

APPROVAL SHEET

Metal Antenna

868~928 MHz Working Frequency

Halogens Free Product

P/N: RFMTA050100NNRB004

Customer :

Customer 's Part No. :

Approval No. :

Issue Date :

*Contents in this sheet are subject to change without prior notice.

品名：RFMTA050100NNRB004

History List

[illegible]

品名：RFMTA050100NNRB004

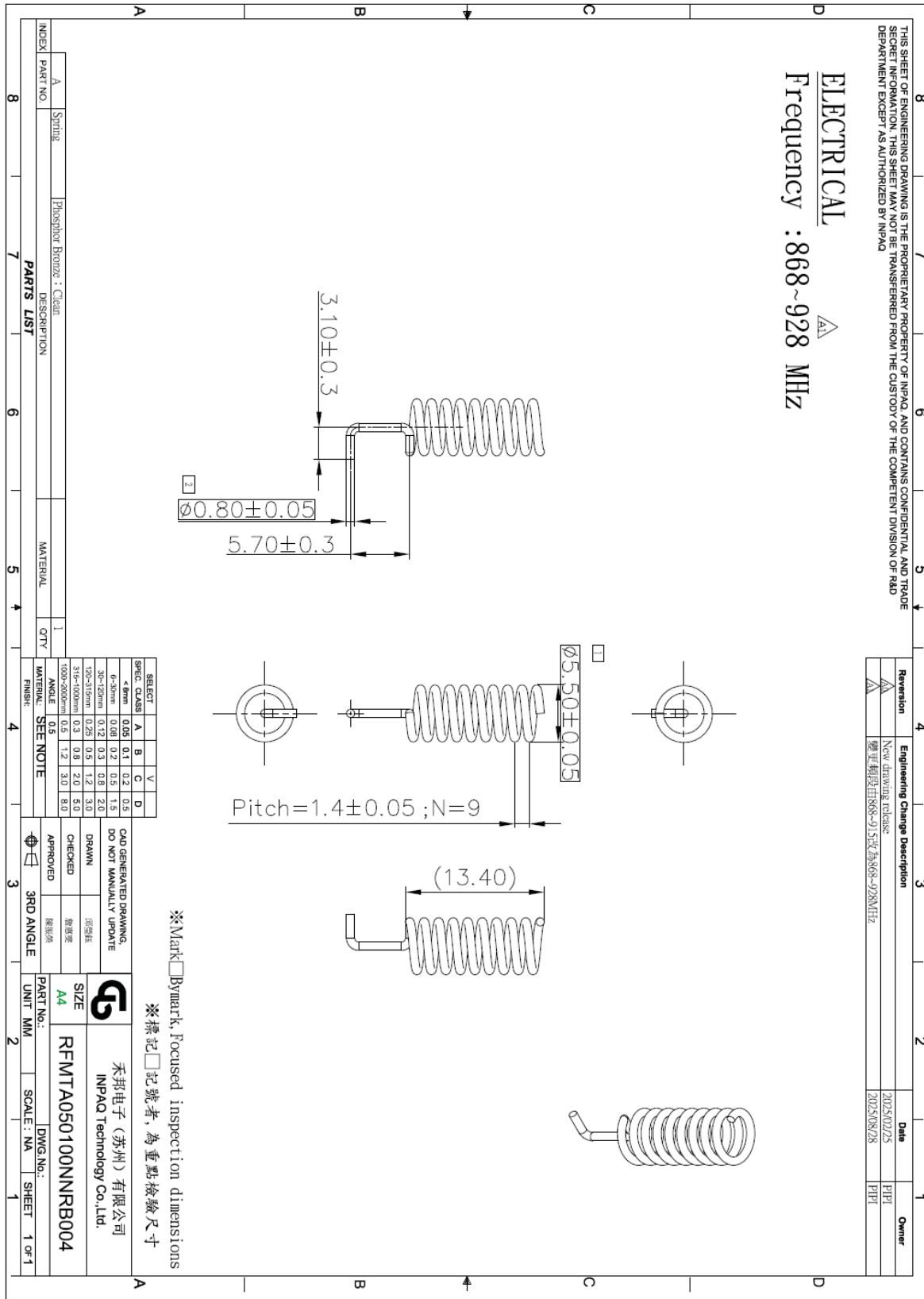
1. Explanation of part number：

RF	MTA	0510	00	N	N	R	B	0	04
Type Code	Product Code	Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
RF Device	Antenna	Per 2 digits of length, width e.g.: 1614 Length 160.0mm, Width140.0mm	2 digits for cable length e.g.:20 5G1 : Length 17.5cm 5G2 : Length 17.5cm 2G1 : Length 20.0cm 2G2 : Length 13.0cm BT : Length 7.0cm	A: N C:MCX D:IPEX III E: IPEX IV F: IPEX A13 H: Hirose I: IPEX M: MMCX S: SMA T: TNC U:MURATA N: None	A: Reverse Female B: Reverse Male F: Female M: Male N: None	0: 0GHz 3: 3GHz 6: 6GHz 5: 5GHz A: 2.4GHz ISM band B: GSM 900/1800 dual band G: GPS band L: 2.4/5.X GHz tri-band N: NFC T: LTE band W: WCDMA band	B: MP T:During Test X: Pile Run	0:None 1:Ø0.81 2:Ø1.32 3:Ø1.13 4:Low Loss Ø1.13 5:Ø0.5 6:RG316 7: Ø1.37 8:RG178 9:Low Loss Ø1.37	01~99 series number

2. Electrical Specification：

Item	Specification
Working Frequency Range	868~928 MHz
Return Loss	-10 dB
Peak Gain	1.24 dBi
Impedance	50 Ohm Nominal
Radiation	Omni-directional
Polarization	Linear Vertical
Admitted Power	1W
Operation Temperature	-20℃ ~ +65℃

3. Drawing :



UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A

SCALE : N/A

UNIT : mm

DRAWN BY : 邱登鈺

CHECKED BY : 詹惠愛

DESIGNED BY : 鄭宇辰

APPROVED BY : 陳振榮

TITLE : RFMTA050100NNRB004



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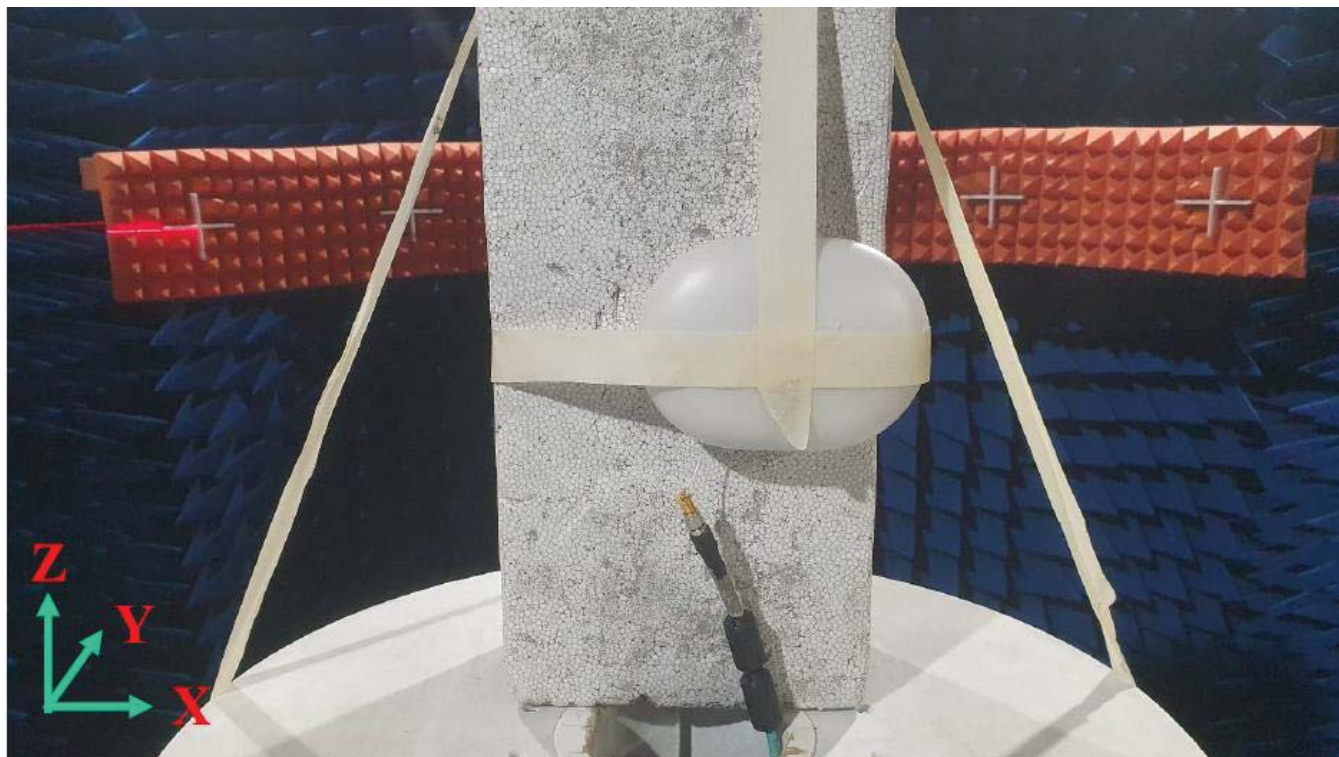
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4. Performance Report :

Test Report

Experimental Setup



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ELECTRICAL CHARACTERISTICS

S-Parameter



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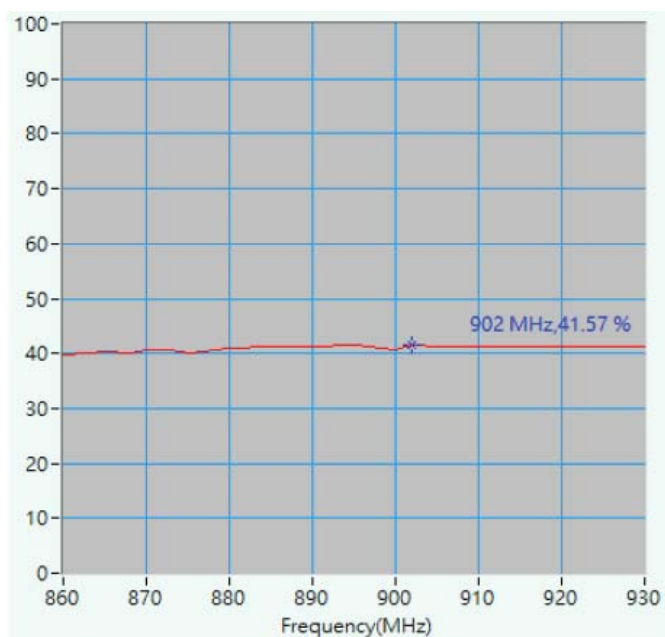
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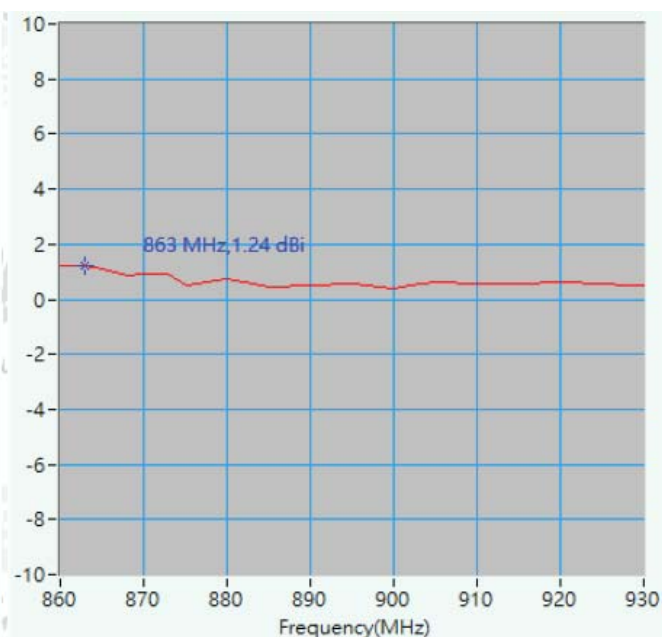
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■ Antenna Efficiency and Peak Gain



Maximum Efficiency at 902 MHz : 41.57 %



Maximum Peak Gain at 863 MHz : 1.24 dBi

	LoRa	
Frequency (MHz)	Efficiency (%)	Peak gain (dBi)
863	40.15	1.24
865	40.23	1.08
868	40.16	0.86
870	40.73	0.89
873	40.55	0.94
902	41.57	0.49
915	41.30	0.57
928	41.12	0.52

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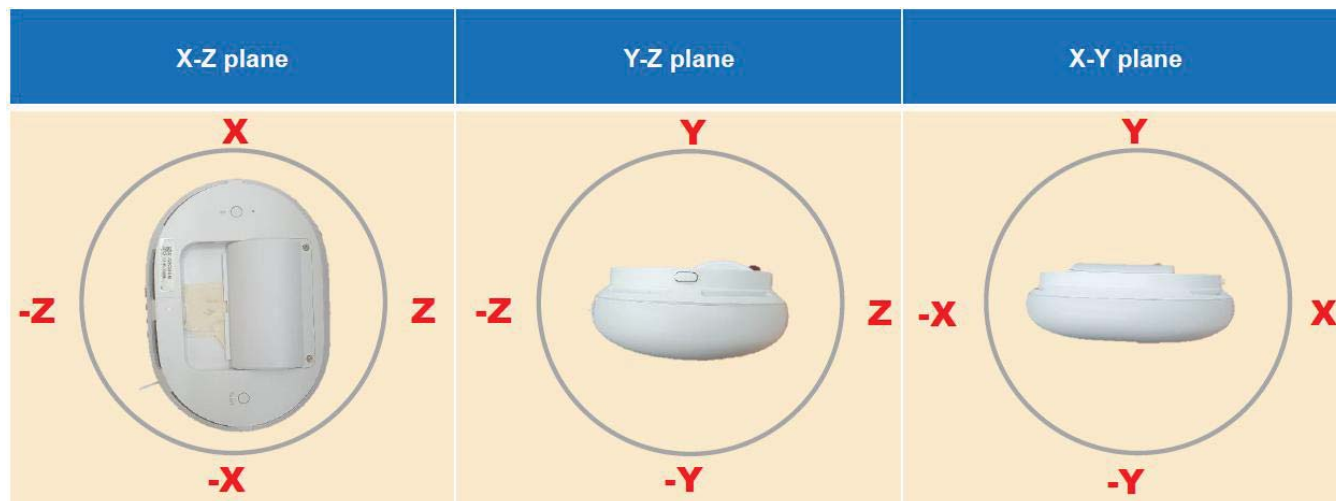
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■ 3 Views of antenna



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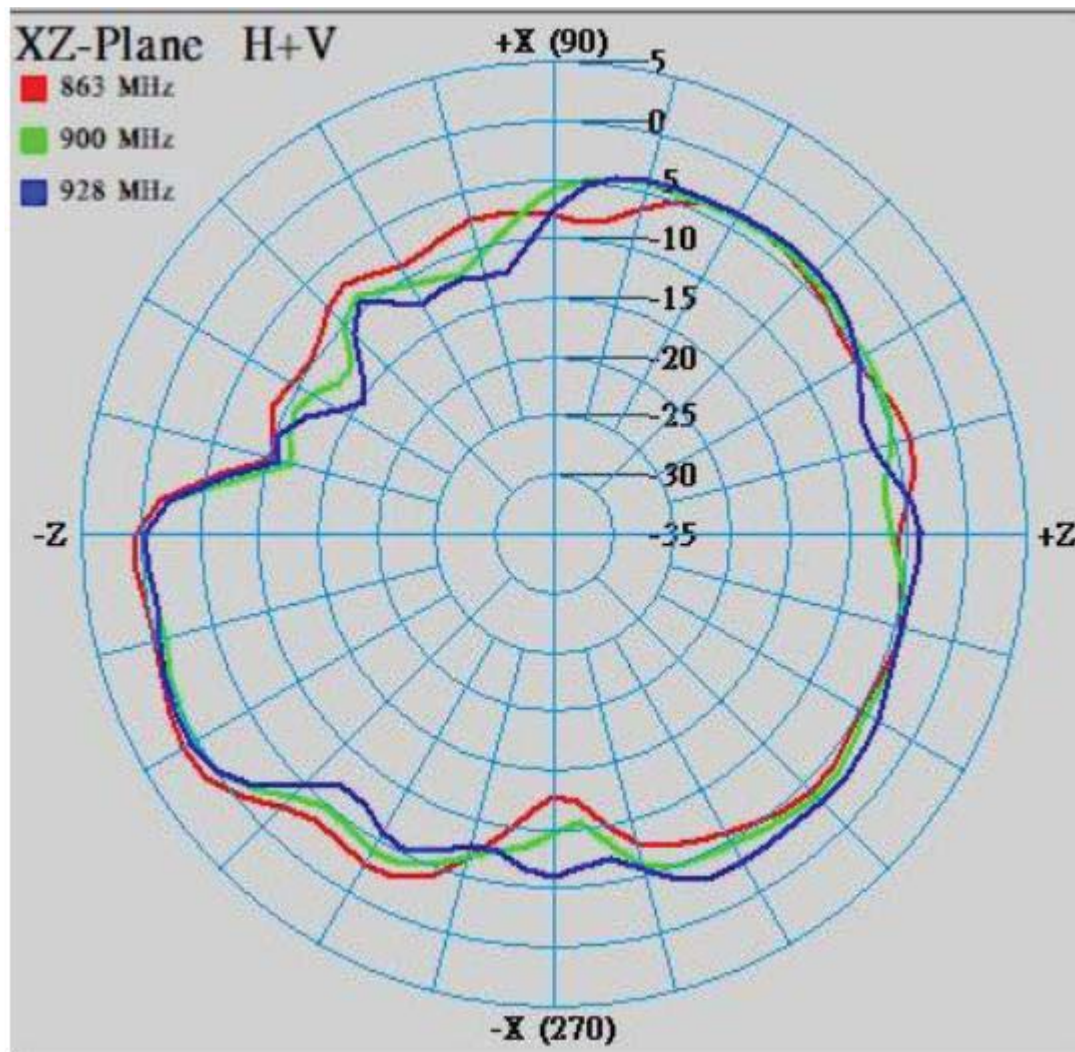
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RADIATION PATTERN

X-Z Plane

Phi=0.00deg

Gain . dB



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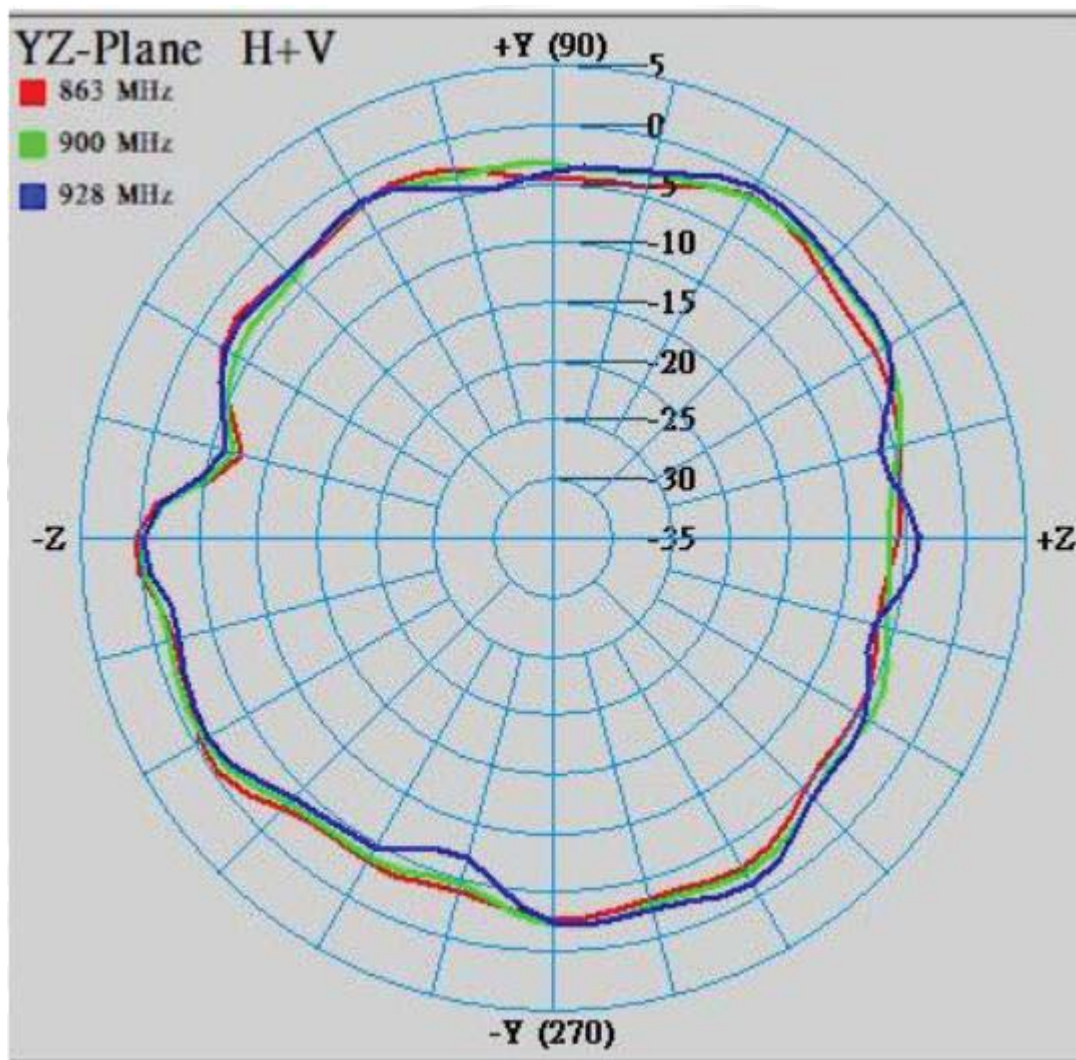
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Y-Z Plane
Phi=90.00deg

Gain . dB



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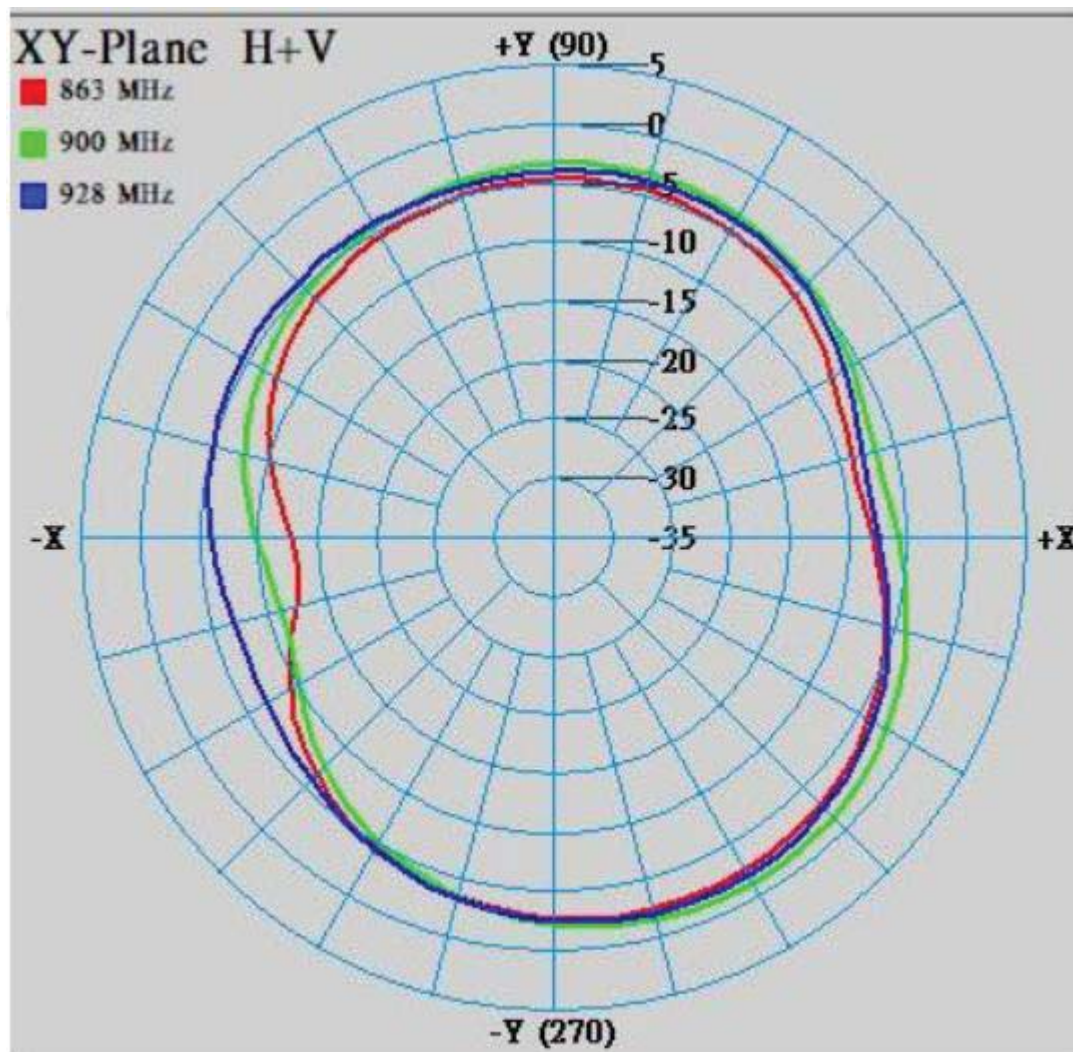
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X-Y Plane

Theta=90.00deg

Gain . dB



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
863	1.22	-4.26	0.44	-3.18	-2.42	-5.48
900	0.36	-4.61	-0.24	-3.08	-1.25	-4.37
928	0.51	-4.44	-0.36	-3.13	-1.94	-4.43

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