

APPROVAL SHEET

Dipole Antenna

2.4~2.5/5.15~5.85/5.925~7.125 GHz Working Frequency

P/N: RFDPA161504IMLB902

Customer : 威強電工業電腦股份有限公司

Customer 's Part No. : CKP-32505-012500-100-HF

Approval No. : _____

Issue Date : _____

佳邦科技股份有限公司 INPAQ TECHNOLOGY CO., LTD.

地址 Add : 326 桃園市楊梅區高獅路 566 之 1 號

(566-1,Ko-Shi Road, Yang-Mei, Tao-Yuan 32668,Taiwan.

電話號碼 Tel : 03 475 8711



PAGE 1 OF 19

品名：RFDPA161504IMLB902

1. Explanation of part number：

RF	DPAA	1615	04	I	M	L	B	9	02
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	Dipole 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	2.4~2.5 / 5.15 ~ 5.85 / 5.925 ~7.125 GHz
Gain	2.83 dBi(@2.4~2.5 GHz) 3.98 dBi(@5.15 ~ 5.85 GHz) 4.53 dBi(@5.925 ~7.125 GHz)
Return Loss	-10dB(Max)
VSWR	2 max.
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50
Operation Temperature	-20℃ ~ +65℃
Cable Loss	2GHz ≤ 0.58 dB 6GHz ≤ 0.92 dB 5GHz ≤ 0.52 dB

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：王韋程

APPROVED BY：陳振榮

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TITLE：RFDPA161504IMLB902

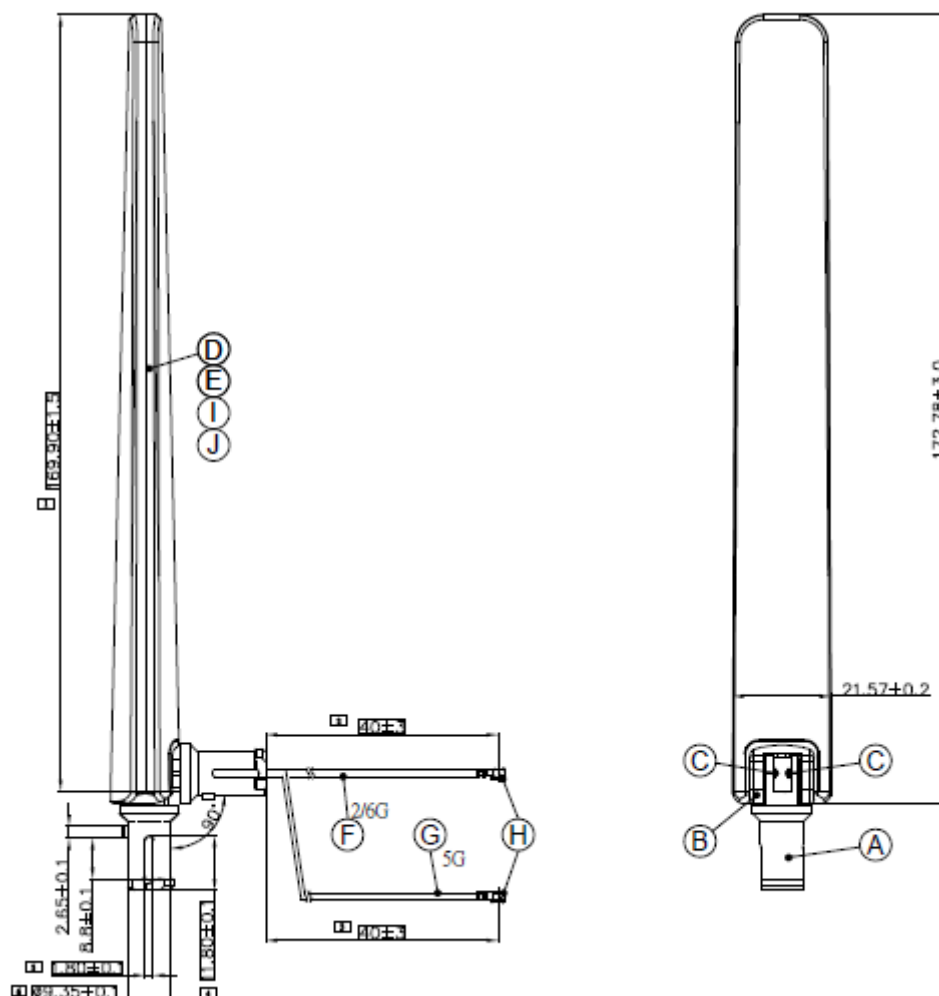
DOCUMENT NO.

SPEC REV.
P0

3. Drawing :

ELECTRICAL

Frequency: 2400~2500 / 5925~7125 MHz
5150~5850 MHz



J	醋酸膠布	Black		1
I	Sponge	Black		1
H	Connector	IPEX : Gold	20351-112R-37 / 721215007739	2
G	Coaxial Cable	Coaxial Cable Ø1.37 Low Loss : Green	5G	1
F	Coaxial Cable	Coaxial Cable Ø1.37 Low Loss : Black	2/6G	1
E	PCB	FR4(Single Layer) : T=0.8mm : Black	PCA1515-23A	1
D	Antenna Cover	ABS : Black		1
C	Rivet	POM : Black		2
B	Antenna Up Base	ABS : Black		1
A	Antenna Down Base	PC : Black	防卡線	1
INDEX	PART NO.	DESCRIPTION	MATERIAL	QTY

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

DRAWN BY : 邱瑩鈺

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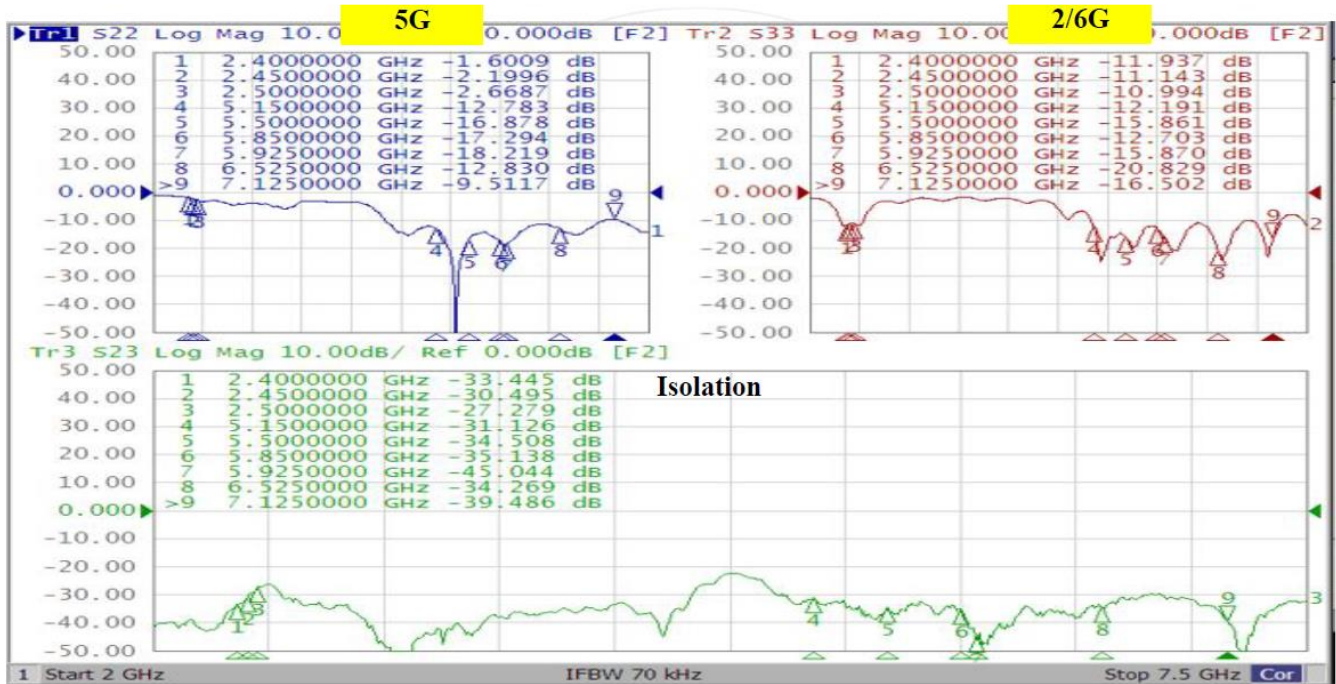
4. Performance Report :

Test Report**Experimental Setup**

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	
DESIGNED BY : 王章程	APPROVED BY : 陳振榮		
TITLE : RFDPA161504IMLB902		DOCUMENT NO.	SPEC REV.
			P0

ELECTRICAL CHARACTERISTICS

S-parameter



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 : 王韋程

APPROVED BY : 陳振榮

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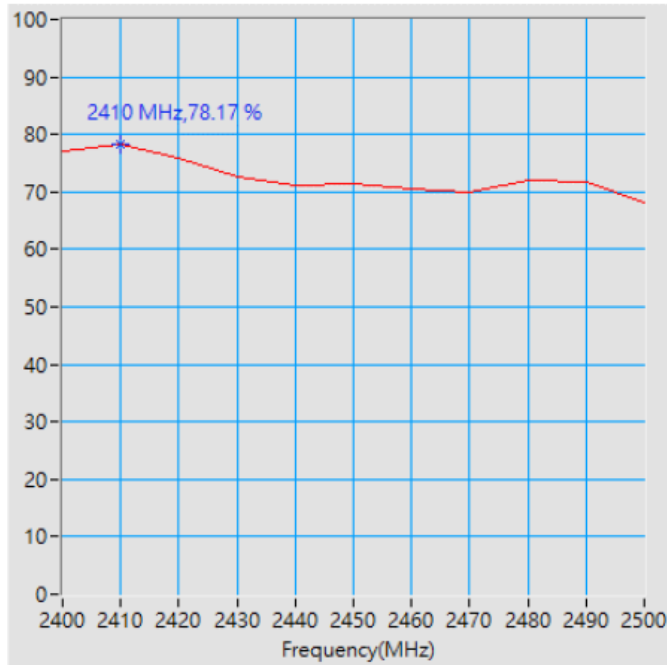
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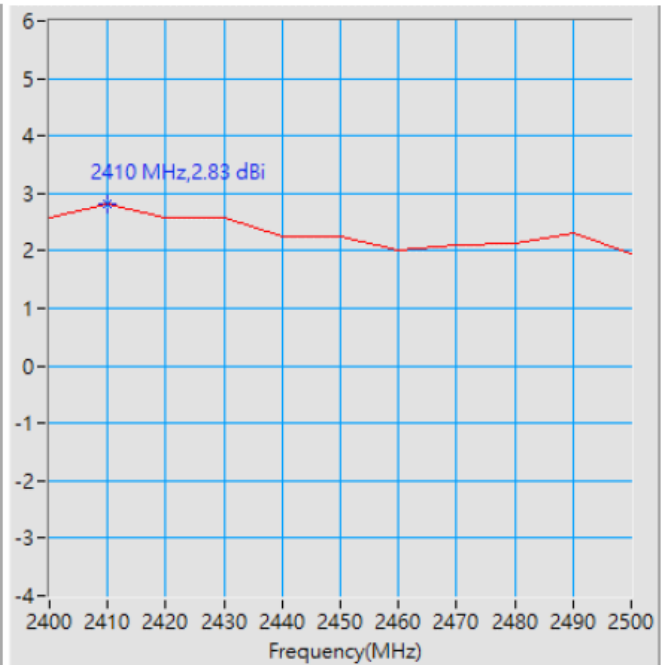
SPEC REV.
P0

Antenna Efficiency and Peak Gain

(2400 ~ 2500) MHz



Maximum Efficiency at 2410 MHz : 78.17 %



Maximum Peak Gain at 2410 MHz : 2.83 dBi

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

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CHECKED BY : 詹惠雯

DESIGNED BY : 王韋程

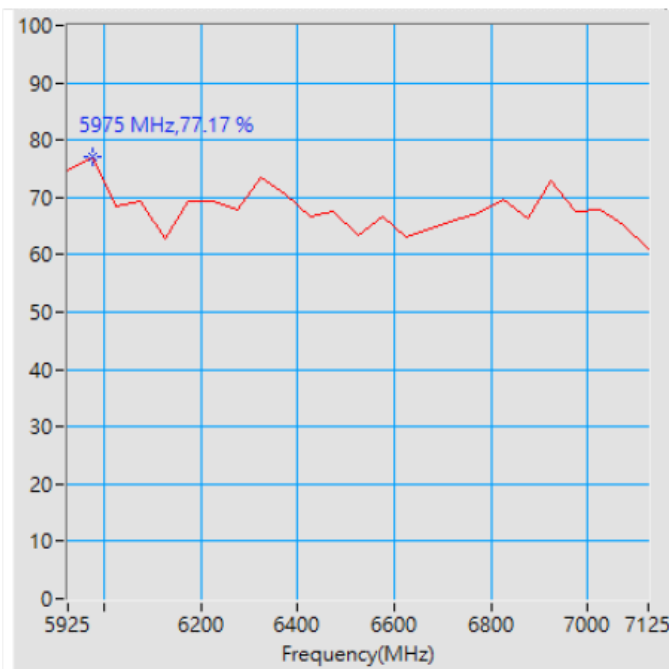
APPROVED BY : 陳振榮

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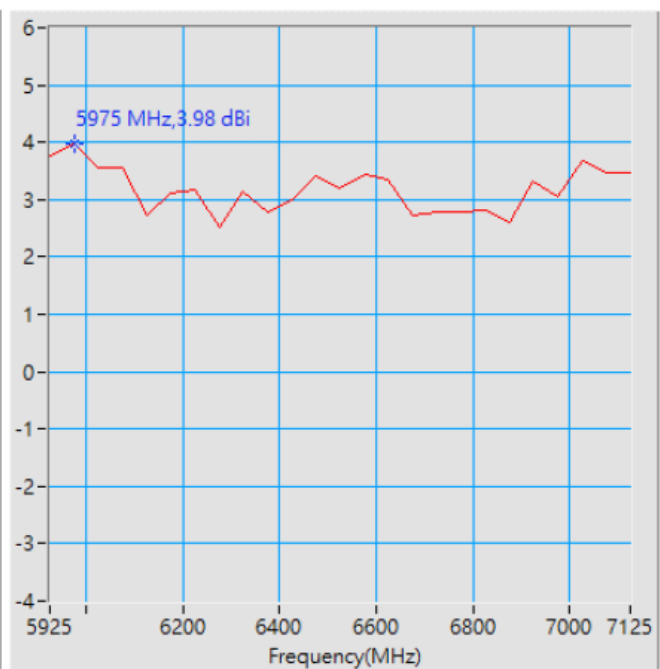
TITLE : RFDPA161504IMLB902

DOCUMENT
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SPEC REV.
P0

(5925 ~ 7125) MHz

Maximum Efficiency at 5975 MHz : 77.17 %



Maximum Peak Gain at 5975 MHz : 3.98 dBi

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

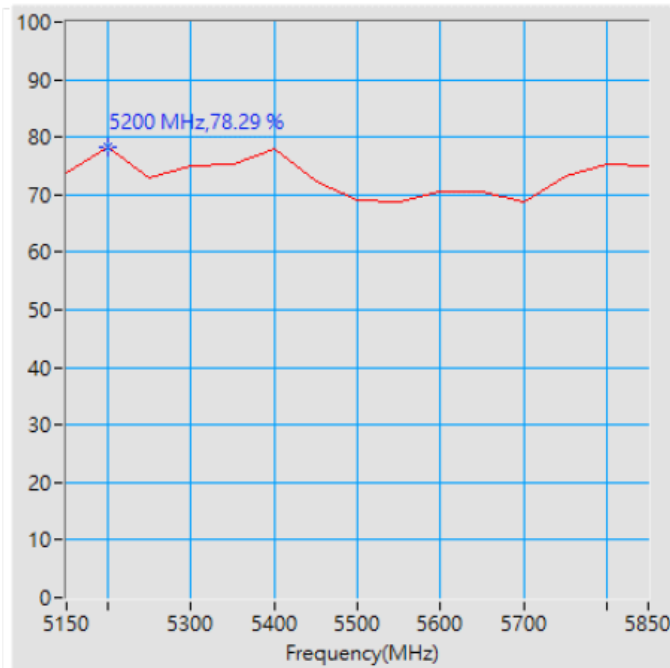
DESIGNED BY : 王韋程

APPROVED BY : 陳振榮

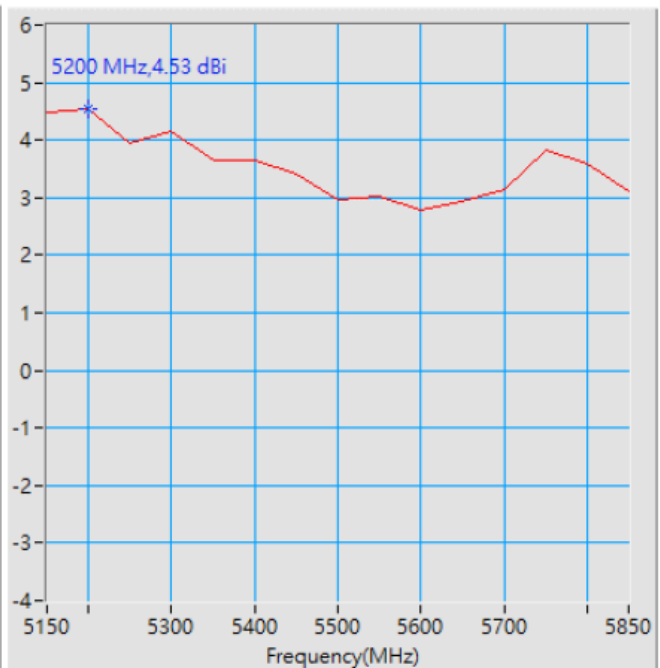
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DOCUMENT
NO.SPEC REV.
P0

(5150 ~ 5850) MHz

Maximum Efficiency at 5200 MHz : 78.29 %



Maximum Peak Gain at 5200 MHz : 4.53 dBi

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 : 王韋程

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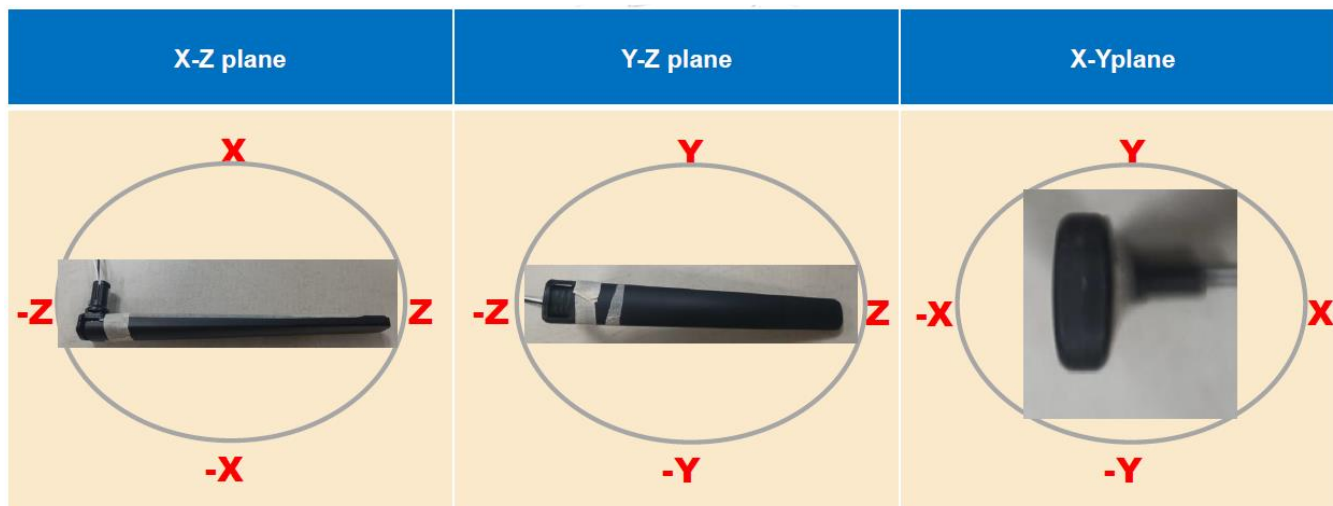
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DOCUMENT
NO.

SPEC REV.

P0

■ 3 Views of antenna & 2D Radiation Patterns



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

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SPEC REV.
P0

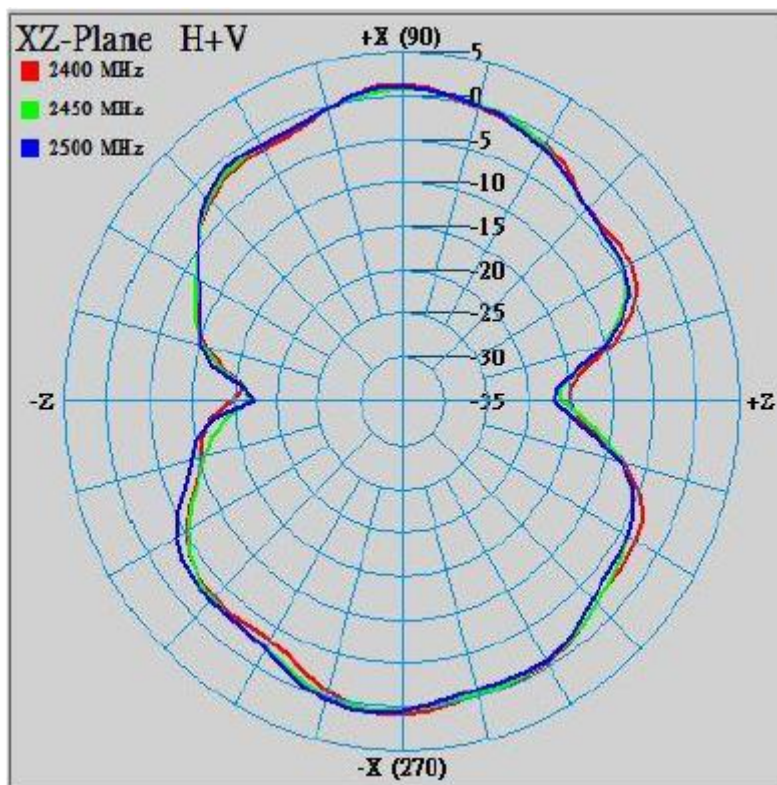
RADIATION PATTERN

(2400 ~ 2500) 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



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : 邱瑩鈺

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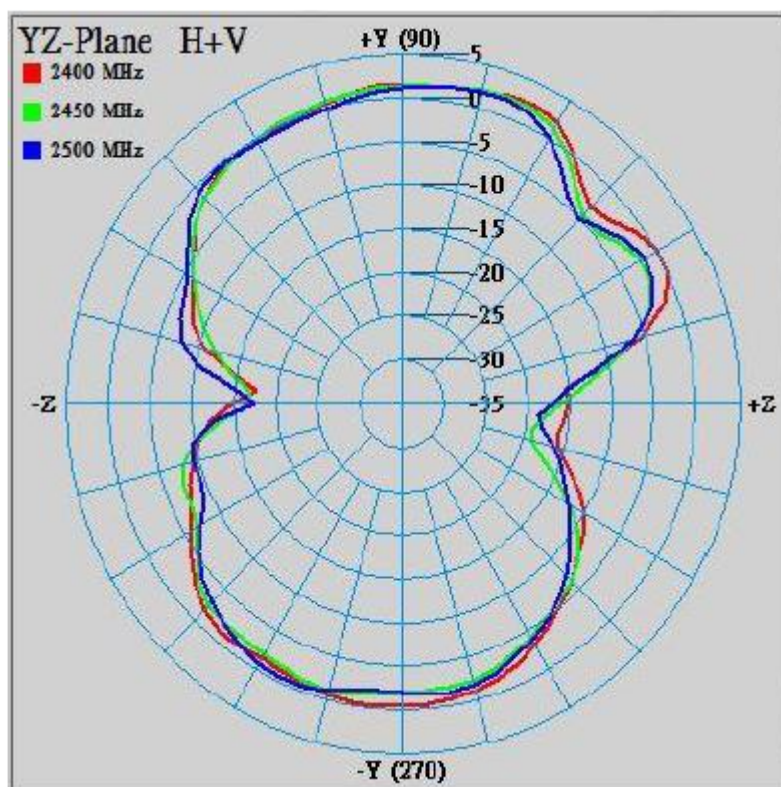
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DOCUMENT
NO.

SPEC REV.
P0

Y-Z Plane
Phi=90.00deg

Gain . dB



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



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

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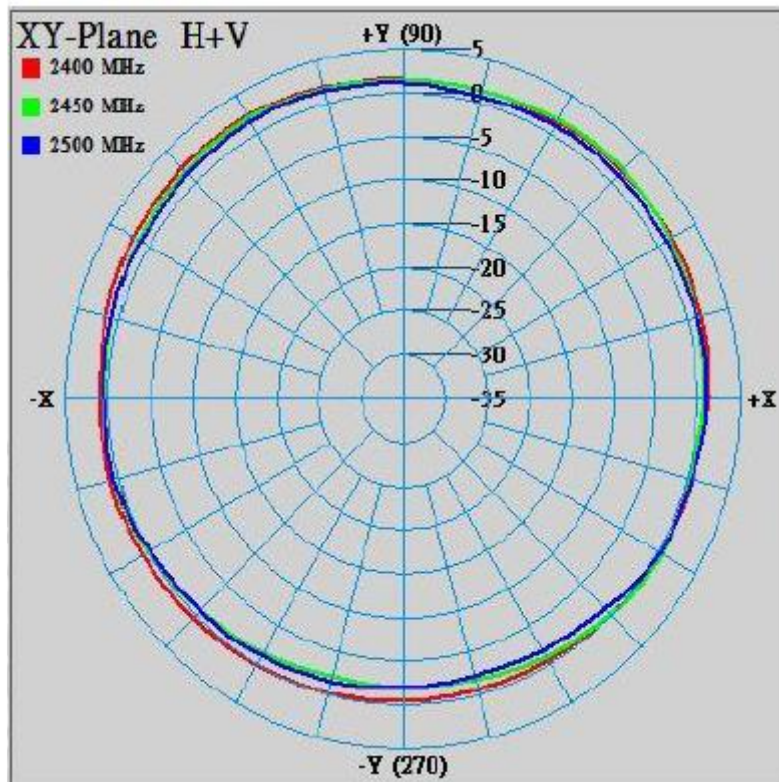
TITLE : RFDPA161504IMLB902

DOCUMENT
NO.

SPEC REV.
P0

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]
2400	1.24	-2.68	2.58	-2.19	2.23	1.02
2450	0.77	-2.73	2.25	-2.72	1.96	0.58
2500	1.06	-2.67	1.93	-2.82	1.59	0.30

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

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DESIGNED BY : 王韋程

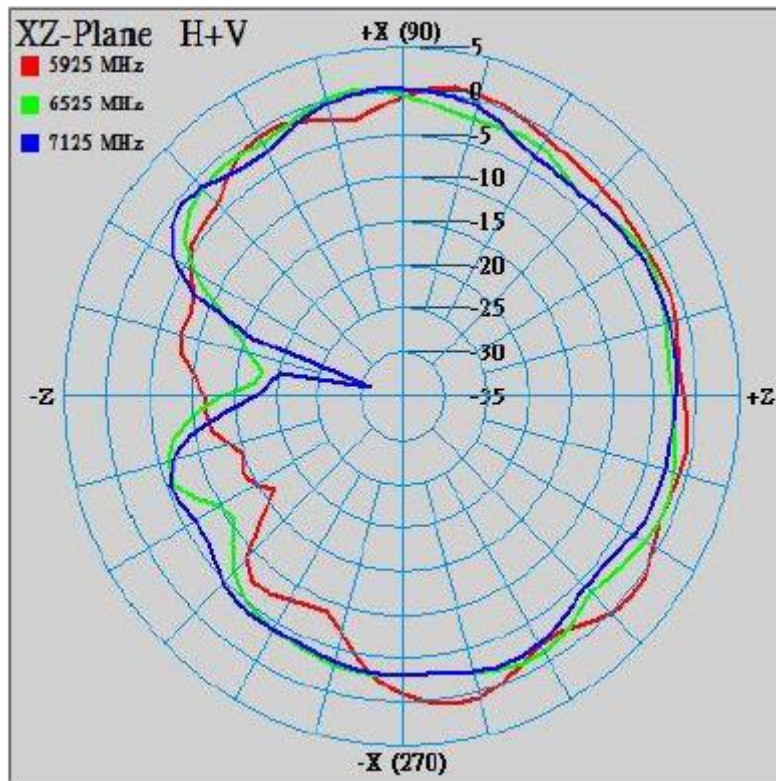
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DOCUMENT
NO.

SPEC REV.
P0

(5925 ~ 7125) 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

**INPAQ TECHNOLOGY CO., LTD.**

SCALE : N/A

UNIT : mm

DRAWN BY : 邱瑩鈺

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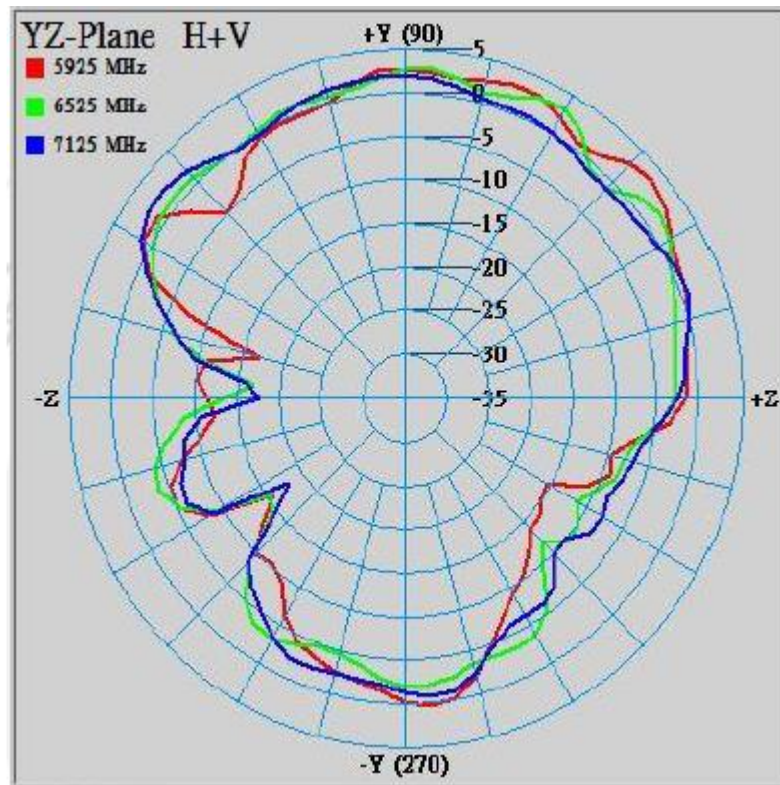
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SPEC REV.

P0

Y-Z Plane
Phi=90.00deg

Gain . dB



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



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

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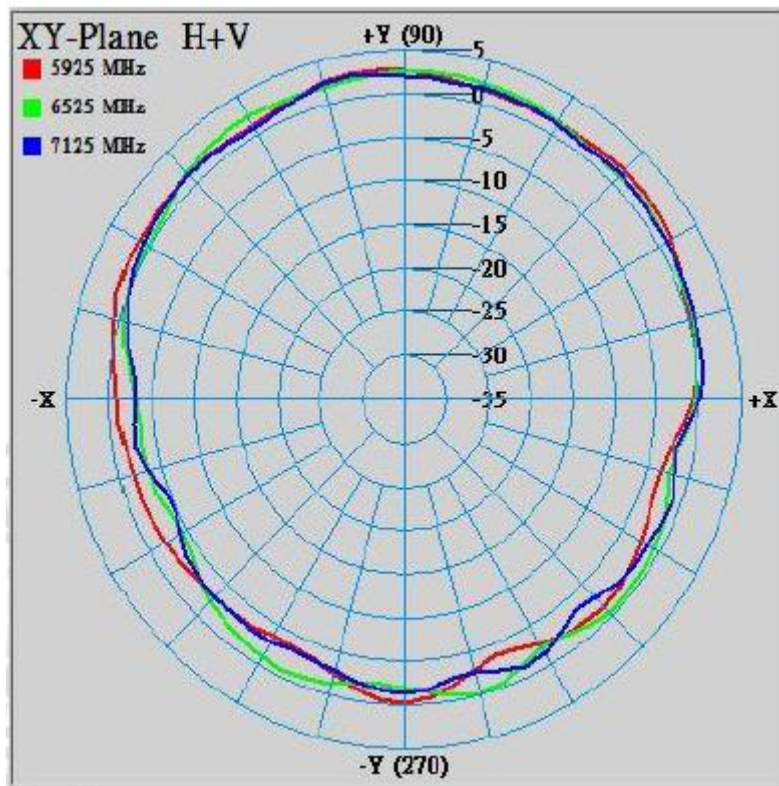
DOCUMENT
NO.

SPEC REV.
P0

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]
5925	0.87	-2.36	3.56	-1.53	2.81	-0.05
6525	0.54	-2.96	3.14	-1.69	2.59	0.00
7125	0.27	-3.08	2.49	-1.80	2.45	-0.36

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

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CHECKED BY : 詹惠雯

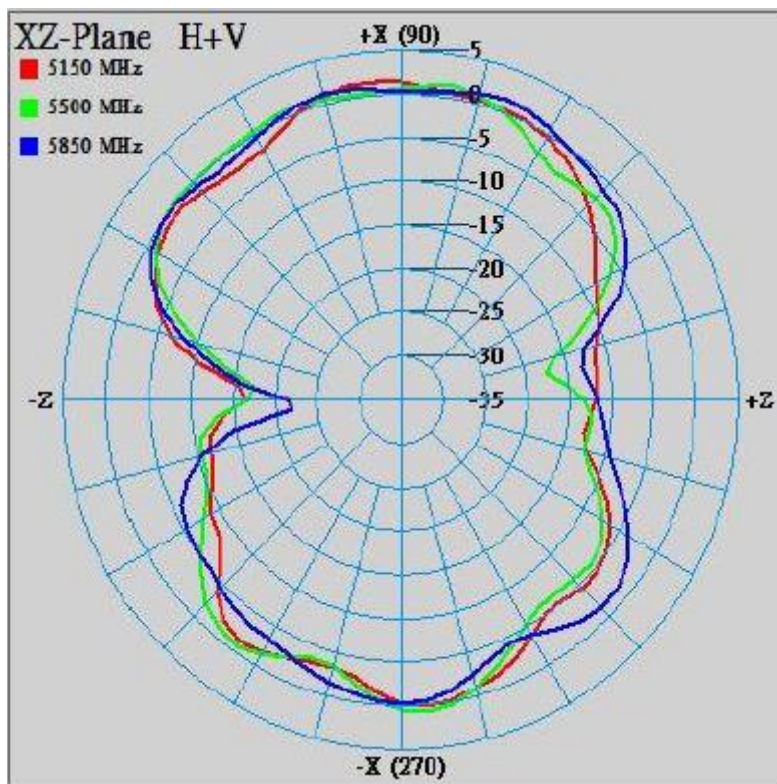
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(5150 ~ 5850) MHz**X-Z Plane**
Phi=0.00deg**Gain . dB**

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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SCALE : N/A

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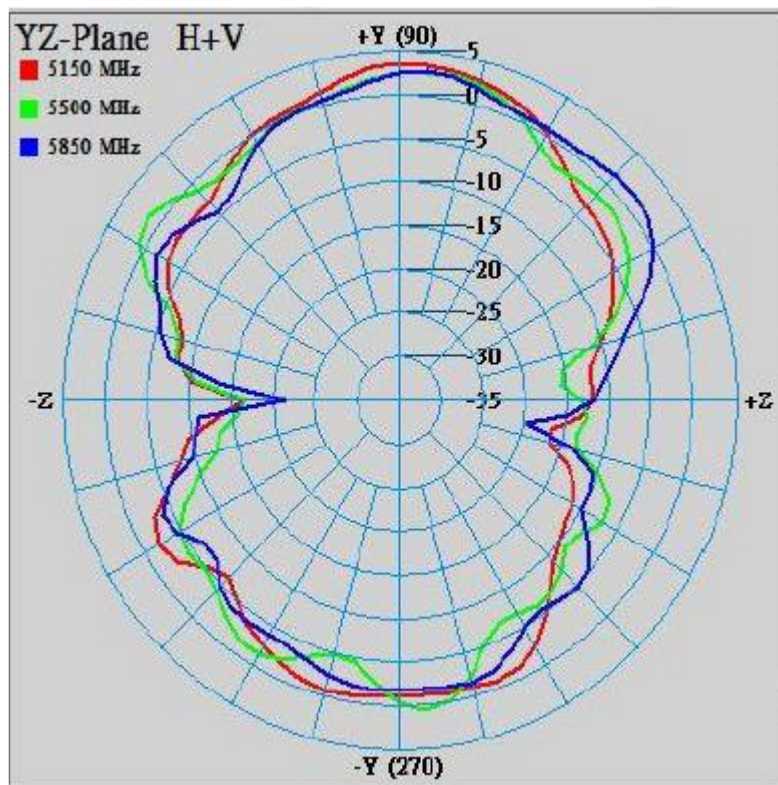
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P0

Y-Z Plane

Phi=90.00deg

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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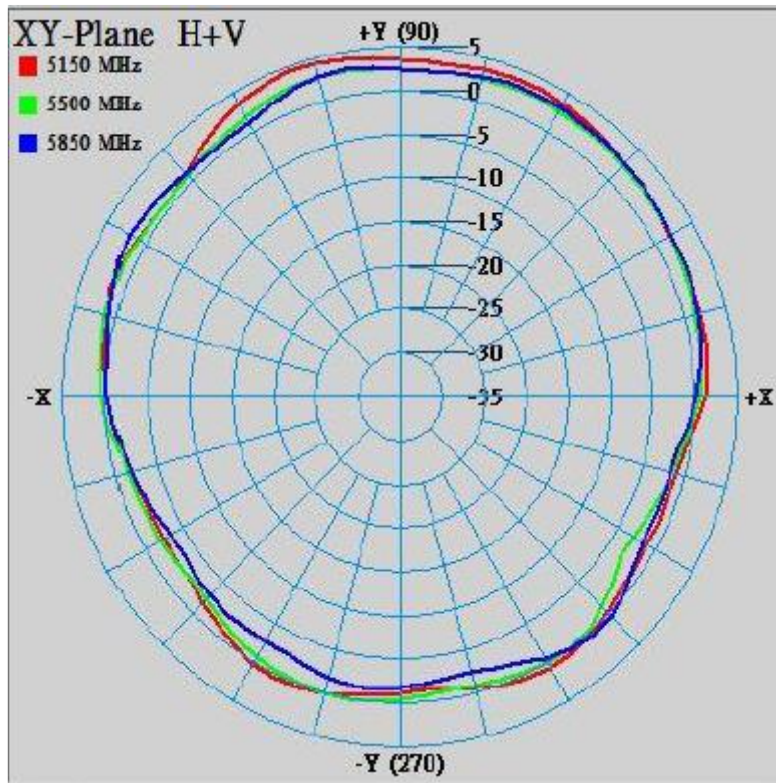
DOCUMENT
NO.

SPEC REV.
P0

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]
5150	1.42	-2.96	3.44	-2.24	4.48	1.26
5500	1.28	-2.77	2.66	-2.52	2.79	0.64
5850	1.41	-2.37	2.74	-2.31	3.11	0.54

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

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