



佳邦科技股份有限公司  
INPAQ TECHNOLOGY CO., LTD.

**RFDPA232300SFMB801**

# Specification

<b>Part Series</b>	<b>Cellular DAS Antennas</b>
<b>Part No.</b>	<b>RFDPA232300SFMB801</b>
<b>Version</b>	<b>V0.1</b>

# Contents

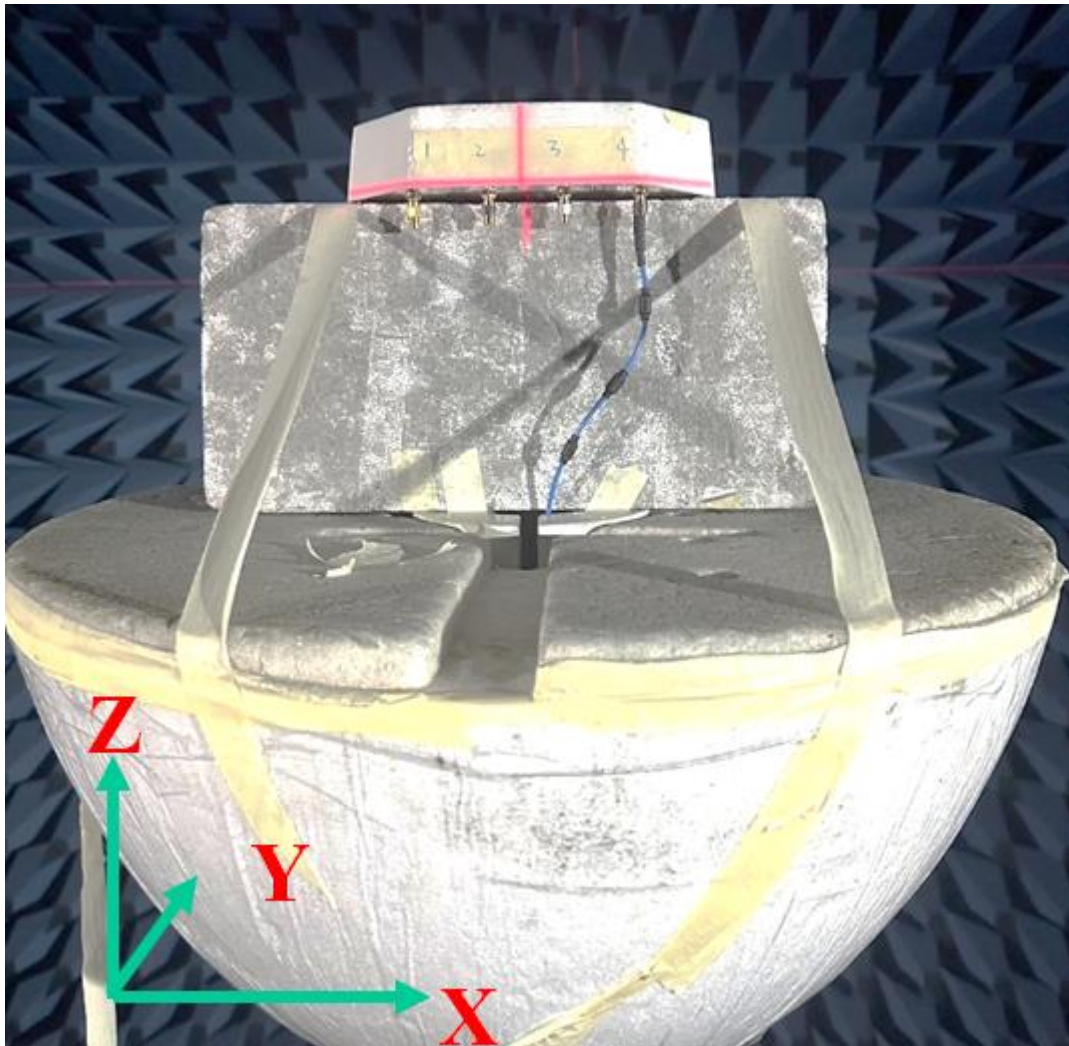
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# 1. Performance

## 1.1 Antenna Performance

Item	Specification
Frequency Range	3300 ~ 5000 MHz
Impedance	50 Ohm Nominal
VSWR	2.0 (Max)
Return Loss	-10dB(Max)
Peak Gain	Port 1 : 13.40 dBi Port 2 : 13.42 dBi Port 3 : 12.99 dBi Port 4 : 13.42 dBi
Radiation	Directional
Polarization	Dual slant polarization
Operation Temperature	-20°C ~ +65°C

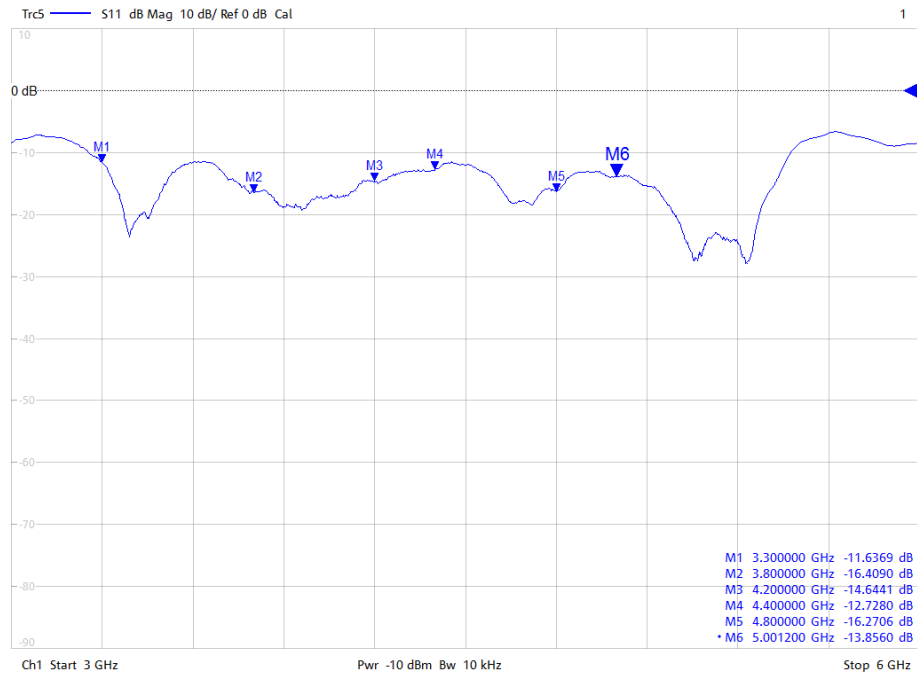
## 1.2 Experimental Setup



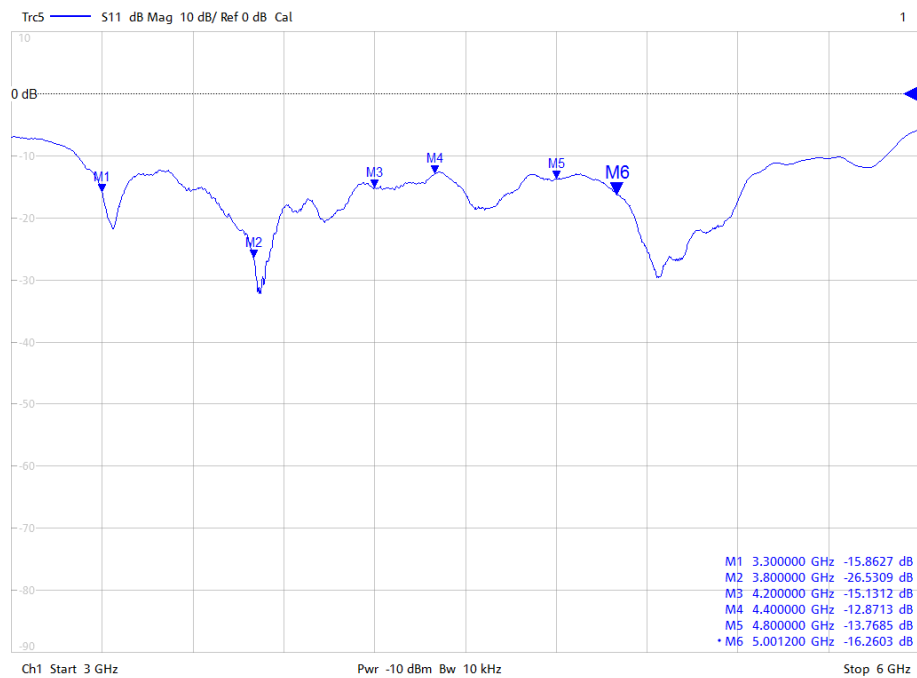
## 1.3 Antenna S-Parameter and Matching Factor

### Return Loss

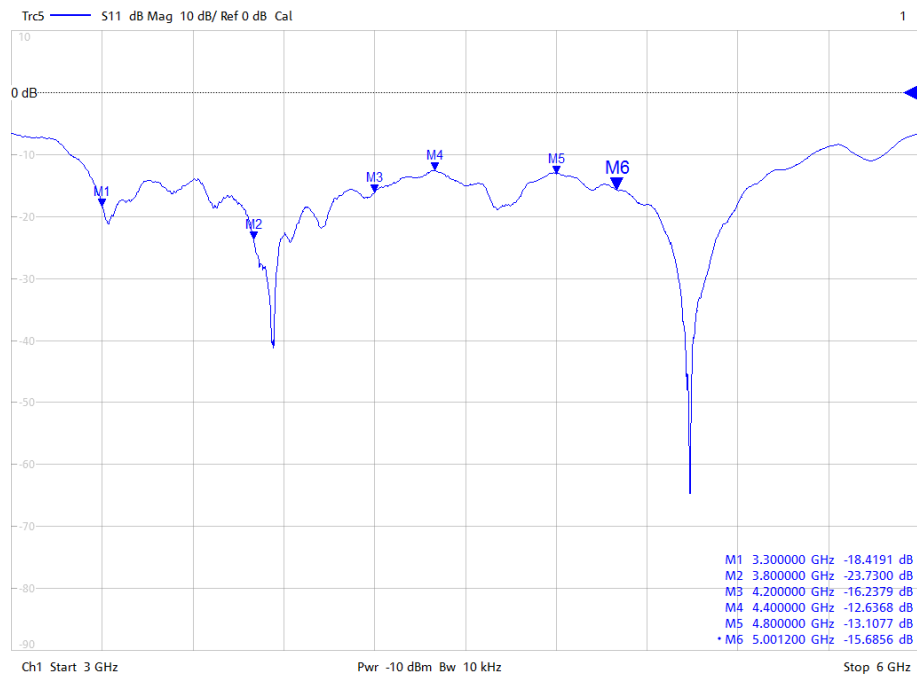
#### Port1



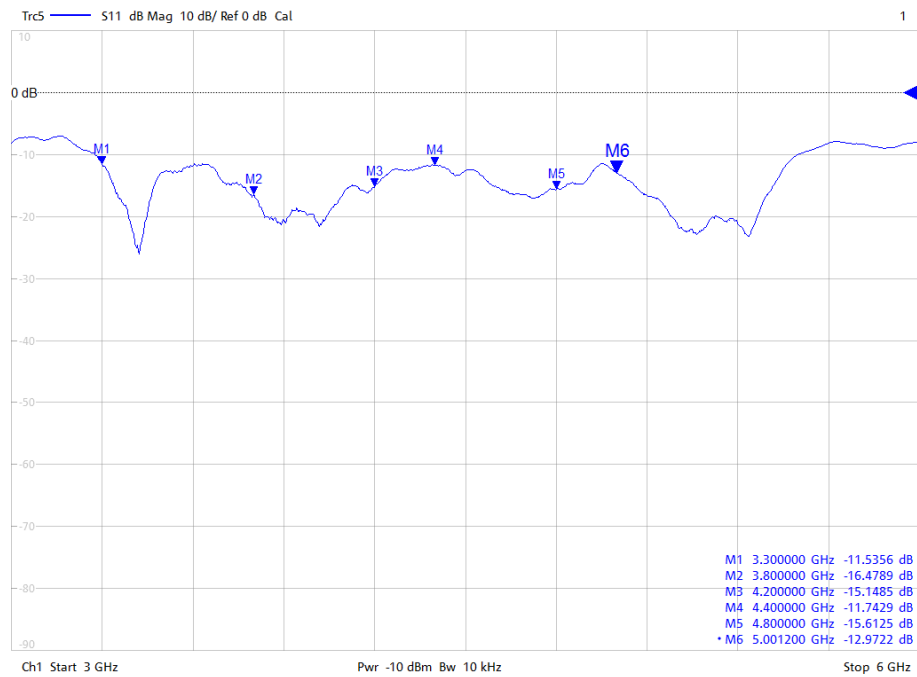
#### Port2



## Port3

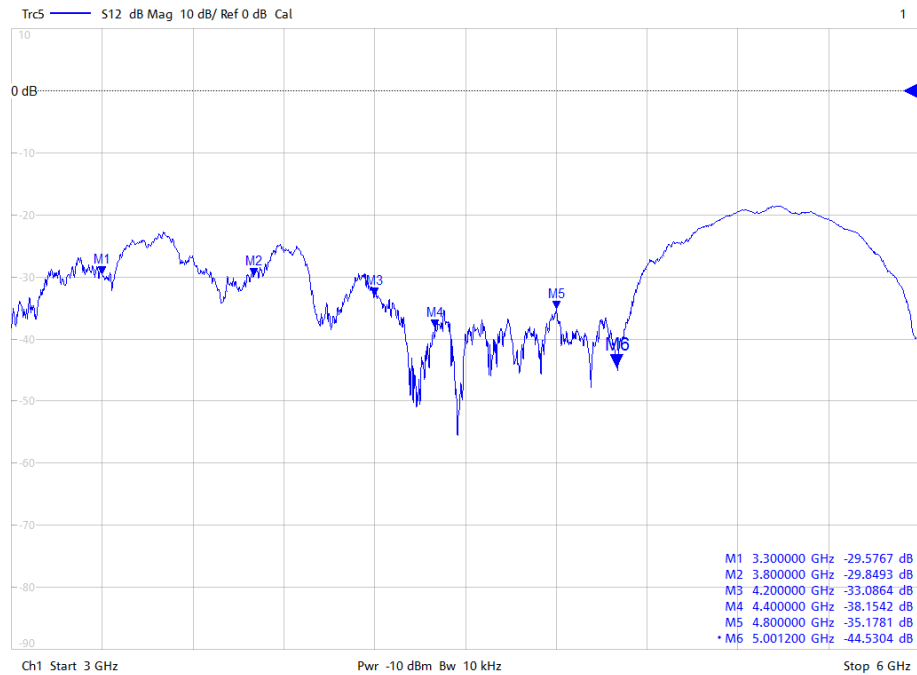


## Port4

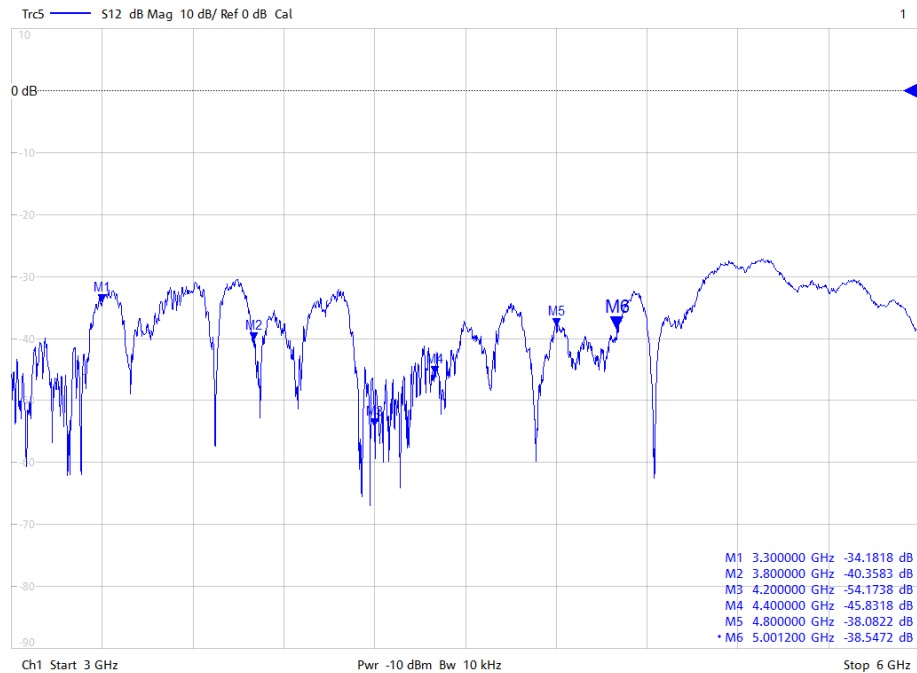


## Isolation

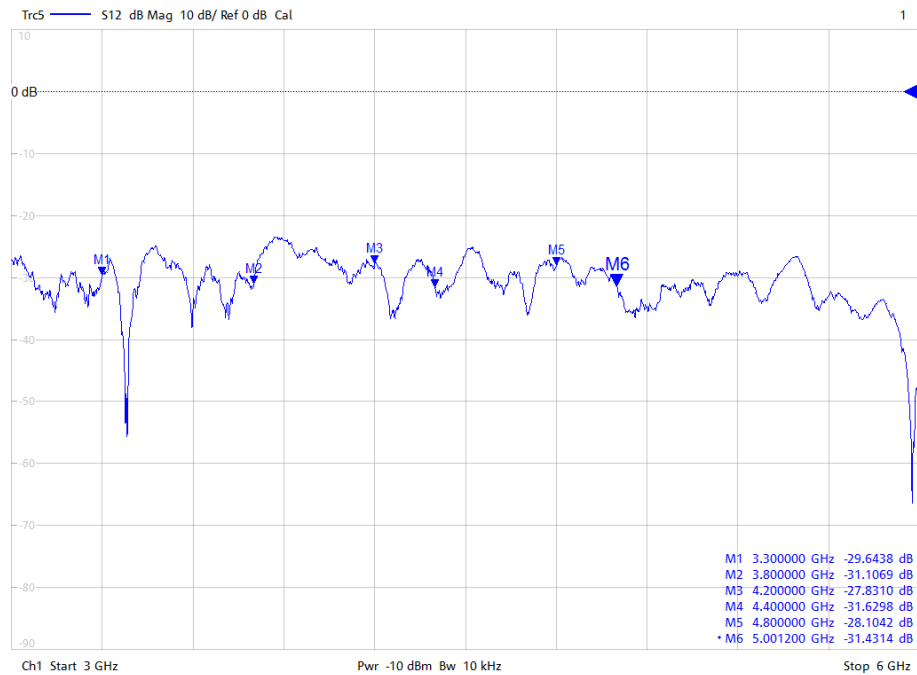
### Port1 / Port2



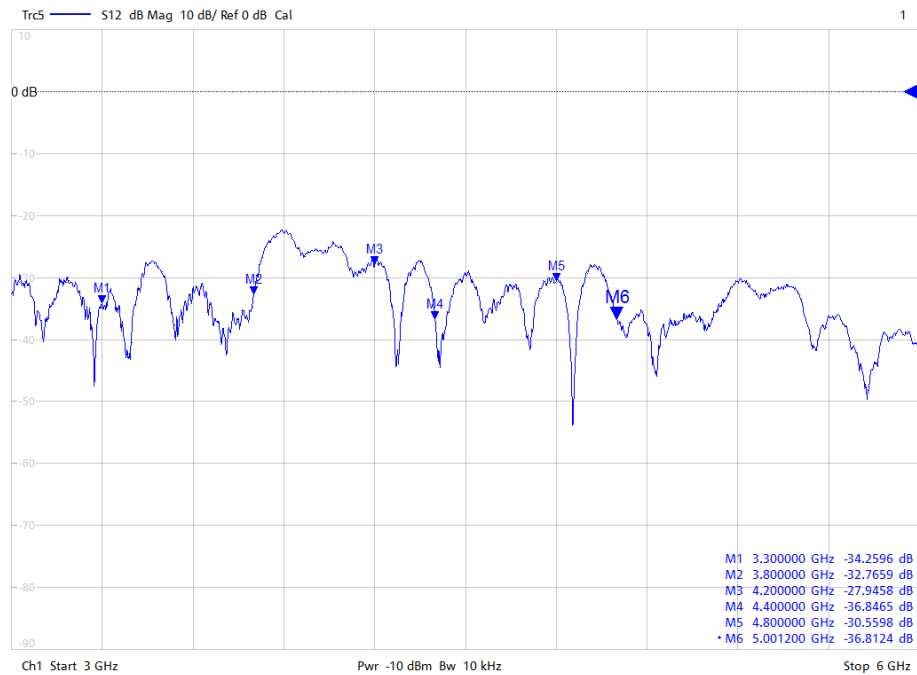
### Port1 / Port3



## Port1 / Port4

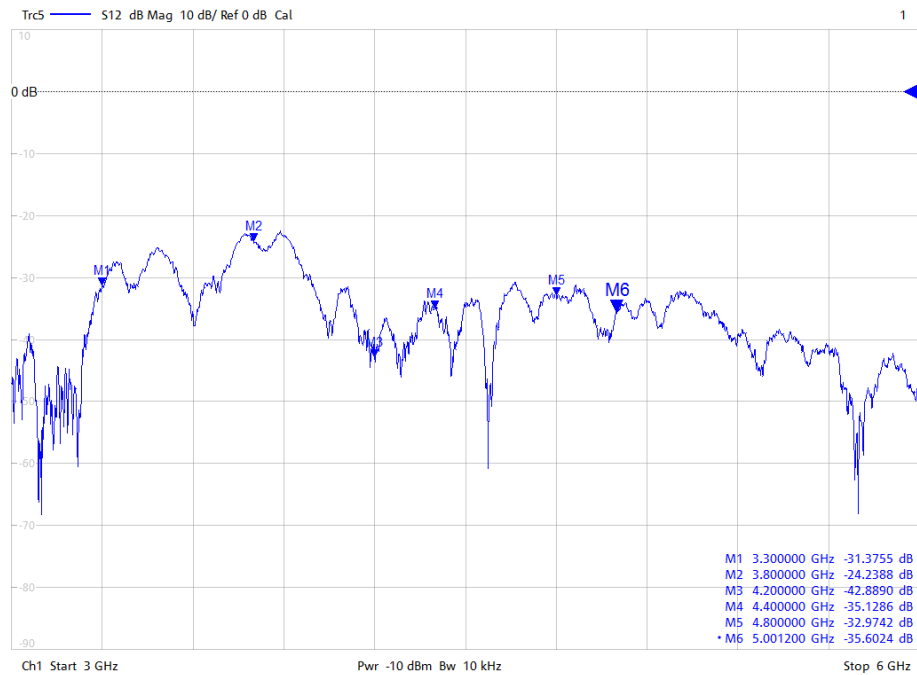


## Port2 / Port3

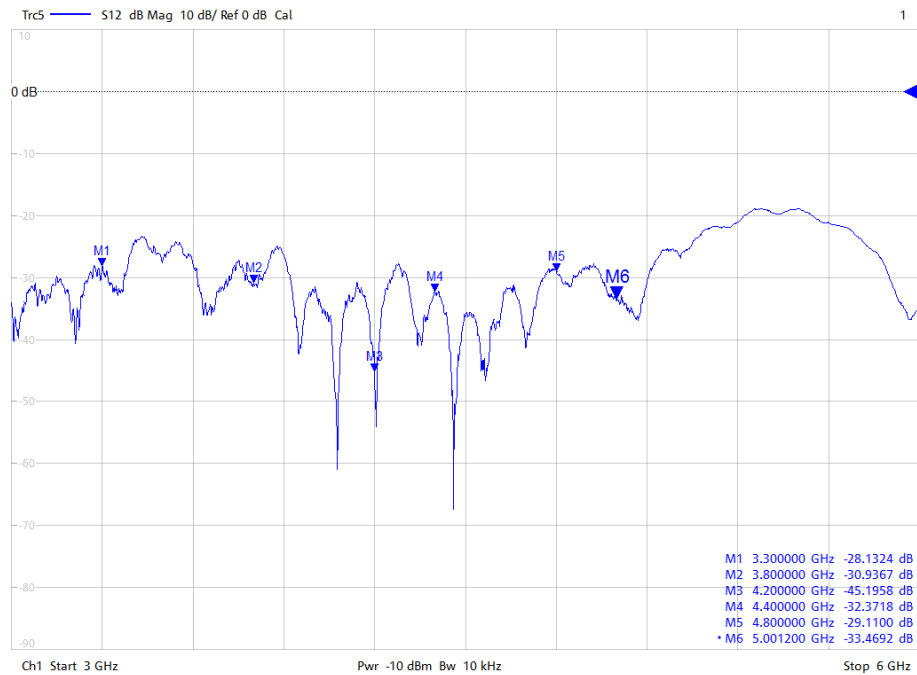




## Port2 / Port4

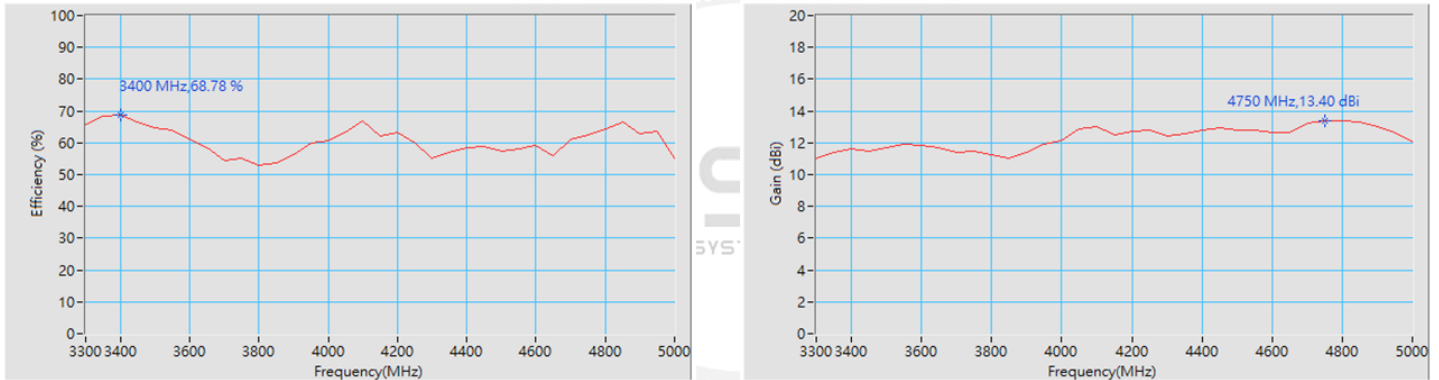


## Port3 / Port4



## 1.4 Antenna Efficiency & Peak Gain

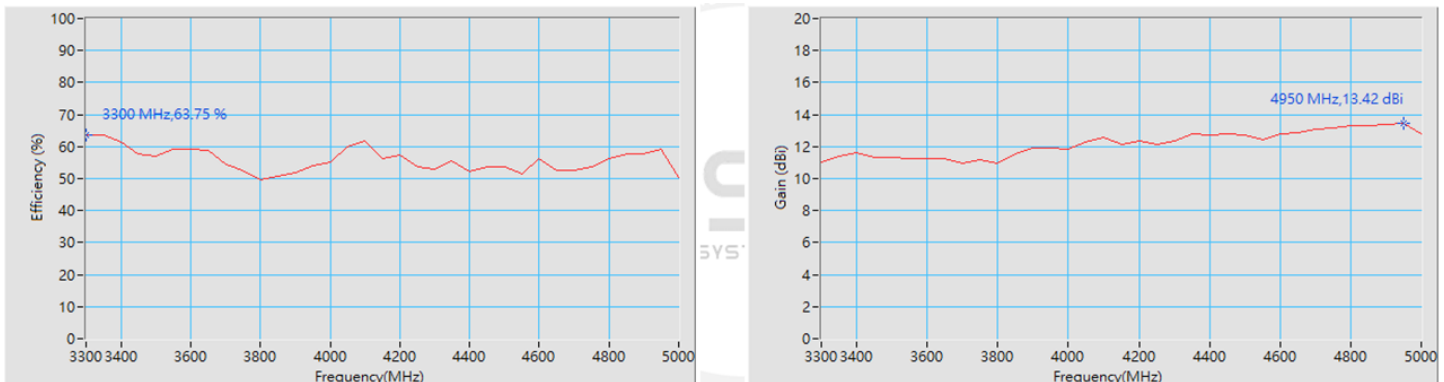
### Port1



Maximum Efficiency at 3400 MHz : 68.78 %

Maximum Peak Gain at 4750 MHz : 13.40 dBi

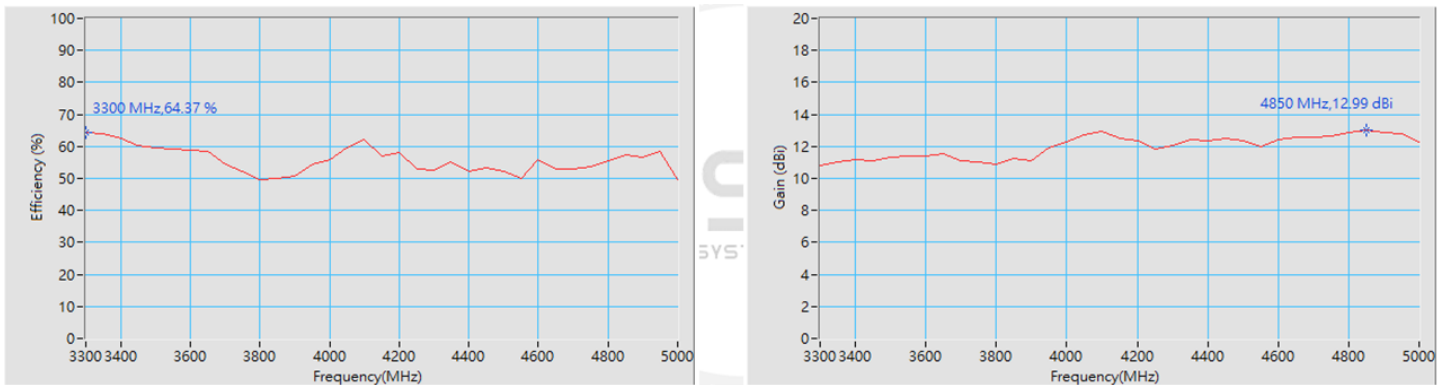
### Port2



Maximum Efficiency at 3300 MHz : 63.75 %

Maximum Peak Gain at 4950 MHz : 13.42 dBi

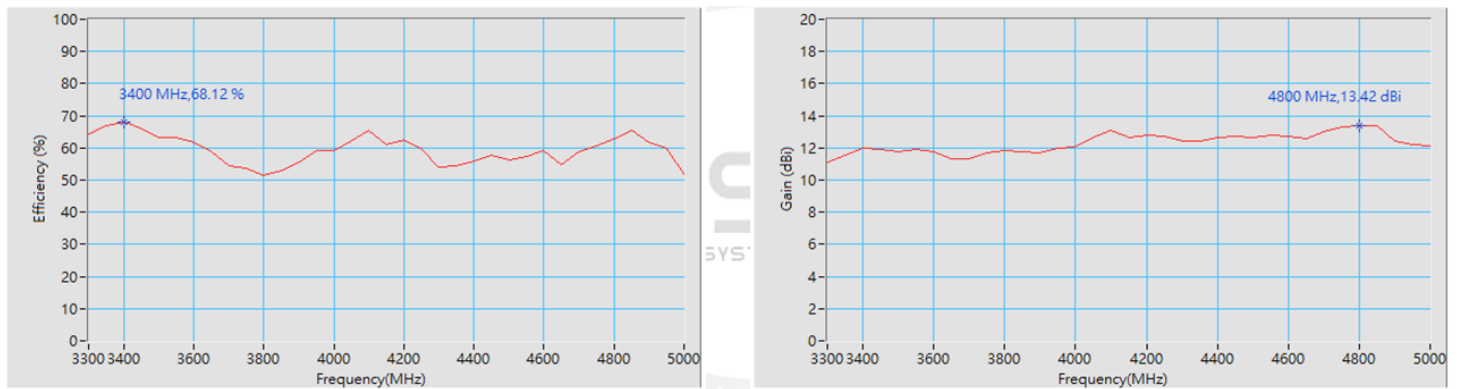
### Port3



Maximum Efficiency at 3300 MHz : 64.37 %

Maximum Peak Gain at 4850 MHz : 12.99 dBi

### Port4



Maximum Efficiency at 3400 MHz : 68.12 %

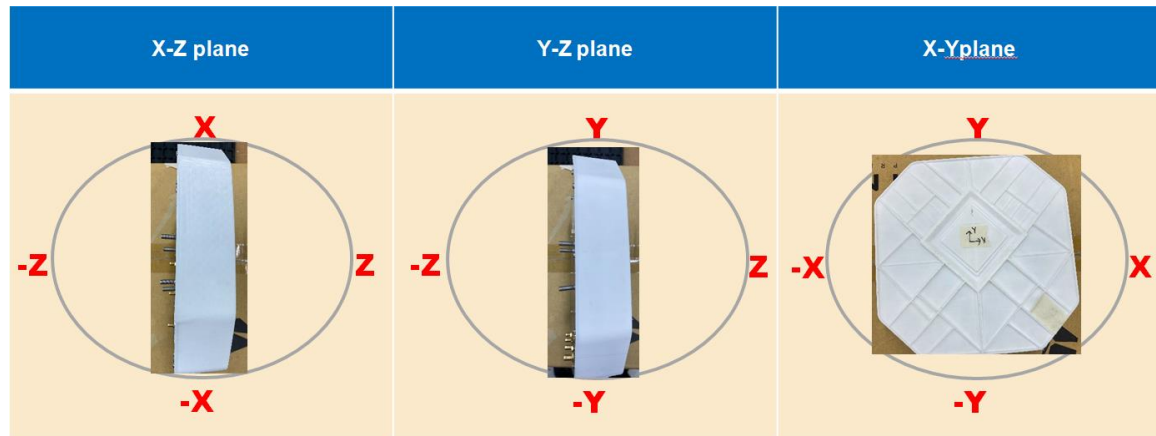
Maximum Peak Gain at 4800 MHz : 13.42 dBi

	Port 1		Port 2	
Frequency (GHz)	Efficiency (%)	Peak gain (dBi)	Efficiency (%)	Peak gain (dBi)
3.3	65.73	11.04	63.75	11.03
3.75	55.00	11.46	52.68	11.17
4.2	63.25	12.72	57.35	12.38
4.4	58.31	12.80	52.22	12.70
4.7	61.10	13.23	52.49	13.06
5	55.04	12.05	50.43	12.80

	Port 3		Port 4	
Frequency (GHz)	Efficiency (%)	Peak gain (dBi)	Efficiency (%)	Peak gain (dBi)
3.3	64.37	10.84	64.36	11.13
3.75	52.06	11.00	53.63	11.72
4.2	58.09	12.36	62.48	12.79
4.4	52.06	12.32	56.04	12.61
4.7	53.08	12.59	58.80	13.02
5	49.78	12.30	51.88	12.11

## 1.5 Radiation Pattern

3 views of antenna

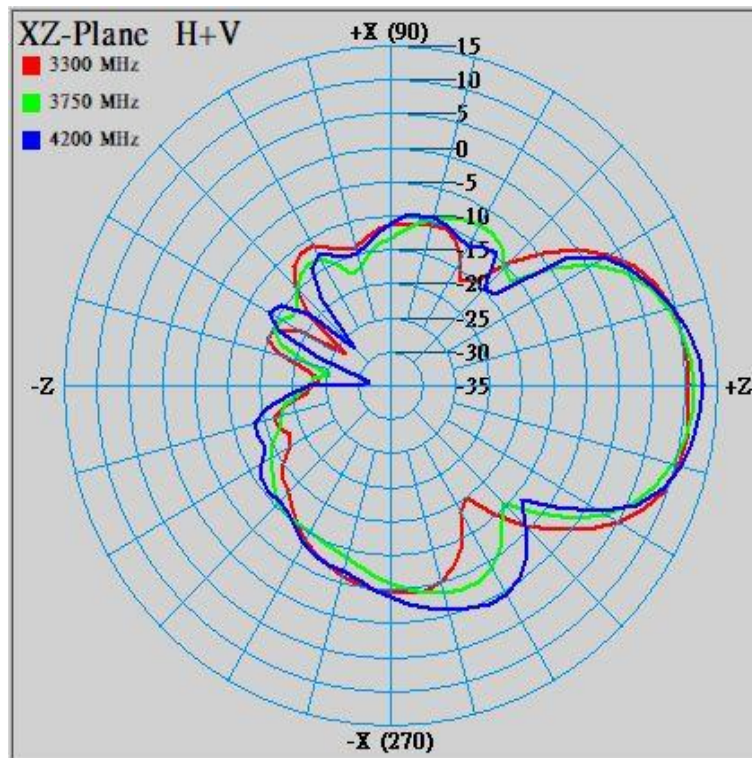


## Port1 3300-4200MHz

X-Z Plane

Phi=0.00deg

Gain . dB

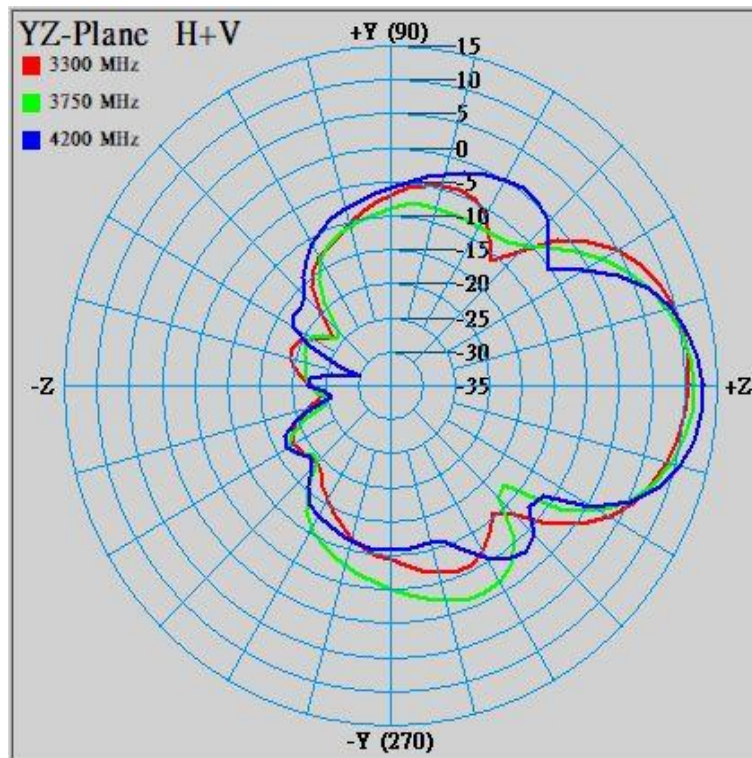


## Port1 3300-4200MHz

Y-Z Plane

Phi=90.00deg

Gain . dB



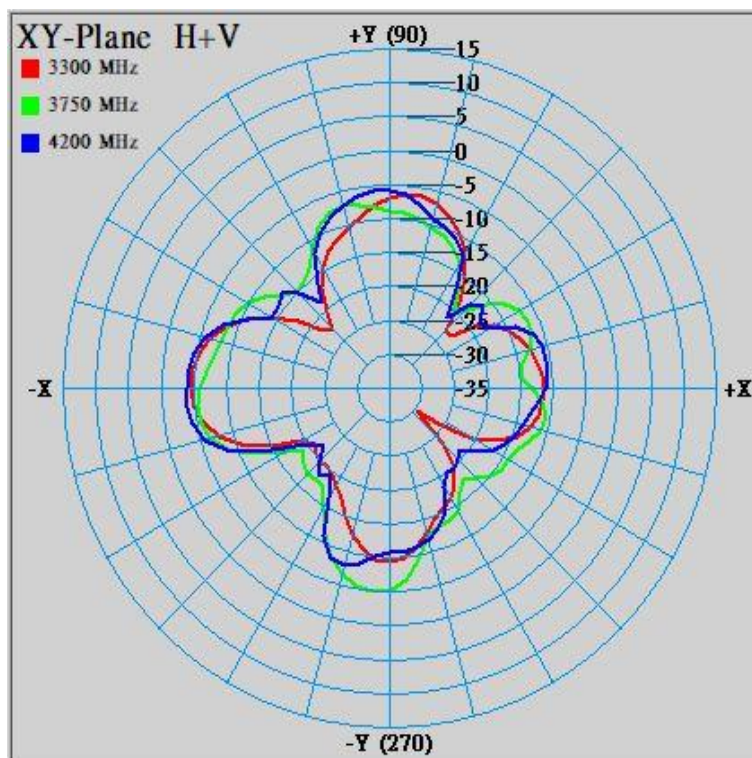


## Port1 3300-4200MHz

X-Y Plane

Theta=90.00deg

Gain . dB



	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
3300	10.98	48	10.77	45	-4.5	-11.08
3750	11.45	37	11.41	37	-4.79	-10.2
4200	12.68	36	12.72	34	-3.81	-10.08

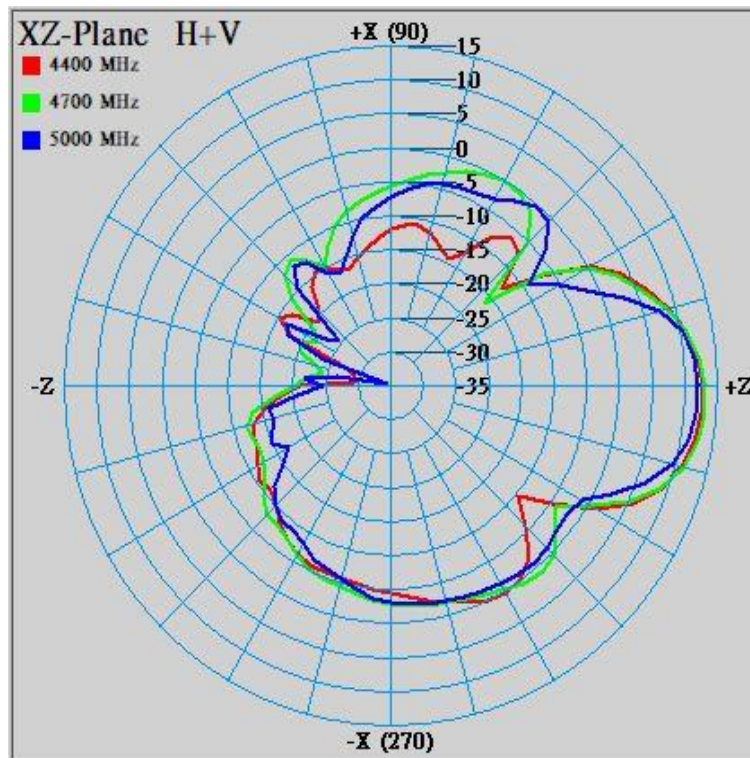


## Port1 4400-5000MHz

X-Z Plane

Phi=0.00deg

Gain . dB

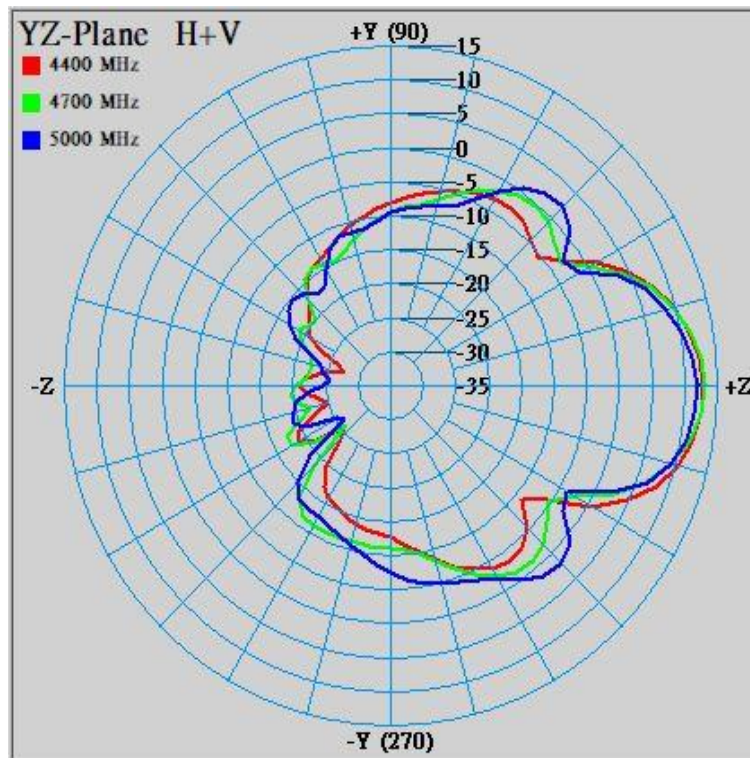


## Port1 4400-5000MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

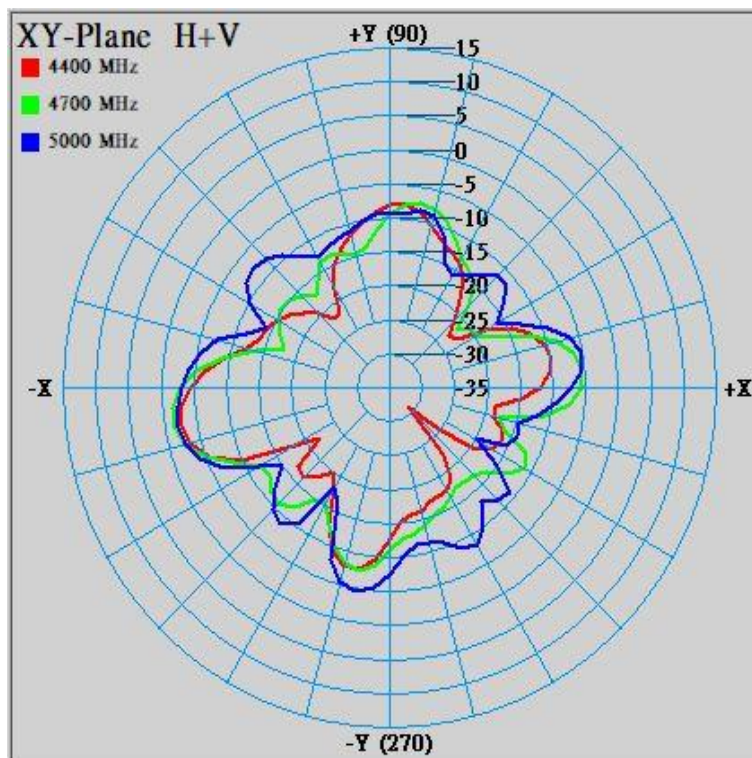


## Port1 4400-5000MHz

X-Y Plane

Theta=90.00deg

Gain . dB



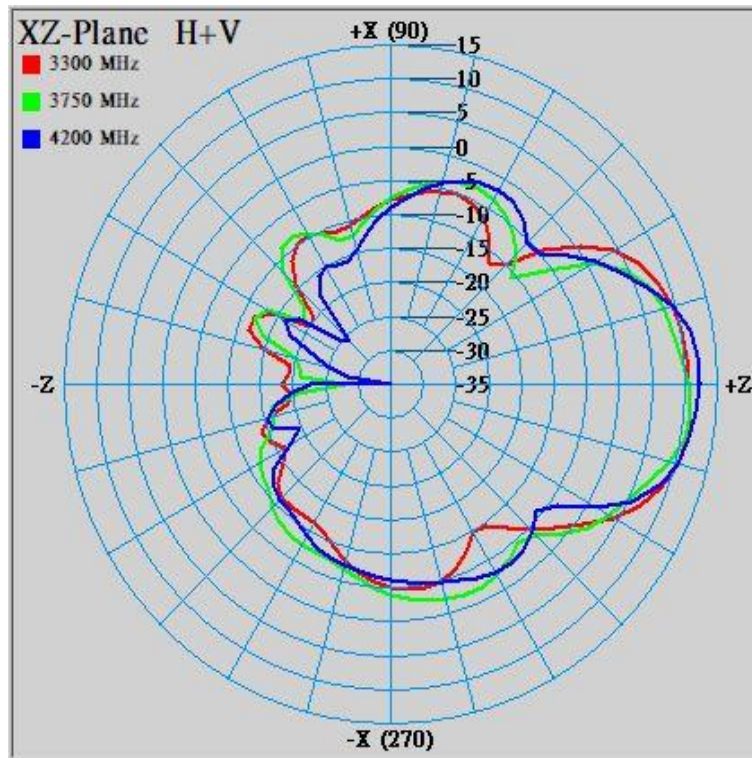
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
4400	12.78	34	12.78	34	-2.6	-11.19
4700	13.2	32	13.06	30	-1.29	-9.67
5000	12.02	32	11.95	31	-2.18	-8.55

## Port2 3300-4200MHz

X-Z Plane

Phi=0.00deg

Gain . dB



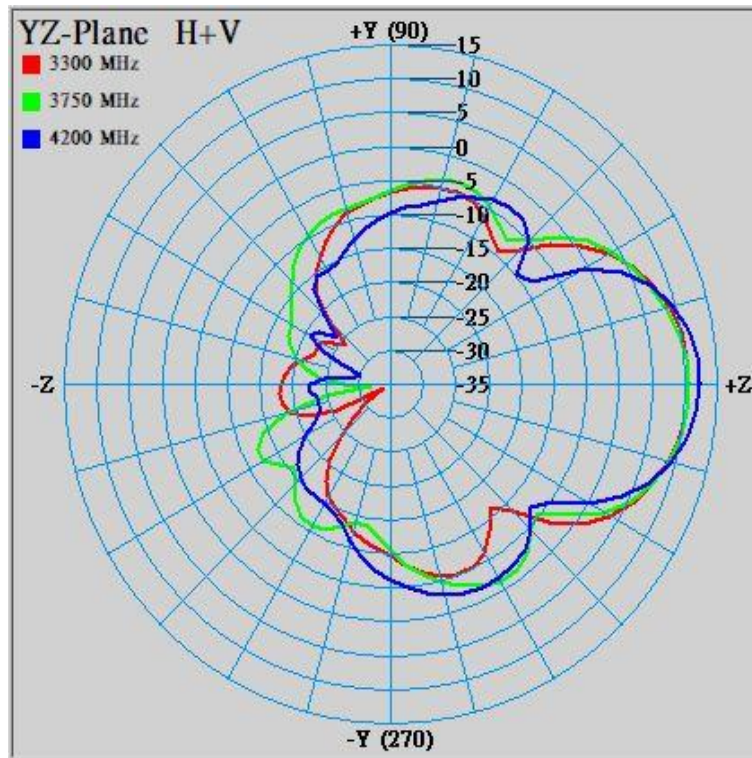


## Port2 3300-4200MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

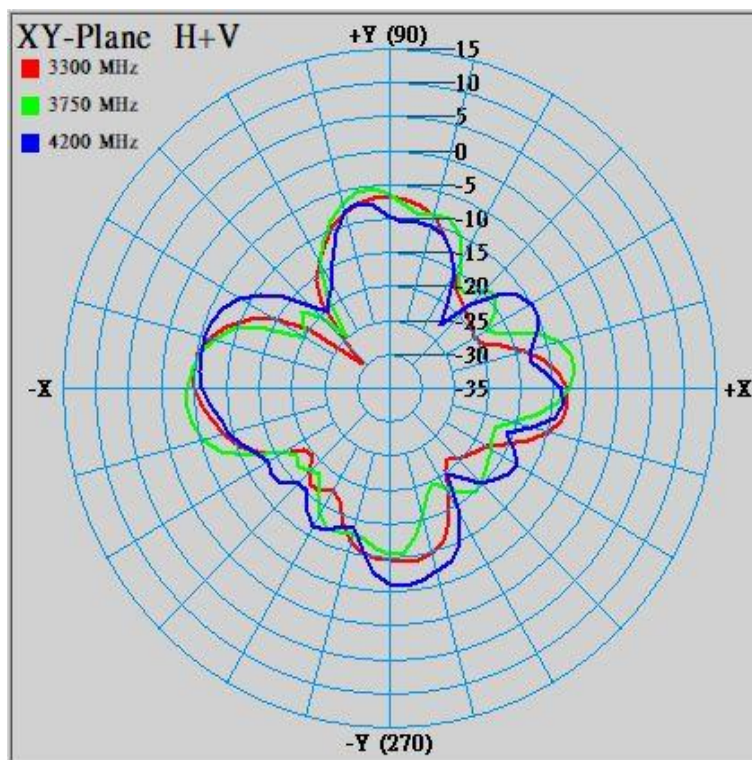


## Port2 3300-4200MHz

X-Y Plane

Theta=90.00deg

Gain . dB



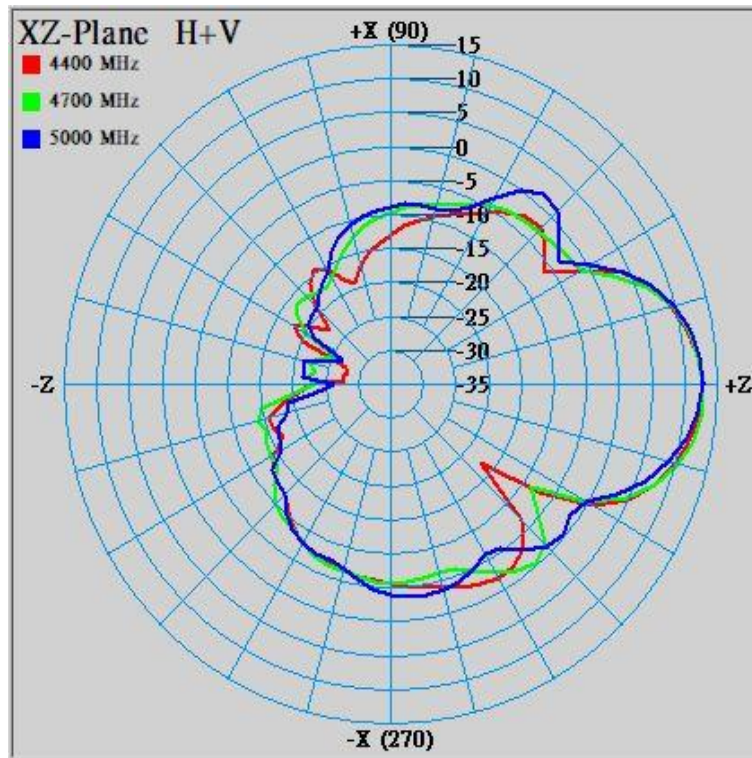
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
3300	11.01	47	10.7	43	-4.79	-10.82
3750	11.17	34	10.74	41	-3.91	-10.2
4200	12.38	36	12.31	33	-5.65	-10.17

## Port2 4400-5000MHz

X-Z Plane

Phi=0.00deg

Gain . dB

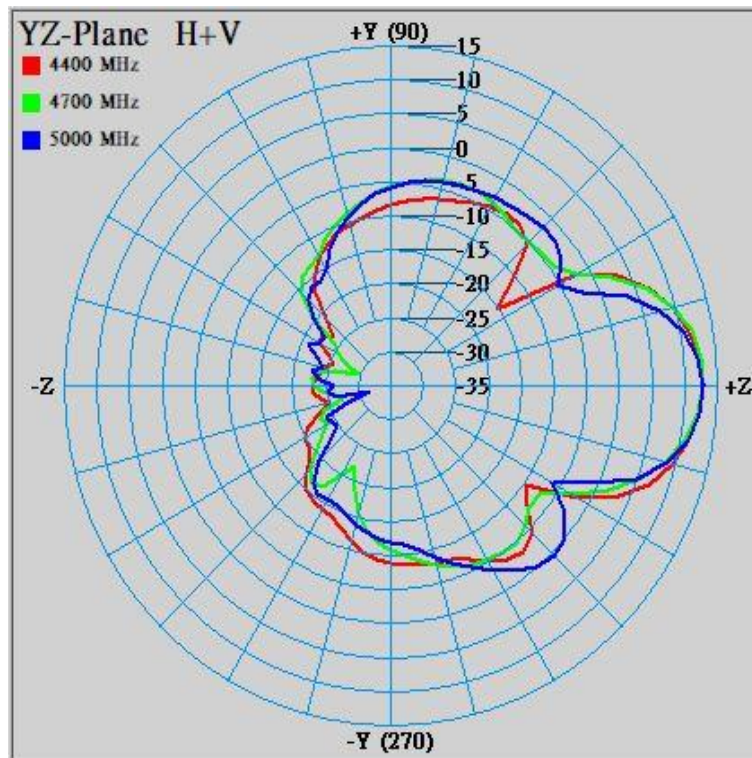


## Port2 4400-5000MHz

Y-Z Plane

Phi=90.00deg

Gain . dB



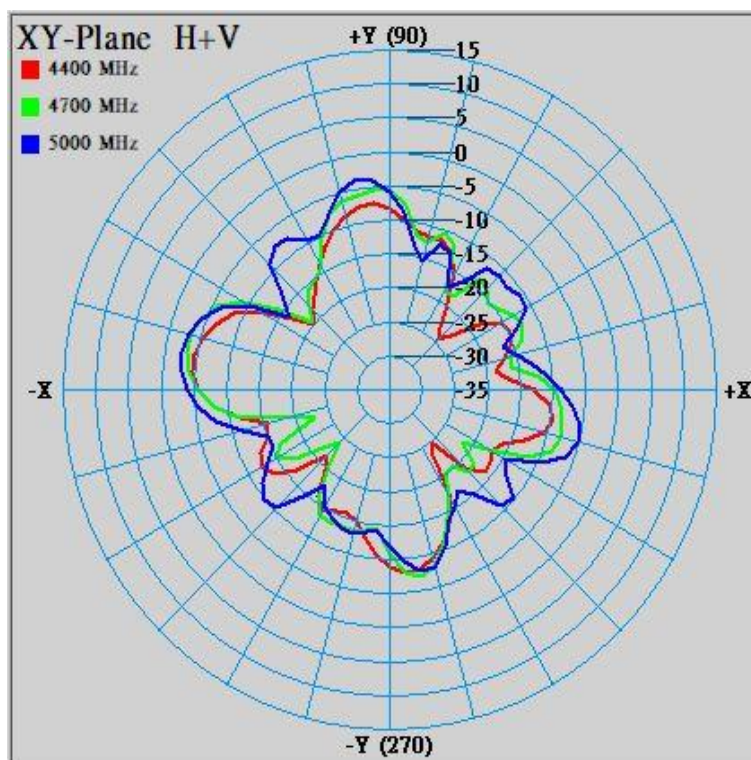


## Port2 4400-5000MHz

X-Y Plane

Theta=90.00deg

Gain . dB



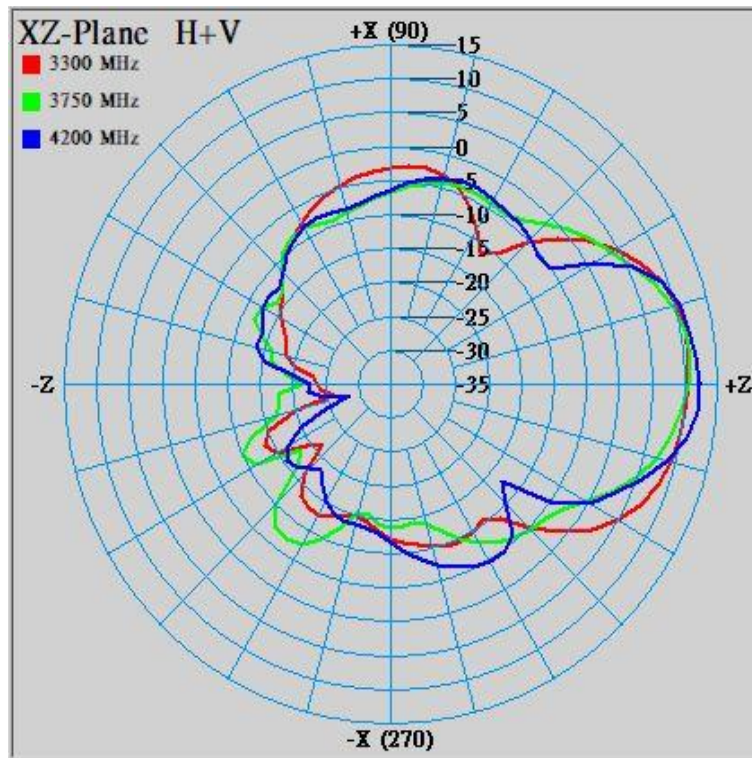
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
4400	12.7	33	12.69	31	-4.49	-11.43
4700	13	32	12.95	28	-3.38	-10.2
5000	12.77	31	12.78	27	-2.66	-8.87

## Port3 3300-4200MHz

X-Z Plane

Phi=0.00deg

Gain . dB

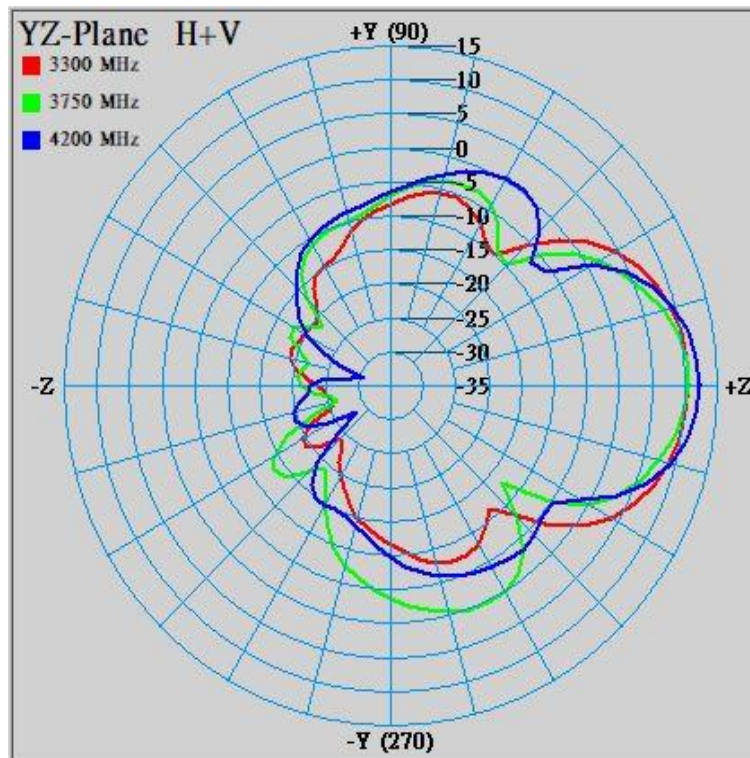


## Port3 3300-4200MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

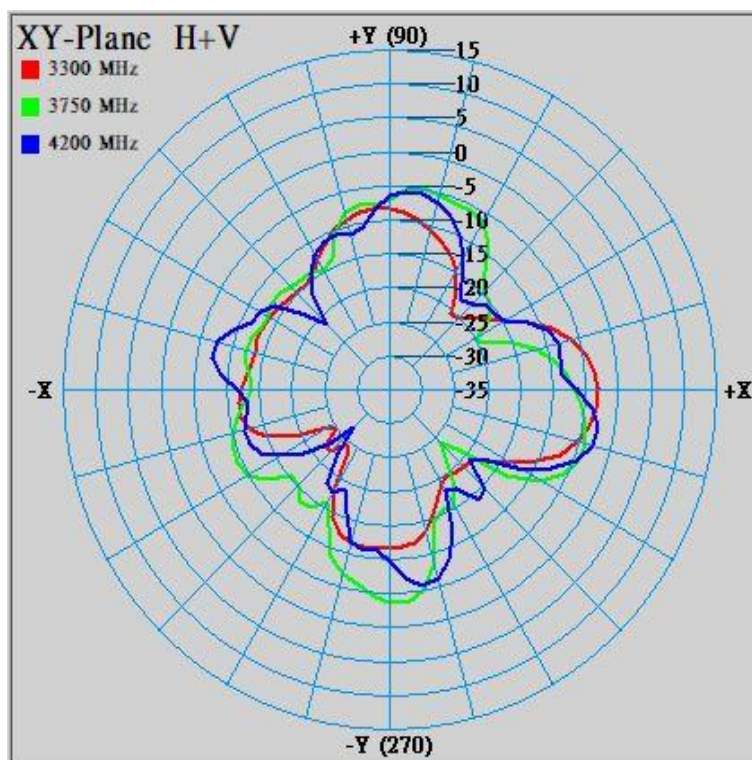


## Port3 3300-4200MHz

X-Y Plane

Theta=90.00deg

Gain . dB



	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
3300	10.84	48	10.59	46	-3.2	-10.79
3750	11	35	10.55	33	-3.44	-9.01
4200	12.36	36	12.28	34	-2.51	-9.77

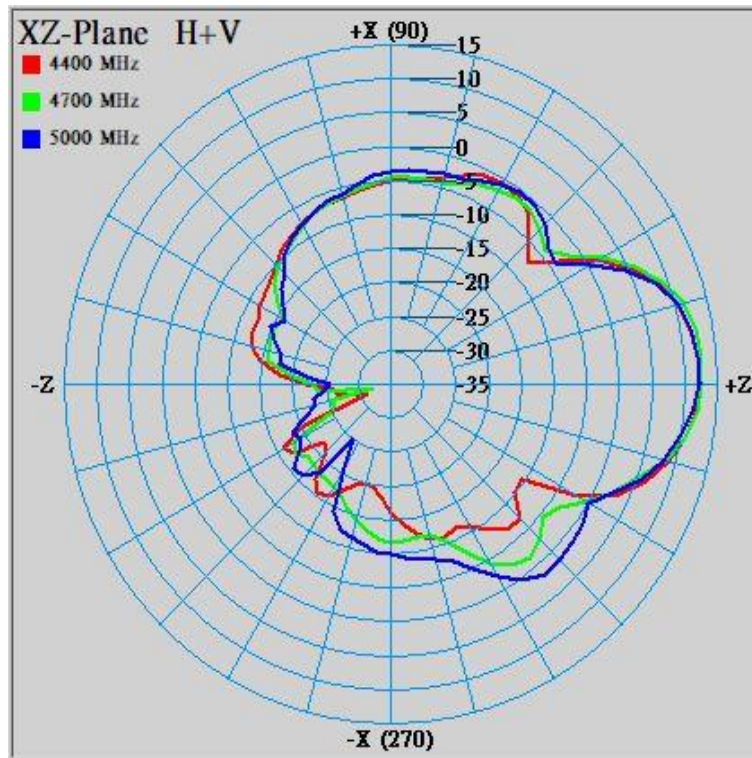


## Port3 4400-5000MHz

X-Z Plane

Phi=0.00deg

Gain . dB

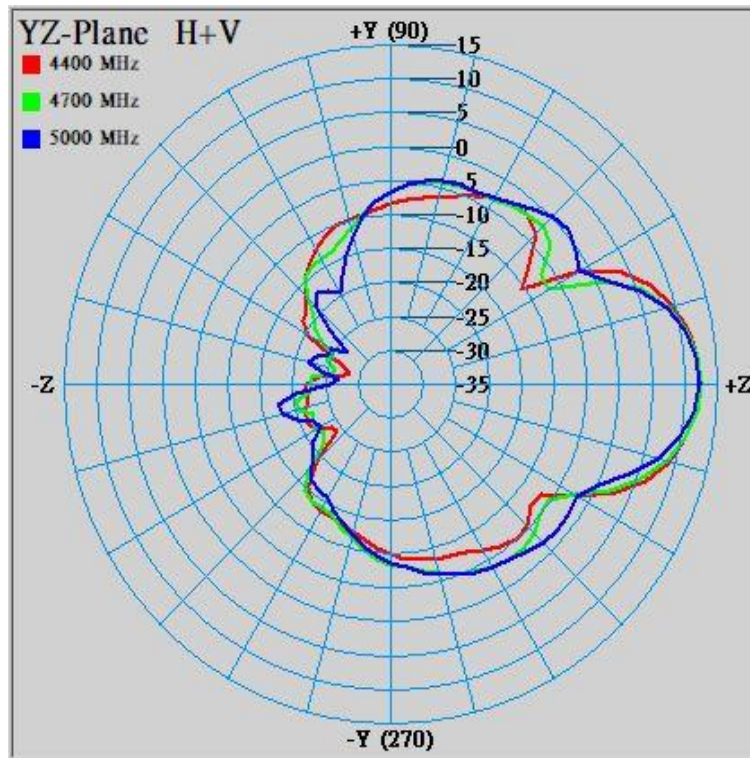


## Port3 4400-5000MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

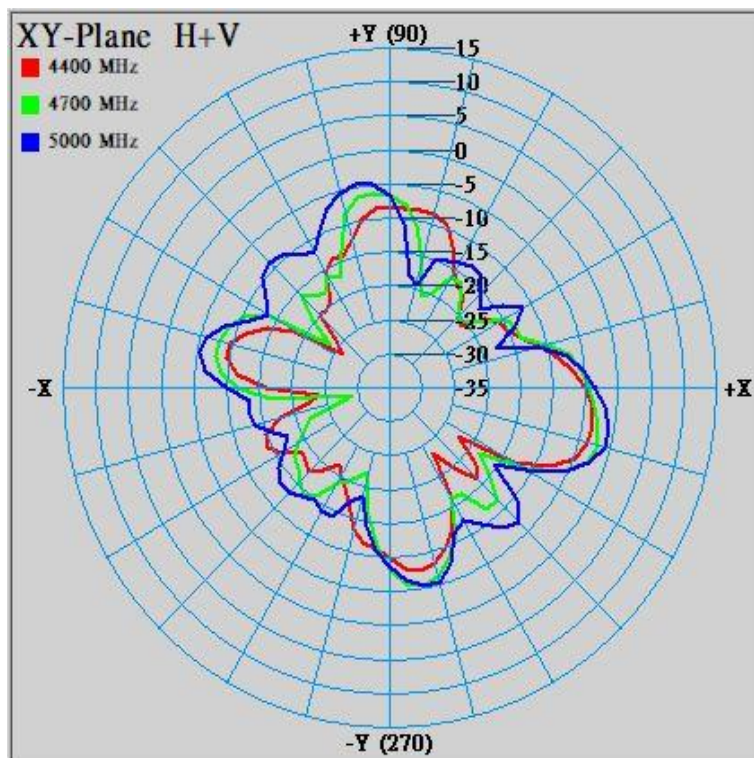


## Port3 4400-5000MHz

X-Y Plane

Theta=90.00deg

Gain . dB



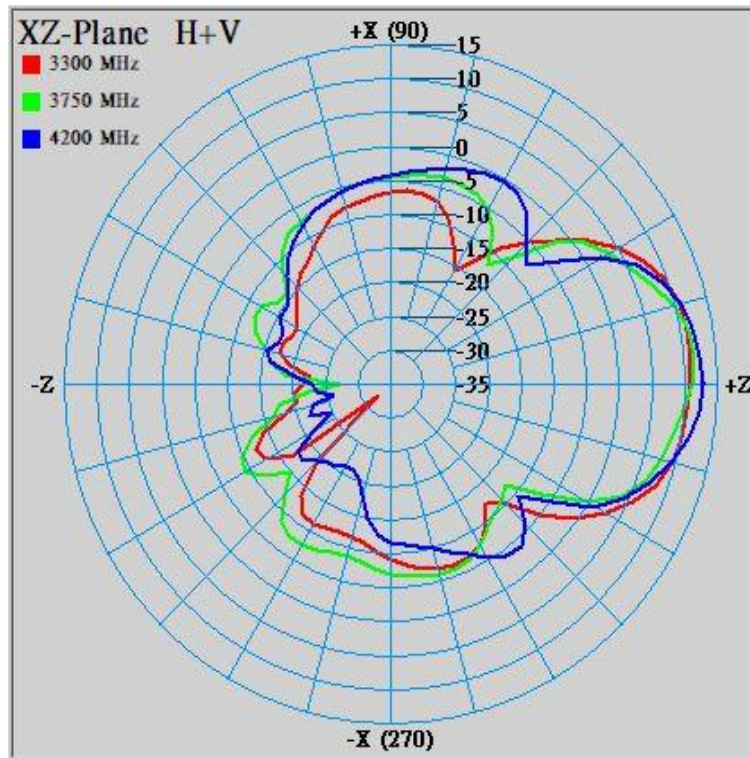
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
4400	12.31	35	12.3	33	-3.38	-11.05
4700	12.59	34	12.54	29	-2.1	-9.93
5000	12.28	31	12.21	28	-0.7	-8.42

## Port4 3300-4200MHz

X-Z Plane

Phi=0.00deg

Gain . dB



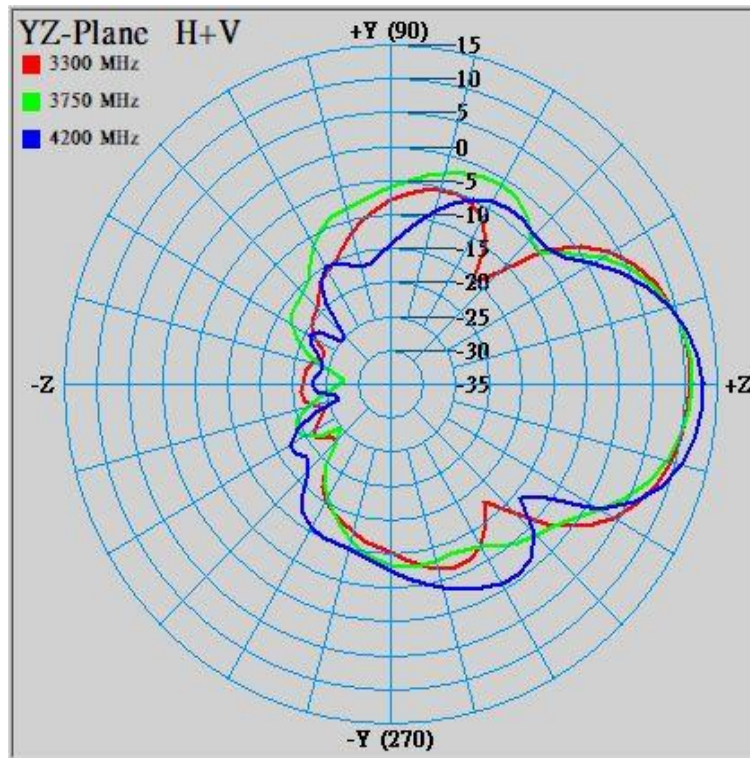


## Port4 3300-4200MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

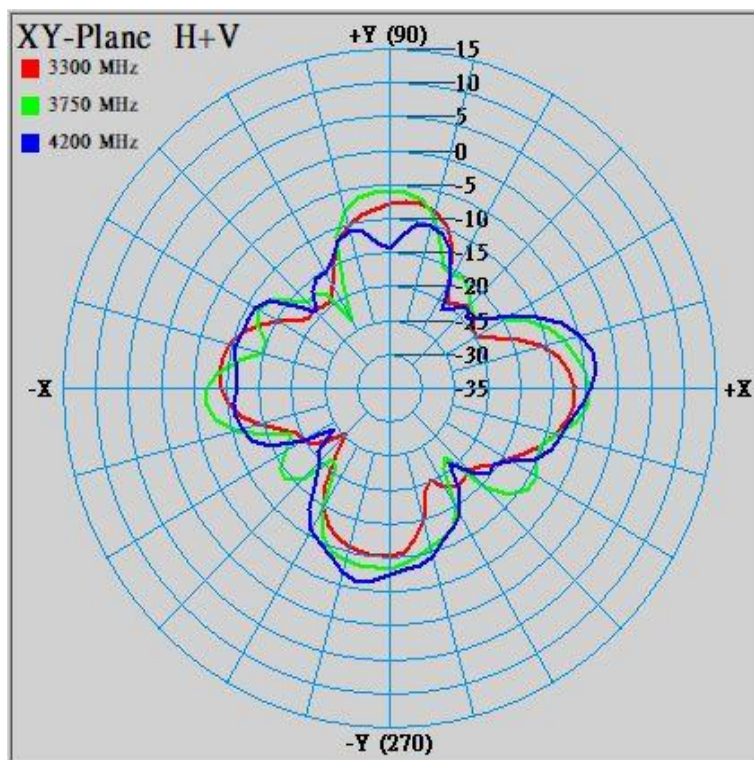


## Port4 3300-4200MHz

X-Y Plane

Theta=90.00deg

Gain . dB



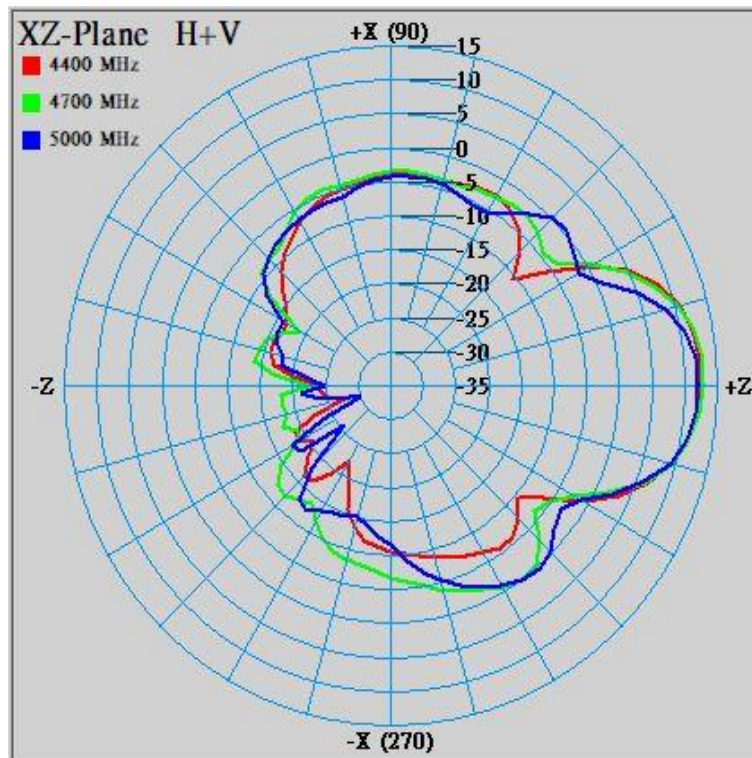
	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
3300	11.12	47	10.85	45	-6.58	-11.91
3750	11.7	29	11.08	39	-4.41	-10.09
4200	12.69	36	12.79	34	-3.29	-10.33

## Port4 4400-5000MHz

X-Z Plane

Phi=0.00deg

Gain . dB

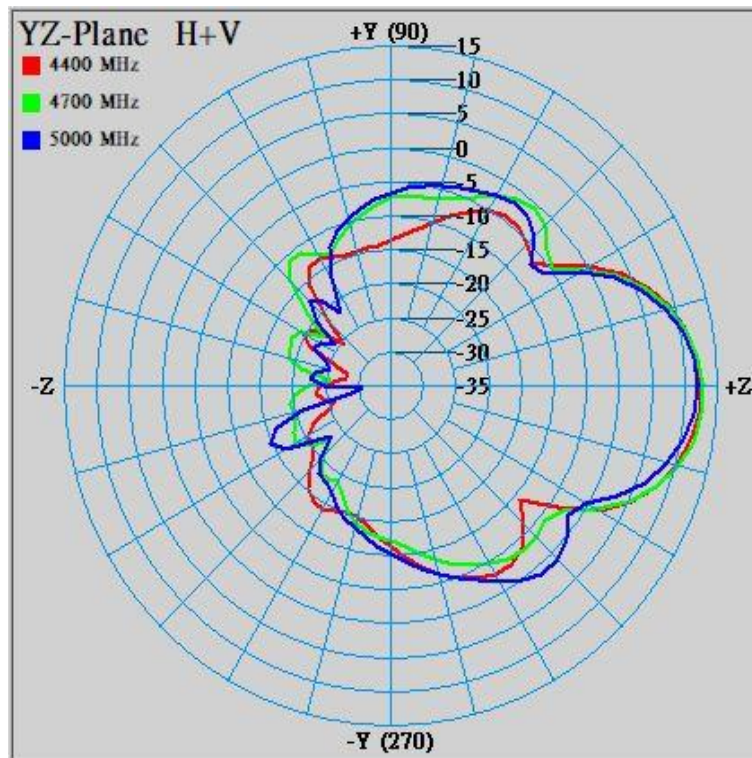


## Port4 4400-5000MHz

Y-Z Plane

Phi=90.00deg

Gain . dB



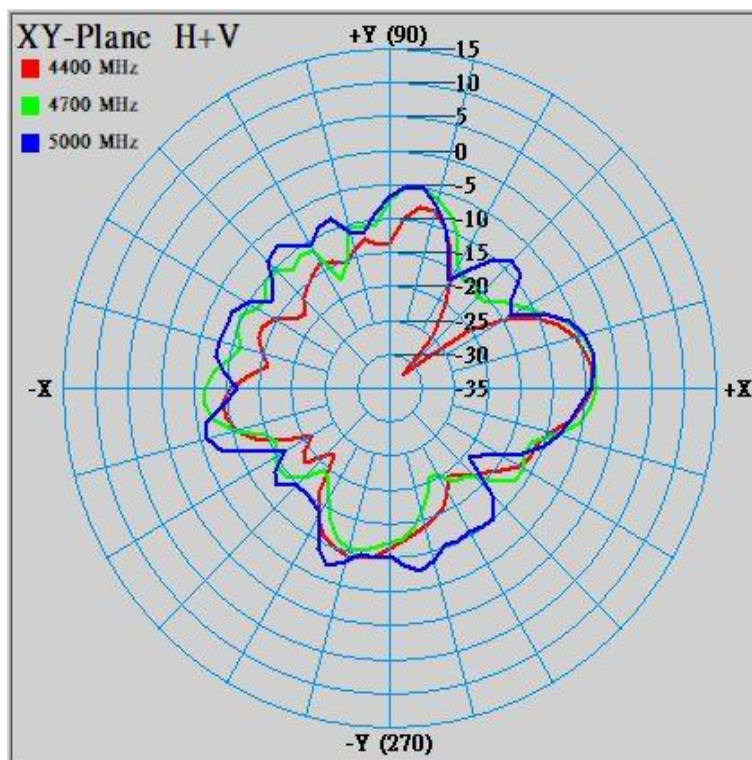


## Port4 4400-5000MHz

X-Y Plane

Theta=90.00deg

Gain . dB

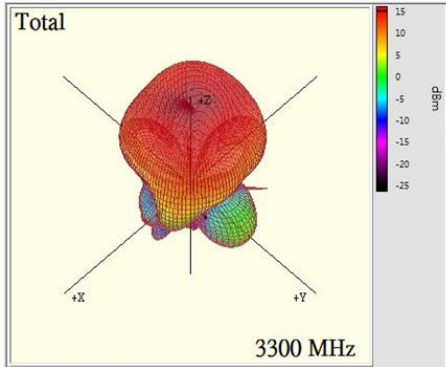


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
4400	12.59	34	12.59	33	-3.87	-11.32
4700	12.96	33	12.92	31	-3.36	-9.74
5000	12.1	32	12.1	30	-3.4	-8.85

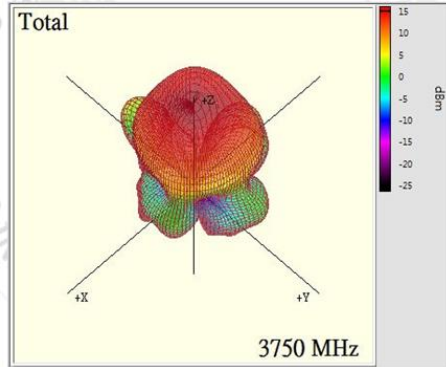


**Port1**

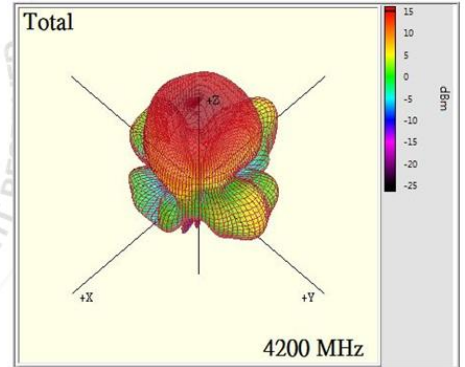
**3300MHz**



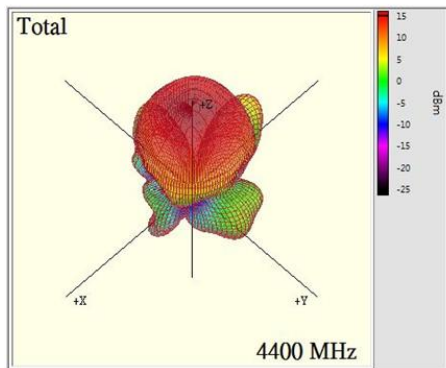
**3750MHz**



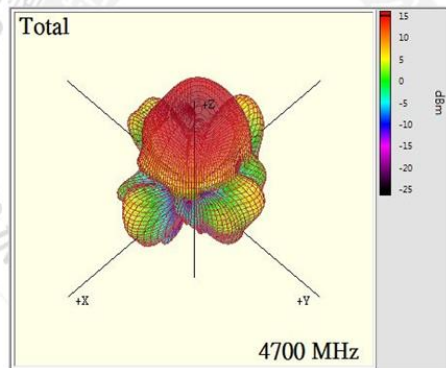
**4200MHz**



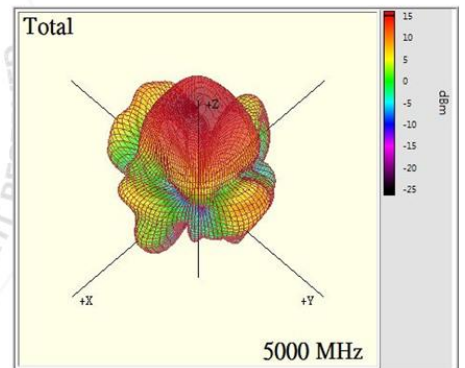
**4400MHz**



**4700MHz**

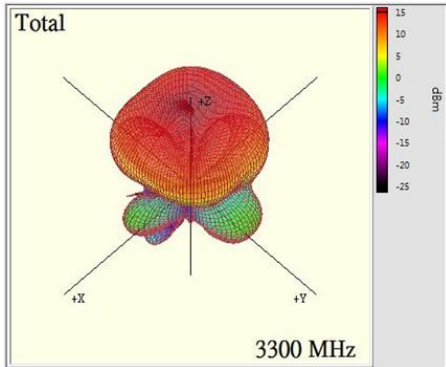


**5000MHz**

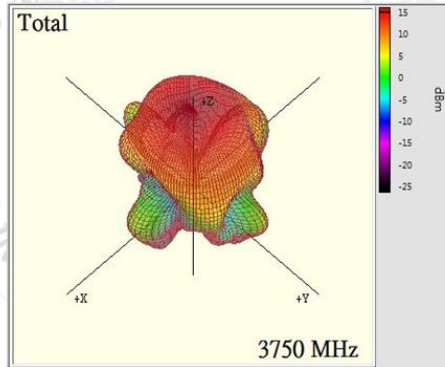


**Port2**

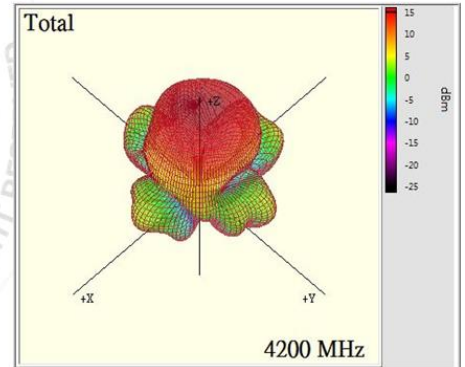
**3300MHz**



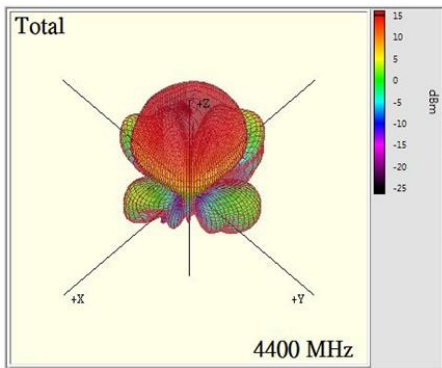
**3750MHz**



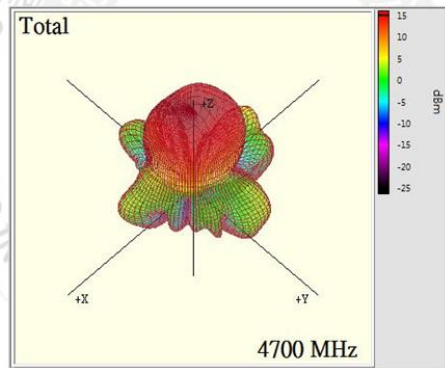
**4200MHz**



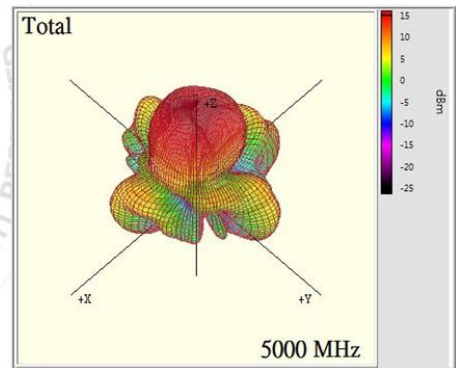
**4400MHz**



**4700MHz**

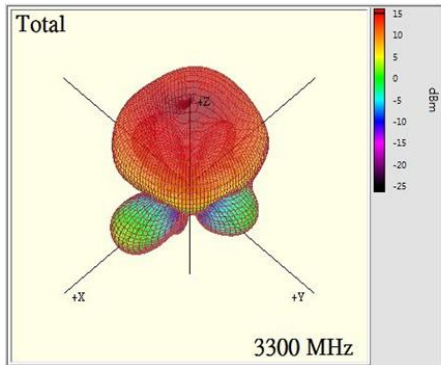


**5000MHz**

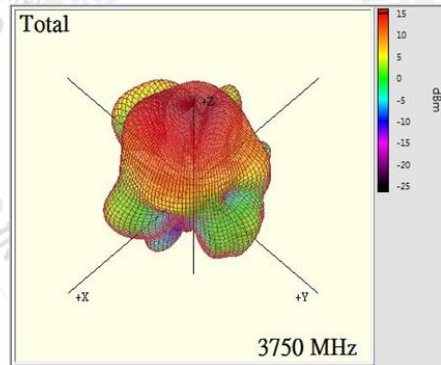


**Port3**

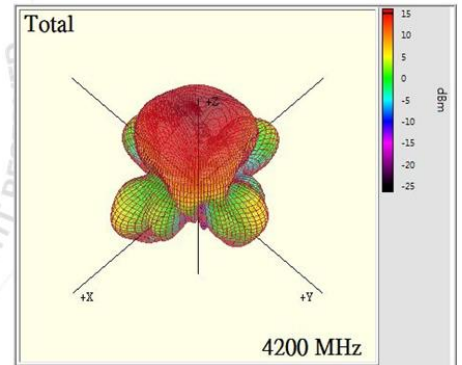
**3300MHz**



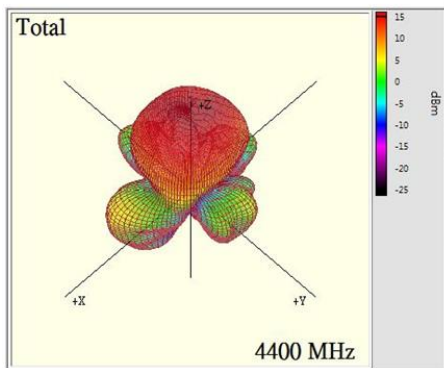
**3750MHz**



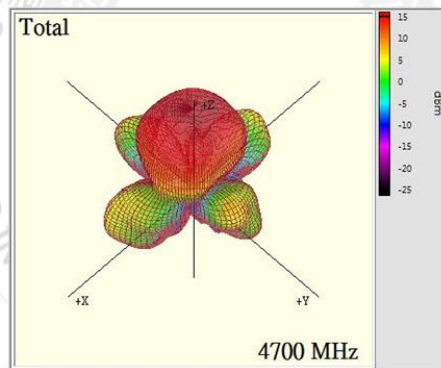
**4200MHz**



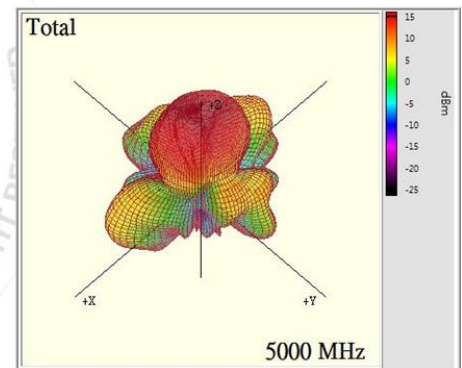
**4400MHz**



**4700MHz**

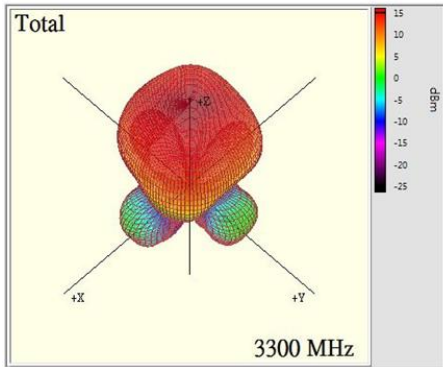


**5000MHz**

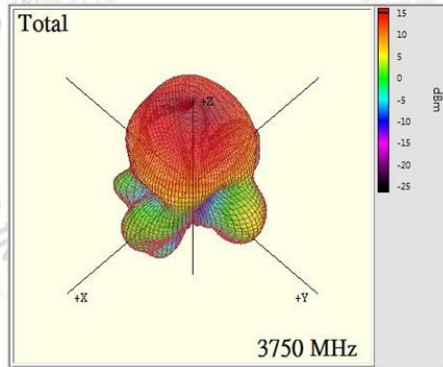


**Port4**

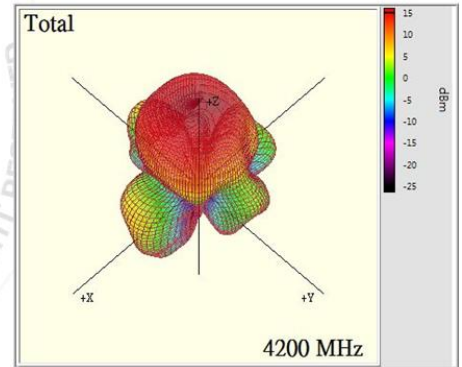
**3300MHz**



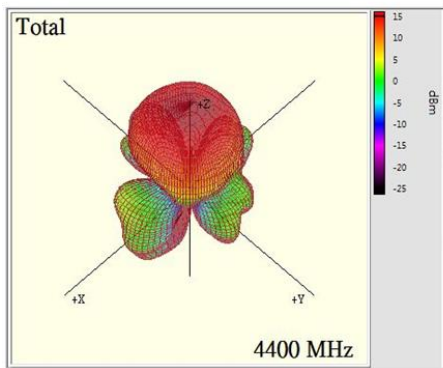
**3750MHz**



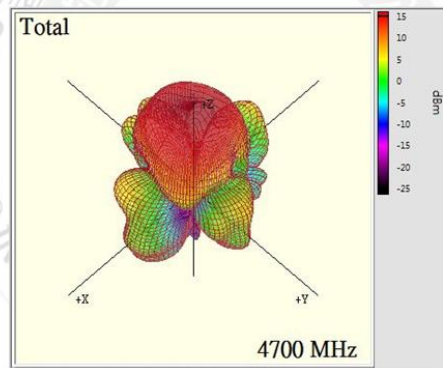
**4200MHz**



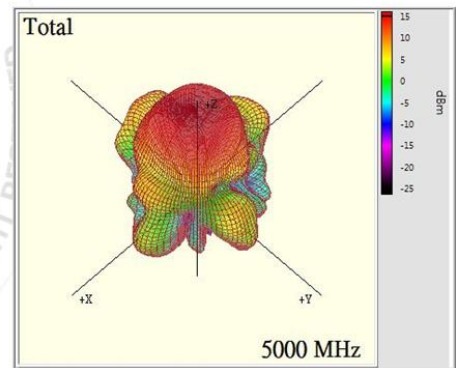
**4400MHz**



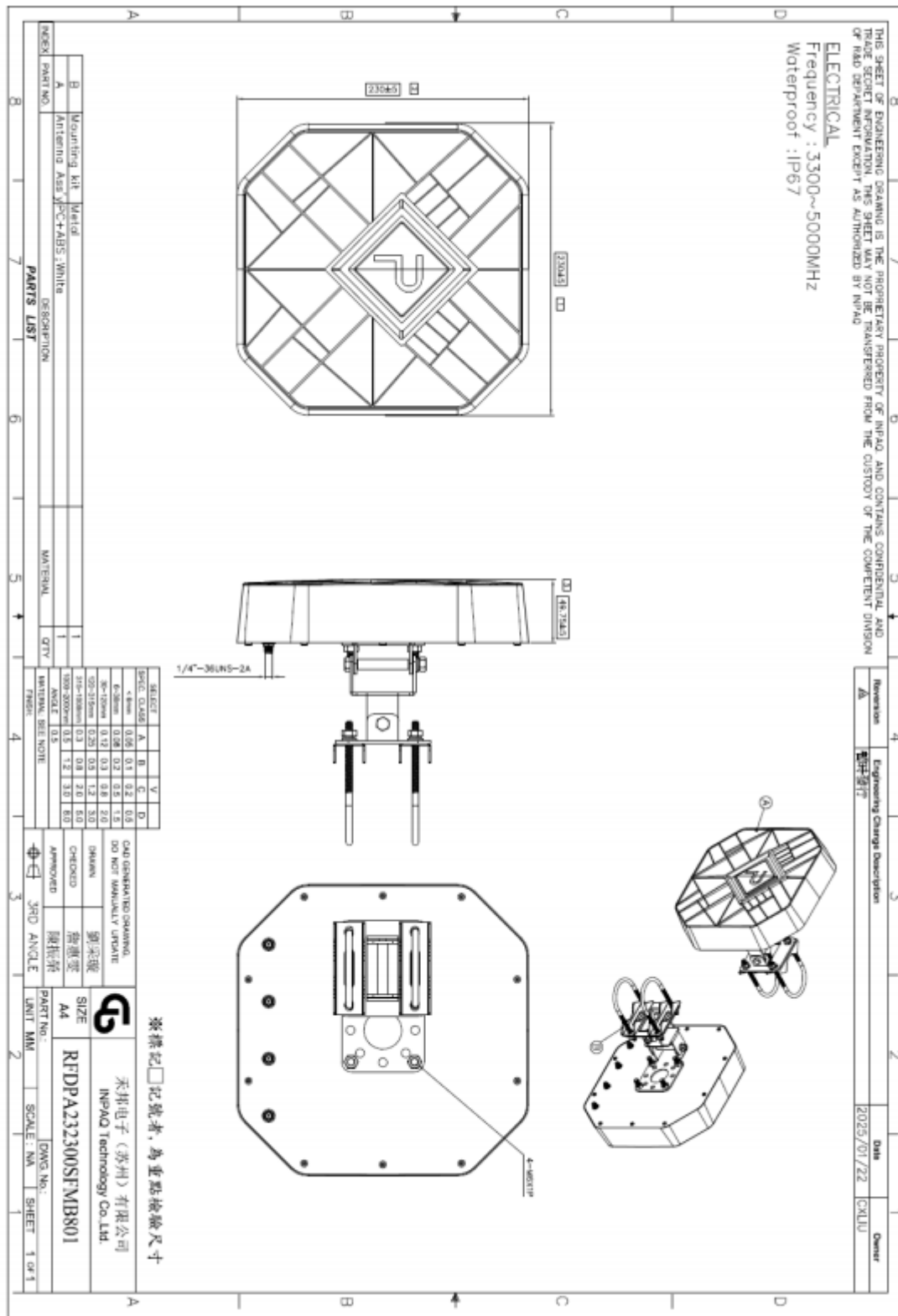
**4700MHz**



**5000MHz**



## 2. Mechanical Specification





## 3. Ordering Information

RF	DPA	2323	00	S	F	M	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.: 2323 Length 230mm, Width 230mm	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 6: 6GHz A: 2.4GHz ISM band B: GSM 900/1800 dual band G: GPS band L: 2.4/5.2/5.8 GHz tri-band M: LTE+Sub 6G+5G 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

4. Version

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	CXLIU	ALL	Temporary Release	2025/01/22	According to the date of PLM Release	N/A