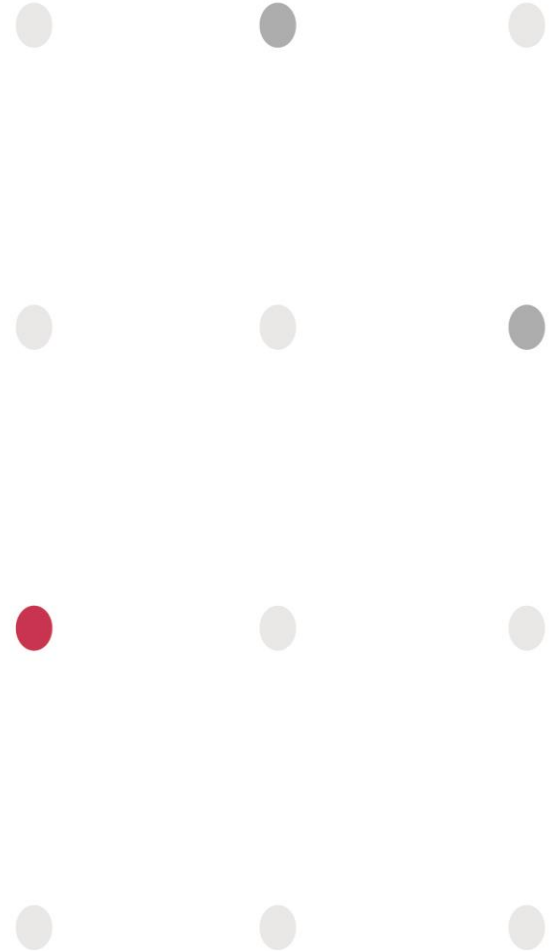


PSA

PASSIVE SYSTEM ALLIANCE
WALSIN TECHNOLOGY CORPORATION



台達 Cranberry

Presented by

Simon Huang

Walsin Technology Corporation

2021/12/10

Version	Date	Description	Author
V01	2021/09/23	New Release	Simon Huang
V02	2021/12/10	1.Change machine and Ant Position 2.Change Ant type	Simon Huang

OUTLINE

1. Measurement Information

1.1 Experimental Setup

1.2 Antenna Solution Detail

2. Antenna Characteristics

2.1 Return Loss

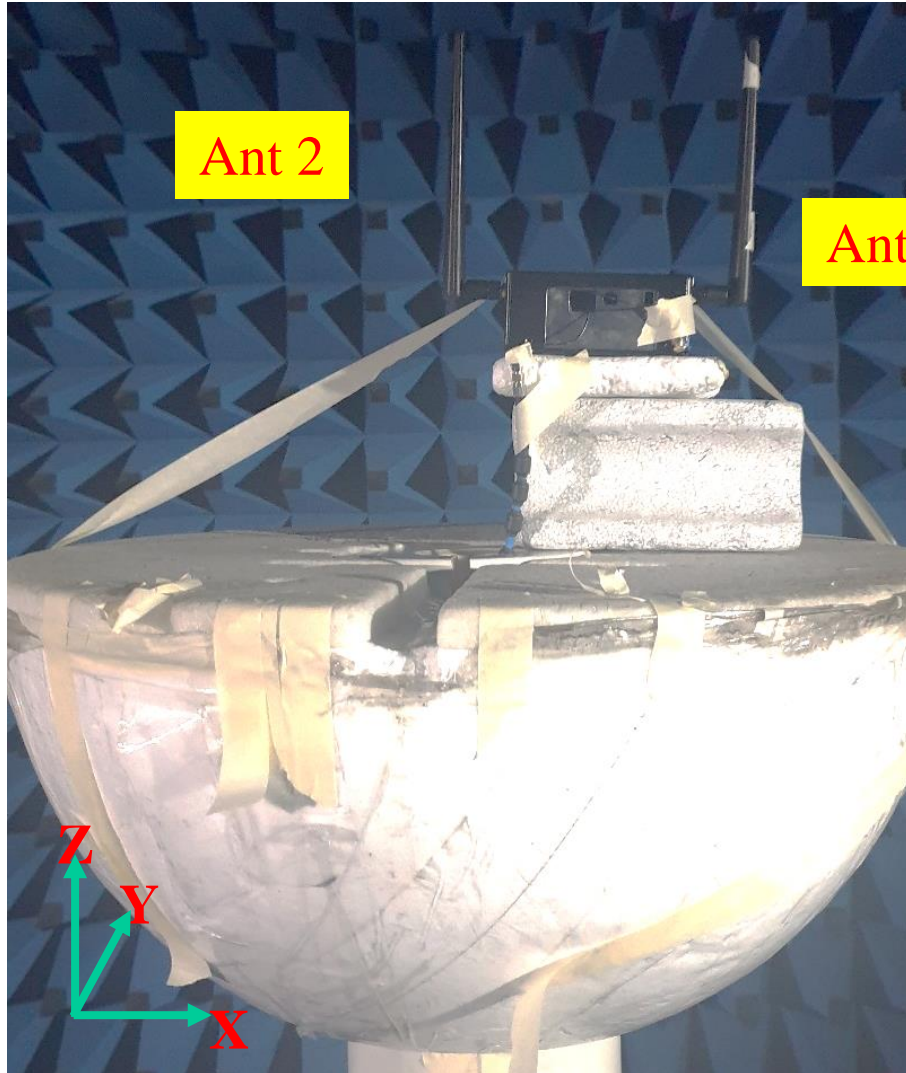
2.2 Antenna Efficiency and Peak Gain

2.3 3 views of antenna & 2D Radiation Patterns

3. Summary

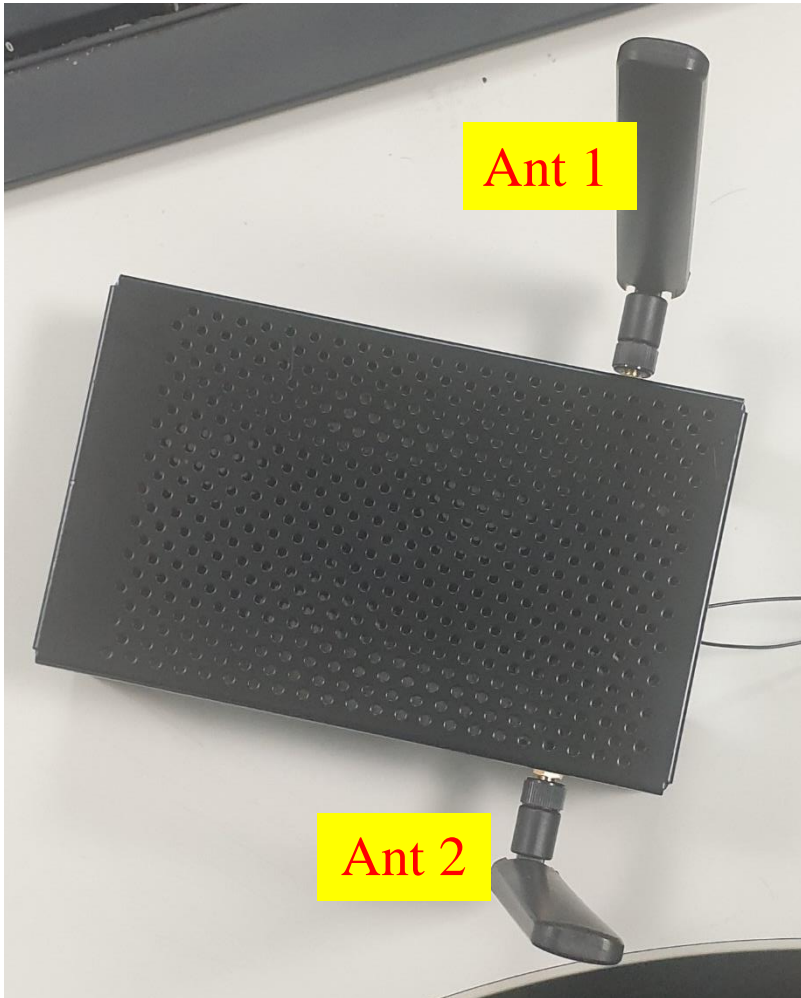
1. Measurement Information

1.1 Experimental Setup (90 deg)



1. Measurement Information

1.2 Antenna Solution Detail



Difference:

1. S11 , impedance meets spec after commissioning .
2. Cable's length update .
3. 2pcs rivet , combination antenna outer pole cover .

2. Antenna Characteristics

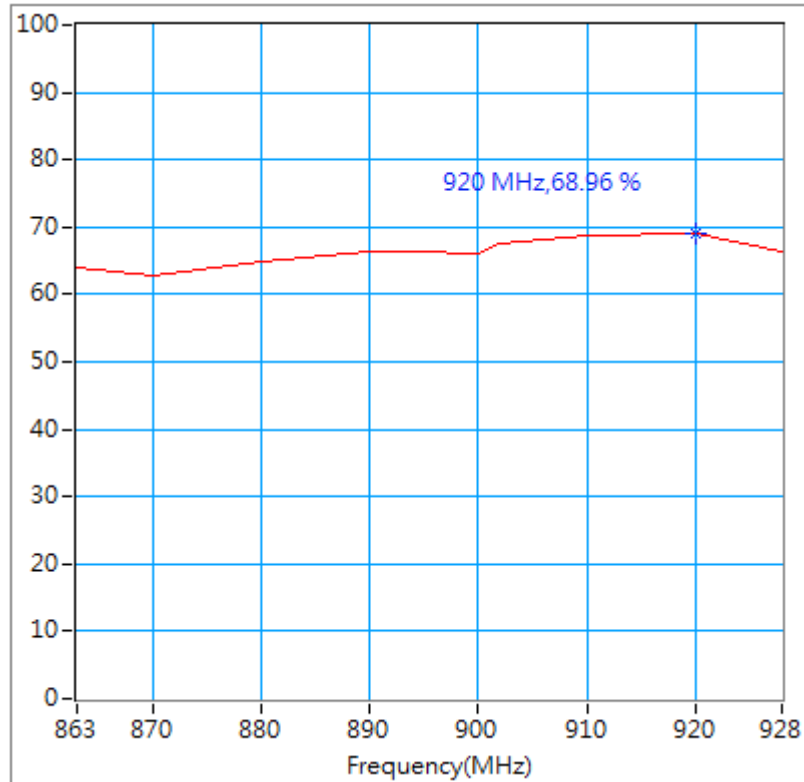
2.1 Return Loss



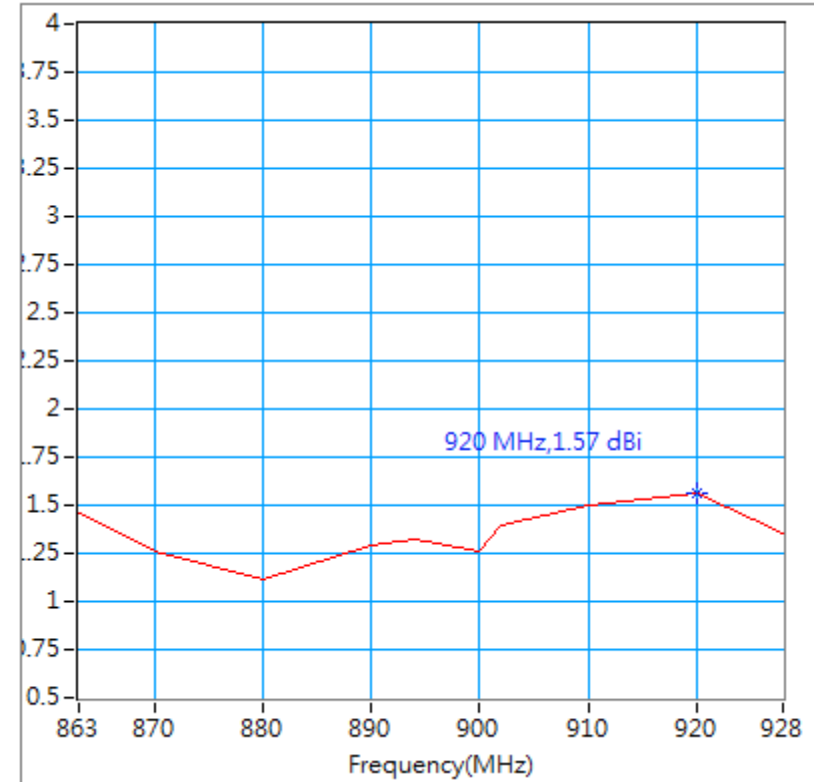
2. Antenna Characteristics

2.2 Antenna Efficiency and Peak Gain

Ant 1



Maximum Efficiency at 920 MHz : 68.96 %

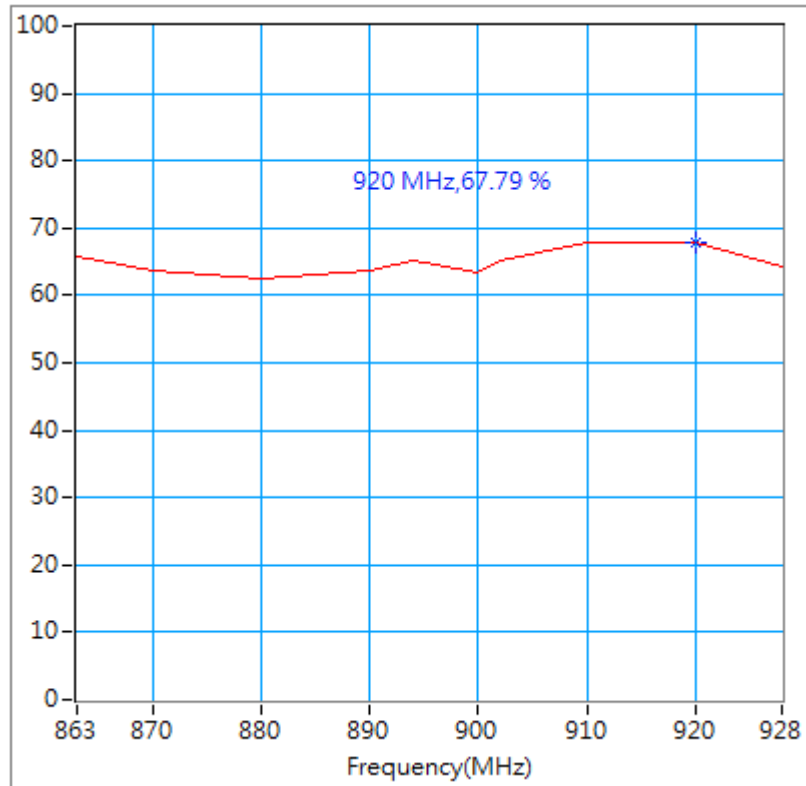


Maximum Peak Gain at 920 MHz : 1.57 dBi

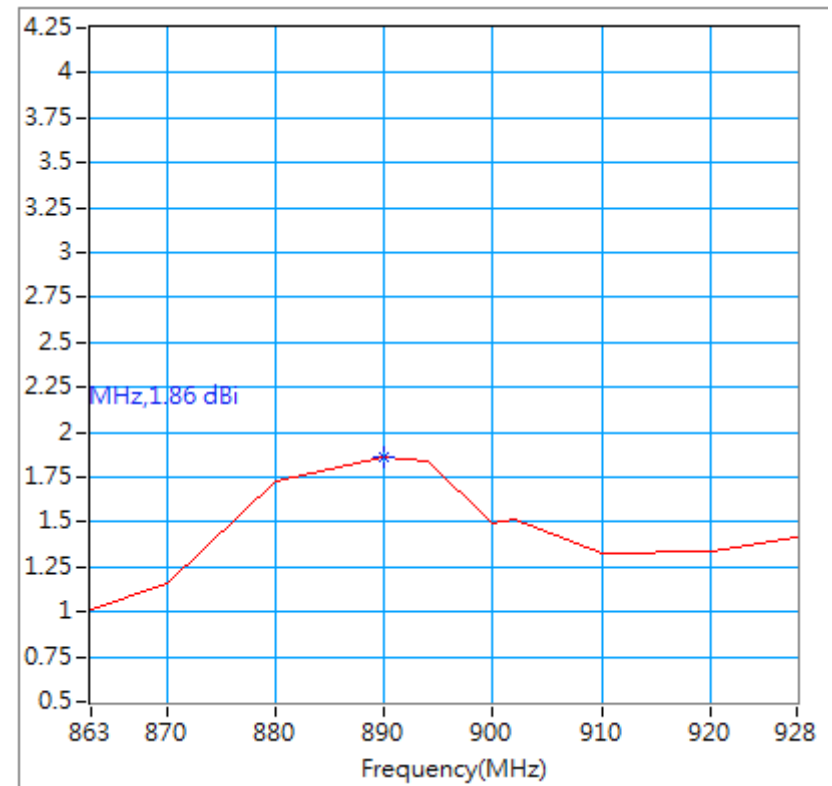
2. Antenna Characteristics

2.2 Antenna Efficiency and Peak Gain

Ant 2



Maximum Efficiency at 920 MHz : 67.79 %



Maximum Peak Gain at 890 MHz : 1.86 dBi

2. Antenna Characteristics

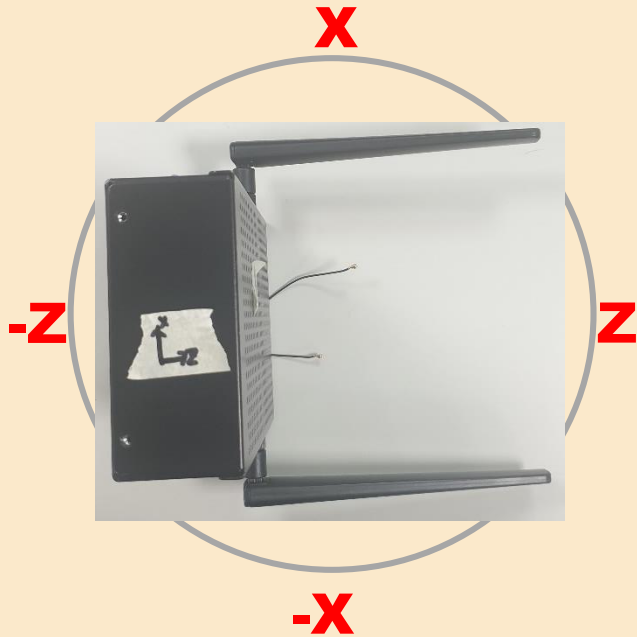
2.2 Antenna Efficiency and Peak Gain

	Ant 1		Ant 2	
Frequency (MHz)	Efficiency (%)	Peak Gain (dBi)	Efficiency (%)	Peak Gain (dBi)
863	64.13	1.46	65.86	1.01
902	67.61	1.40	65.04	1.52
928	66.25	1.35	64.25	1.42

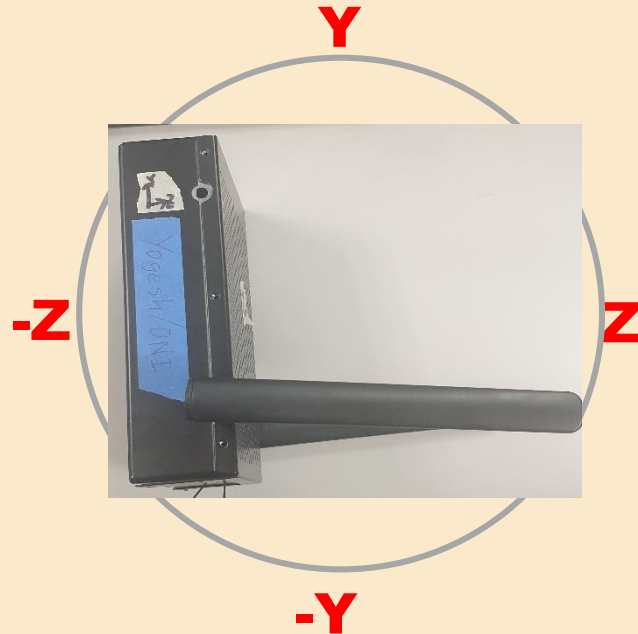
2. Antenna Characteristics

2.3 3 views of antenna

X-Z plane



Y-Z plane



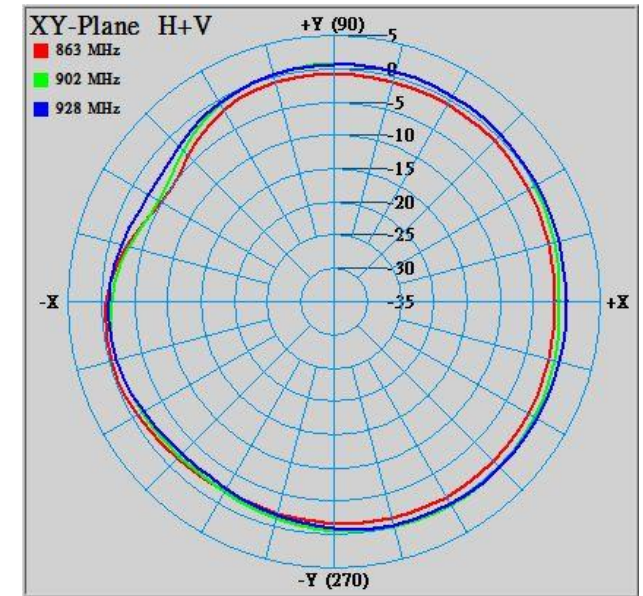
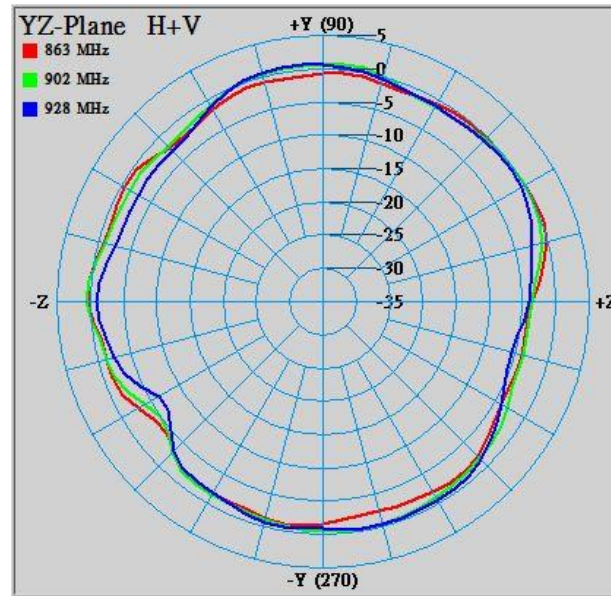
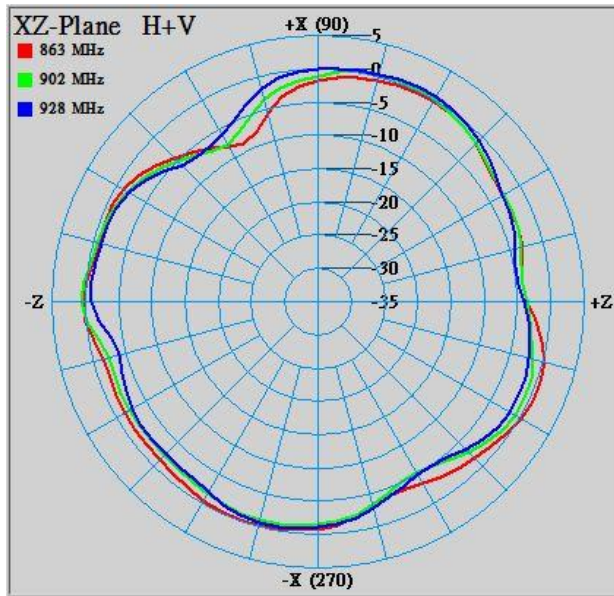
X-Y plane



2. Antenna Characteristics

2.3 2D Radiation Patterns (90 deg)

Ant 1

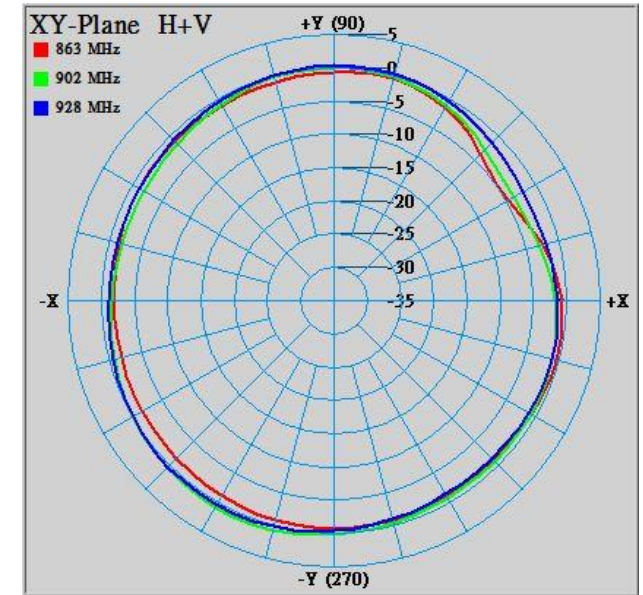
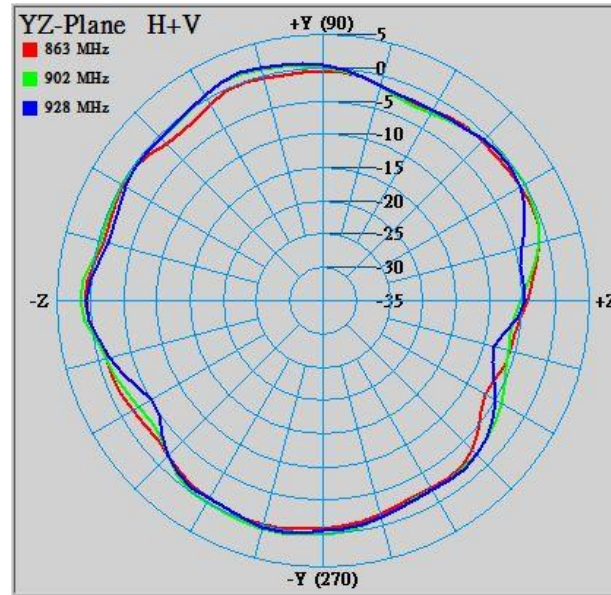
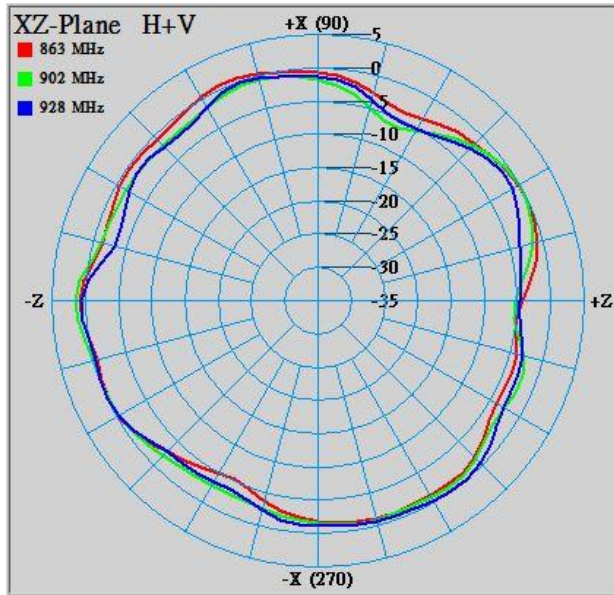


Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value (dB)	Average (dB)	Max Value (dB)	Average (dB)	Max Value (dB)	Average (dB)
863	0.667	-1.623	0.472	-1.476	-0.365	-1.506
902	0.56	-1.992	0.799	-1.134	0.715	-0.702
928	0.547	-2.088	0.757	-1.62	0.691	-0.538

2. Antenna Characteristics

2.3 2D Radiation Patterns (90 deg)

Ant 2



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value (dB)	Average (dB)	Max Value (dB)	Average (dB)	Max Value (dB)	Average (dB)
863	0.878	-1.477	0.878	-1.447	-0.419	-1.358
902	1.508	-1.628	1.508	-0.959	0.83	-0.87
928	0.683	-1.828	1.391	-1.326	0.41	-0.714

3. Summary

- The performance of antennas is shown in table

	Ant 1	Ant 2
Maximum Efficiency (%)	920 MHz → 68.96 %	920 MHz → 67.79 %
Maximum Gain (dBi)	920 MHz → 1.57 dBi	890 MHz → 1.86 dBi

Thank you

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