

APPROVAL SHEET

Dipole Antenna

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

P/N: RFDPA161517IMLB902

Customer : 威強電工業電腦股份有限公司

Customer 's Part No. : CKP-32505-012600-100-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



品名：RFDPA161517IMLB902

History List

版本 REV.	修訂者 EDITOR	修訂頁次 PAGE	修訂內容 ITEMS OF CHANGE	申請日期 DATE	生效日期 VALID DATE	ECN 編號 ECN NO.
P0	邱瑩鈺	ALL	New drawing release	2024/07/02	According to the date of PLM Release	N/A

品名：RFDPA161517IMLB902

1. Explanation of part number :

RF	DPAA	1615	17	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, Width 140.0mm	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	50Ω
Operation Temperature	-20°C ~ +65°C
Cable Loss	2GHz ≤ 0.79 dB 6GHz ≤ 1.25 dB 5GHz ≤ 0.85 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 : 王章程

APPROVED BY : 陳振榮

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TITLE : RFDPA161517IMLB902

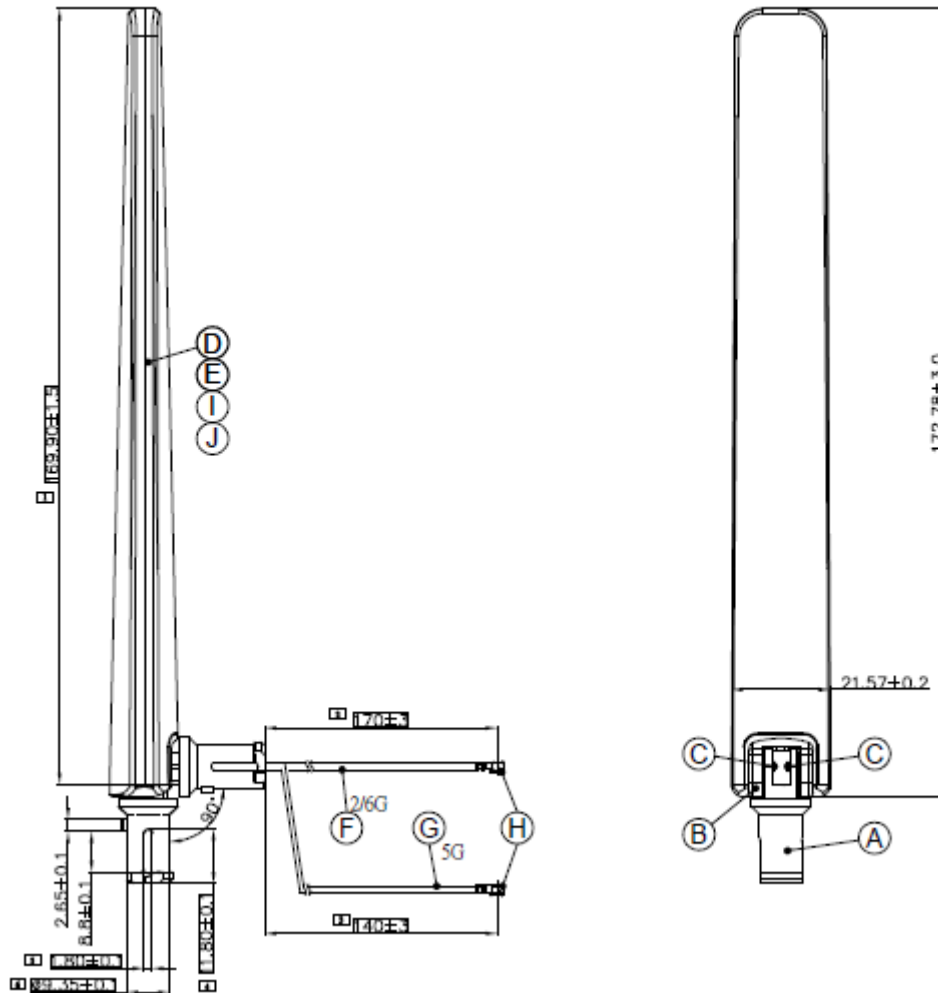
DOCUMENT NO.

SPEC REV. P0


3. Drawing :

ELECTRICAL

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



INDEX	PART NO.	DESCRIPTION	MATERIAL	Q'TY
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	PCA1515-24A	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


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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4. Performance Report :

Test Report

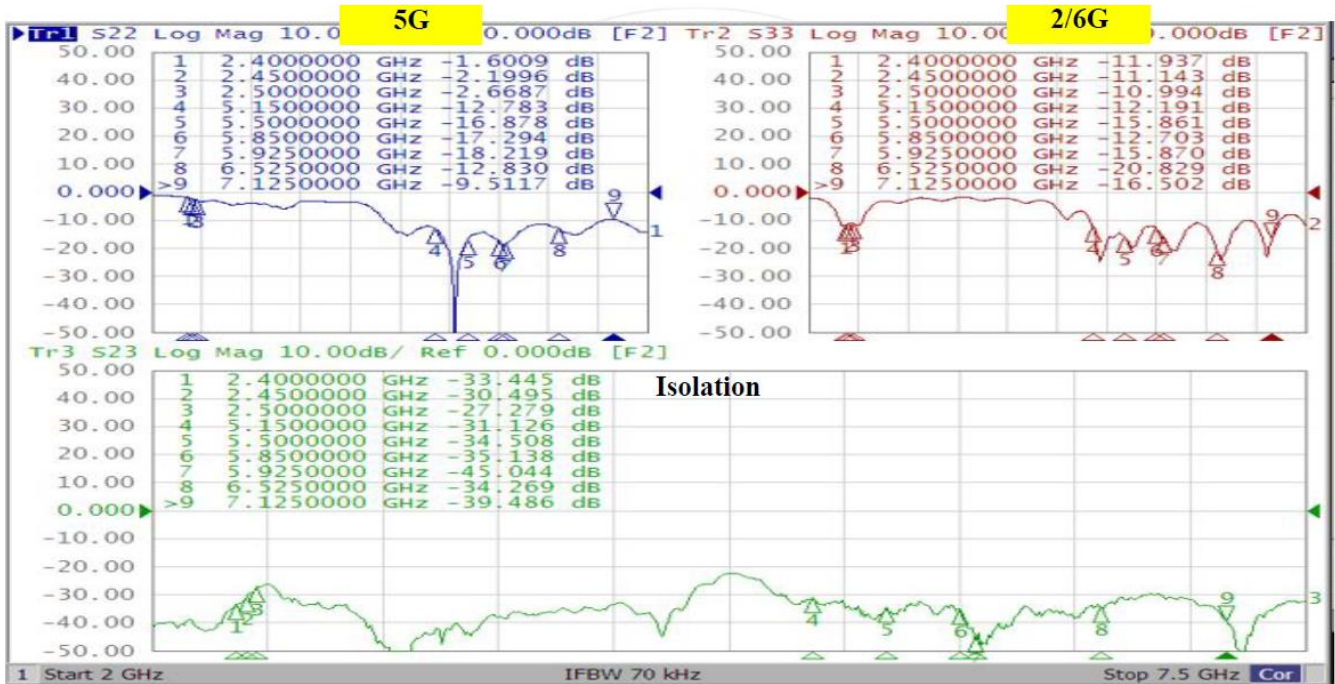
Experimental Setup




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.
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ELECTRICAL CHARACTERISTICS

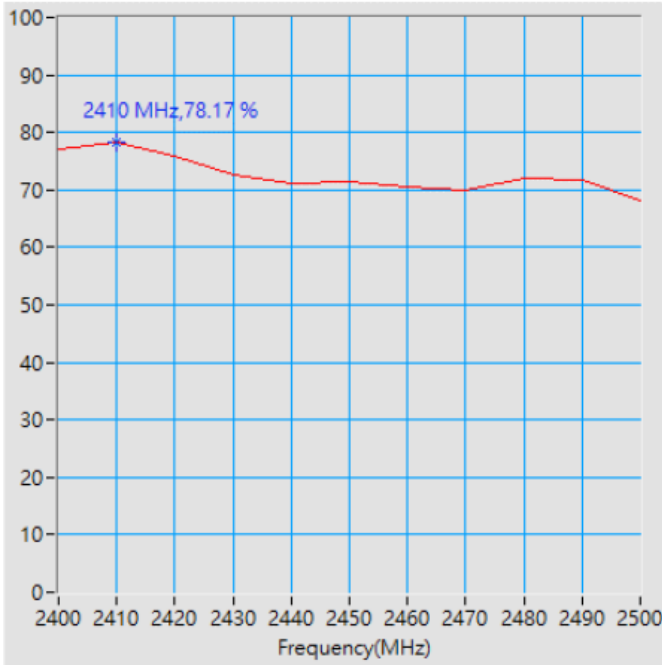
S-parameter



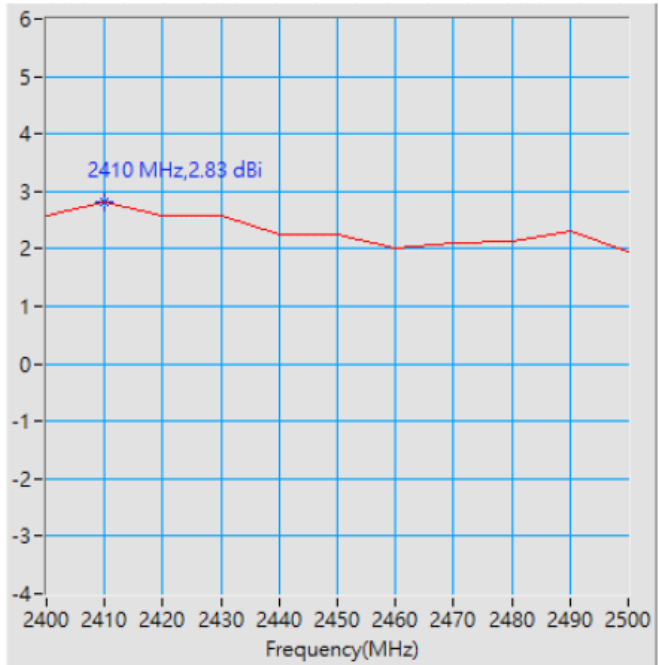
UNLESS OTHER SPECIFIED TOLERANCES ON : X=N/A X.X=N/A X.XX=N/A ANGLES=N/A HOLEDIA=N/A		 INPAQ TECHNOLOGY CO., LTD.
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Antenna Efficiency and Peak Gain


(2400 ~ 2500) MHz



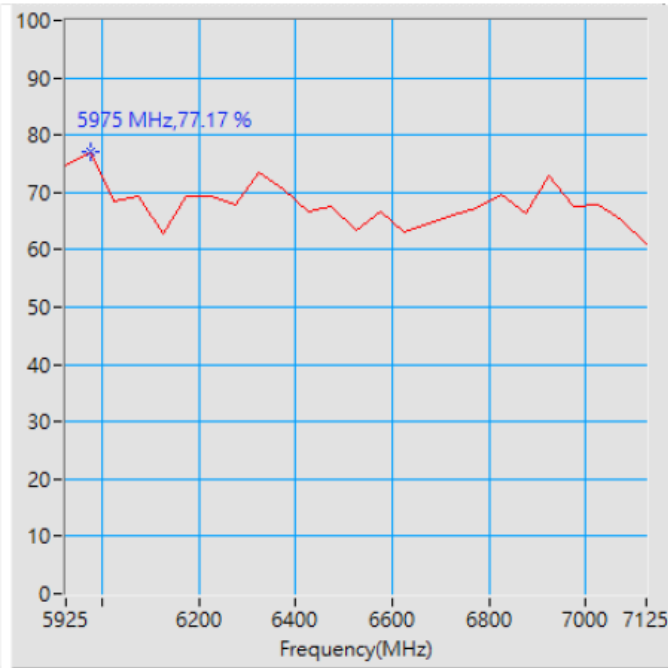
Maximum Efficiency at 2410 MHz : 78.17 %



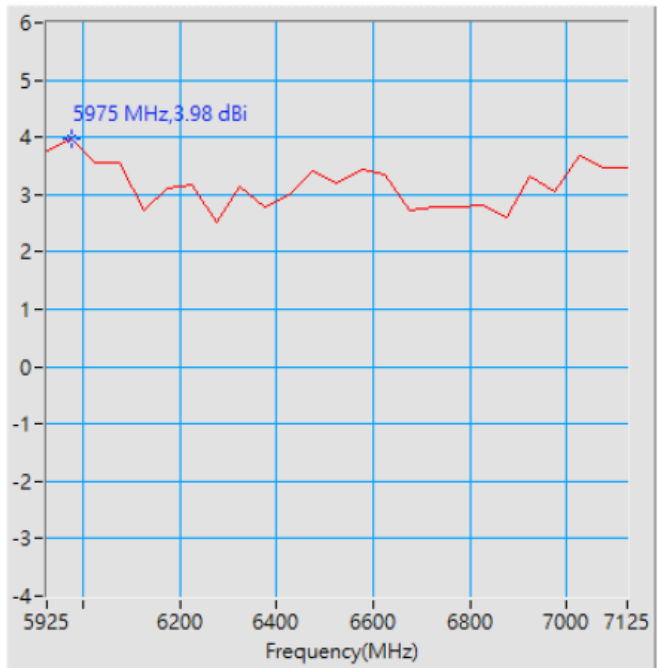
Maximum Peak Gain at 2410 MHz : 2.83 dBi

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.
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(5925 ~ 7125) MHz



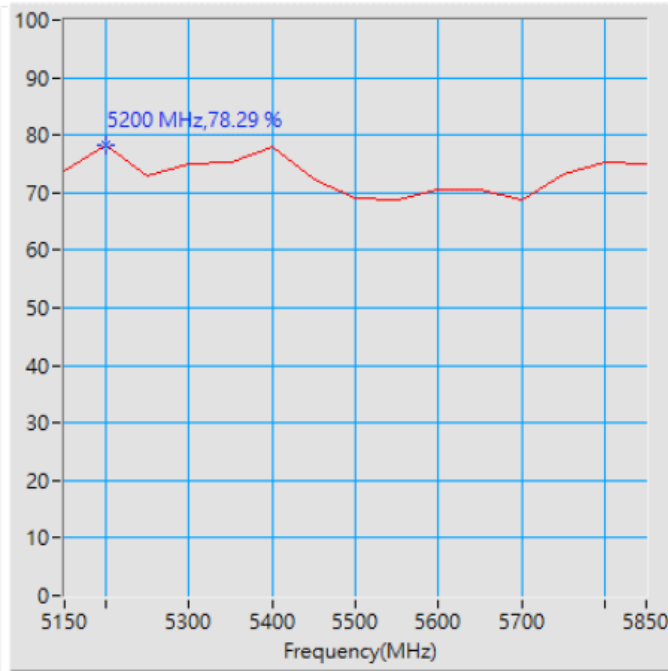
Maximum Efficiency at 5975 MHz : 77.17 %



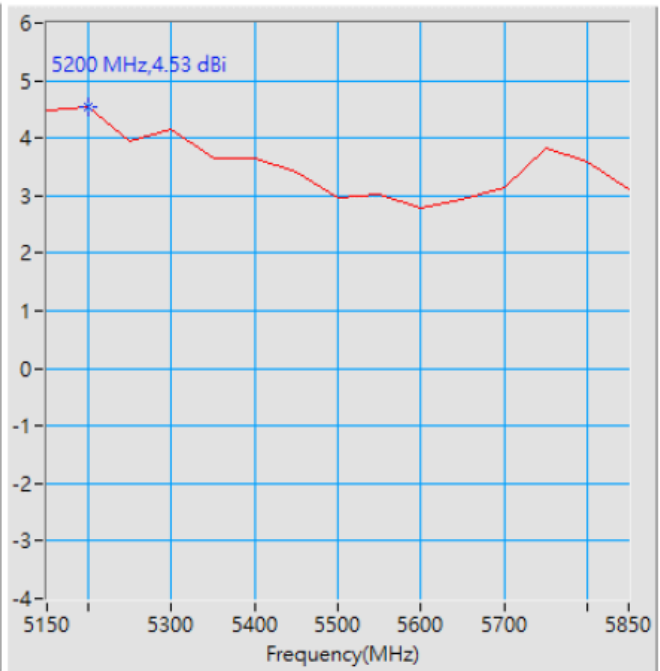
Maximum Peak Gain at 5975 MHz : 3.98 dBi

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	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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(5150 ~ 5850) MHz



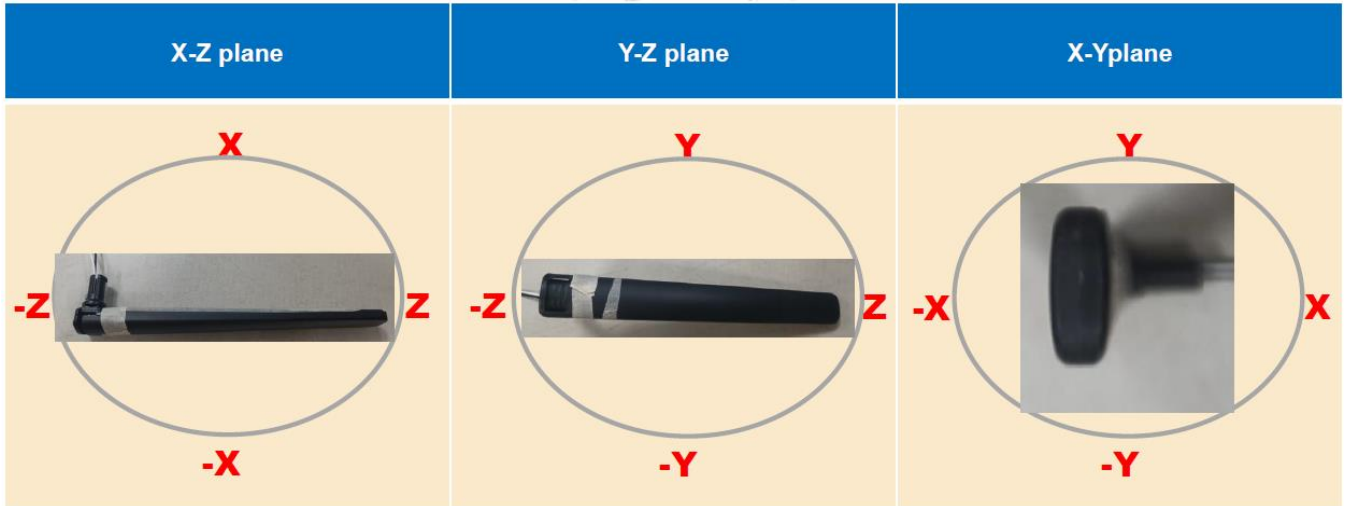
Maximum Efficiency at 5200 MHz : 78.29 %




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.	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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3 Views of antenna & 2D Radiation Patterns



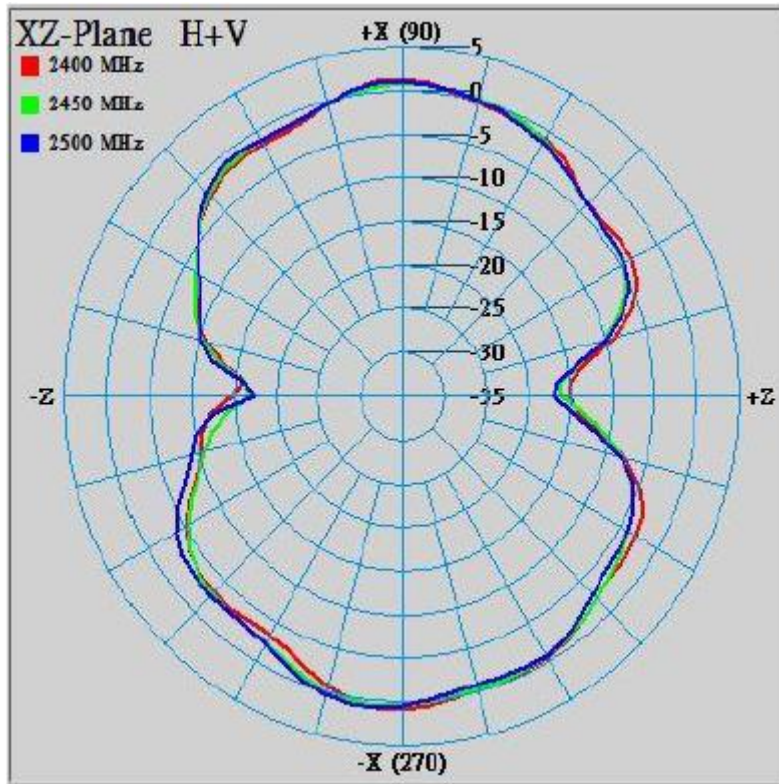
UNLESS OTHER SPECIFIED TOLERANCES ON : X = N/A X.X = N/A X.XX = N/A ANGLES = N/A HOLEDIA = N/A		 INPAQ TECHNOLOGY CO., LTD.	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES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

(2400 ~ 2500) MHz

X-Z Plane
Phi=0.00deg

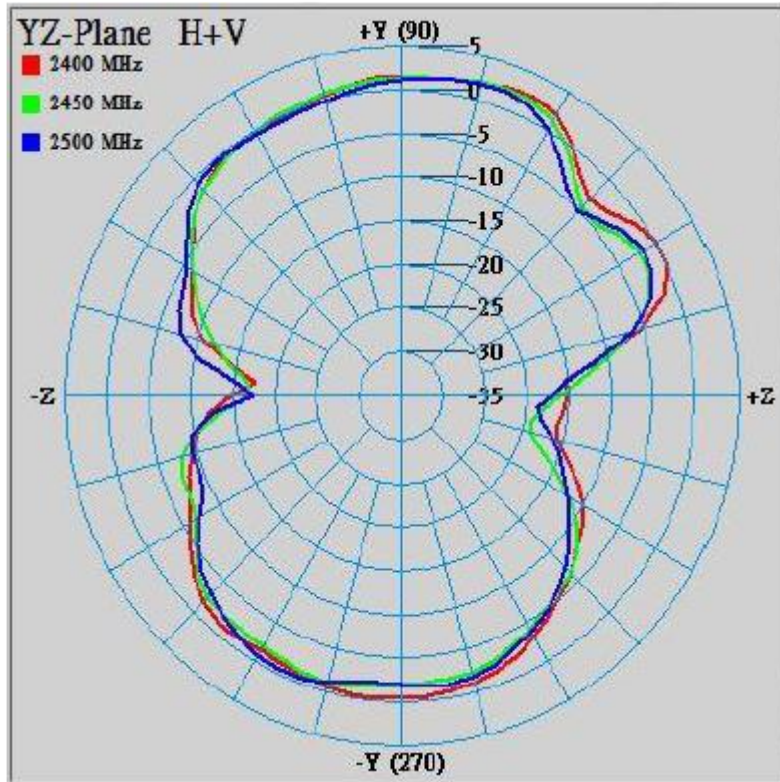
Gain . dB




UNLESS OTHER SPECIFIED TOLERANCES ON :		 INPAQ TECHNOLOGY CO., LTD.	
X = N/A	X.X = N/A X.XX = N/A		
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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Y-Z Plane
Phi=90.00deg

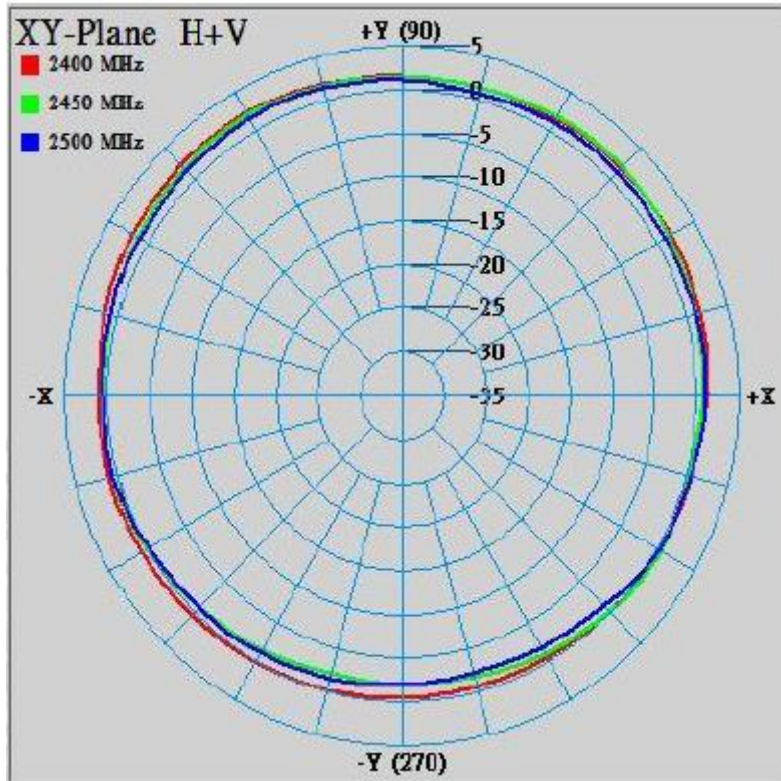
Gain . dB




UNLESS OTHER SPECIFIED TOLERANCES ON :			INPAQ TECHNOLOGY CO., LTD.
X=N/A	X.X=N/A X.XX=N/A		
ANGLES=N/A		HOLEDIA=N/A	
SCALE : N/A	UNIT : mm	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



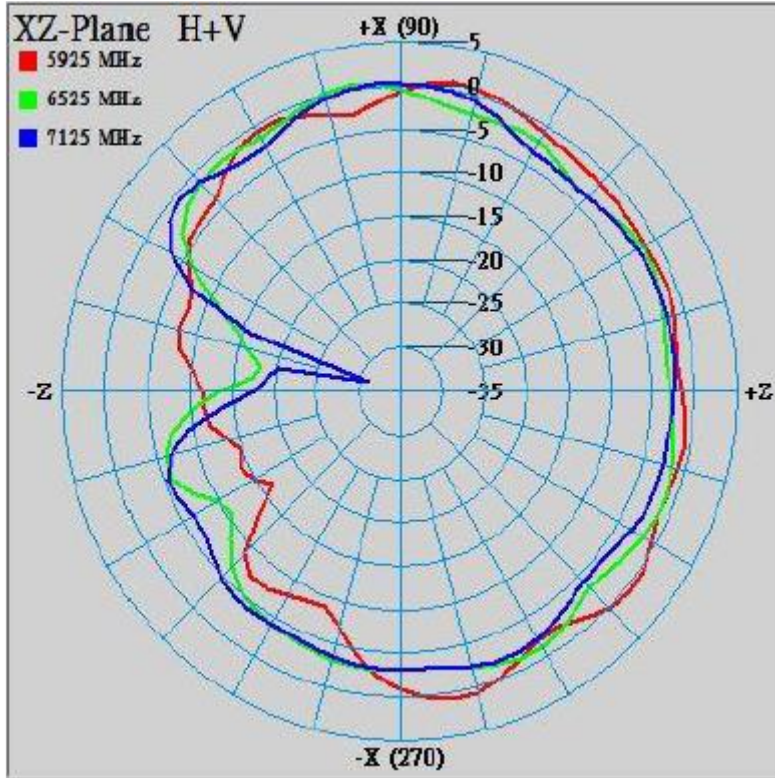
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
2400	1.24	-2.68	2.58	-2.19	2.23	1.02
2450	0.77	-2.73	2.25	-2.72	1.96	0.58
2500	1.06	-2.67	1.93	-2.82	1.59	0.30


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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(5925 ~ 7125) MHz

X-Z Plane
Phi=0.00deg

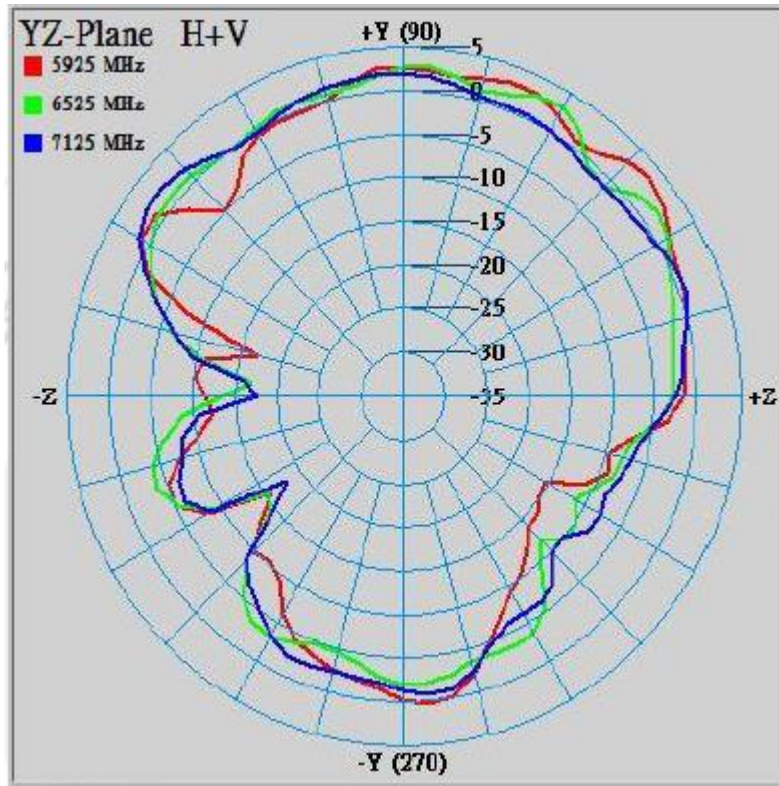
Gain . dB




UNLESS OTHER SPECIFIED TOLERANCES ON :			INPAQ TECHNOLOGY CO., LTD.
X = N/A	X.X = N/A		
ANGLES = N/A		HOLEDIA = N/A	
SCALE : N/A	UNIT : mm	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

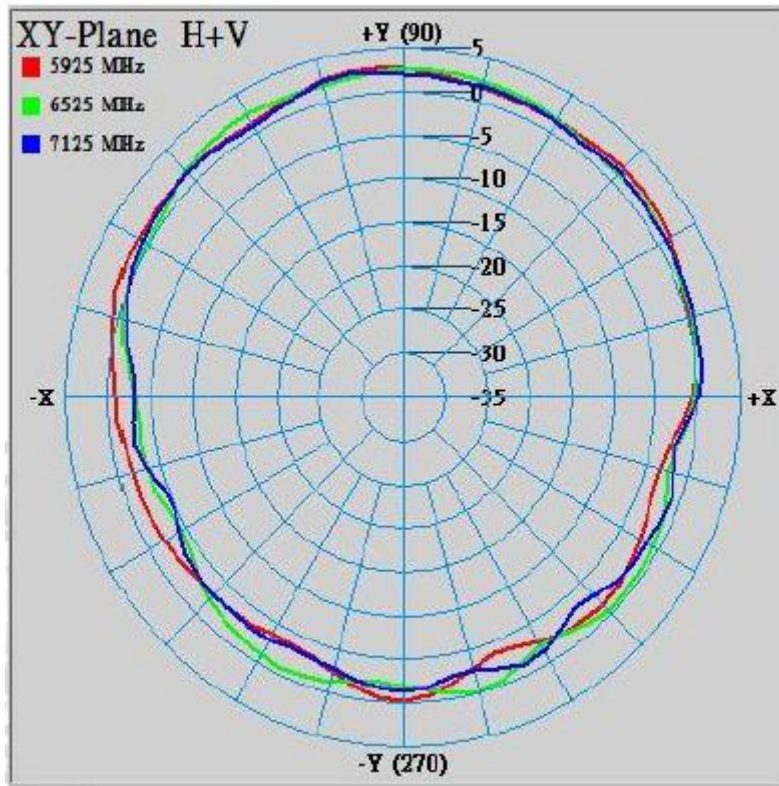
Gain . dB




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X = N/A	X.X = N/A X.XX = N/A		
ANGLES = N/A		HOLEDIA = N/A	
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X-Y Plane
Theta=90.00deg

Gain . dB



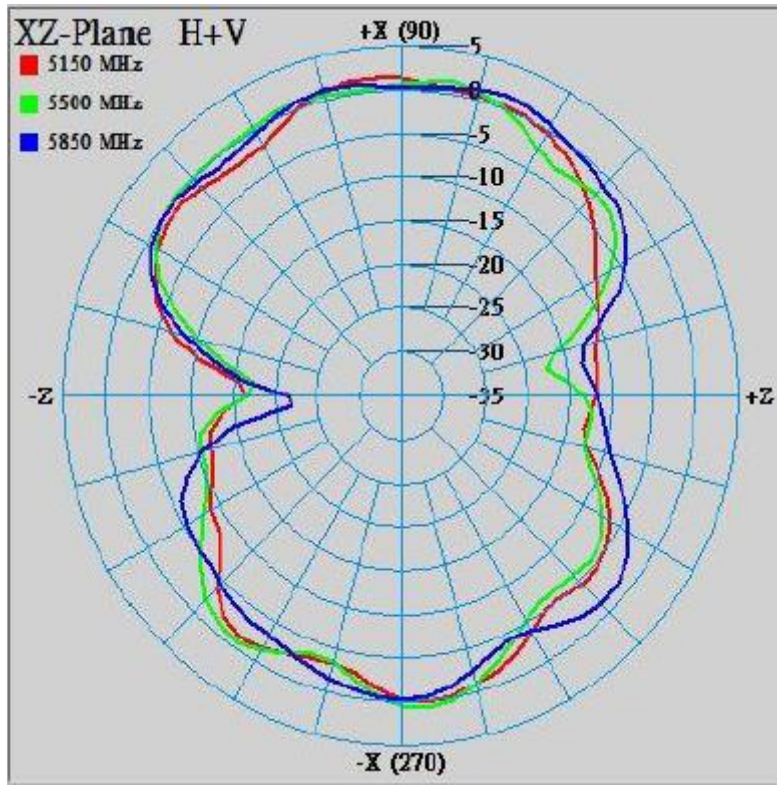
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
5925	0.87	-2.36	3.56	-1.53	2.81	-0.05
6525	0.54	-2.96	3.14	-1.69	2.59	0.00
7125	0.27	-3.08	2.49	-1.80	2.45	-0.36


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.
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(5150 ~ 5850) MHz

**X-Z Plane
Phi=0.00deg**

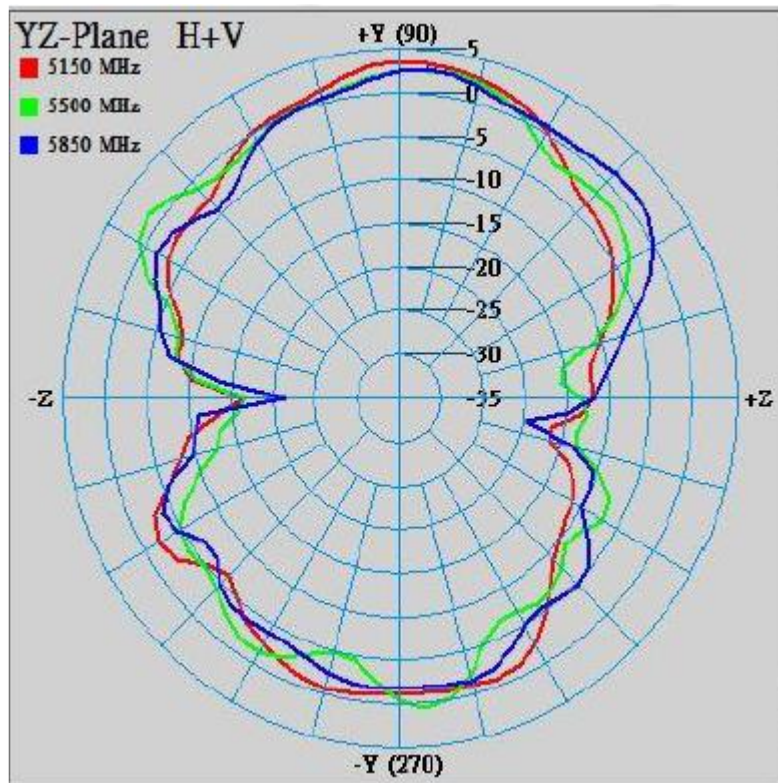
Gain . dB




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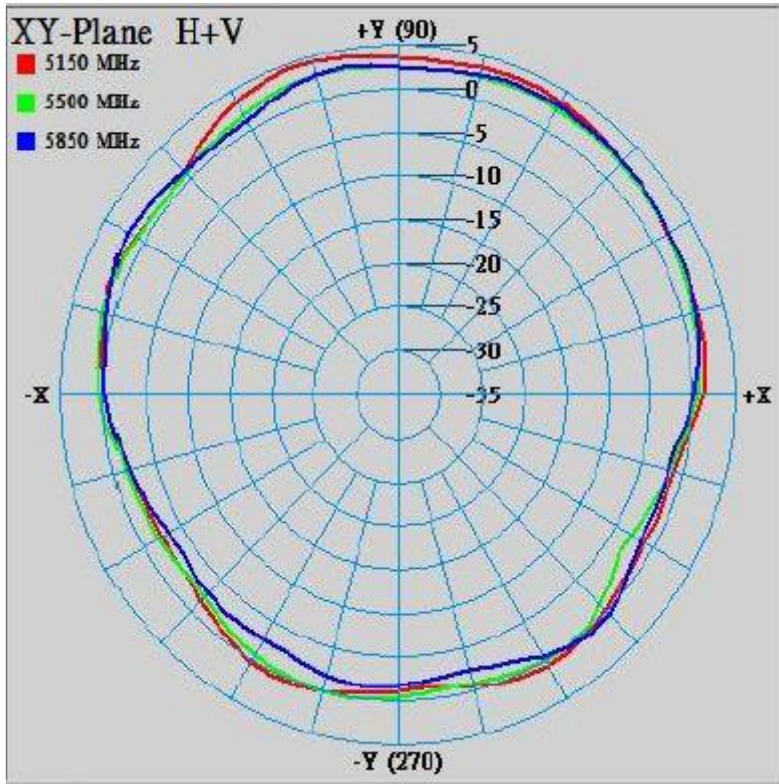
Gain . dB




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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]
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

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