

CW-WZ-0081

2.4/5.8G External Antenna

Key Features

Frequency: 2400-2500/5150-5850MHz

IPEX Connector

Dimensions: 46*16 mm



1. Antenna Electrical Characteristics

Band (MHz)	
Frequency (MHz)	2400-2500/5150-5850
VSWR	≤2.0
Efficiency (%)	65.45/62
Peak Gain (dBi)	3.23/3.39
Impedance (Ohm)	50
Polarisation	Vertical
Max. Input Power (W)	10
Connector Type	IPEX

2. Material and environmental characteristics

External Structure	ABS
Inner Structure	PCB
Cable Type	RF1.13 Double tin cable
Connector Type	IPEX
Dimensions (mm)	46*16
Antenna Color	Black
Operation Temperature	-40 to +80
Storage Temperature	-40 to +80
Antenna Storage life(year)	10
Substance Compliance	ROHS

Technical Drawing of Cowin Antenna

Dimensions:

- Main body diameter: $\varnothing 46 \pm 1$
- Main body length: 17.7 ± 1
- Mounting bracket width: 8.3 ± 0.5
- Total length: 400 ± 5

Packing List:

NO	Name	Description	QTY	Remark
1	Connector	RF1.13 I-PEX (Iequivalents)	1	Copper gold-plating
2	Cable	$\varnothing 1.13$ mm Double tin cable	1	Black
3	Screw column	Copper	1	
4	Nut	Copper	1	
5	Foam cotton	45.5×1 mm	1	Black
6	Lower cover	ABS	1	
7	PCB	FR4	1	Black
8	Shell	ABS	1	

Specification (Free Test):

- Frequency Range: 2.4-2.5/5.15-5.85G
- Impedance: 50Ω
- V.S.W.R: ≤ 2.0
- 100% Continuity, short and open circuit test
- Materials, parts and process must be environmentally (ROHS)

Drawing Revision:

REV	Date	Description
X1	2022/08/19	New Issue
X2	2023/01/04	Change wire
X3	2024/09/26	Update the dimensions of the product body.

4. Antenna test parameters

Antenna Measurement Conditions:

Mounted on Ground Plane of 280 x 80 mm

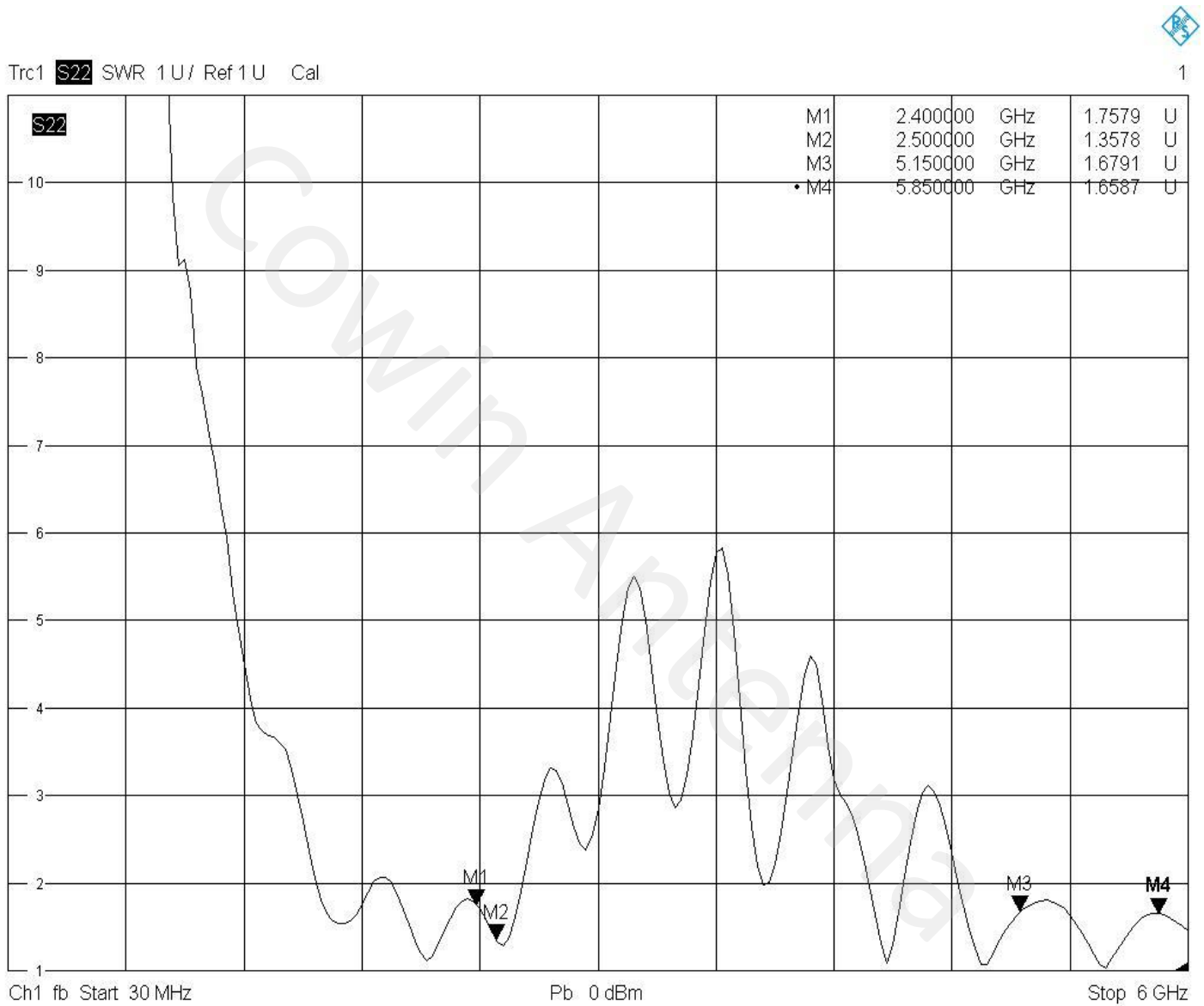
Measured in Certified 3D Anechoic Chamber

The network analyzer is Agilent 5071c

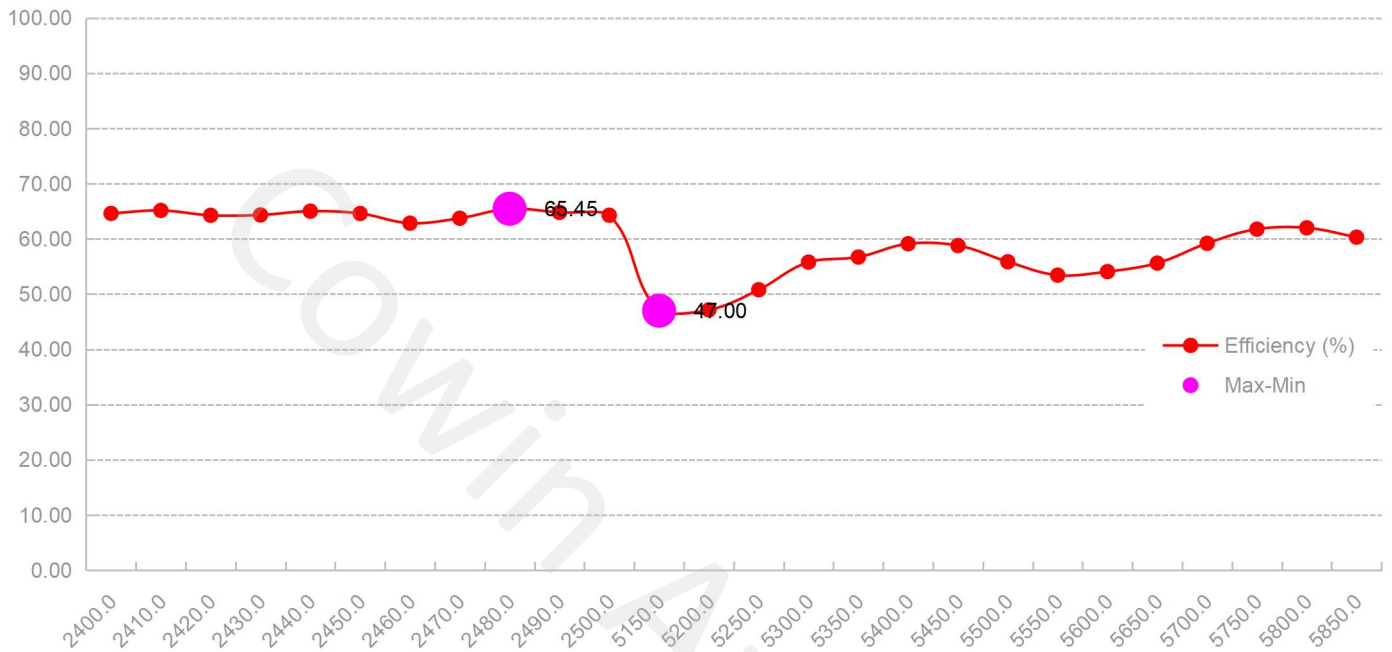
The comprehensive tester is Agilent cmv500



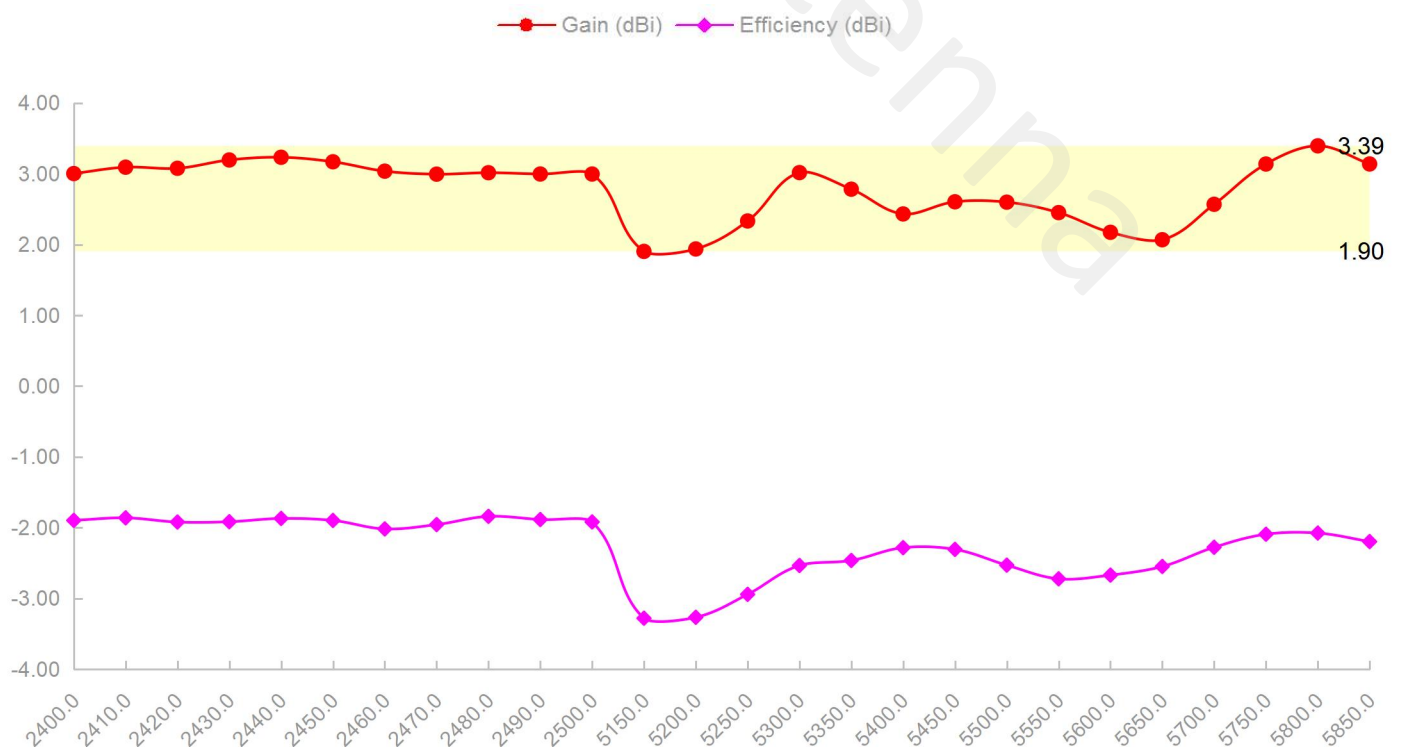
4.1 VSWR



4.2 Efficiency



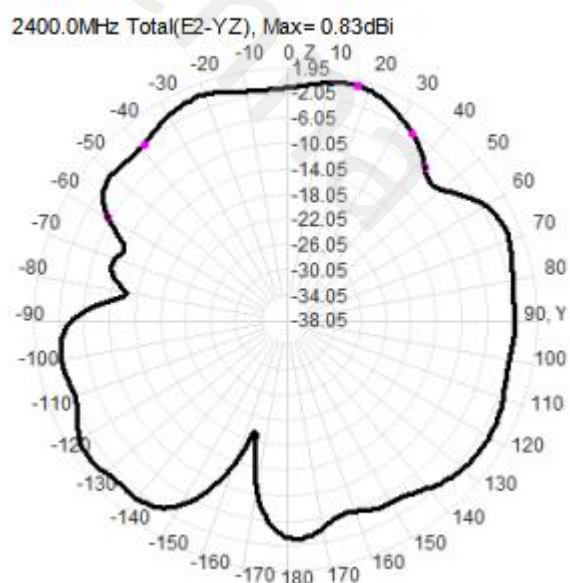
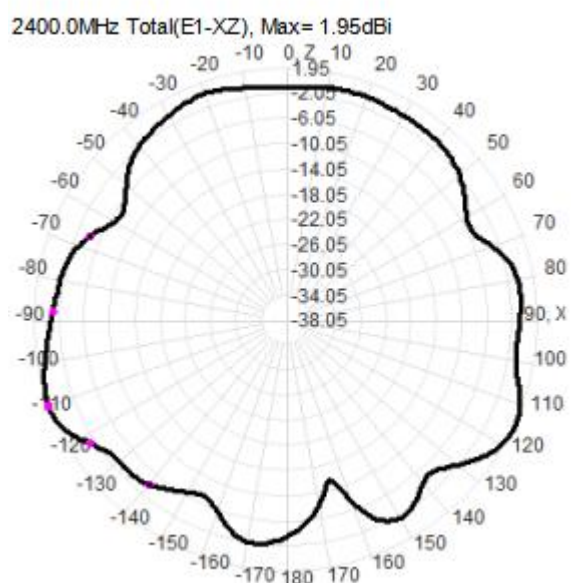
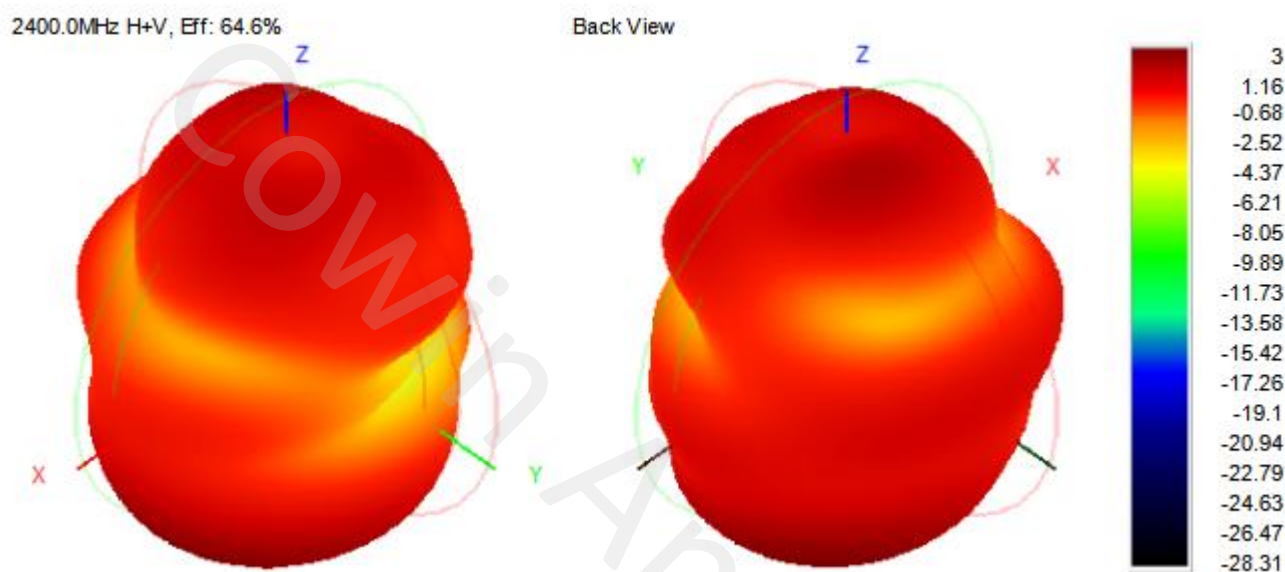
4.3 Peak gain



4.4 Data summary

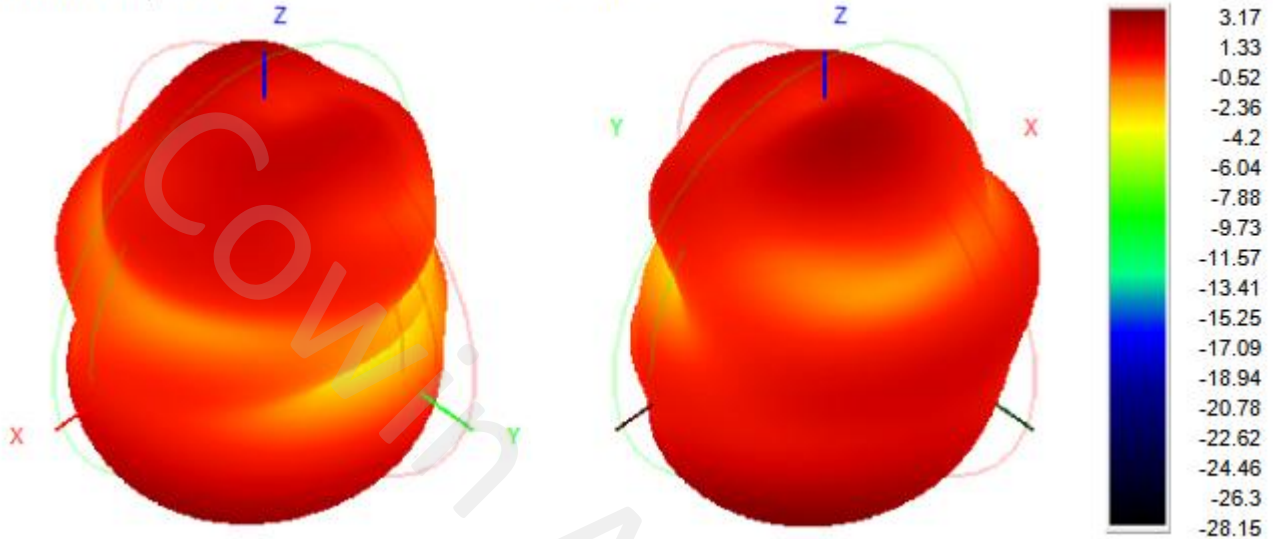
Frequency (MHz)	Gain (dBi)	Efficiency (%)
2400.0	3.00	64.61
2410.0	3.09	65.14
2420.0	3.08	64.26
2430.0	3.19	64.33
2440.0	3.23	65.01
2450.0	3.17	64.59
2460.0	3.04	62.84
2470.0	2.99	63.73
2480.0	3.01	65.45
2490.0	3.00	64.79
2500.0	3.00	64.28
5150.0	1.90	47.00
5200.0	1.94	47.14
5250.0	2.33	50.79
5300.0	3.02	55.79
5350.0	2.78	56.71
5400.0	2.43	59.12
5450.0	2.60	58.79
5500.0	2.60	55.85
5550.0	2.45	53.42
5600.0	2.17	54.07
5650.0	2.07	55.61
5700.0	2.57	59.19
5750.0	3.14	61.76
5800.0	3.39	62.00
5850.0	3.14	60.30

4.5 3D&2D Radiation Patterns

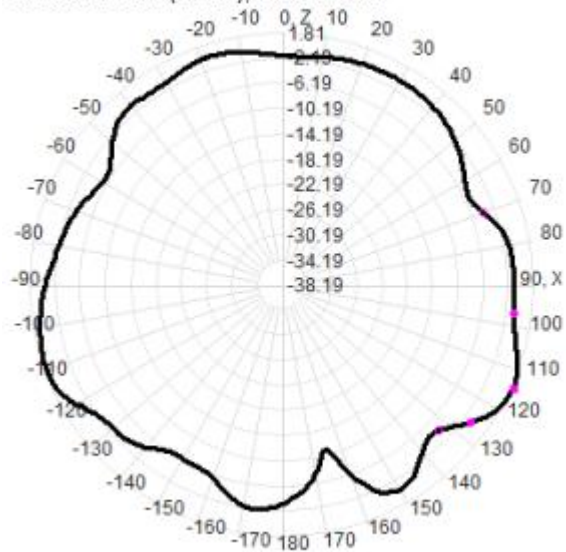


2450.0MHz H+V, Eff: 64.6%

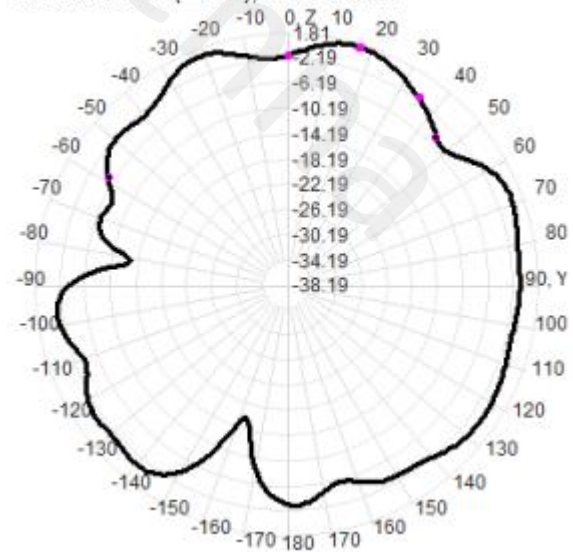
Back View



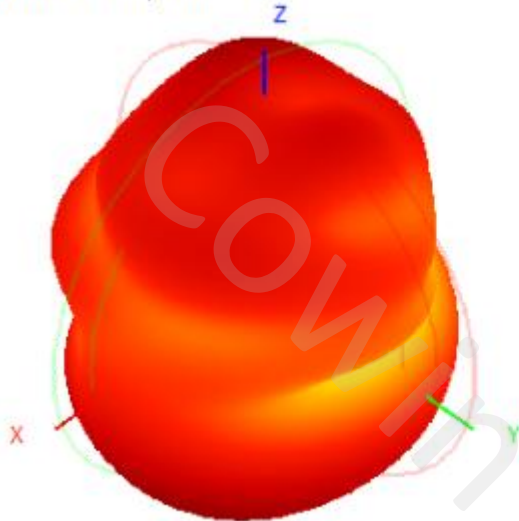
2450.0MHz Total(E1-XZ), Max= 1.81dBi



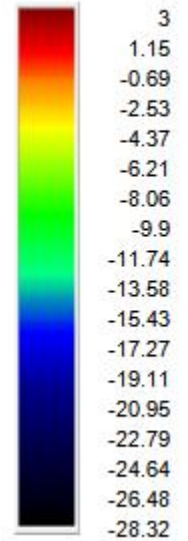
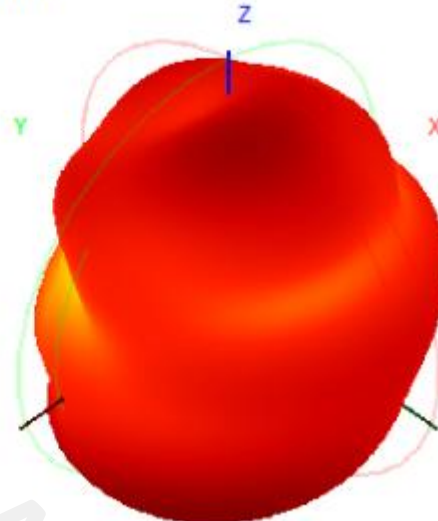
2450.0MHz Total(E2-YZ), Max= 1.29dBi



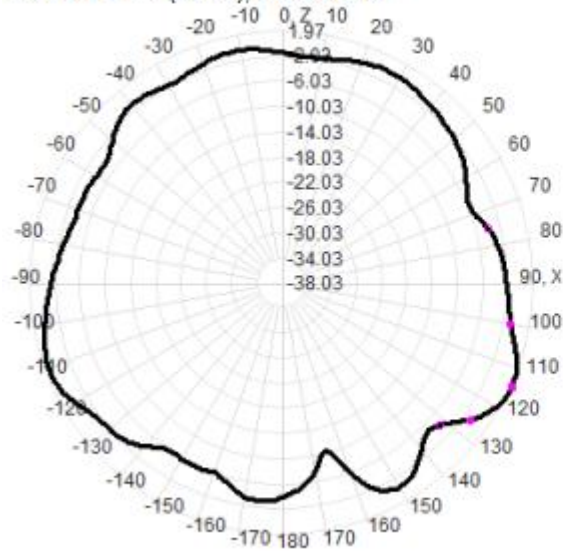
2500.0MHz H+V, Eff: 64.3%



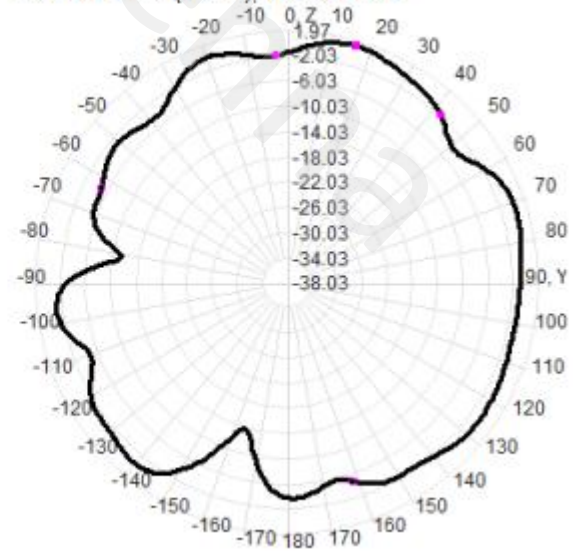
Back View



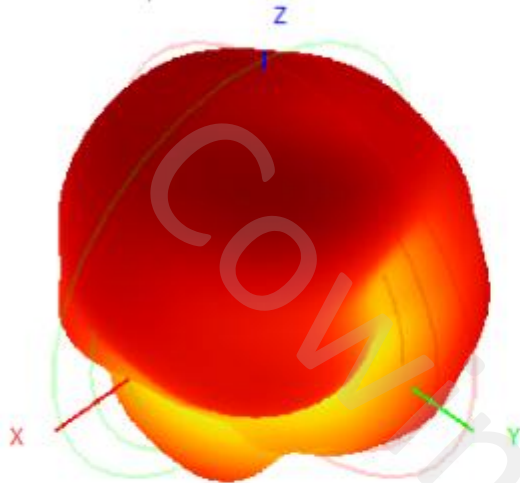
2500.0MHz Total(E1-XZ), Max= 1.92dBi



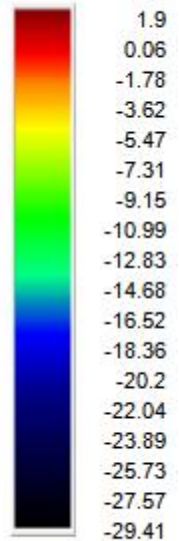
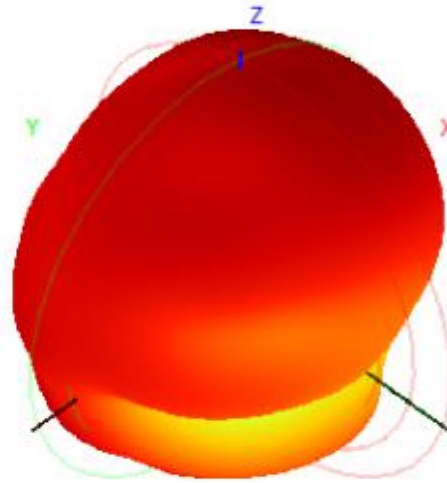
2500.0MHz Total(E2-YZ), Max= 1.11dBi



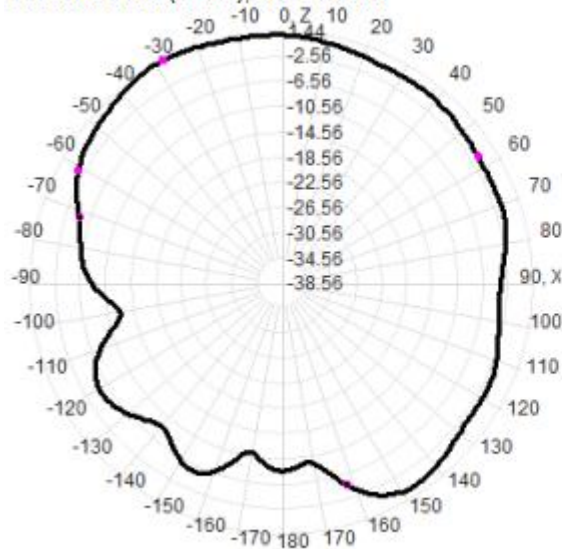
5150.0MHz H+V, Eff: 47.0%



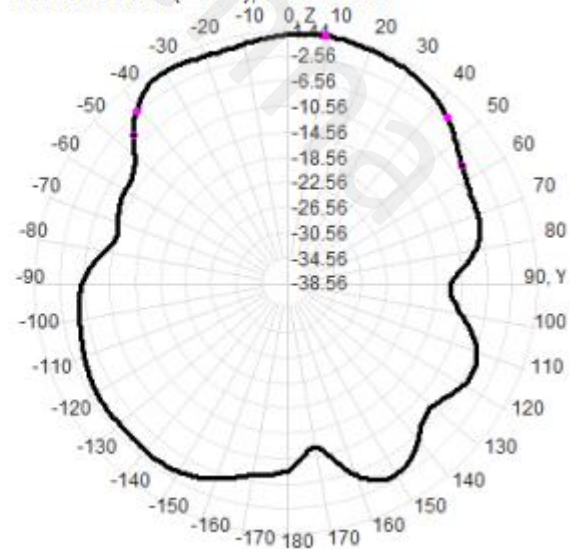
Back View



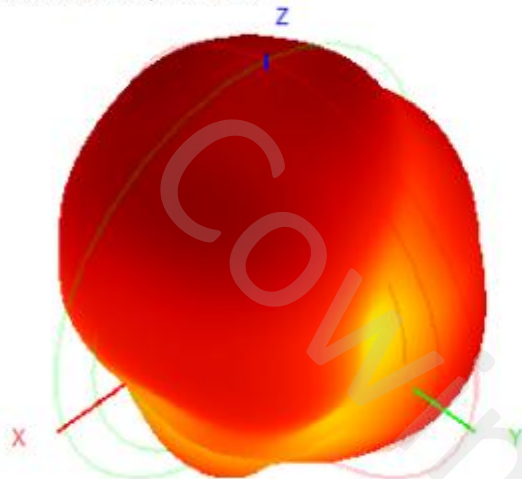
5150.0MHz Total(E1-XZ), Max= 1.44dBi



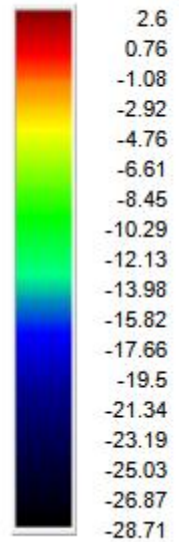
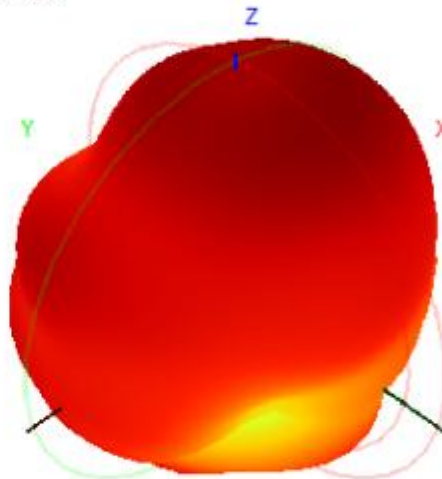
5150.0MHz Total(E2-YZ), Max= 1.11dBi



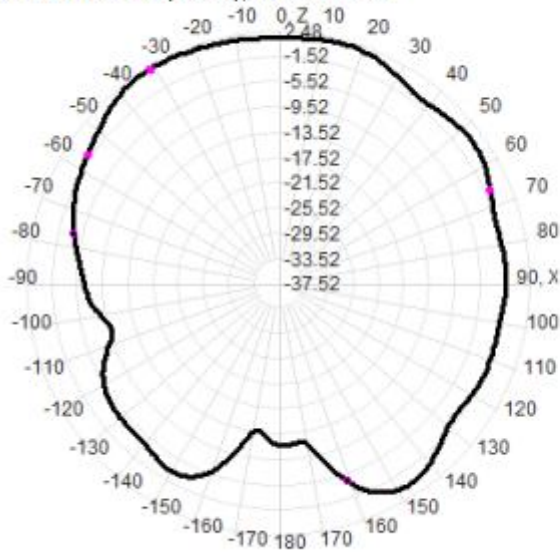
5450.0MHz H+V, Eff: 58.8%



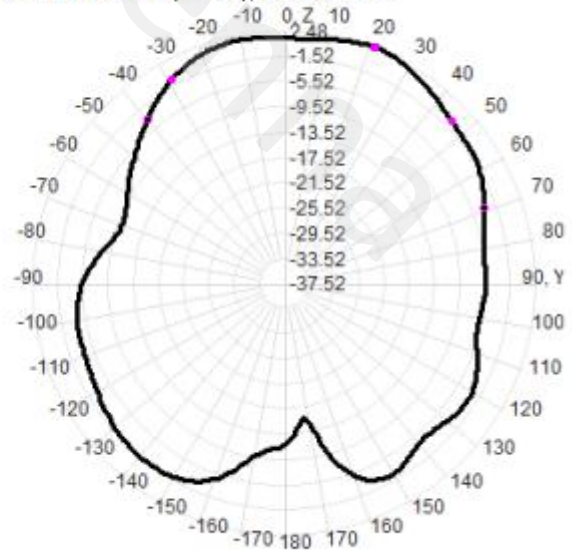
Back View



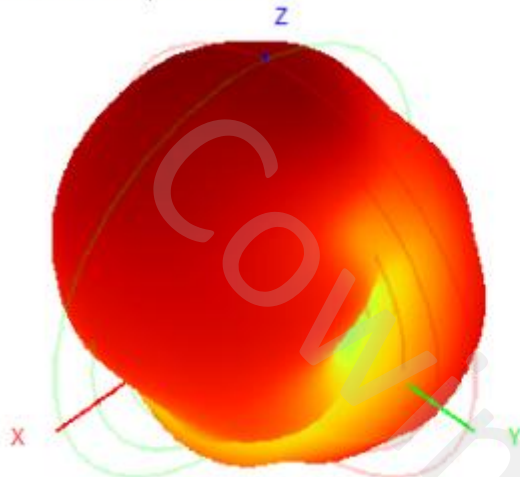
5450.0MHz Total(E1-XZ), Max= 2.08dBi



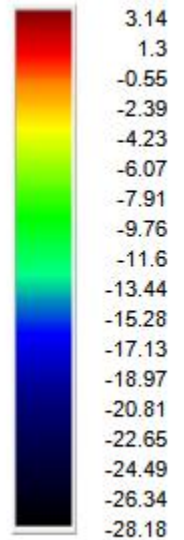
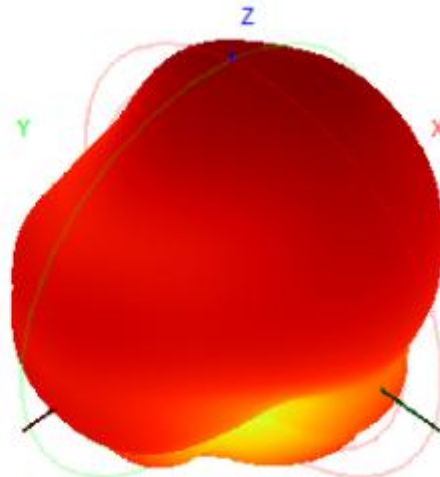
5450.0MHz Total(E2-YZ), Max= 2.48dBi



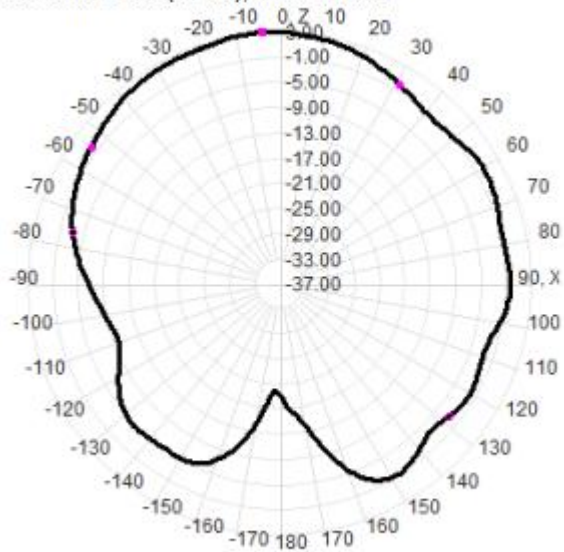
5850.0MHz H+V, Eff: 60.3%



Back View



5850.0MHz Total(E1-XZ), Max= 3.00dBi



5850.0MHz Total(E2-YZ), Max= 2.95dBi

