

Winmate Inc.

AntennaSpecification

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2. Wi-Fi Main Antenna Specification

Winmate Part Number: 90RF05000026

2.1. Electrical Characteristics

Frequency(MHz): 2400-2500 / 5150-5850

SWR: $\leq 1.11@2400-2500\text{MHz}$

$\leq 2.50@5150-5850\text{MHz}$

Return Loss: $\leq -35.60\text{dB}@2400-2500\text{MHz}$

$\leq -11.62\text{dB}@5150-5850\text{MHz}$

Peak Gain: 2.49dBi@2400-2500MHz

3.26dBi@5150-5850MHz

Impedance: 50ohm

Polarization: Linear

2.2. Mechanical Characteristics

Cable: 50 Ω $\varnothing$ 0.81 RF cable

Connector: MHF4

PCB: FR4 /Thickness 0.4mm

Type:PIFA

2.3. Environmental Characteristics

Operating Temperature: -30°C to 80°C

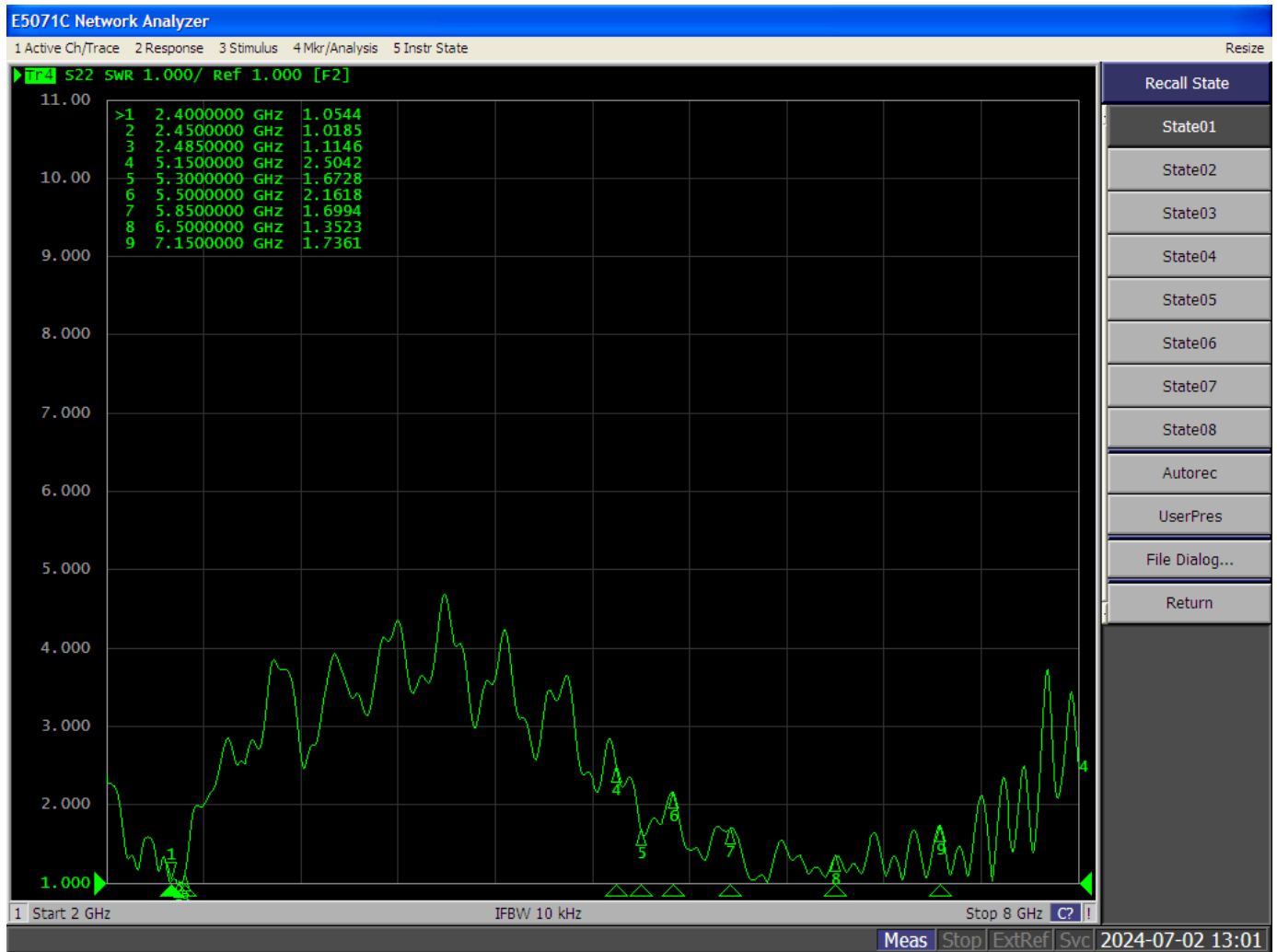
2.4.3. Gain / Efficiency

Frequency	2400	2450	2483.5	2500	5150	5250	5350	5470	5600	5725
Directivity (dBi)	6.02	5.94	5.60	5.42	8.10	6.73	6.53	6.49	7.45	7.25
Efficiency (dB)	-5.92	-3.86	-3.23	-2.94	-3.84	-3.64	-3.72	-4.28	-3.89	-4.45
Efficiency (%)	25.59	41.13	47.51	50.87	41.29	43.20	42.46	37.33	40.88	35.88
Peak Gain (dBi)	0.11	2.08	2.36	2.49	3.26	3.09	2.81	2.21	3.56	2.80

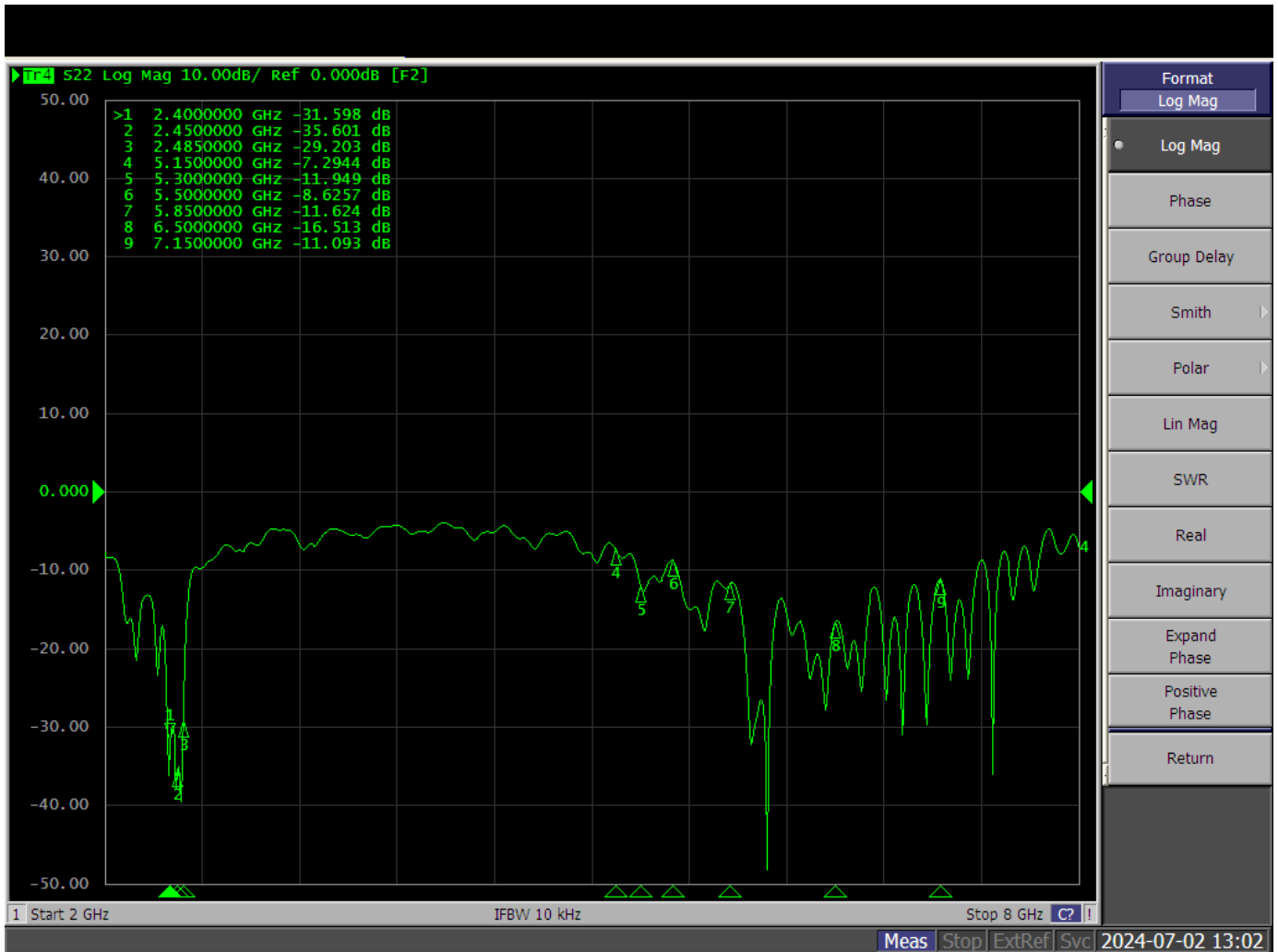
Frequency	5785	5850
Directivity (dBi)	6.81	6.67
Efficiency (dB)	-4.58	-3.97
Efficiency (%)	34.82	40.06
Peak Gain (dBi)	2.23	2.70

2.4. RF Performance Characteristics

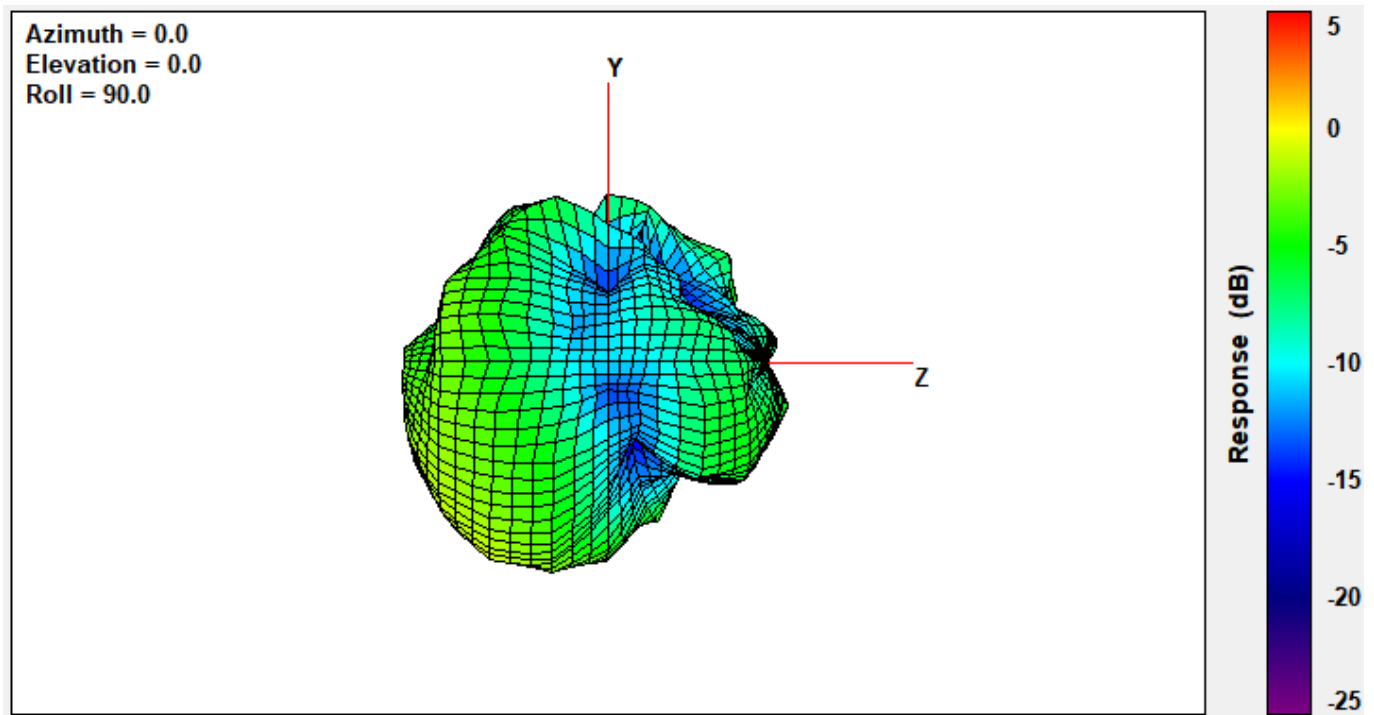
2.4.1. SWR



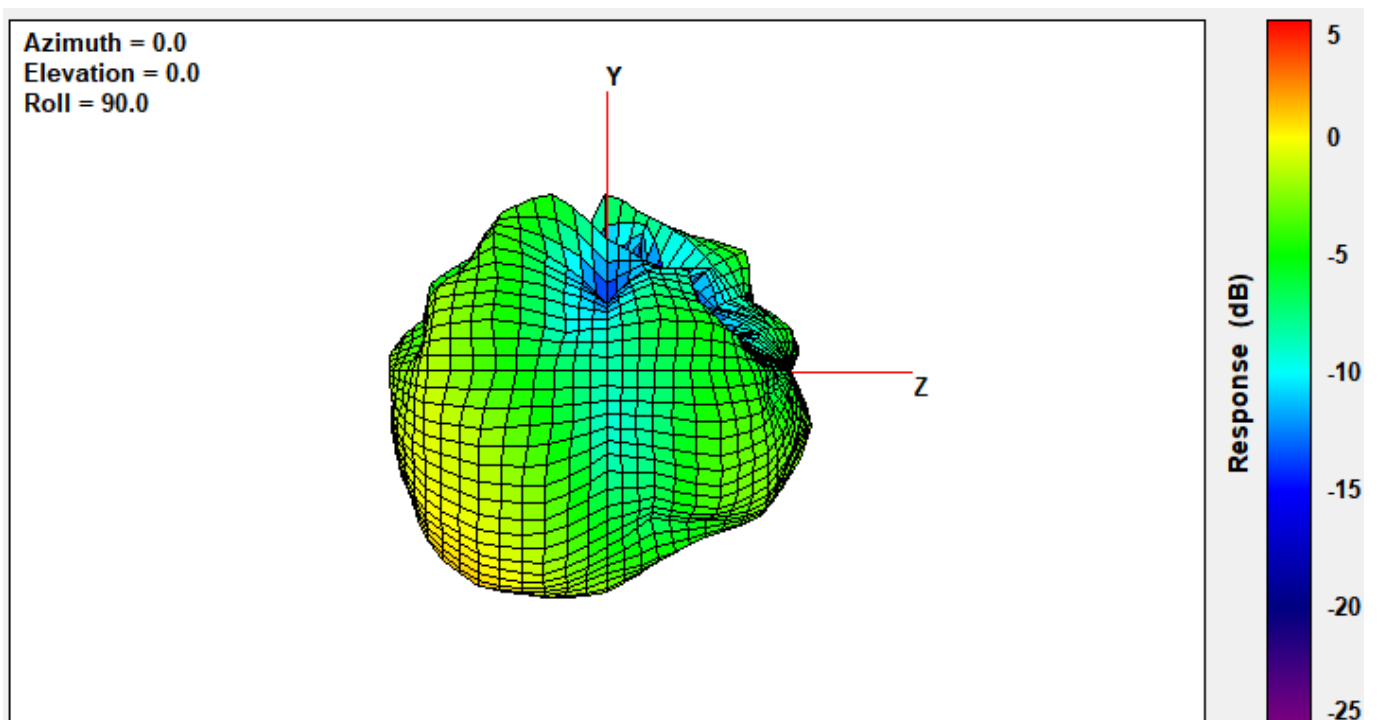
2.4.2. Return Loss



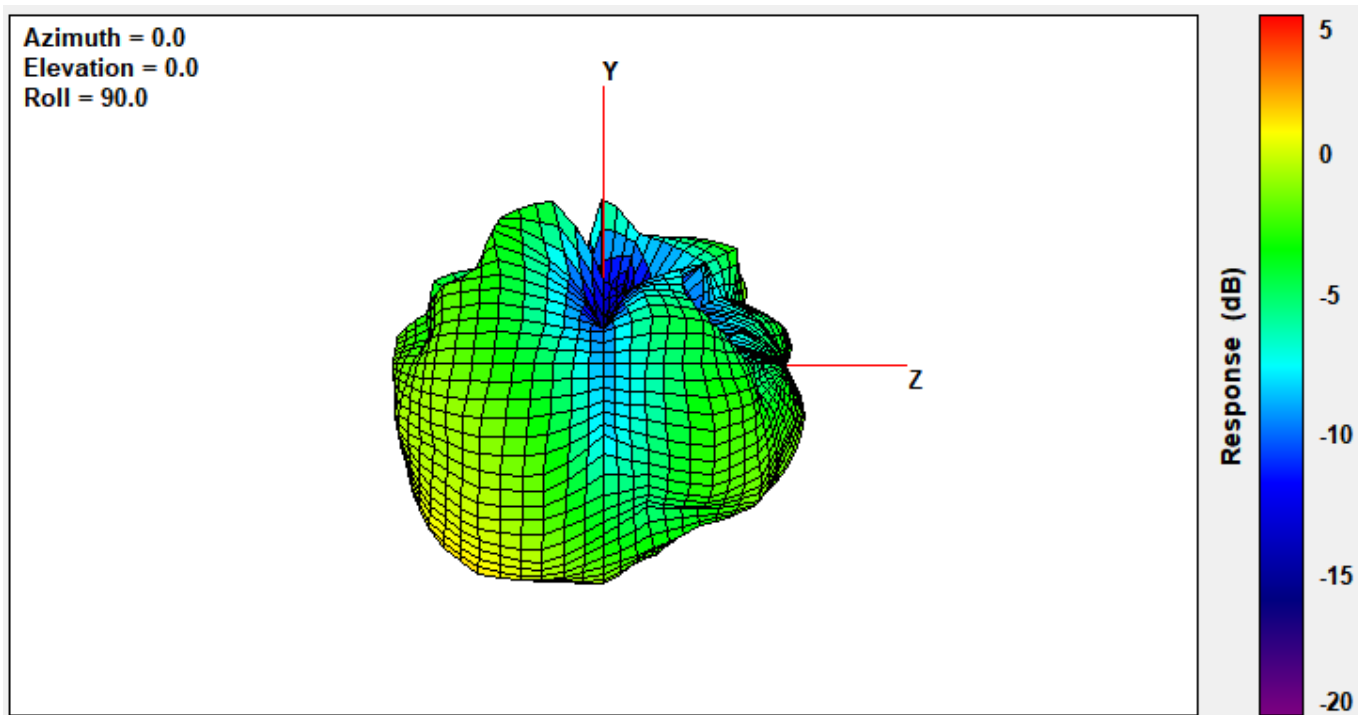
2400MHz



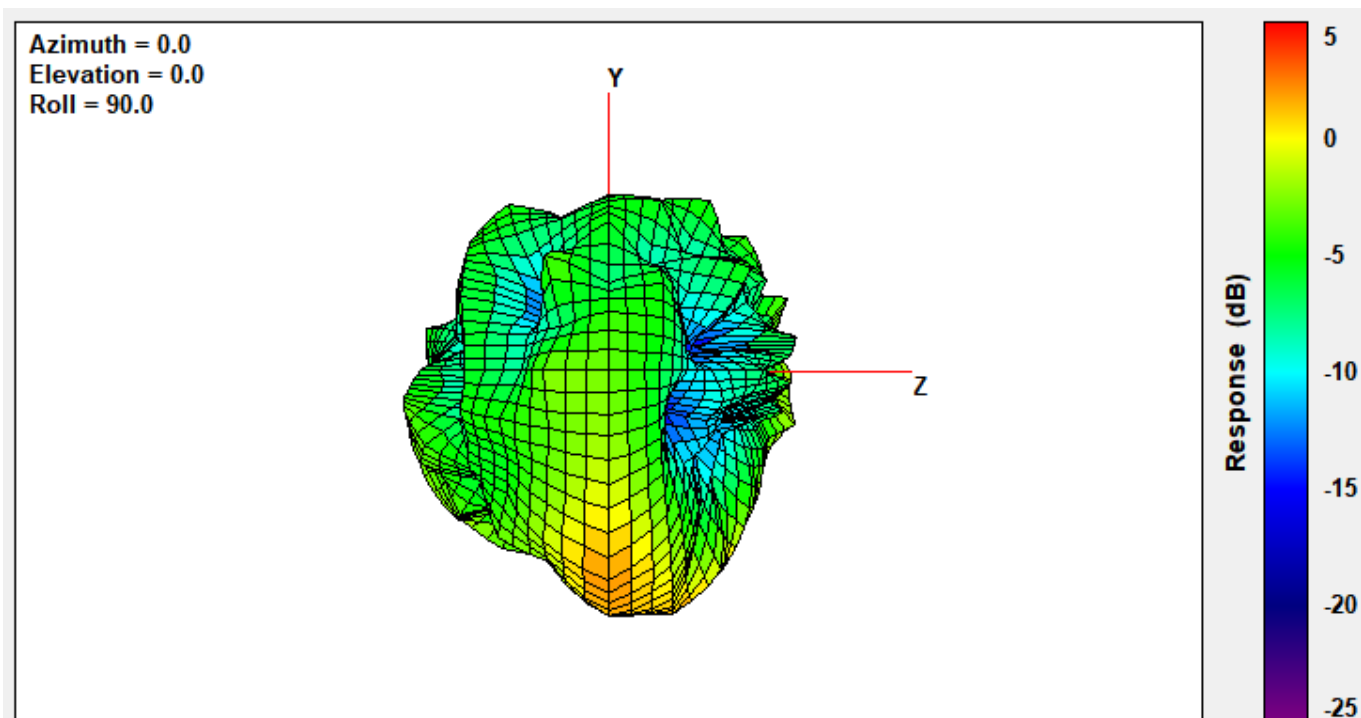
2450MHz



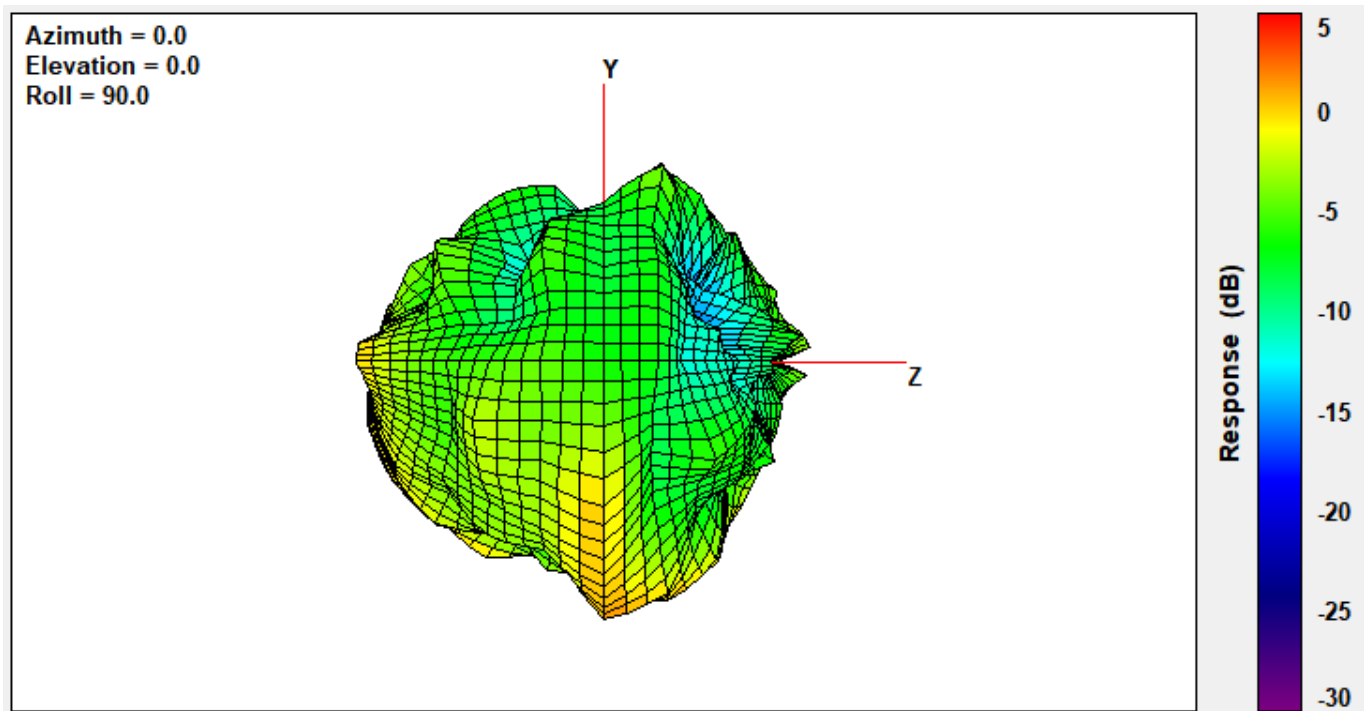
2483MHz



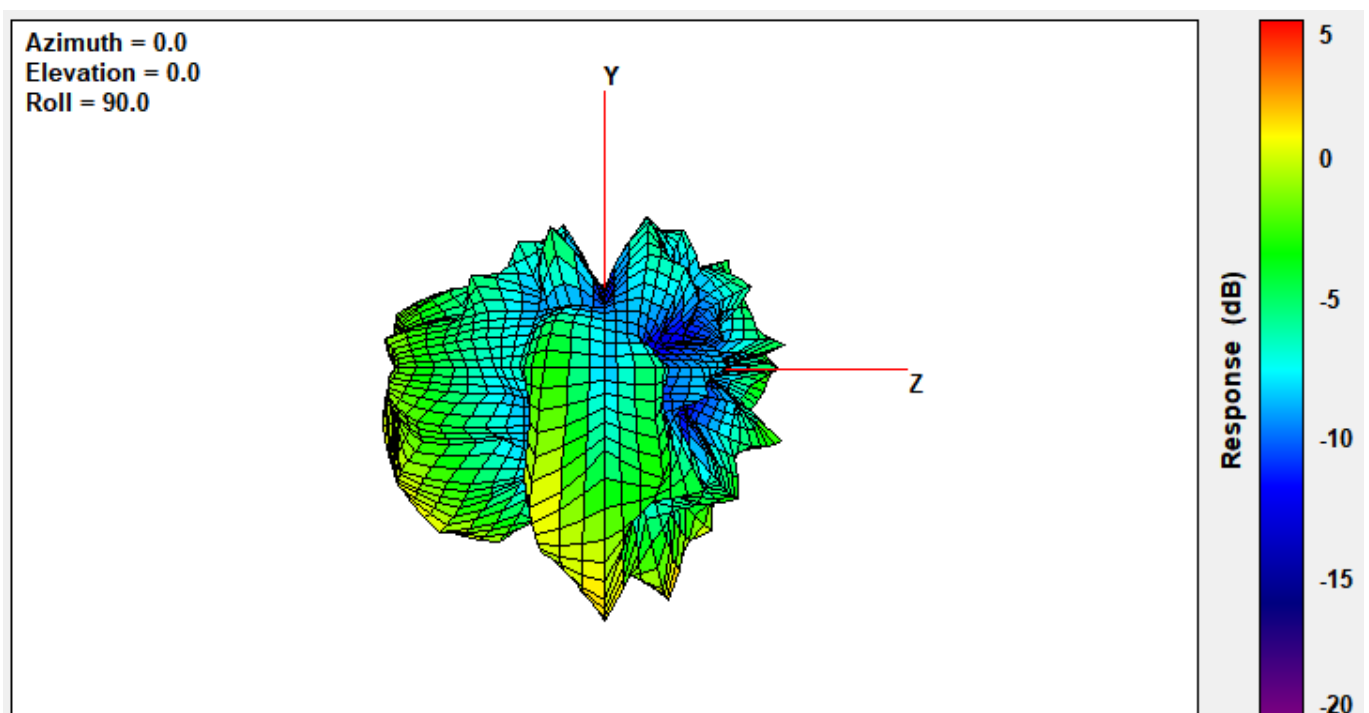
5150MHz



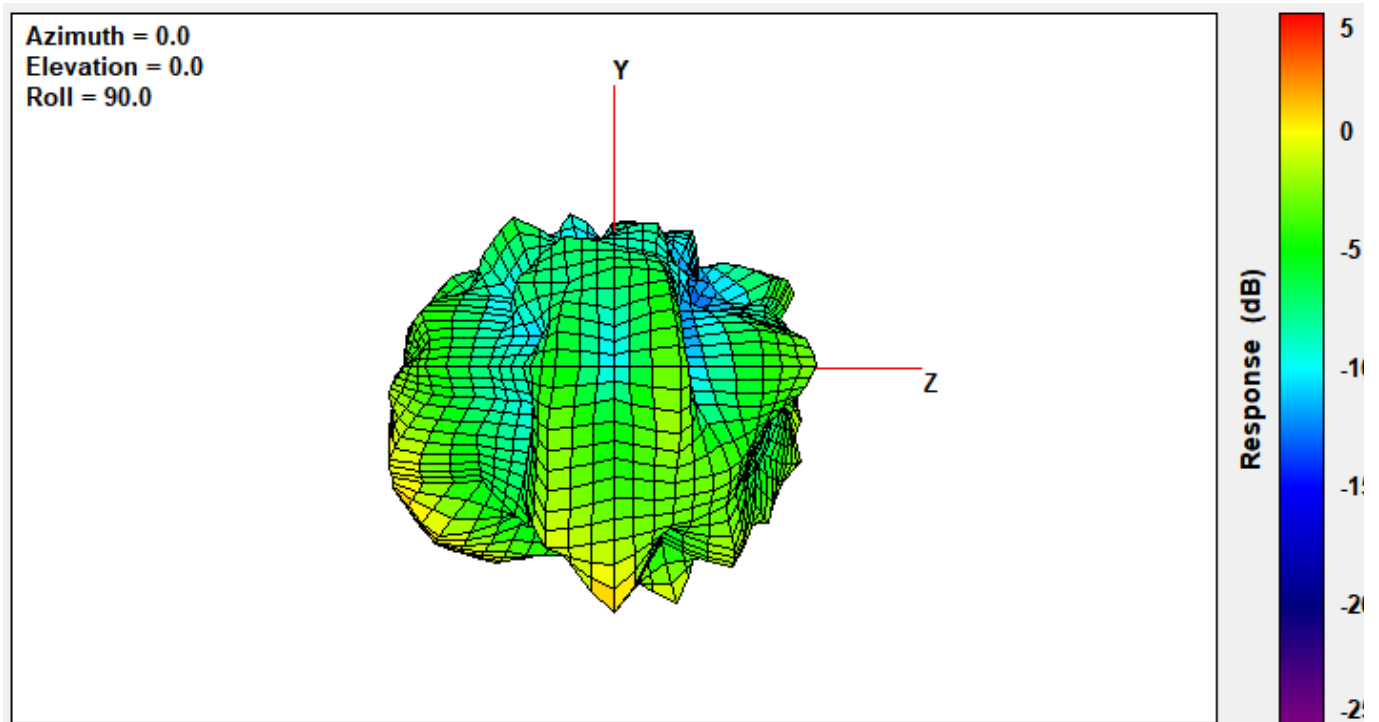
5350MHz



5600MHz



5850MHz



3. WiFi Aux Antenna Specification

Winmate Part Number: 90RF0600001V

3.1. Electrical Characteristics

Frequency(MHz): 2400-2500 / 5150-5850

SWR: $\leq 2.17@2400-2500\text{MHz}$

$\leq 1.28@5150-5850\text{MHz}$

Return Loss: $\leq -11.93@2400-2500\text{MHz}$

$\leq -31.29\text{dB}@5150-7150\text{MHz}$

Peak Gain: 0.59dBi@2400-2500MHz

3.67dBi@5150-5850MHz

Impedance: 50ohm

Polarization: Linear

3.2. Mechanical Characteristics

Cable: 50 Ω φ 0.81 RF cable

Connector: MHF4

PCB: FPCB /Thickness 0.2mm

Type:PIFA

3.3. Environmental Characteristics

Operating Temperature: -30°C to 80°C

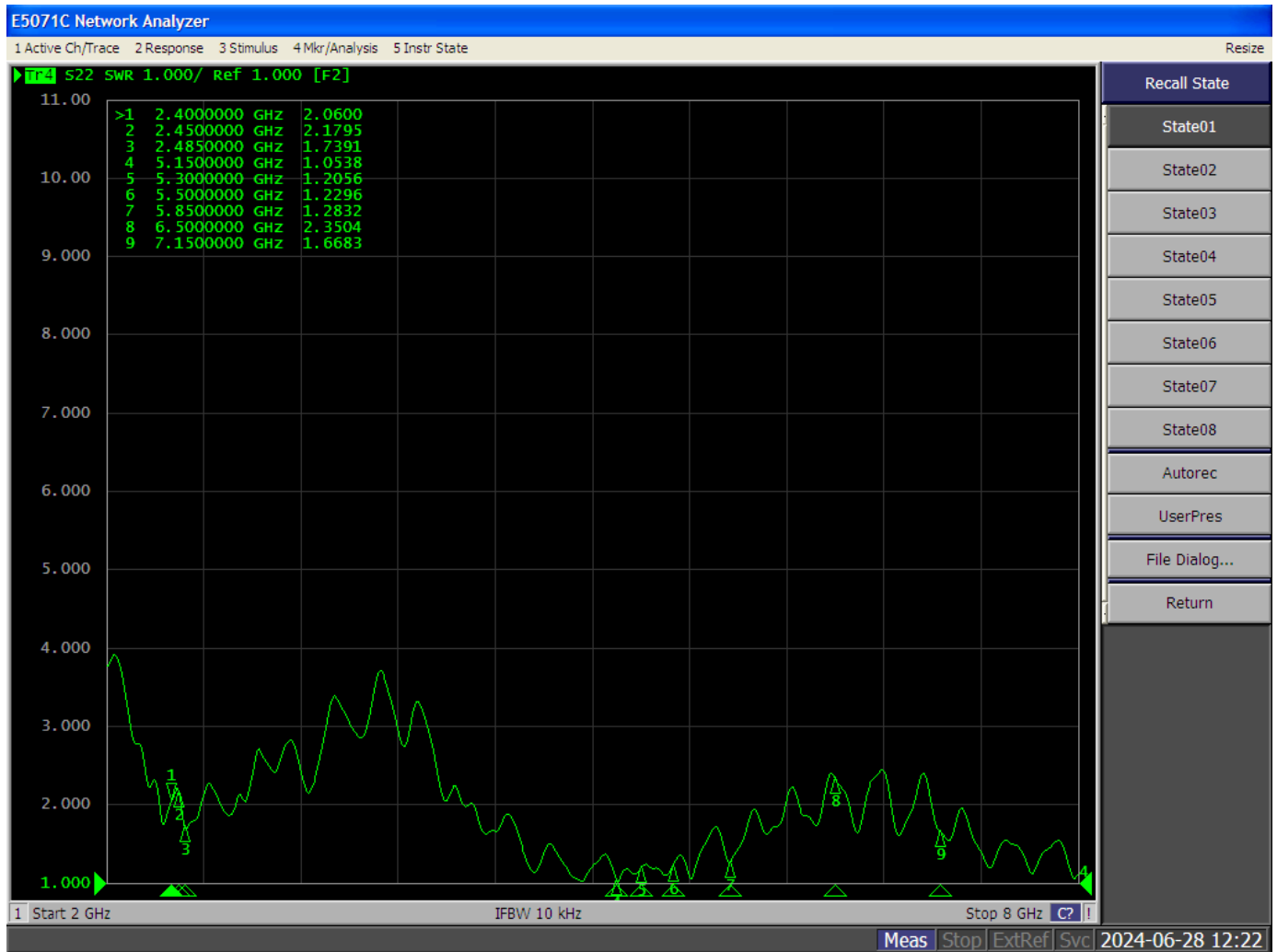
3.4.3. Gain / Efficiency

Frequency	2400	2450	2483.5	2500	5150	5250	5350	5470	5600	5725
Directivity (dBi)	6.42	6.25	5.80	5.83	8.55	7.54	8.20	6.90	7.13	7.31
Efficiency (dB)	-8.77	-6.56	-5.67	-5.24	-4.88	-4.73	-4.14	-4.63	-4.59	-5.13
Efficiency (%)	13.27	22.09	27.13	29.95	32.48	33.68	38.52	34.45	34.72	30.68
Peak Gain (dBi)	-2.36	-0.31	0.14	0.59	3.67	2.82	3.06	2.27	2.53	2.18

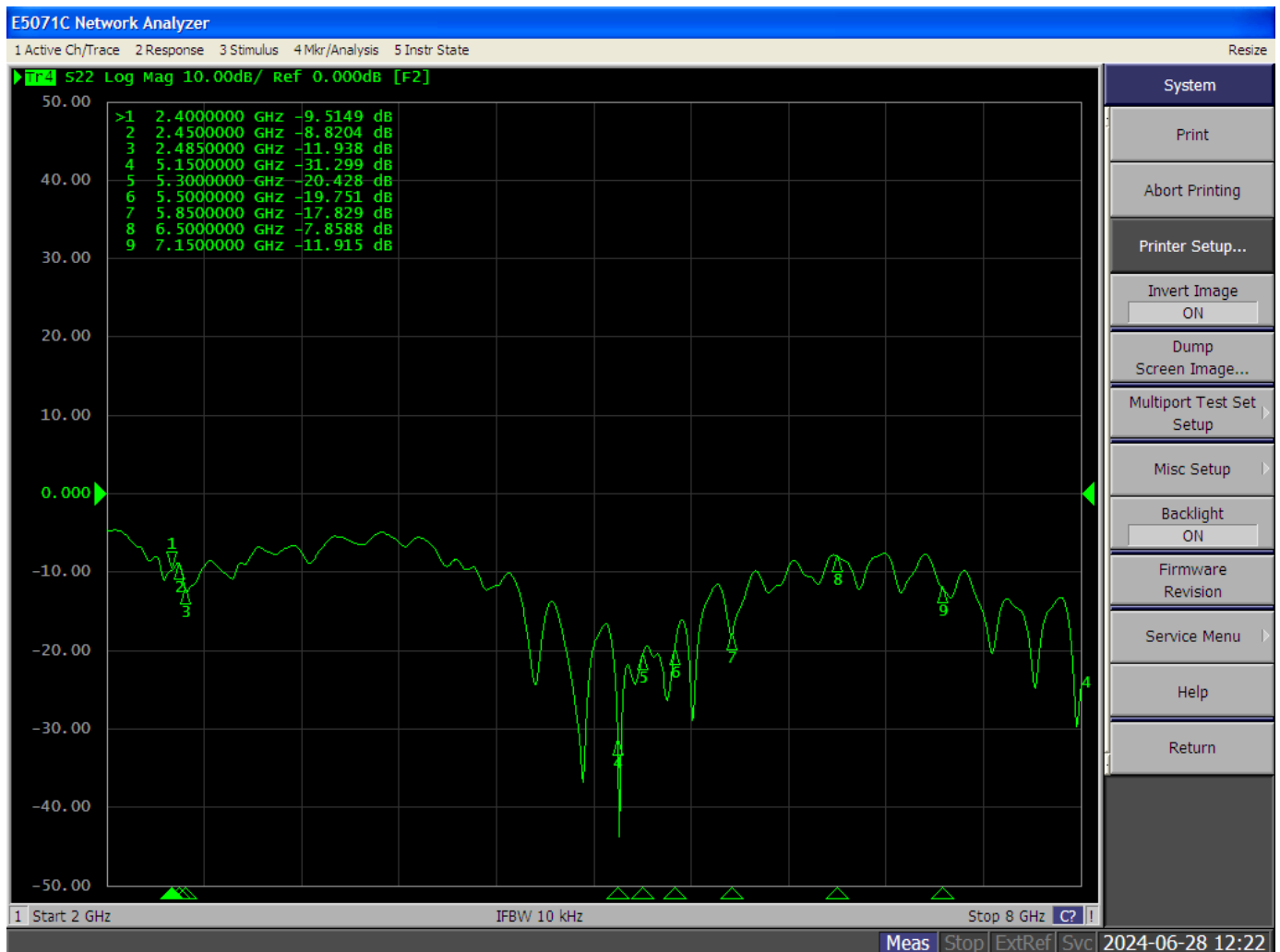
Frequency	5785	5850
Directivity (dBi)	7.43	7.50
Efficiency (dB)	-5.13	-4.36
Efficiency (%)	30.71	36.64
Peak Gain (dBi)	2.30	3.13

3.4. RF Performance Characteristics

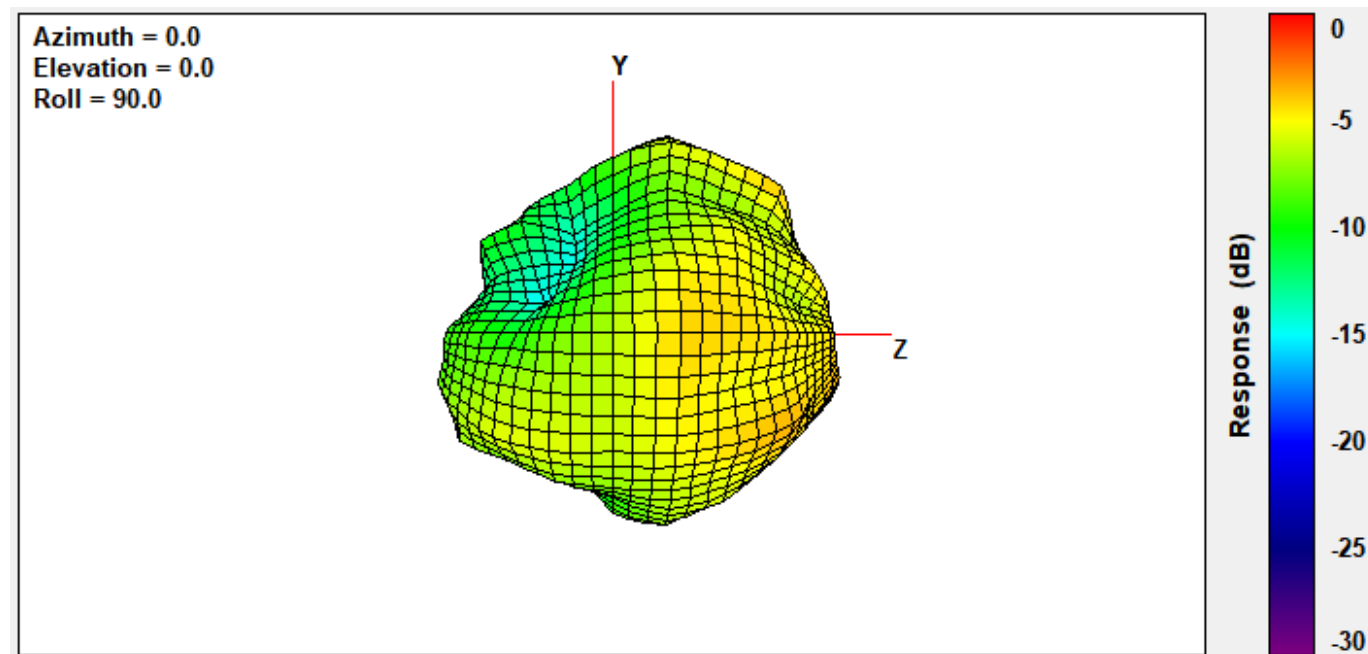
3.4.1 SWR



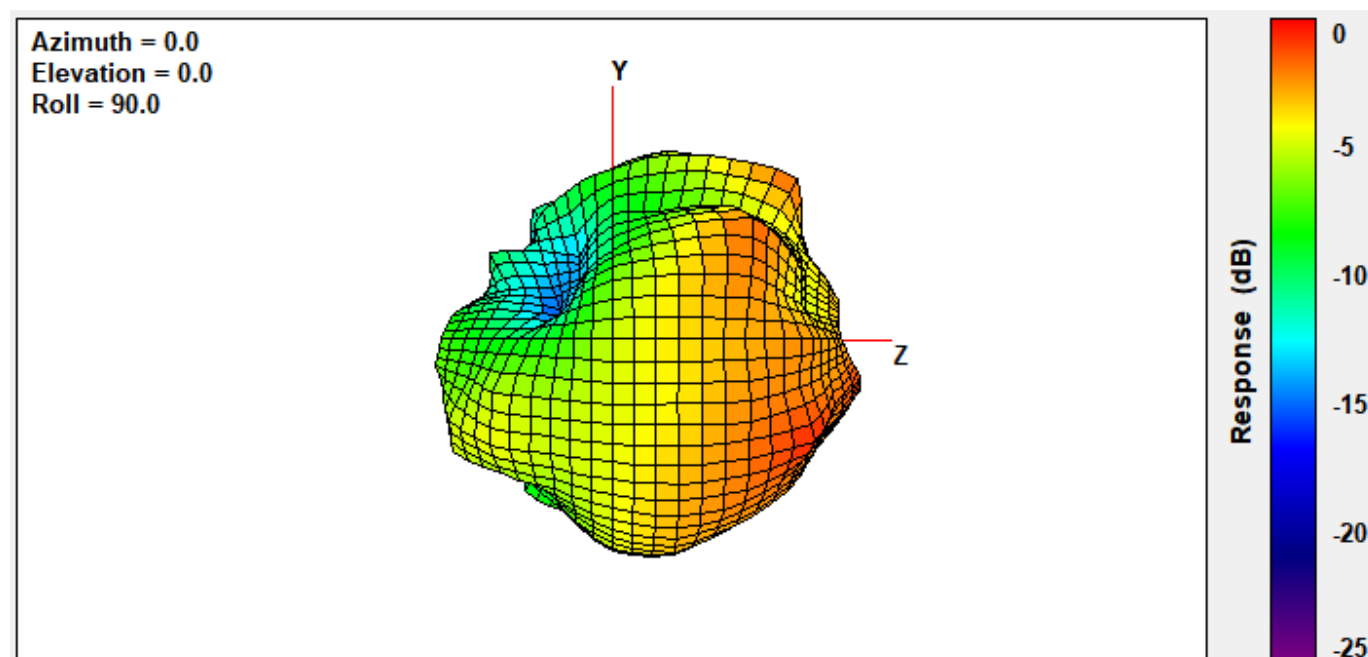
3.4.2 Return Loss



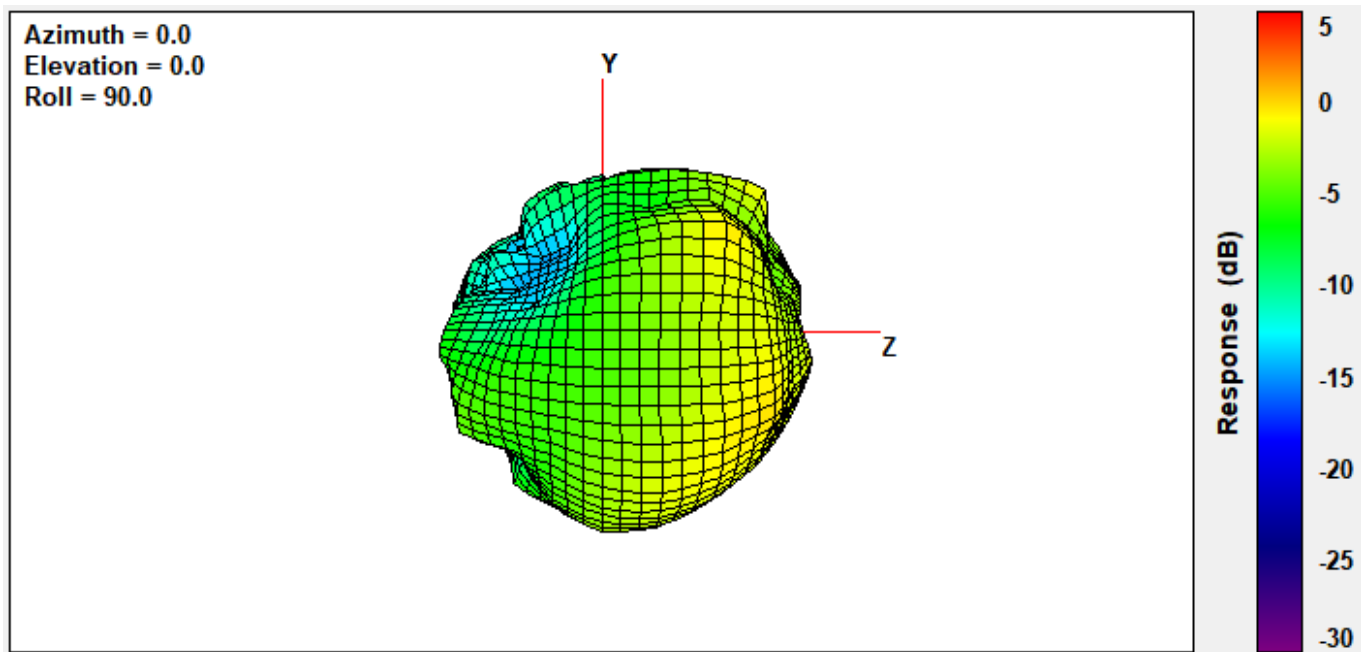
2400MHz



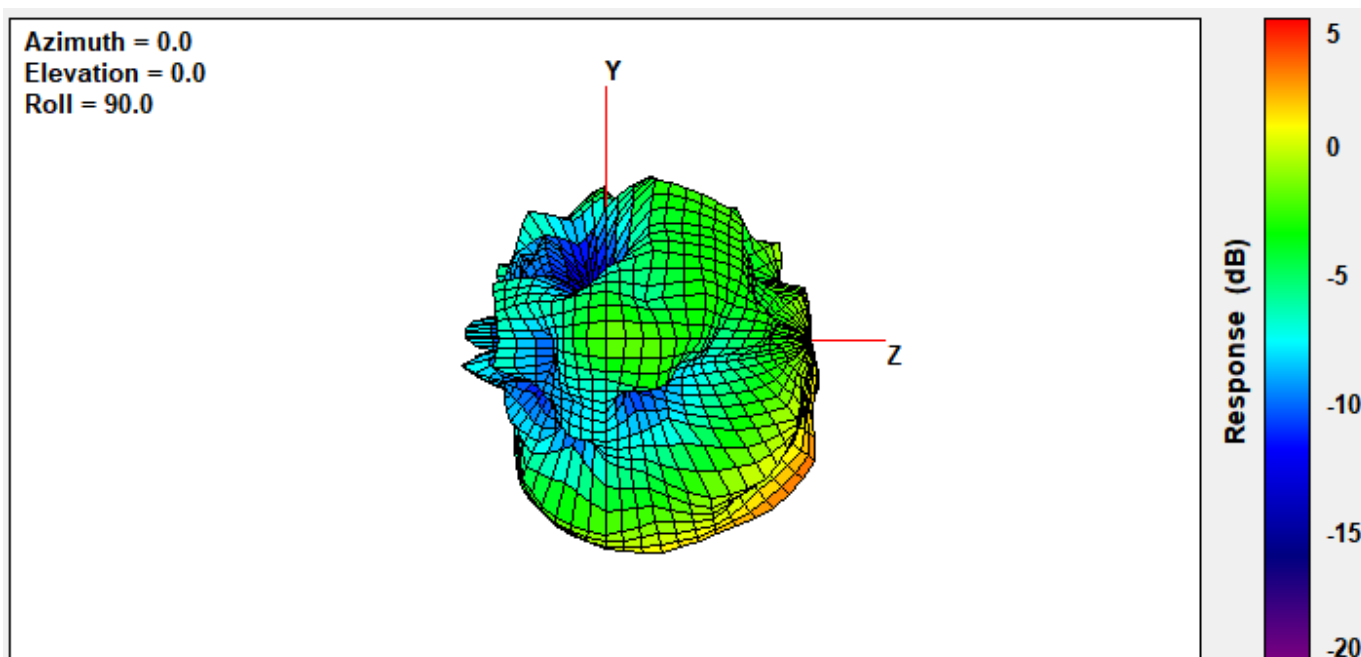
2450MHz



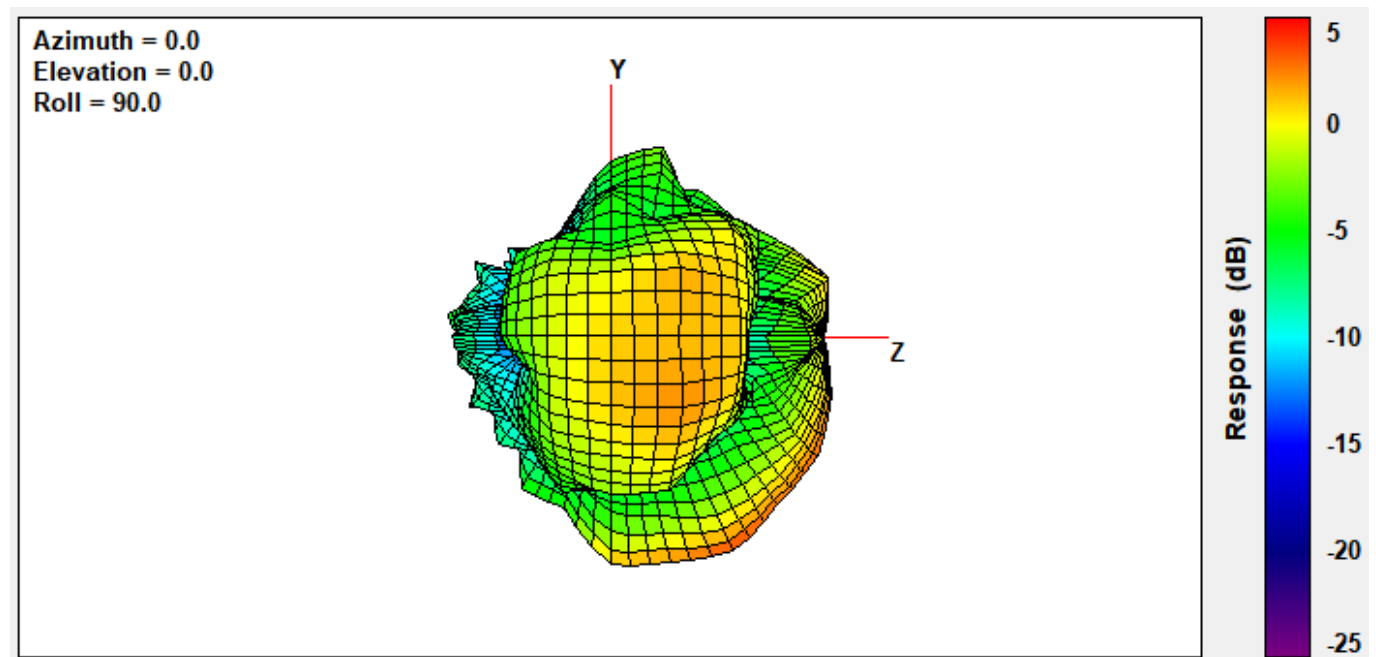
2483MHz



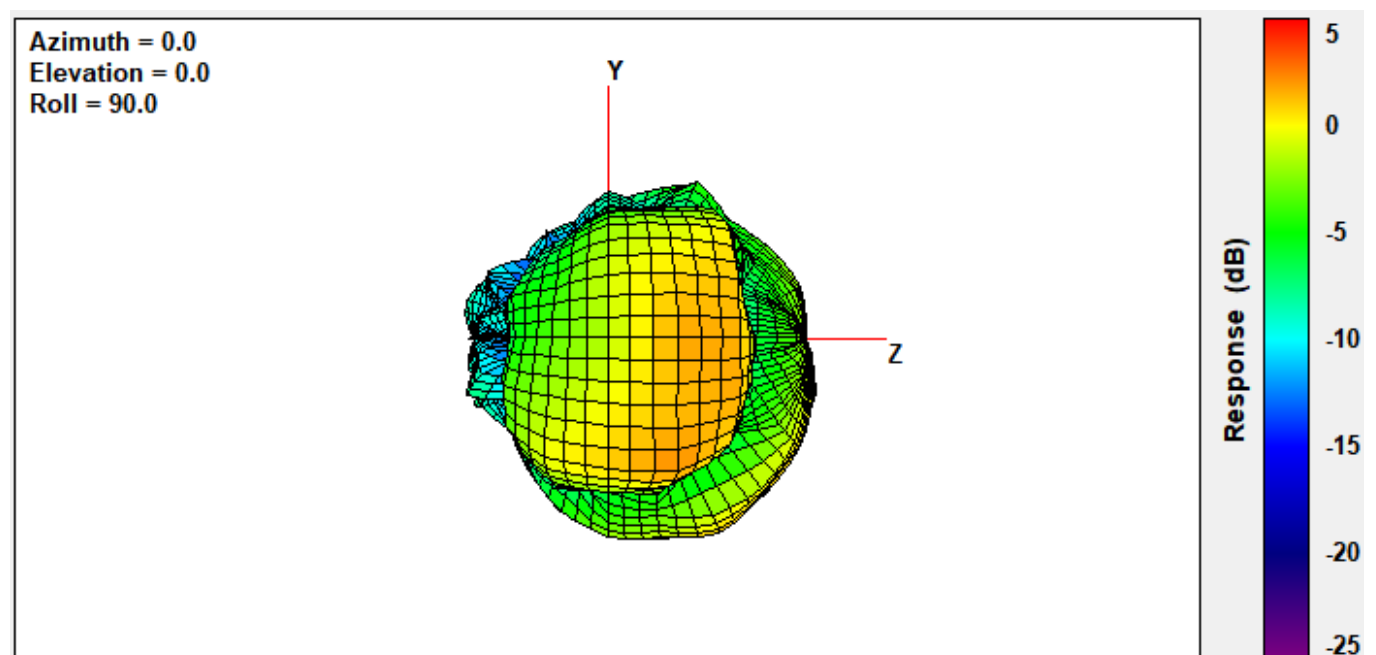
5150MHz



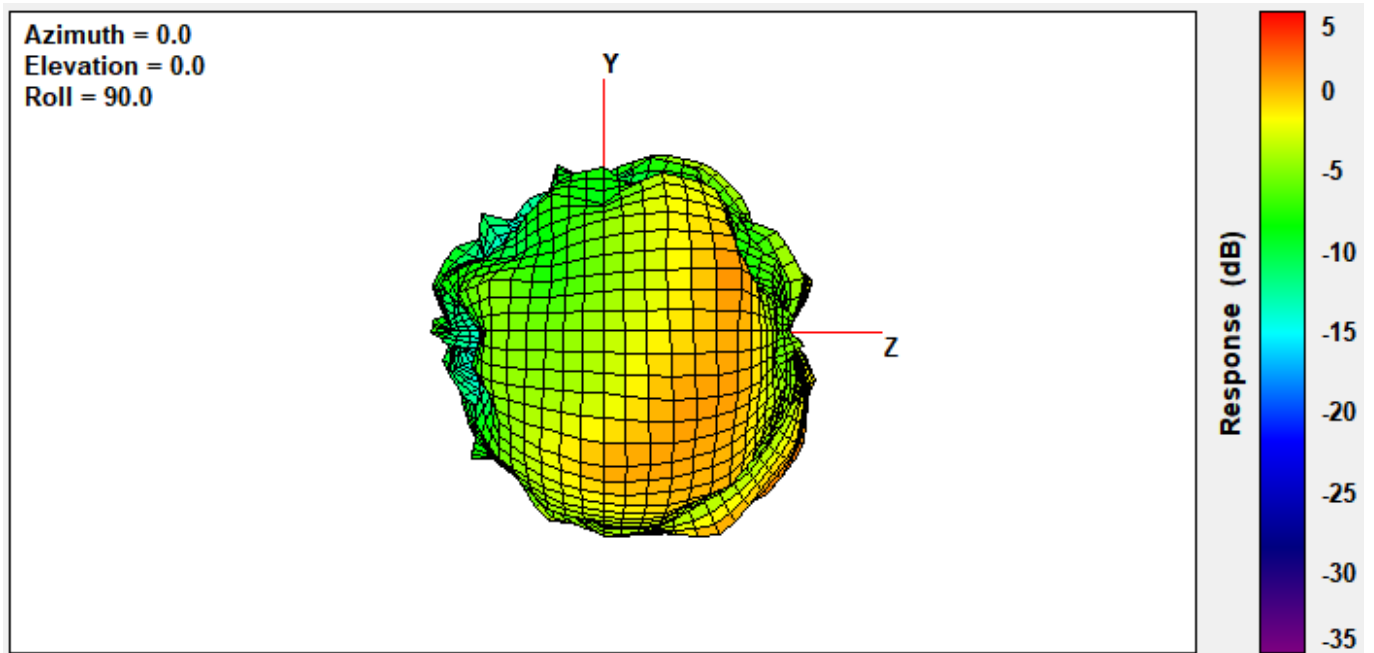
5350MHz



5600MHz



5850MHz



5. Antenna dimensional information for SAR evaluation

