



Antenna Specification (9290035625 Mode)

Model: RFFPA203007IMAB402 (Zigbee)

Model: RFFPA203006IMLB403 (WiFi)

Manufacturer:WALSIN TECHNOLOGY CORP.

Address: 24 F., No. 1, Songzhi Rd., Xinyi Dist., Taipei City 110411, Taiwan

Brand: WALSIN

Date : Jun. 27, 2023

Prepared by : Carl Hung



Outline

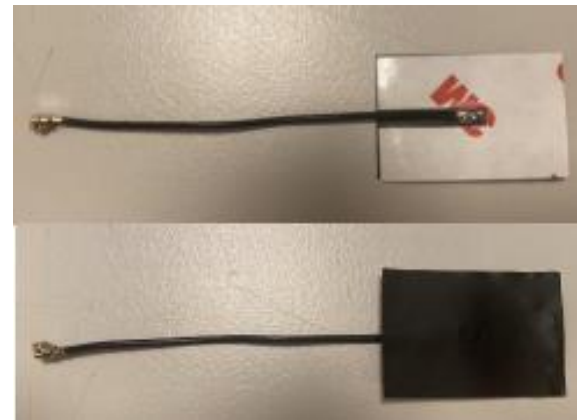
- Antenna Structure & Placement
- Test Setup
- Return Loss & Isolation
- Radiation Pattern
- Peak Gain & Efficiency

Antenna Structure & Placement

WiFi & BLE Antenna



ZigBee Antenna



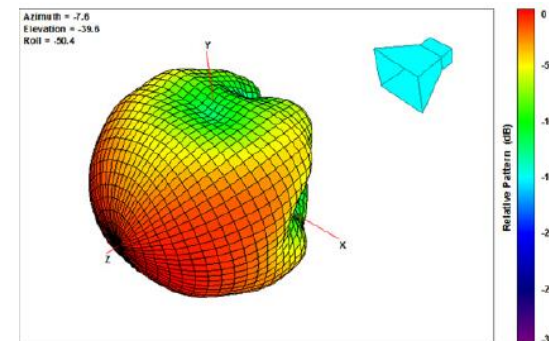
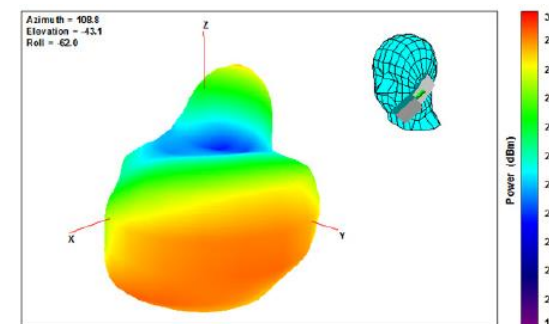
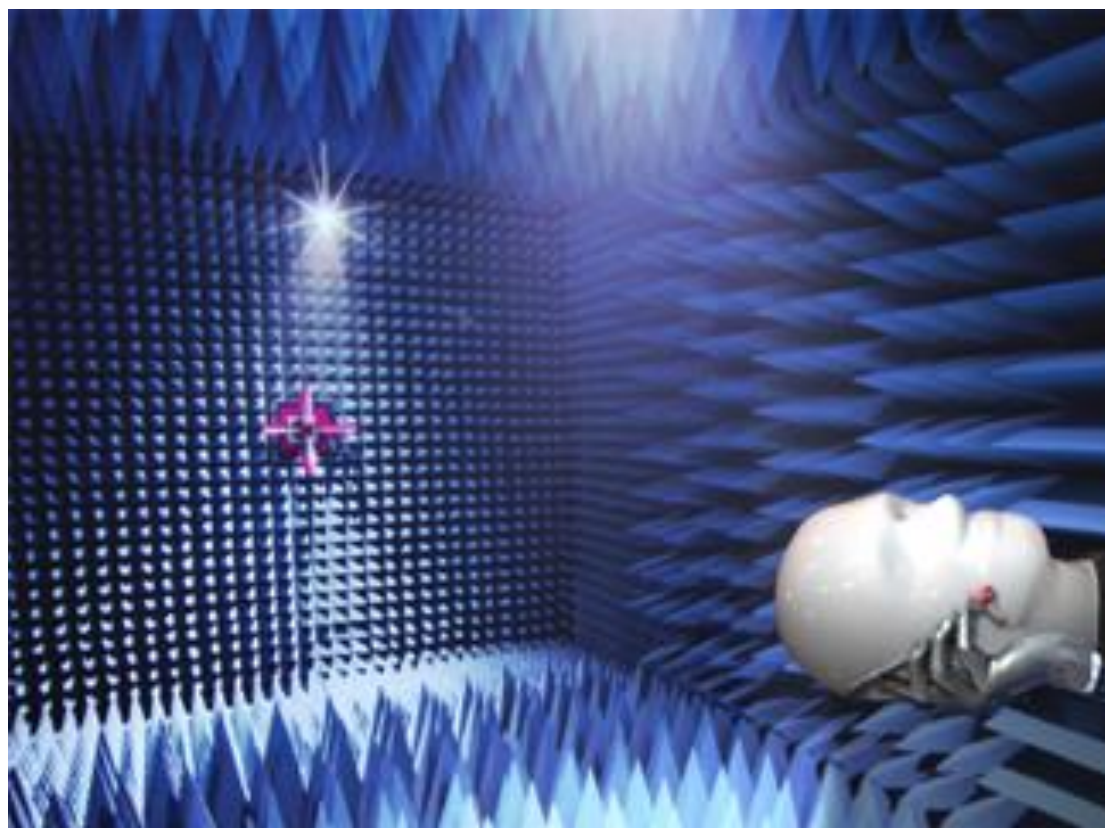
Ant No.	Operating Band	Type	Material	Feeding	Dimension
Ant-1 WiFi	2400 MHz ~ 2500 MHz 5150 MHz ~ 5850 MHz	Monopole	FPCB	Cable	30(L) x 24(W) x 0.15(T) mm ³
Ant-2 ZigBee	2400 MHz ~ 2500 MHz	Monopole	FPCB	Cable	30(L) x 24(W) x 0.15(T) mm ³

Return Loss & Isolation

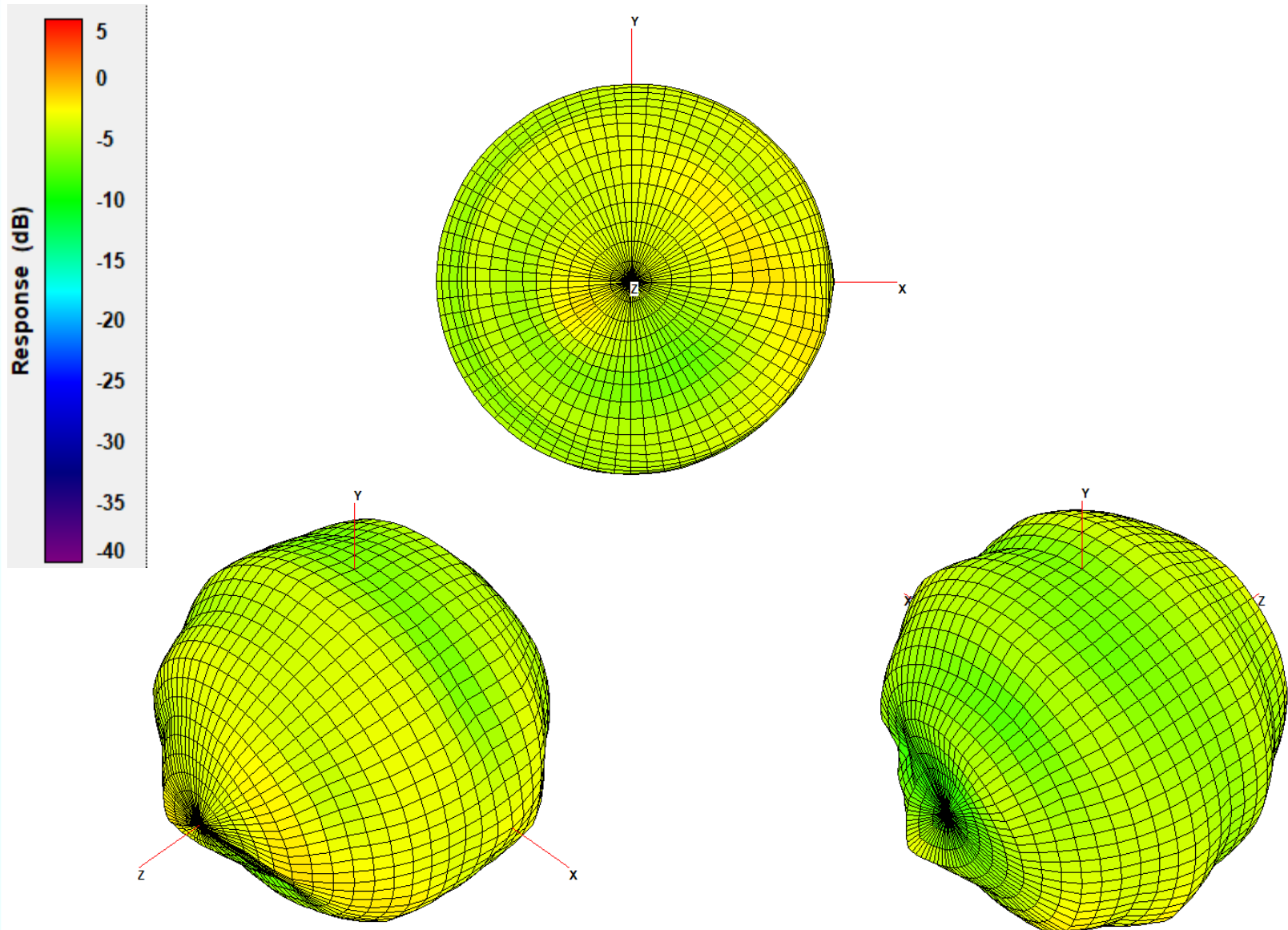


Antenna Measurement Chamber

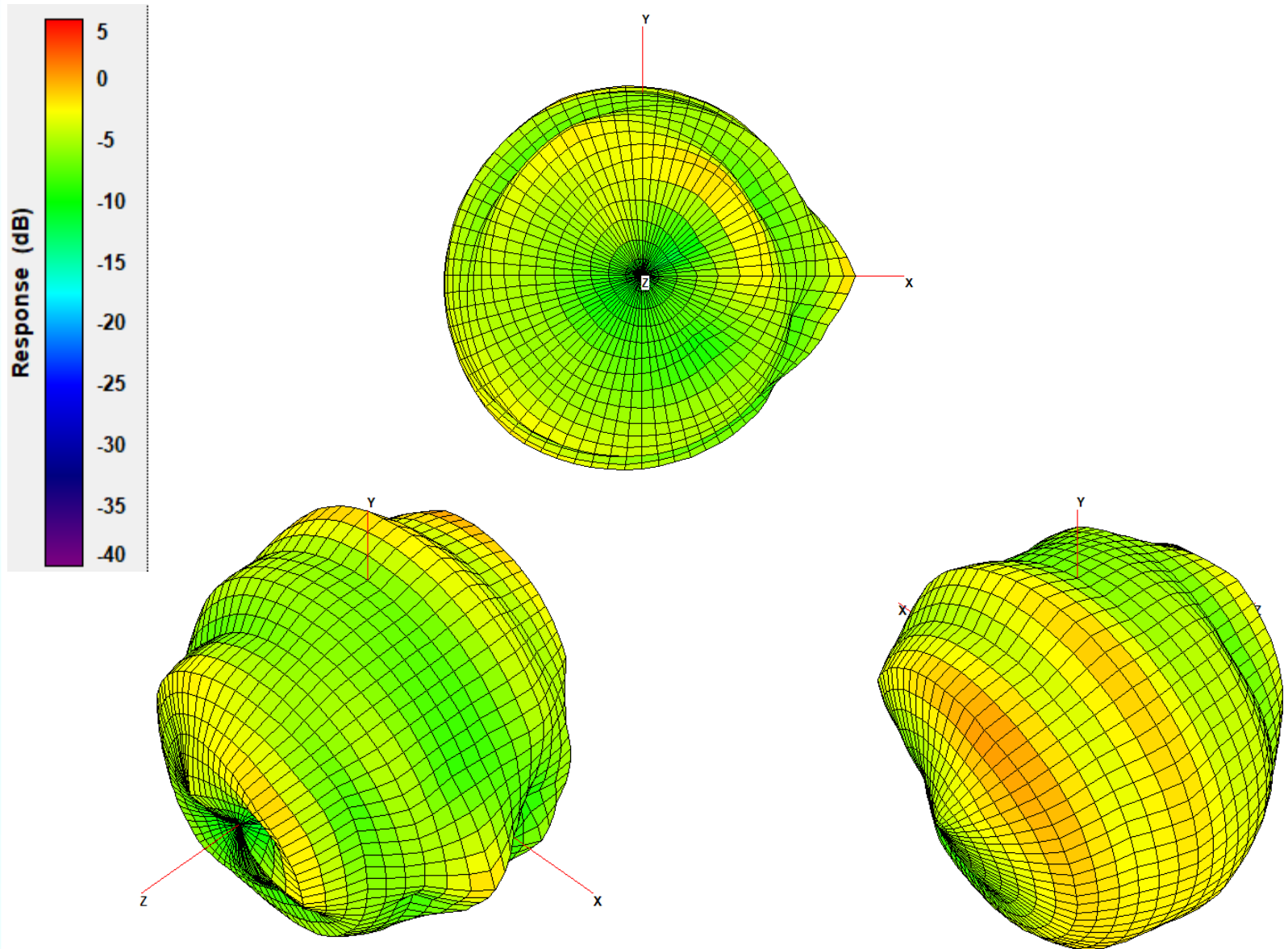
- ETS AMS-8500 antenna measurement system
- Interior dimensions : 7.32(L)×3.66(W)×3.66(H)m³
- Operating band : 600 MHz – 10 GHz
- Support passive test & active test
- Provide graphic data display



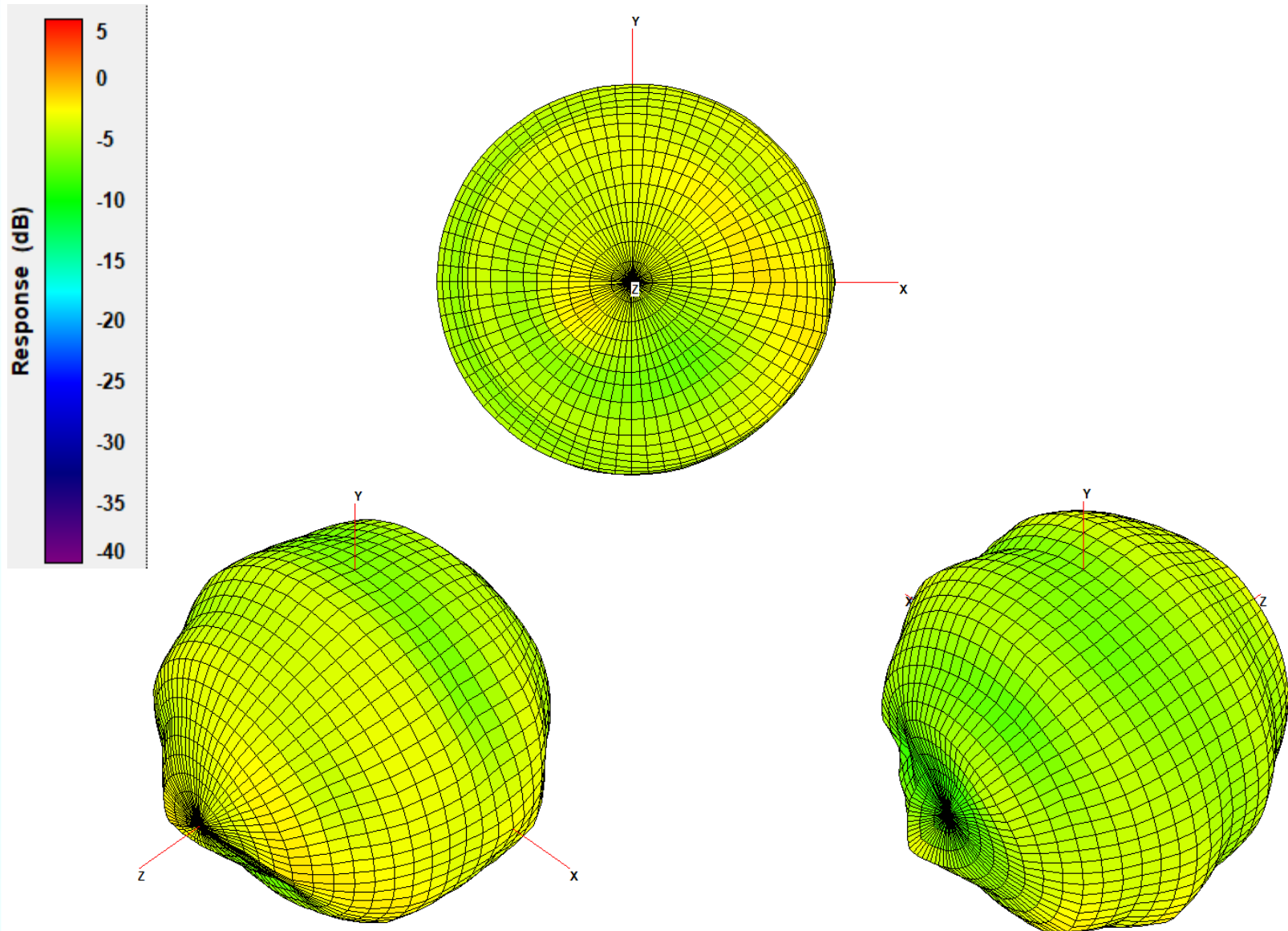
Radiation Pattern – Ant-1 WiFi @ 2450 MHz



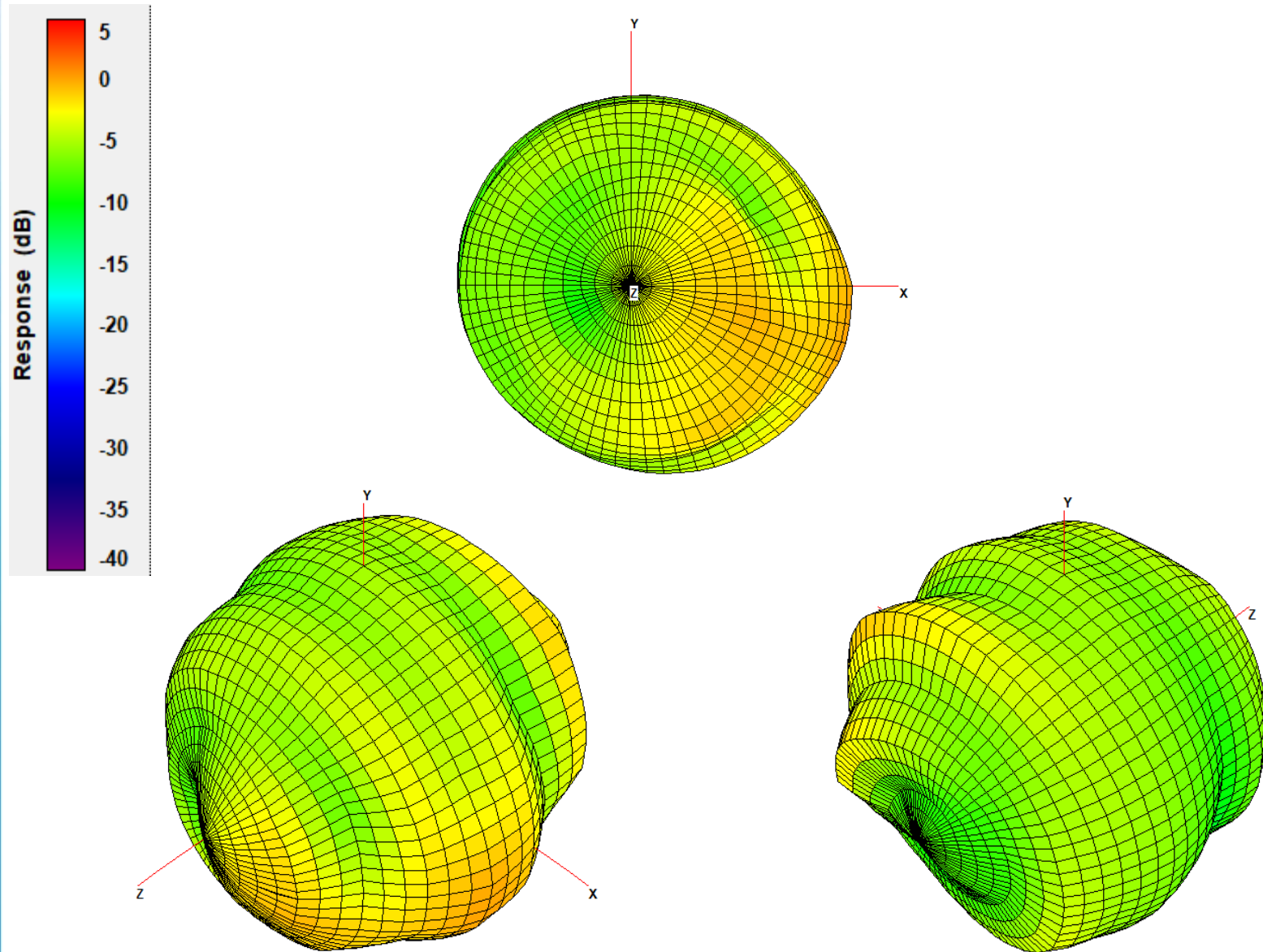
Radiation Pattern – Ant-1 WiFi @ 5500 MHz



Radiation Pattern – Ant-1 BLE @ 2450 MHz



Radiation Pattern – Ant-2 ZigBee @ 2450 MHz



Peak Gain & Efficiency

Antenna Performance								
Freq. (MHz)	Ant-1 WiFi & BLE				Ant-2 ZigBee			
	Efficiency (%)	Directivity (dBi)	Avg Gain (dBi)	Peak Gain (dBi)	Efficiency (%)	Directivity (dBi)	Avg Gain (dBi)	Peak Gain (dBi)
2400	38.1	4.36	-4.19	0.17	37.3	4.92	-4.27	0.64
2450	41.0	4.44	-3.87	0.57	44.7	4.79	-3.49	1.30
2500	45.1	4.91	-3.45	1.45	41.6	4.92	-3.80	1.11
5150	34.3	5.89	-4.64	1.24				
5500	38.1	6.46	-4.18	2.27				
5850	44.9	4.85	-3.47	1.38				

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