CW-NZ-0237

868-915MHz Internal Antenna

Cowin Antenna

Key Features

Frequency: 868-915MHz

SMA 90° Male Connector

Dimensions: 59*27*1mm

1. Antenna Electrical Characteristics

Band (MHz)	
Frequency (MHz)	868-915
VSWR	≤2.0
Efficiency (%)	66.52
Peak Gain (dBi)	4.71
Impedance (Ohm)	50
Polarisation	Vertical
Max. Input Power (W)	10

2. Material and environmental characteristics

External Structure	N/A
Inner Structure	PCB
Cable Type	RG174
Connector Type	SMA 90°Male
Dimensions (mm)	59*27*1
Antenna Colour	Black
Operation Temperature	-40℃ to +80℃
Storage Temperature	-40℃ to +80℃
Antenna Storage life(year)	10
Substance Compliance	ROHS

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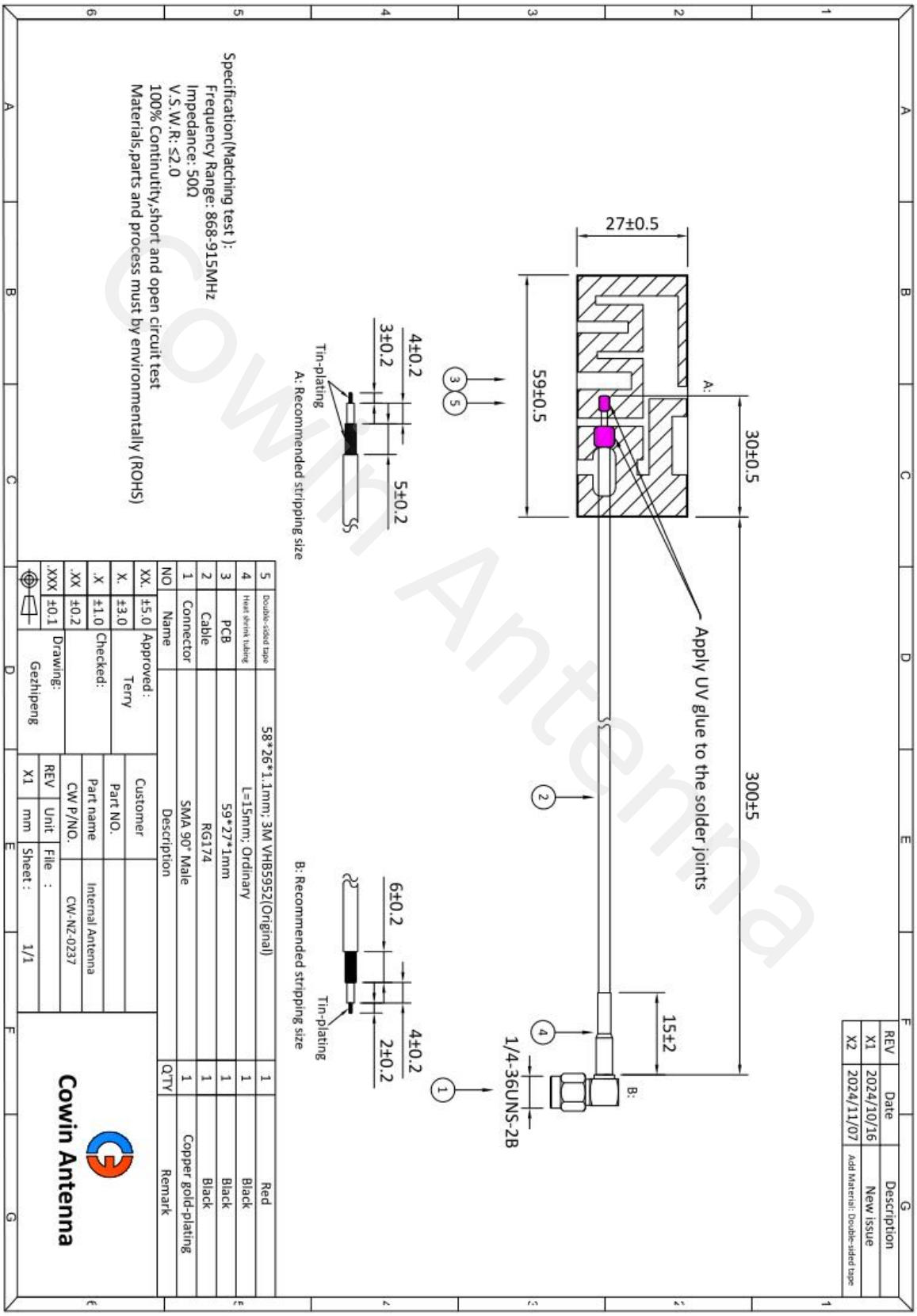
27±0.5
59±0.5
30±0.5
300±5
15±2
Apply UV glue to the solder joints
1/4-36UNS-2B
4±0.2
3±0.2
5±0.2
Tin-plating
A: Recommended stripping size
6±0.2
4±0.2
2±0.2
Tin-plating
B: Recommended stripping size
REV Date Description
X1 2024/10/16 New issue
X2 2024/11/07 Add Material: Double-sided tape
Specification(Matching test):
Frequency Range: 868-915MHz
Impedance: 50Ω
V.S.W.R: ≤2.0
100% Continutity,short and open circuit test
Materials,parts and process must by environmentally (ROHS)
5 Double-sided tape 58*26*1.1mm; 3M VHB5952(Original) 1 Red
4 Heat shrink tubing L=15mm; Ordinary 1 Black
3 PCB 59*27*1mm 1 Black
2 Cable RG174 1 Black
1 Connector SMA 90° Male 1 Copper gold-plating
NO Name Description QTY Remark
XX. ±5.0 Approved : Terry Customer
X. ±3.0
.X ±1.0 Checked: Part NO.
.XX ±0.2
.XXX ±0.1 Drawing: Gezhipeng Part name Internal Antenna
CW P/NO. CW-NZ-0237
REV X1
Unit mm
File :
Sheet : 1/1
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4. Antenna test parameters

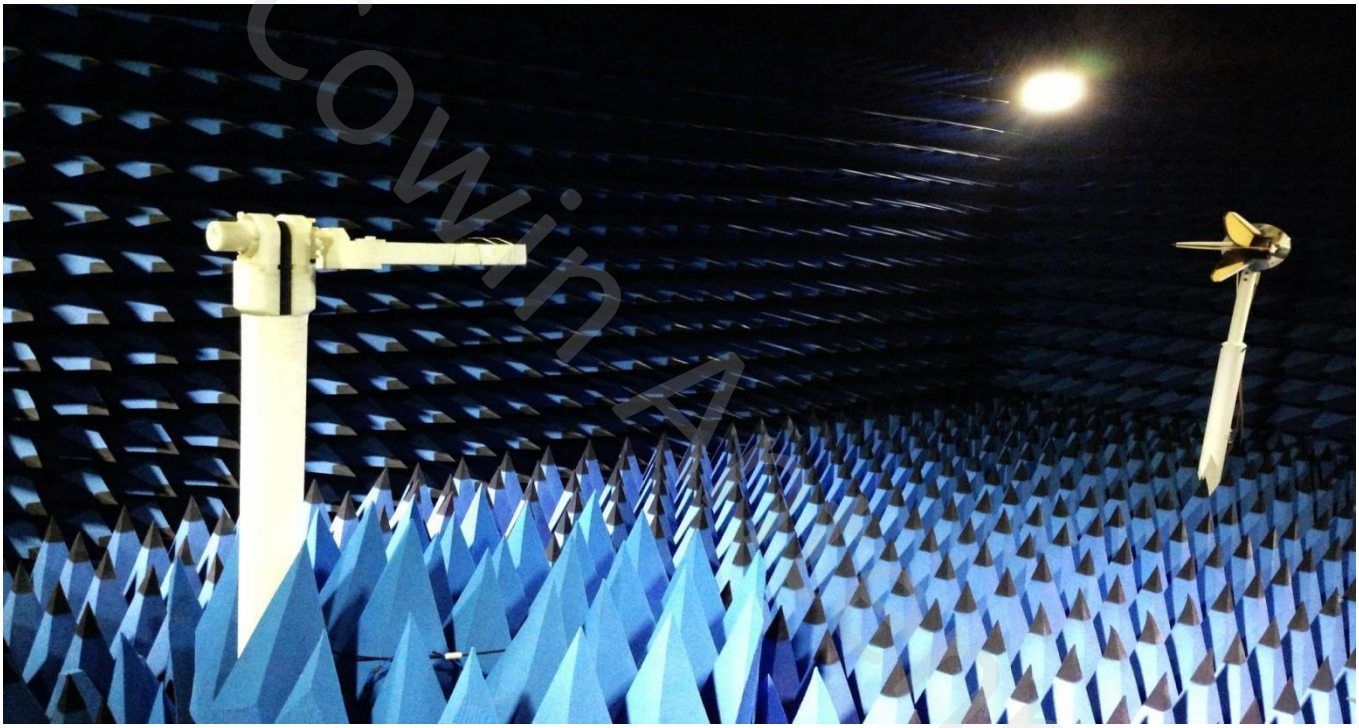
Antenna Measurement Conditions:

Mounted on Ground Plane of 280 x 80 mm

Measured in Certified 3D Anechoic Chamber

The network analyzer is Agilent 5071c

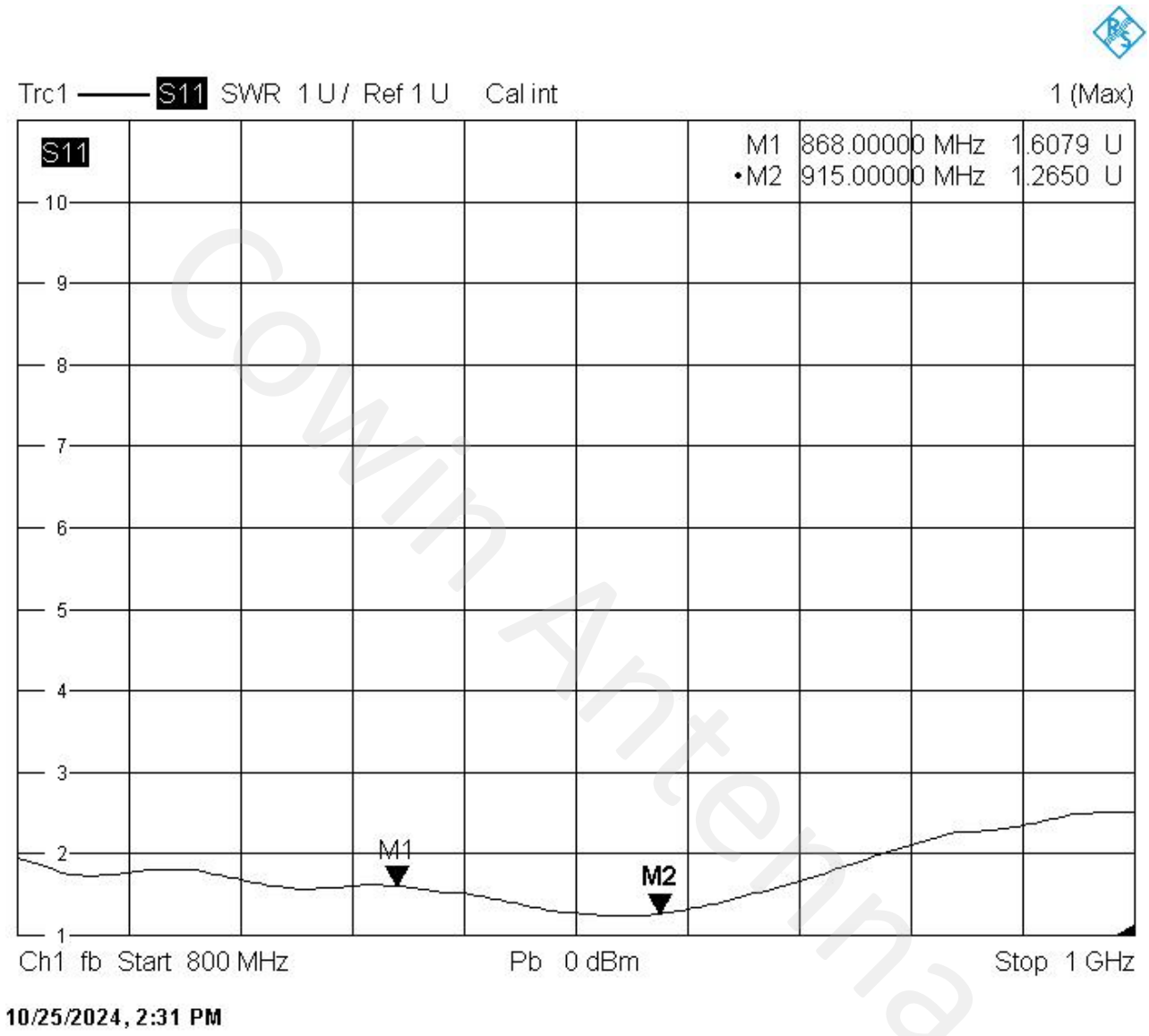
The comprehensive tester is Agilent cmv500







4.1 VSWR



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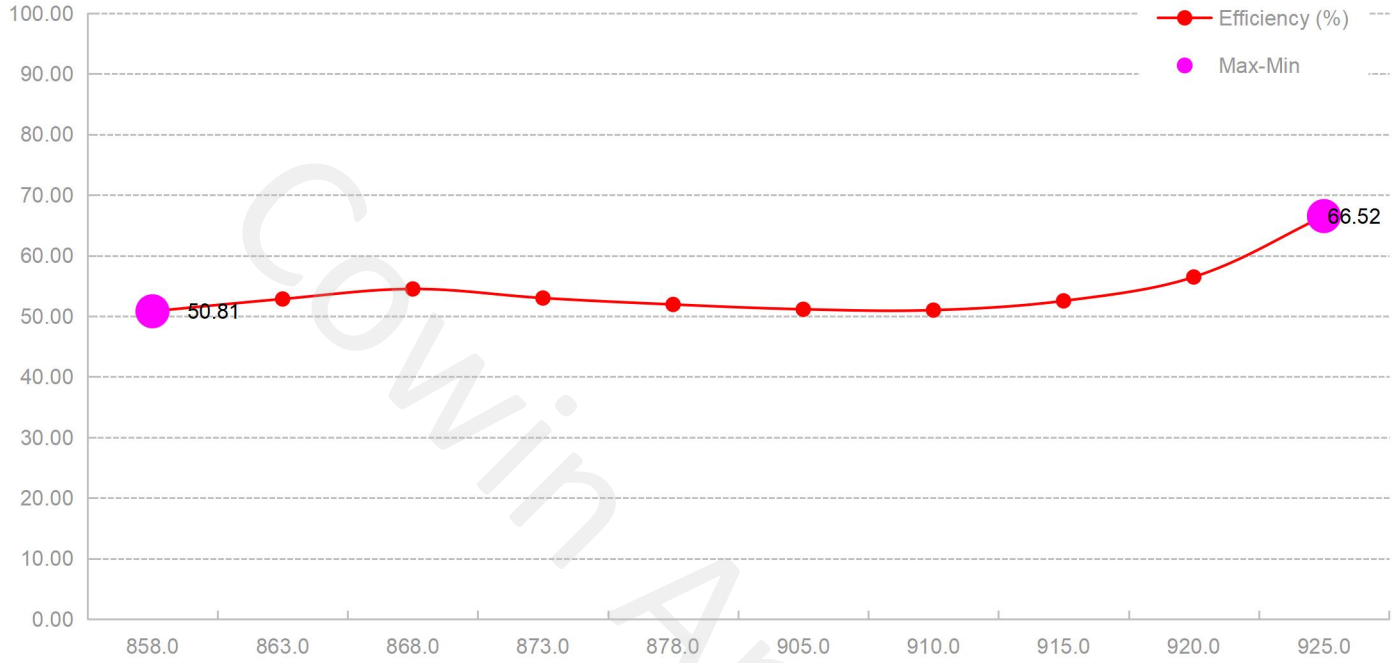
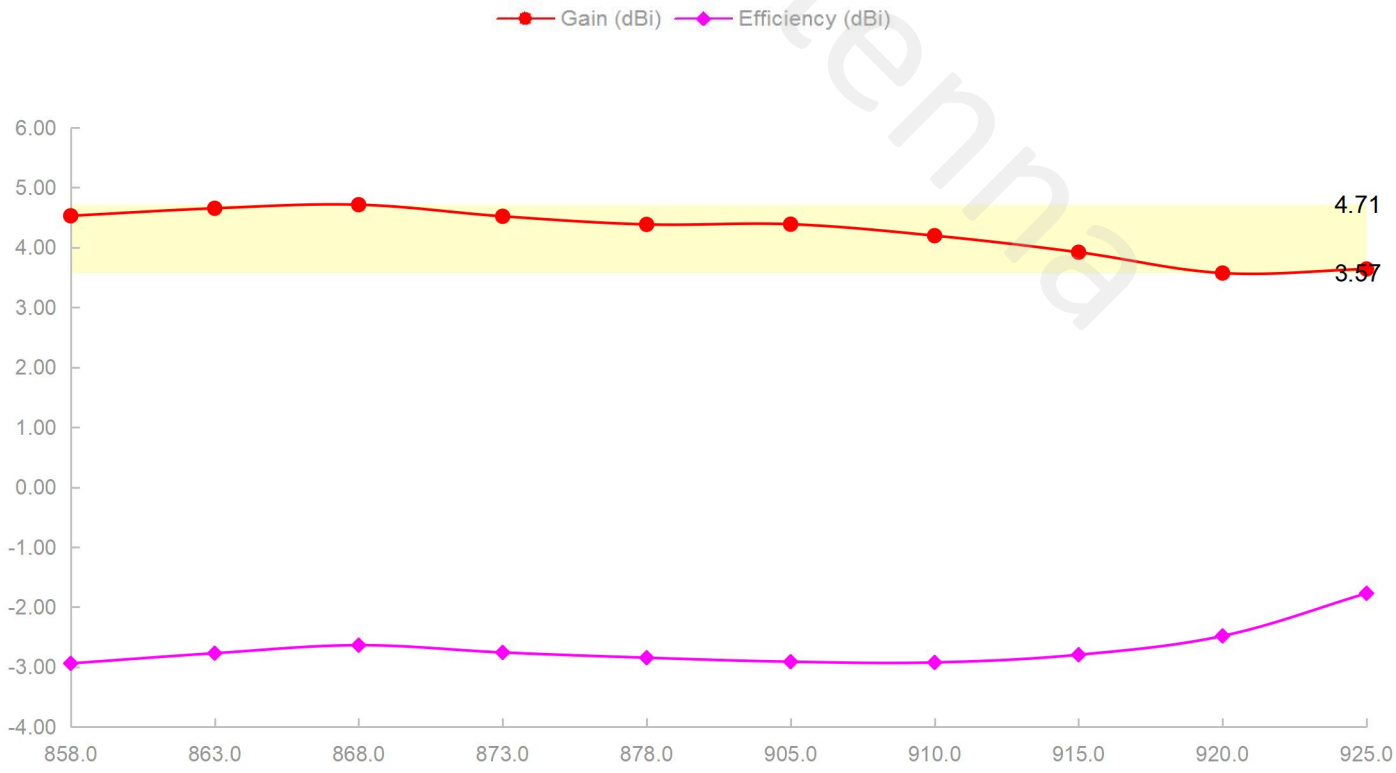
4.2 Efficiency



4.3 Peak gain



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4.4 Data summary

Frequency (MHz)	Gain (dBi)	Efficiency (%)
858.0	4.53	50.81
863.0	4.65	52.84
868.0	4.71	54.49
873.0	4.52	52.99
878.0	4.38	51.93
905.0	4.39	51.14
910.0	4.20	51.00
915.0	3.92	52.53
920.0	3.57	56.47
925.0	3.64	66.52

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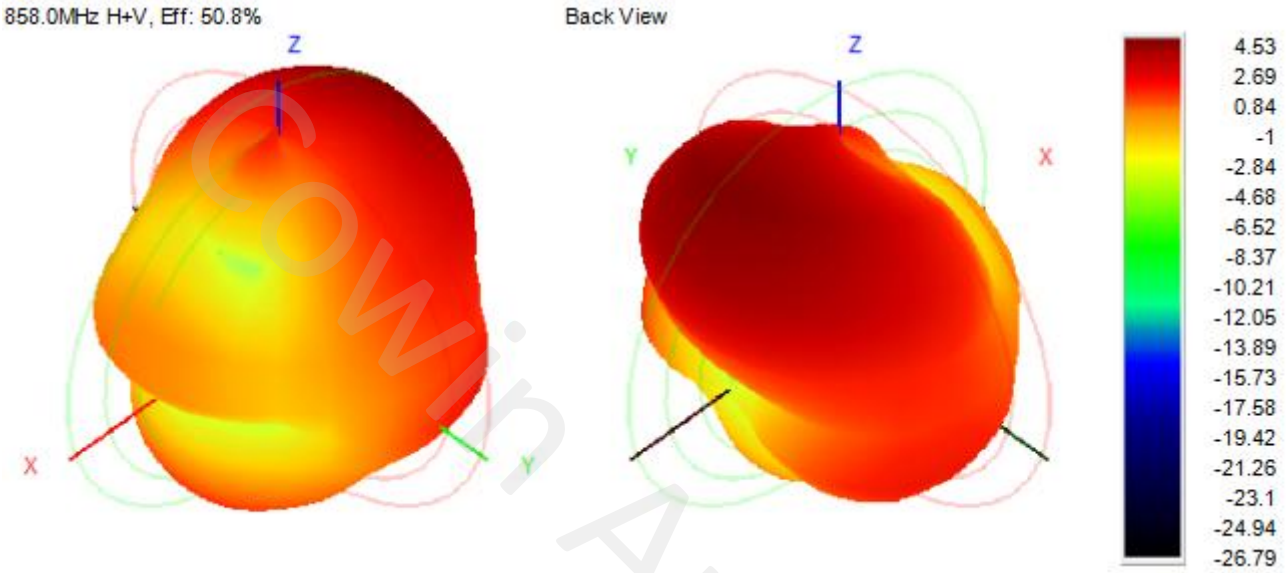
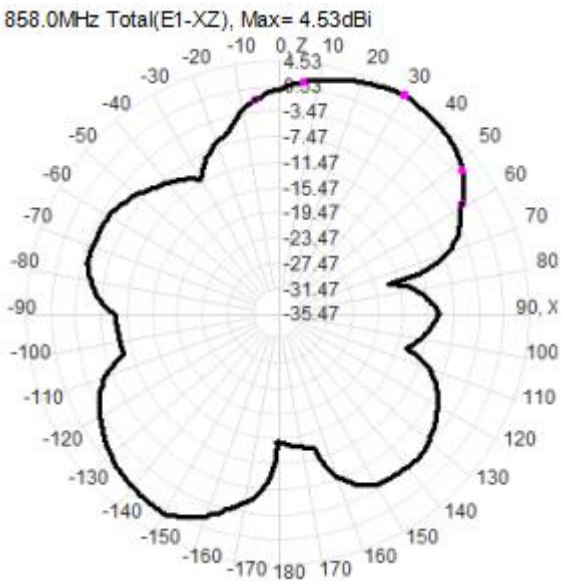
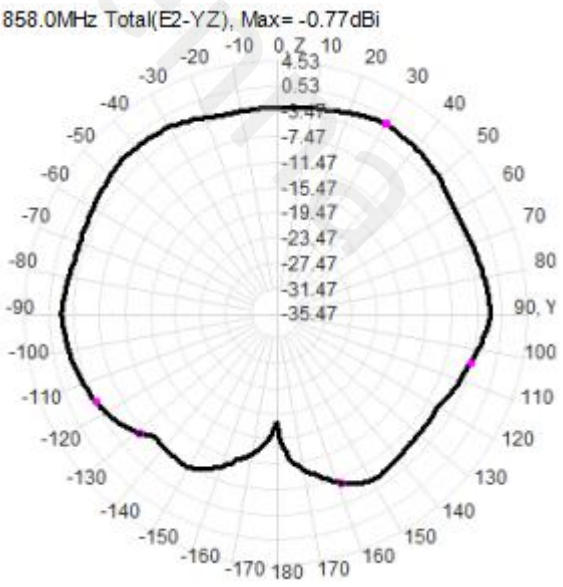
4.5 3D&2D Radiation Patterns







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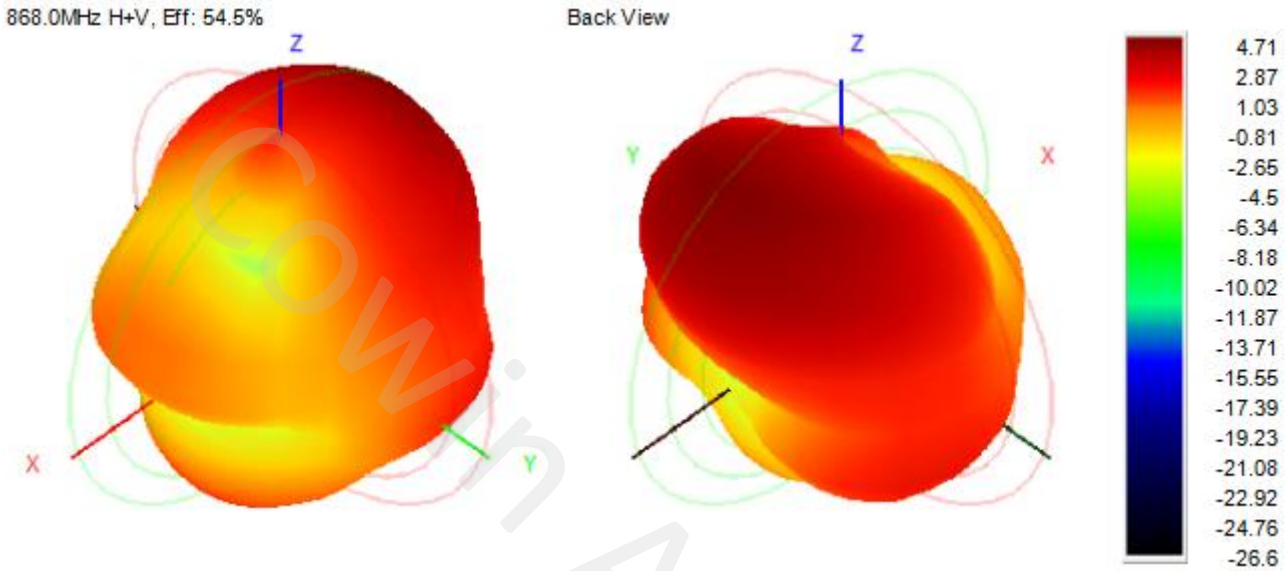

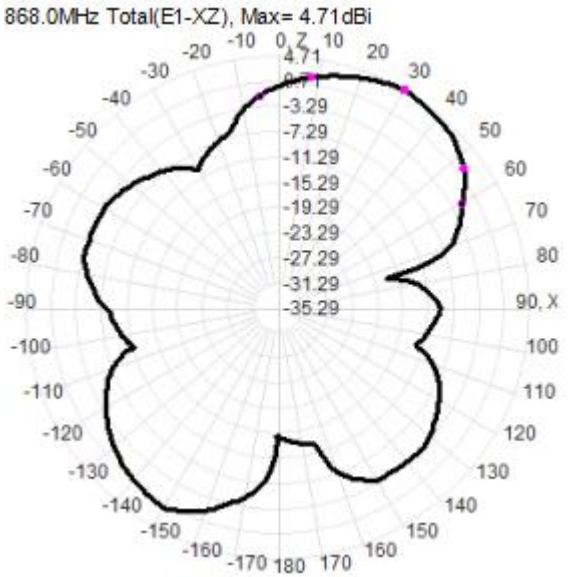

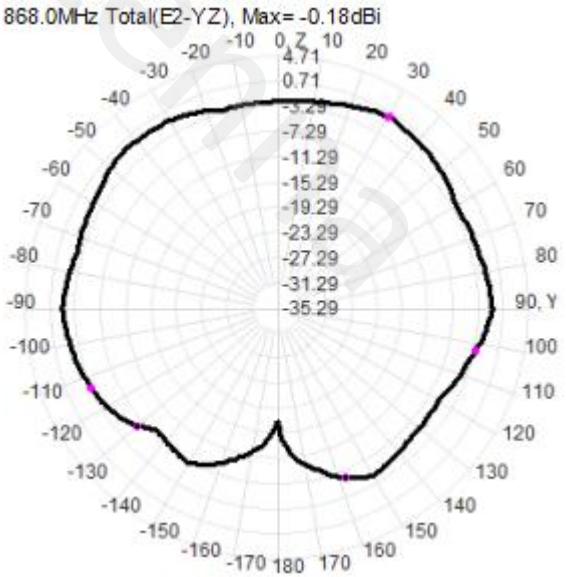

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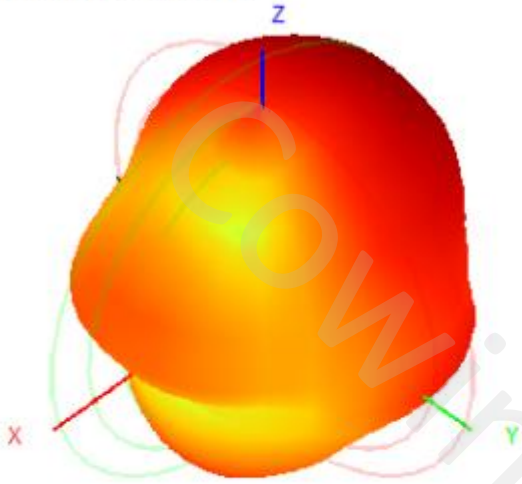
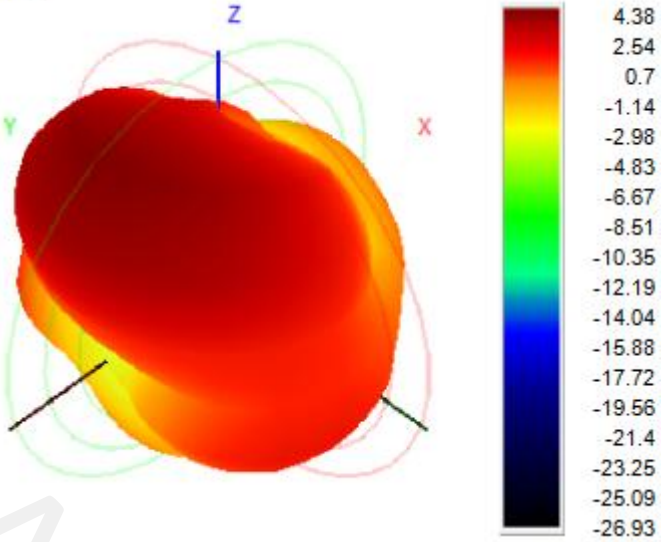
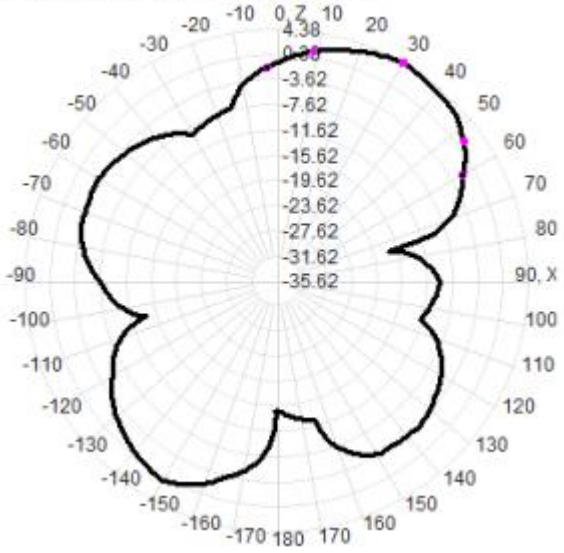
878.0MHz H+V, Eff: 51.9%



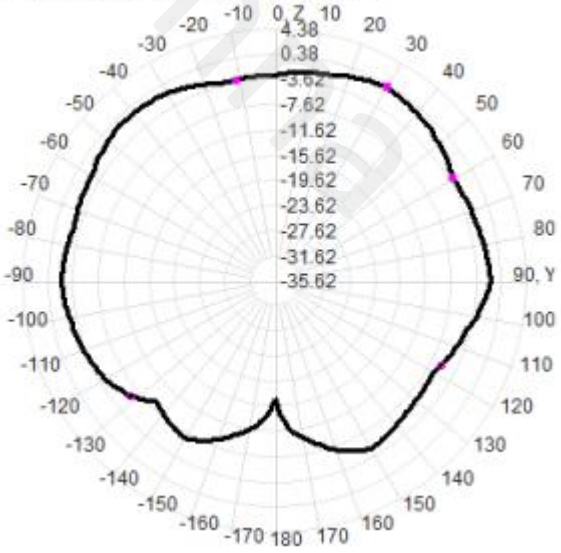
Back View



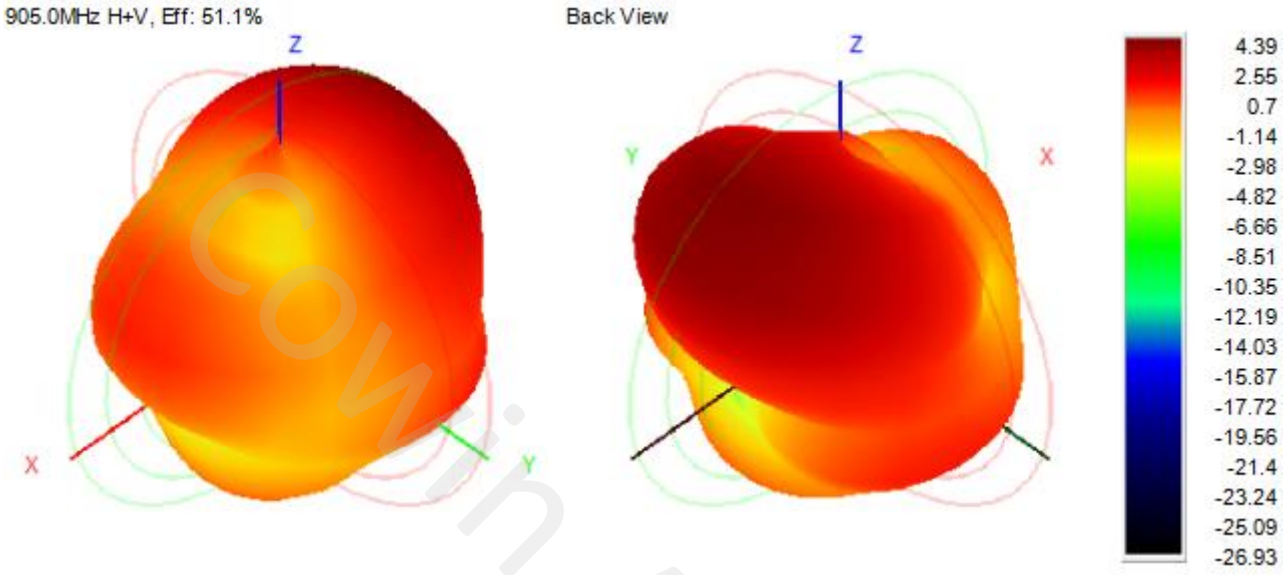
878.0MHz Total(E1-XZ), Max= 4.38dBi

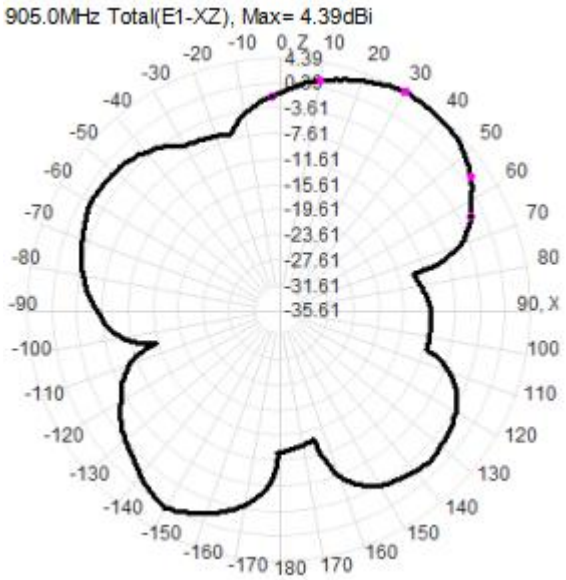


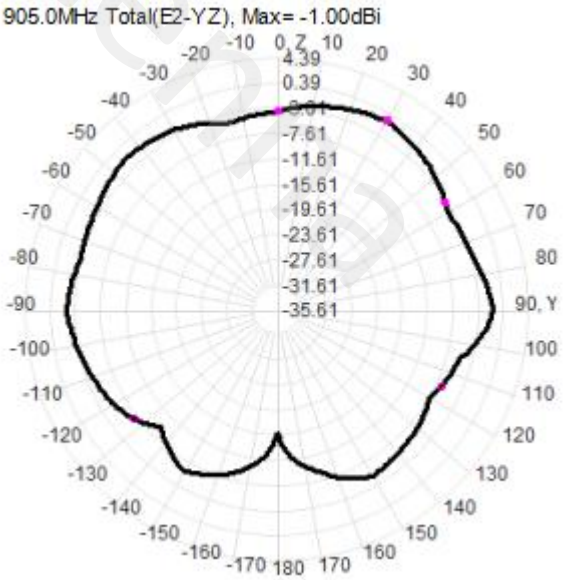
878.0MHz Total(E2-YZ), Max= -0.13dBi



Cowin Antenna







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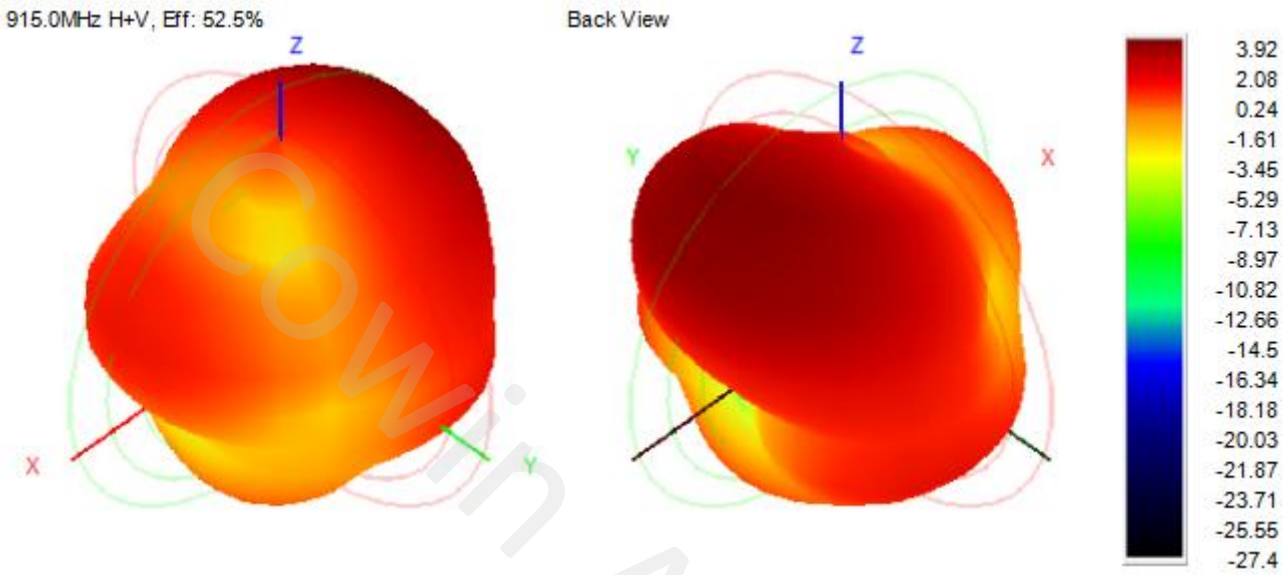

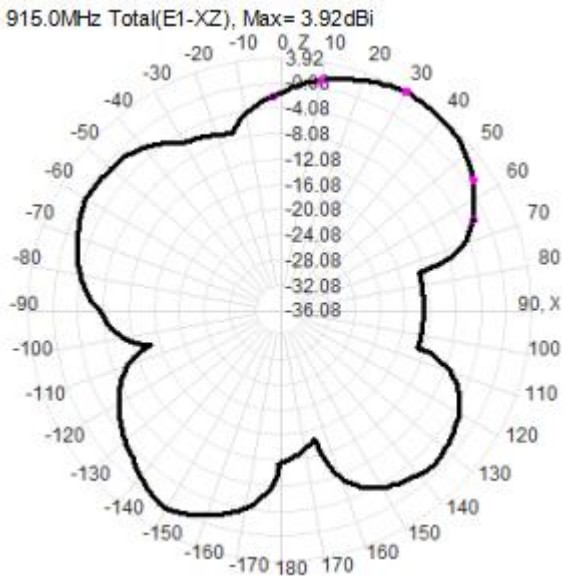

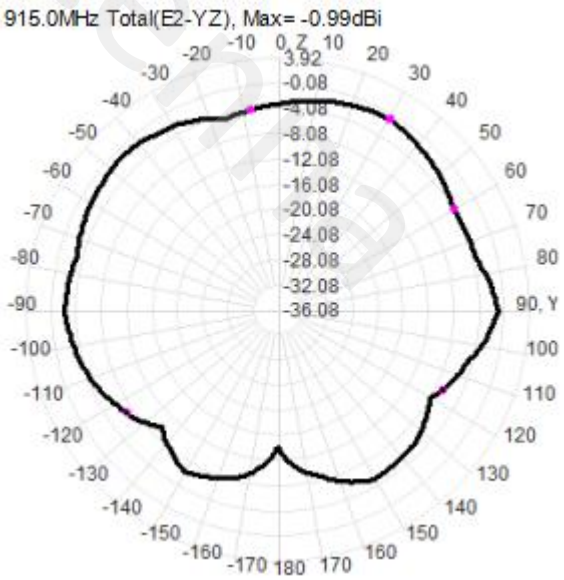

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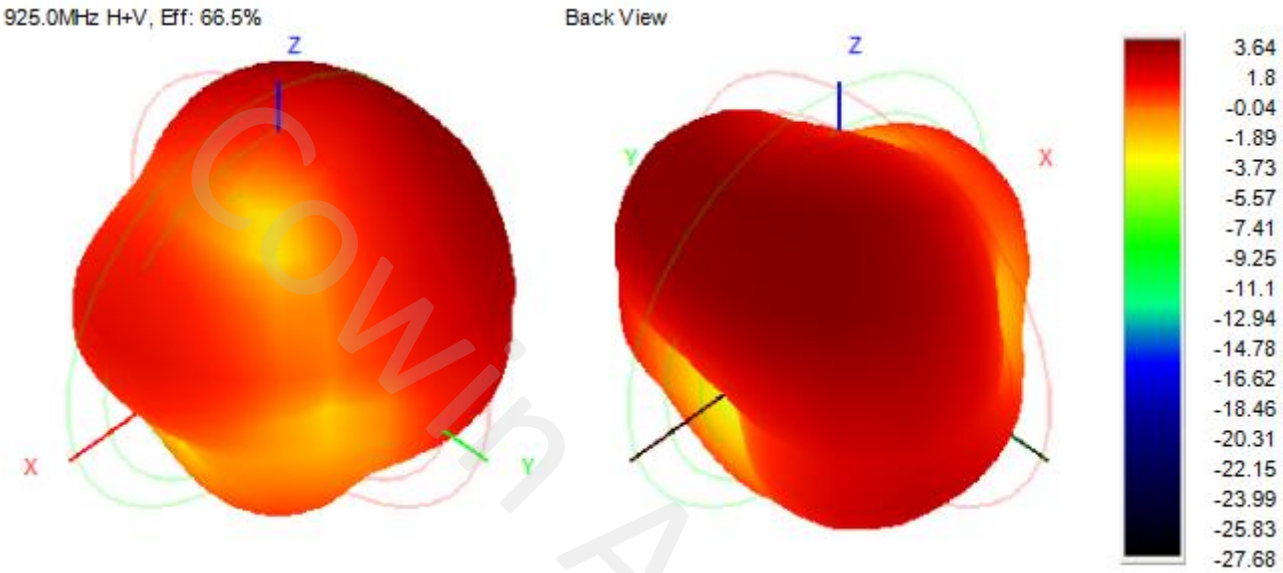

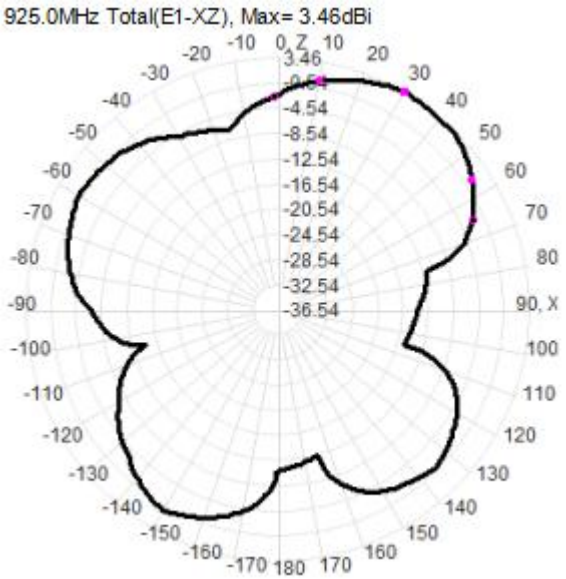

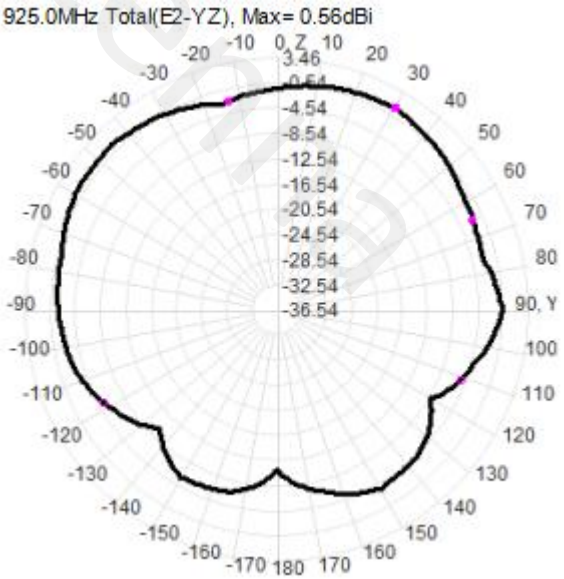

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