

Antena Test Report

Customer name: Greatwall

Project name: A2369/A2470/A2770

Part description: WIFI Antenna, Dual Band 2.4/5.8G Built-in Iron Sheet - Black 1.37 Wires - 4th Generation Terminals

Supplier: Suzhou Cowin Antenna Electronics Co., Ltd.

**ADD:No. 156, Gangpu Middle Road, Zhangpu Town, Kunshan City,
Jiangsu Province**

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FAX:0512-57382973

EMAIL:peter@cowin-antenna.com

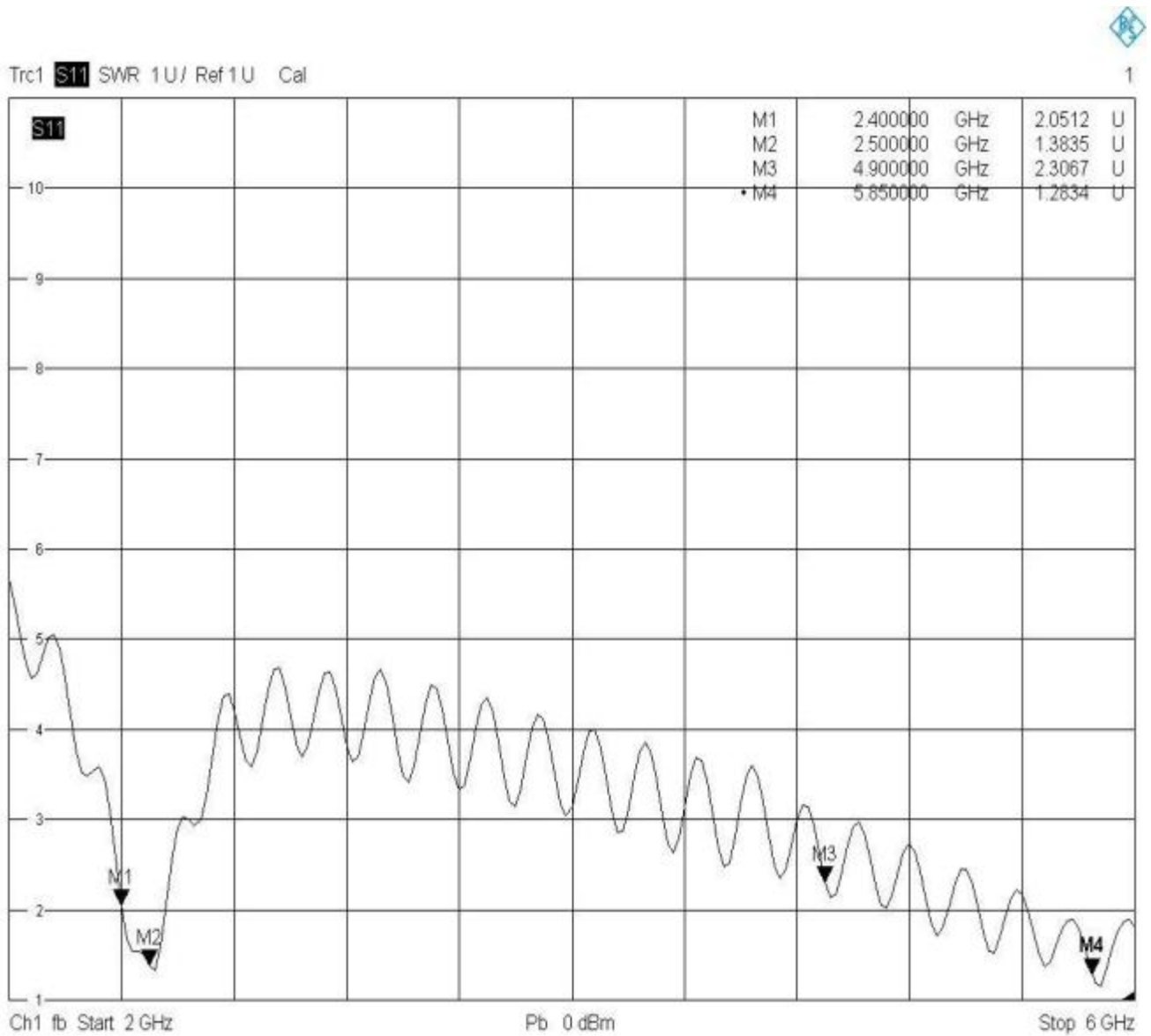
					<table><tr><td>REV</td><td>Date</td><td>Description</td></tr><tr><td>X1</td><td>2023/02/06</td><td>New Issue</td></tr><tr><td>X2</td><td>2024/11/27</td><td>Add customer part number</td></tr></table>		REV	Date	Description	X1	2023/02/06	New Issue	X2	2024/11/27	Add customer part number																																																													
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Technical drawing of a Cowin Antenna. The top view shows a rectangular antenna with a width of 30±0.3 and a length of 11±0.3. A 'Hand tear position' is indicated. The side view shows a total length of 540±10. Callouts 1 through 5 point to specific components: 1. Foam cotton, 2. Double-sided tape, 3. Connector, 4. Cable, and 5. Stamping parts.																																																																												
Specification(Free test): Frequency Range: 2.4-2.5G/5.15-5.85G Impedance: 50Ω V.S.W.R: ≤2.0/2.5 100% Continuity,short and open circuit test Materials,parts and process must by environmentally (ROHS)																																																																												
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1. Performance parameter table

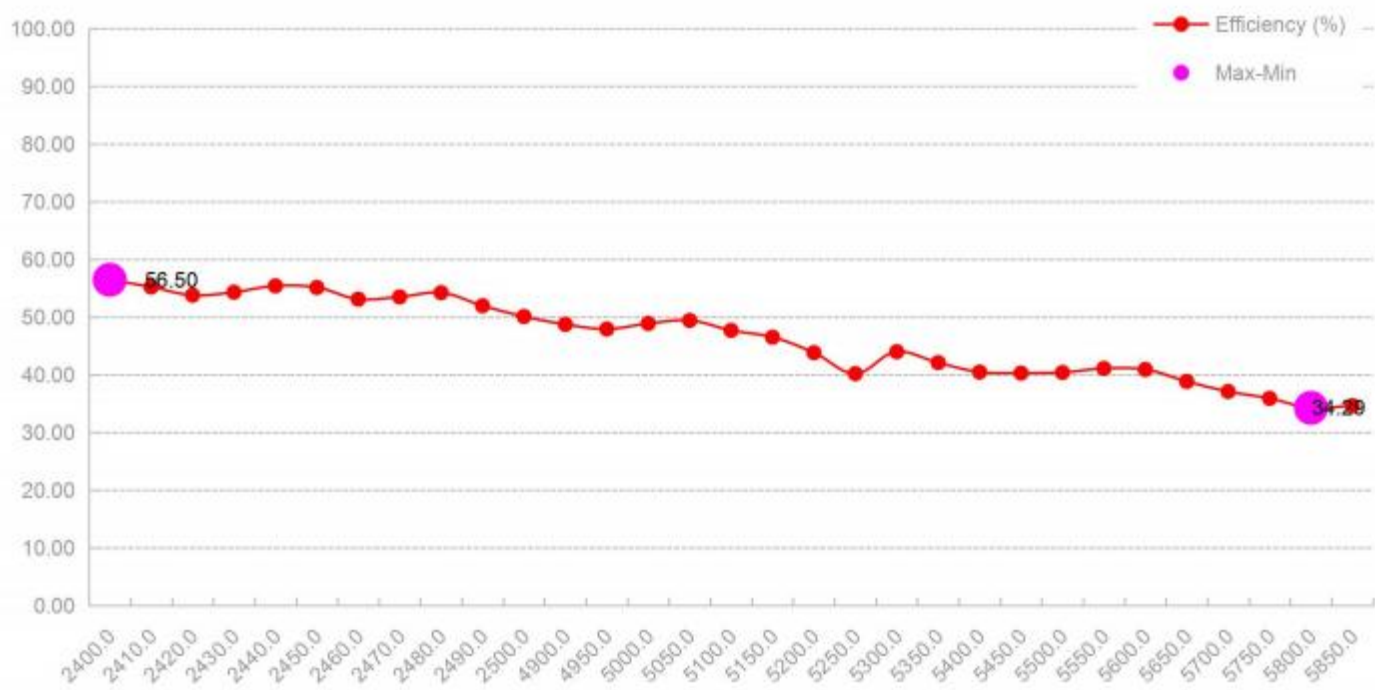
Sample photo	
	
A.Electrical Characteristics	
Frequency	2.4-2.5G/5.15-5.85G
V.S.W.R	<=2.0/2.5
Peak Gain	1.99/3.52 dBi
Impedance	50 Ohm
Radiation	全向（Omni-directional）
Polarization	线极化（Linear）
Admitted Power	<10W
B.Material & Mechanical Characteristics	
Internal structure	SU304
External structure	N/A
Cable Type	RF 1.13 Black
Connector Type	IPEX MHF4
C.Environmental Characteristics)	
Operation Temperature	- 40 ℃ + 80 °C
Storage Temperature	- 40 ℃ + 80 °C
Antenna Storage life	10 year

2. Electrical performance test

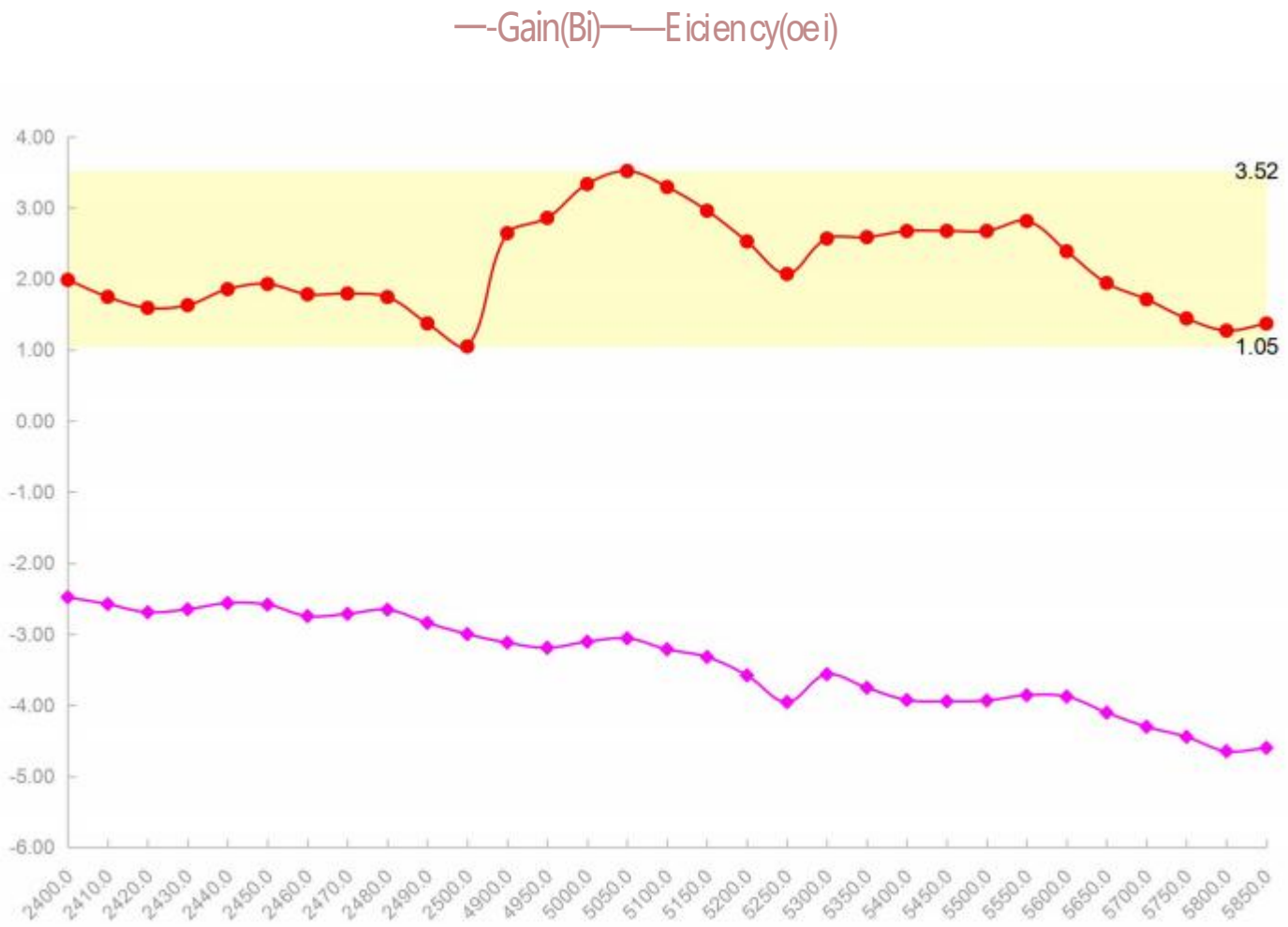
2.1 VSWR



2.2 Efficiency



2.3 Peak gain

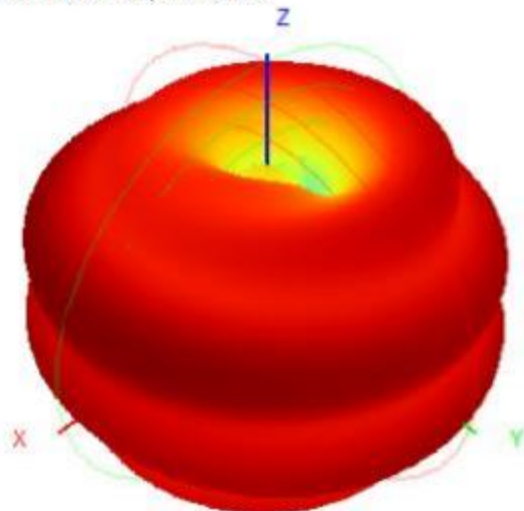


2.4 Data summary

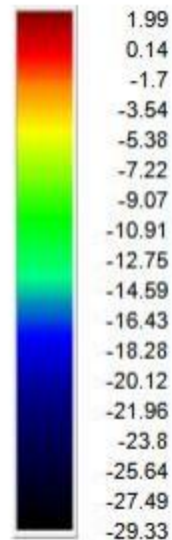
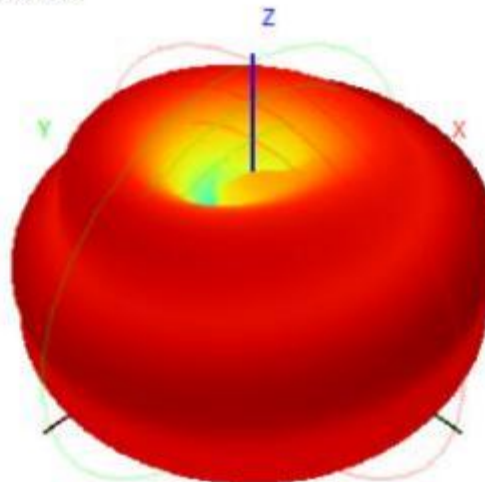
Frequency (MHz)	Gain (dBi)	Efficiency (%)
2400.0	1.99	56.50
2410.0	1.75	55.25
2420.0	1.59	53.82
2430.0	1.63	54.34
2440.0	1.86	55.44
2450.0	1.93	55.16
2460.0	1.78	53.14
2470.0	1.79	53.52
2480.0	1.75	54.26
2490.0	1.37	51.99
2500.0	1.05	50.13
4900.0	2.64	48.76
4950.0	2.86	47.96
5000.0	3.33	48.91
5050.0	3.52	49.45
5100.0	3.29	47.73
5150.0	2.96	46.55
5200.0	2.53	43.85
5250.0	2.07	40.22
5300.0	2.57	44.02
5350.0	2.59	42.13
5400.0	2.67	40.49
5450.0	2.68	40.32
5500.0	2.67	40.42
5550.0	2.82	41.13
5600.0	2.39	40.95
5650.0	1.94	38.87
5700.0	1.71	37.13
5750.0	1.44	35.94
5800.0	1.27	34.29
5850.0	1.37	34.68

2.5 3D&2D Radiation Patterns

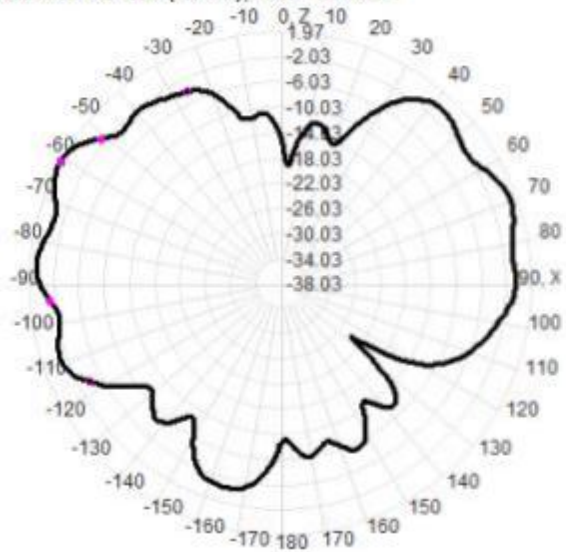
2400.0MHz H+V, Eff: 56.5%



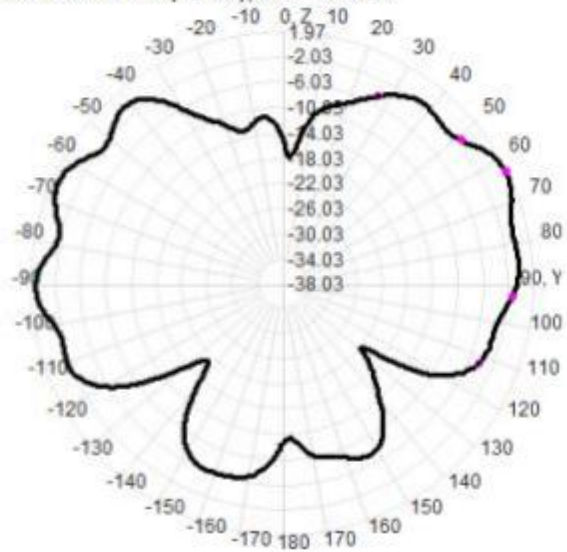
Back View



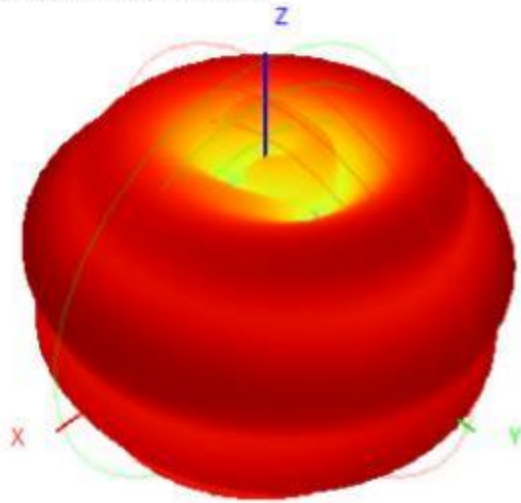
2400.0MHz Total(E1-XZ), Max= 1.97dBi



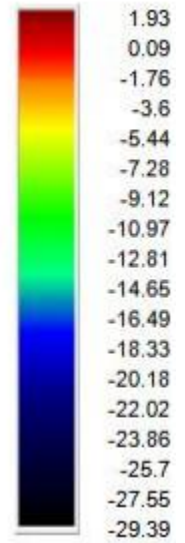
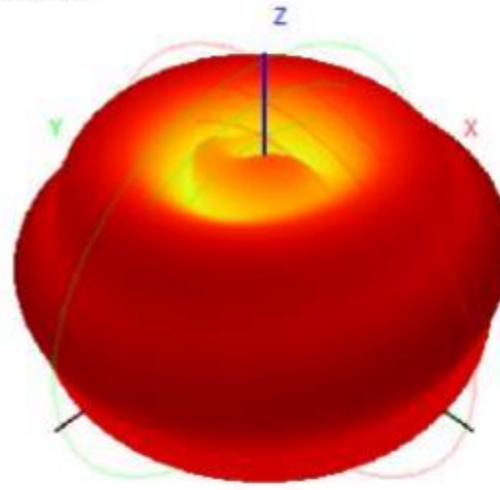
2400.0MHz Total(E2-YZ), Max= 1.54dBi



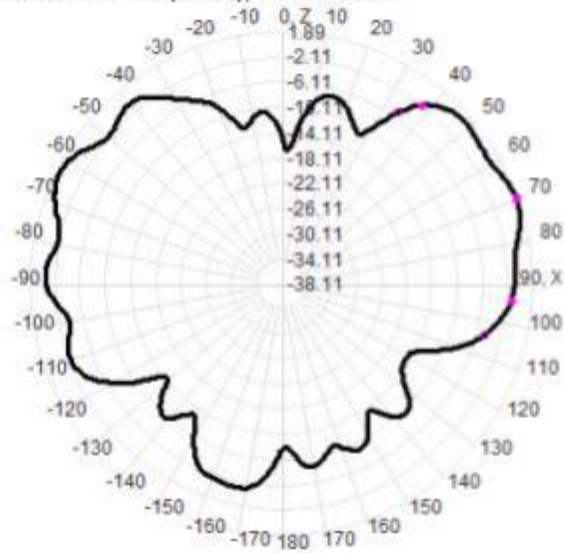
2450.0MHz H+V, Eff: 55.2%



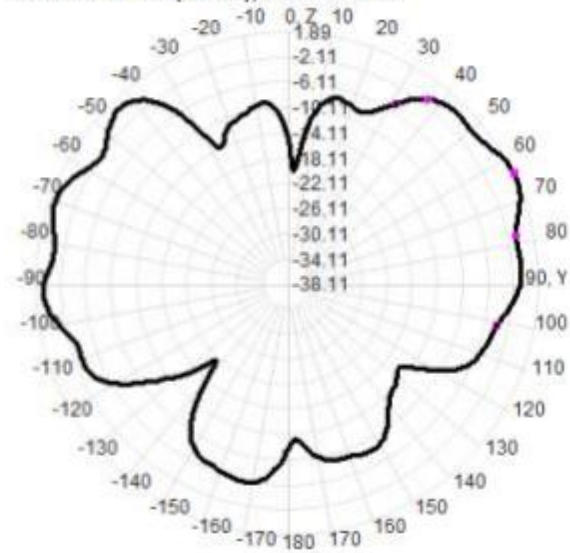
Back View



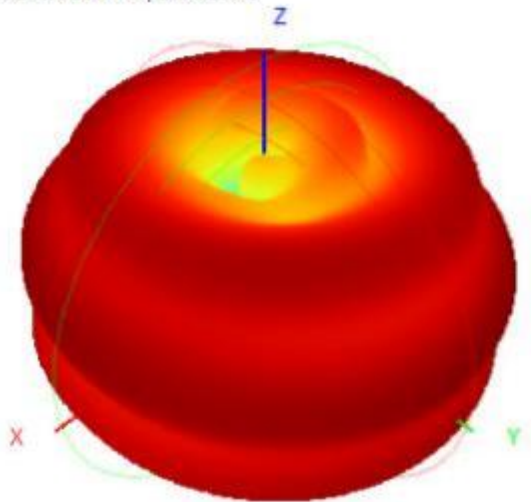
2450.0MHz Total(E1-XZ), Max= 1.40dBi



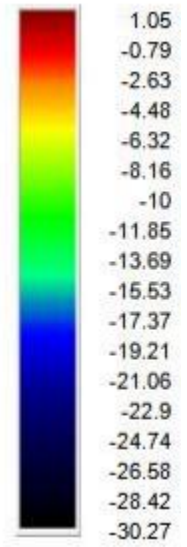
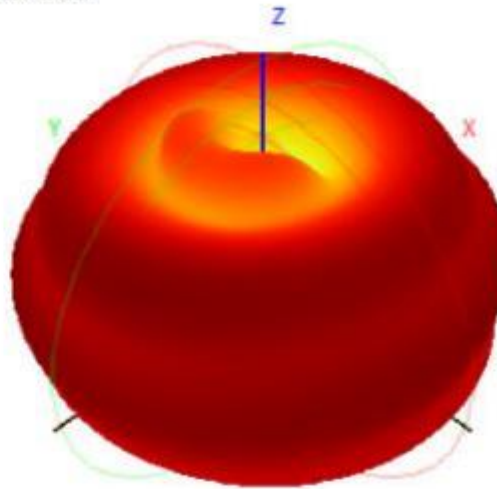
2450.0MHz Total(E2-YZ), Max= 1.89dBi



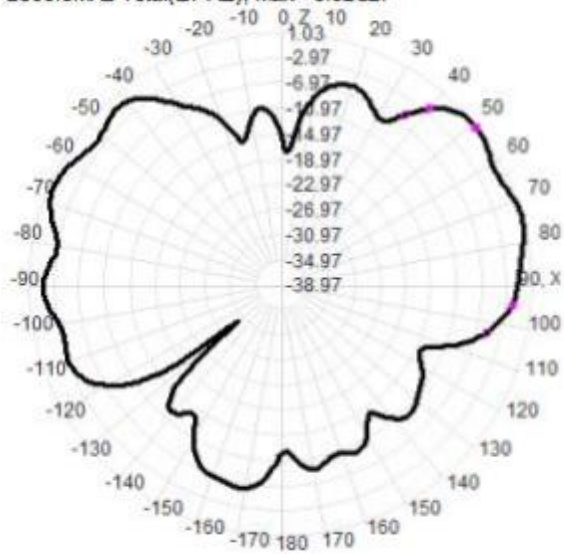
2500.0MHz H+V, Eff: 50.1%



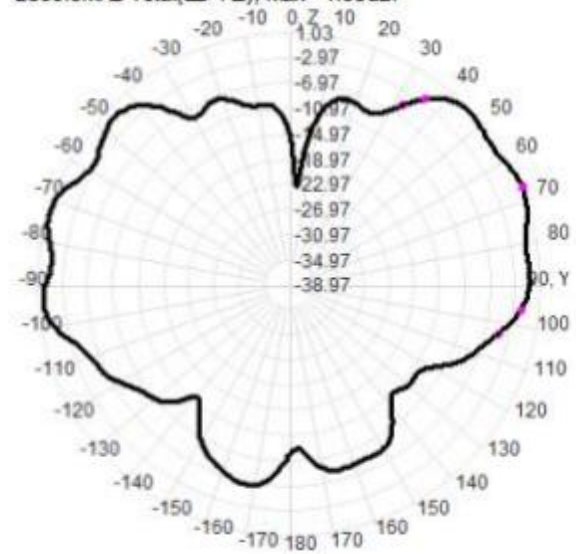
Back View



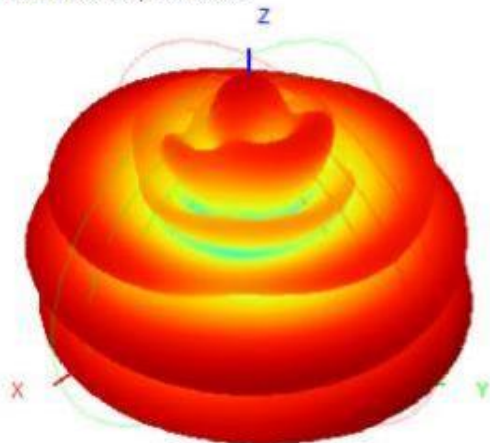
2500.0MHz Total(E1-XZ), Max= 0.82dBi



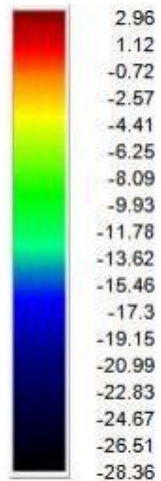
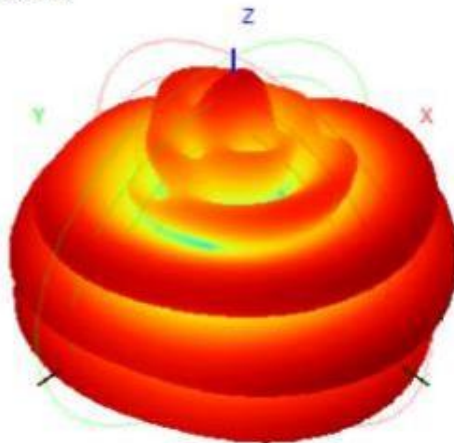
2500.0MHz Total(E2-YZ), Max= 1.03dBi



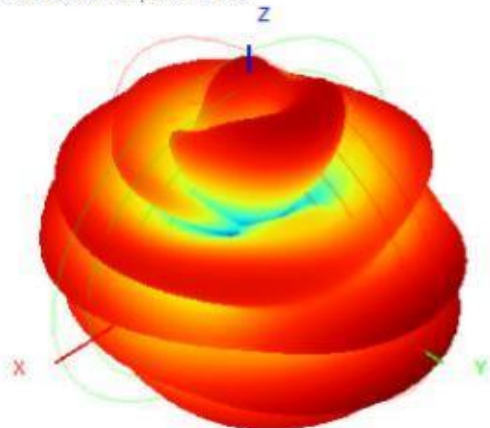
5150.0MHz H+V, Eff: 46.5%



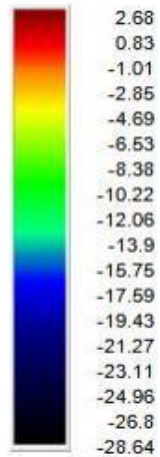
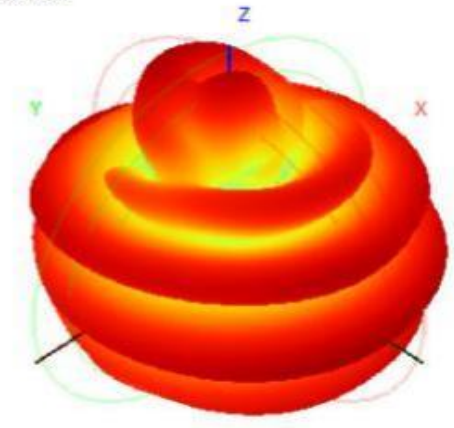
Back View



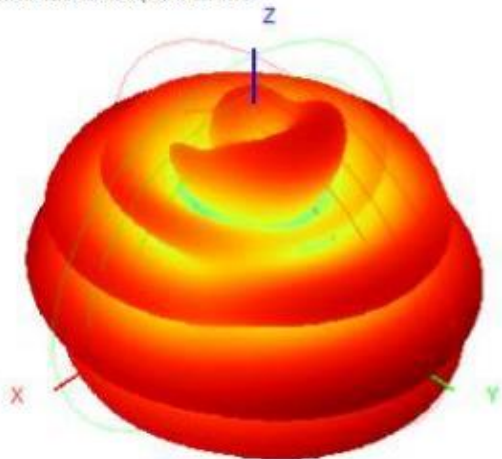
5450.0MHz H+V, Eff: 40.3%



Back View



5850.0MHz H+V, Eff: 34.7%



Back View

