



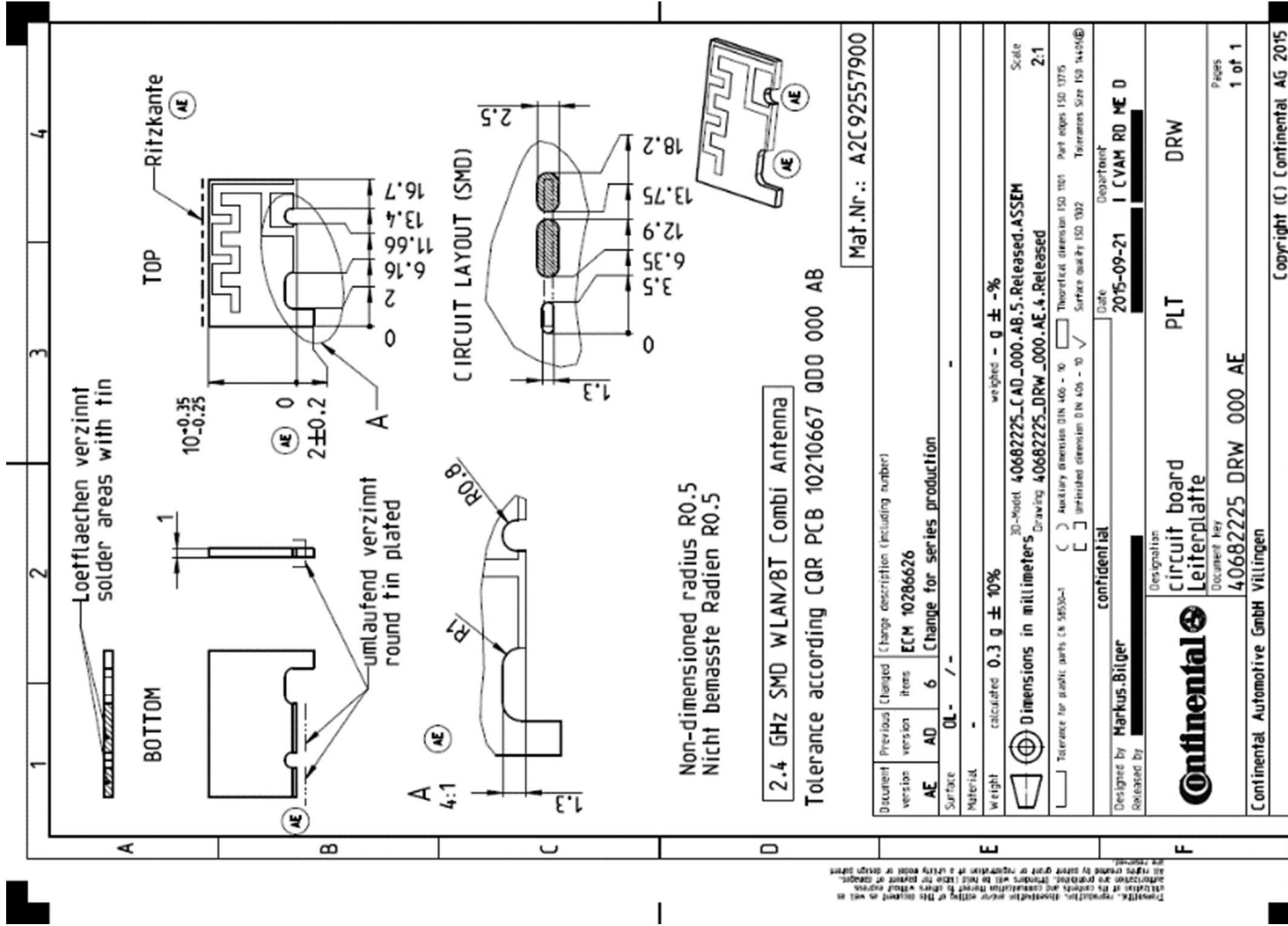
Zonar TCU

Internal Bluetooth/WiFi antenna characteristics

Dec 2022

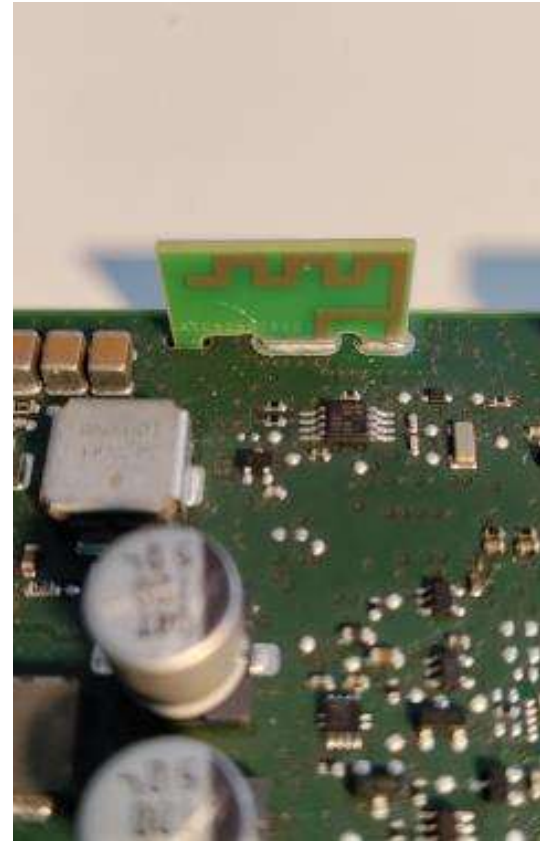
www.continental-corporation.com

Interior Division



Bluetooth/WiFi Antenna

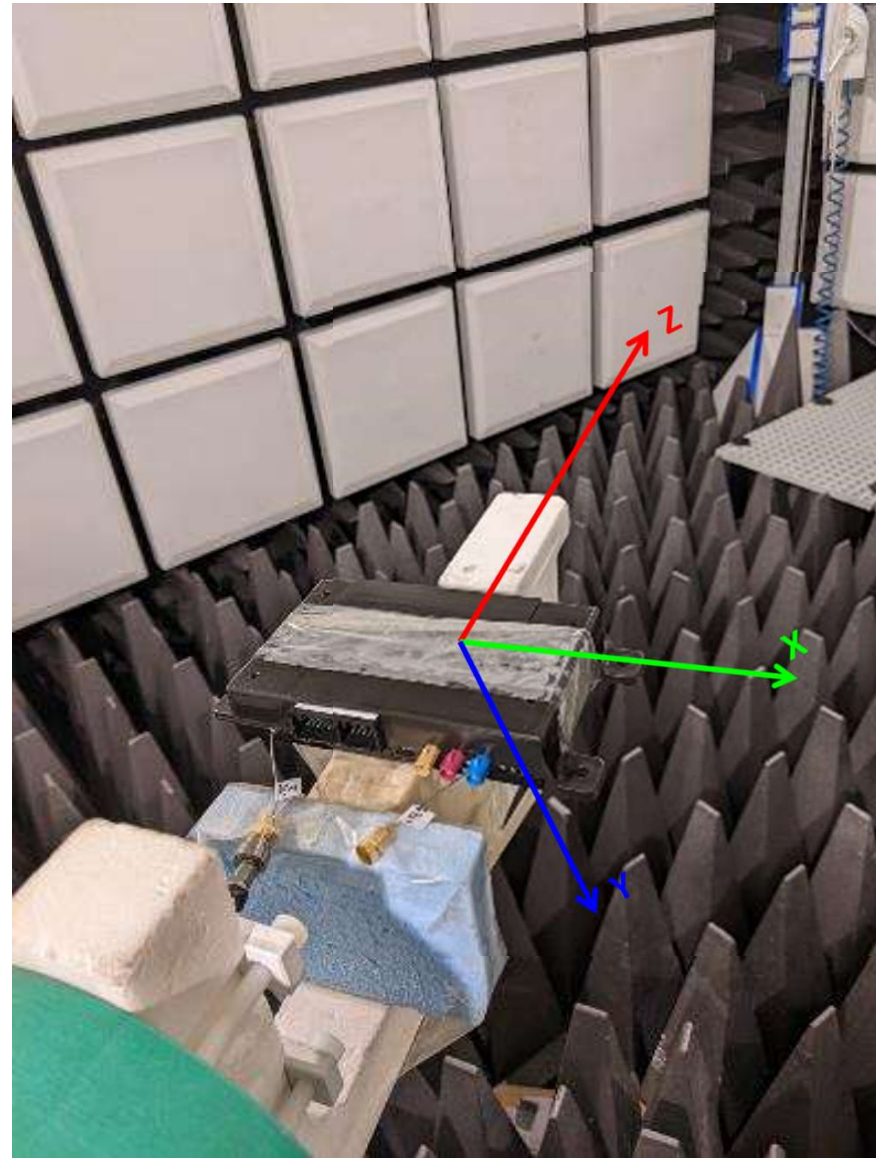
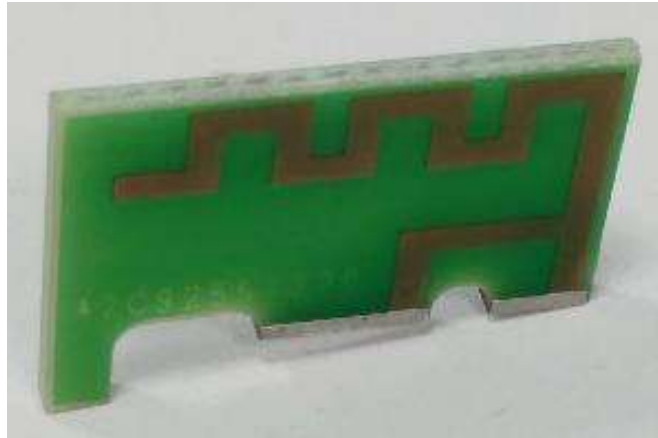
Position of Antenna in the Device



Bluetooth/WiFi antenna Position inside the device (left), Picture of antenna (right)

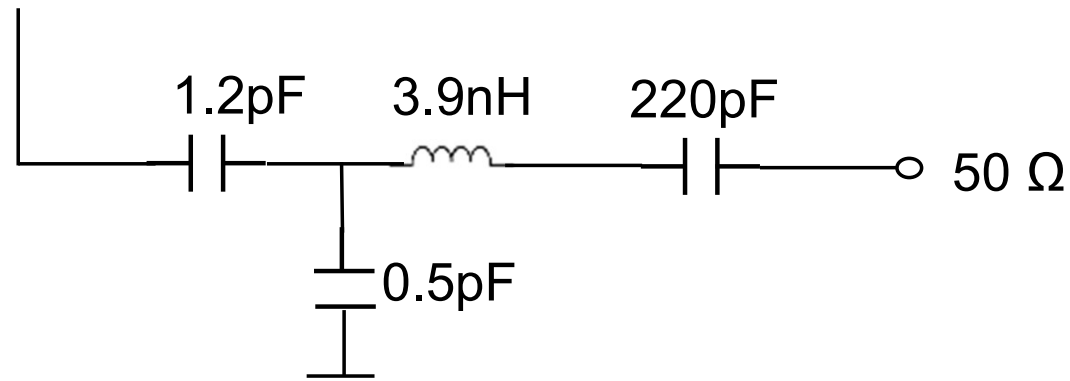
Anechoic chamber setup

Bluetooth/WiFi Antenna



Bluetooth/WiFi – matching circuit topology

Bluetooth/WiFi antenna



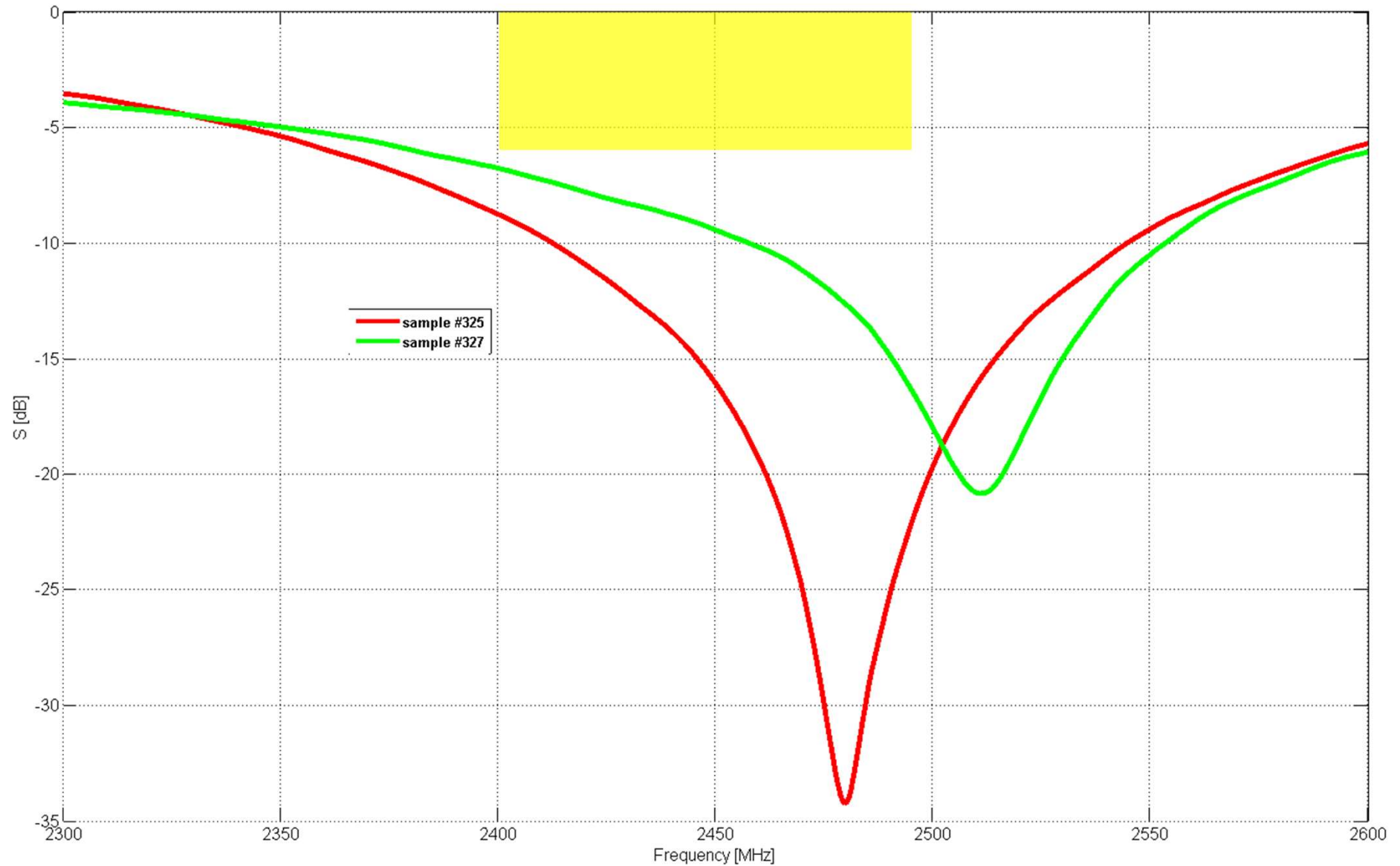
0.5 pF: A2C01778300

1.2 pF: A2C01778400

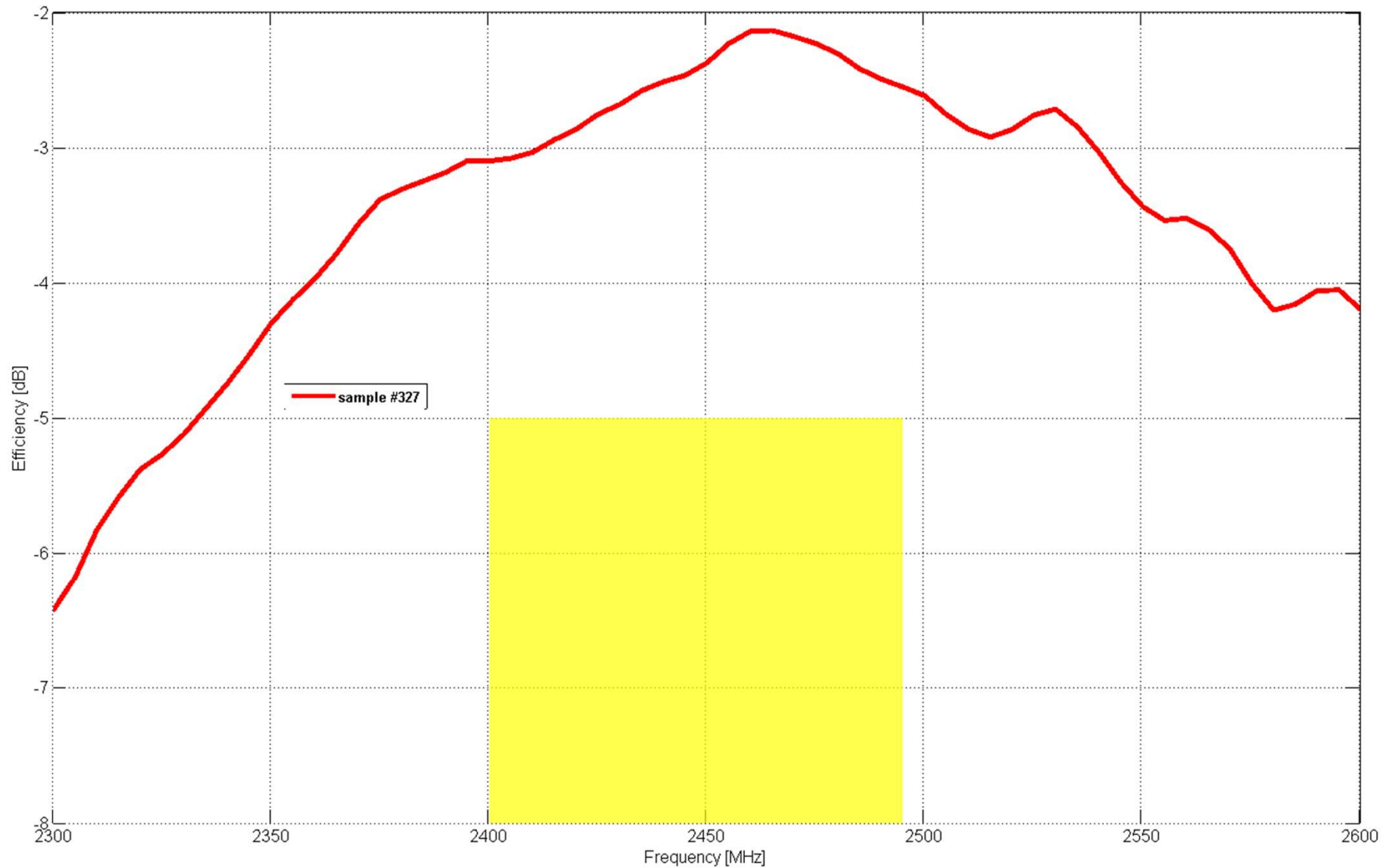
220pF: A2C02373300

3.9nH: A2C01364600

Bluetooth/WiFi – Input reflection coefficient

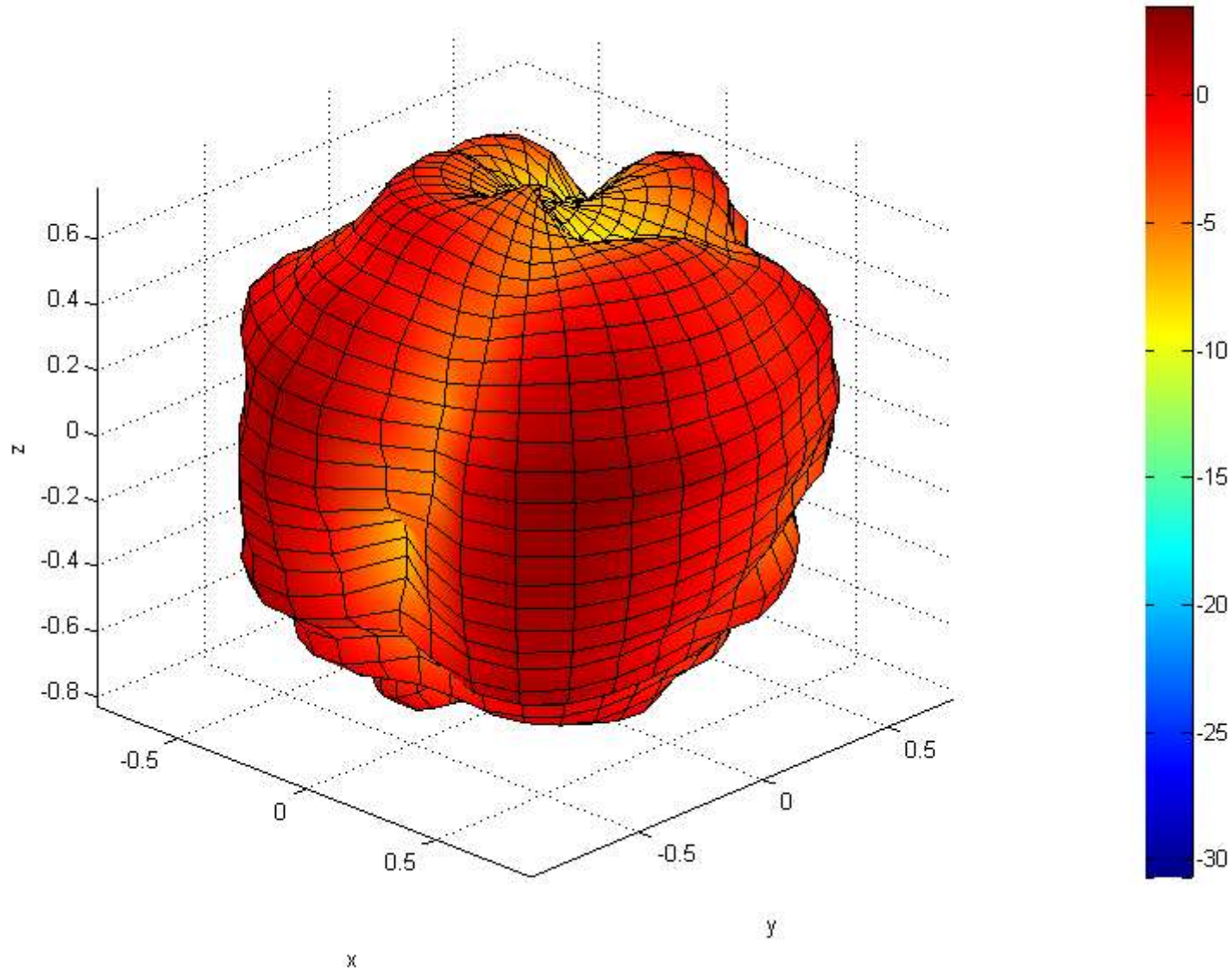


Bluetooth/WiFi – Radiation Efficiency

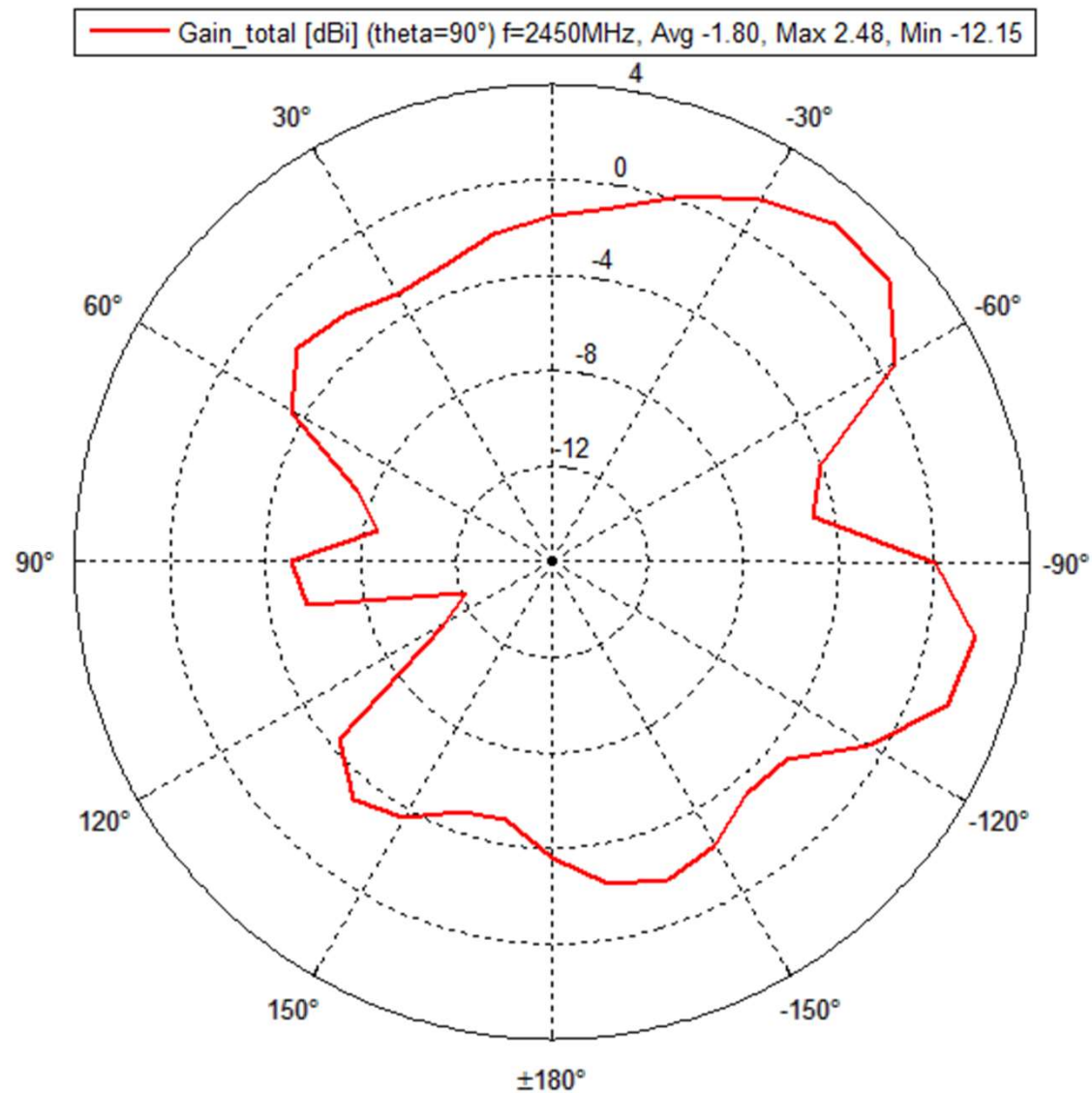


Bluetooth/WiFi – 3D Total Gain plot

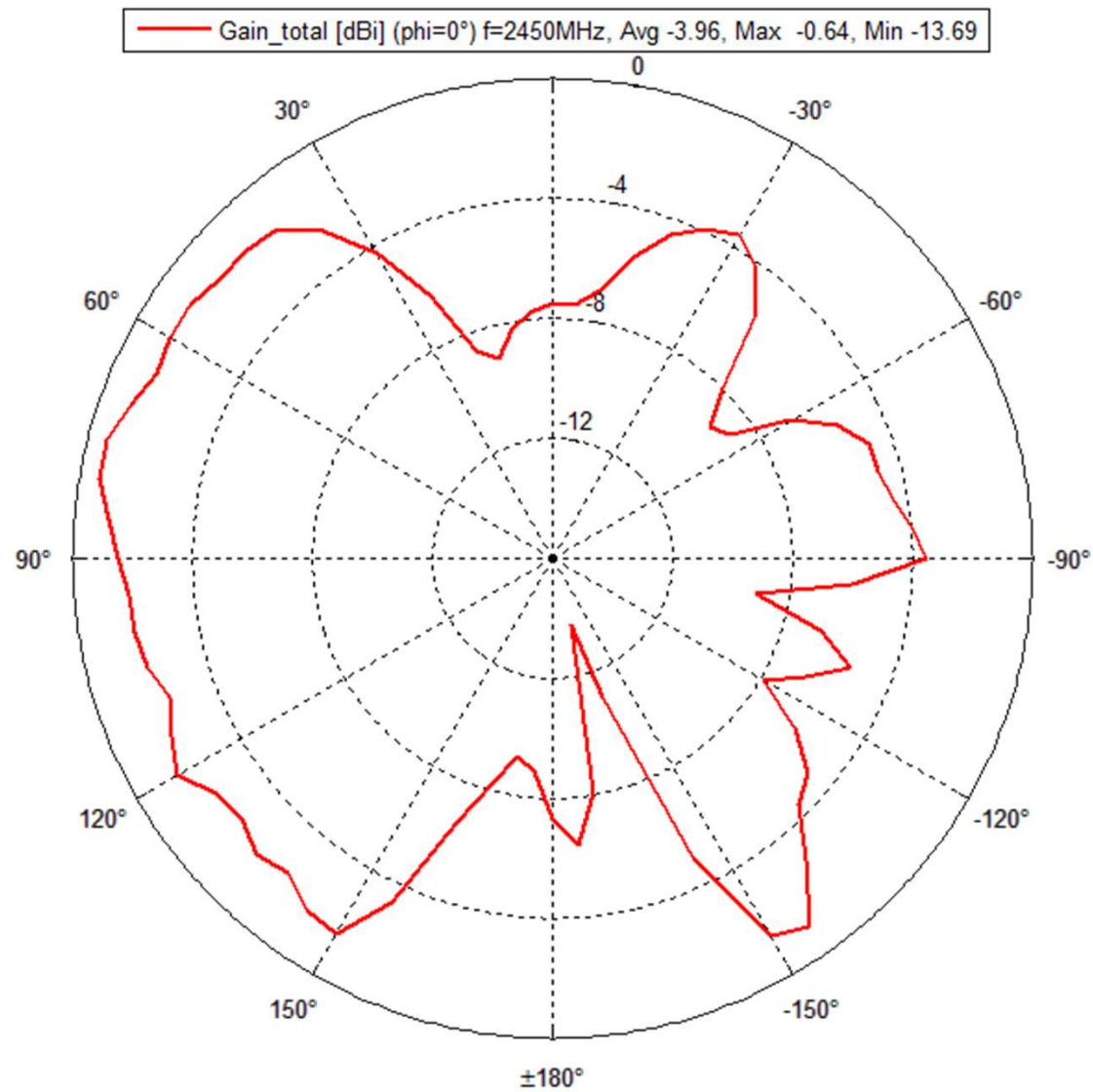
f=2450MHz Gain_total [dBi] Max: 3.38dBi Min: -30.70dBi Efficiency: 58.26% (-2.3dB) corr: 0.00dB



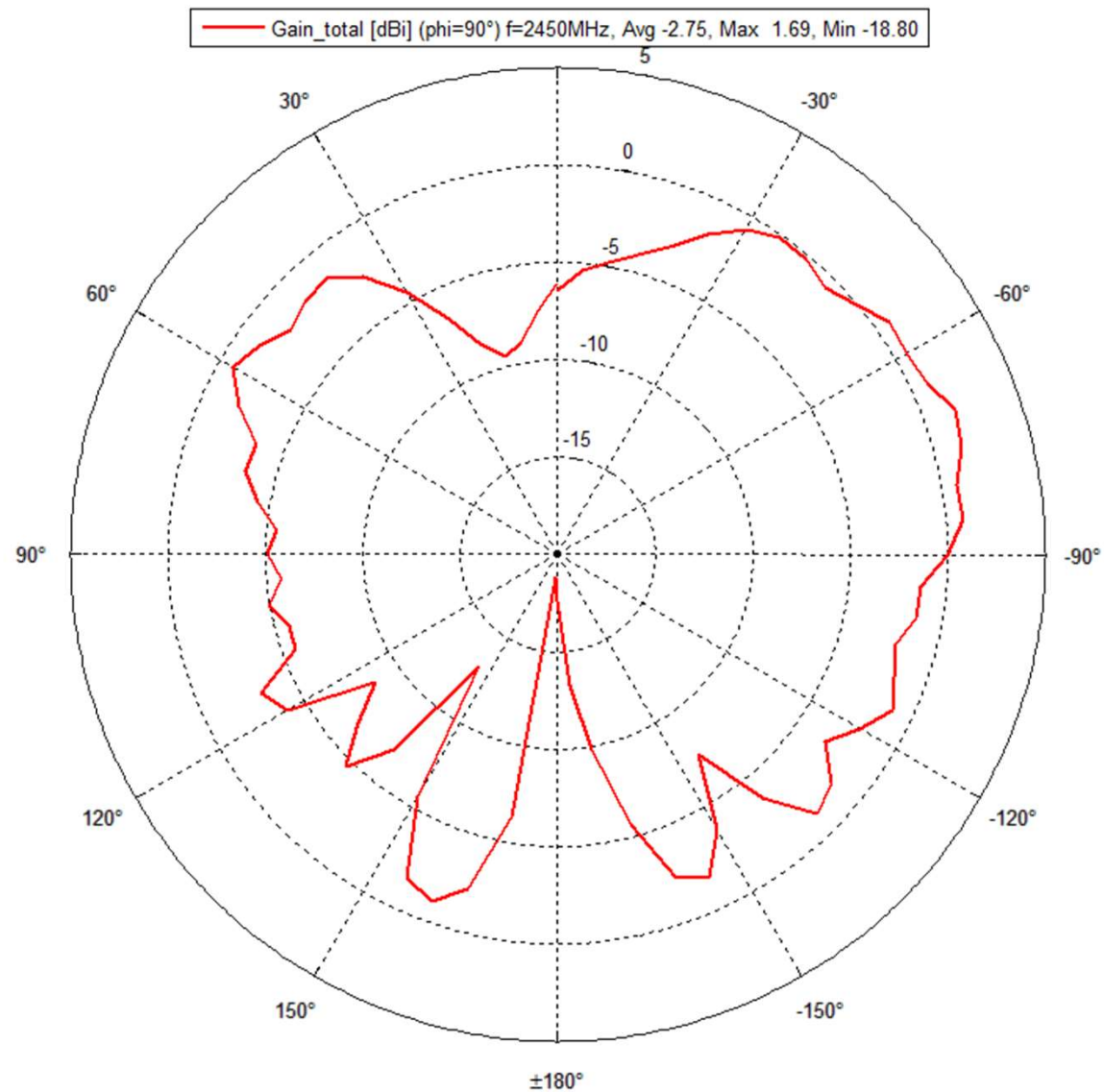
Bluetooth/WiFi – 2D Total Gain XY plane



Bluetooth/WiFi – 2D Total Gain XZ plane



Bluetooth/WiFi – 2D Total Gain YZ plane



Bluetooth/WiFi – Max & Average gain

Freq [MHz]	Max Gain [dBi]	Avg Gain [dBi]
2400	+2.42	-3.07
2410	+2.37	-3.01
2420	+2.48	-2.84
2430	+2.77	-2.66
2440	+3.1	-2.49
2450	+3.38	-2.35
2460	+3.66	-2.11
2470	+3.37	-2.15
2480	+3.37	-2.28
2490	+3.11	-2.47
2500	+2.73	-2.59