



IEI Integration Corp.
威強電工業電腦

SPECIFICATION FOR APPROVAL

零件承認書

IEI Part Number :

(威強電料號)

CKP-32505-006200-100-RS

IEI Description :

(威強電料號描述)

Dipole Antenna

**2.4~2.5/5.15~5.85 GHz Dual Band Working
Frequency Halogens Free Product**

Manufacturer :

(製造商)

INPAQ TECHNOLOGY CO., LTD.

Manufacturer Model Name :

(製造商型號)

RFDPA171300SBLB801

Manufacturer Part Number :

(製造商料號)

RFDPA171300SBLB801

Manufacturer / Supplier Description :

(製造商/代理商料號描述)

2.4+5GHz Wi-Fi External Antenna

RoHS or Halogen Free :

(符合 RoHS 或無鹵)

RoHS

Manufacturer/Supplier contact window & stamped

(製造商/代理商窗口資訊及用印)

Enclosure List (附件清單)

- One .Component approving sheet (零件承認書)** Y N
- 1.English file name..... V
(英文檔名)
2. Component Spec..... V
(零件規格)
3. Component Monomer Packing..... V
(零件單體封裝)
4. Component Dimension..... V
(零件尺寸)
5. Component material approving..... V
(零件材料承認)
6. Safety certificate of plastic material or component..... V
(塑膠材質安規或零件安規)
7. Component Shipment Packing..... V
(零件出貨包裝)

Two .Component RoHS test report in one year (零件一年內 RoHS 檢測報告)

1. The third party test report...ex. SGS TEST REPORT..... V
(第 3 公正單位測試報告...例如: SGS,ICT)
2. If there's no test report, please add the announcement at the attachment V
(無第 3 公正單位測試報告,提供自我宣告書)
3. The better is to add the MSDS at the attachment..... V
(各原材料 MSDS)

Three. Item Attributes(零件特性)

1. Operating Temperature(Max.)..... + 65°C
(最高使用溫度)
2. Operating Temperature(Min.)..... -20°C
3. (最低使用溫度)
4. Storage Temperature(Max.)..... + 75°C
(最高儲存溫度)
5. Storage Temperature(Min.)..... -30°C
6. (最低儲存溫度)
7. Meeting **IPC/JEDEC J-STD-20 MSL Classifications**..... _____
(符合 **IPC/JEDEC J-STD-20 MSL Classifications** 等級)
6. If not meeting Item5,that can meet _____ (standard) and attached documents for certifying.(如不符合上述第 5 項,可符合 _____ 標準, 並提供相關資料說明)

品名：RFDPA171300SBLB801

客戶料號：CKP-32505-006200-100-RS

1. Explanation of part number :

RF	DPA	1713	00	S	B	L	B	8	01
Type Code	Product Code	Dipole Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
RF Device	DPA: Dipole Antenna	Per 2 digits of length, width e.g.: 1713 Length 172mm, Width 13mm	2 digits for cable length e.g.: 00 None Cable	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 5: 5 GHz 6: 6GHz 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 3:Ø1.13 6:RG316 7:Ø1.37 8:RG178	01~99 series number

2. Electrical Specification :

Item	Specification
Working Frequency Range	2.4 ~ 2.5 / 5.15 ~ 5.85 GHz (Note-1)
Peak Gain	2.4 ~ 2.5 GHz @ 2.22 dBi 5.15 ~ 5.85 GHz @ 4.29 dBi
Return Loss	-10dB(Max)
VSWR	2 max.
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50Ω
Operation Temperature	-40℃ ~ +75℃
Storage Temperature	-40℃ ~ +85℃

If the operating or storage temperature is higher than 70 ° C, the antenna cover may be deformed by external load or gravity.

With slight deformation of the antenna cover, the antenna can maintain normal operation.

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 : 邱瑩鈺

CHECKED BY : 詹惠雯

DESIGNED BY :

APPROVED BY : 陳振榮

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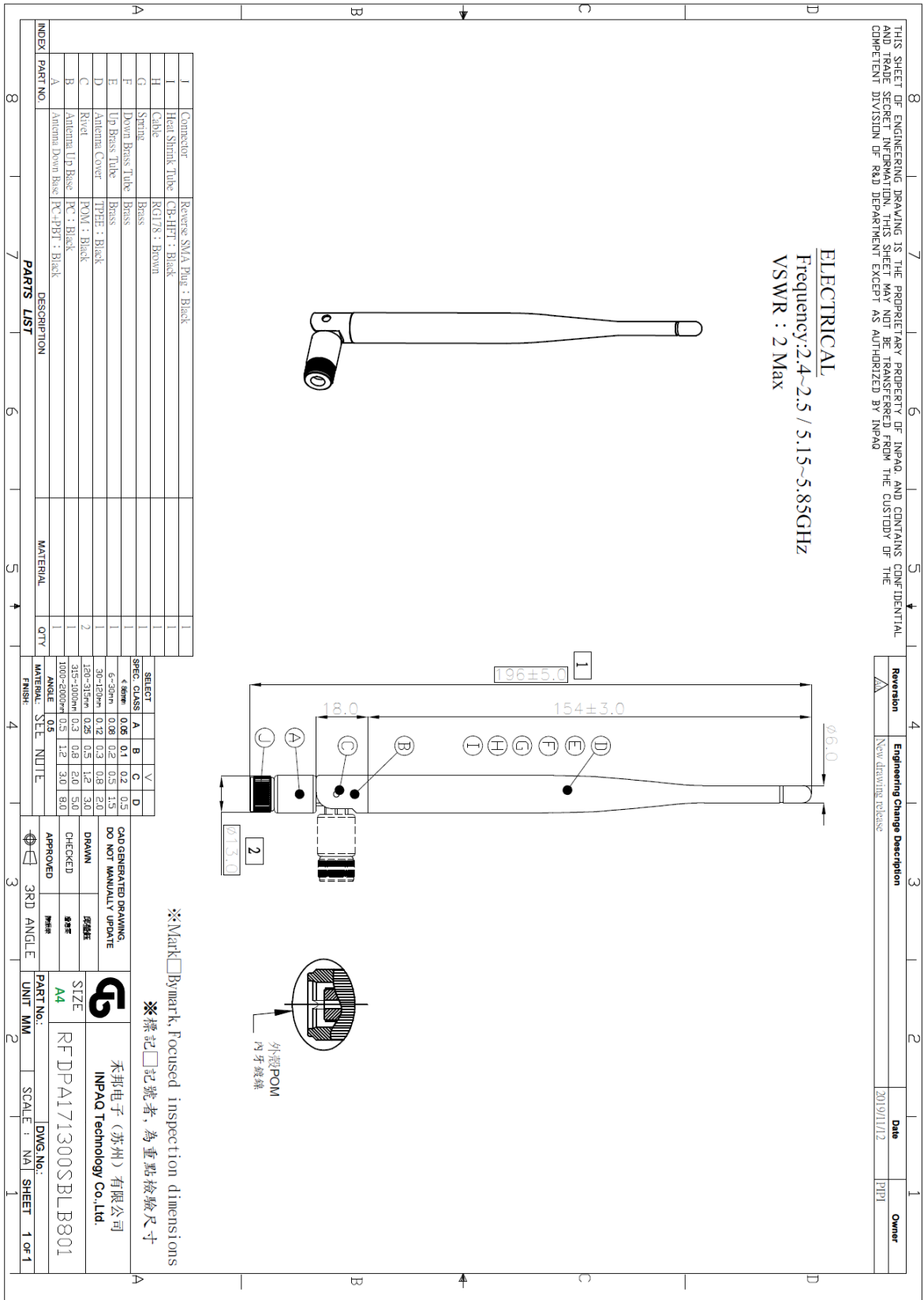
TITLE : RFDPA171300SBLB801

DOCUMENT NO.

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SPEC REV.
A4

3. Drawing :



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF INPAQ AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE REPRODUCED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY INPAQ

ELECTRICAL
Frequency: 2.4~2.5 / 5.15~5.85GHz
VSWR : 2 Max

Revision	Engineering Change Description	Date	Owner
1	New drawing release	2019/11/12	PP1

※Mark □ By mark, Focused inspection dimensions
※標記 □ 記號者, 為重點檢尺寸

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X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A



INPAQ TECHNOLOGY CO., LTD.

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UNIT : mm

DRAWN BY : 邱發鈺

CHECKED BY : 詹惠愛

DESIGNED BY :

APPROVED BY : 陳振榮

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5. Performance Report


Equipment	Brand and test program	Calibrated Equipment	Calibration date
Reflection Coefficient Measurement	Keysight Network Analyzer	Keysight Network 85033E	2019/2/20
Pattern Measurement	Satimo Test Program: SPM V15	Satimo SD2450 (2G) SD5150 (5G) SD5450 (5G)	2019/4/23

Tested date : 2019/11/12

Test personnel : Jason Lin

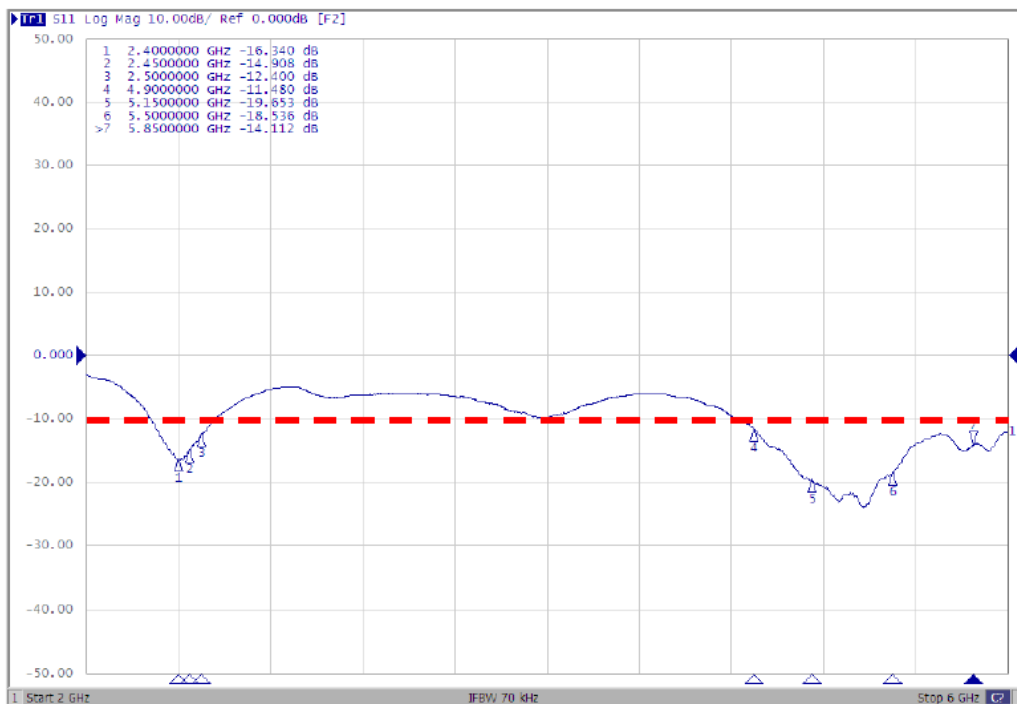
■ Operating instructions:

- 1.Place the DUT at the center of the turntable,
- 2.Connecting the test cable to the DUT, and use the SPM software for passive measurement.
- 3.During the measured process, SATIMO SG24 will conduct radiation testing with the DUT through 23 probes by a vertical 360- degree; then the turntable will rotate a horizontal 180- degree.
4. After, a complete measurement of spherical 3D is completed.


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 : 邱瑩鈺	CHECKED BY : 詹惠雯	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
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ELECTRICAL CHARACTERISTICS

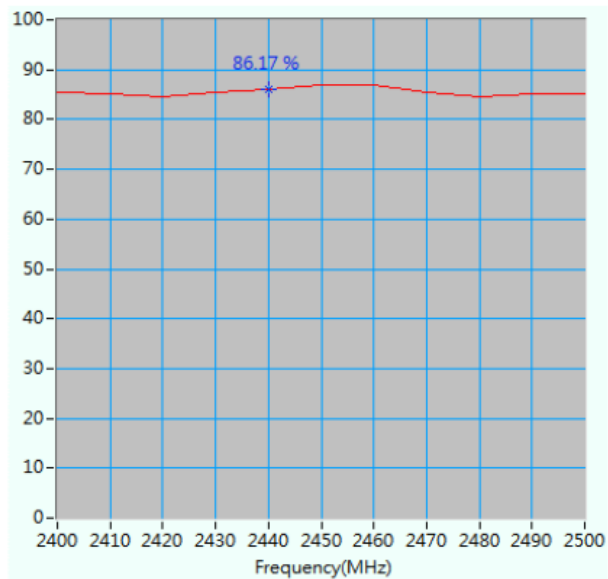
Return Loss & Isolation



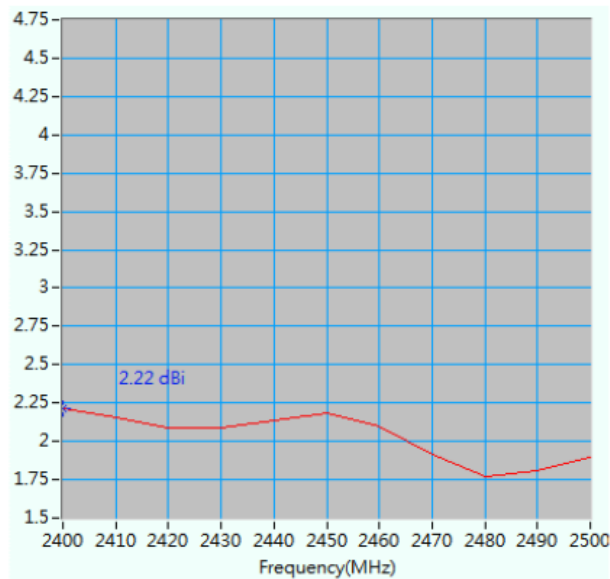
10dB-Return Loss

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.
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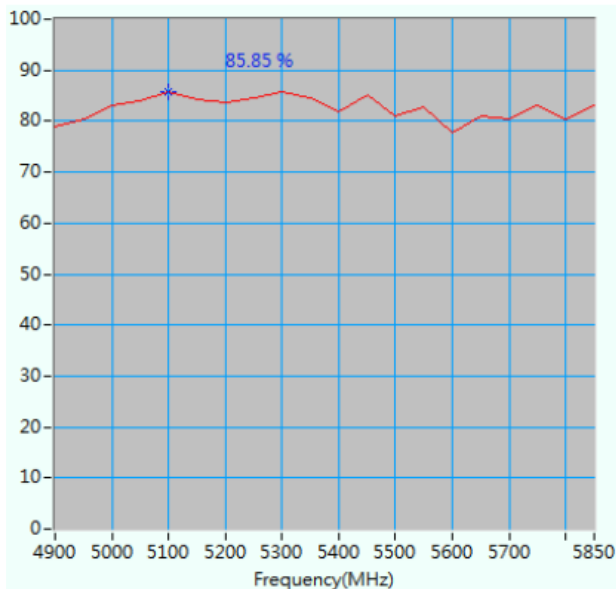
Efficiency & Peak Gain



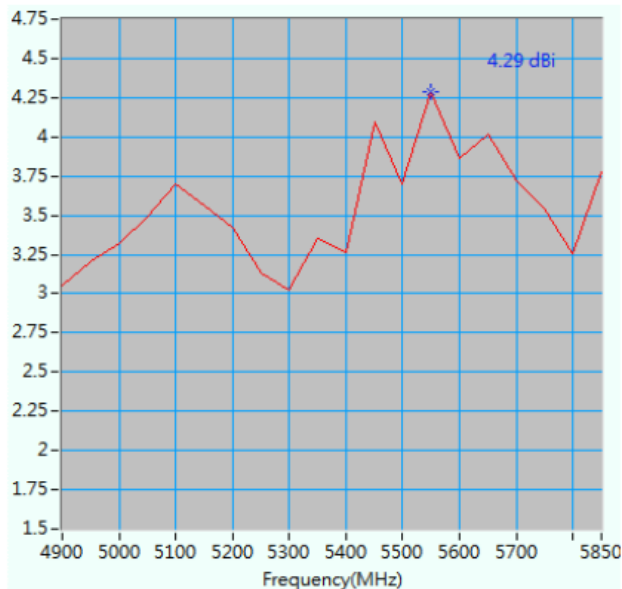
Maximum Efficiency at 2440 MHz : 86%



Maximum Efficiency at 2400 MHz : 2.22 dBi



Maximum Efficiency at 5100 MHz : 85 %



Maximum Efficiency at 5550 MHz : 4.29 dBi

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



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SCALE : N/A

UNIT : mm

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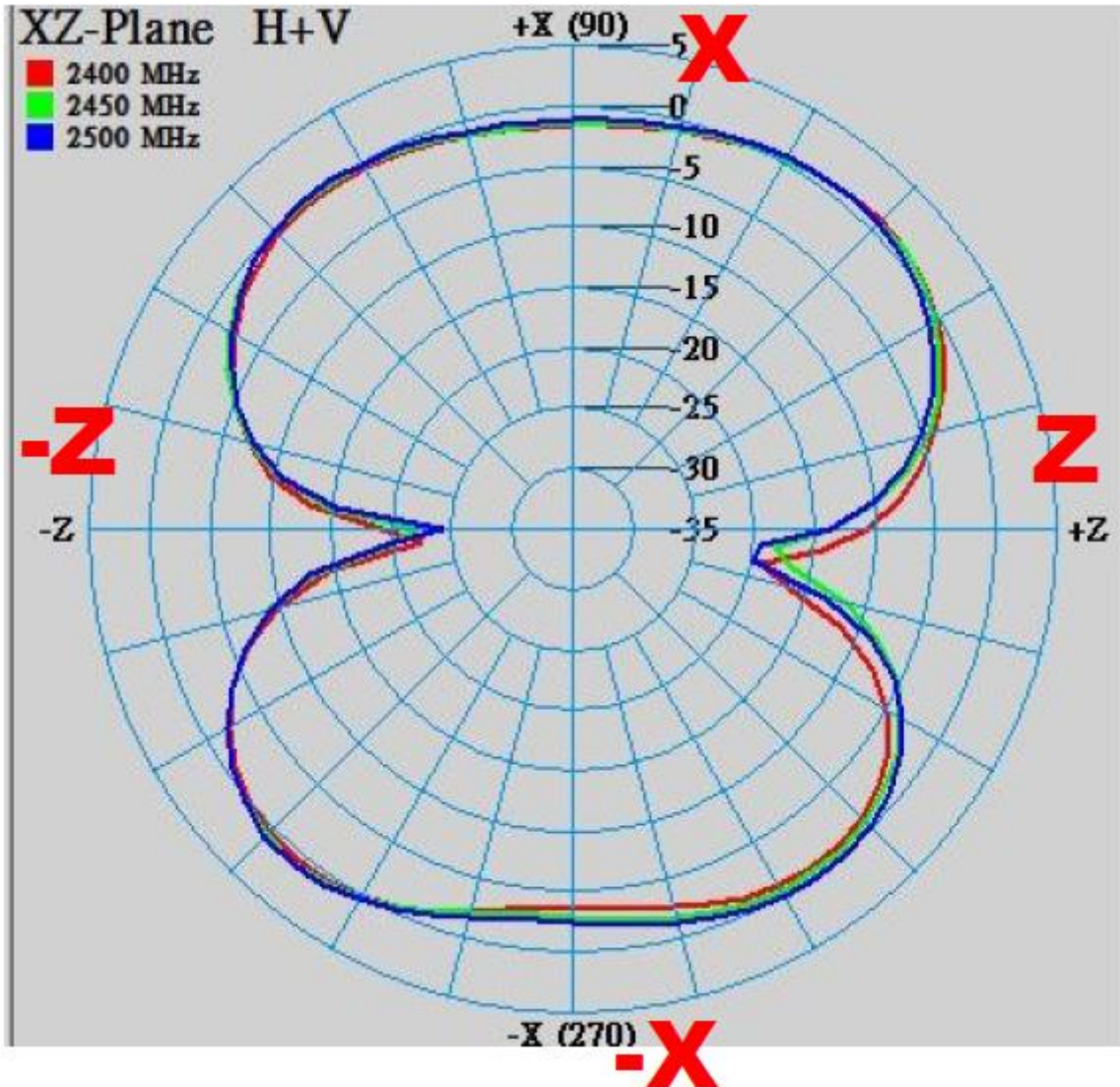
Radiation Patterns


2400~2500 MHz

X-Z Plane

Phi=0.00deg

Gain . dB

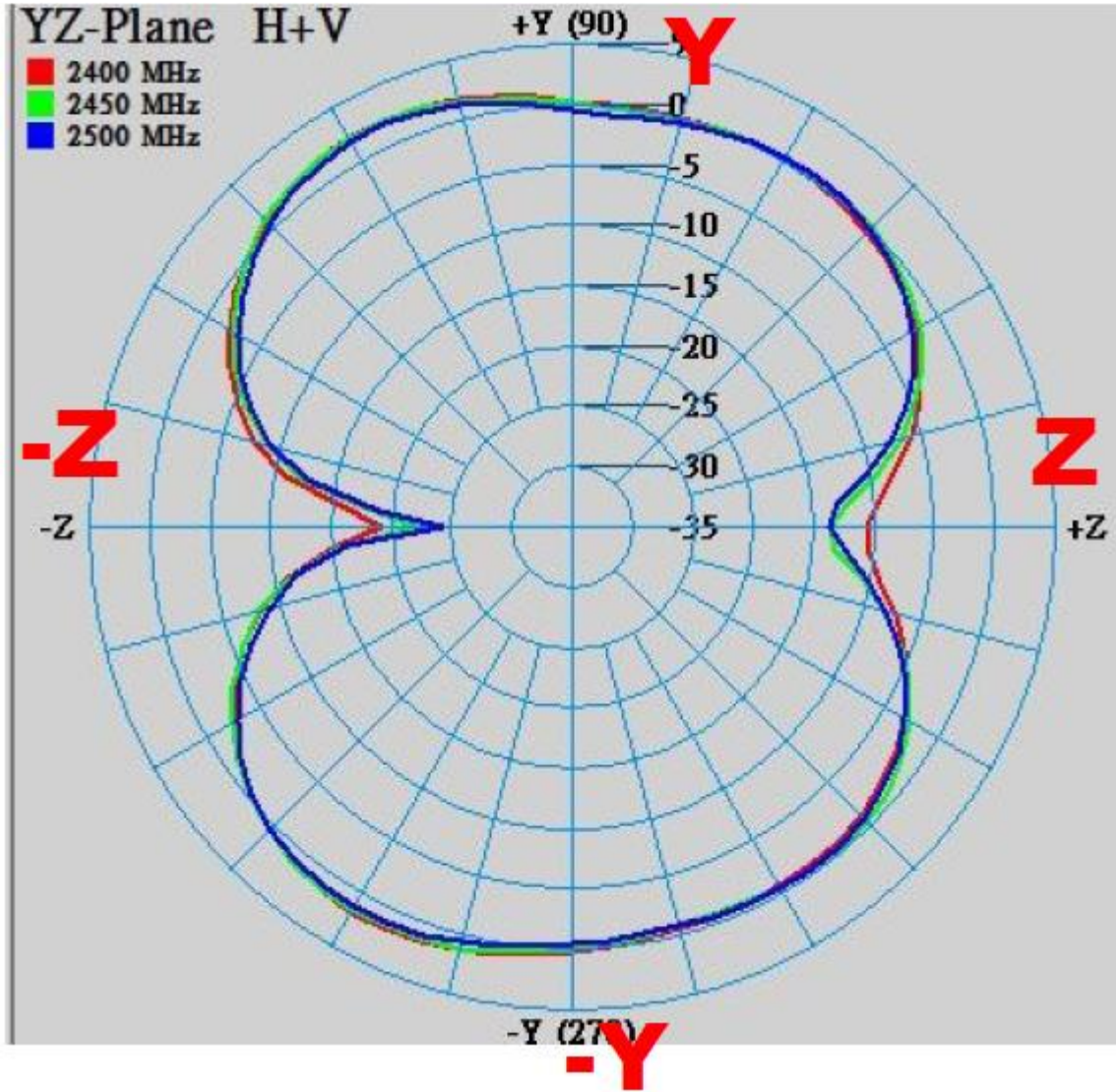



UNLESS OTHER SPECIFIED TOLERANCES ON :		 INPAQ TECHNOLOGY CO., LTD.	
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ANGLES=N/A HOLEDIA=N/A		THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION	
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Y-Z Plane

Phi=90.00deg

Gain . dB

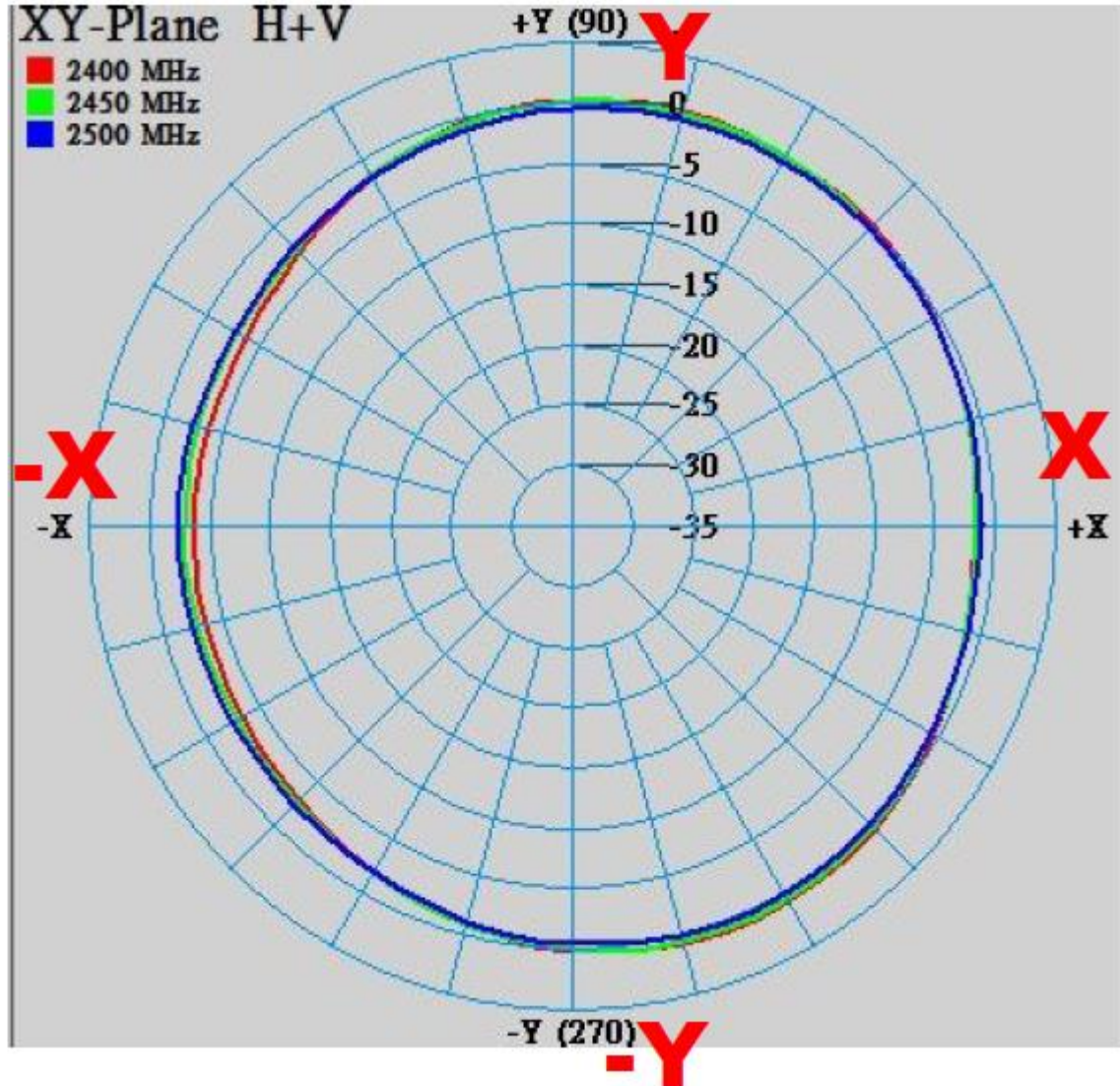


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ANGLES=N/A		THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
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X-Y Plane

Theta=90.00deg

Gain . dB



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2400	1.04	-2.08	2.22	-1.06	0.82	-1.04
2450	1.01	-1.86	2.13	-1.07	0.64	-0.99
2500	1.06	-1.76	1.83	-1.39	0.11	-1.16

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



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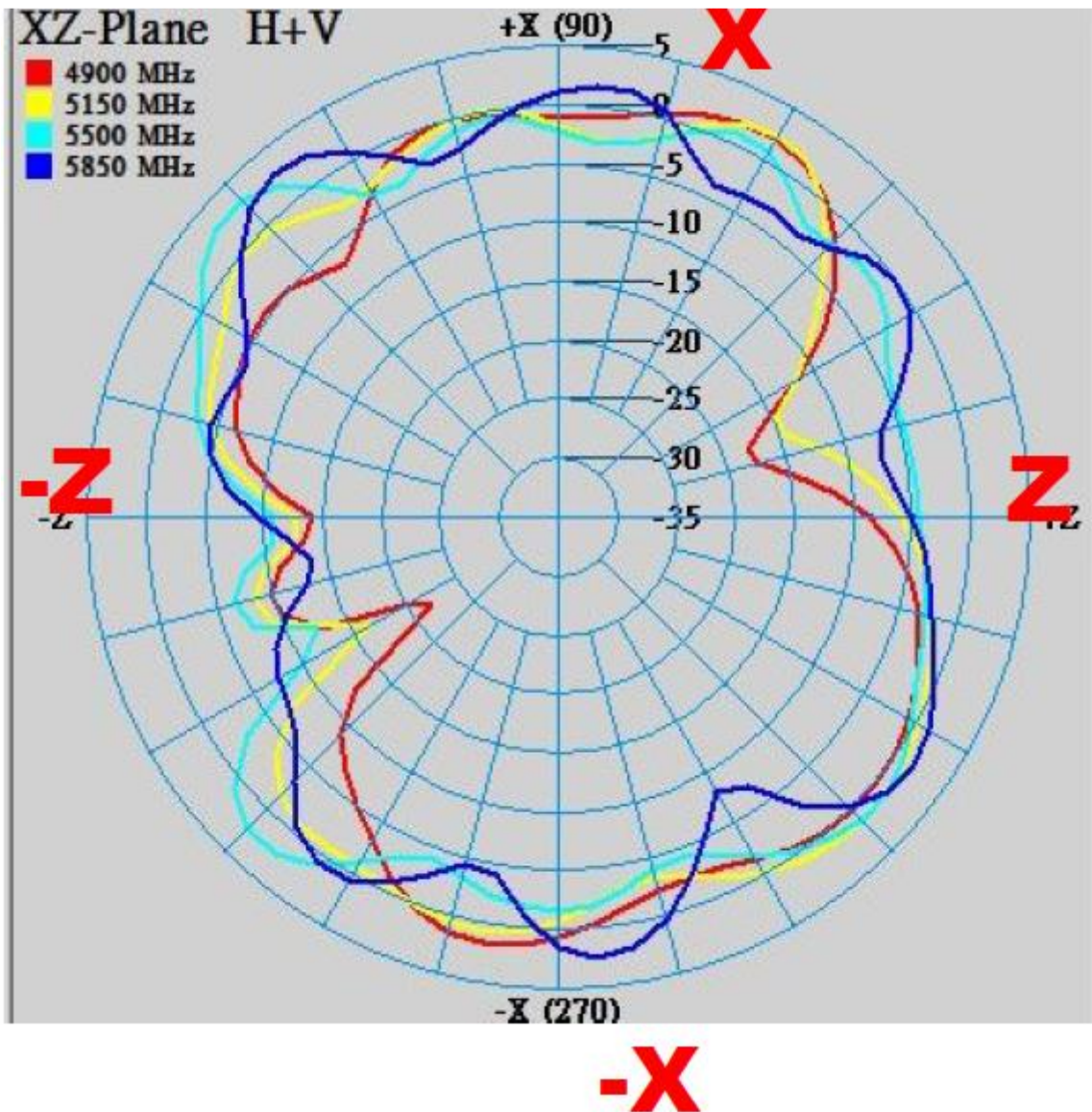
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5150~5850 MHz

X-Z Plane

Phi=0.00deg

Gain . dB



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



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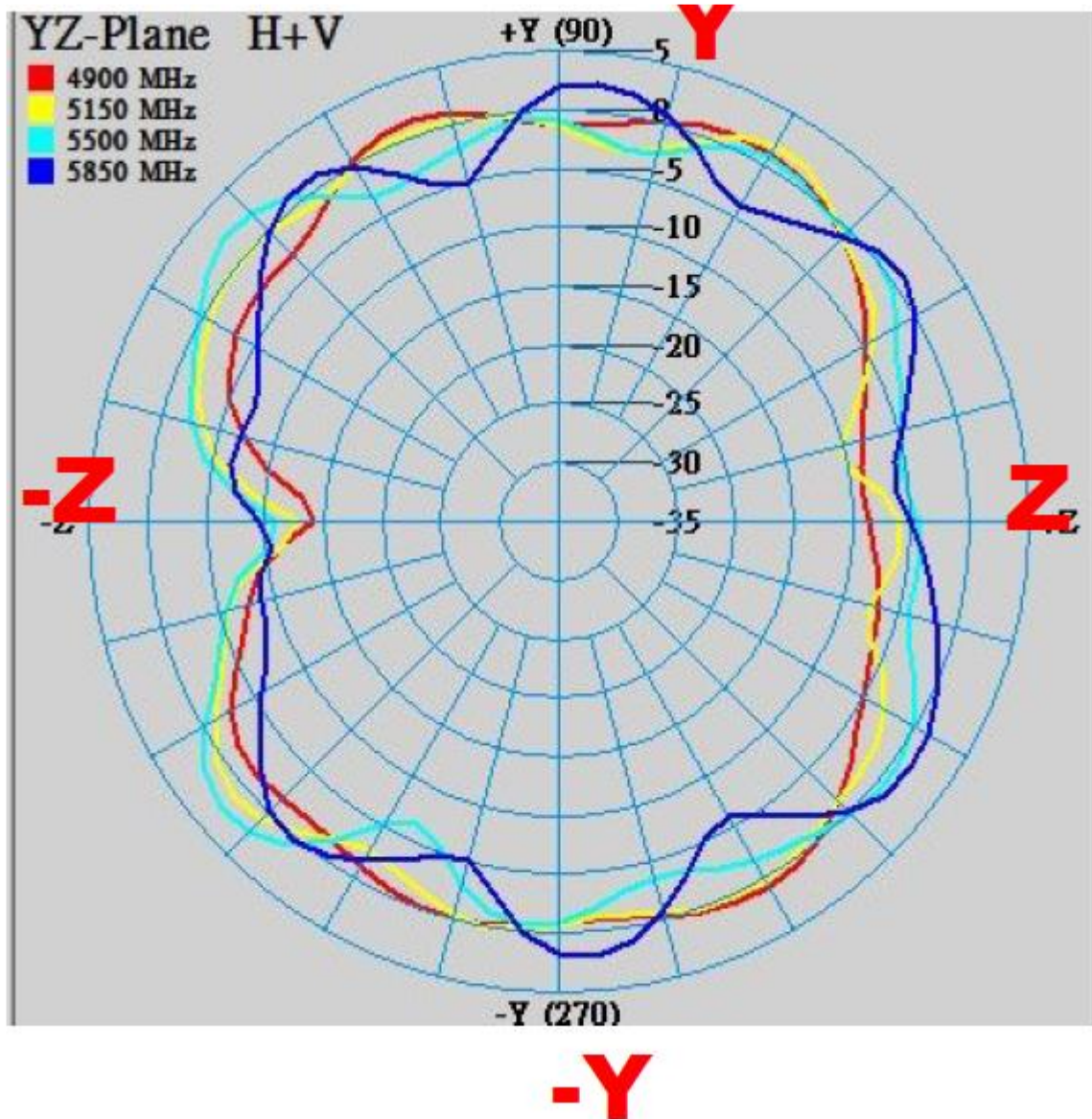
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Y-Z Plane

Phi=90.00deg

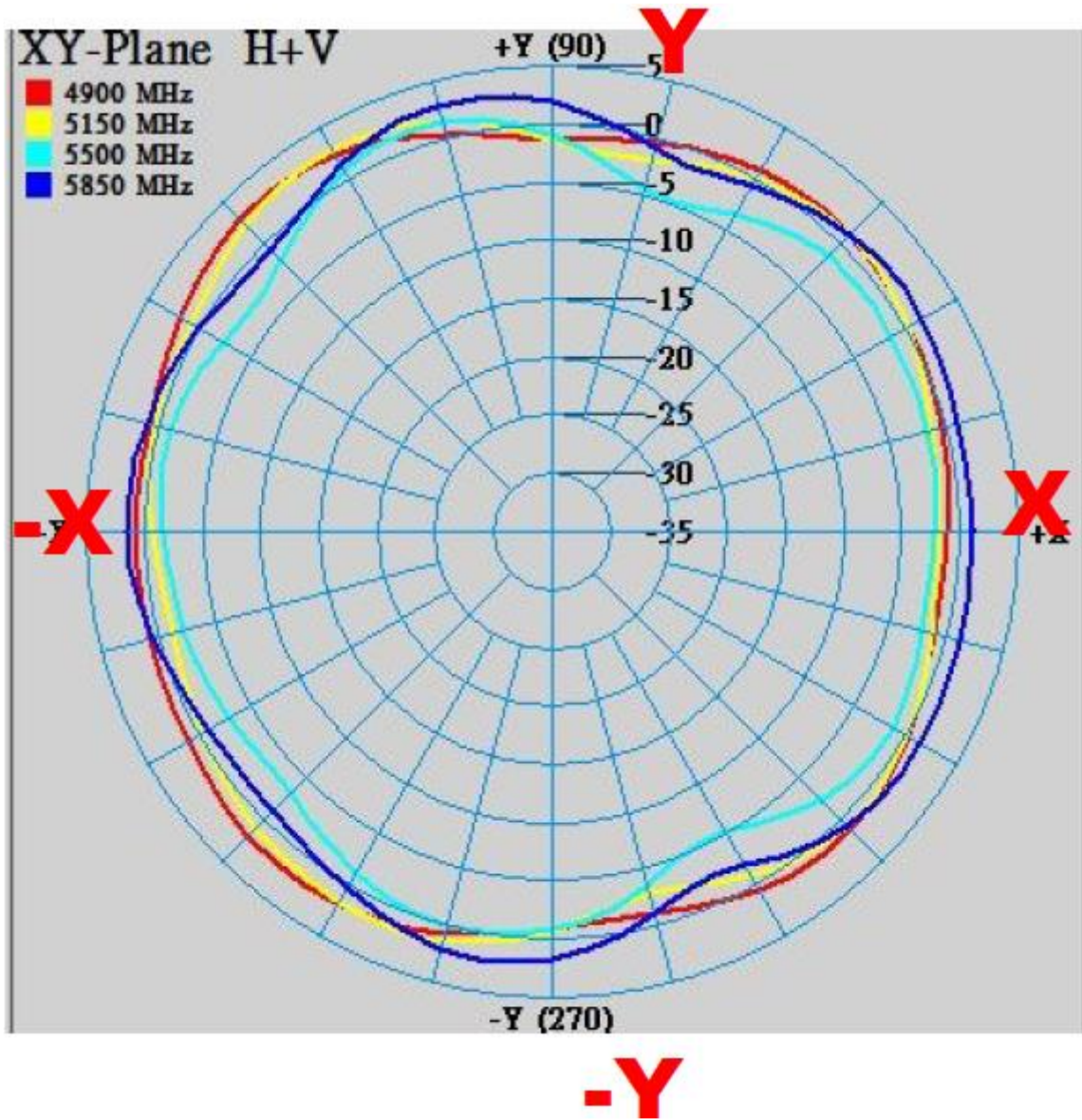
Gain . dB



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X-Y Plane
Theta=90.00deg

Gain . dB



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
4900	1.98	-2.50	1.31	-1.95	3.05	0.67
5150	2.33	-1.91	1.91	-1.62	3.56	0.20
5500	4.29	-1.56	2.74	-1.44	1.48	-1.69
5850	2.78	-1.60	2.30	-1.70	3.77	0.73

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