CW-WZ-0003

4G External Antenna

Key Features

Frequency: 698-960MHz/1710-2700MHz

SMA Male Connector

External Rubber

Dimensions 158*17.6mm

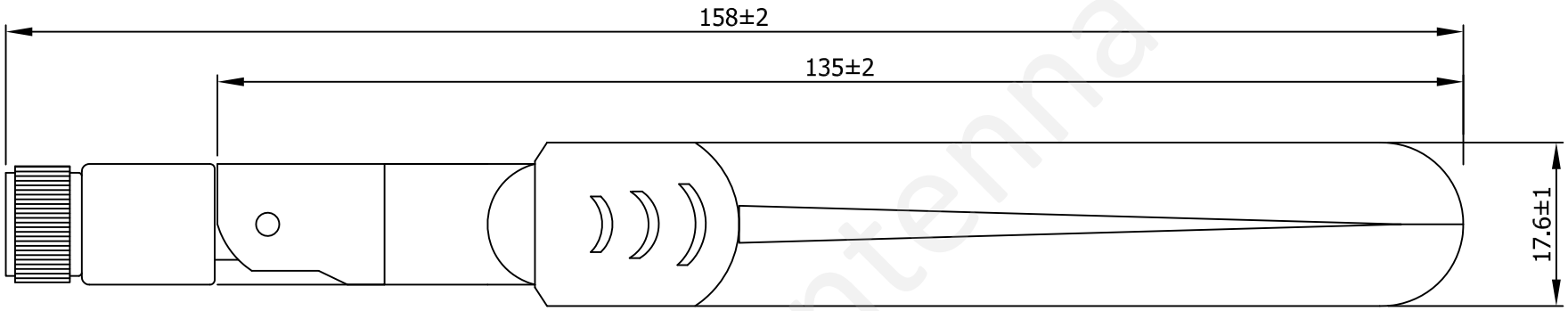
1. Antenna Electrical Characteristics

Band (MHz)		
Frequency (MHz)	698-960MHz	1710-2700MHz
VSWR	4:1	2.5:1
Efficiency (%)	63.76%	66.26%
Peak Gain (dBi)	1.89	4.03
Impendance (Ohm)	50	
Polarisation	Vertical	
Max. Input Power (W)	10	
Connector Type	SMA male	

2. Material and environmental characteristics

Material of PCB	FR4
Material of Plastic	PC+PBT/TPEE
Cable Type	RG178
Connector Type	SMA Male
Dimensions (mm)	158*17.6MM
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	2021/07/31	New issue



Specification(Free Test):

Frequency Range: 698-960MHZ/1710-2700MHZ

Impedance: 50Ω

V.S.W.R: ≤4.5/4

NO	Name	Description	Q'TY	Remark
6	Radome	Black ABS	1	
5	Lower fixing seat	Black PC+PBT	1	
4	Upper fixing seat	Black PC+PBT	1	
3	Connector	Black SMA male	1	
2	Cable	RG178 Single silver wire	1	
1	PCB	FR4	1	

XX.	±5.0	Approved	Customer		
X.	±3.0		Part NO.		
.X	±1.0	Checked	Part name	External antenna	
.XX	±0.2		CW P/NO.	CW-WZ-0003	
.XXX	±0.1	Drawing	REV	Unit	File :
			X1	m/m	Sheet : 1/1

Cowin Antenna

4. Antenna test parameters

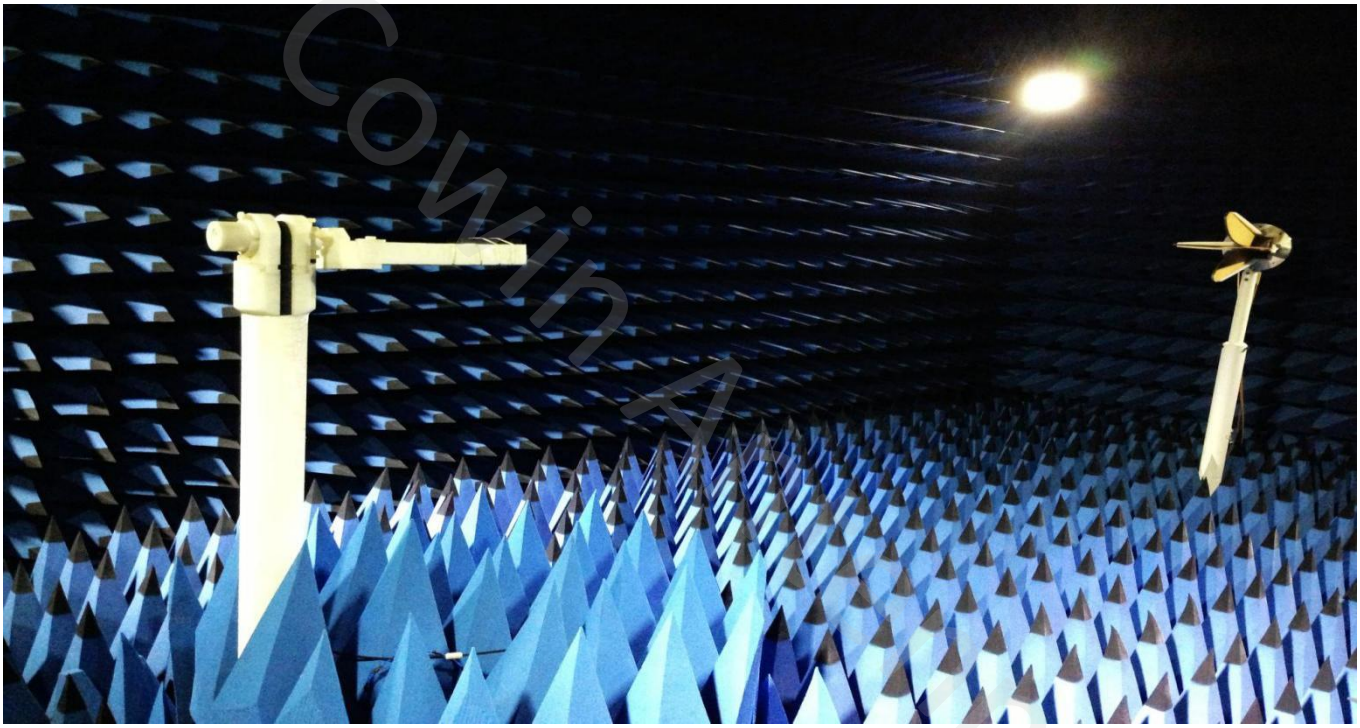
Antenna Measurement Conditions:

Mounted on Ground Plane of 280 x 80 mm

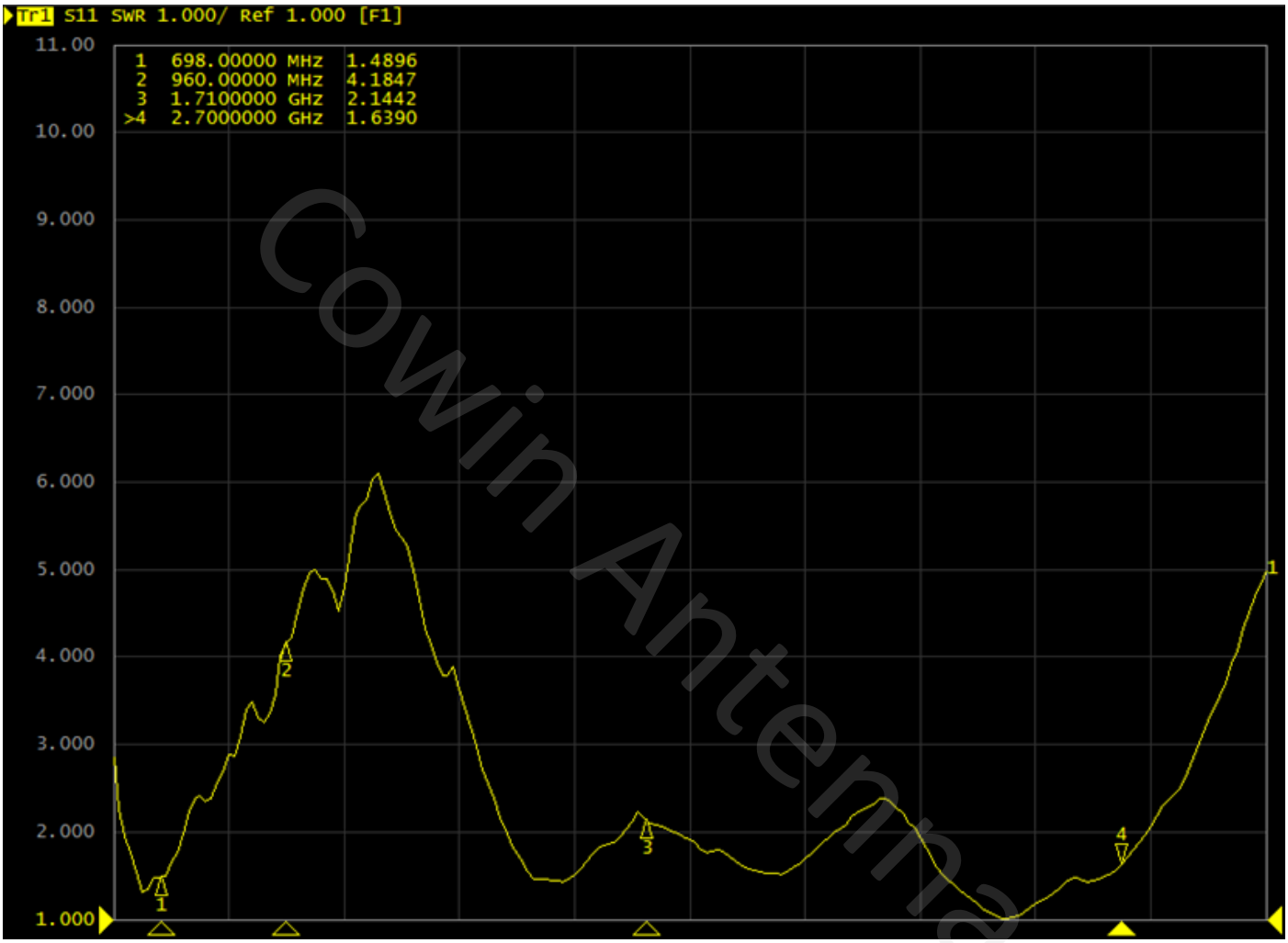
Measured in Certified 3D Anechoic Chamber

The network analyzer is Agilent 5071c

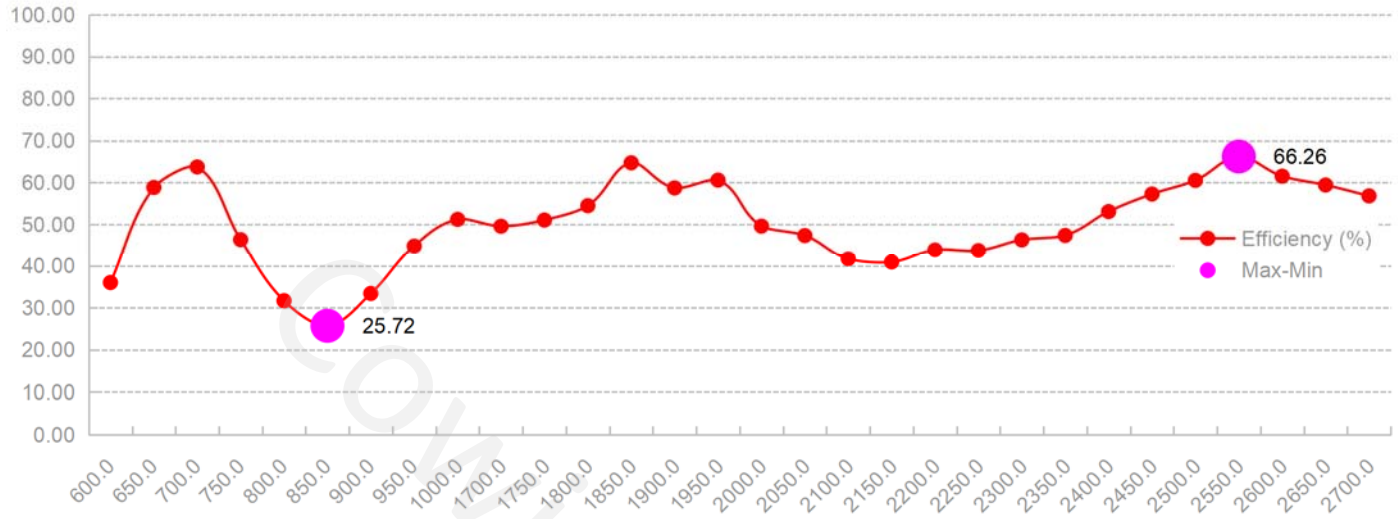
The comprehensive tester is Agilent cmv500



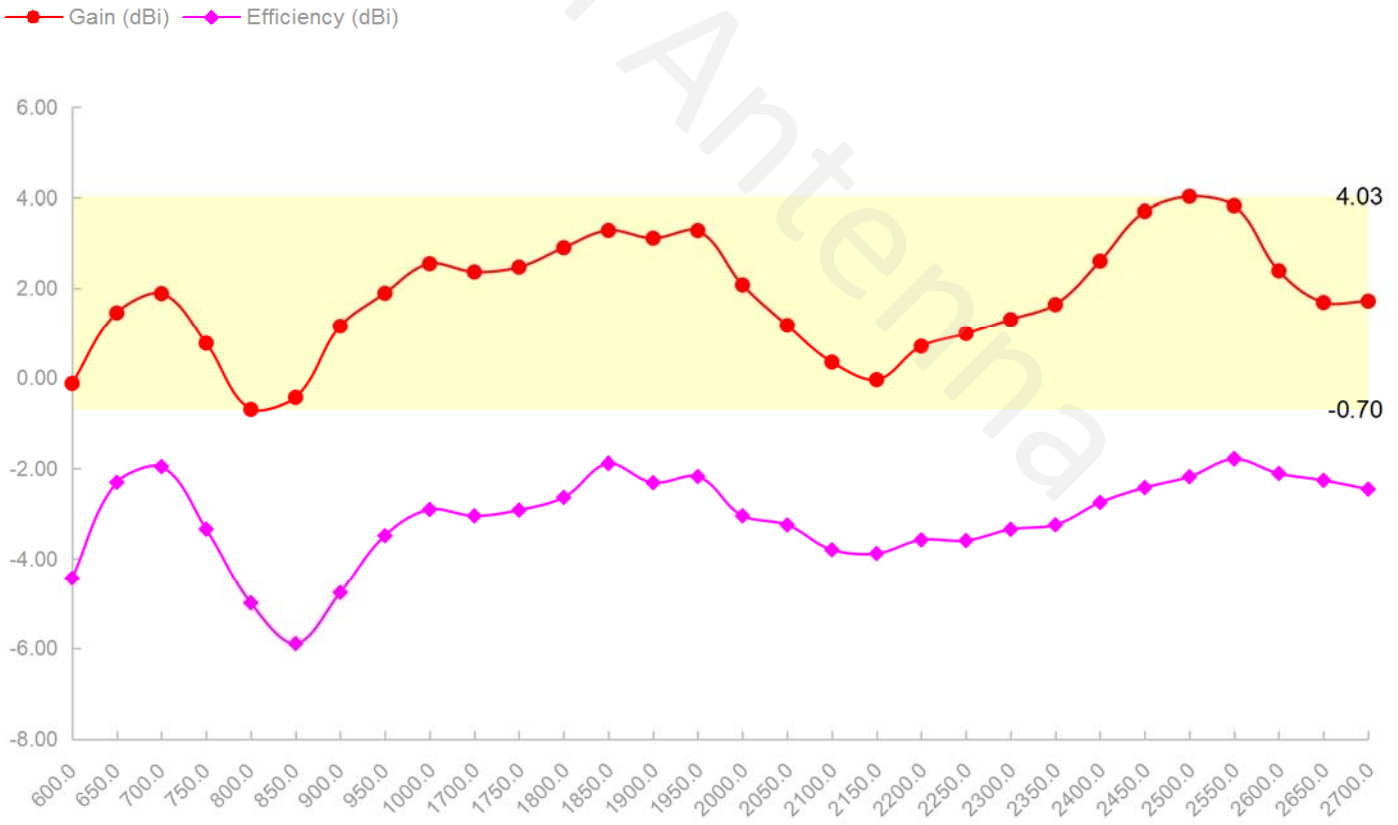
4.1 VSWR


Tr1 S11 SWR 1.000/ Ref 1.000 [F1]
1 698.00000 MHz 1.4896
2 960.00000 MHz 4.1847
3 1.7100000 GHz 2.1442
>4 2.7000000 GHz 1.6390
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
Cowin Antenna

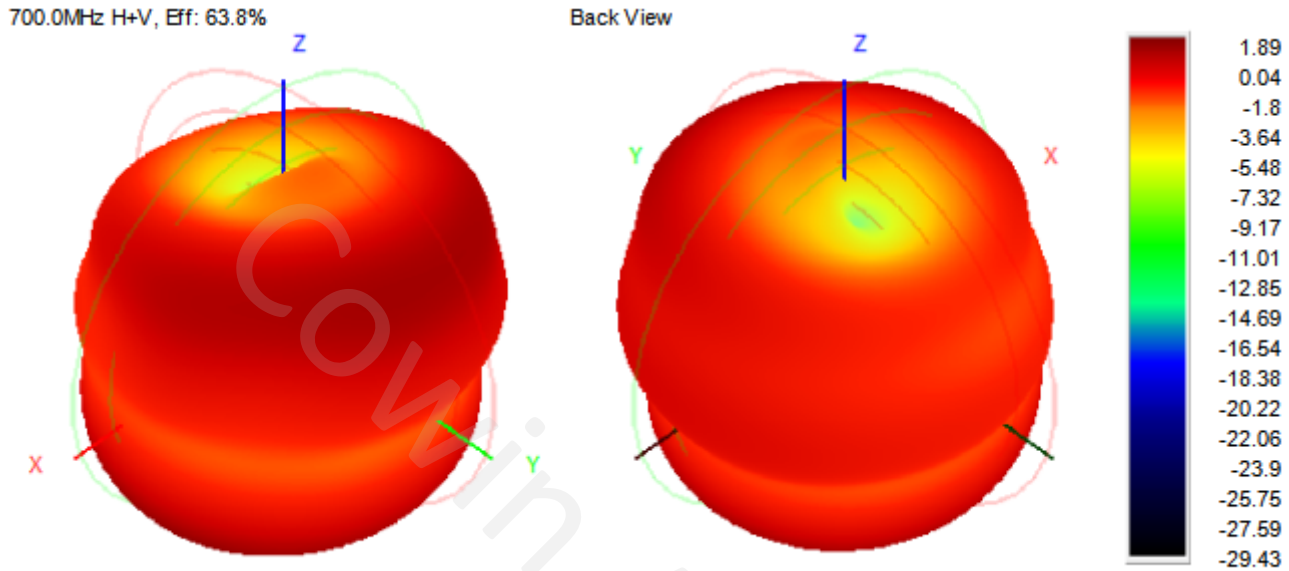
4.2 Efficiency

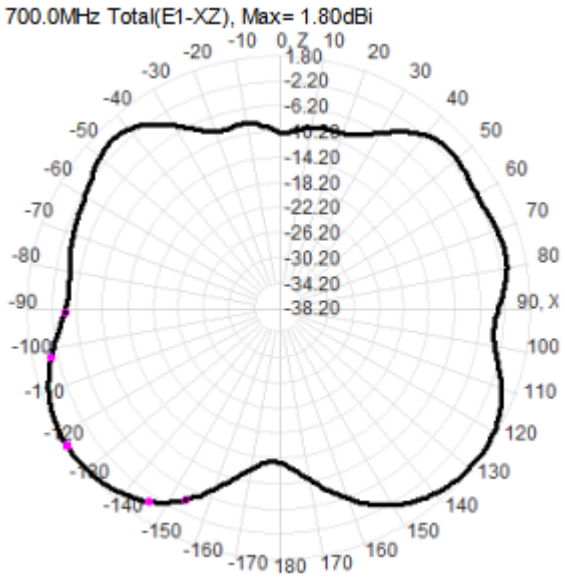


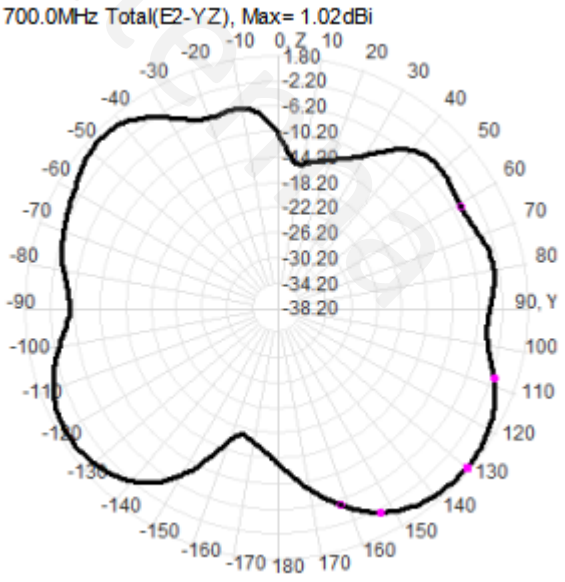
4.3 Peak gain

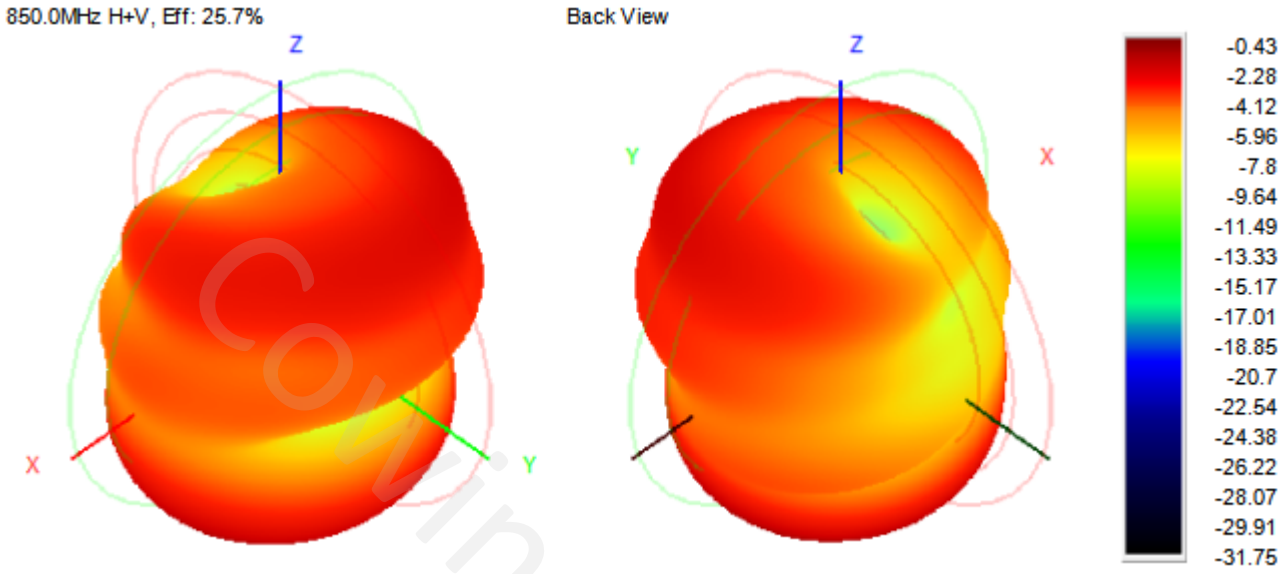


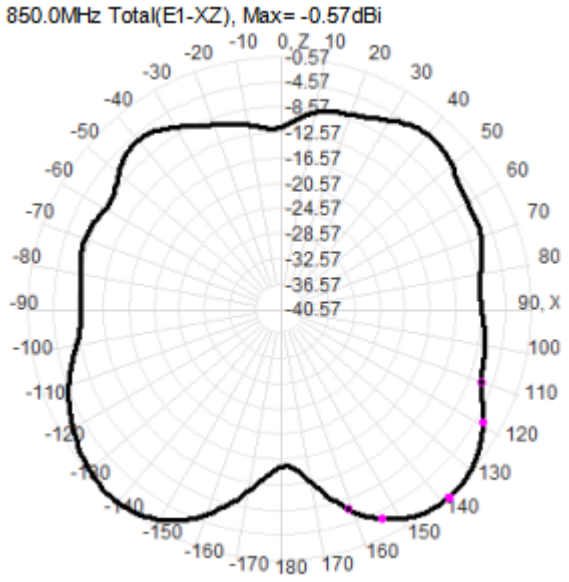
4.4 3D&2D Radiation Patterns

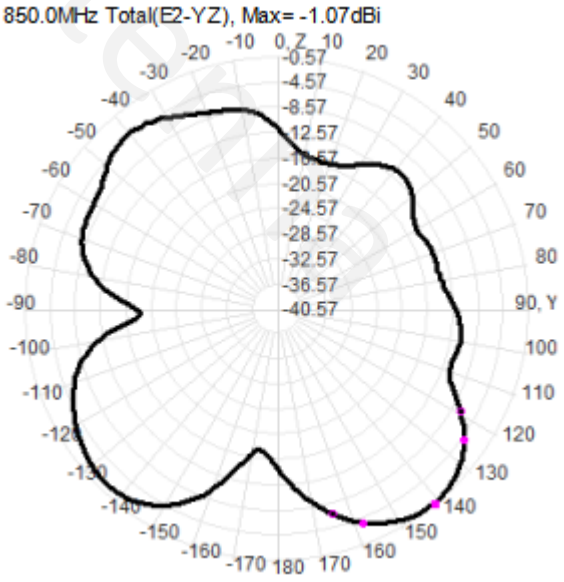


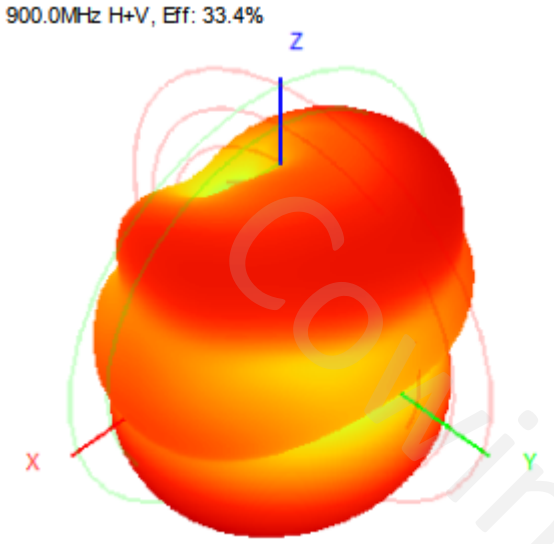


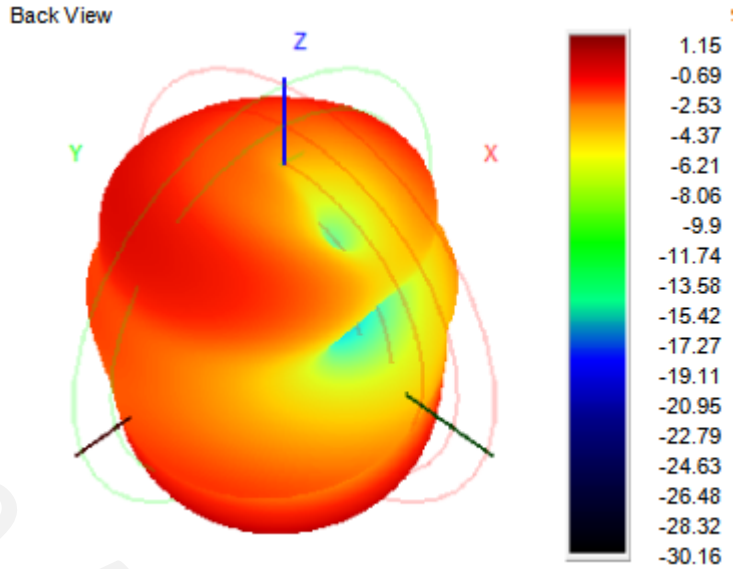


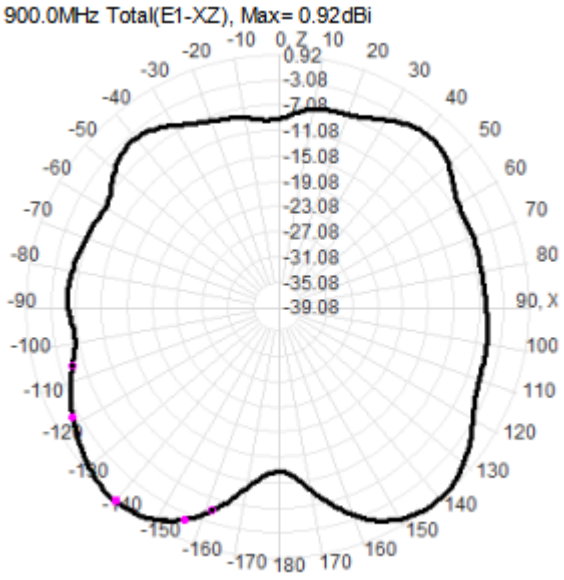


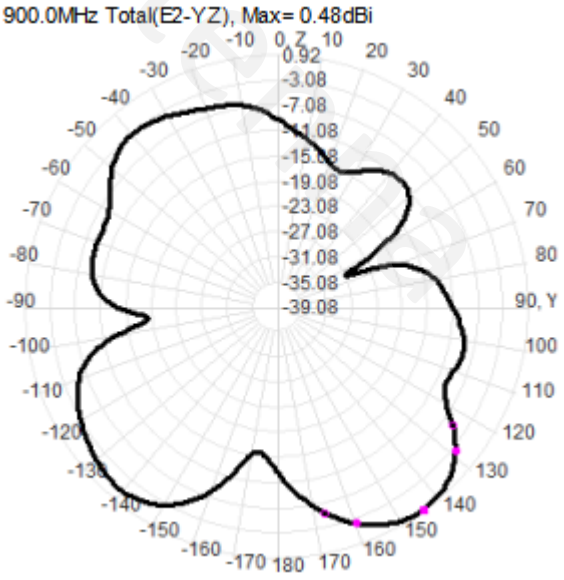


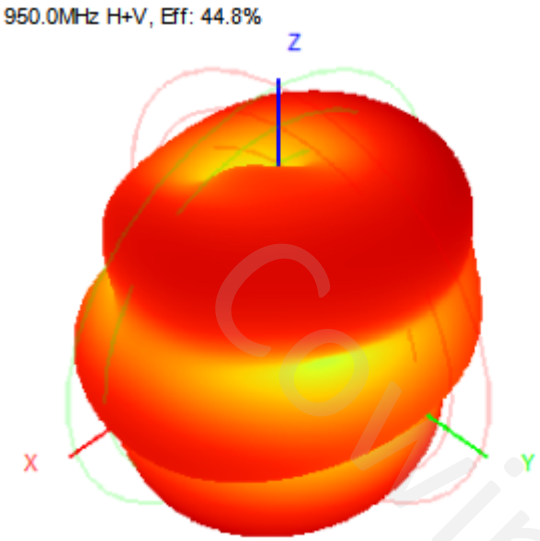


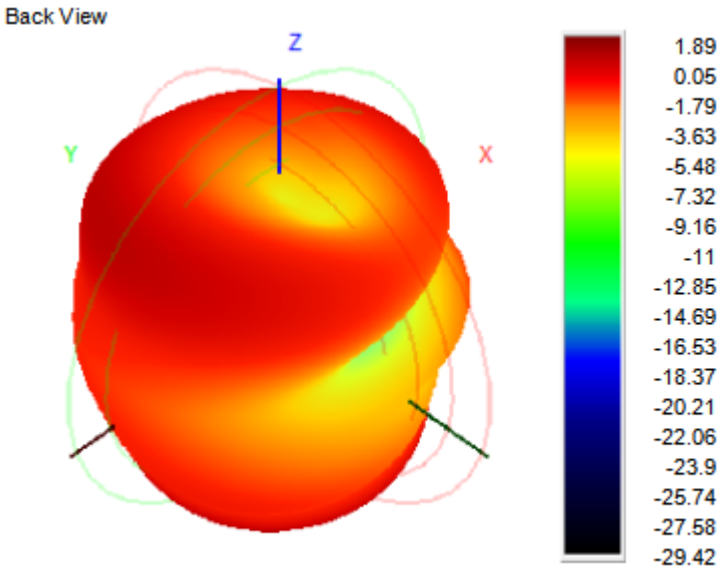


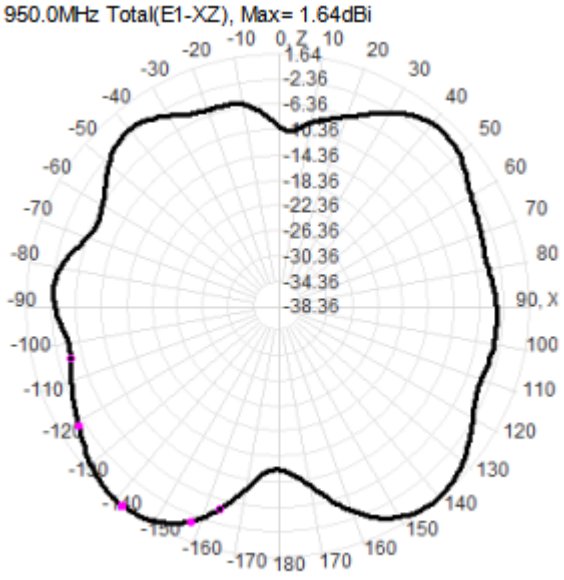


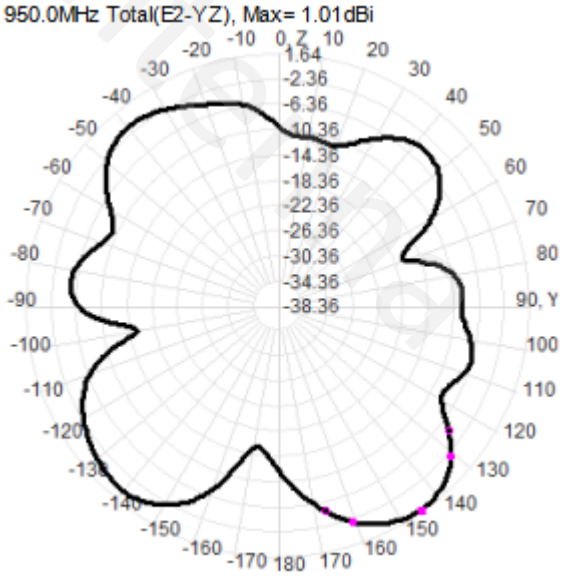


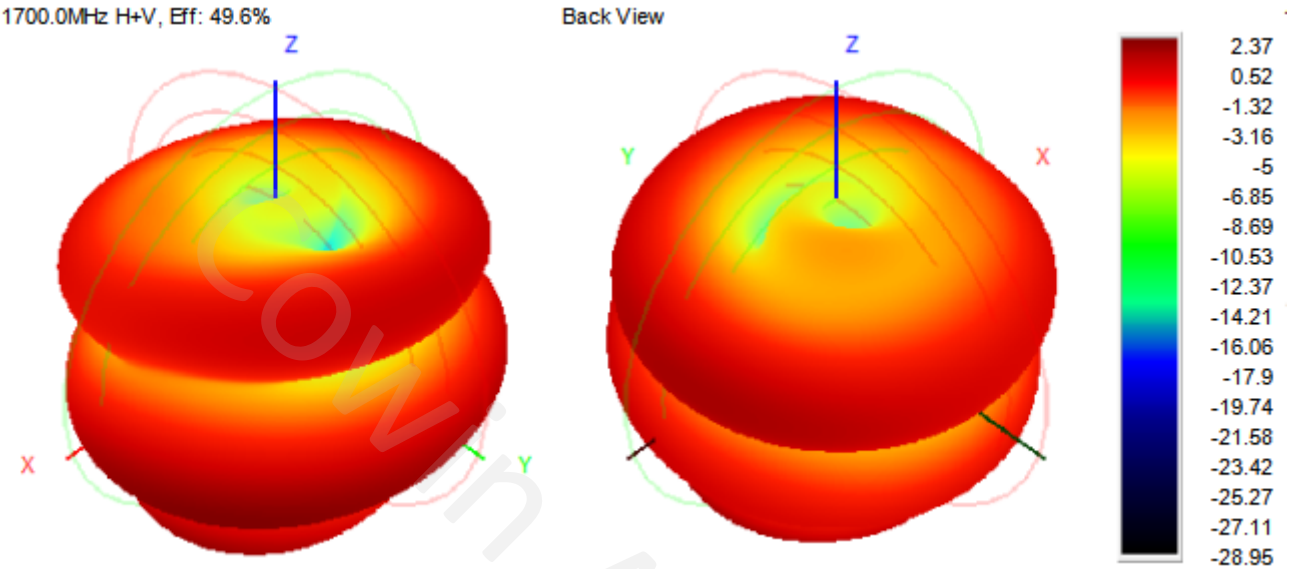


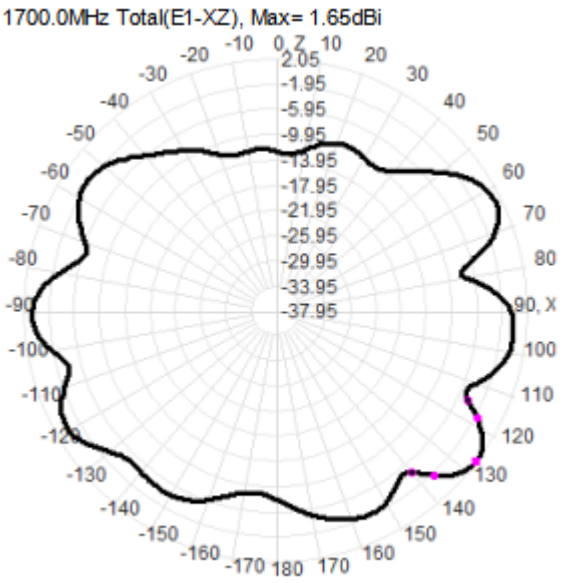


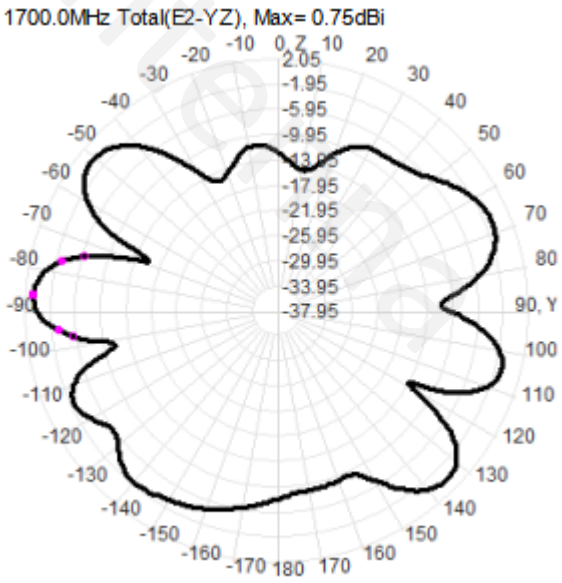


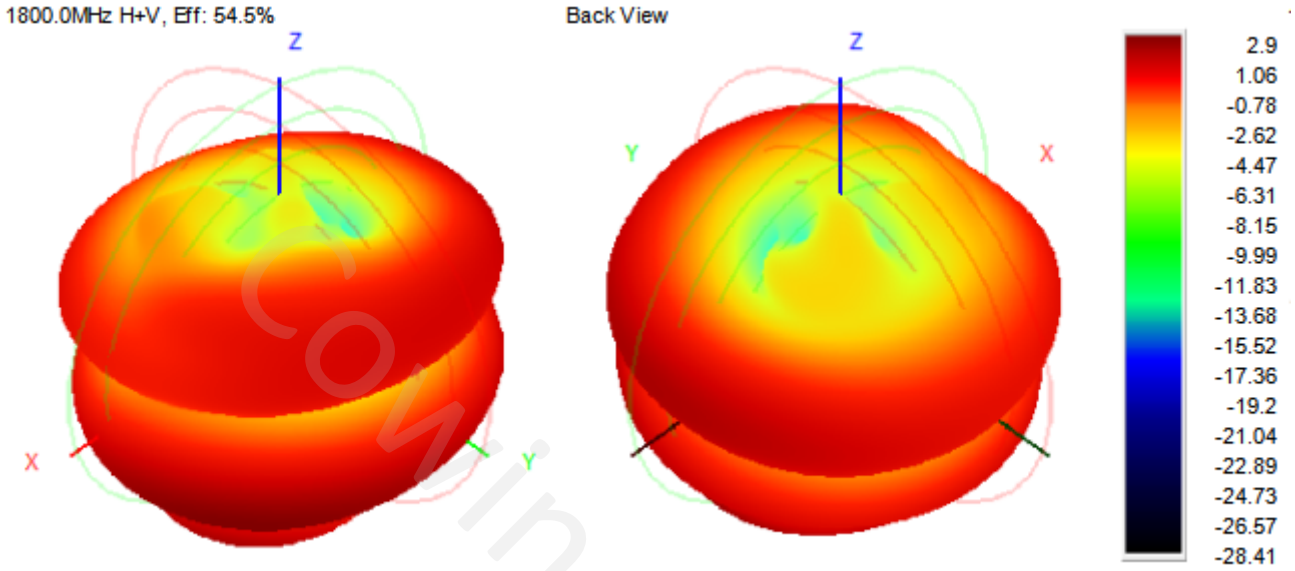


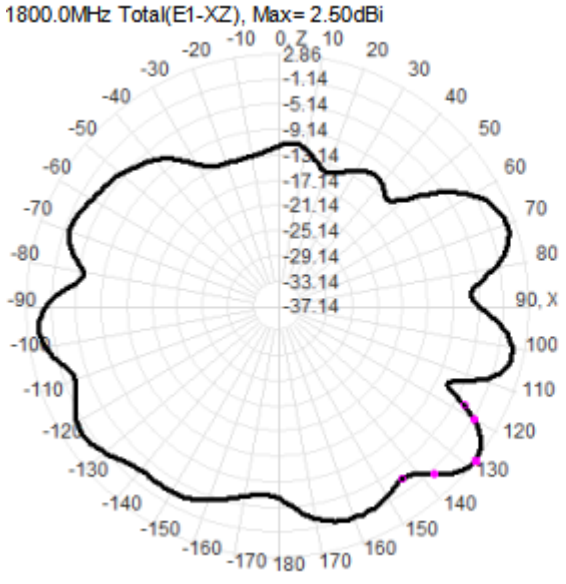


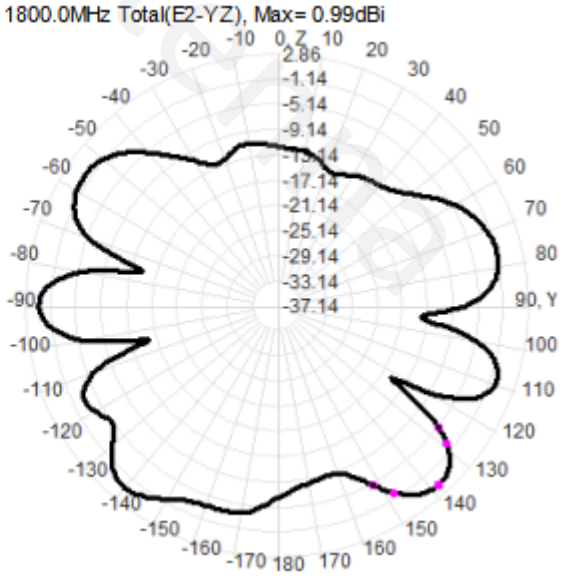


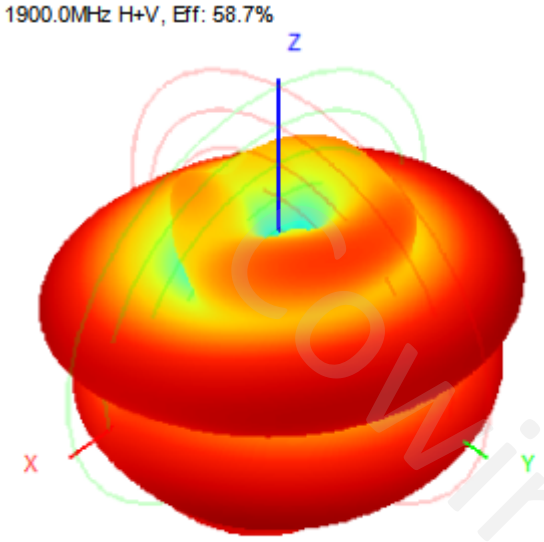


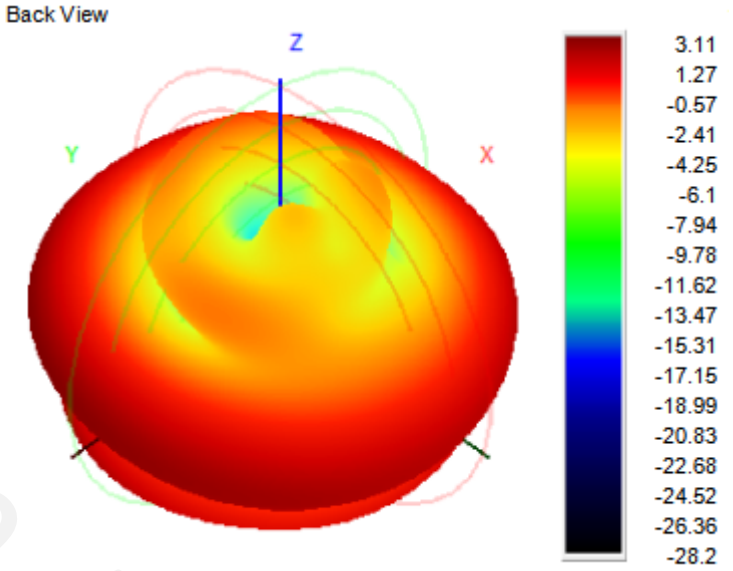


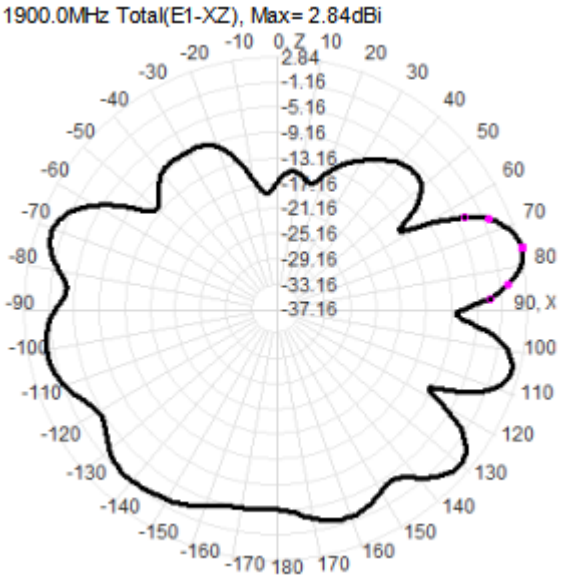


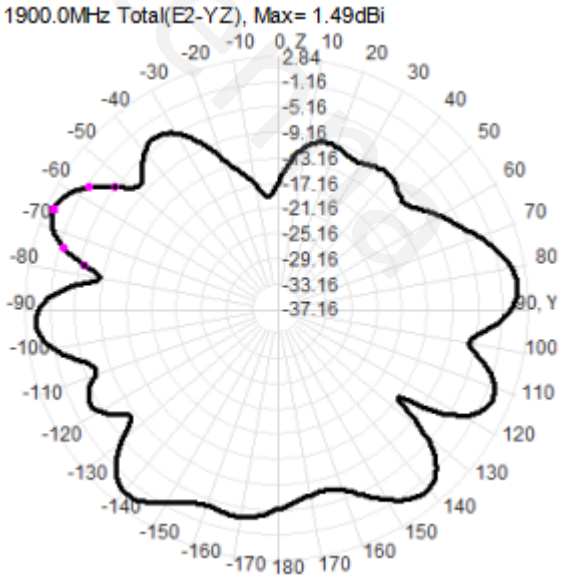


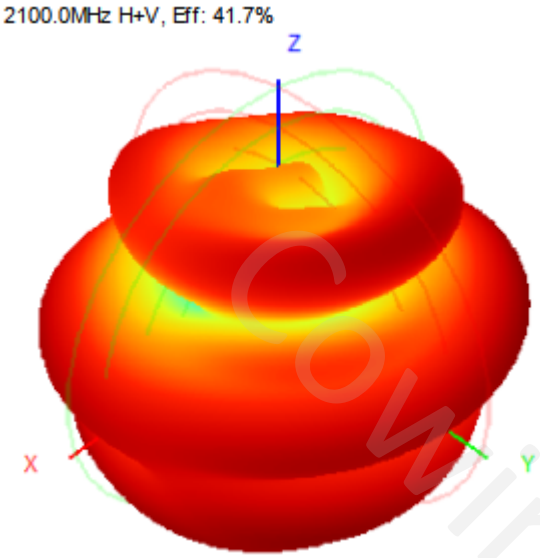


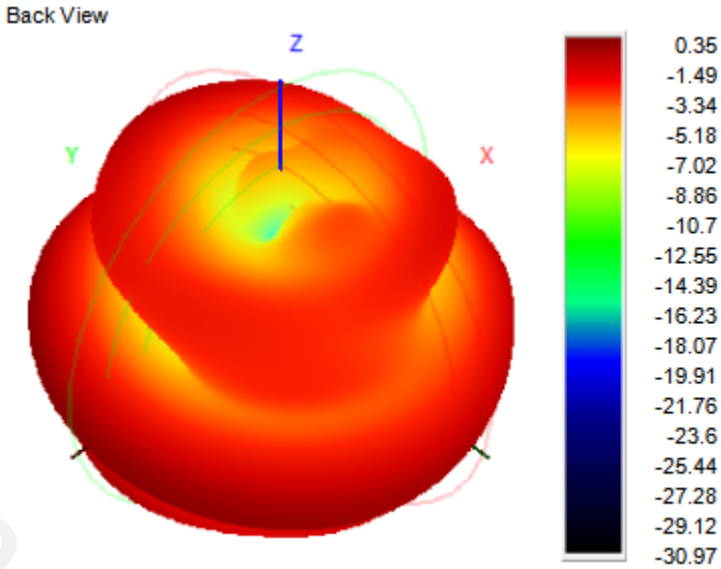


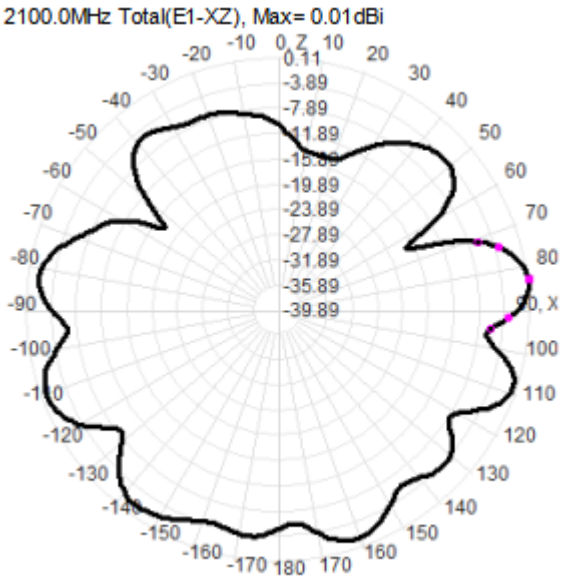


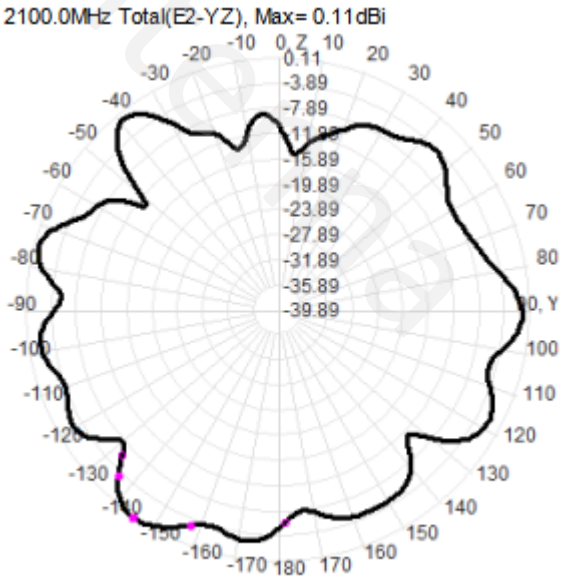


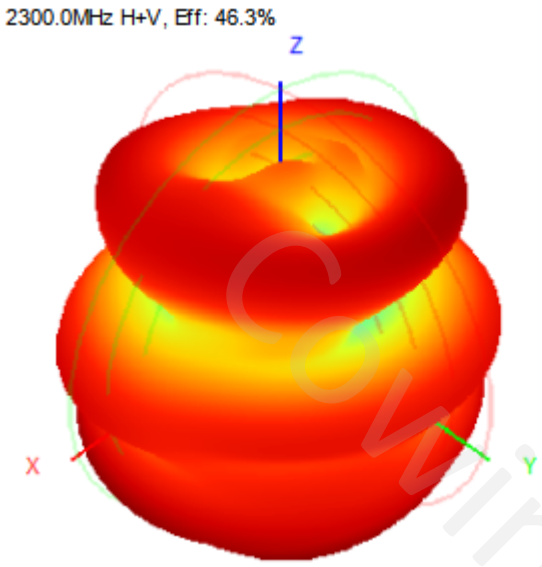


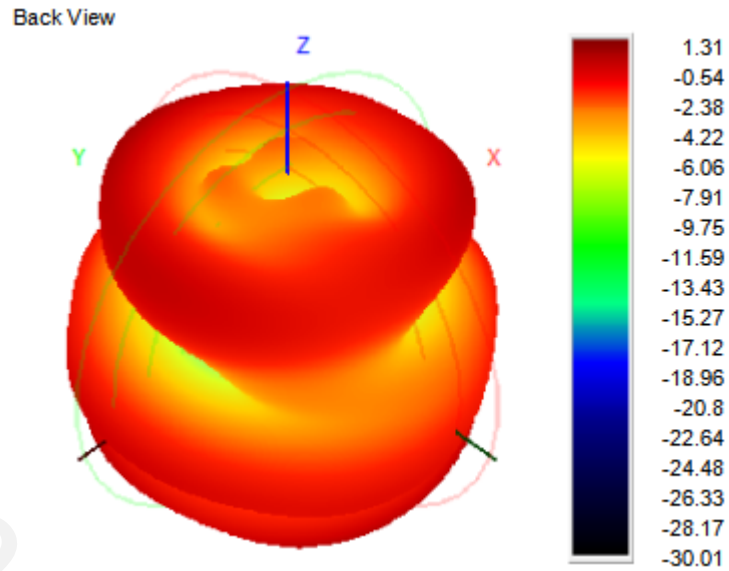


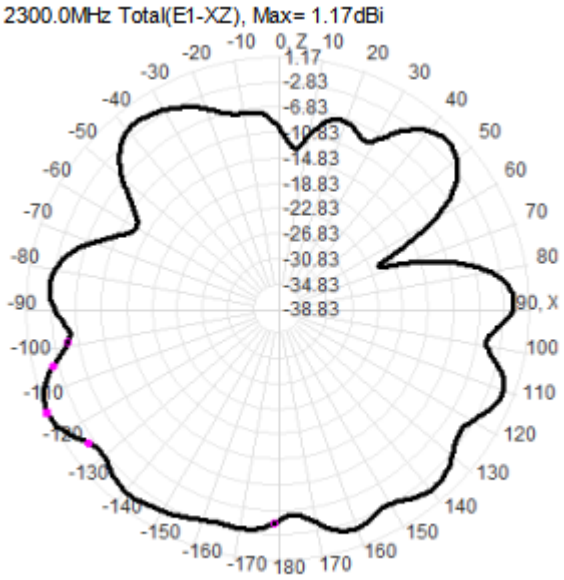


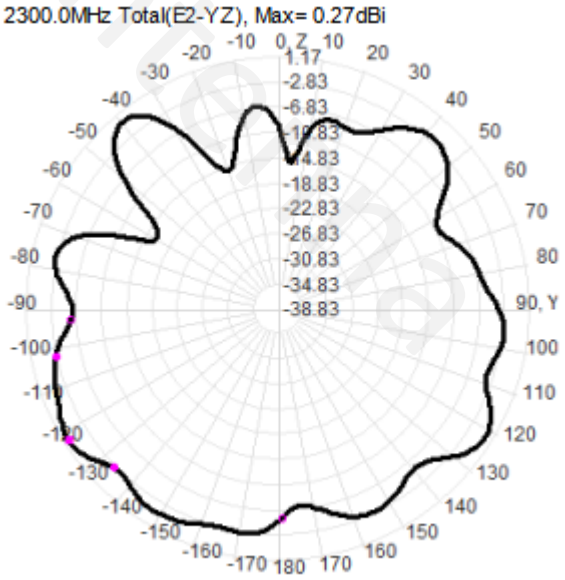




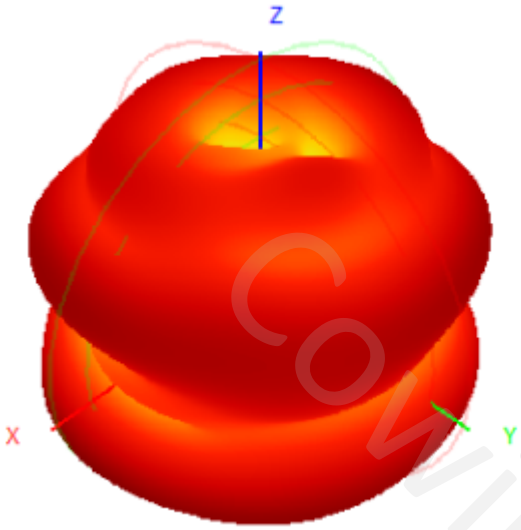




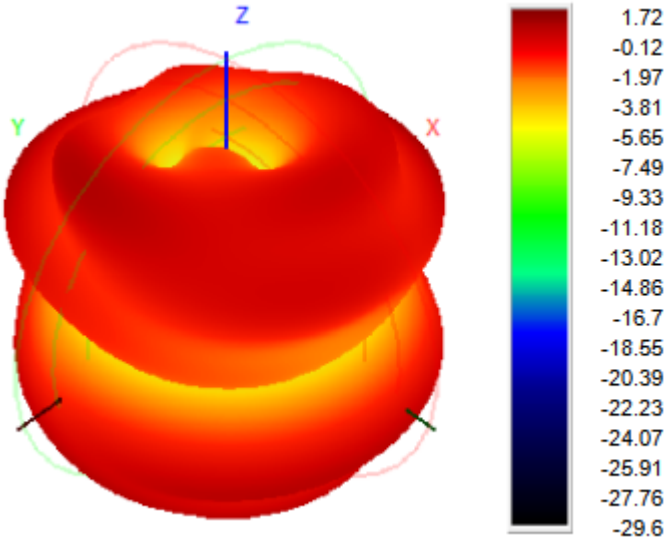




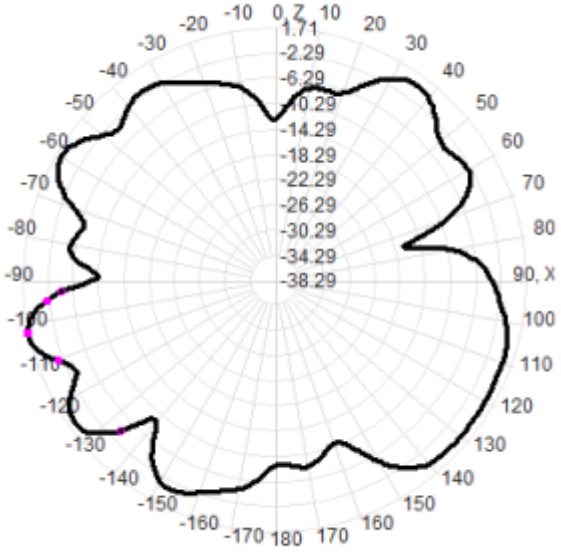
2700.0MHz H+V, Eff: 56.8%



Back View



2700.0MHz Total(E1-XZ), Max= 1.71dBi



2700.0MHz Total(E2-YZ), Max= 0.51dBi