

## **CW-ZH-0003**

### **4G/GNSS External Combo Antenna**

#### **Key Features**

Frequency: 698-960MHz/1710-2700MHz&1561/1575/1602MHz

SMA Connector

Screw Mount

Dimensions 80\*15mm



## 1. Antenna Electrical Characteristics

Band (MHz)			
Frequency (MHz)	698-960MHz	1710-2700MHz	1561/1575/1602/1606
VSWR	3.5:1	2.5:1	2:1
Efficiency (%)	64.66%	59.21%	
Peak Gain (dBi)	1.94	5.33	28
Impedance (Ohm)	50		
Polarisation	Vertical		RHCP
Max. Input Power (W)	10		2.5-5
Connector Type	SMA		

## 2. Material and environmental characteristics

inner structure	PCB/Ceramics
Material of Plastic	ABS
Cable Type	RG174
Connector Type	SMA
Dimensions (mm)	80*15MM
Antenna color	Black
Operation Temperature(°)	-40 to +80
Storage Temperature(°)	-40 to +80
Antenna Storage life(year)	10
Substance Compliance	ROHS



## 4. Antenna test parameters

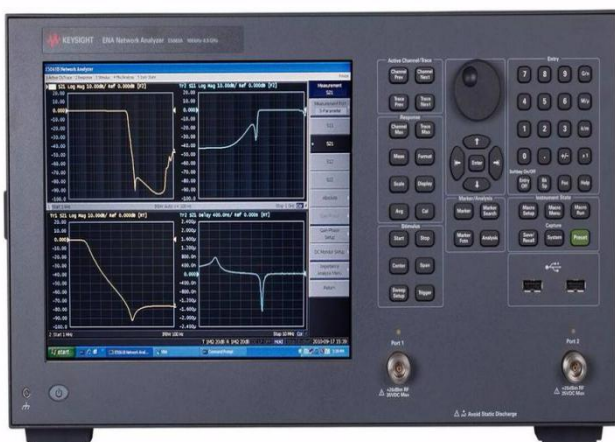
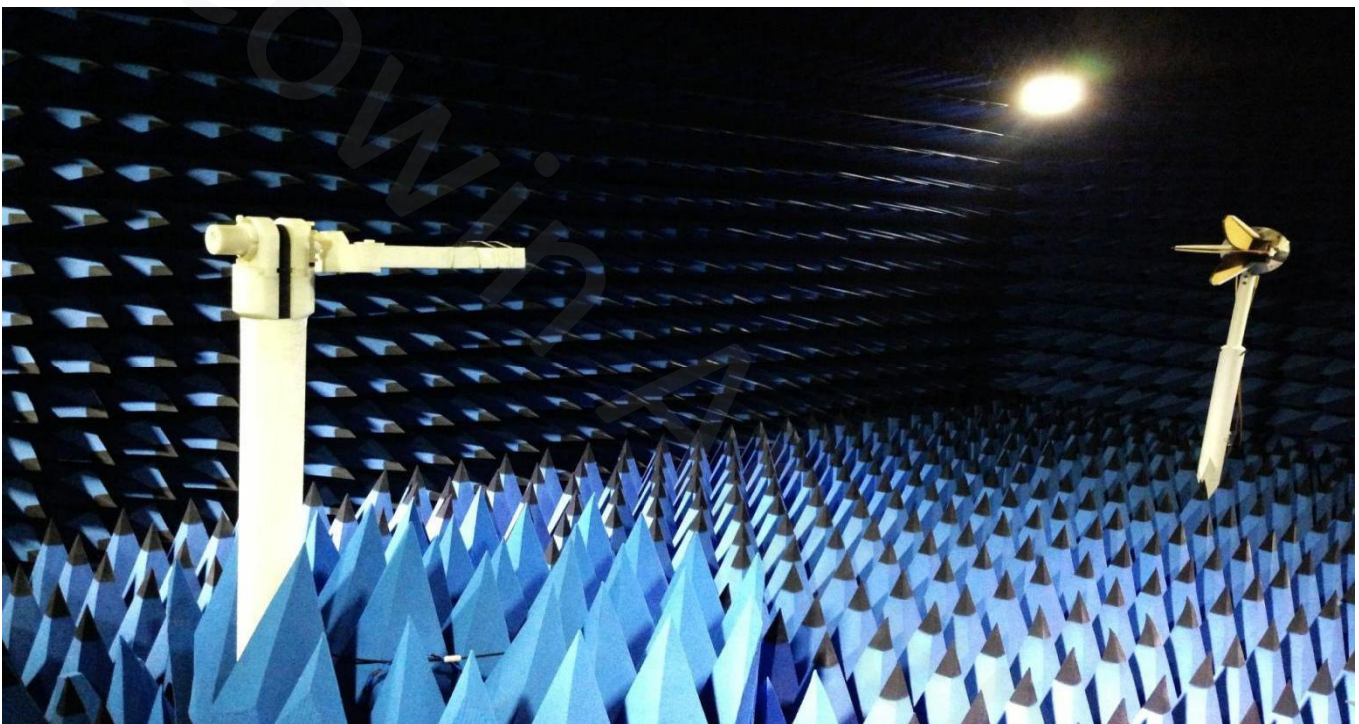
### Antenna Measurement Conditions:

Mounted on Ground Plane of 280 x 80 mm

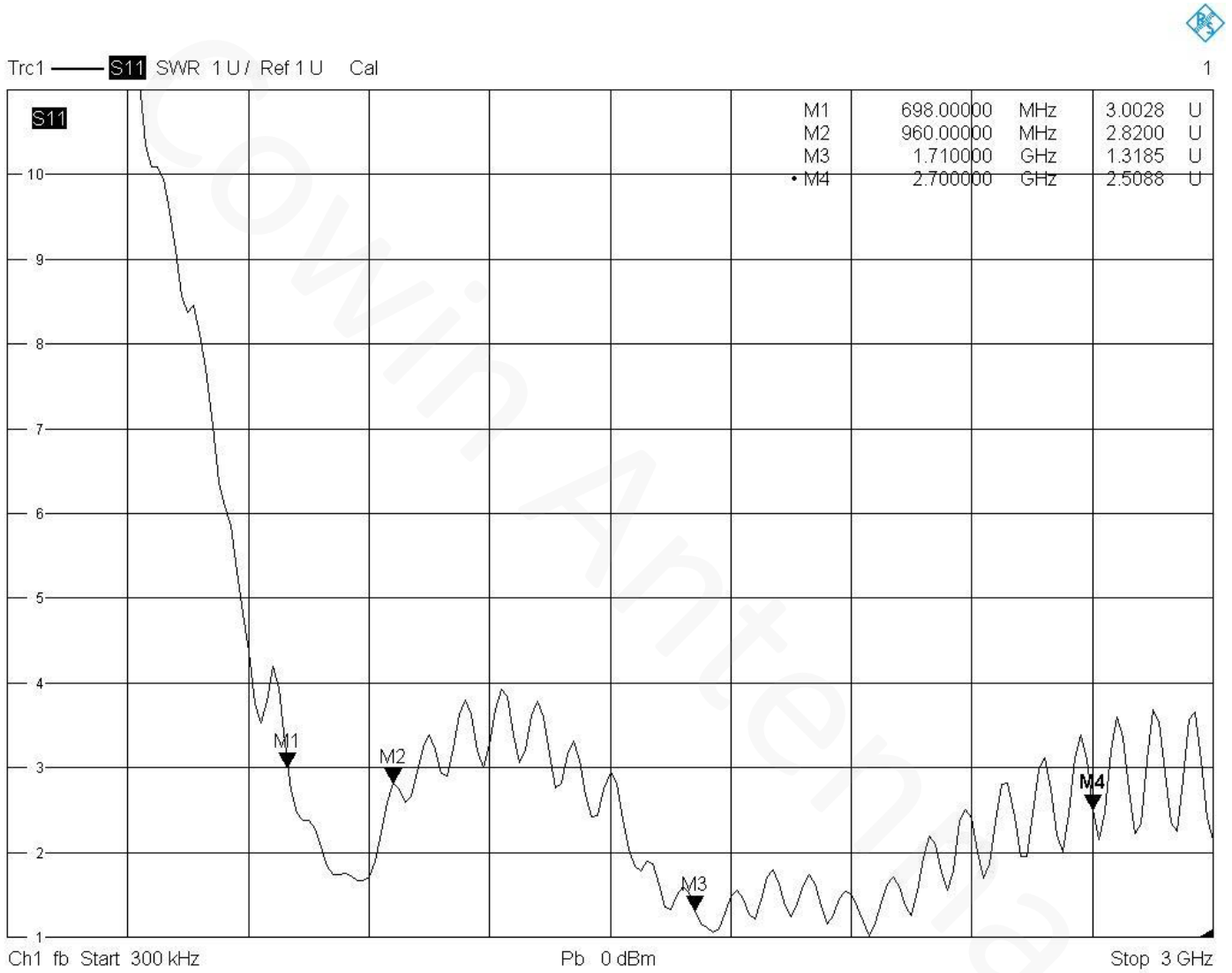
Measured in Certified 3D Anechoic Chamber

The network analyzer is Agilent 5071c

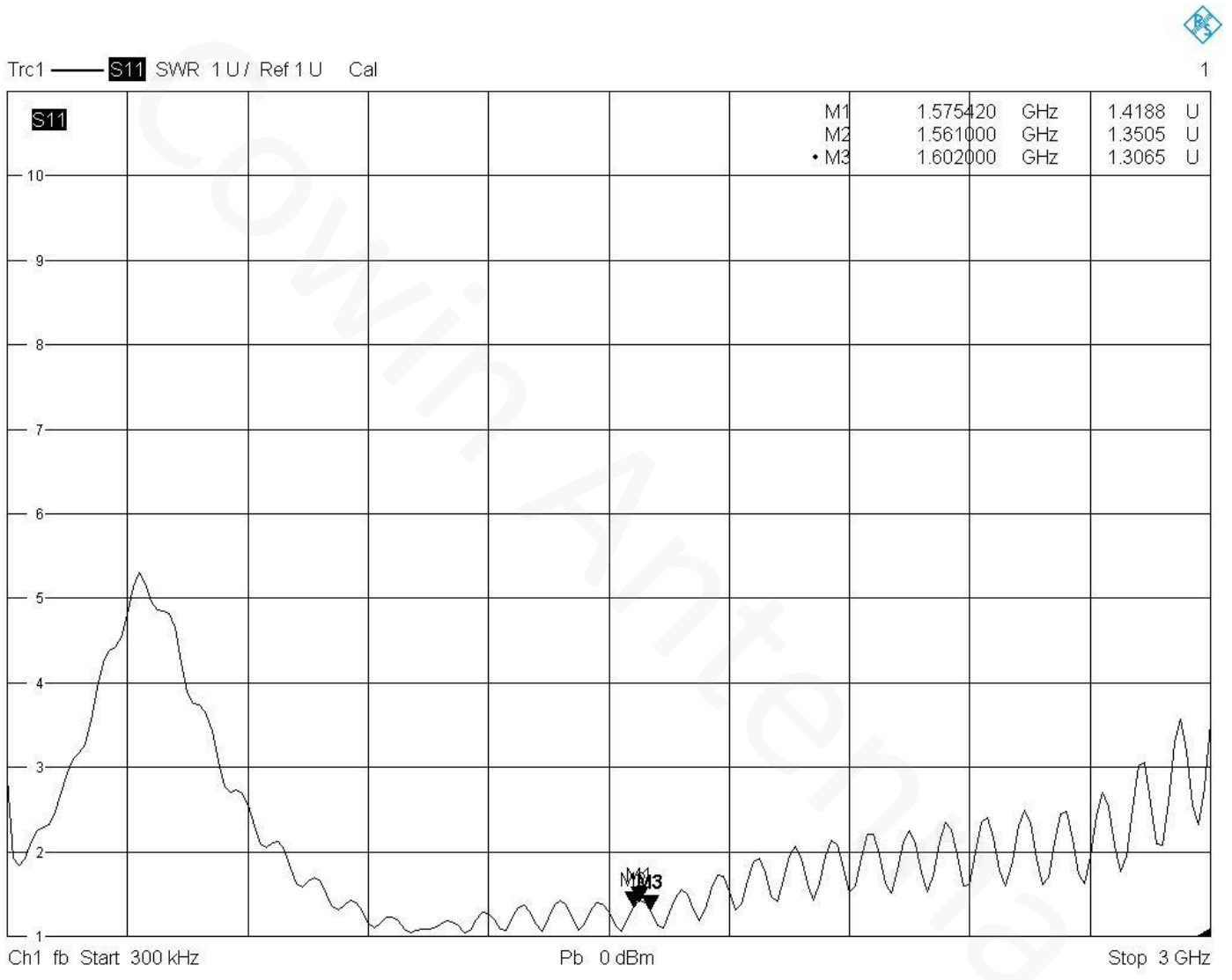
The comprehensive tester is Agilent cmv500



## 4.1 VSWR



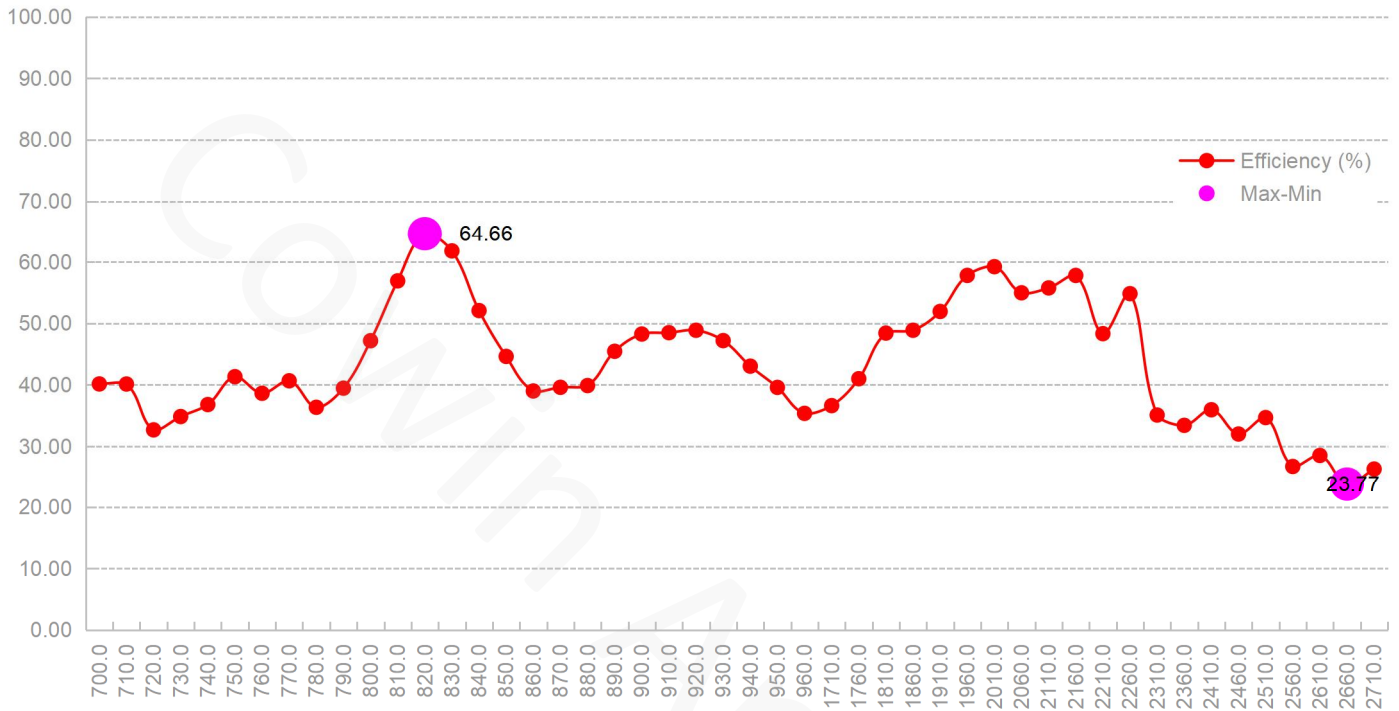
11/1/2021, 10:43 PM



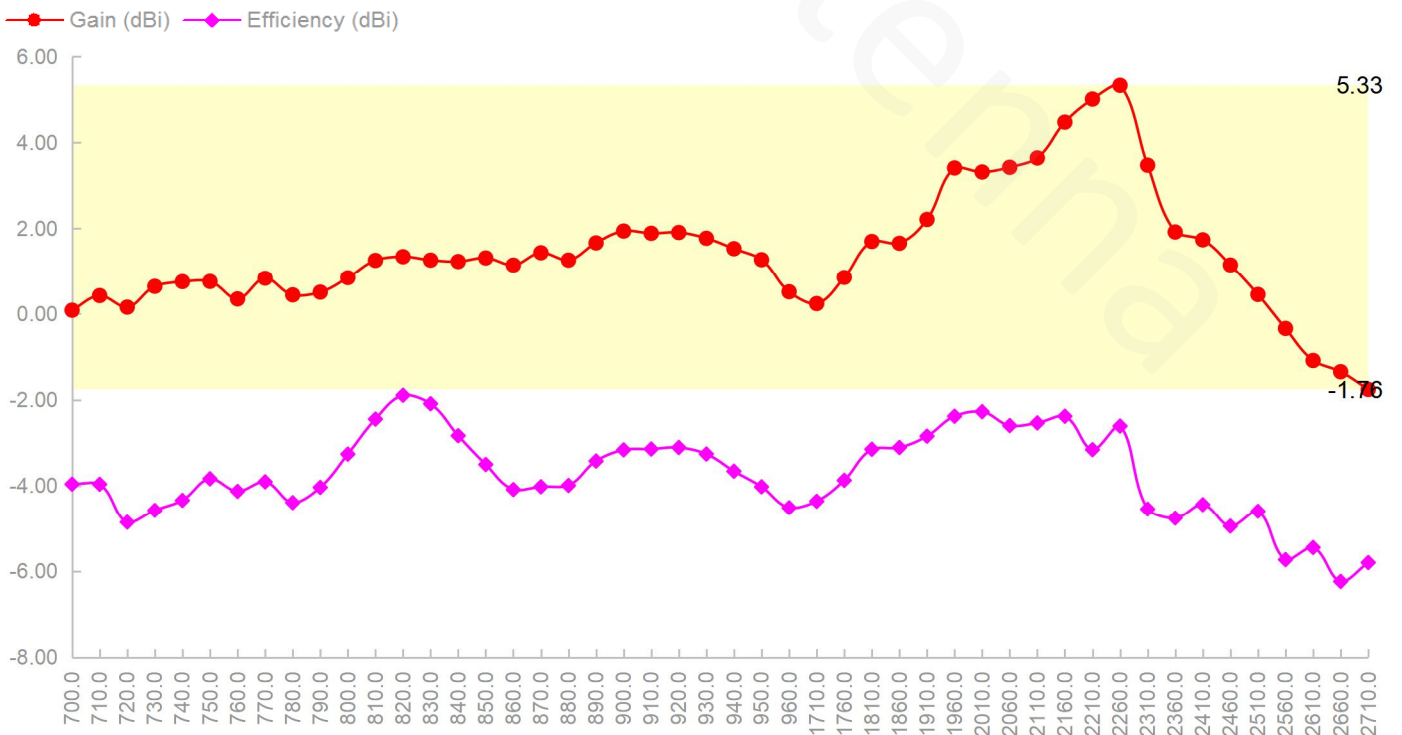
11/1/2021, 10:46 PM

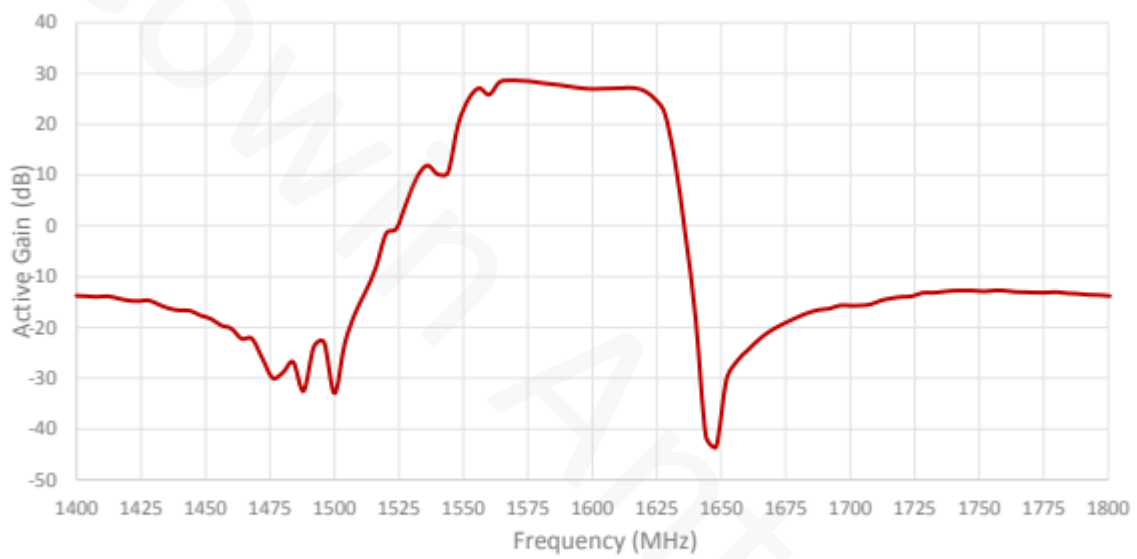


## 4.2 Efficiency



## 4.3 Peak gain



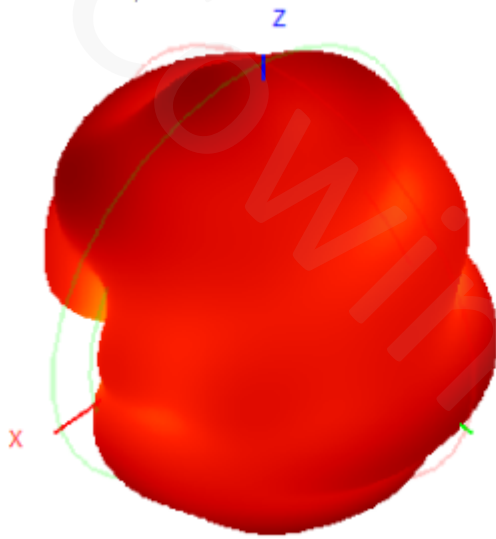


\* Measured at 3 V

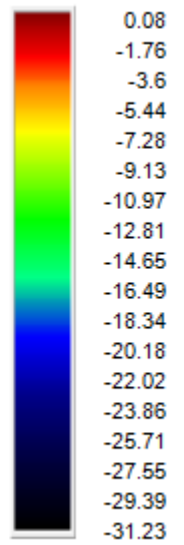
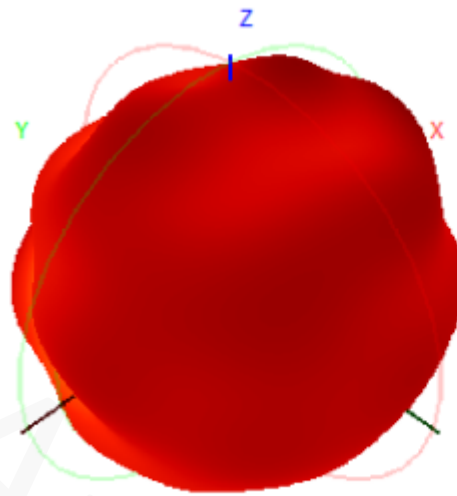


## 4.4 3D&2D Radiation Patterns

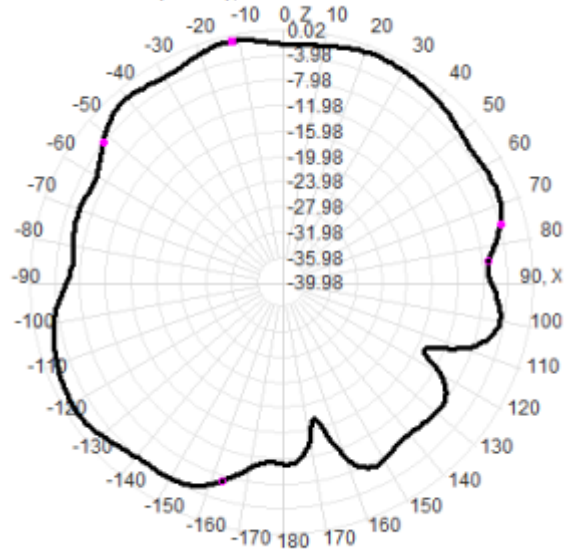
700.0MHz H+V, Eff: 40.1%



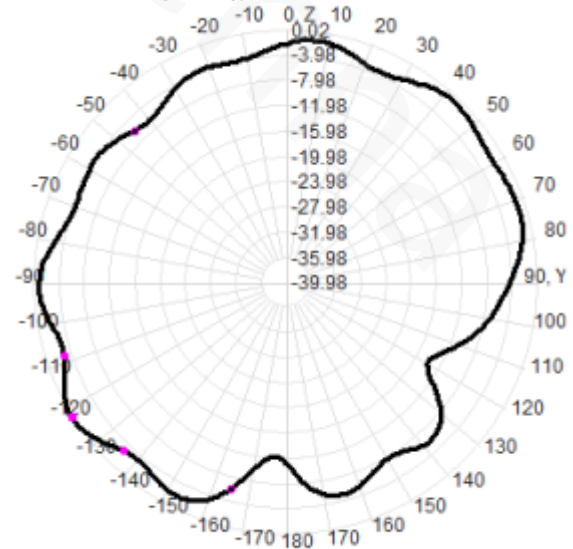
Back View



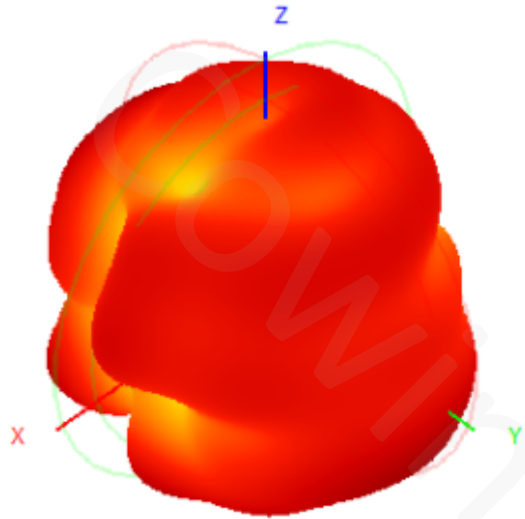
700.0MHz Total(E1-XZ), Max=-0.96dBi



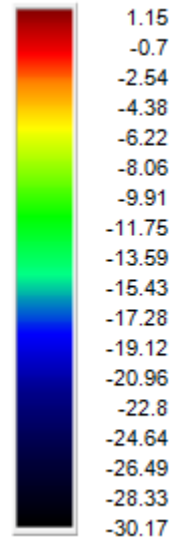
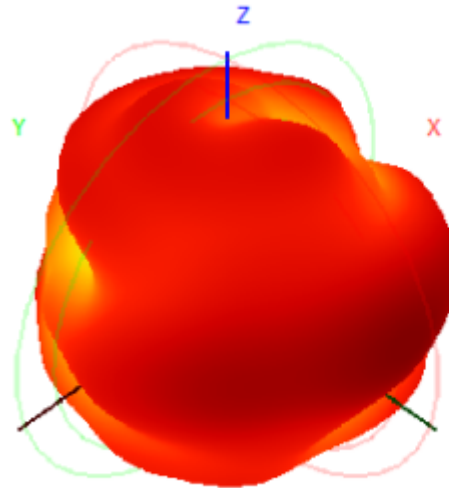
700.0MHz Total(E2-YZ), Max=0.02dBi



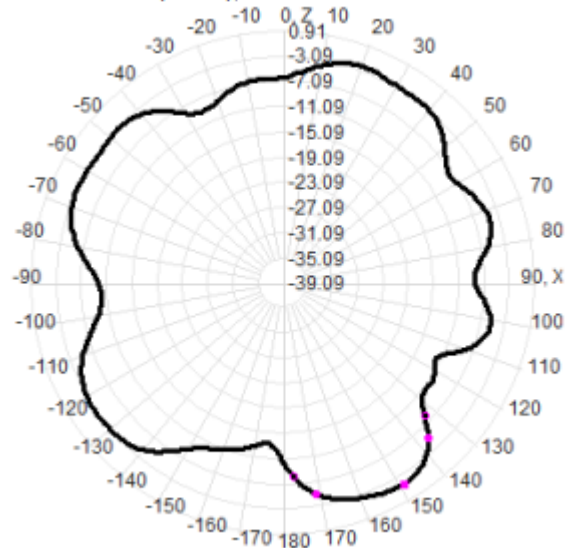
860.0MHz H+V, Eff: 39.0%



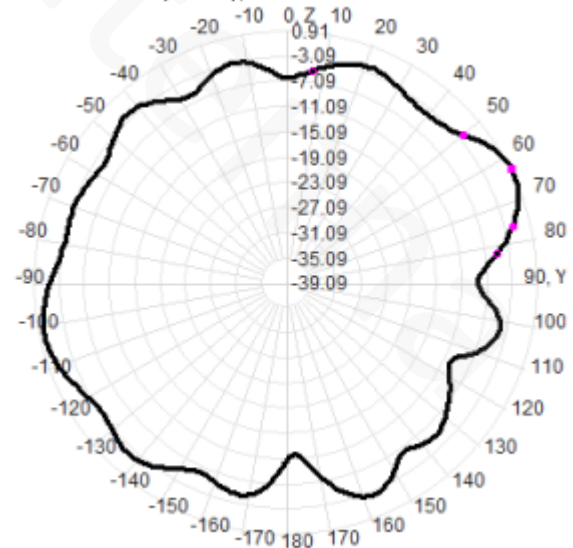
Back View



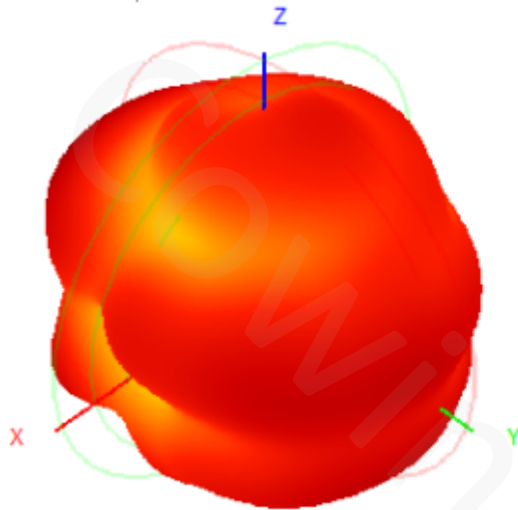
860.0MHz Total(E1-XZ), Max= -1.96dBi



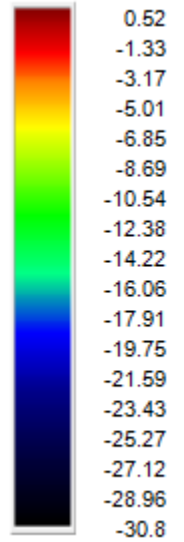
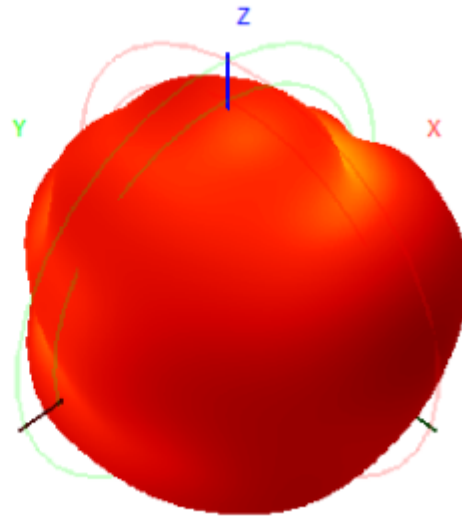
860.0MHz Total(E2-YZ), Max= 0.91dBi



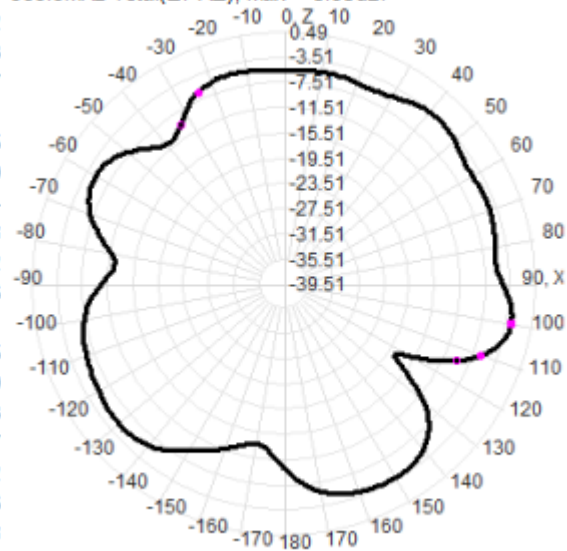
960.0MHz H+V, Eff: 35.4%



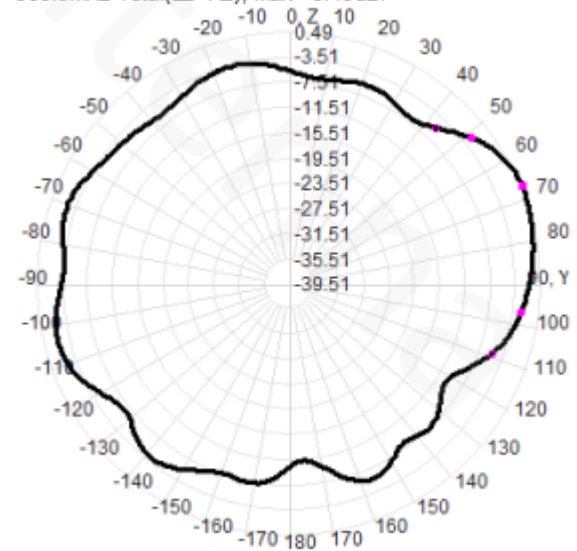
Back View



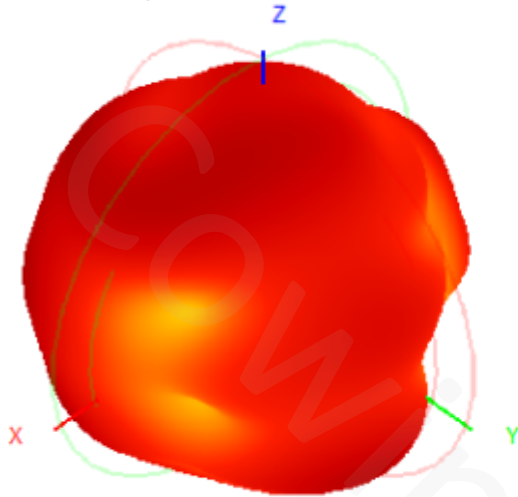
960.0MHz Total(E1-XZ), Max= -3.05dBi



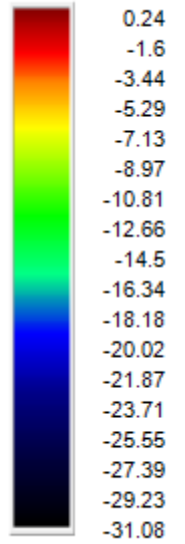
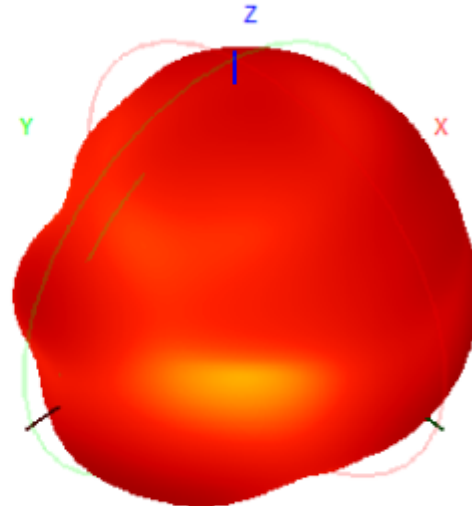
960.0MHz Total(E2-YZ), Max= 0.49dBi



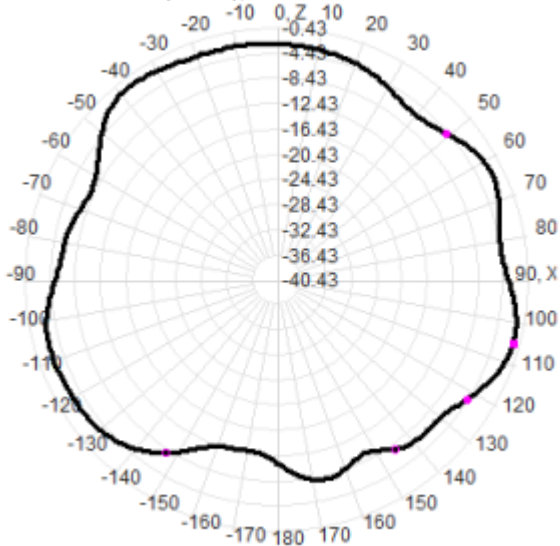
1710.0MHz H+V, Eff: 36.6%



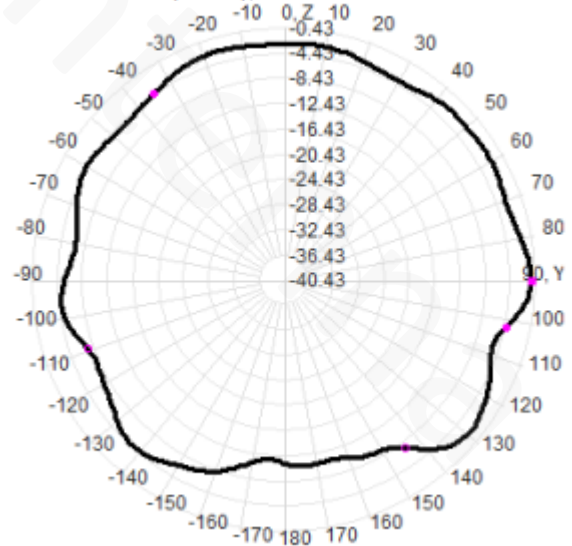
Back View



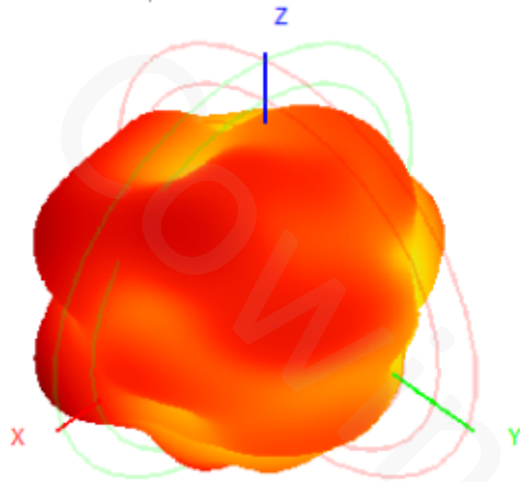
1710.0MHz Total(E1-XZ), Max= -1.77dBi



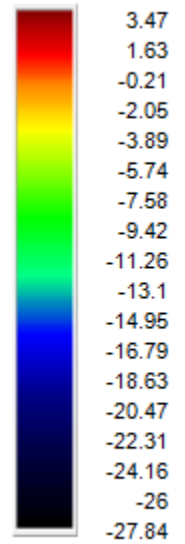
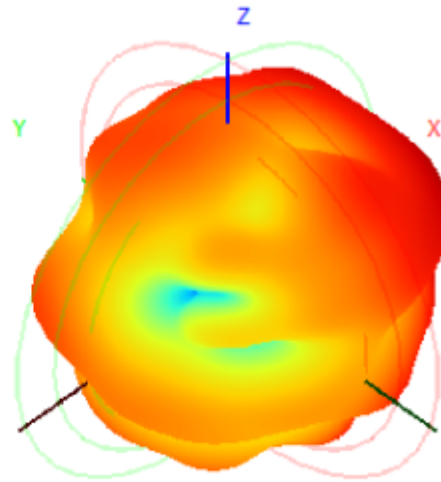
1710.0MHz Total(E2-YZ), Max= -1.37dBi



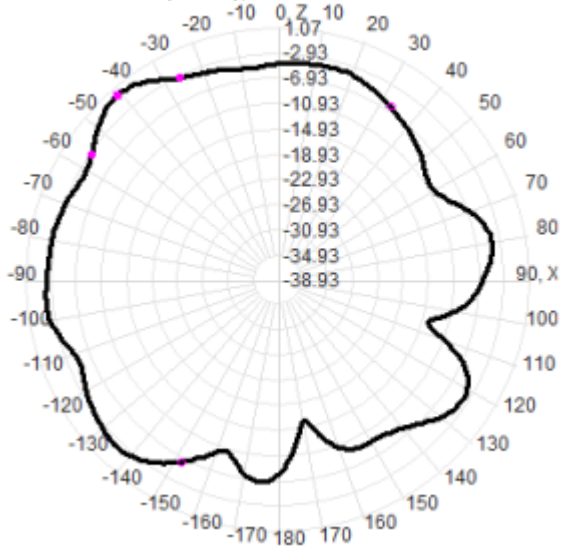
2310.0MHz H+V, Eff: 35.1%



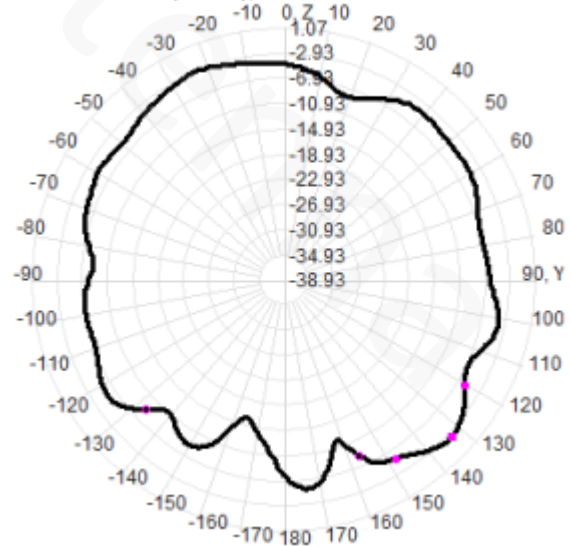
Back View



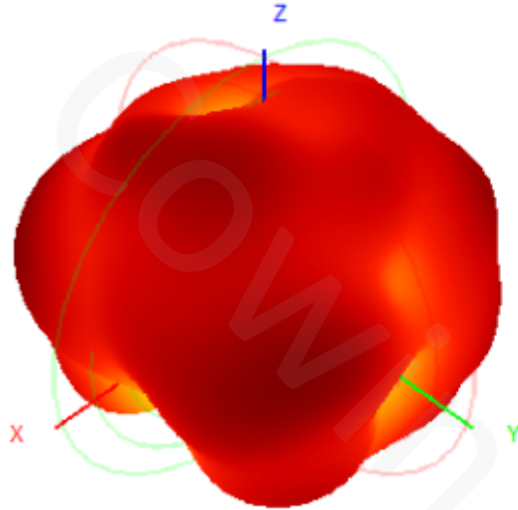
2310.0MHz Total(E1-XZ), Max= -0.17dBi



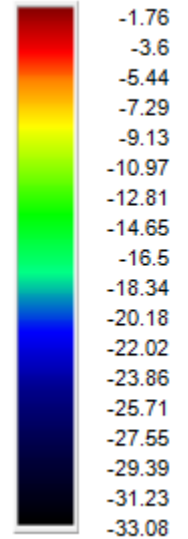
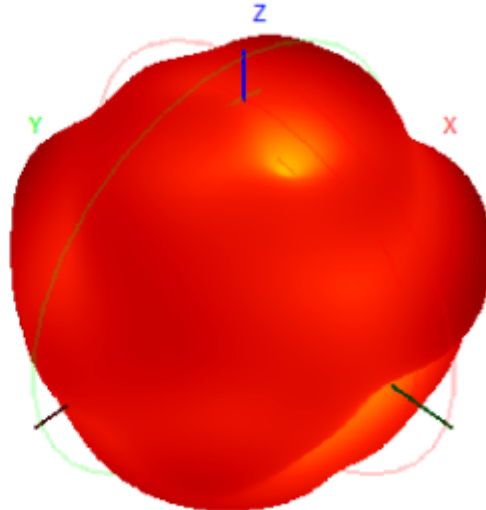
2310.0MHz Total(E2-YZ), Max= -2.65dBi



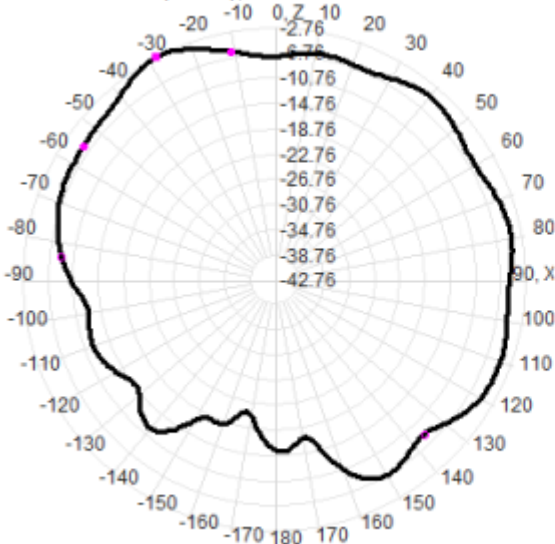
2710.0MHz H+V, Eff: 26.3%



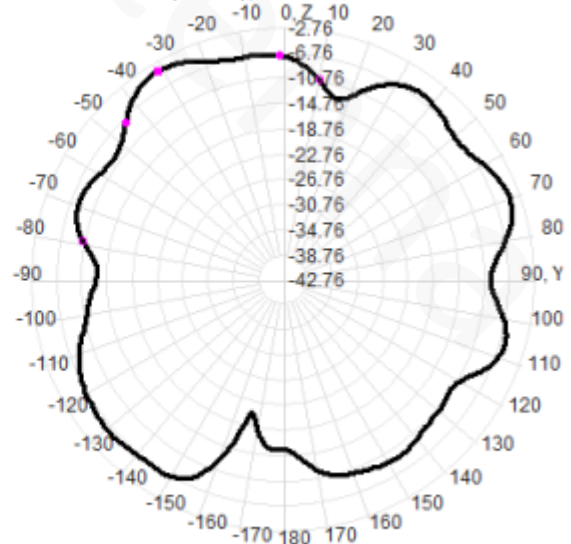
Back View



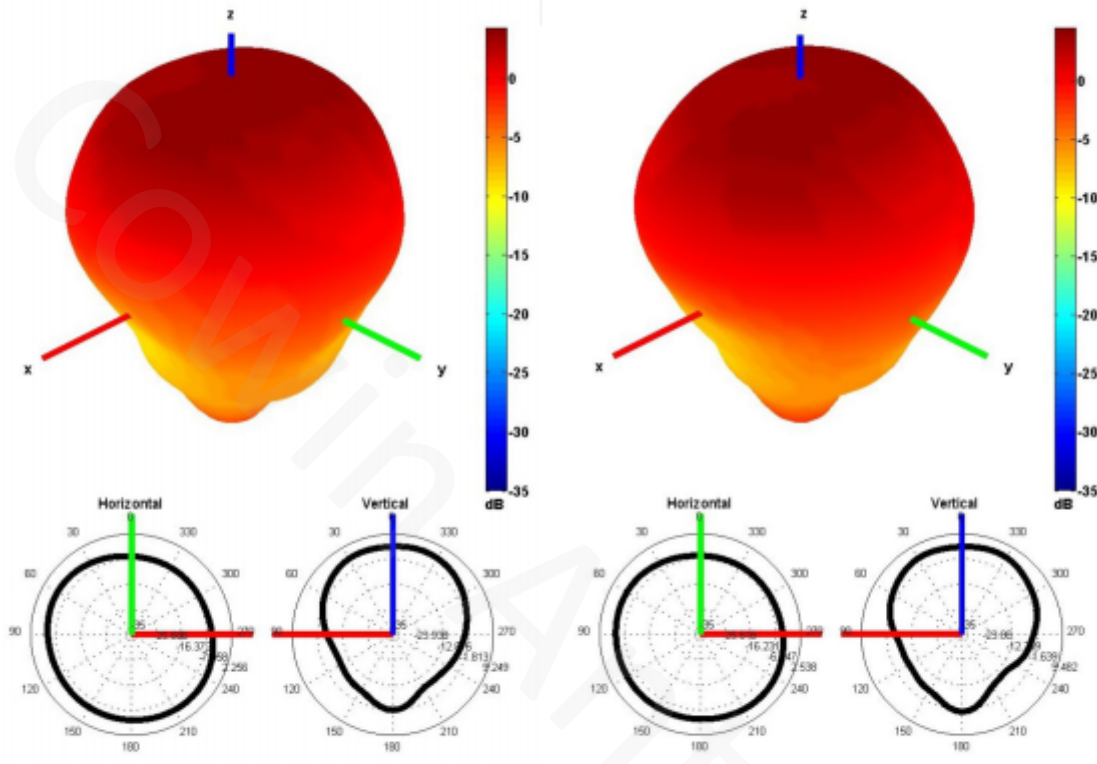
2710.0MHz Total(E1-XZ), Max=-2.76dBi



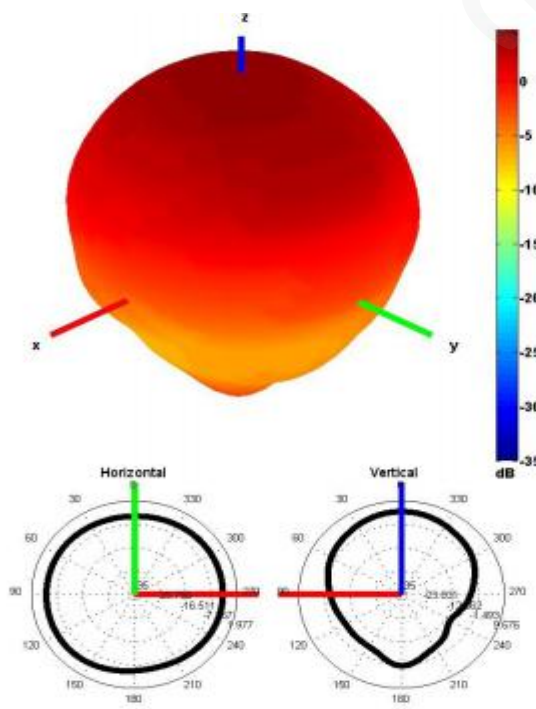
2710.0MHz Total(E2-YZ), Max=-4.13dBi







1561 and 1575 MHz Radiation pattern



1602 MHz Radiation pattern