

# APPROVAL SHEET

**PCB Antenna**

**2.4~2.5 GHz Working Frequency**

**P/N: RFPCA191903IMAB302**

Customer :

Customer 's Part No. : 0790A2013L-A10

Approval No. :

Issue Date :

品名：RFPCA191903IMAB302

## History List

[illegible]

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



**INPAQ TECHNOLOGY CO., LTD.**

**SCALE : N/A**

UNIT : mm

DRAWN BY : 邱榮鈺

CHECKED BY: 詹惠雯

DESIGNED BY : 林樹良

APPROVED BY : 陳振榮

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**TITLE :** RFPCA191903IMAB302

DOCUMENT NO.
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ENS070024030-000803719001

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## 品名：RFPCA191903IMAB302

## 1. Explanation of part number：

RF	PCA	1919	03	I	M	A	B	3	02
Type Code	Product Code	PCB Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
RF Device	PCB 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>B: Reverse Male</b> F: Female M: Male N: None	<b>0: 0GHz</b> <b>3: 3GHz</b> <b>6: 6GHz</b> <b>5: 5GHz</b> A: 2.4GHz ISM band B: GSM 900/1800 dual band G: GPS band L: 2.4/5.X GHz tri-band <b>N: NFC</b> <b>T: LTE band</b> W: WCDMA band	B: MP <b>T:During Test</b> X: Pile Run	0:None 1:∅ 0.81 2:∅ 1.32 3:∅ 1.13 4:Low Loss ∅ 1.13 5:∅ 0.5 6:RG316 7: ∅ 1.37 8:RG178 9:Low Loss ∅ 1.37	01~99 series number

## 2. Electrical Specification：

Item	Specification
Working Frequency Range	2.4~2.5 GHz
Peak Gain	-0.35 dBi
Return Loss	-10dB(Max)
VSWR	2 max.
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50Ω
Operation Temperature	-20℃ ~ +65℃

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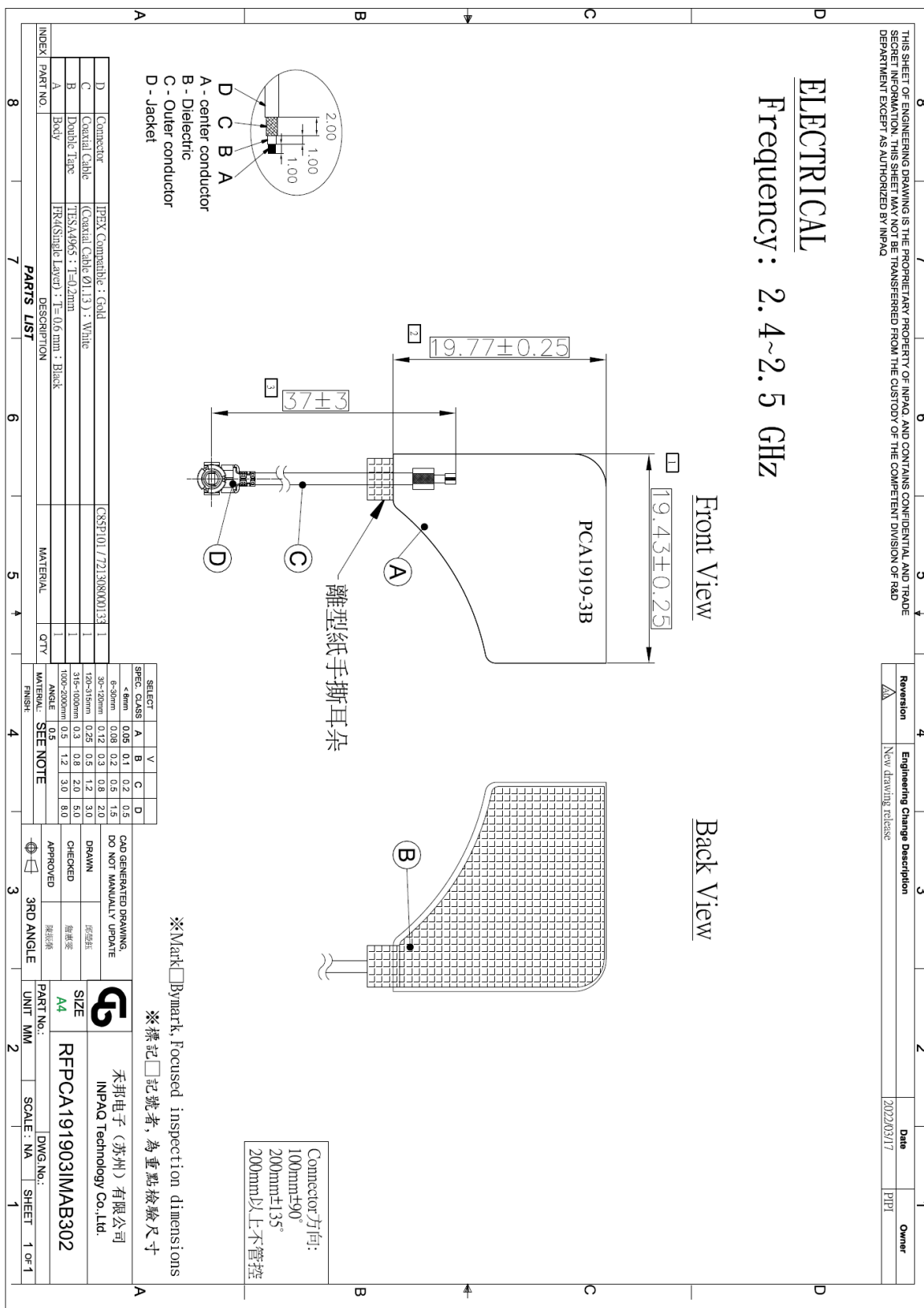
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## 3. Drawing :



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CHECKED BY : 詹惠愛

DESIGNED BY : 林樹良

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TITLE : RFPKA191903IMAB302

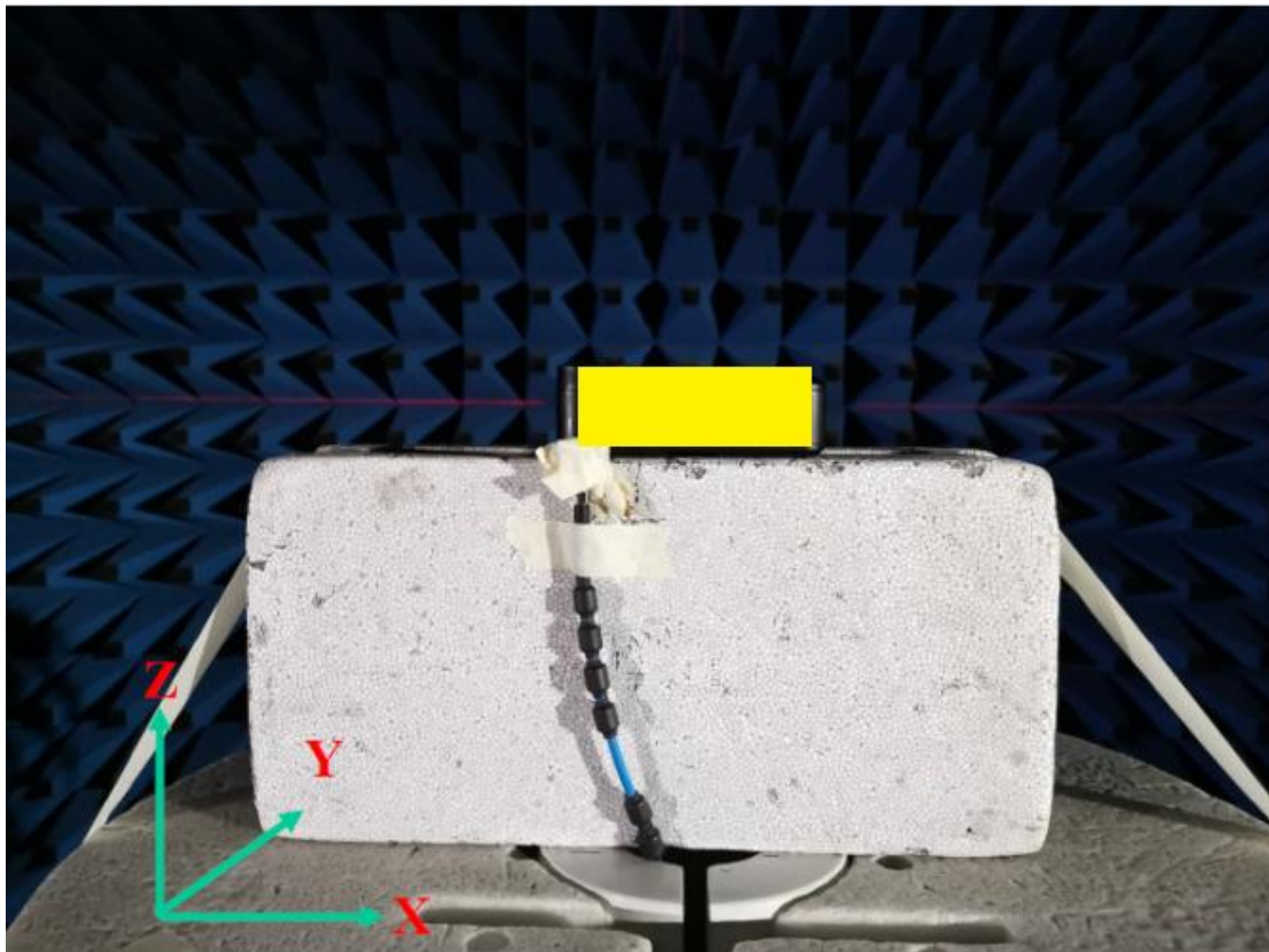
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## 4. Test Report

### Experimental Setup



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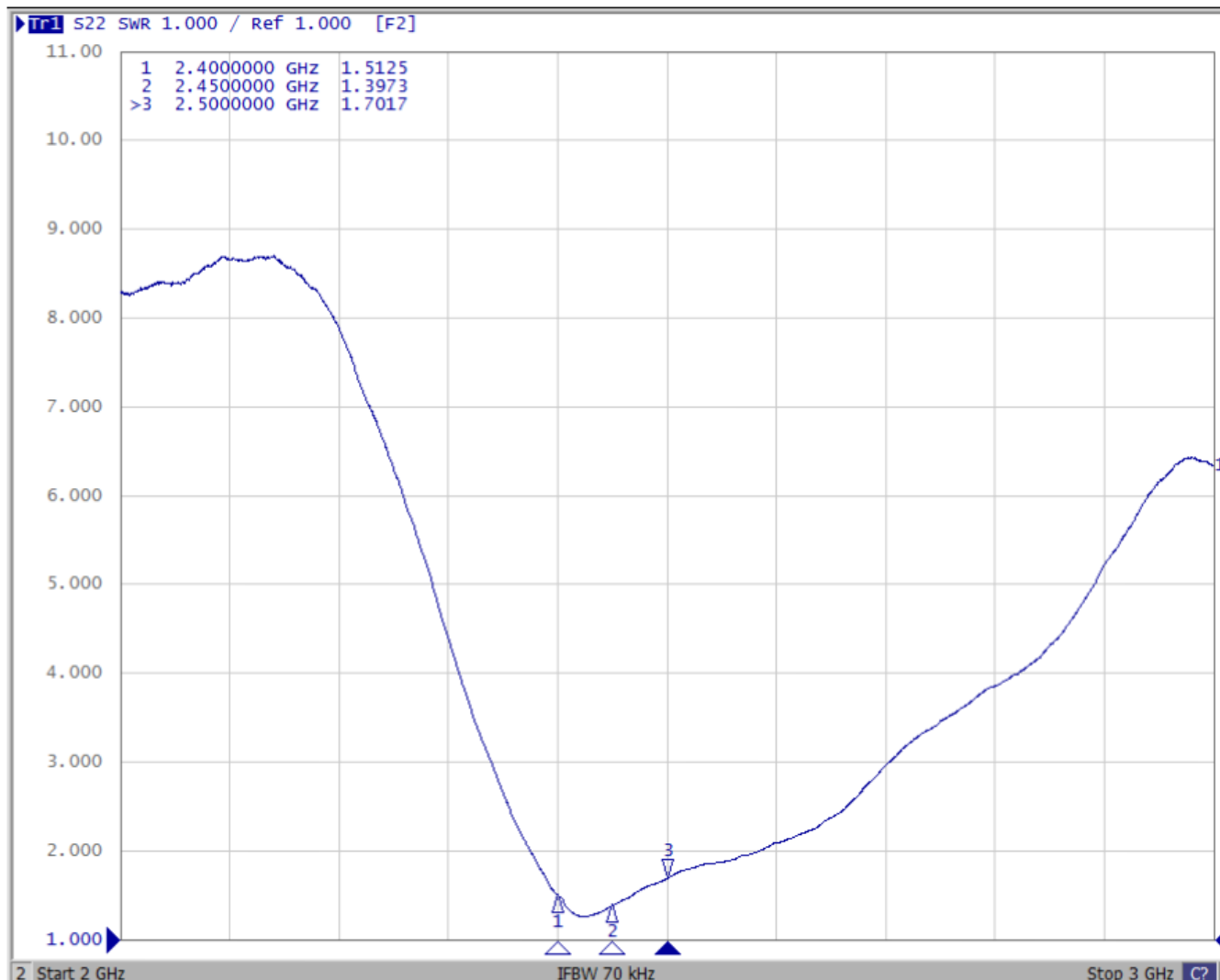
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# ELECTRICAL CHARACTERISTICS

## VSWR



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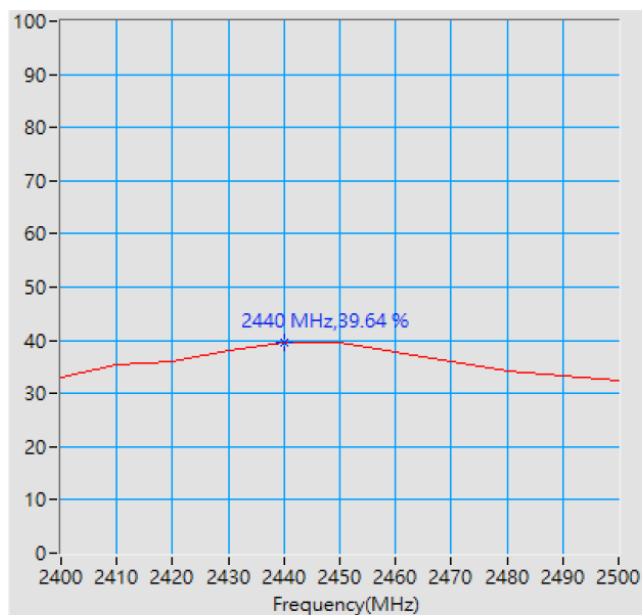
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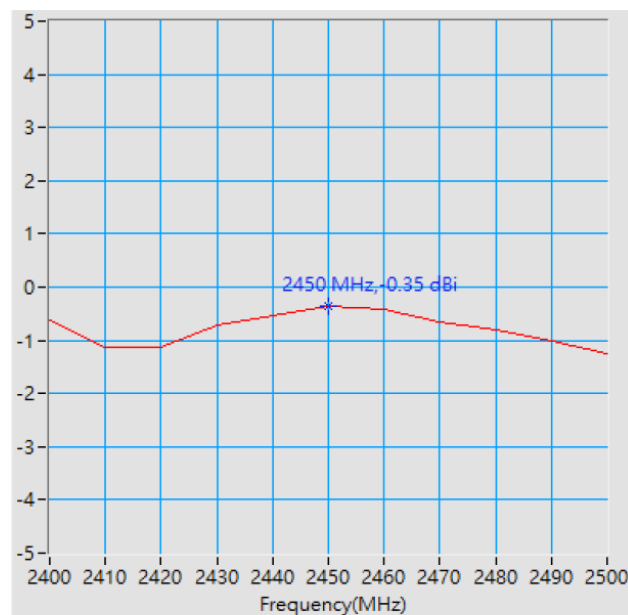
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## Antenna Efficiency and Peak Gain



Maximum Efficiency at 2440 MHz : 39.64 %



Maximum Peak Gain at 2450 MHz : -0.35 dBi

### BT

Frequency (MHz)	Efficiency (%)	Peak gain (dBi)
2400	33.09	-0.64
2450	39.50	-0.35
2500	32.42	-1.24

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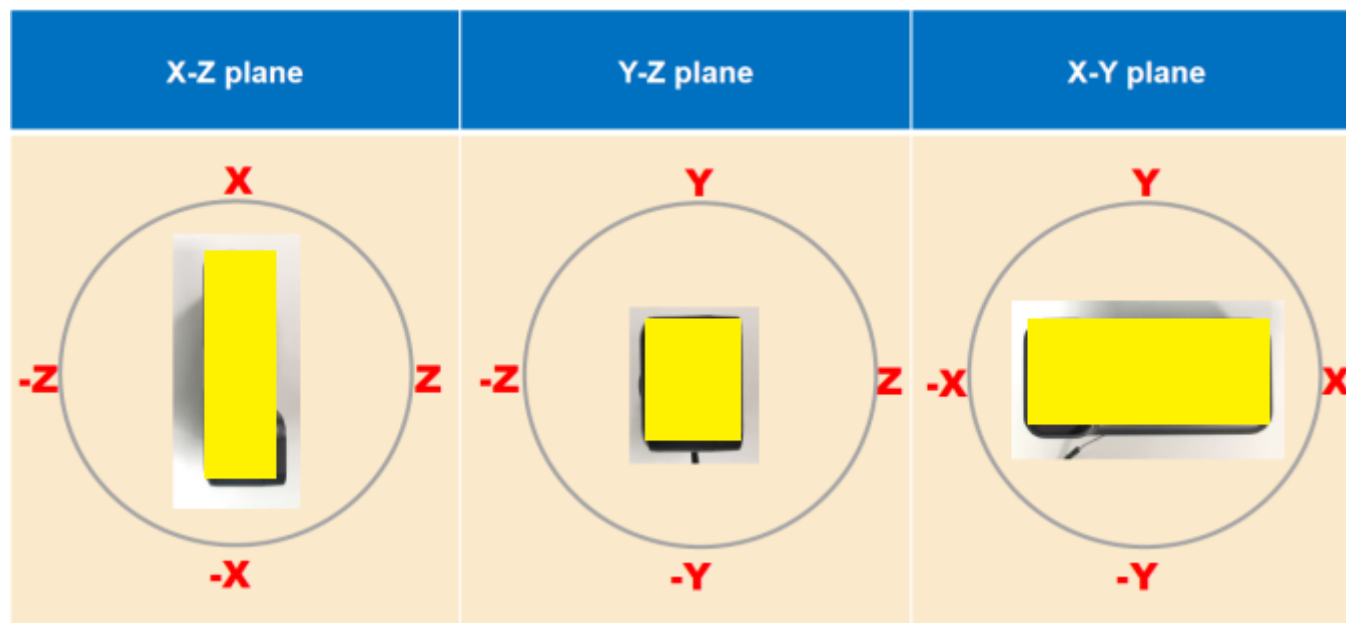
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### 3 Views of antenna



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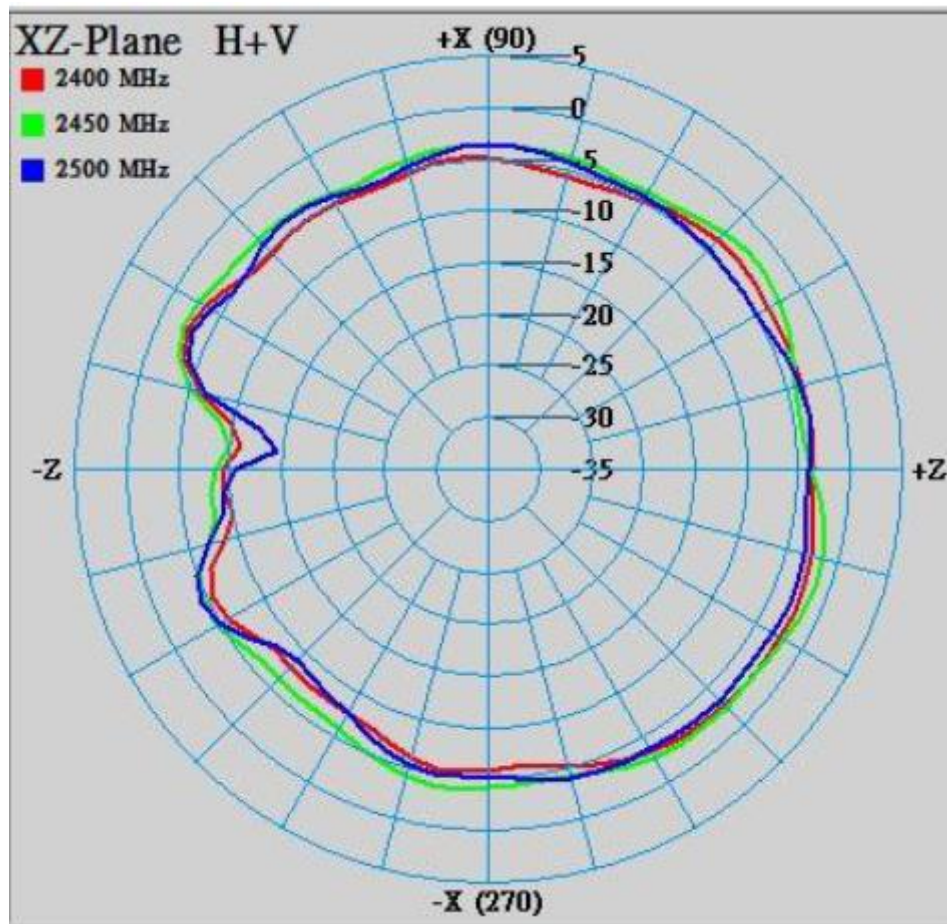


## Radiation Patterns

X-Z Plane

Phi=0.00deg

Gain . dB



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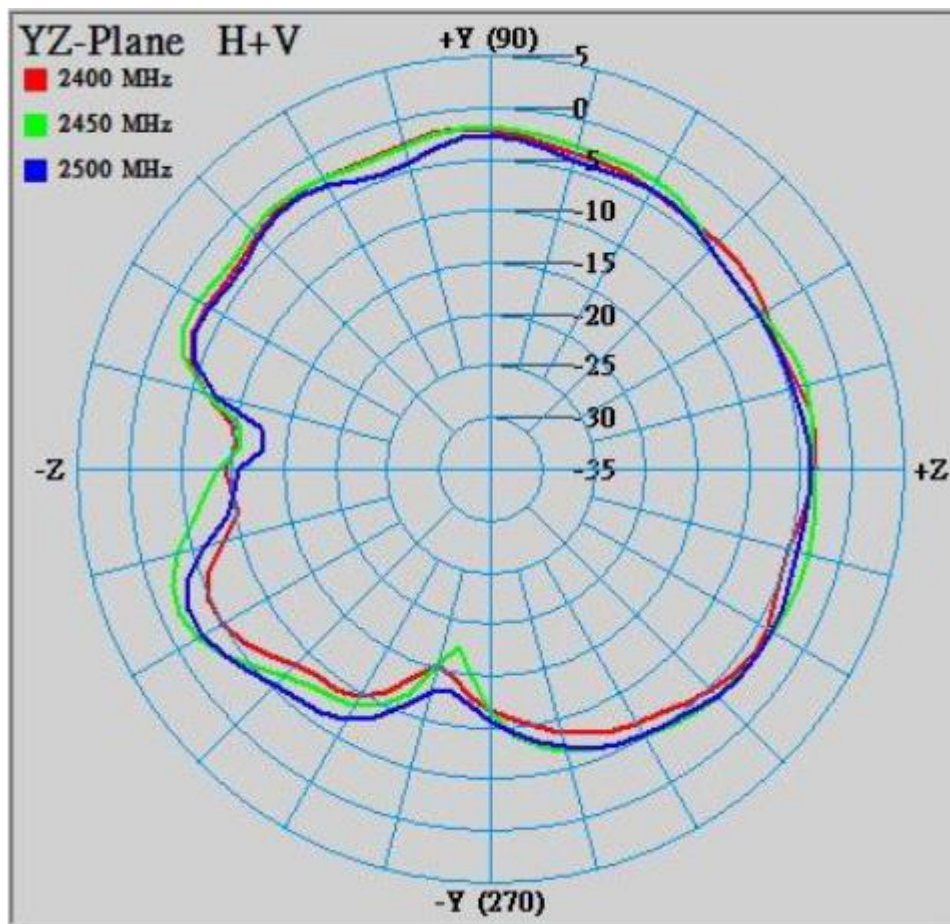
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## Y-Z Plane

Phi=90.00deg

Gain . dB



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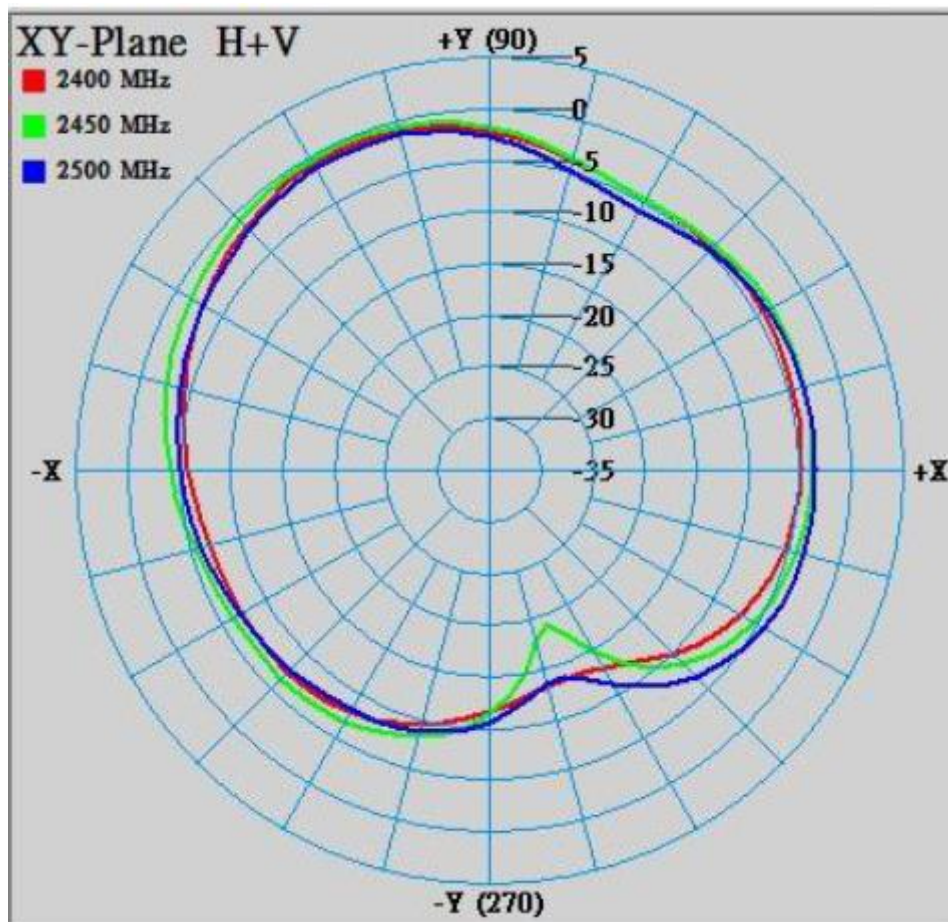
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## X-Y Plane

Theta=90.00deg

Gain . dB



	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2400	-2.37	-4.81	-1.92	-4.91	-0.73	-4.92
2450	-1.33	-3.85	-1.76	-4.16	-0.37	-4.12
2500	-3.06	-4.81	-2.69	-4.88	-1.25	-4.75

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