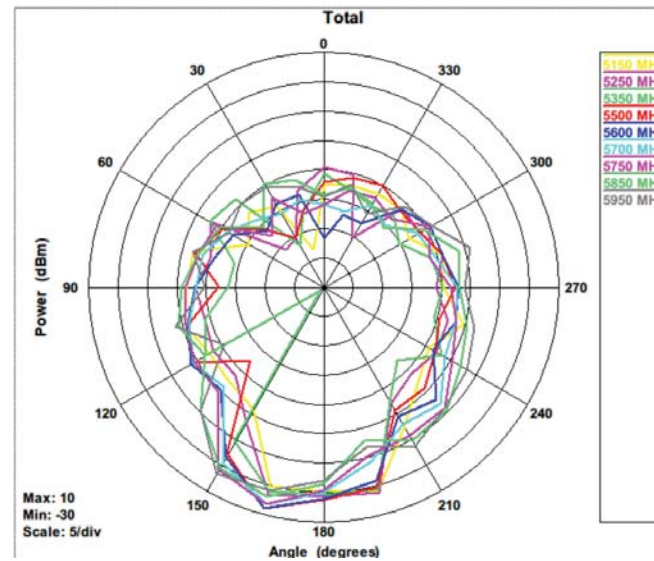


- ANT #4 - 5G1

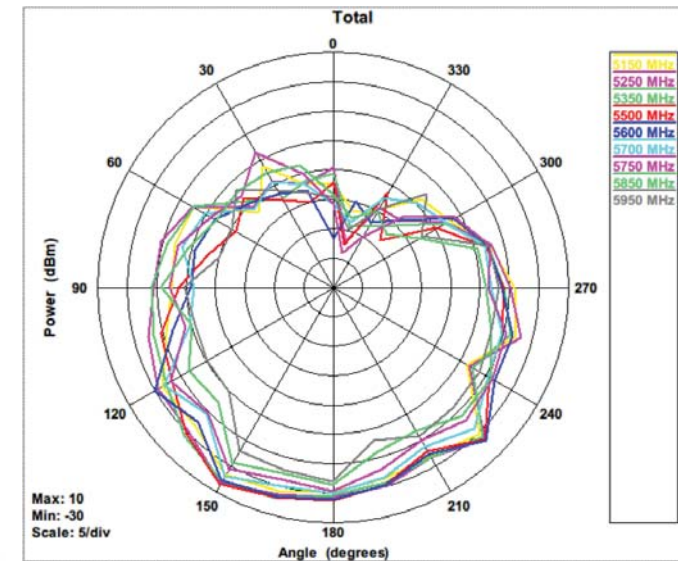
XY H-plane



XZ E1-plane



YZ E2-plane



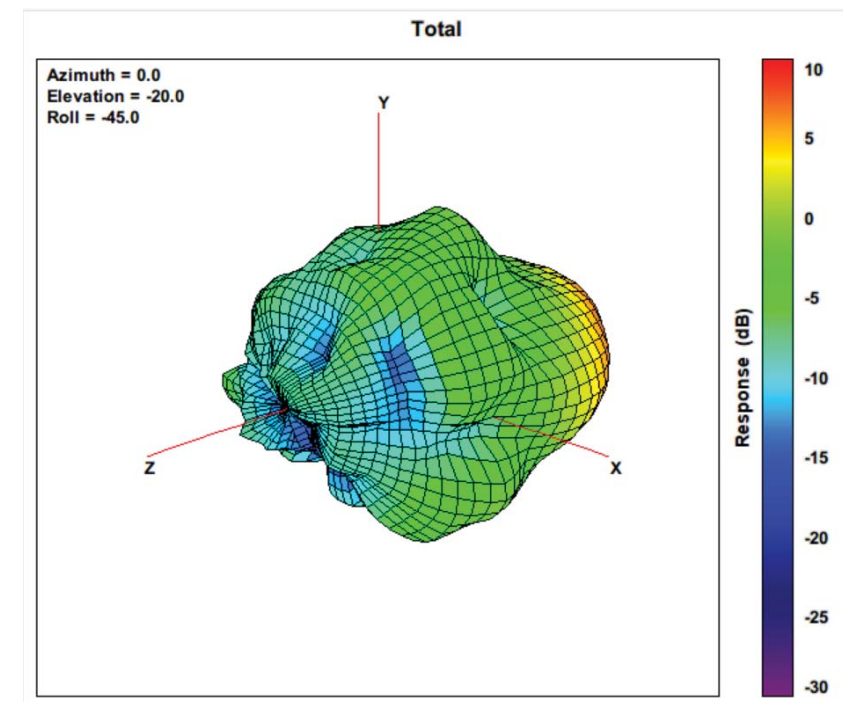
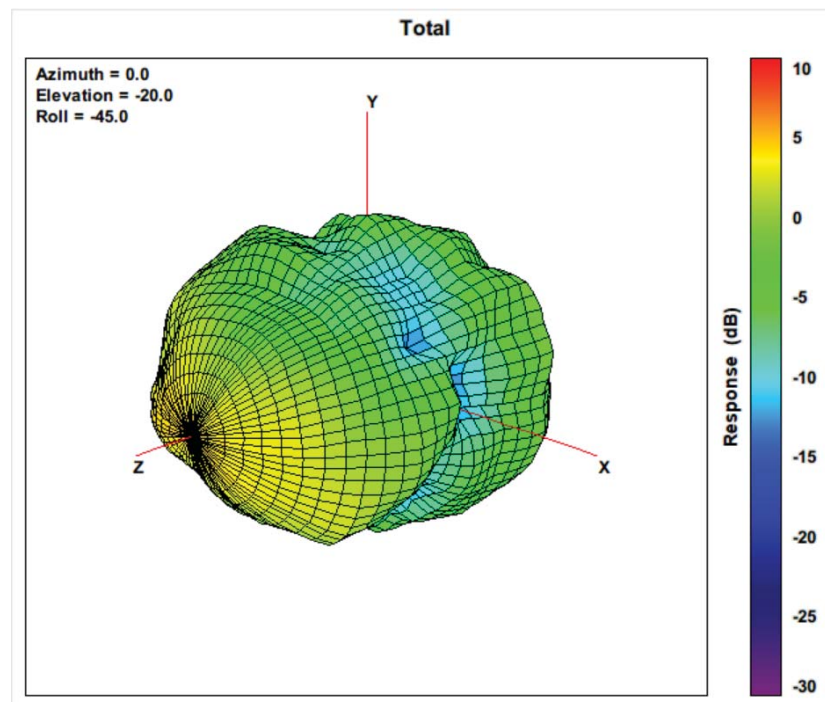
Antenna Pattern – 3D



- WLAN 2.4GHz Antenna For ANT 1 (Front) and ANT 2 (Rear)

ANT #1- 2442MHz

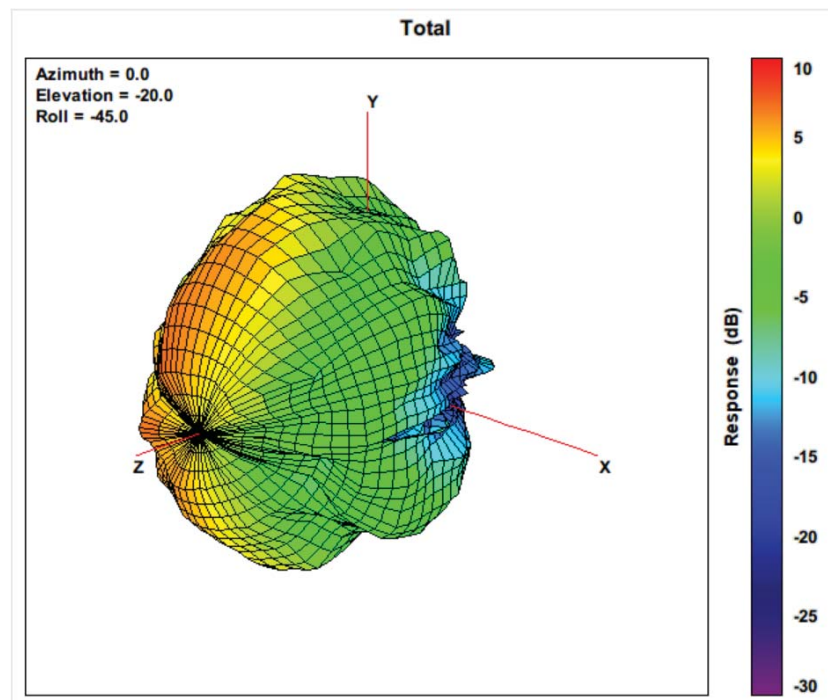
ANT #2- 2442MHz



Antenna Pattern – 3D

- WLAN 5GHz Antenna For ANT 3 and ANT 4 (Front)

ANT #3- 5500MHz



ANT #4- 5500MHz

