

## **CW-WZ-0182**

### **2.4G External Antenna**

#### **Key Features**

Frequency: 2400-2500MHz

SMA Male Connector

Dimensions: 50\*10mm

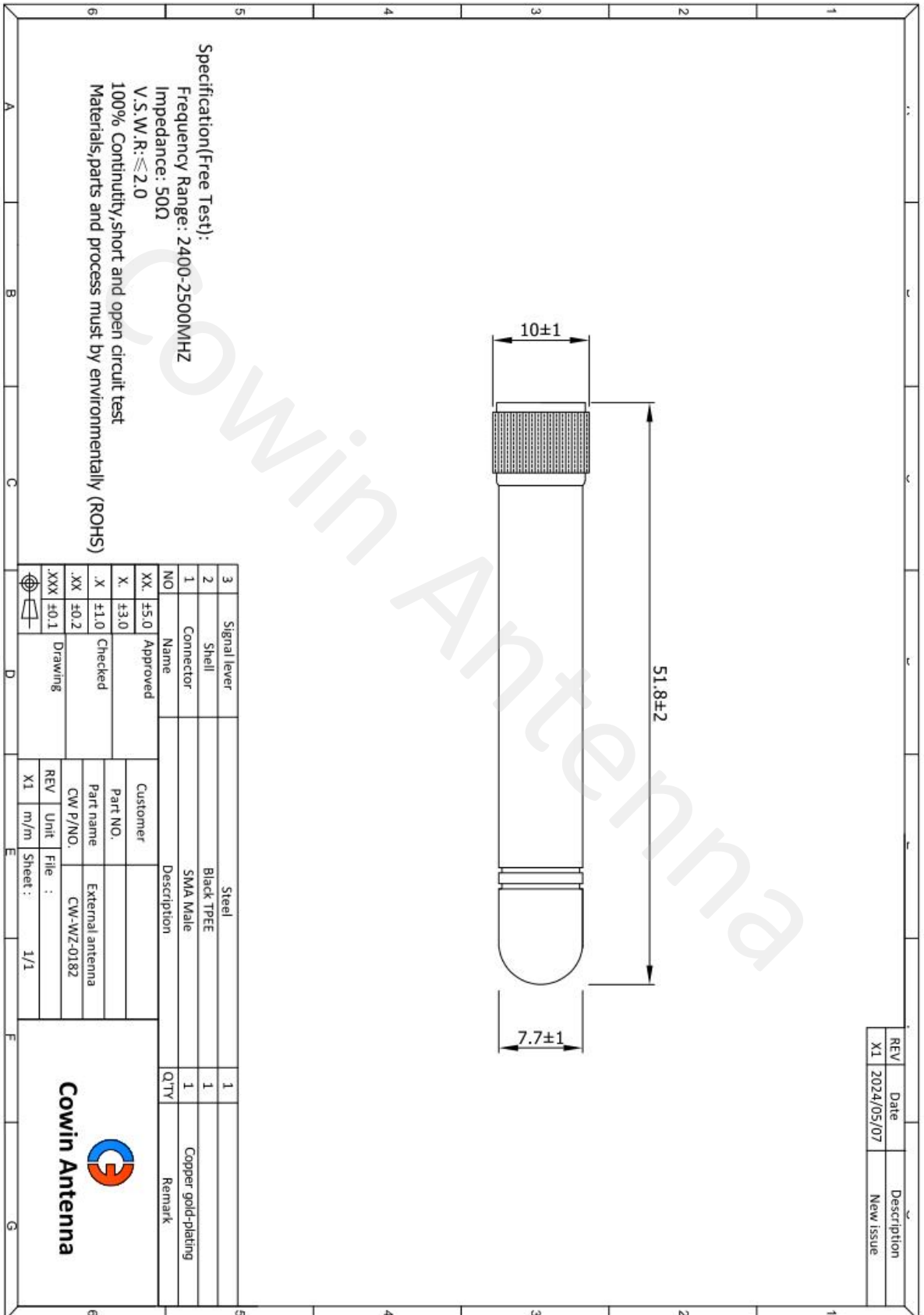


## 1. Antenna Electrical Characteristics

Band (MHz)	
Frequency (MHz)	2400-2500
VSWR	≤2.0
Efficiency (%)	64.89
Peak Gain (dBi)	4.75
Impedance (Ohm)	50
Polarisation	Vertical
Max. Input Power (W)	10
Connector Type	SMA Male

## 2. Material and environmental characteristics

External structure	TPEE
Inner structure	Signal lever
Cable Type	N/A
Connector Type	SMA Male
Dimensions (mm)	50*10 mm
Antenna color	Black
Operation Temperature	-40 to +80
Storage Temperature	-40 to +80
Antenna Storage life(year)	10
Substance Compliance	ROHS



REV	Date	Description
X1	2024/05/07	New Issue

Specification(Free Test):  
 Frequency Range: 2400-2500MHZ  
 Impedance: 50Ω  
 V.S.W.R: ≤2.0  
 100% Continuity, short and open circuit test  
 Materials, parts and process must by environmentally (ROHS)

3	Signal level	Steel	1	
2	Shell	Black TPEE	1	
1	Connector	SMA Male	1	Copper gold-plating
NO	Name	Description	Q'TY	Remark
XX: ±5.0	Approved	Customer		
X: ±3.0	Checked	Part NO.		
.X ±1.0	Checked	Part name		External antenna
.XX ±0.2	Drawing	CW P/NO.		CW-WZ-0182
.XXX ±0.1		REV	Unit	File
		X1	m/m	Sheet : 1/1



## 4. Antenna test parameters

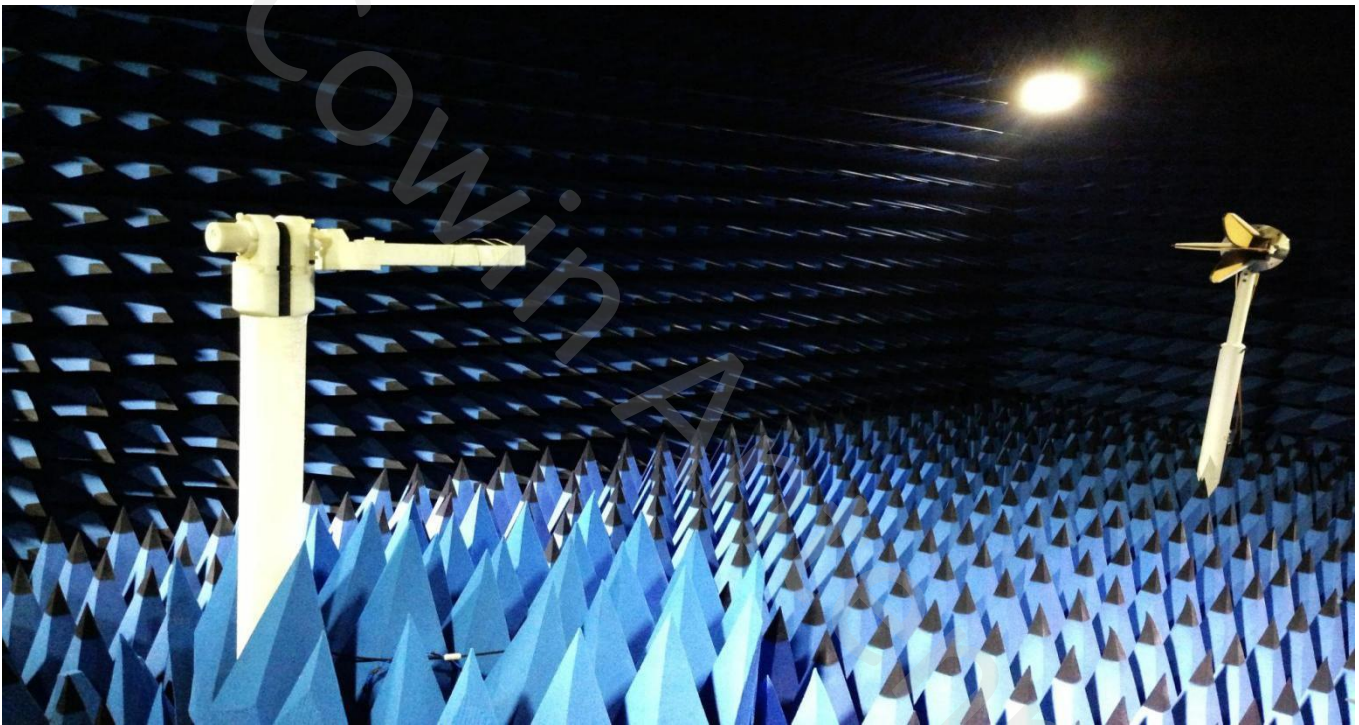
### Antenna Measurement Conditions:

Mounted on Ground Plane of 280 x 80 mm

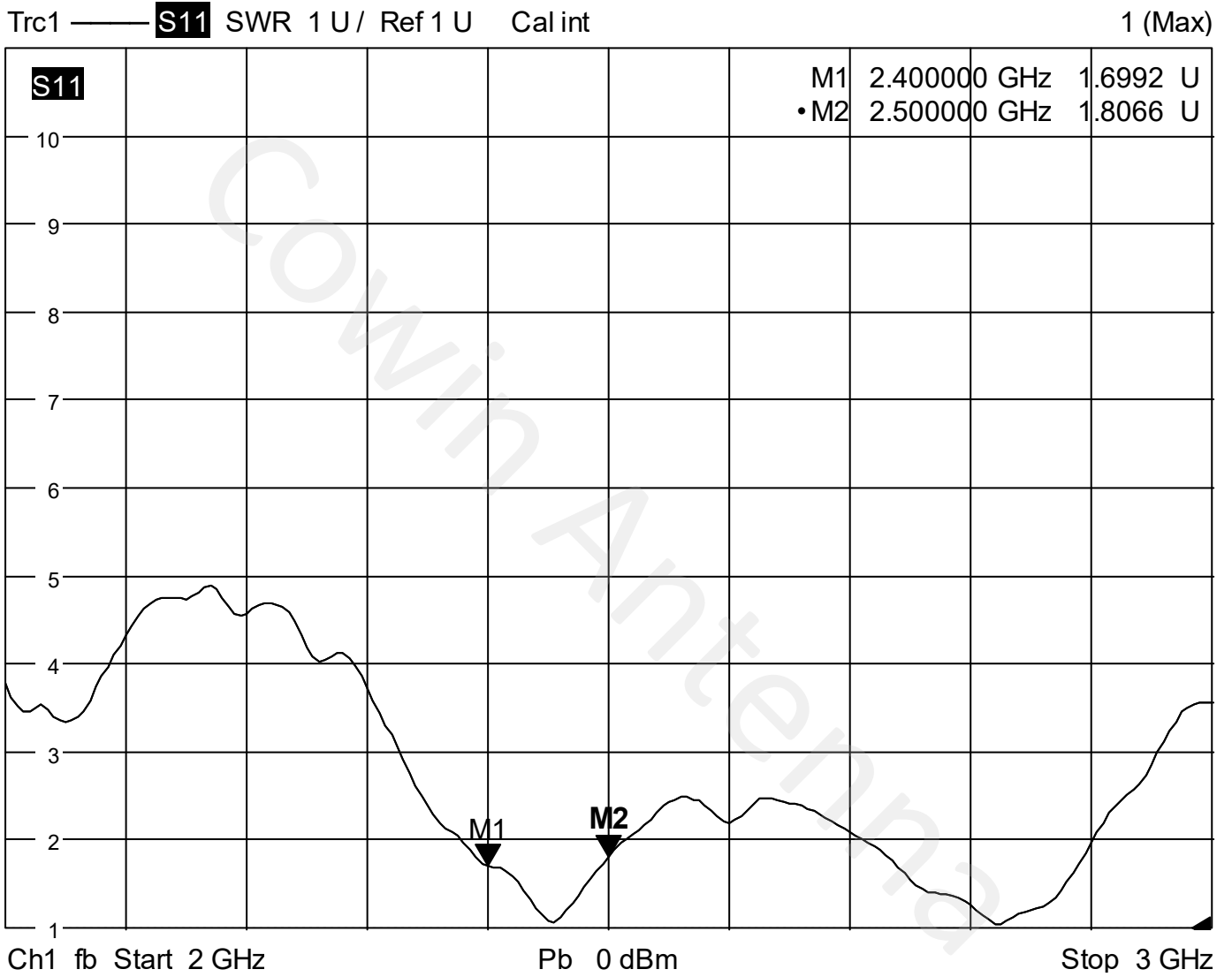
Measured in Certified 3D Anechoic Chamber

The network analyzer is Agilent 5071c

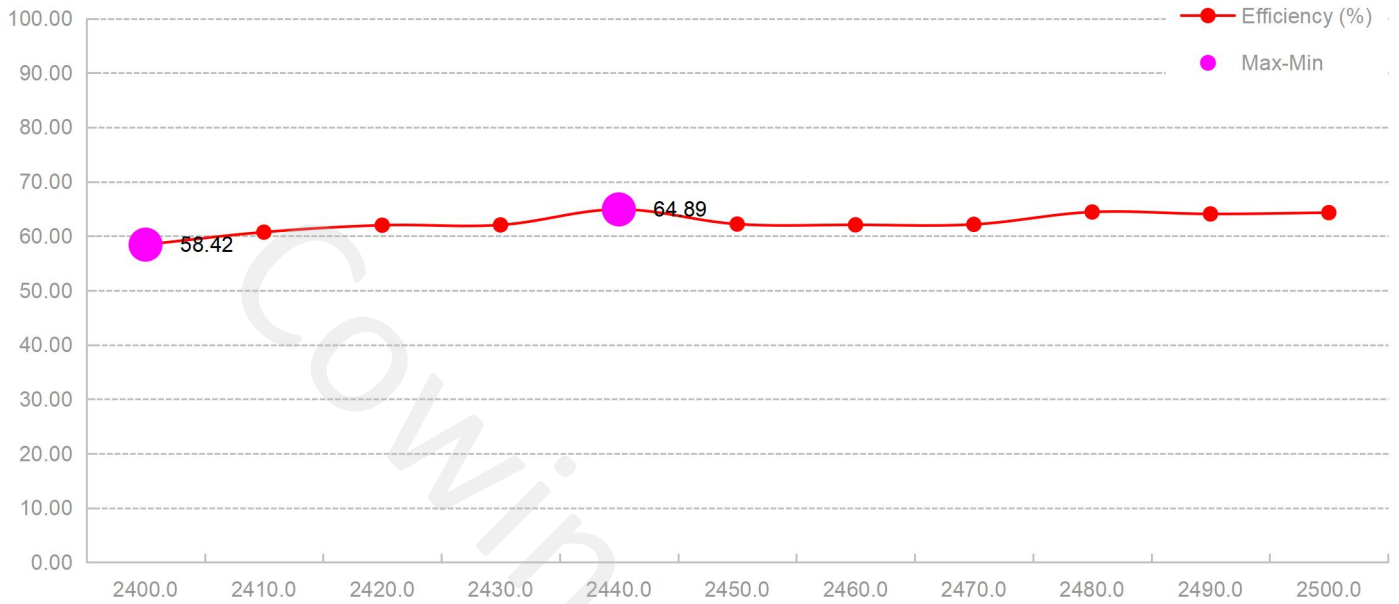
The comprehensive tester is Agilent cmv500



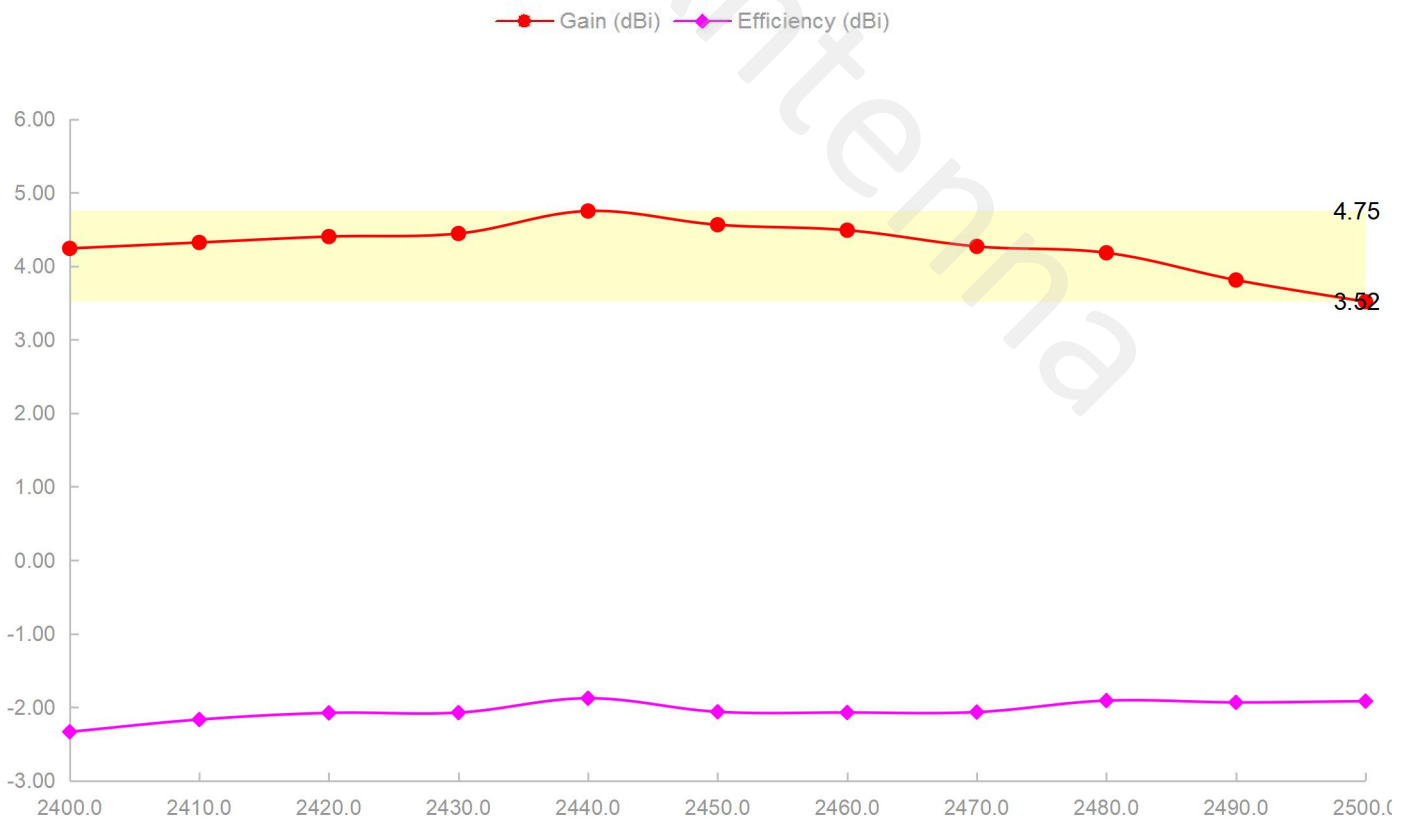
## 4.1 VSWR



## 4.2 Efficiency



## 4.3 Peak gain



## 4.4 Data summary

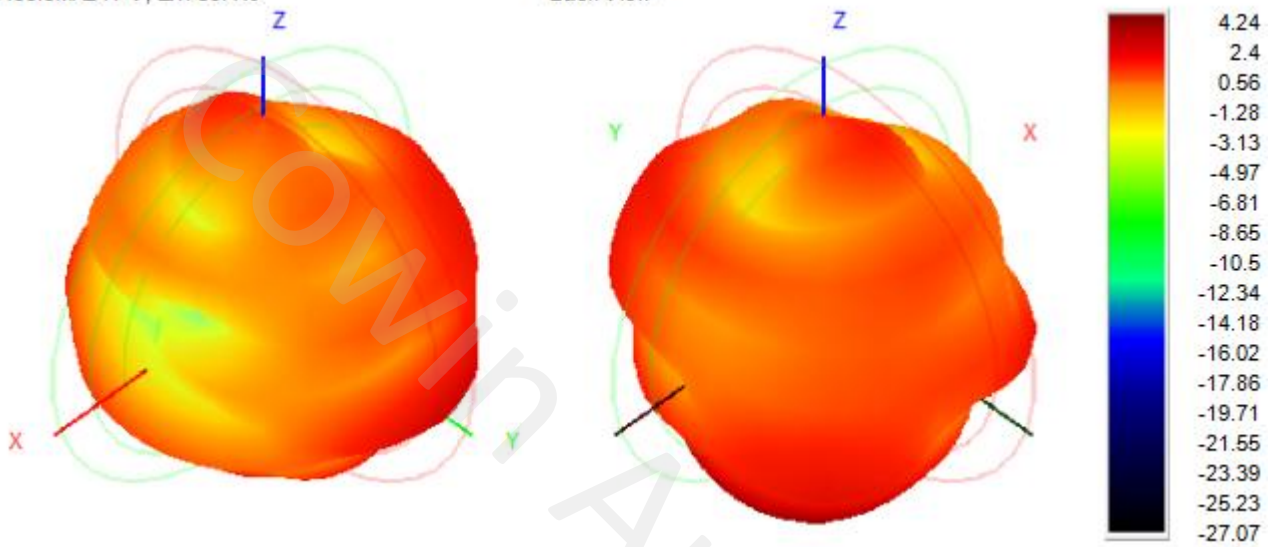
Frequency(MHz)	Gain (dBi)	Efficiency (%)
2400.0	4.24	58.42
2410.0	4.32	60.71
2420.0	4.40	61.99
2430.0	4.44	62.04
2440.0	4.75	64.89
2450.0	4.56	62.20
2460.0	4.49	62.06
2470.0	4.27	62.14
2480.0	4.18	64.41
2490.0	3.81	64.06
2500.0	3.52	64.30



## 4.5 3D&2D Radiation Patterns

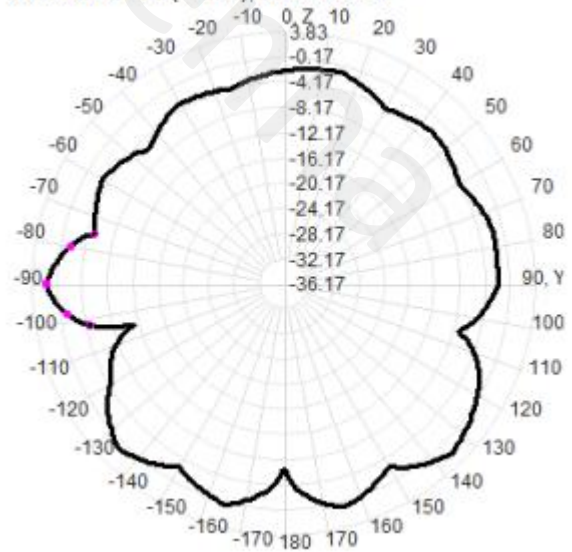
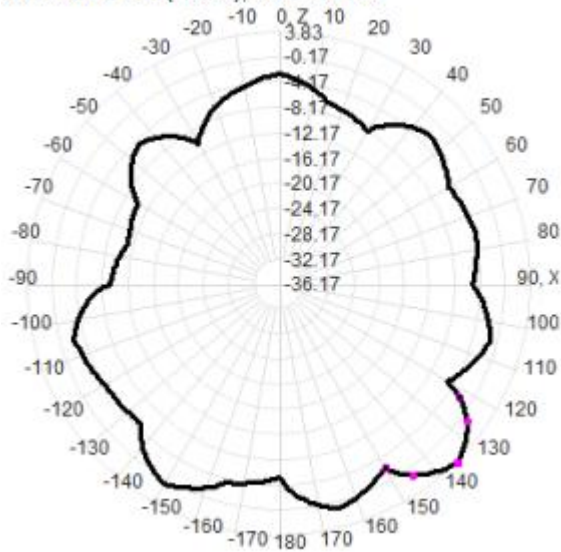
2400.0MHz H+V, Eff: 58.4%

Back View



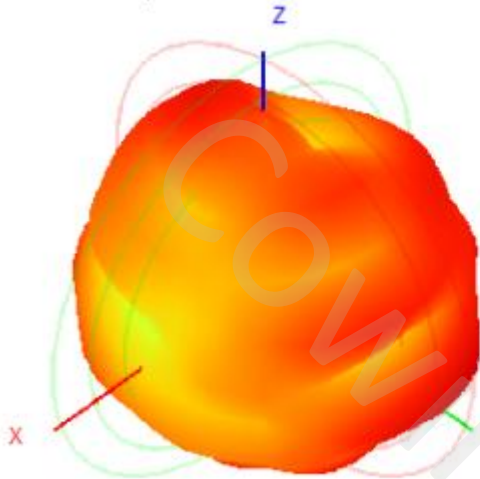
2400.0MHz Total(E1-XZ), Max= 3.83dBi

2400.0MHz Total(E2-YZ), Max= 1.51dBi

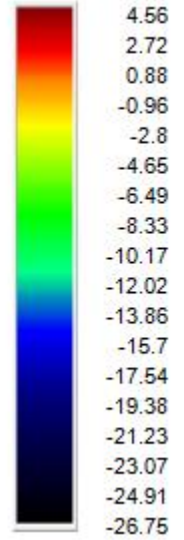
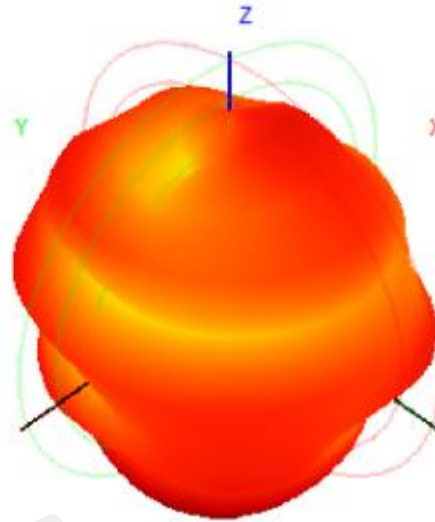




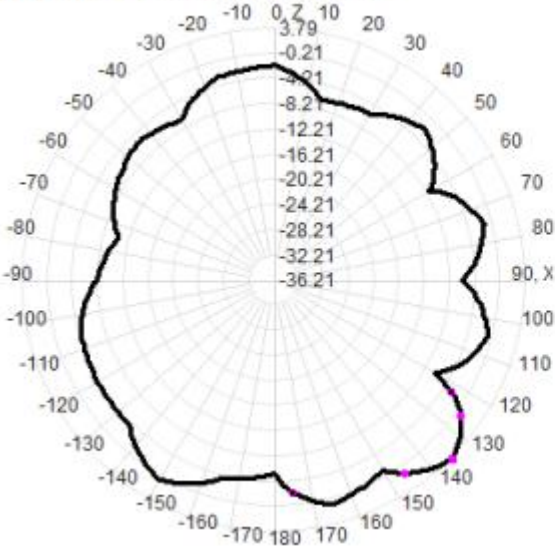
2450.0MHz H+V, Eff: 62.2%



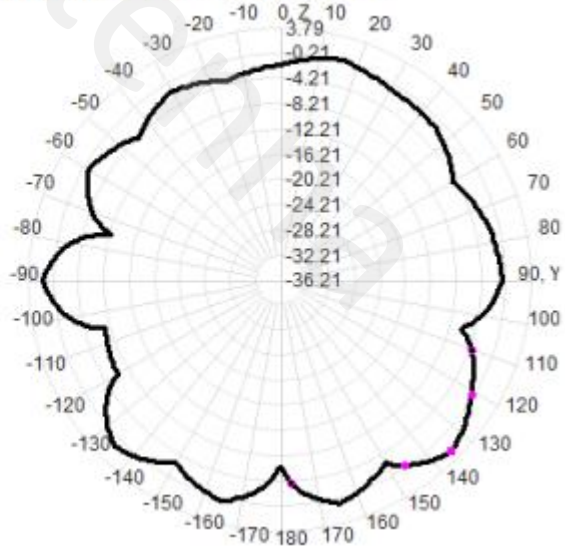
Back View



2450.0MHz Total(E1-XZ), Max= 3.79dBi

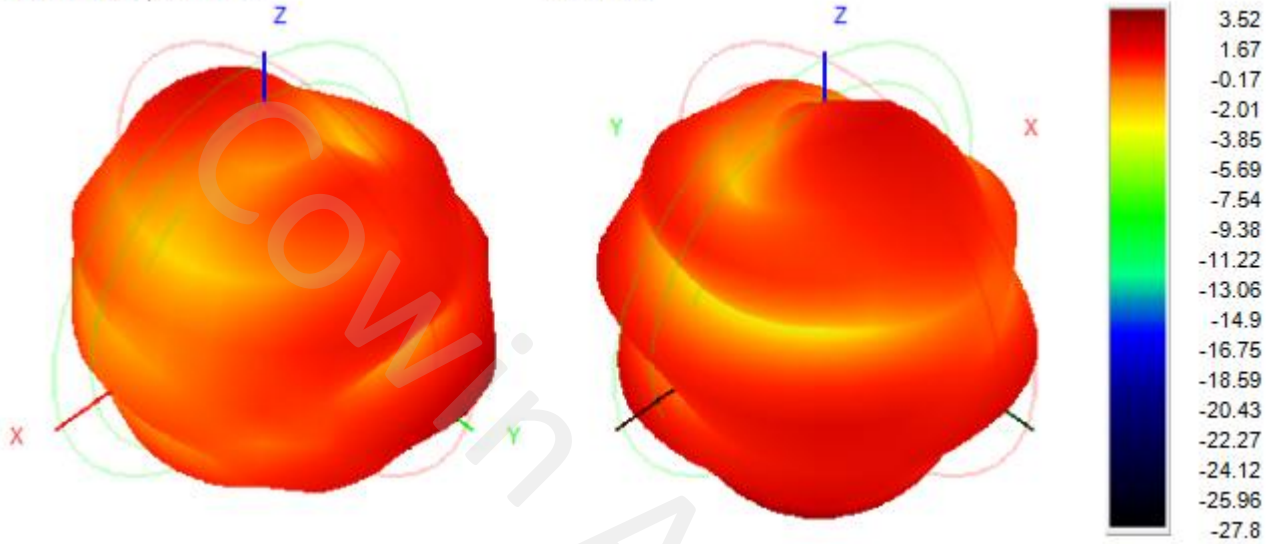


2450.0MHz Total(E2-YZ), Max= 2.11dBi



2500.0MHz H+V, Eff: 64.3%

Back View



2500.0MHz Total(E1-XZ), Max= 2.95dBi

2500.0MHz Total(E2-YZ), Max= 2.34dBi

