

Antenna specification

**Tianfrequency Intelligent
Technology (Kunshan) Co.,LTD**

**Material code:
TP299-RG174B-L3M-SJ-868**

customer name

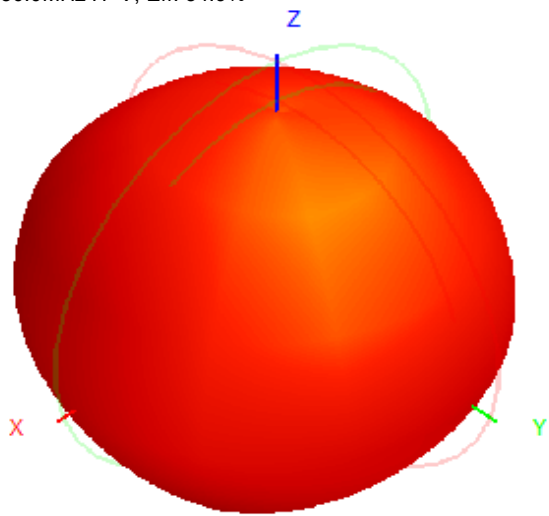
**Nanjing Ningyuan Intelligent
Instrument Co., LTD**

2022, November 11.04

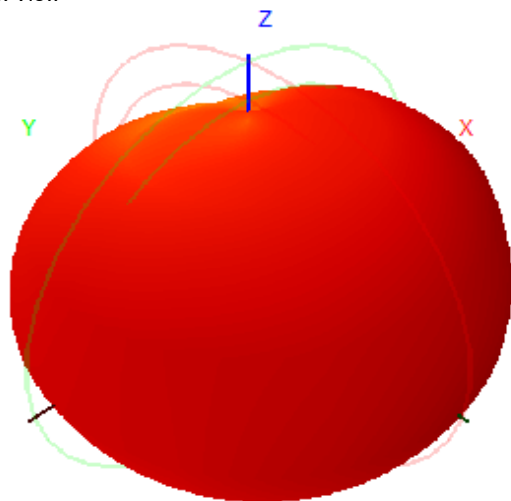
General product specification reference

NO.	ITEMS	DETAILS
1	Adapted models	LoRa, Specify the Project
2	Applicable frequency band	LoRa 433--930MHZ
3	antenna VSWR	< 2:1
4	antenna impedance	50Ω
5	Antenna structure form	RF cable + suction cup + spring oscillator
6	Max gain	-0.74dBi (430-510MHZ) -1.71dBi (850-930MHZ)
7	Antenna pole efficiency	40%(±10%)
8	union joint	SMA-J connector (SMA, inner screw inner hole)
9	wire stock Cable	Wire RG174-Black, Anti-UV
10	Maximum antenna operating frequency	3000MHZ
11	Antenna use temperature	-30°C --- 80°C
12	Environmental requirements	Meet environmental protection (confirmed separately if any special environmental protection requirements)
13	Physical picture reference	

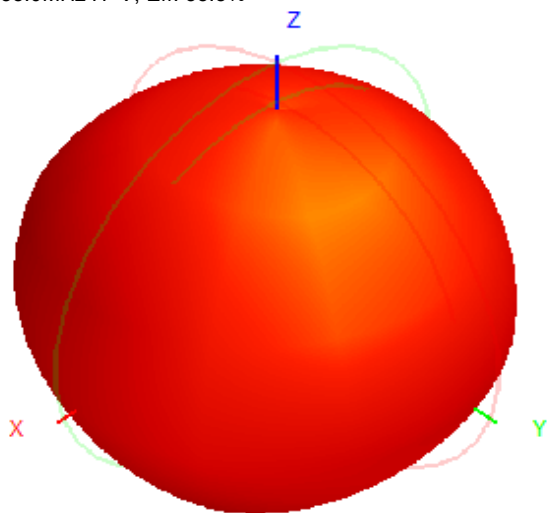
430.0MHz H+V, Eff: 34.9%



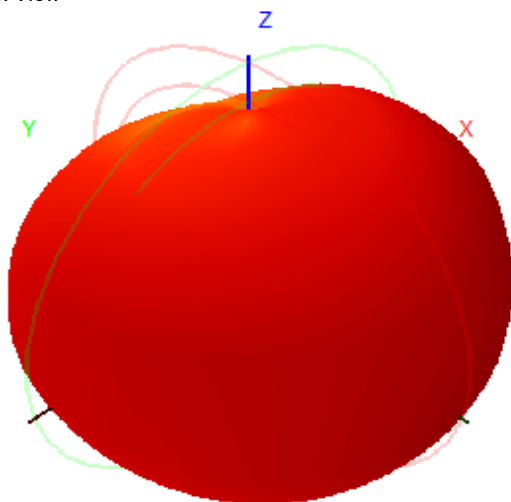
Back View



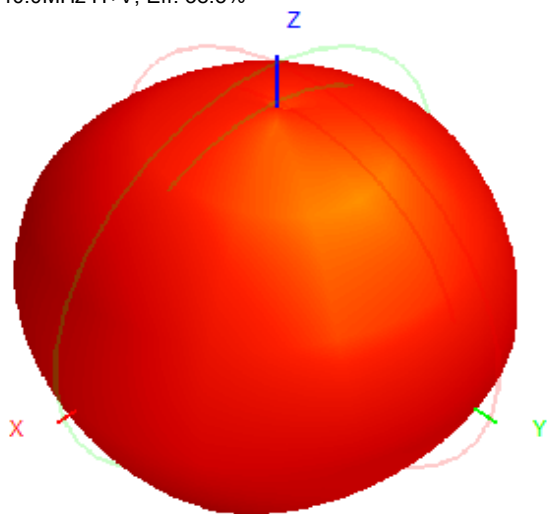
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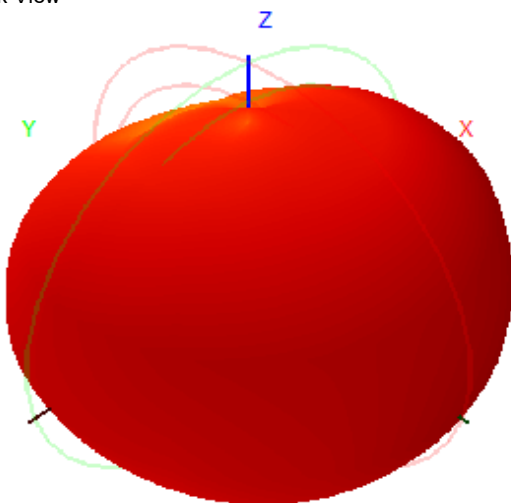
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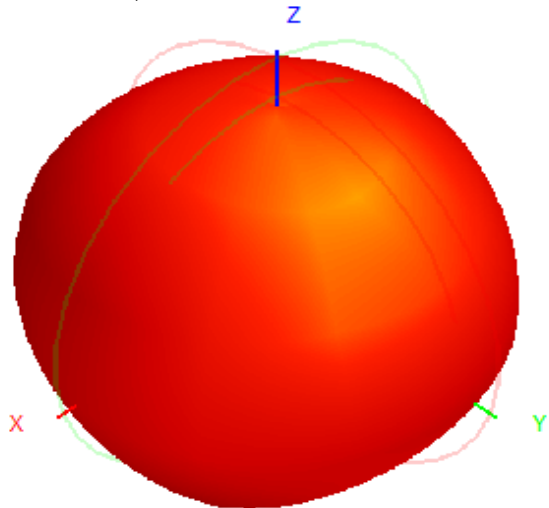
440.0MHz H+V, Eff: 38.5%



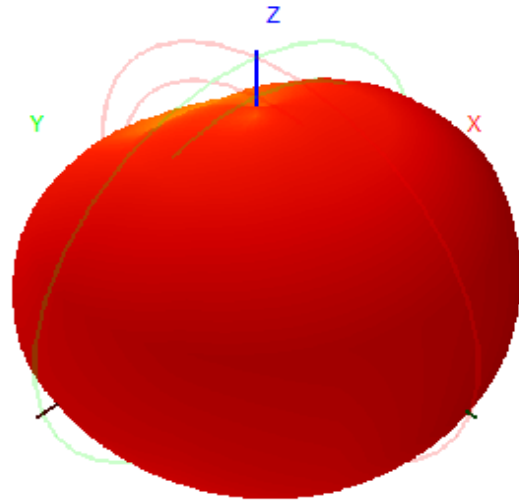
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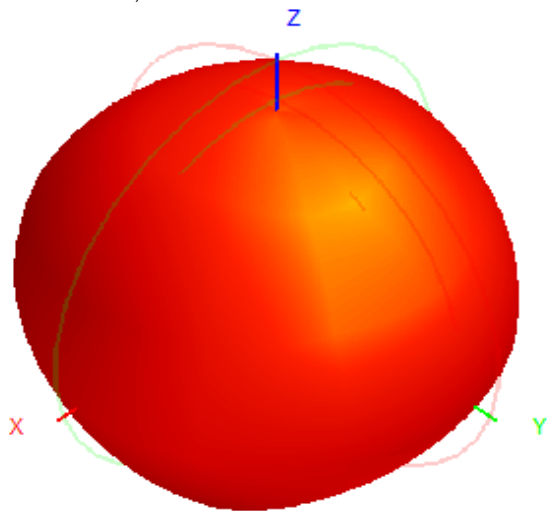
445.0MHz H+V, Eff: 39.2%



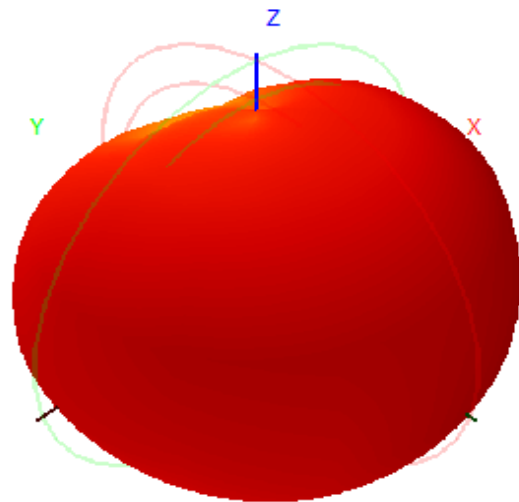
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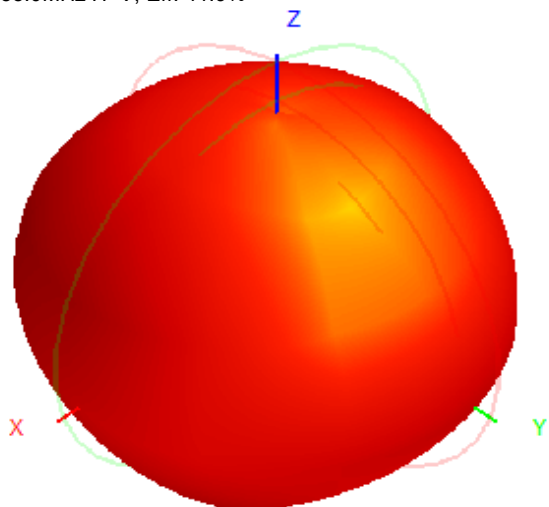
450.0MHz H+V, Eff: 39.0%



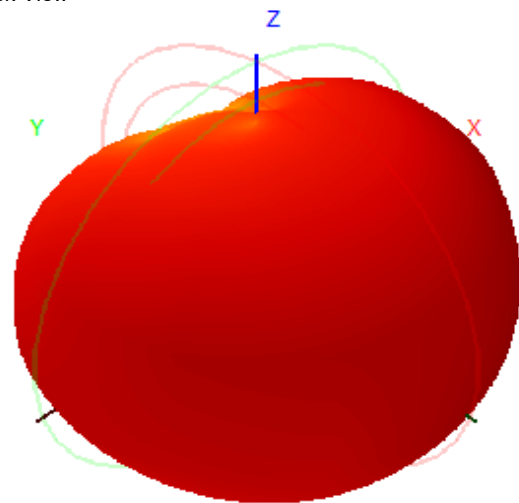
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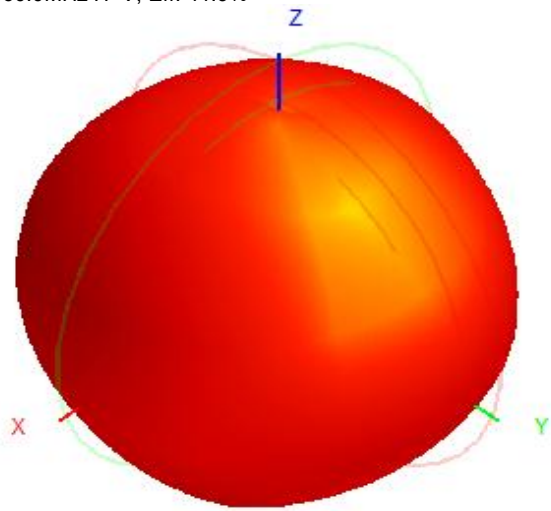
455.0MHz H+V, Eff: 41.9%



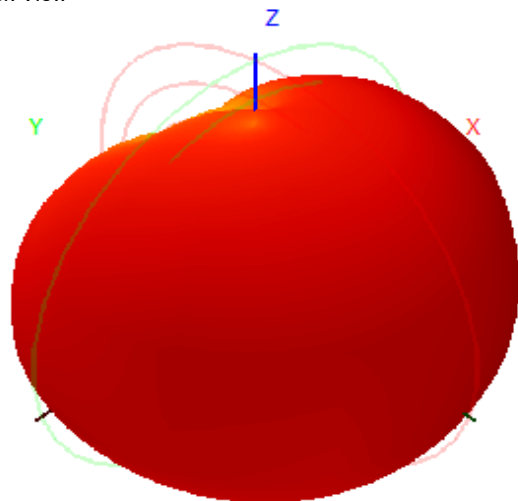
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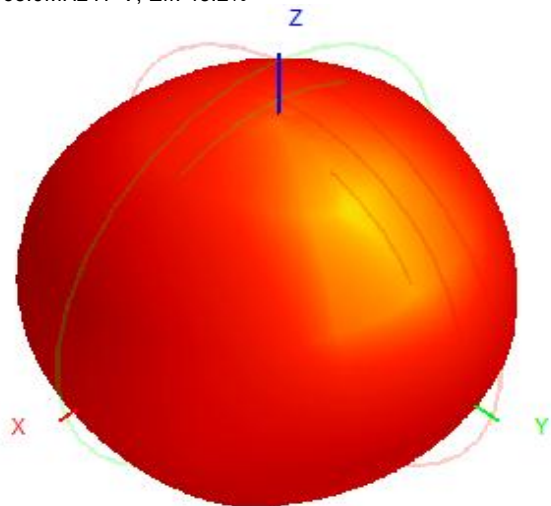
460.0MHz H+V, Eff: 41.9%



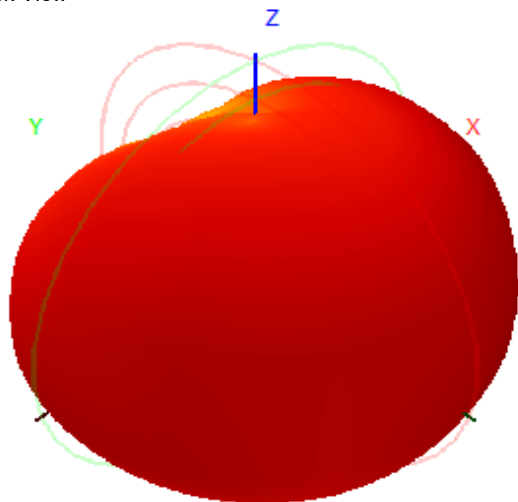
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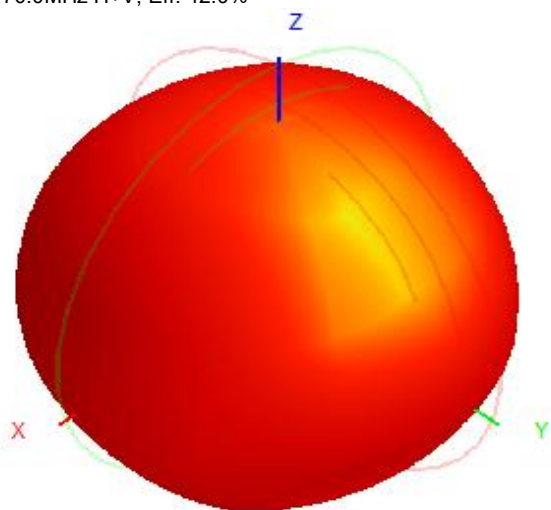
465.0MHz H+V, Eff: 43.2%



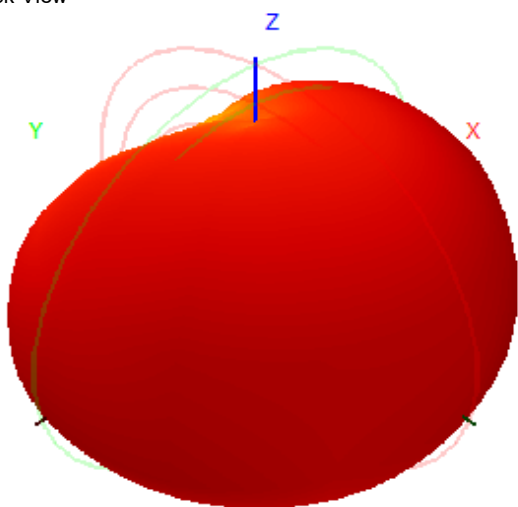
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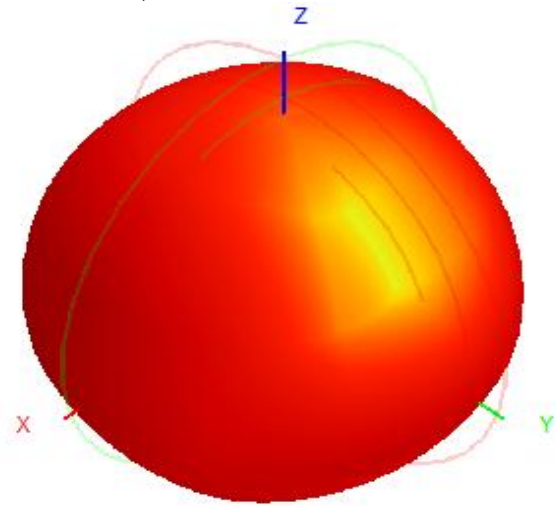
470.0MHz H+V, Eff: 42.0%



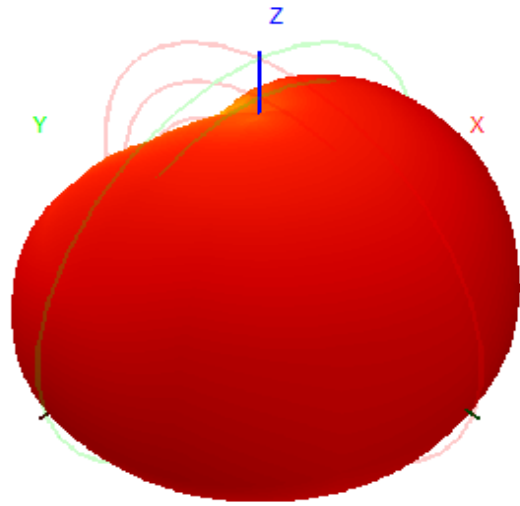
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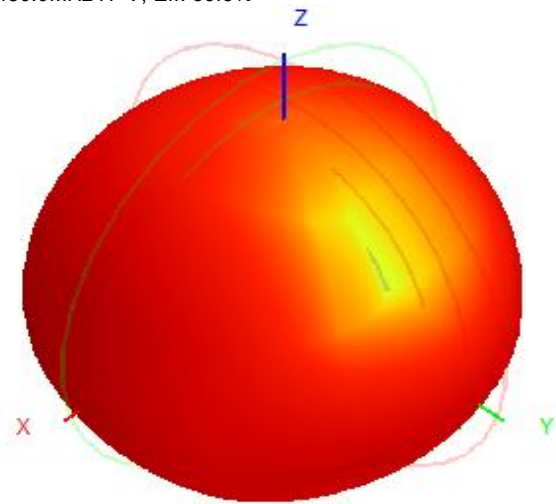
475.0MHz H+V, Eff: 40.7%



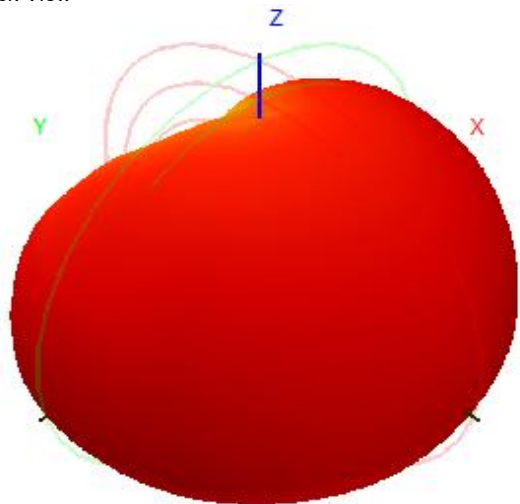
Back View



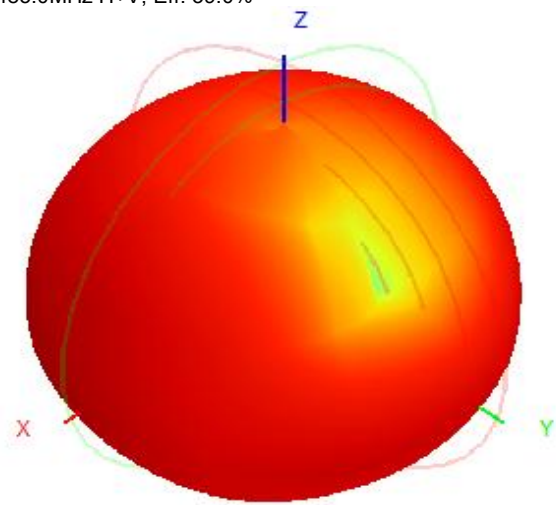
480.0MHz H+V, Eff: 39.5%



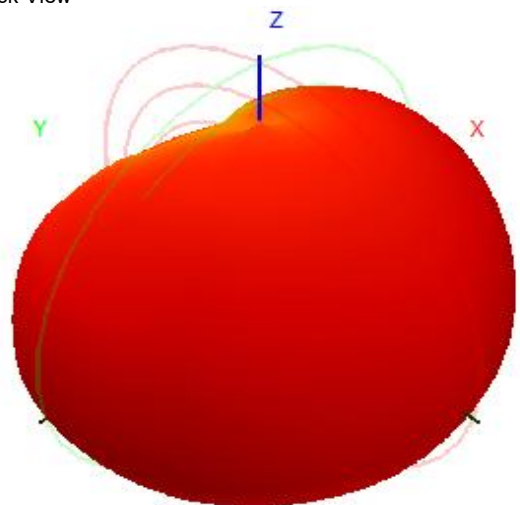
Back View



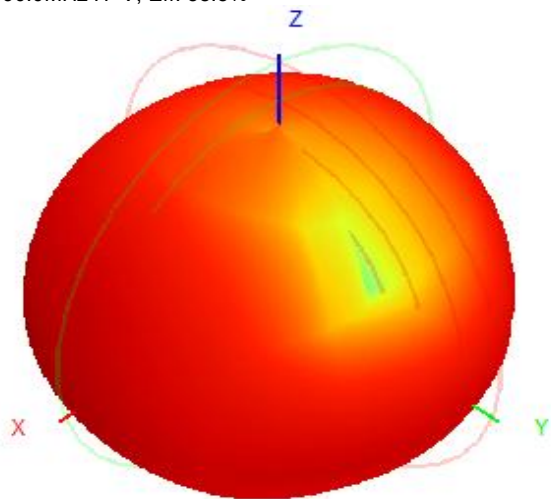
485.0MHz H+V, Eff: 39.0%



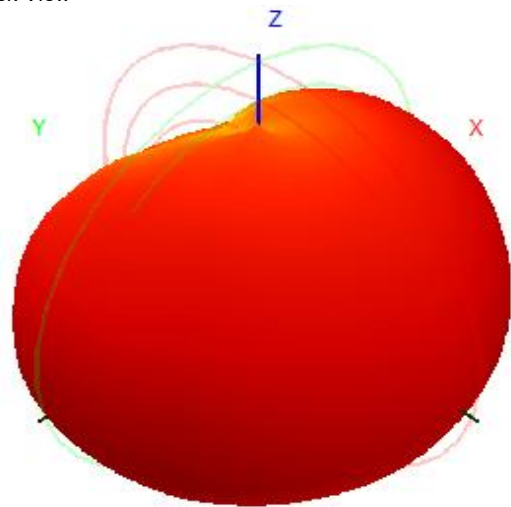
Back View



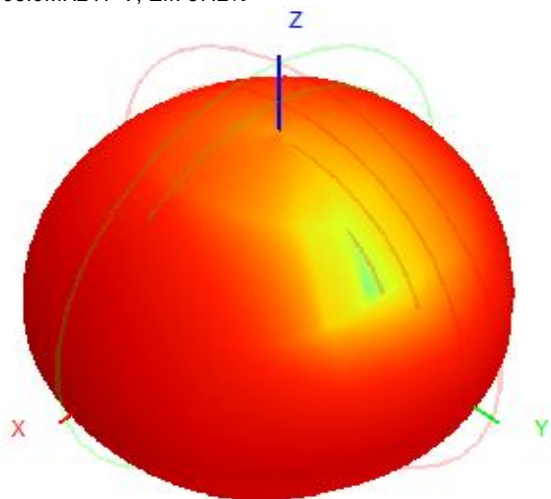
490.0MHz H+V, Eff: 38.5%



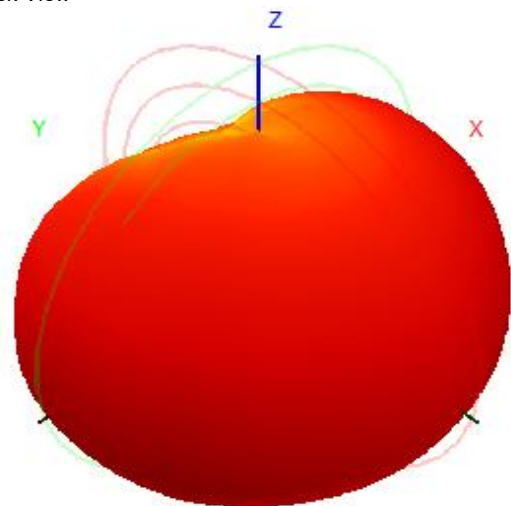
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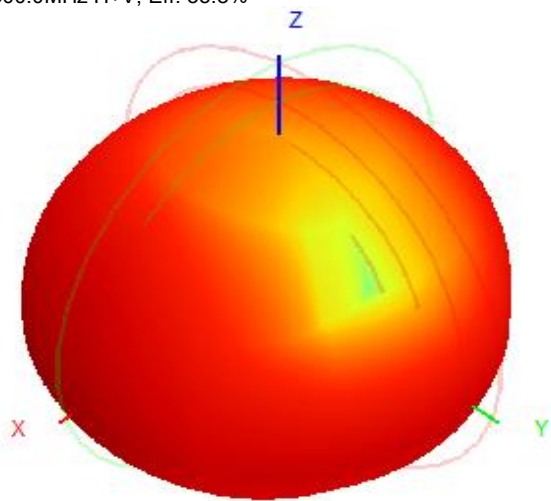
495.0MHz H+V, Eff: 37.2%



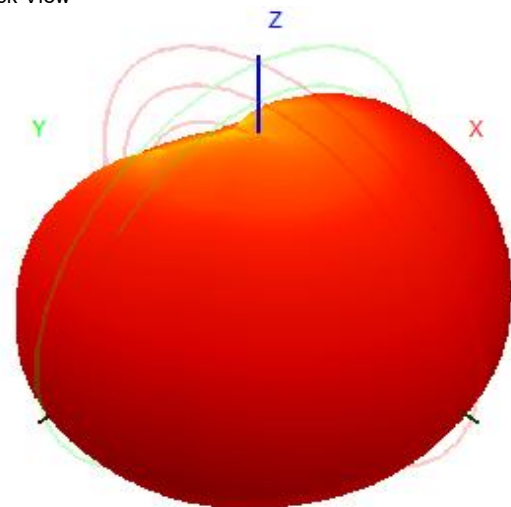
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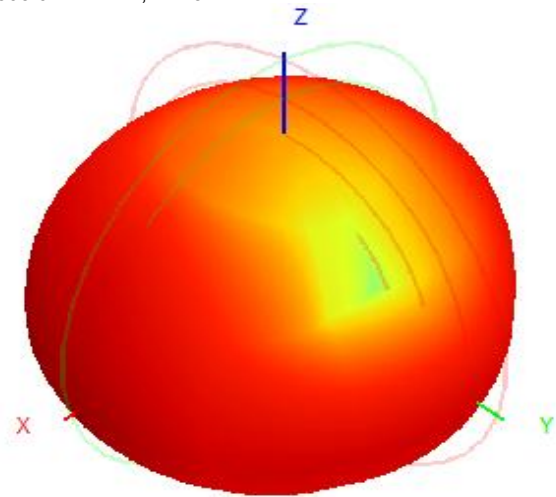
500.0MHz H+V, Eff: 35.8%



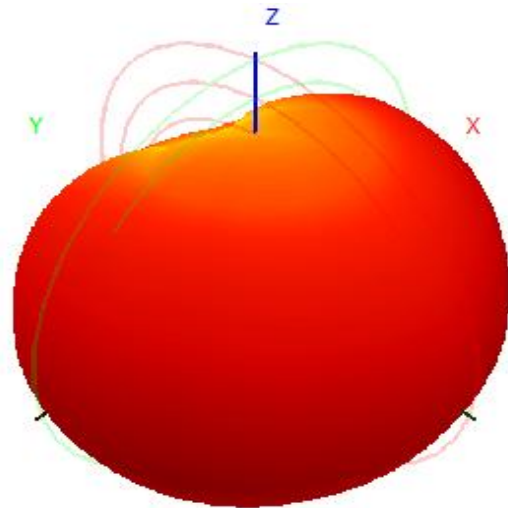
Back View



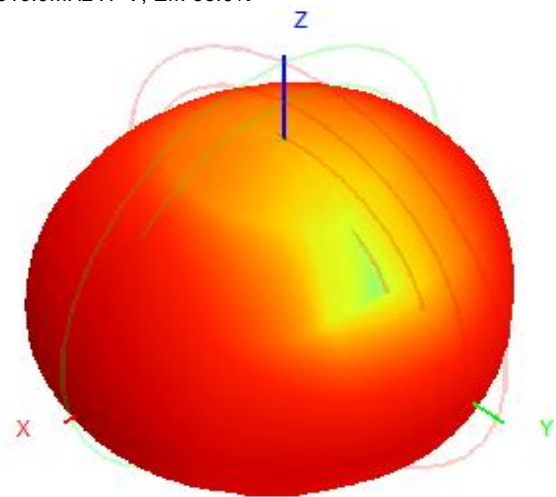
505.0MHz H+V, Eff: 34.7%



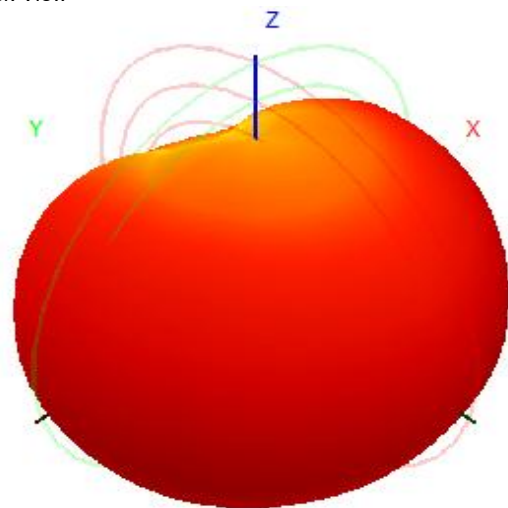
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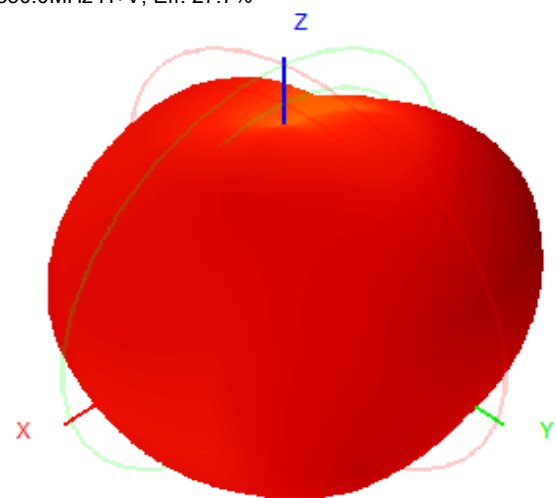
510.0MHz H+V, Eff: 33.0%



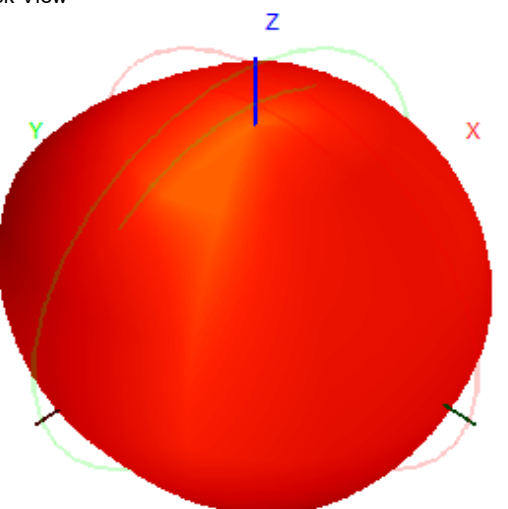
Back View



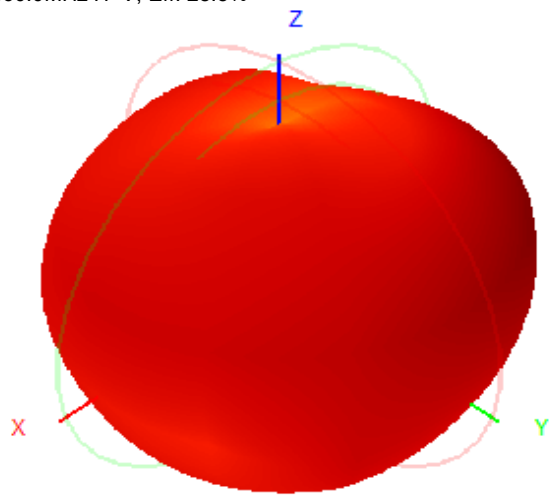
850.0MHz H+V, Eff: 27.7%



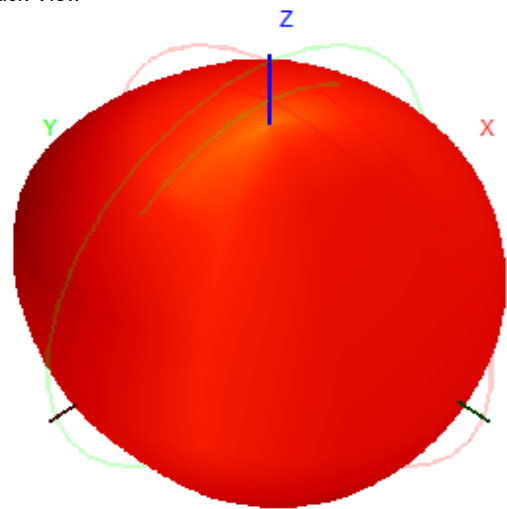
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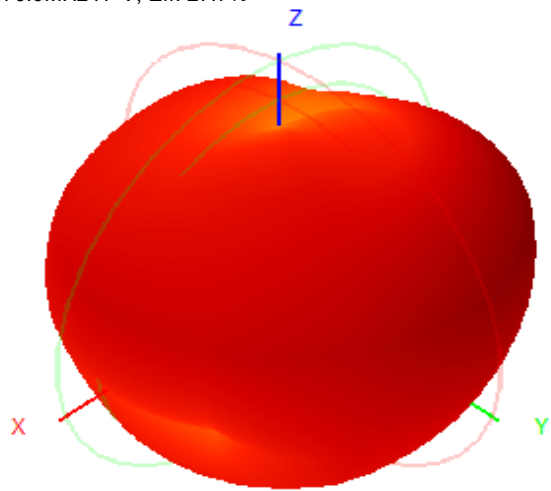
860.0MHz H+V, Eff: 28.5%



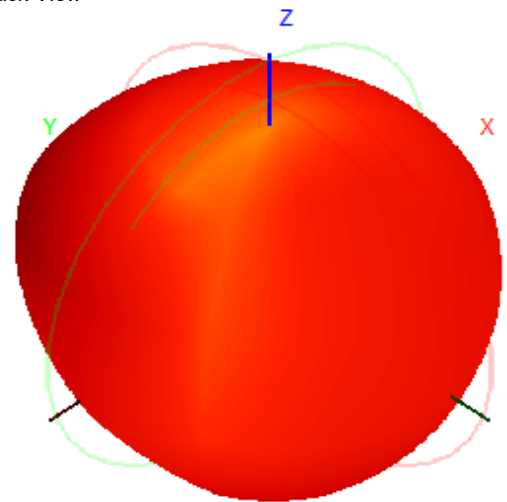
Back View



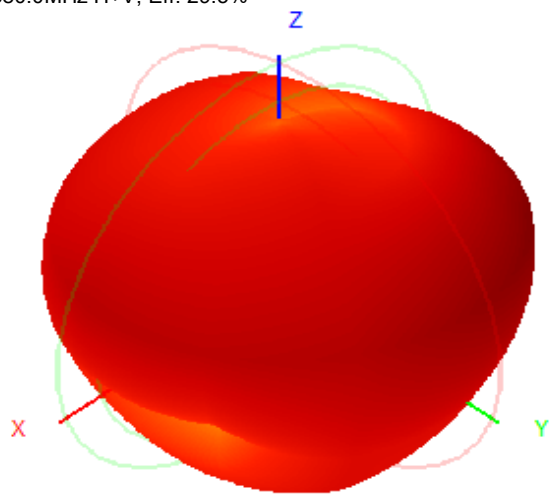
870.0MHz H+V, Eff: 27.7%



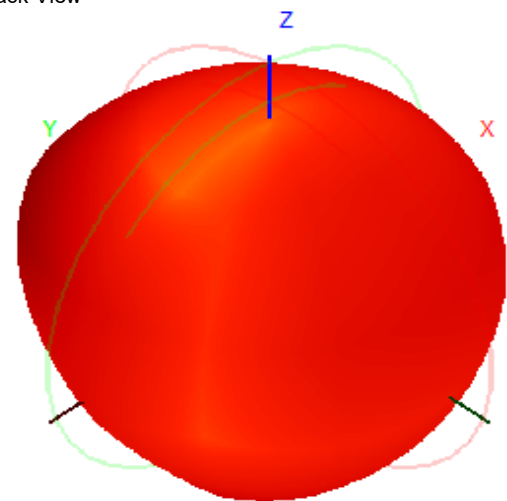
Back View



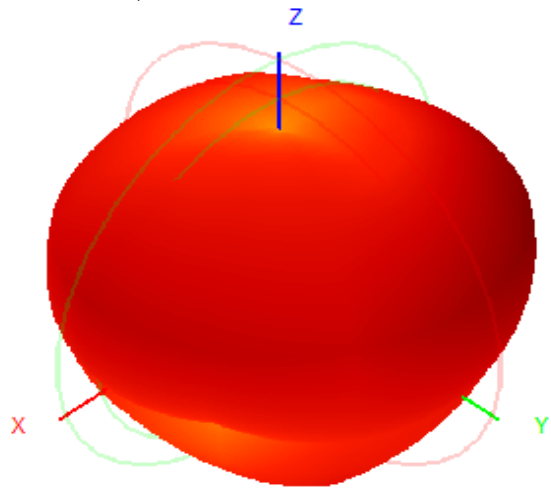
880.0MHz H+V, Eff: 29.5%



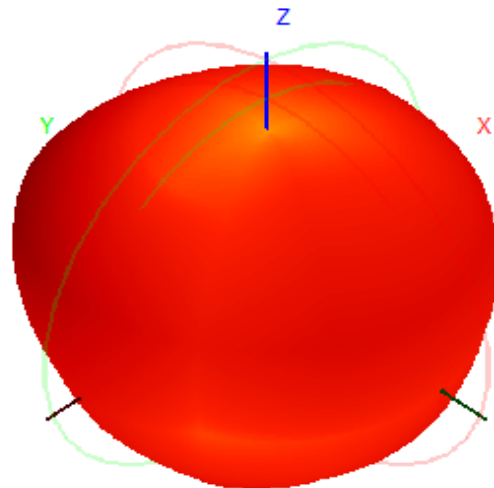
Back View



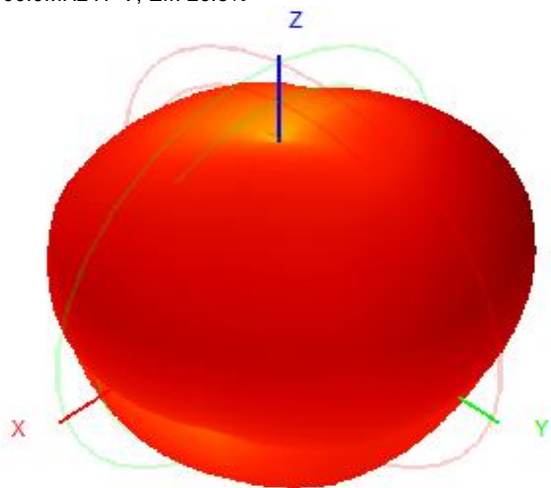
890.0MHz H+V, Eff: 28.2%



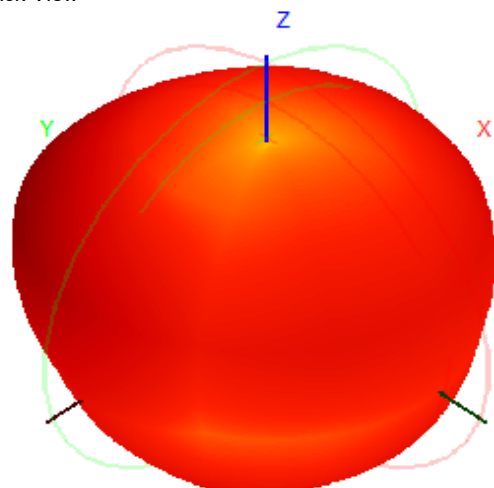
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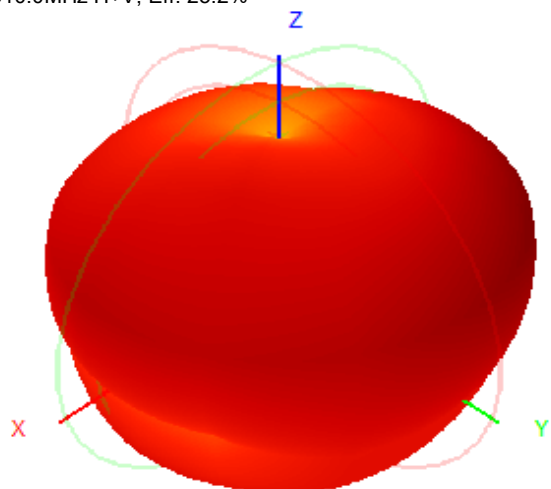
900.0MHz H+V, Eff: 26.3%



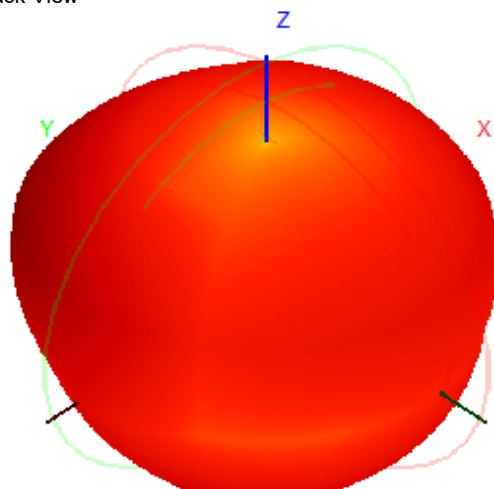
Back View



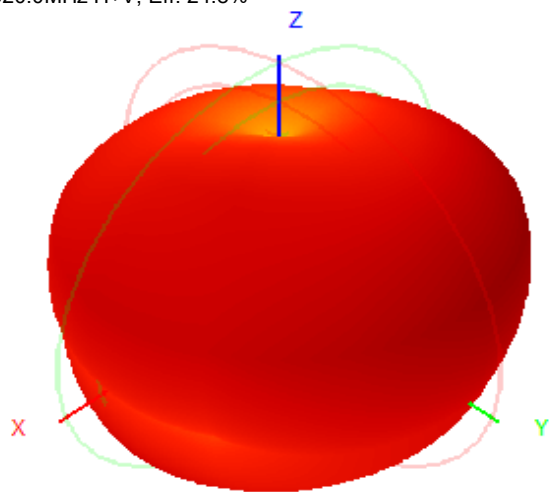
910.0MHz H+V, Eff: 25.2%



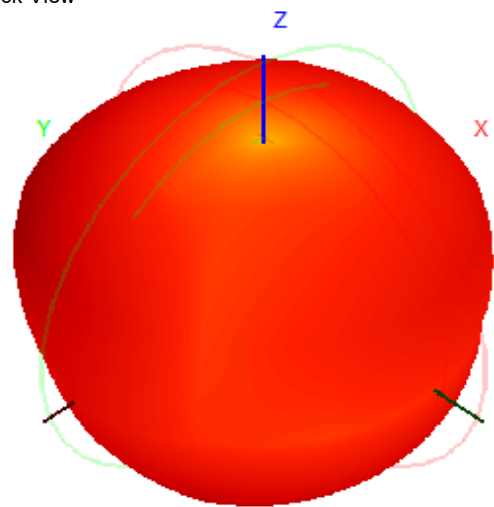
Back View



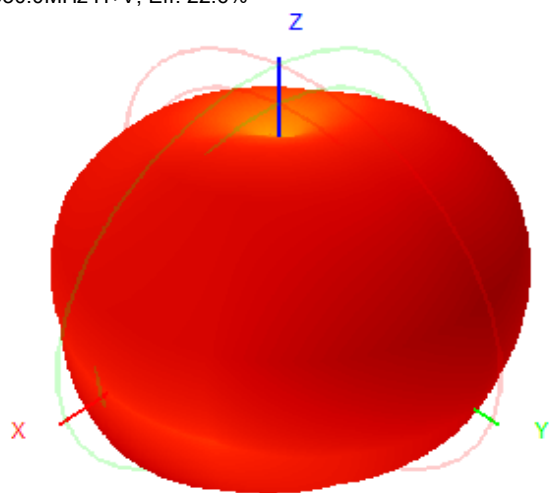
920.0MHz H+V, Eff: 24.8%



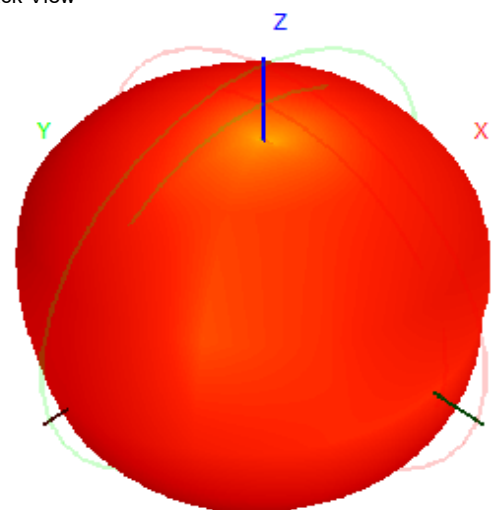
Back View

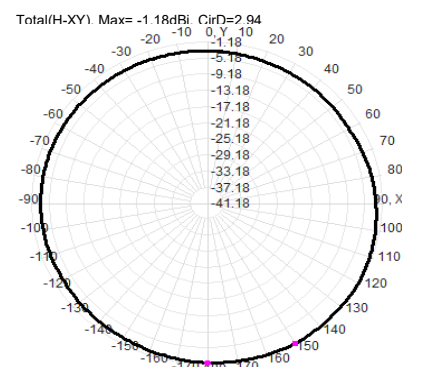
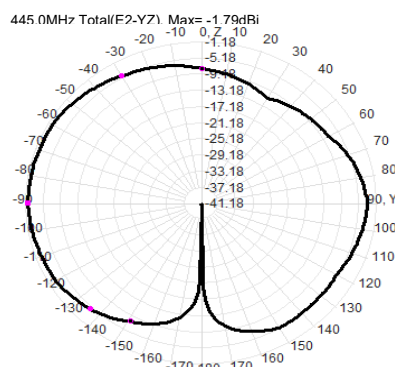
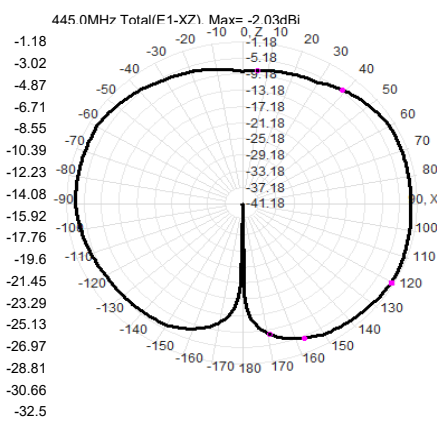
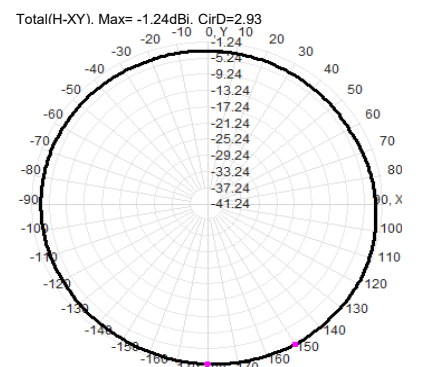
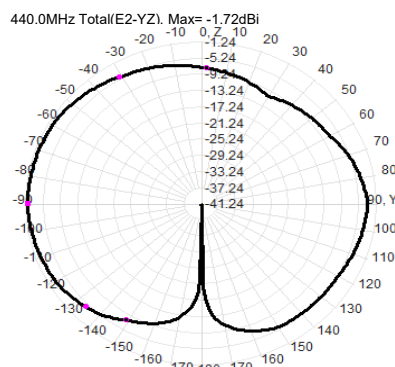
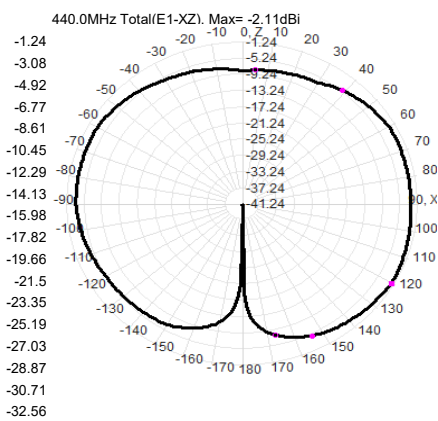
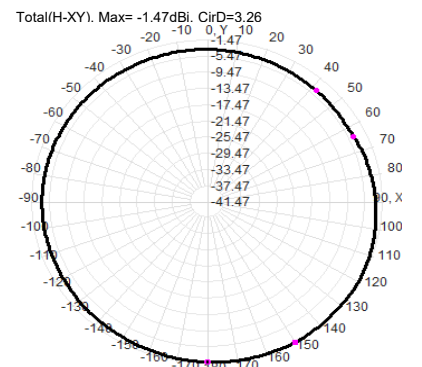
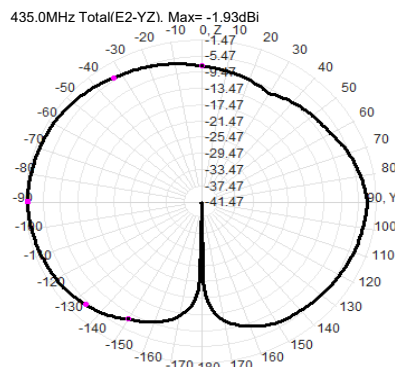
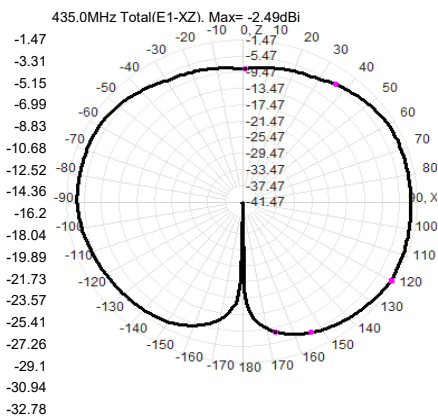
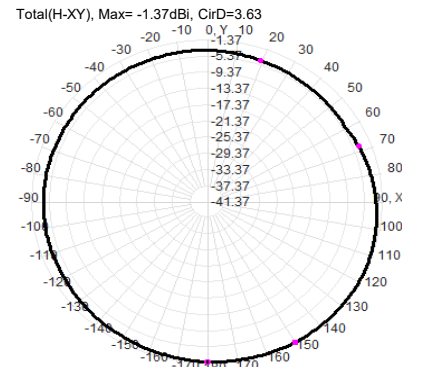
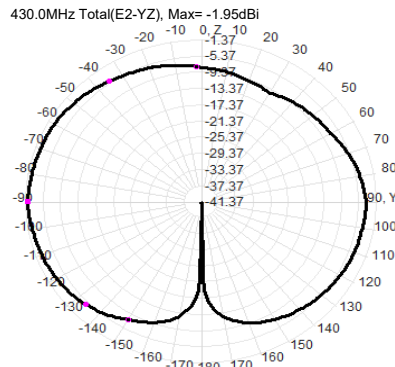
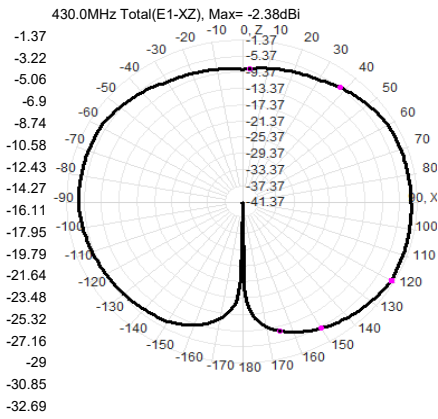


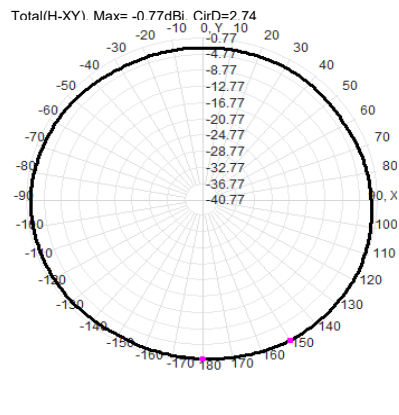
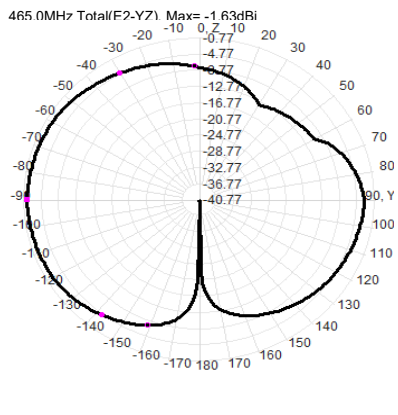
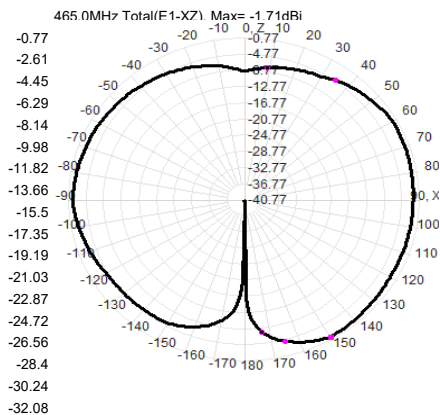
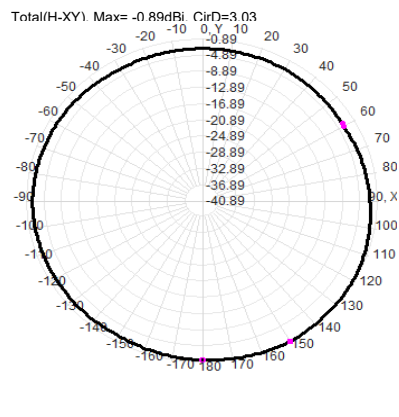
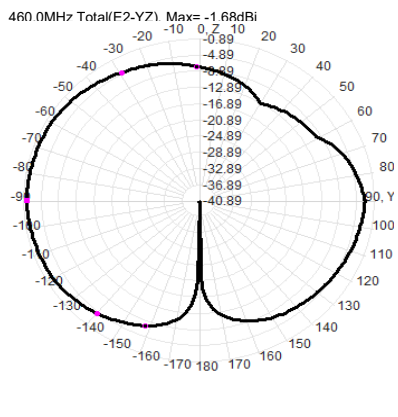
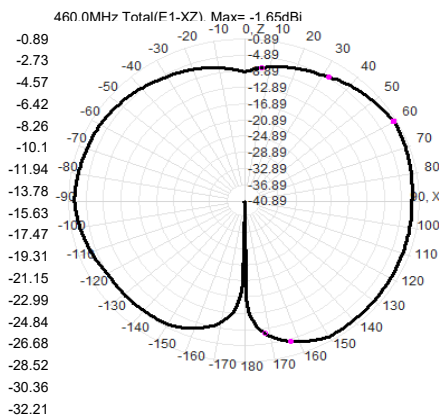
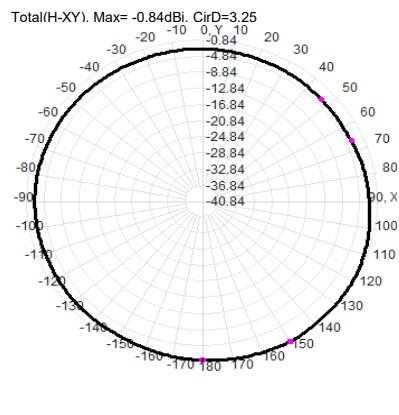
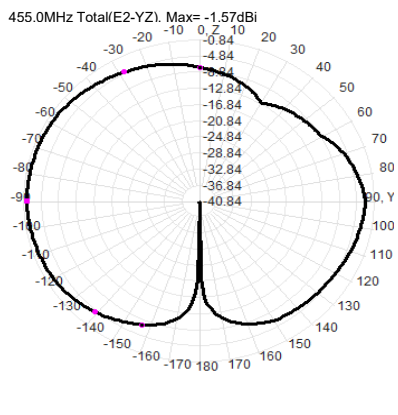
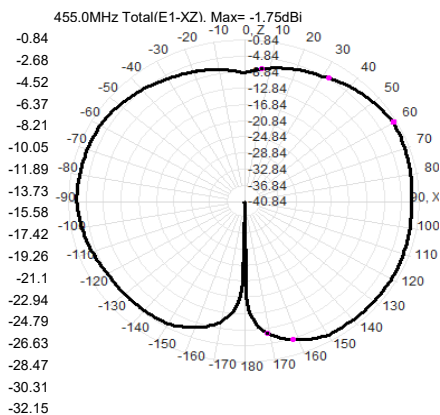
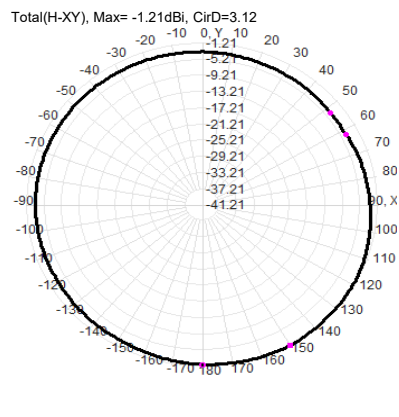
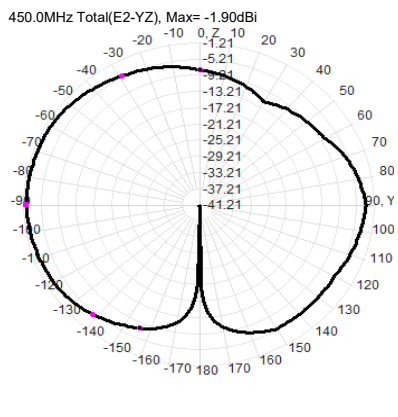
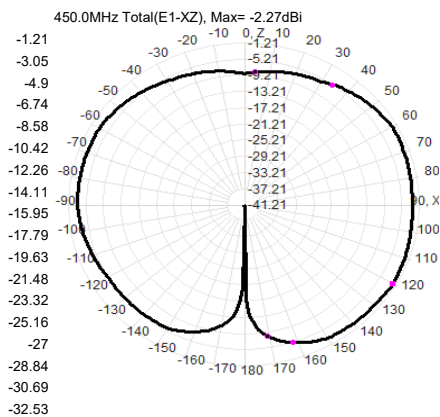
930.0MHz H+V, Eff: 22.6%

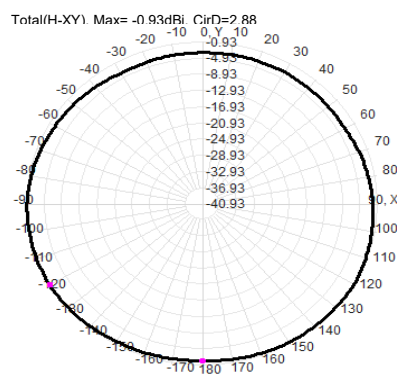
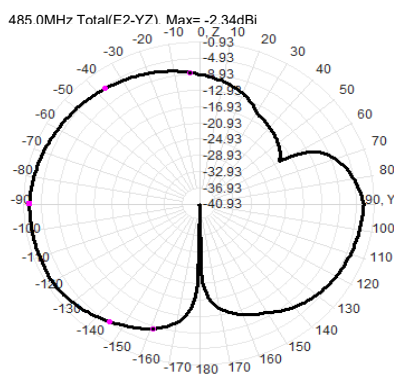
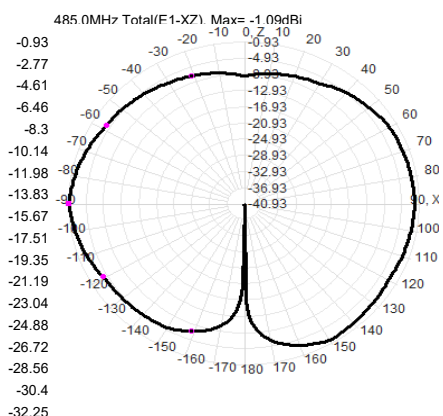
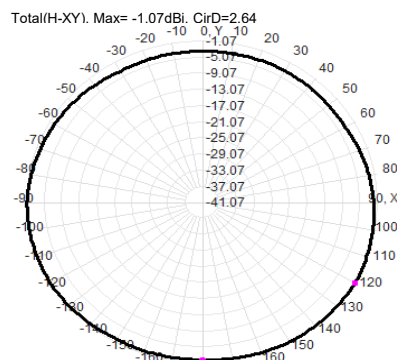
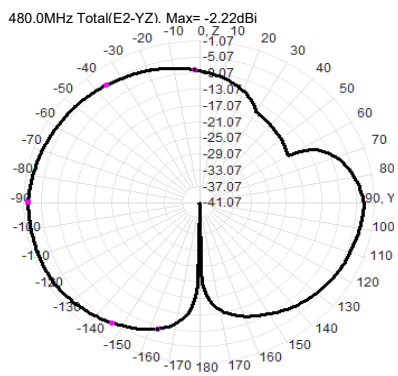
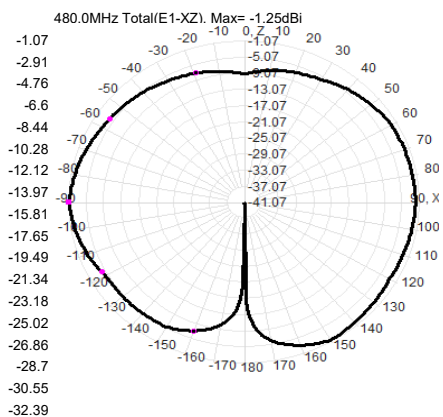
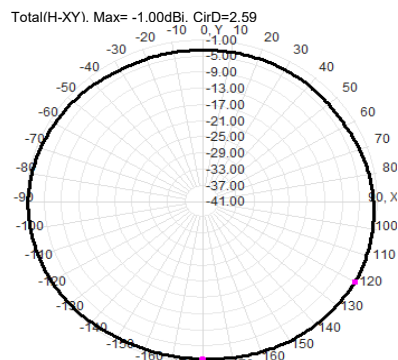
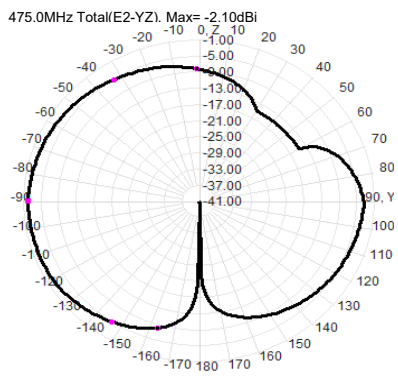
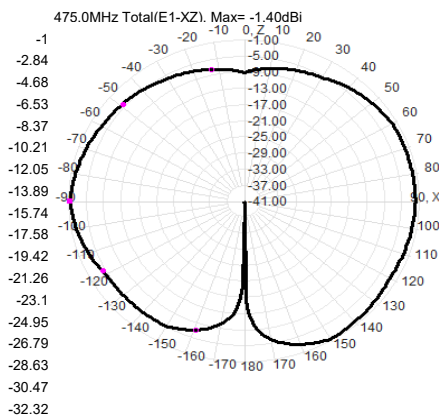
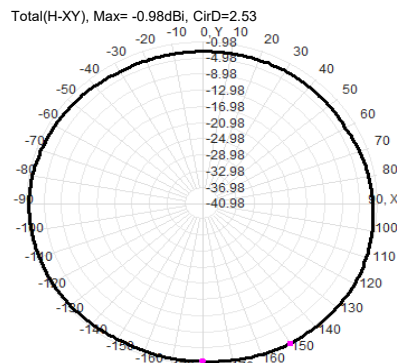
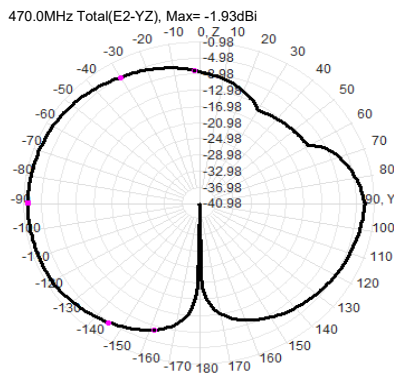
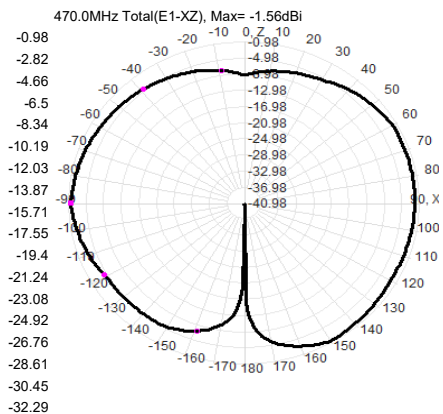


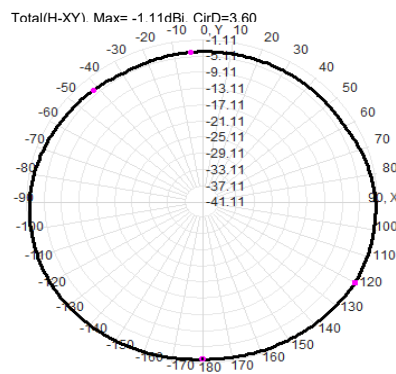
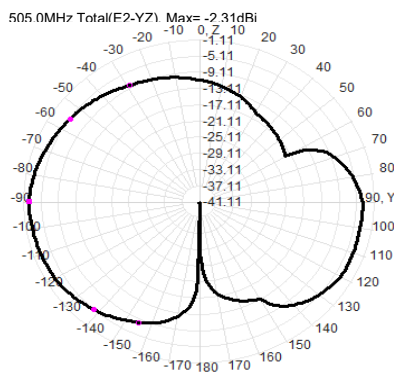
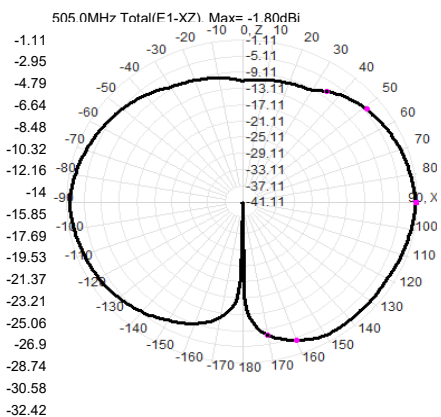
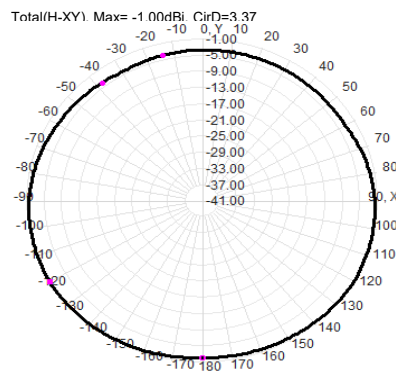
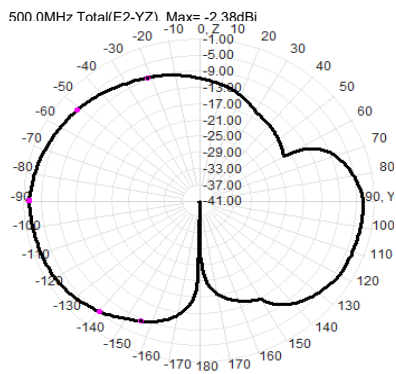
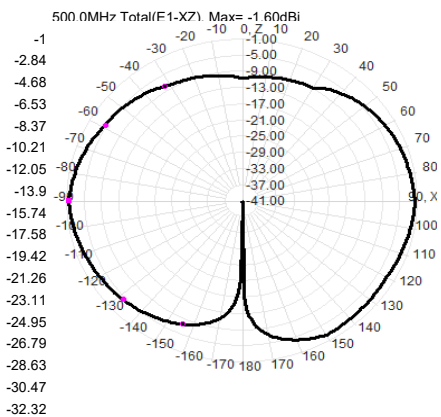
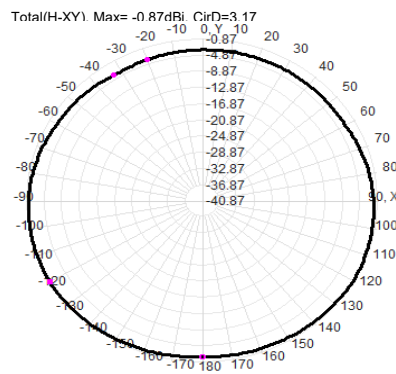
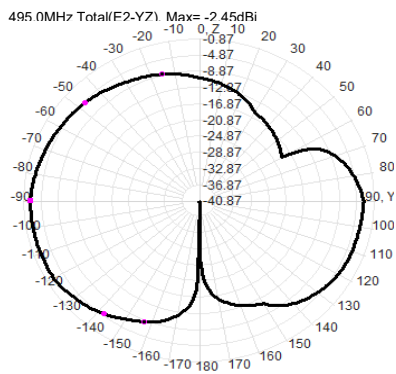
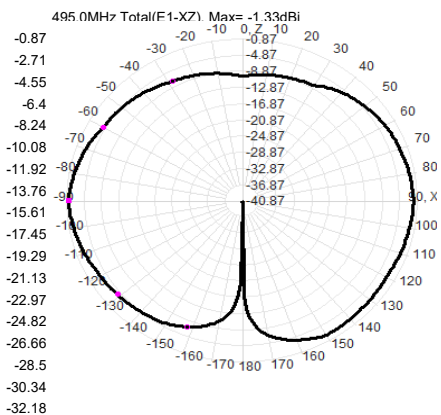
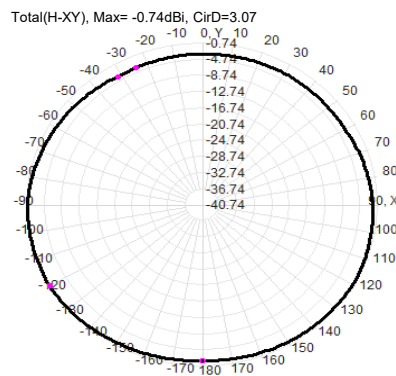
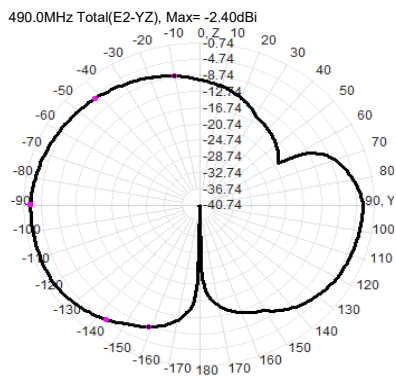
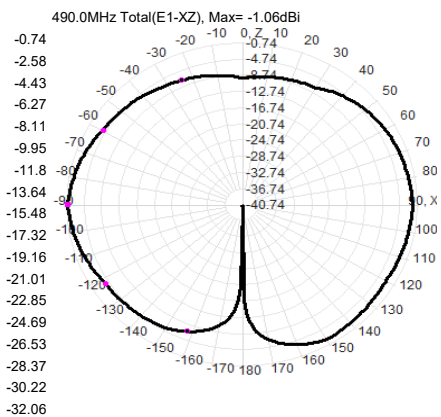
Back View

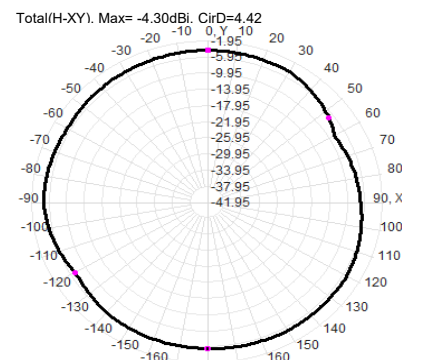
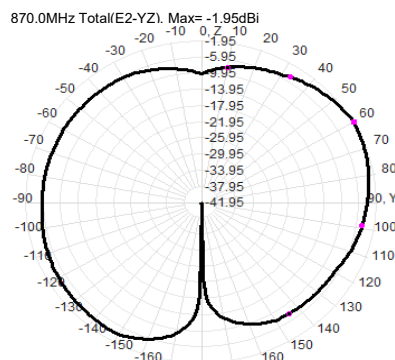
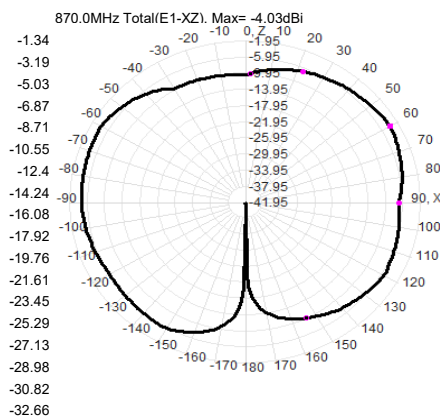
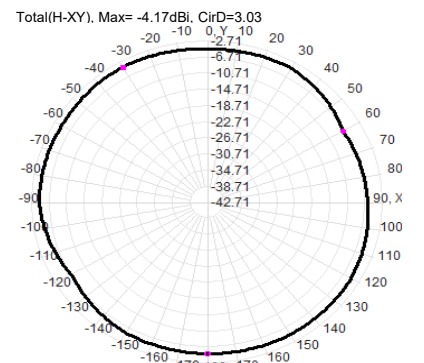
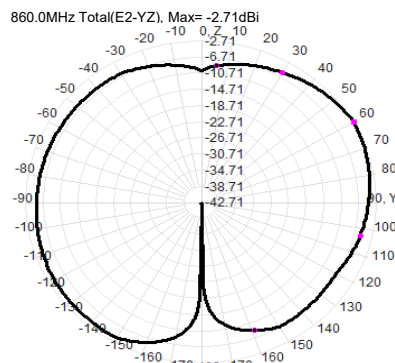
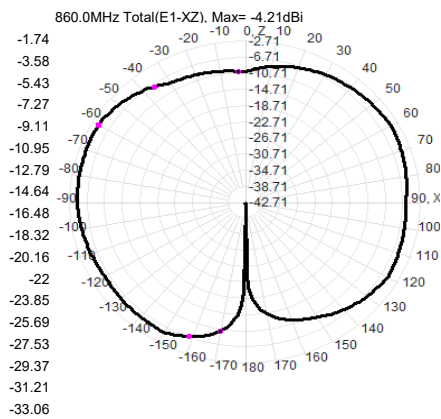
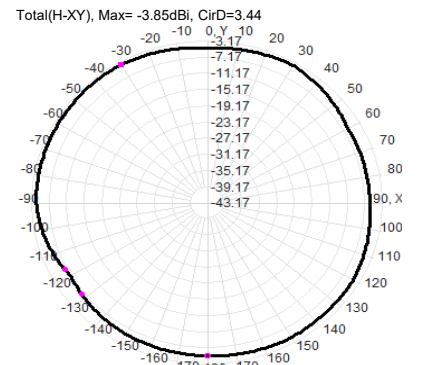
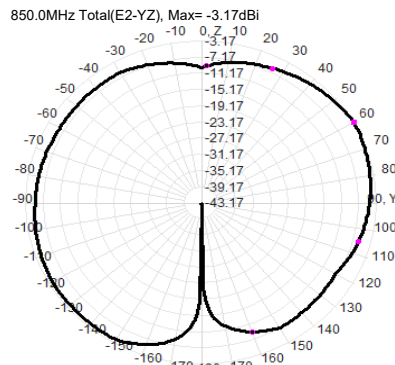
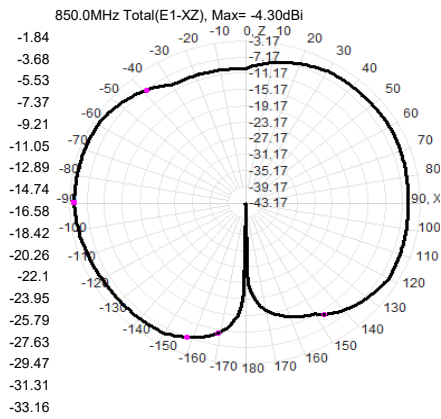
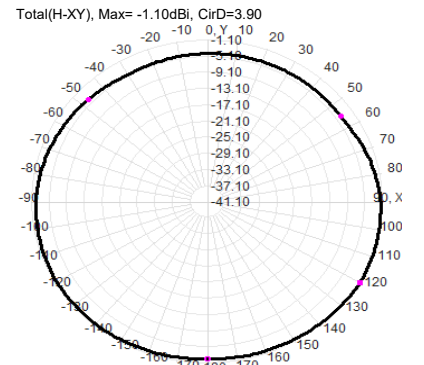
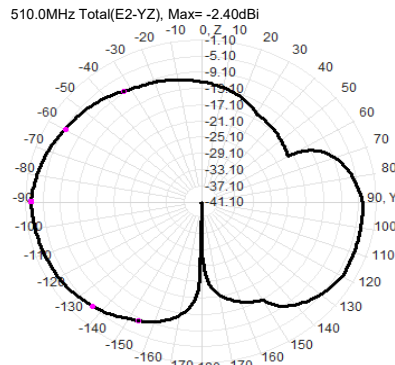
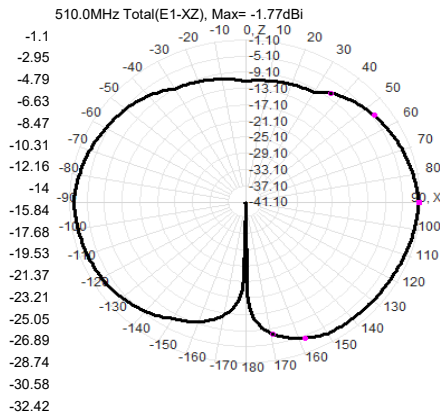


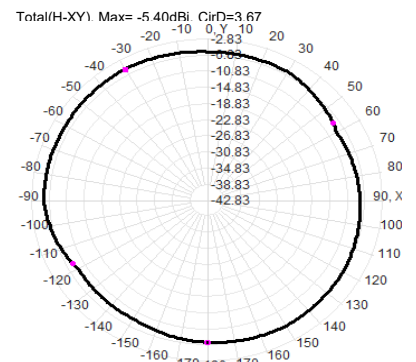
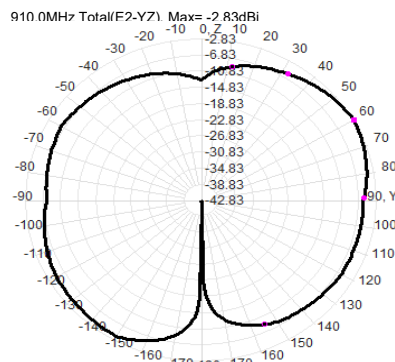
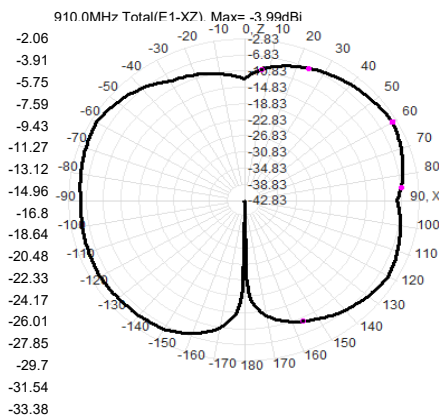
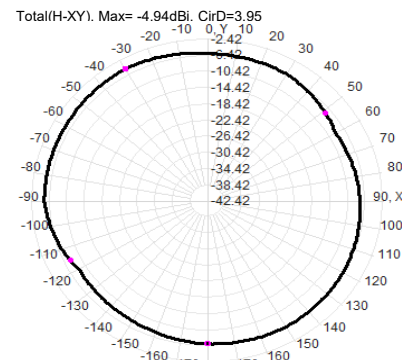
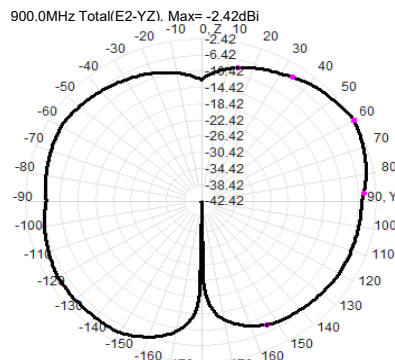
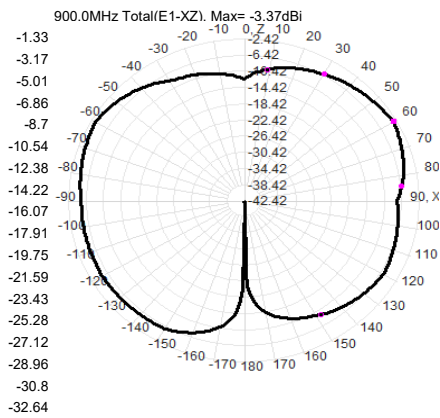
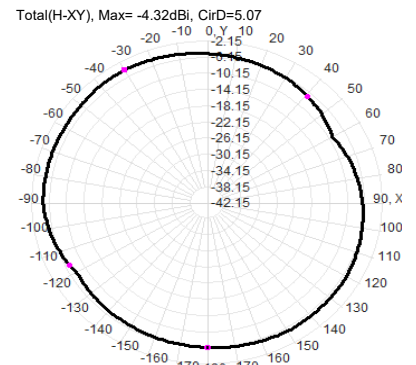
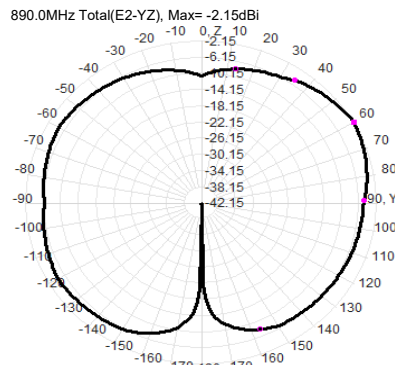
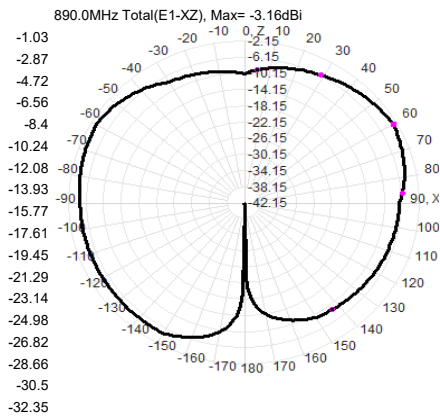
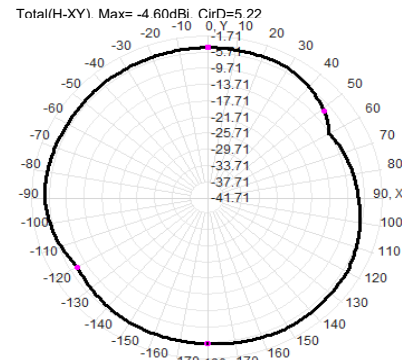
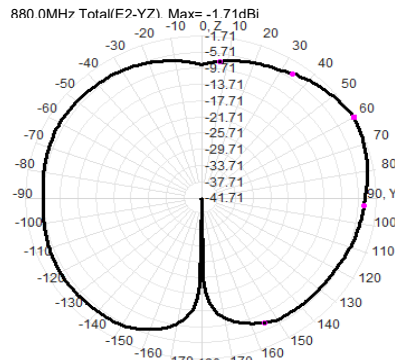
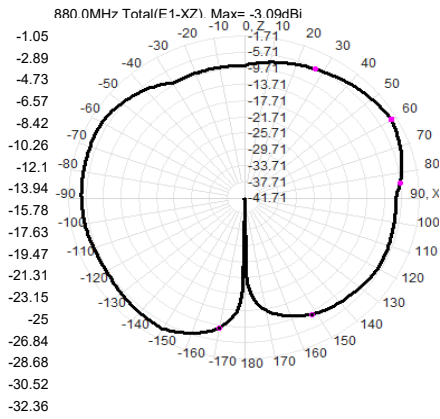


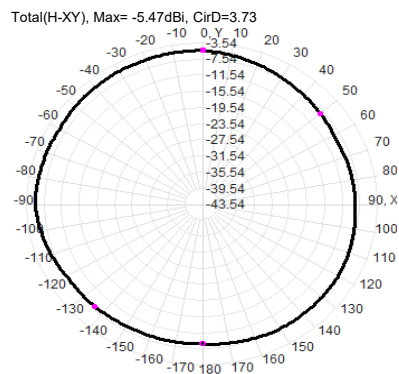
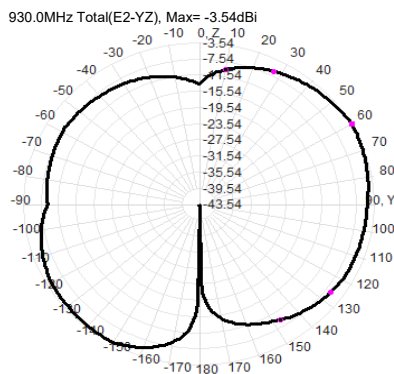
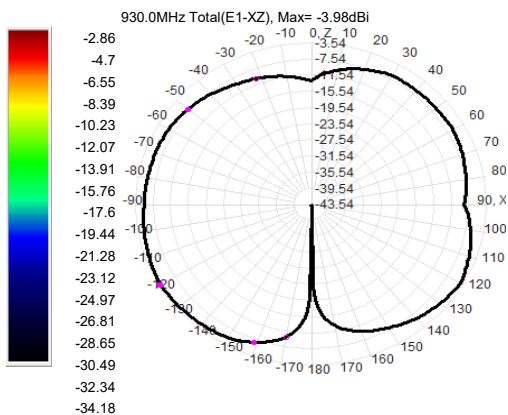
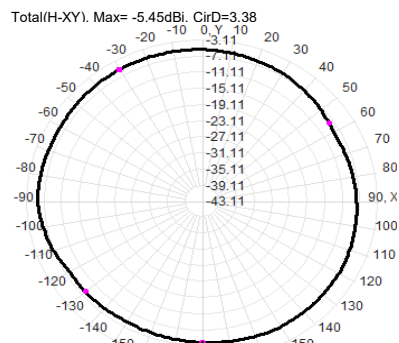
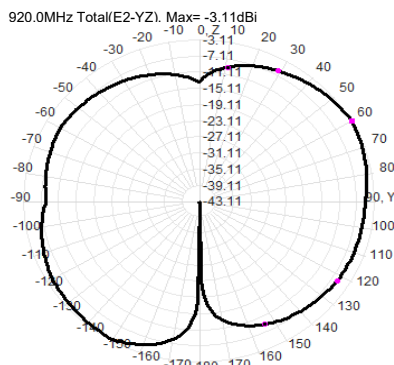
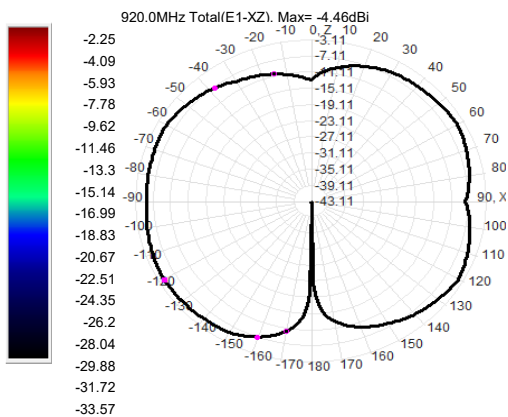












Product packaging method:

Self-sealed bag + carton, each self-sealed bag placed quantity 2PCS, each large bag package 20 or 50, the bag is affixed with the corresponding label information. The number of packing per outer box is not More than 1,000 boxes, with the material information code logo on the box.

The shipping package can meet the needs of express transportation, and arrive at the designated place of the customer, with no damage or abnormal situation.

Environmental protection statement:

All materials meet general RoHS requirements. For special environmental protection requirements, they shall be provided separately.