

RFDPA191900SFLB801

Specification

Part Series	WIFI DAS Antennas
Part No.	RFDPA191900SFLB801
Version	V0.1

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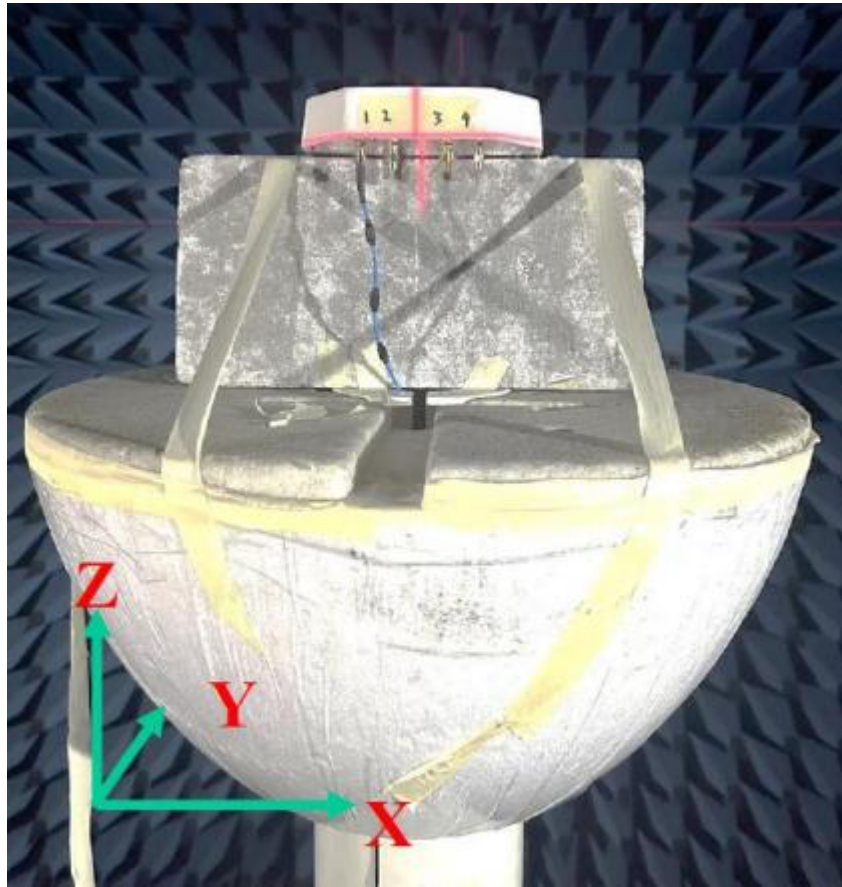
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1. Performance

1.1 Antenna Performance

Item	Specification
Frequency Range	2.4~2.5/5.15~5.85 GHz
Impedance	50 Ohm Nominal
VSWR	2.0 (Max)
Return Loss	-10dB(Max)
Peak Gain	Port 1 2.4~2.5 GHz @7.01 dBi 5.15~5.85 GHz@9.59 dBi Port 2 2.4~2.5 GHz @7.37 dBi 5.15~5.85 GHz@9.80 dBi Port 3 2.4~2.5 GHz @6.77 dBi 5.15~5.85 GHz@9.87 dBi Port 4 2.4~2.5 GHz @7.43 dBi 5.15~5.85 GHz@9.69 dBi
Radiation	Directional
Polarization	Horizontal/Vertical
Operation Temperature	-20°C ~ +65°C

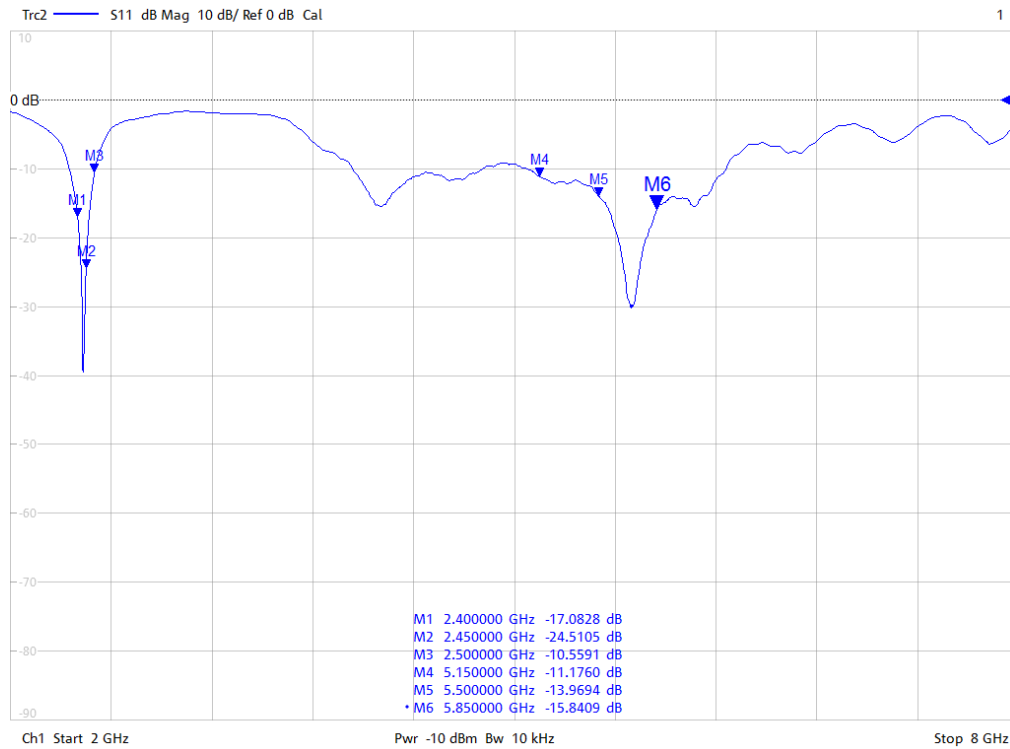
1.2 Experimental Setup



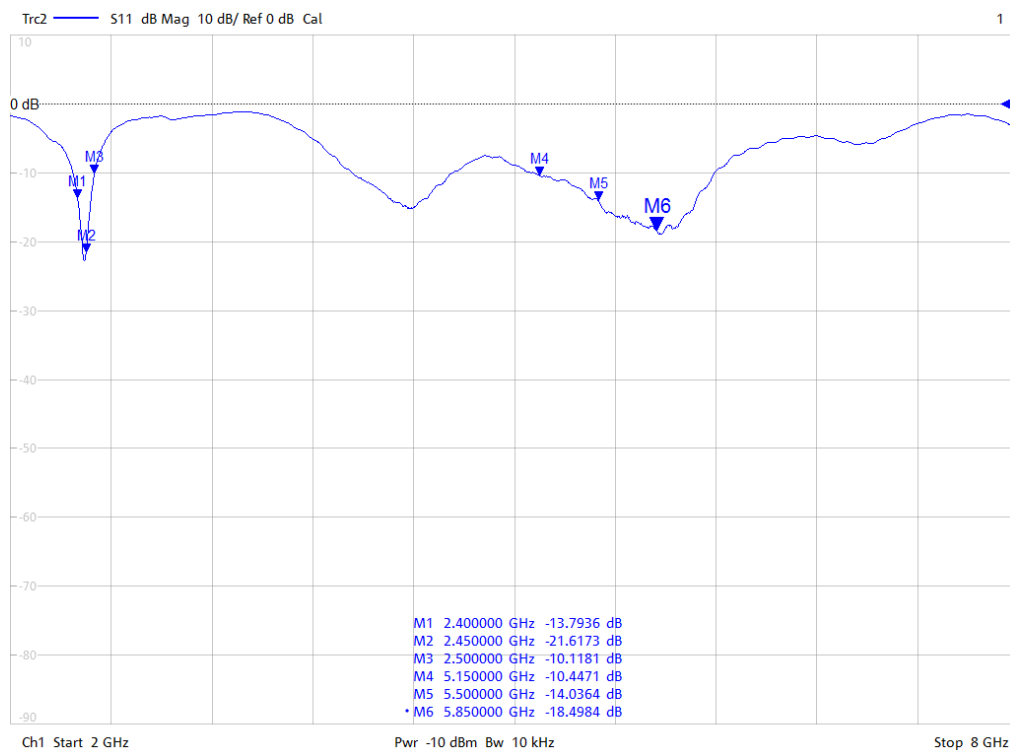
1.3 Antenna S-Parameter and Matching Factor

Return Loss

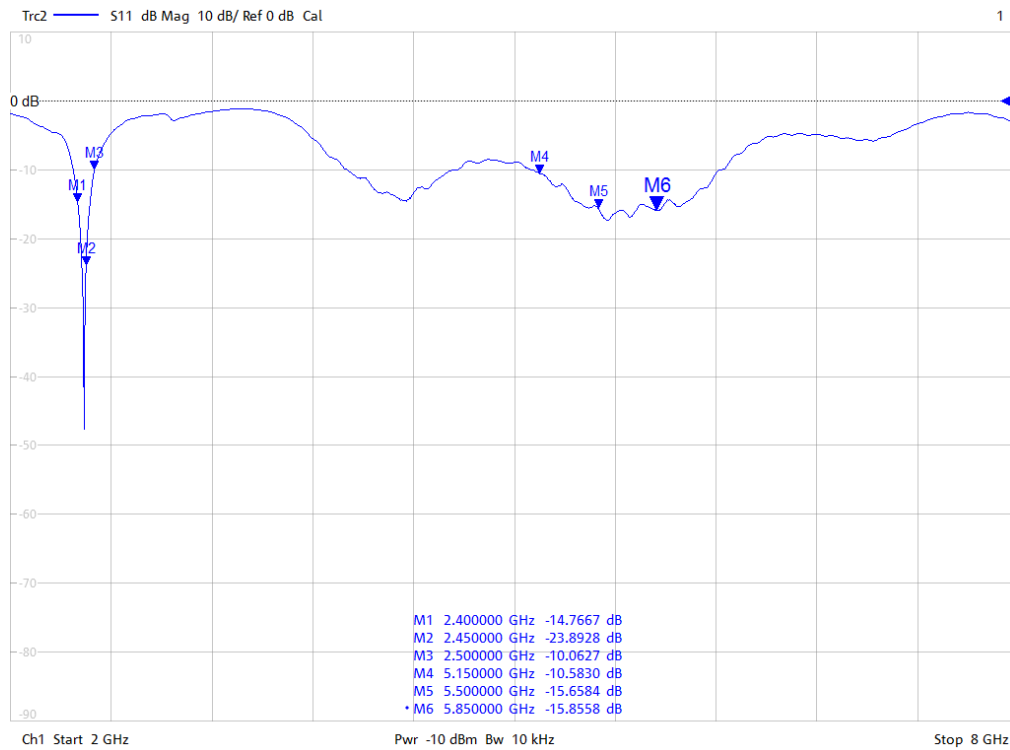
Port1



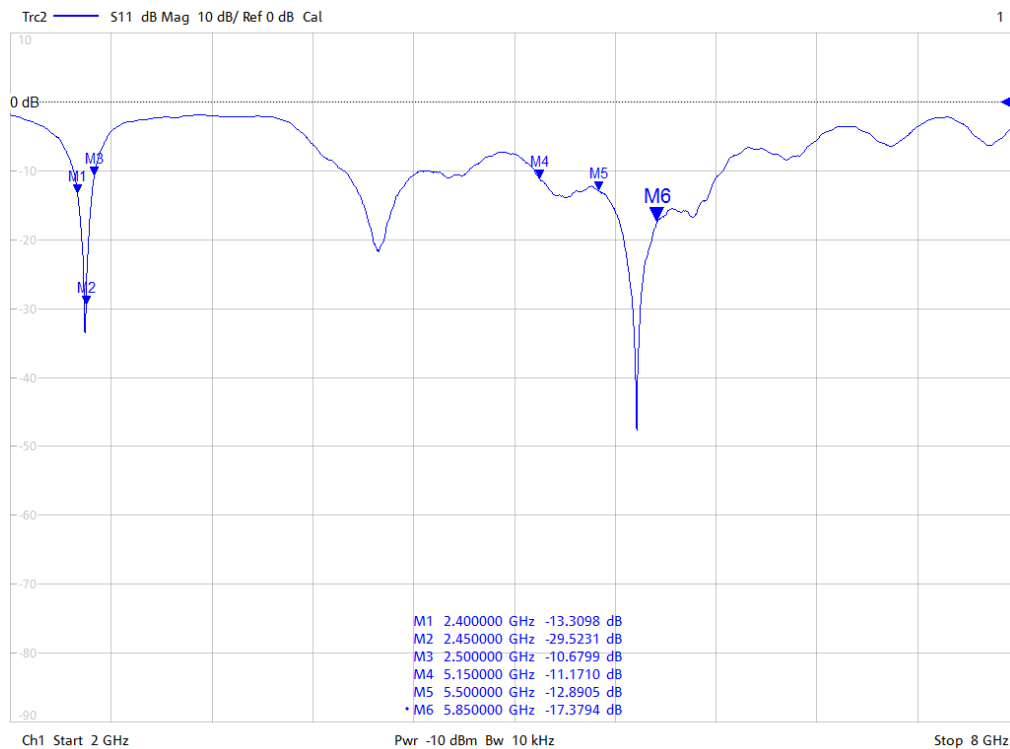
Port2



Port3

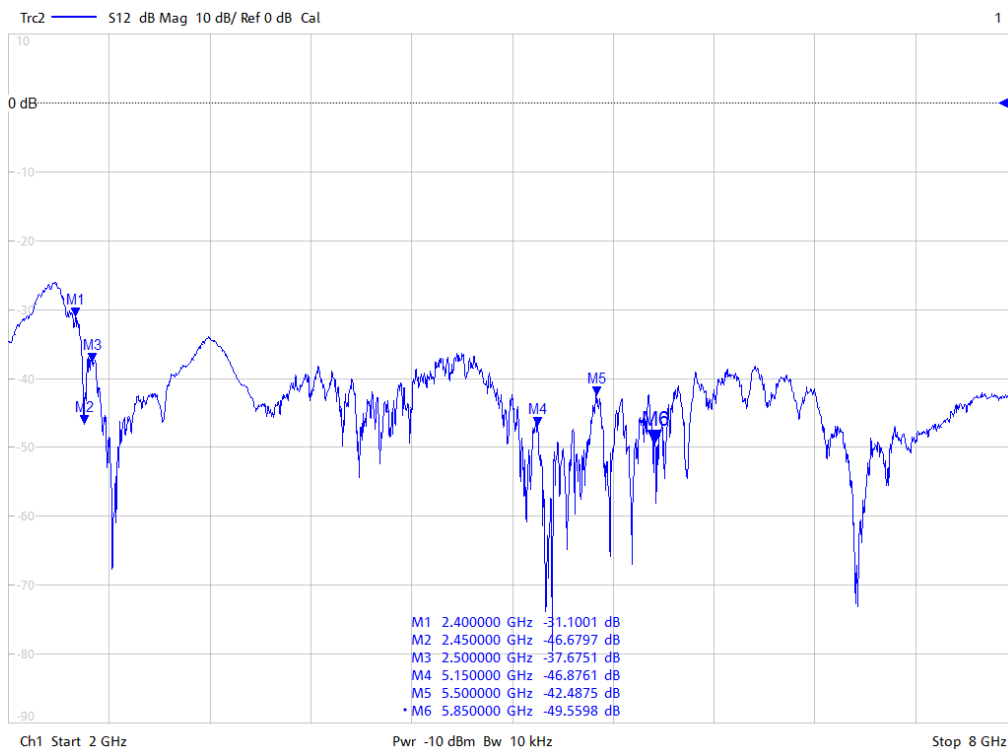


Port4

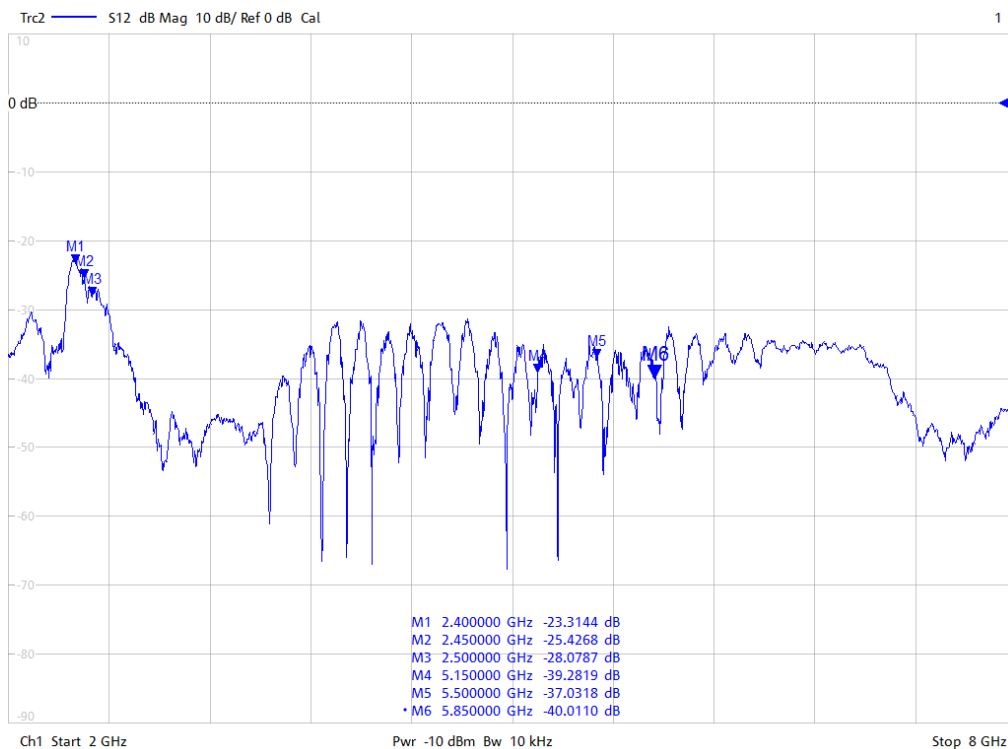


Isolation

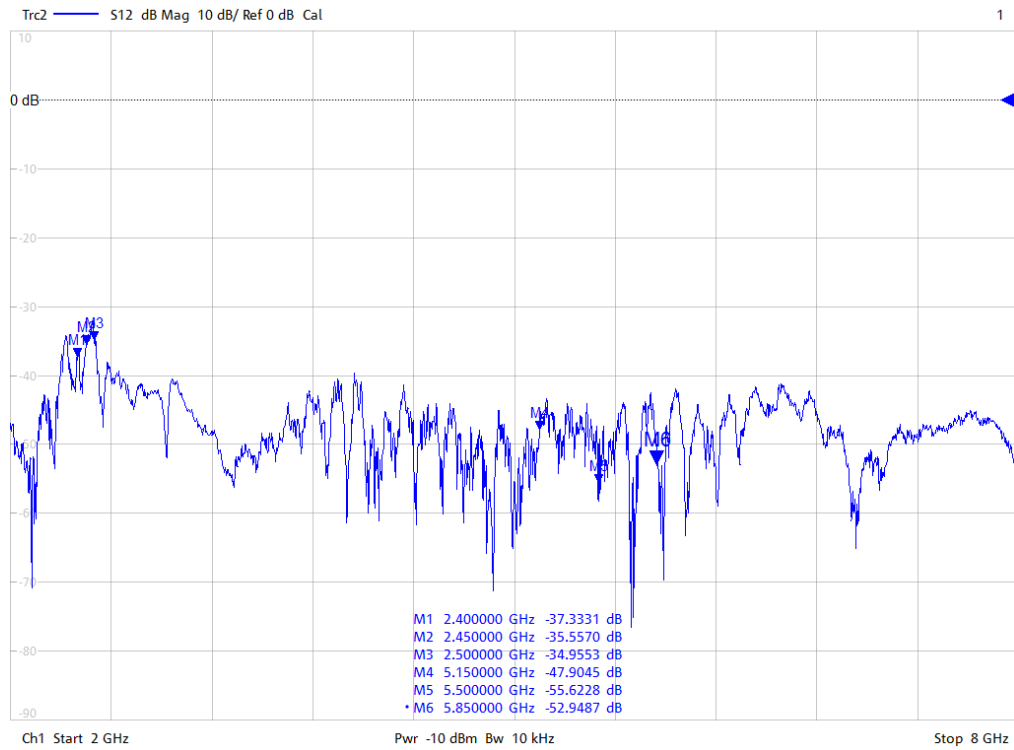
Port1 / Port2



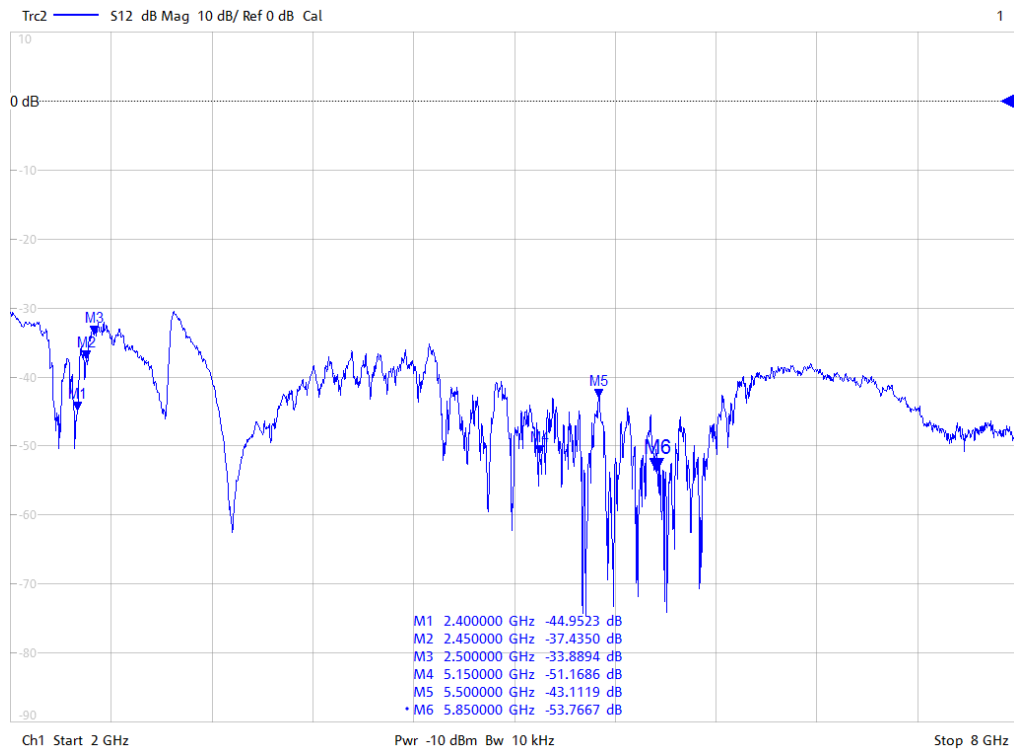
Port1 / Port3



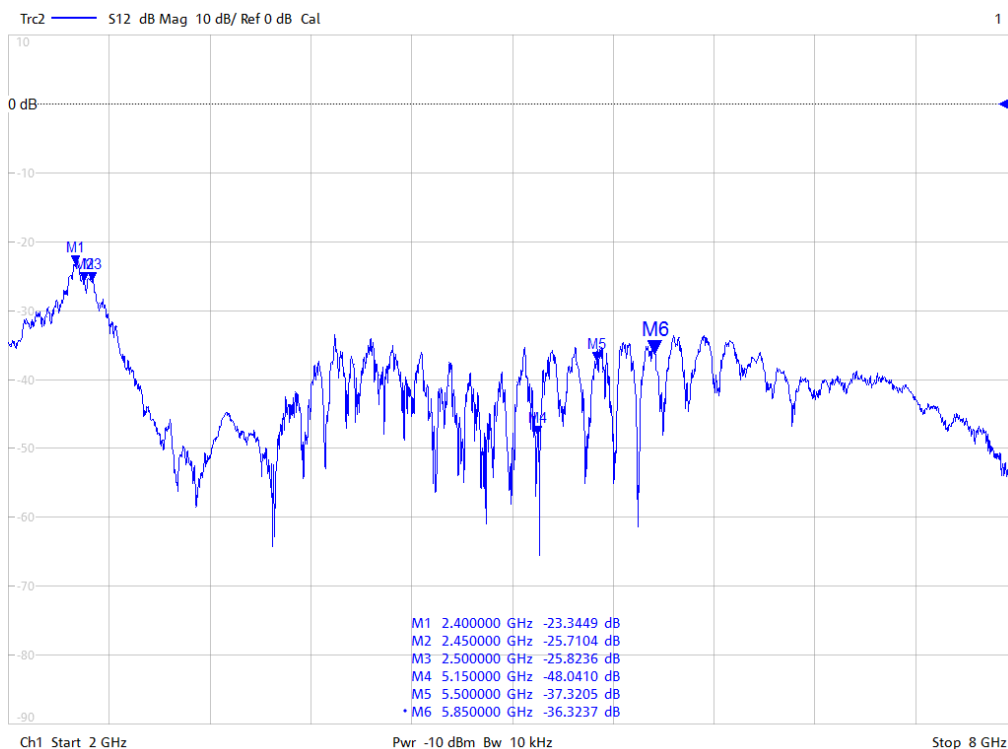
Port1 / Port4



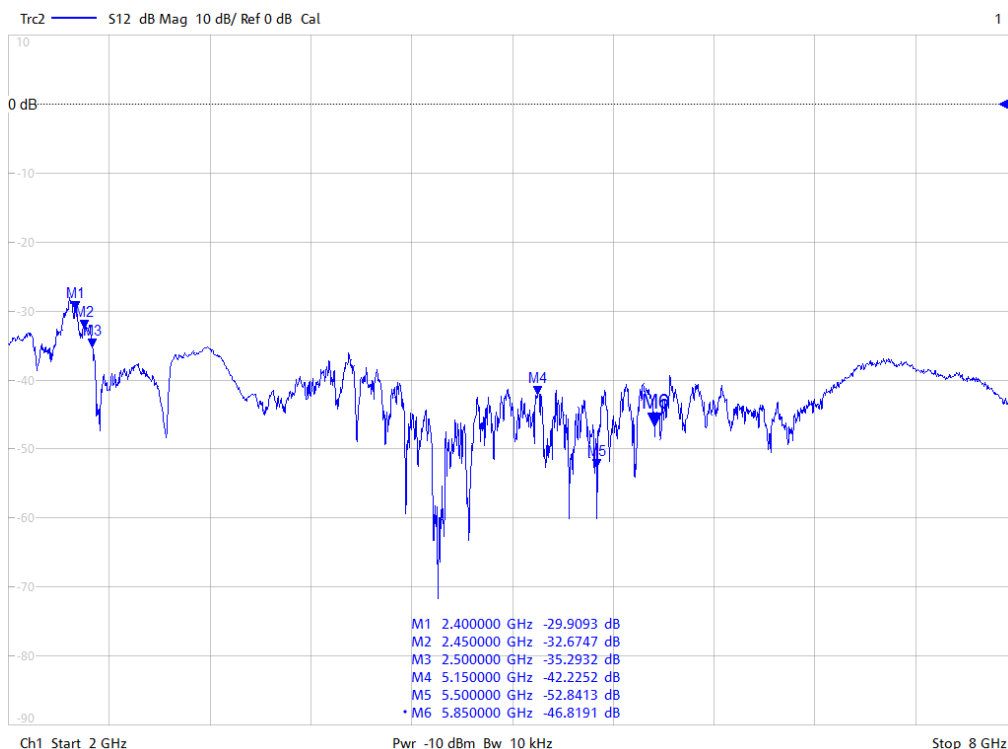
Port2 / Port3



Port2 / Port4

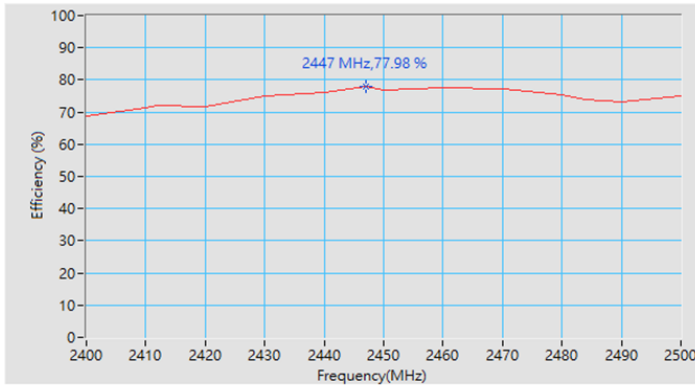


Port3 / Port4

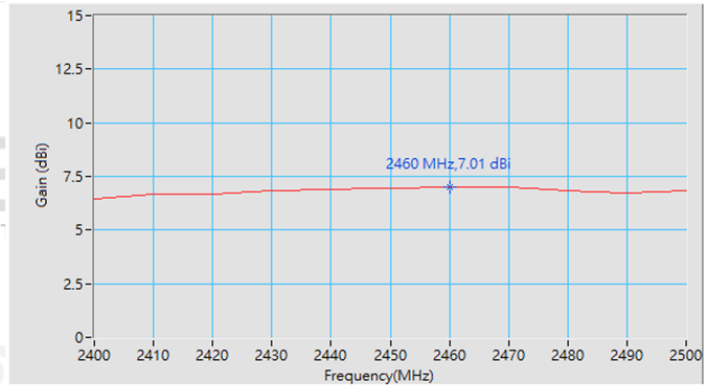


1.4 Antenna Efficiency & Peak Gain

Port1 2400-2500 MHz

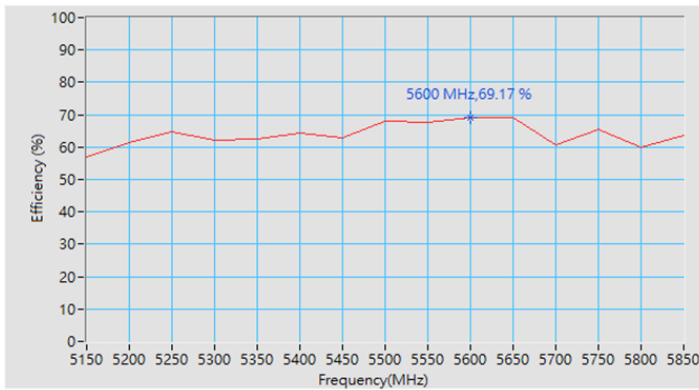


Maximum Efficiency at 2447 MHz : 77.98 %

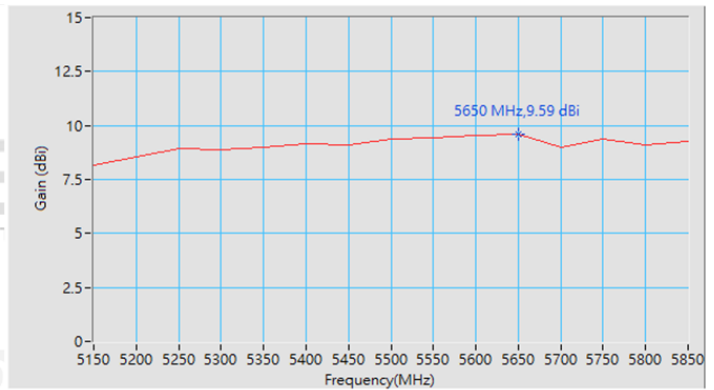


Maximum Peak Gain at 2460 MHz : 7.01 dBi

Port1 5150-5850 MHz

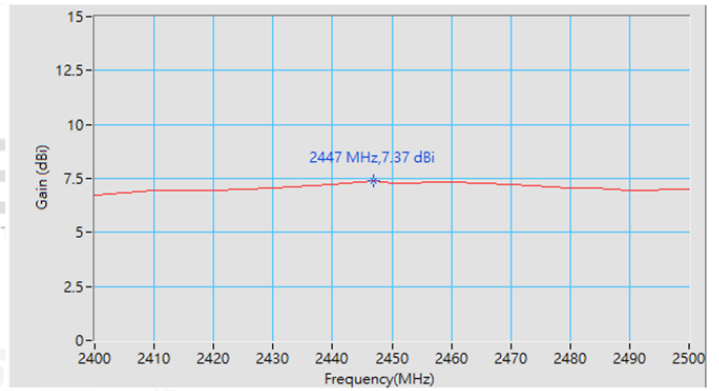
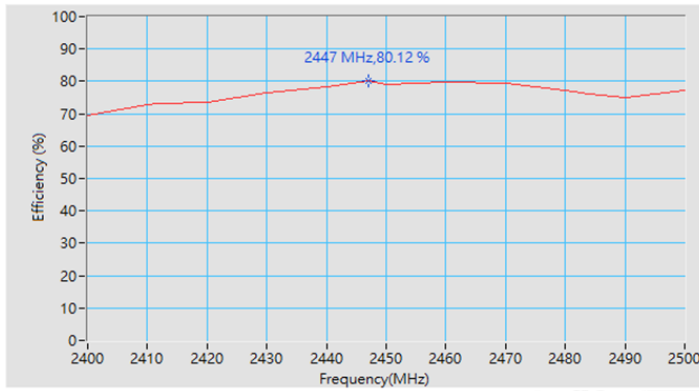


Maximum Efficiency at 5600 MHz : 69.17 %



Maximum Peak Gain at 5650 MHz : 9.59 dBi

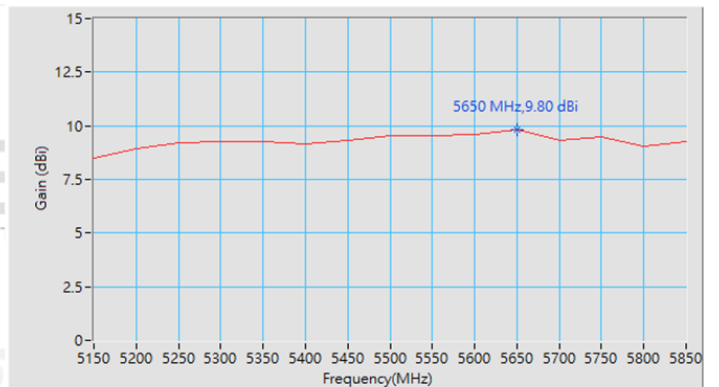
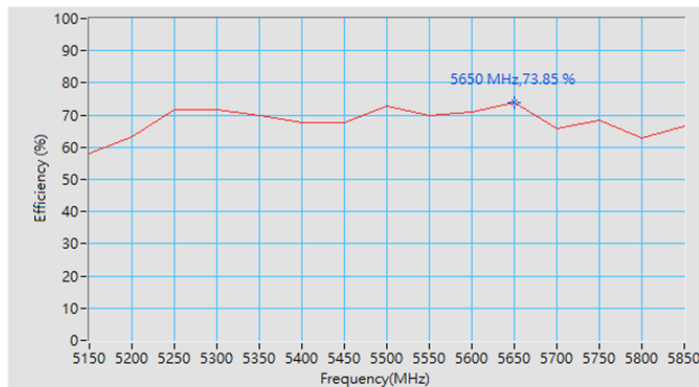
Port2 2400-2500 MHz



Maximum Efficiency at 2447 MHz : 80.12 %

Maximum Peak Gain at 2447 MHz : 7.37 dBi

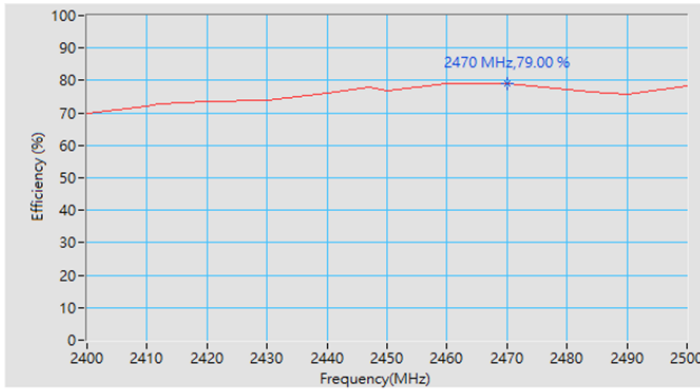
Port2 5150-5850 MHz



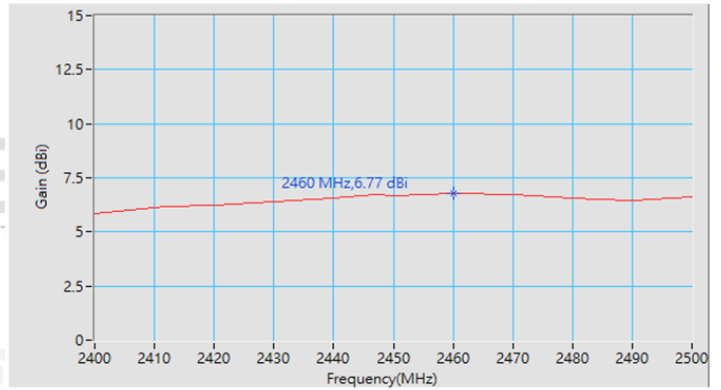
Maximum Efficiency at 5650 MHz : 73.85 %

Maximum Peak Gain at 5650 MHz : 9.80 dBi

Port3 2400-2500 MHz

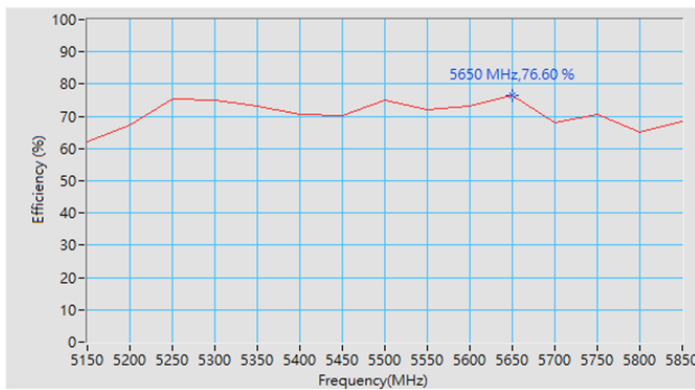


Maximum Efficiency at 2470 MHz : 79.0 %

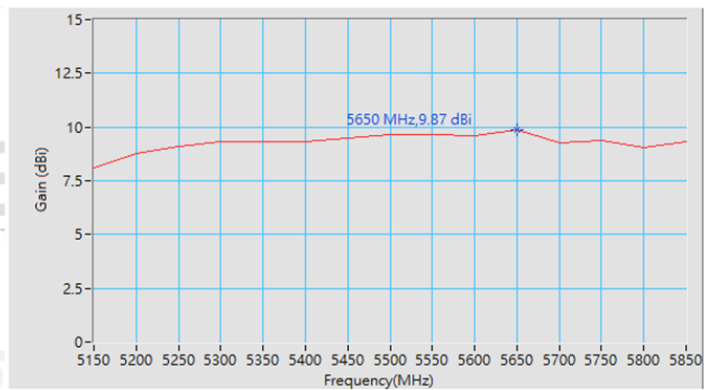


Maximum Peak Gain at 2460 MHz : 6.77 dBi

Port3 5150-5850 MHz

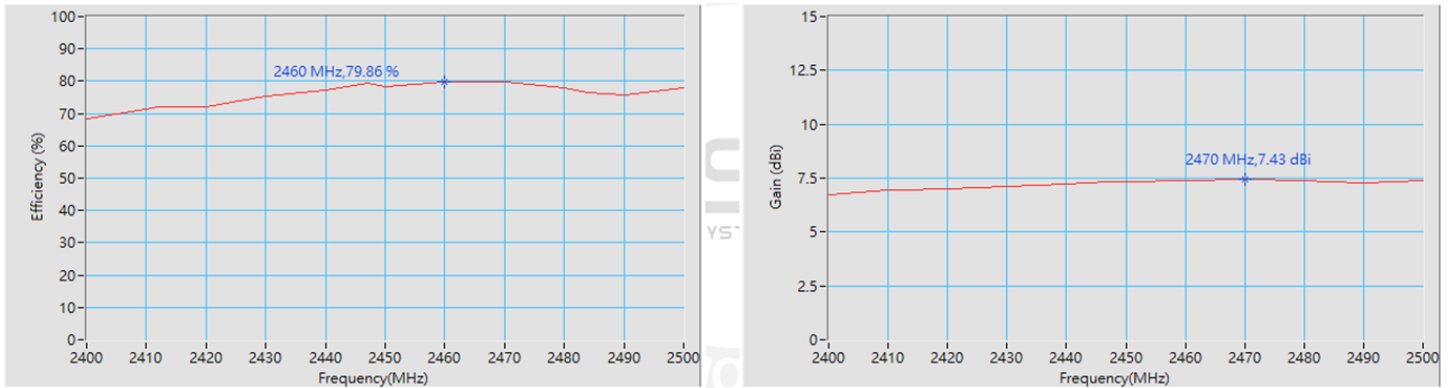


Maximum Efficiency at 5650 MHz : 76.60 %



Maximum Peak Gain at 5650 MHz : 9.87 dBi

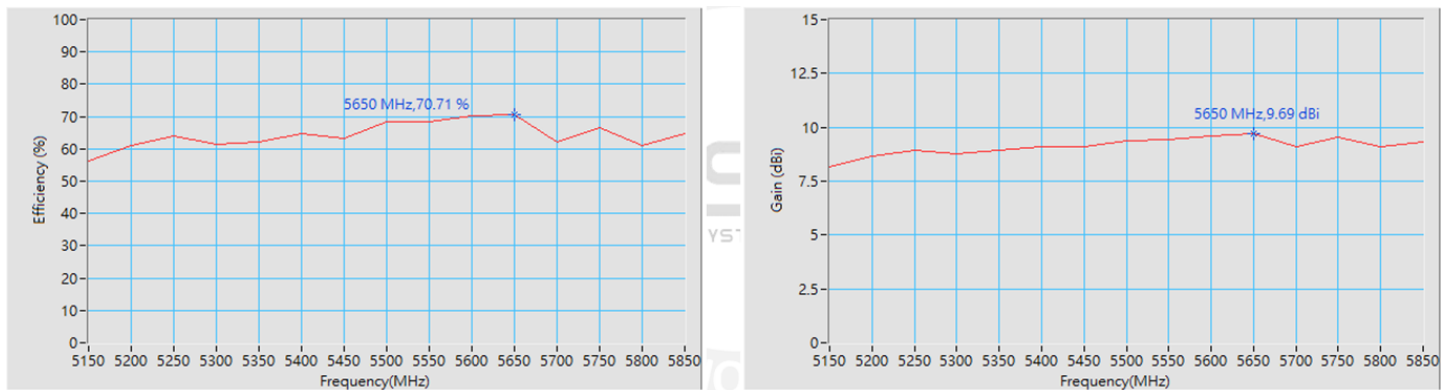
Port4 2400-2500 MHz



Maximum Efficiency at 2460 MHz : 79.86 %

Maximum Peak Gain at 2470 MHz : 7.43 dBi

Port4 5150-5850 MHz



Maximum Efficiency at 5650 MHz : 70.71 %

Maximum Peak Gain at 5650 MHz : 9.69 dBi

	Port 1		Port 2	
Frequency (GHz)	Efficiency (%)	Peak gain (dBi)	Efficiency (%)	Peak gain (dBi)
2.4	68.85	6.47	69.57	6.75
2.45	76.71	6.93	78.98	7.30
2.5	75.16	6.86	77.09	7.03

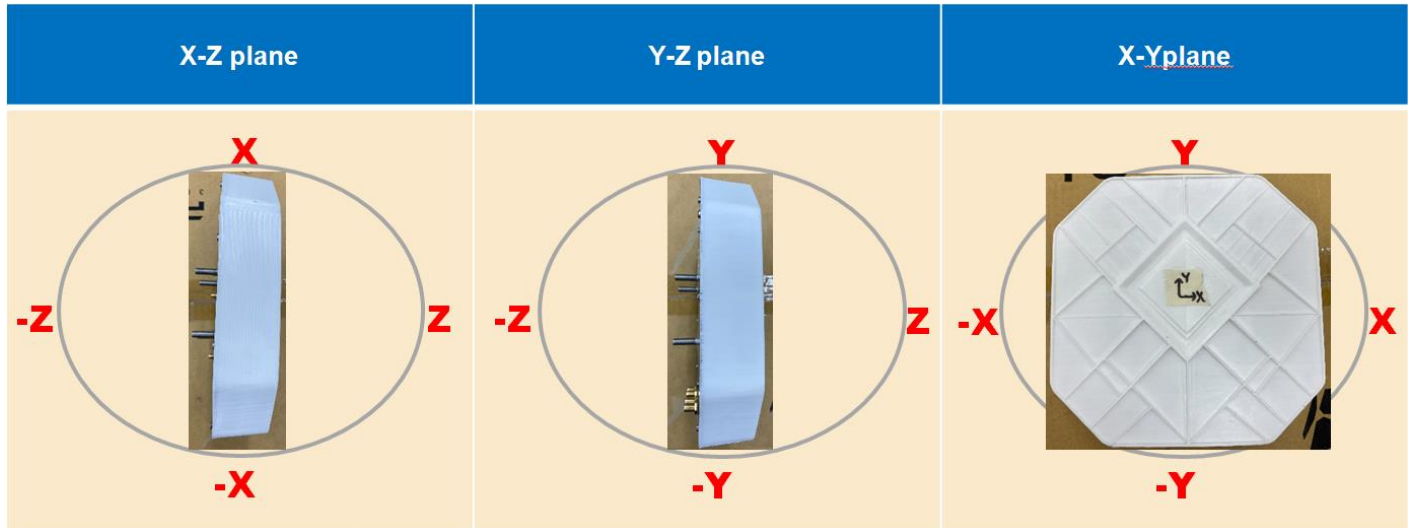
	Port 3		Port 4	
Frequency (GHz)	Efficiency (%)	Peak gain (dBi)	Efficiency (%)	Peak gain (dBi)
2.4	69.83	5.86	68.23	6.73
2.45	76.94	6.67	78.39	7.31
2.5	78.34	6.60	77.85	7.40

	Port 1		Port 2	
Frequency (GHz)	Efficiency (%)	Peak gain (dBi)	Efficiency (%)	Peak gain (dBi)
5.15	57.16	8.14	58.02	8.47
5.5	67.87	9.38	72.63	9.54
5.85	63.58	9.29	66.46	9.29

	Port 3		Port 4	
Frequency (GHz)	Efficiency (%)	Peak gain (dBi)	Efficiency (%)	Peak gain (dBi)
5.15	62.06	8.13	56.14	8.17
5.5	75.07	9.67	68.44	9.35
5.85	68.54	9.29	64.78	9.33

1.5 Radiation Pattern

3 views of antenna

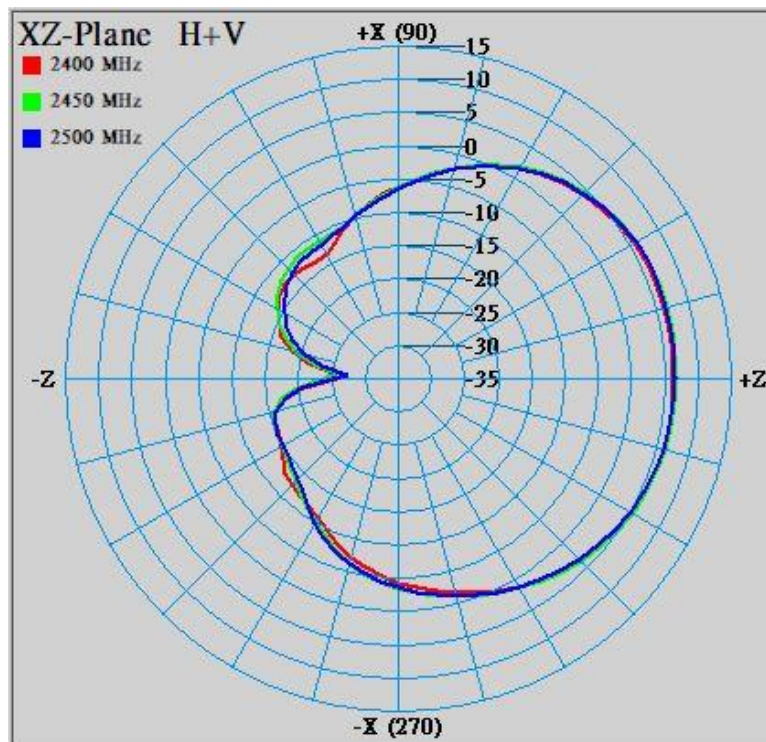


Port1 2400 - 2500 MHz

X-Z Plane

Phi=0.00deg

Gain . dB

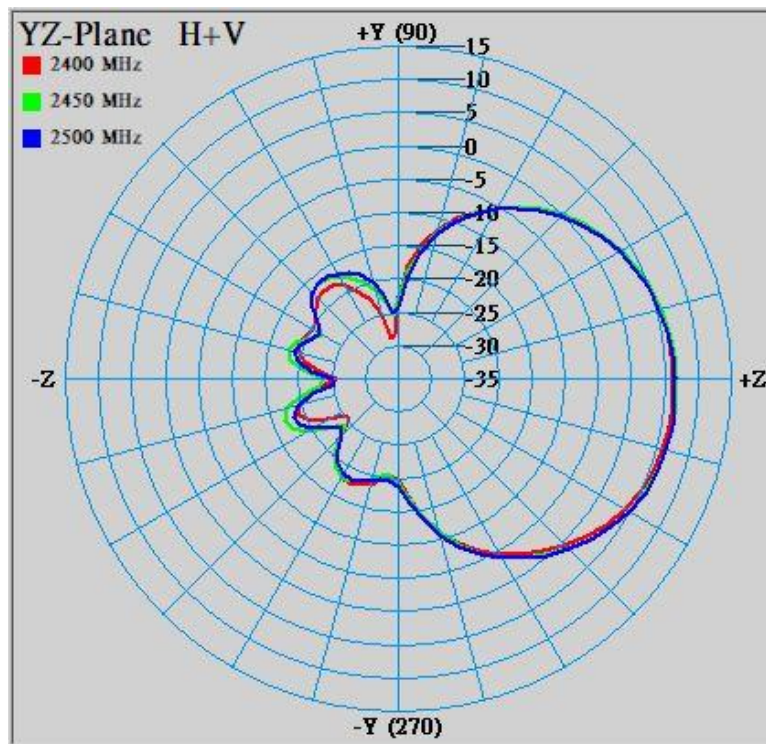


Port1 2400 - 2500 MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

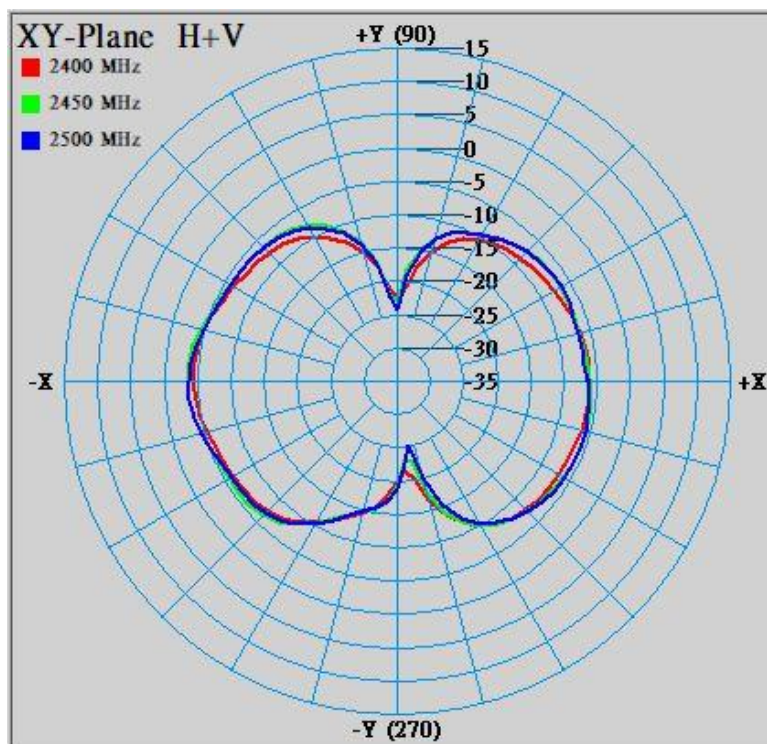


Port1 2400 - 2500 MHz

X-Y Plane

Theta=90.00deg

Gain . dB



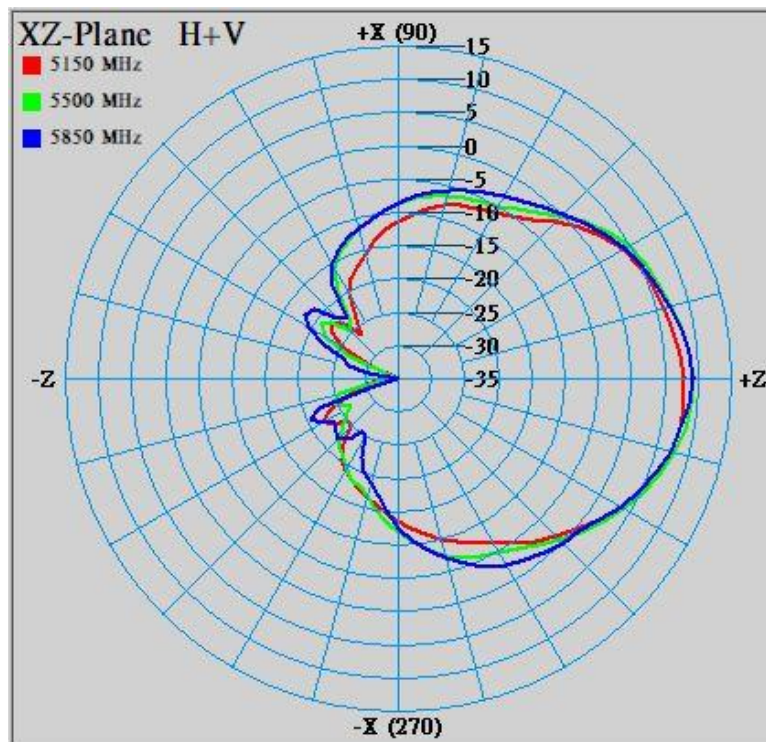
	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
2400	6.33	98	6.38	66	-4.28	-8.19
2450	6.81	96	6.82	66	-3.42	-7.48
2500	6.65	95	6.75	66	-3.59	-7.62

Port1 5150 - 5850 MHz

X-Z Plane

Phi=0.00deg

Gain . dB

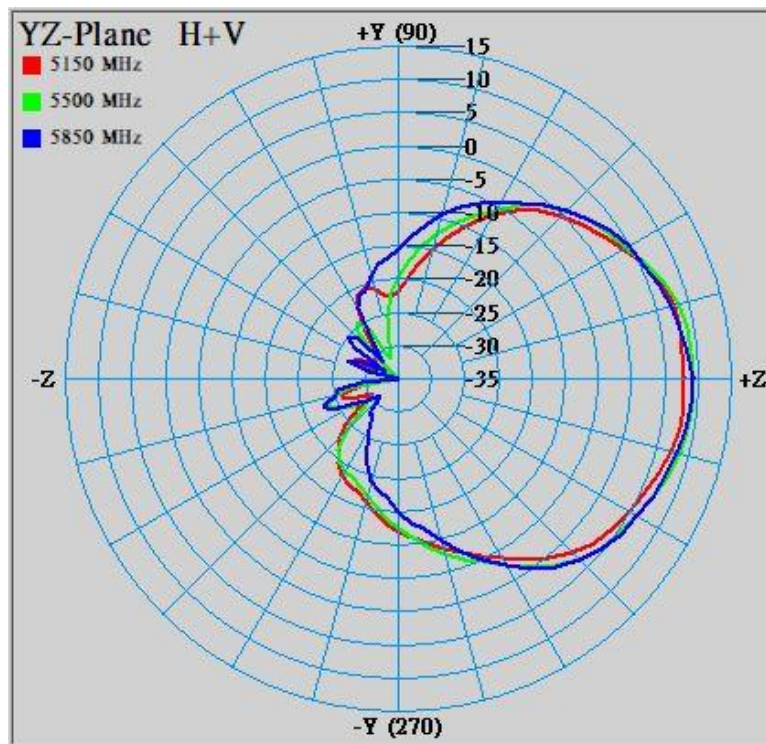


Port1 5150 - 5850 MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

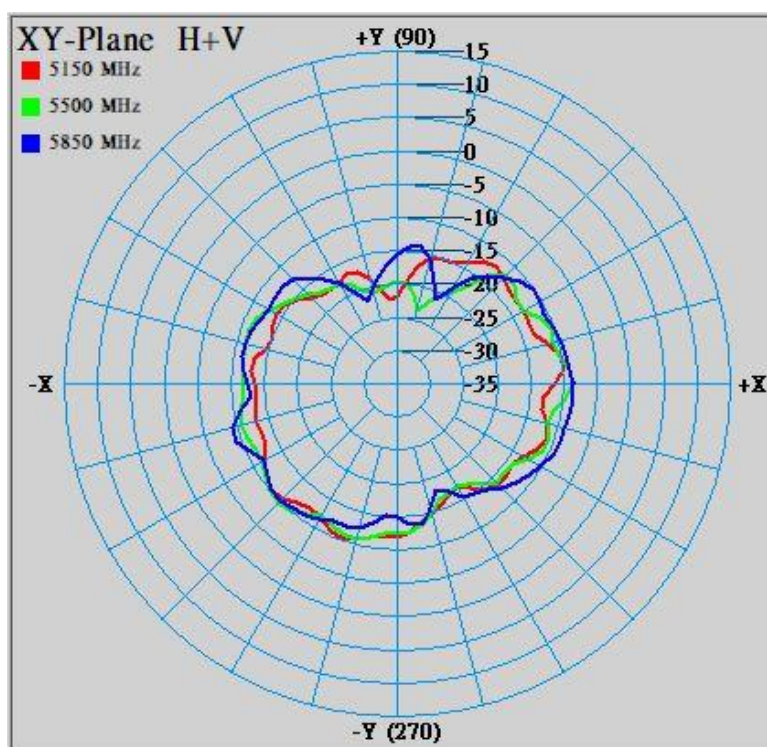


Port1 5150 - 5850 MHz

X-Y Plane

Theta=90.00deg

Gain . dB



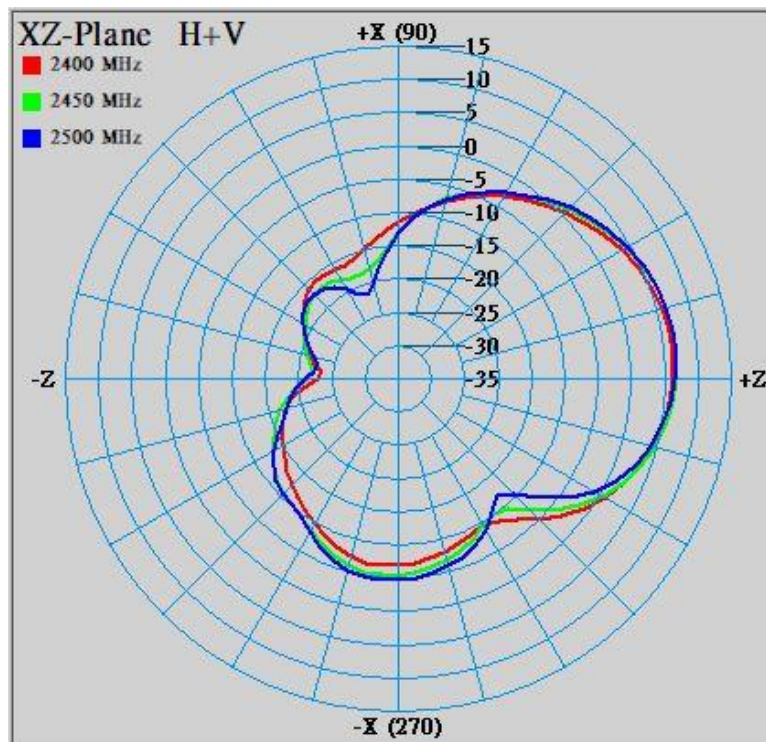
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
5150	8.01	53	8.01	59	-9.88	-13.29
5500	9.24	47	9.28	55	-8.62	-12.74
5850	9.18	43	9.28	53	-8.39	-12.08

Port2 2400-2500 MHz

X-Z Plane

Phi=0.00deg

Gain . dB

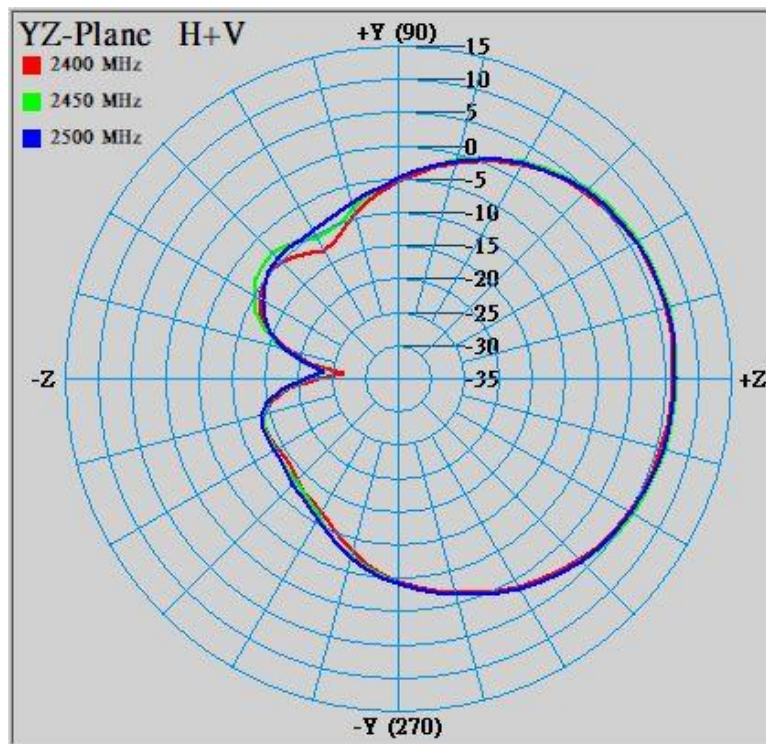


Port2 2400-2500 MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

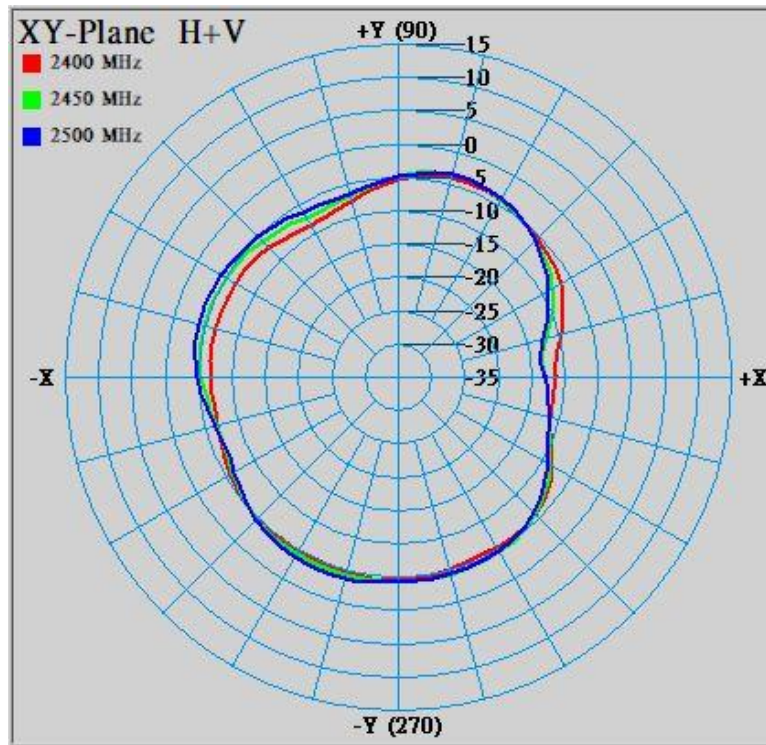


Port2 2400 - 2500 MHz

X-Y Plane

Theta=90.00deg

Gain . dB



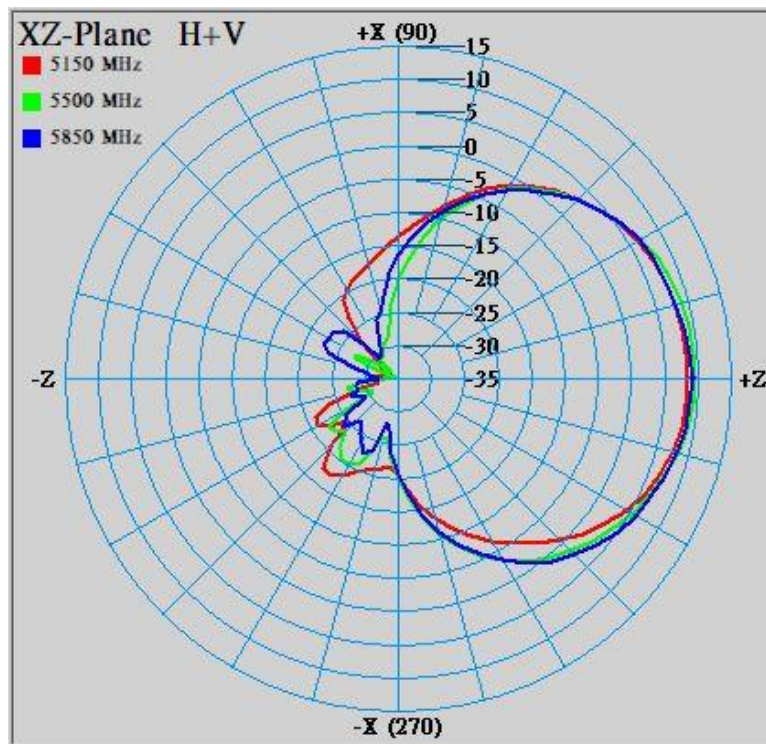
	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
2400	6.4	54	6.5	38	-3.91	-6.22
2450	7.01	53	6.98	39	-3.52	-5.82
2500	6.91	53	6.71	42	-3.49	-5.61

Port2 5150 - 5850 MHz

X-Z Plane

Phi=0.00deg

Gain . dB

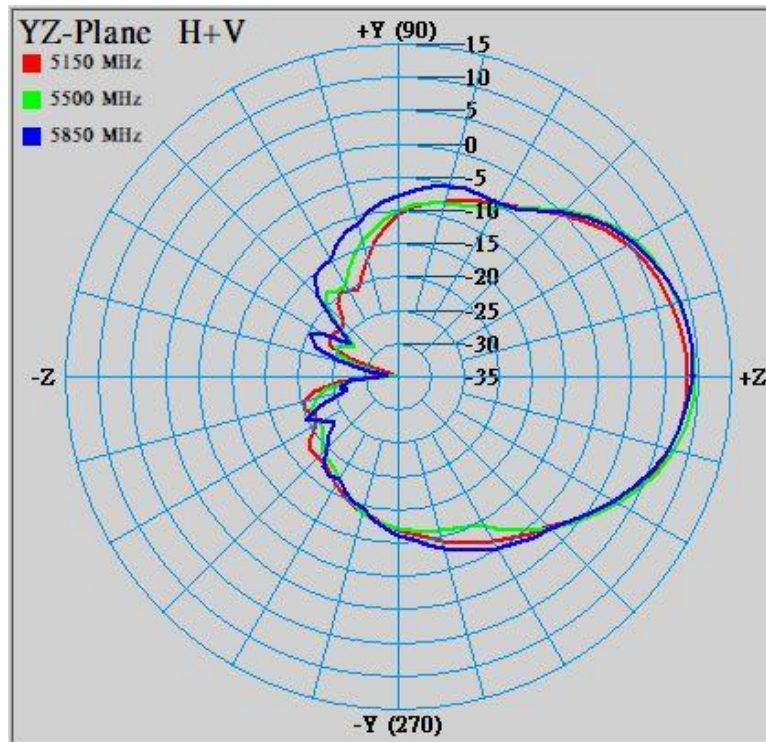


Port2 5150 - 5850 MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

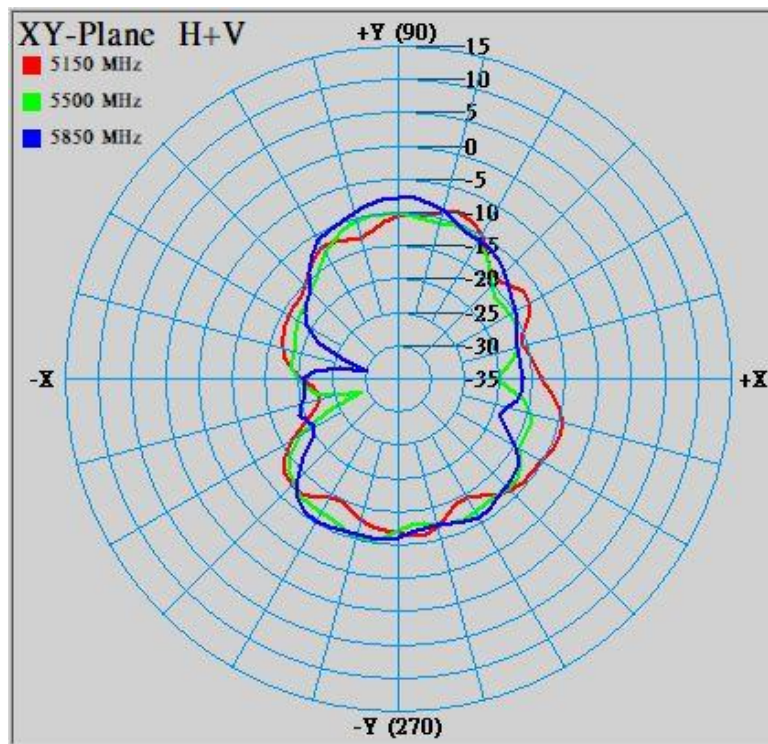


Port2 5150 - 5850 MHz

X-Y Plane

Theta=90.00deg

Gain . dB



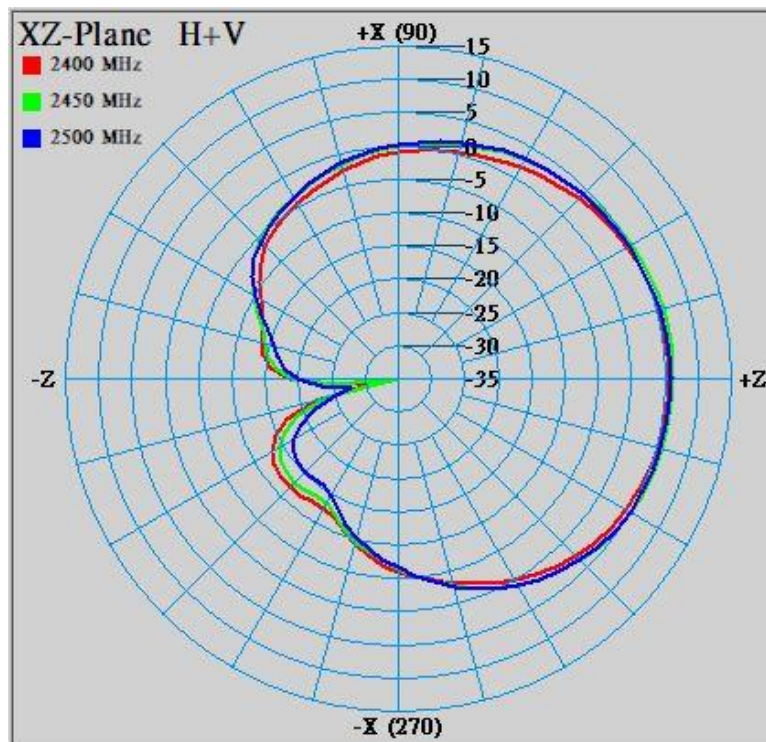
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
5150	8.43	64	8.44	52	-8.49	-12.69
5500	9.54	59	9.53	50	-10.07	-13.33
5850	9.12	66	9.28	46	-7.75	-12.59

Port3 2400 - 2500 MHz

X-Z Plane

Phi=0.00deg

Gain . dB

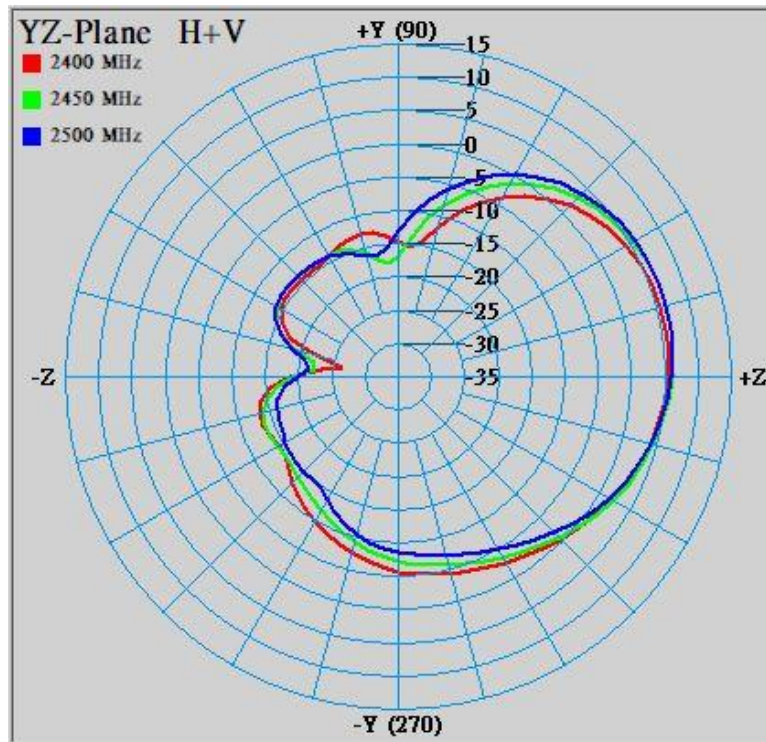


Port3 2400 - 2500 MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

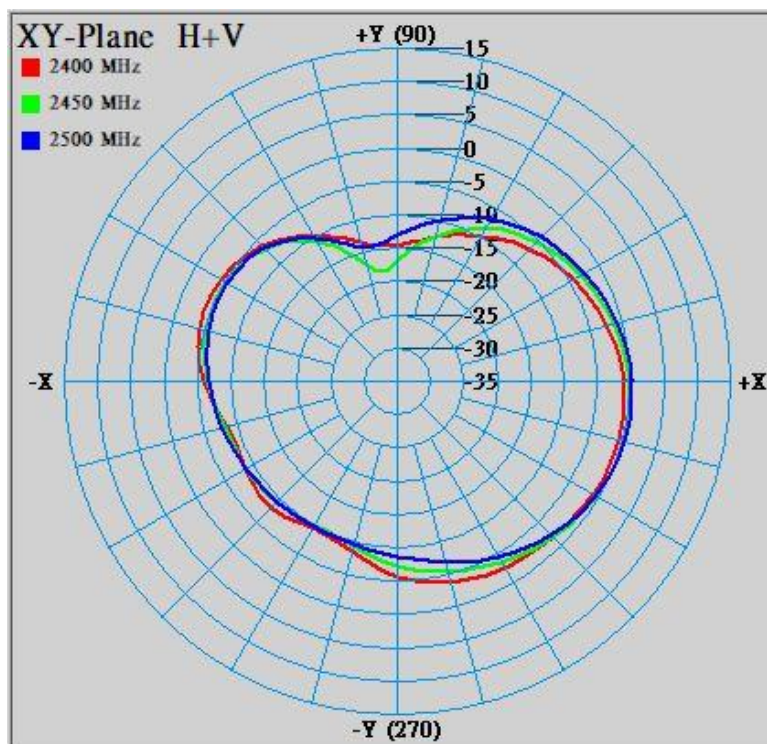


Port3 2400 - 2500 MHz

X-Y Plane

Theta=90.00deg

Gain . dB



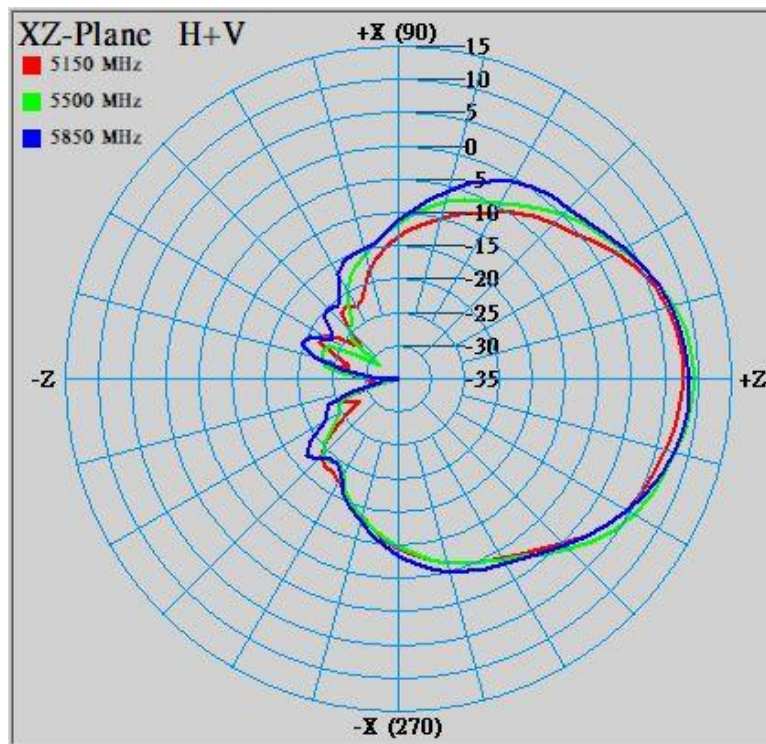
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
2400	5.57	101	5.85	65	-0.54	-4.94
2450	6.27	106	6.61	66	0.22	-4.82
2500	5.91	115	6.52	69	0.37	-4.73

Port3 5150 - 5850 MHz

X-Z Plane

Phi=0.00deg

Gain . dB

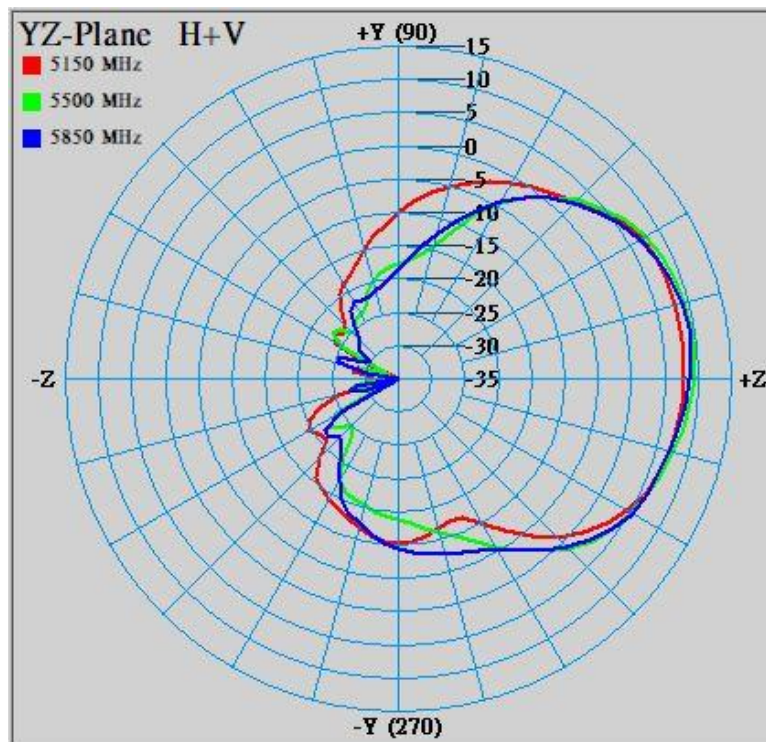


Port3 5150 - 5850 MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

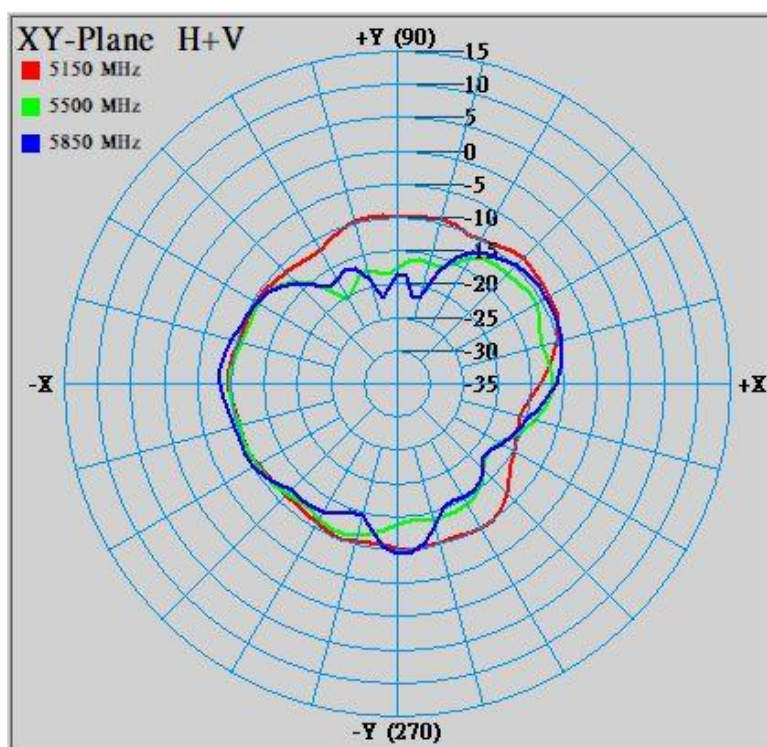


Port3 5150 - 5850 MHz

X-Y Plane

Theta=90.00deg

Gain . dB



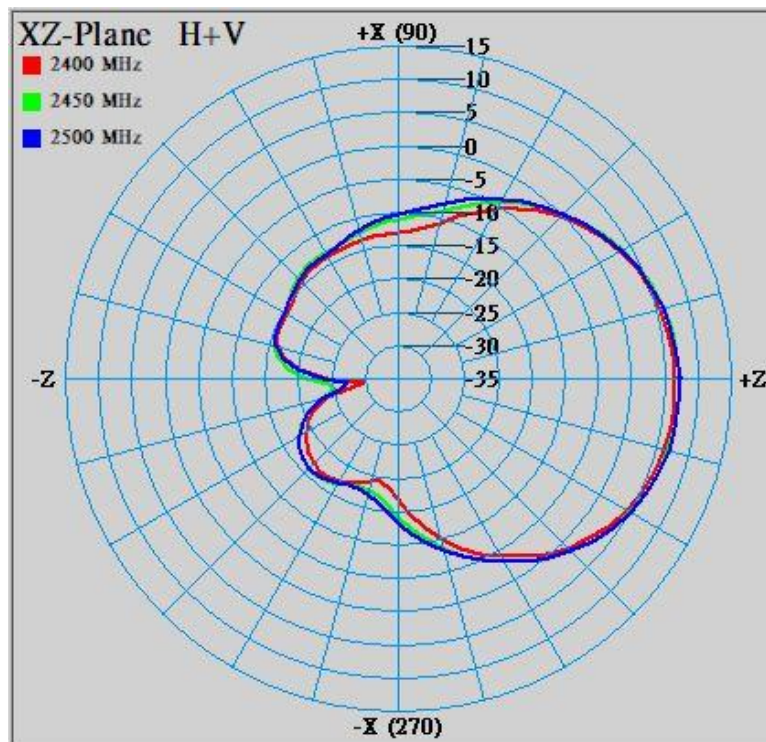
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
5150	7.85	54	8.01	69	-8.28	-10.55
5500	9.38	50	9.64	59	-9.75	-12.67
5850	8.8	52	9.27	59	-8.35	-11.94

Port4 2400 - 2500 MHz

X-Z Plane

Phi=0.00deg

Gain . dB

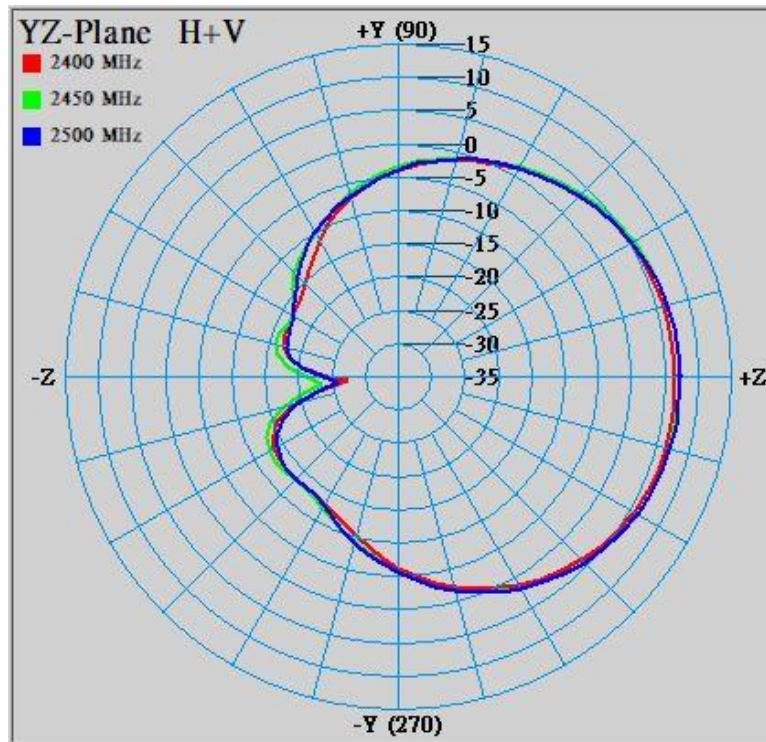


Port4 2400 - 2500 MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

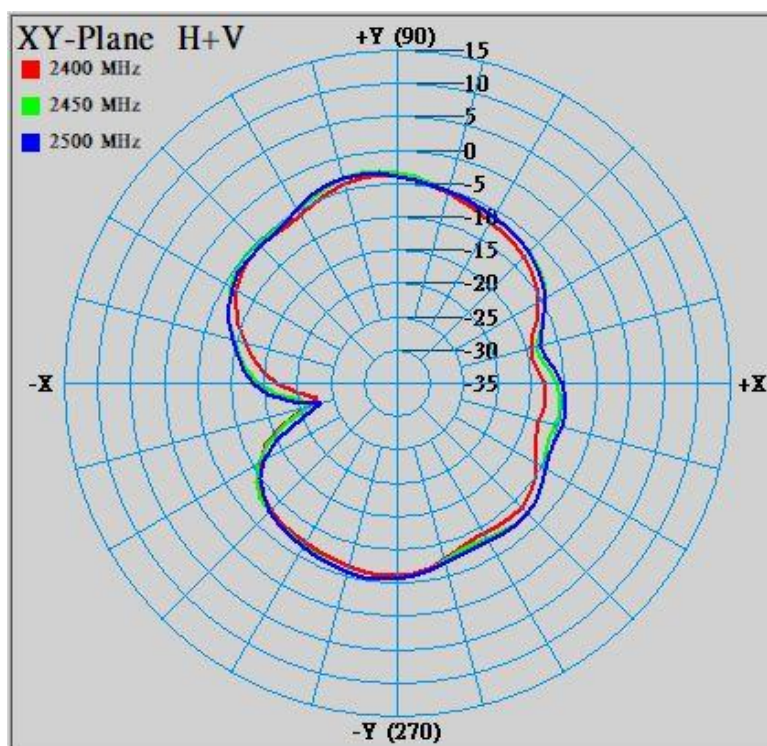


Port4 2400 - 2500 MHz

X-Y Plane

Theta=90.00deg

Gain . dB



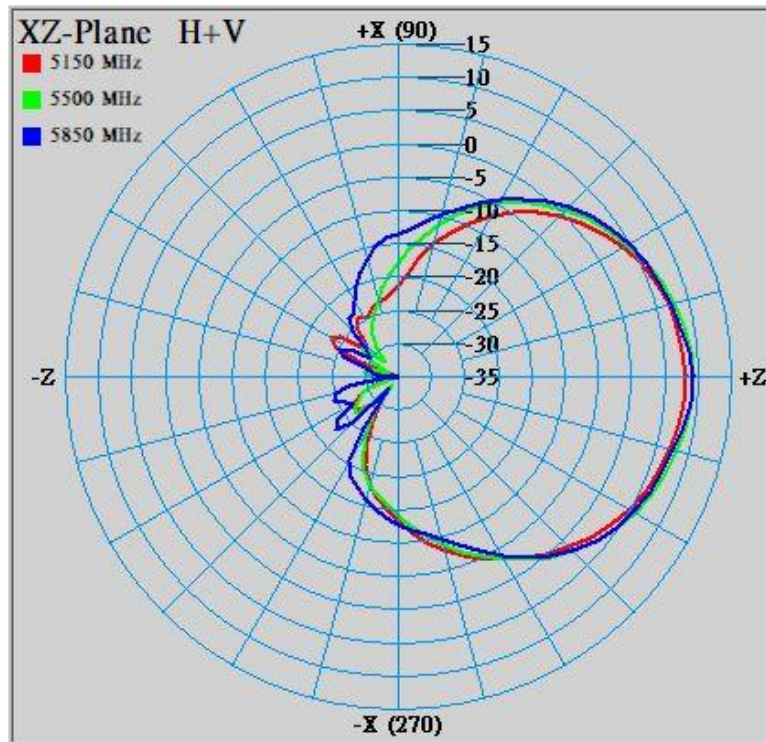
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
2400	6.56	67	6.55	94	-3.61	-7.92
2450	7.23	64	7.22	91	-2.89	-7.09
2500	7.31	63	7.29	88	-3.06	-7.13

Port4 5150 - 5850 MHz

X-Z Plane

Phi=0.00deg

Gain . dB

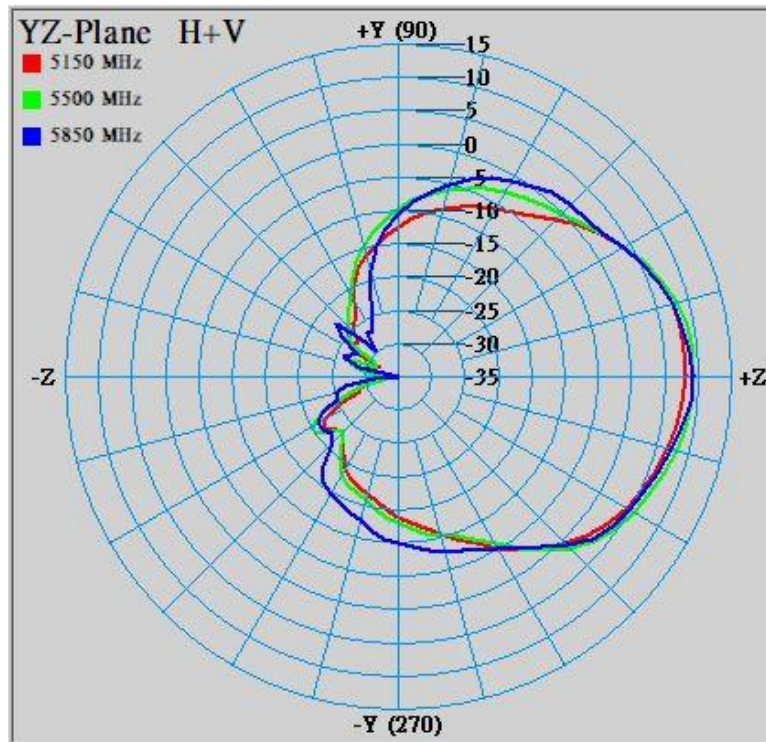


Port4 5150 - 5850 MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

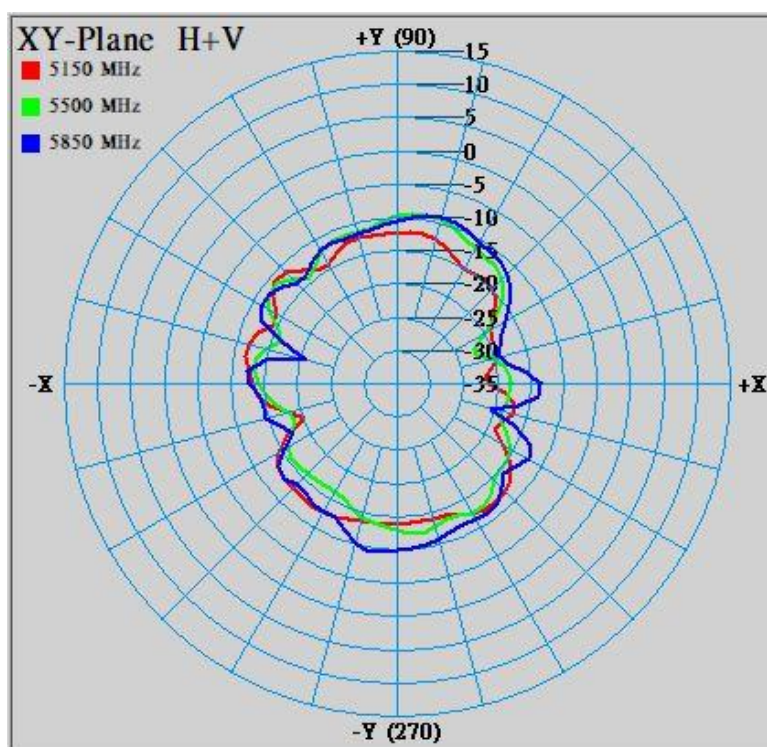


Port4 5150 - 5850 MHz

X-Y Plane

Theta=90.00deg

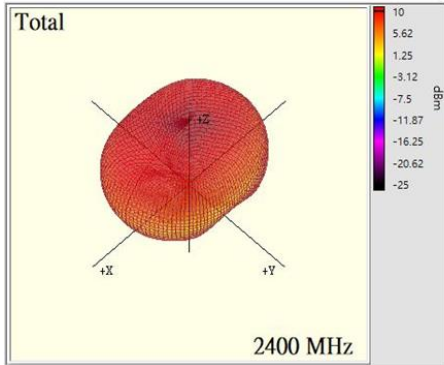
Gain . dB



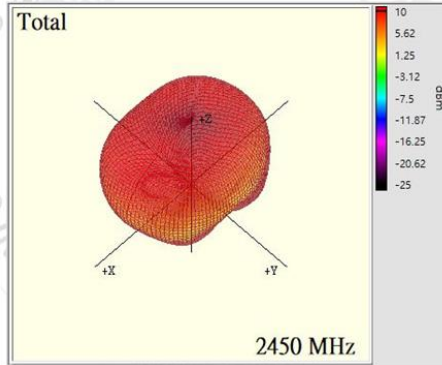
	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
5150	8.01	58	8.15	55	-11.04	-13.94
5500	9.33	54	9.34	52	-9.24	-13.58
5850	9.31	51	9.3	45	-9.09	-12.36

Port1

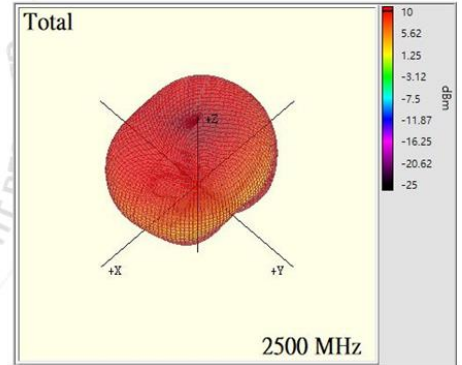
2400MHz



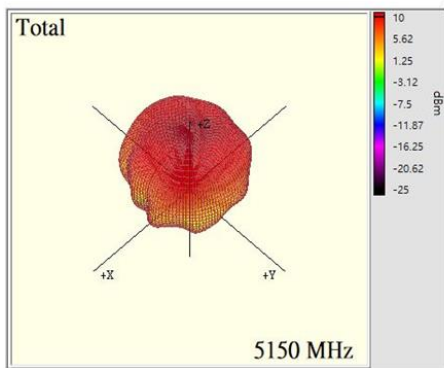
2450MHz



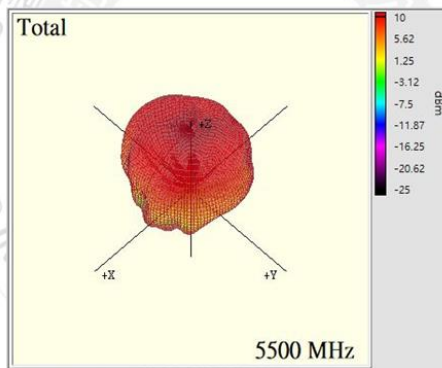
2500MHz



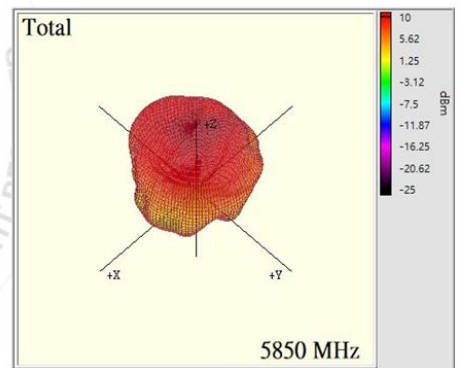
5150MHz



5500MHz

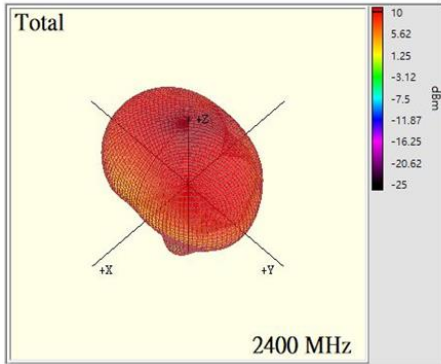


5850MHz

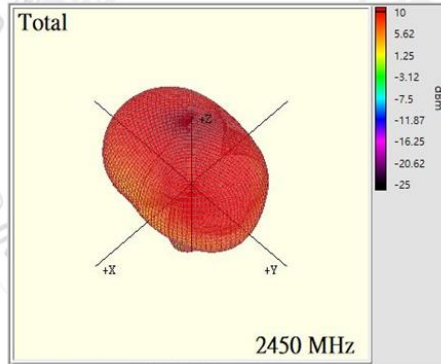


Port2

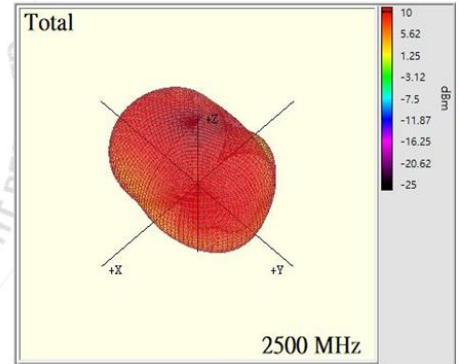
2400MHz



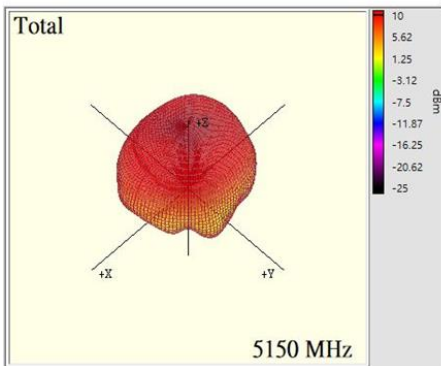
2450MHz



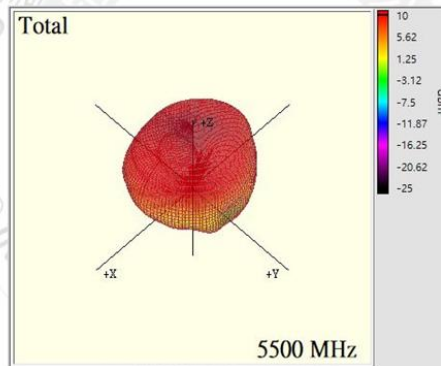
2500MHz



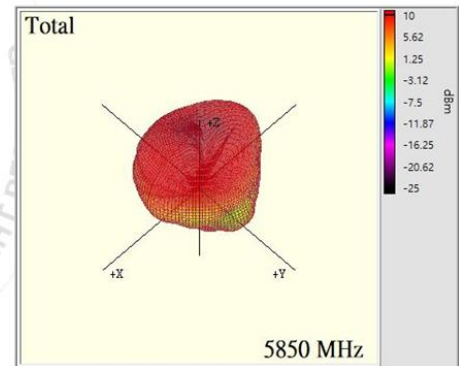
5150MHz



5500MHz

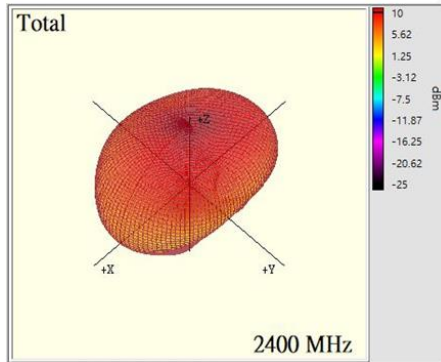


5850MHz

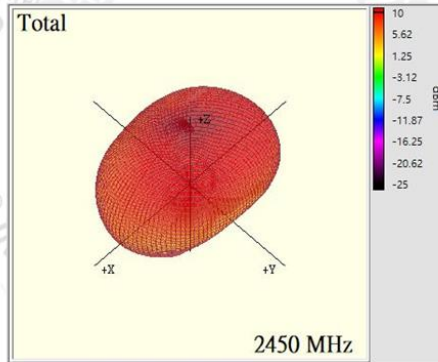


Port3

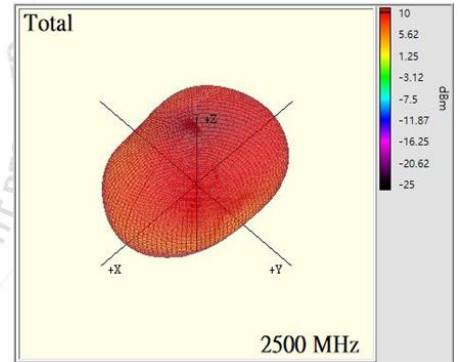
2400MHz



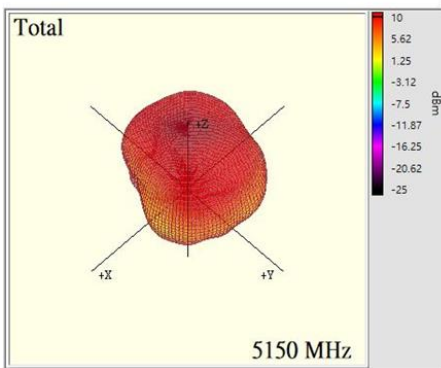
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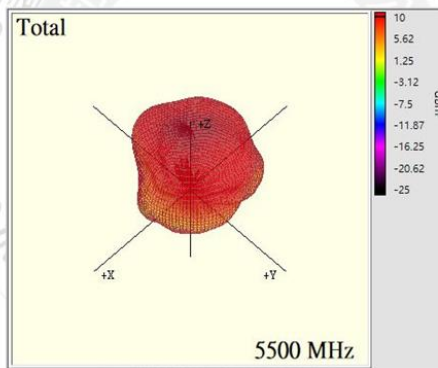
2500MHz



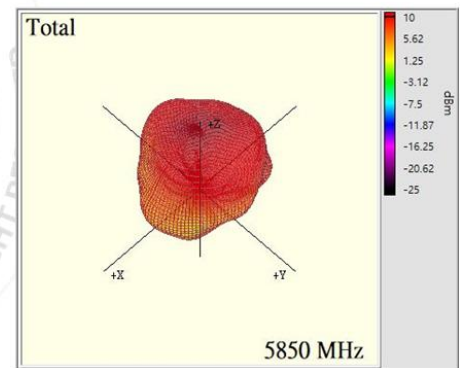
5150MHz



5500MHz

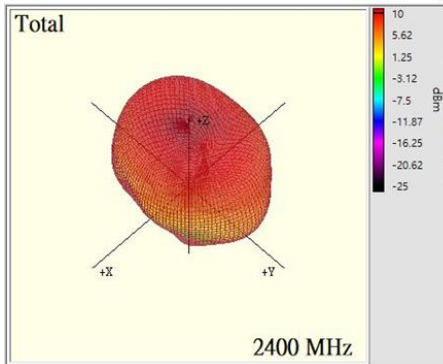


5850MHz

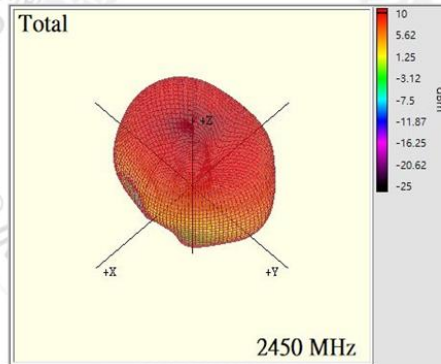


Port4

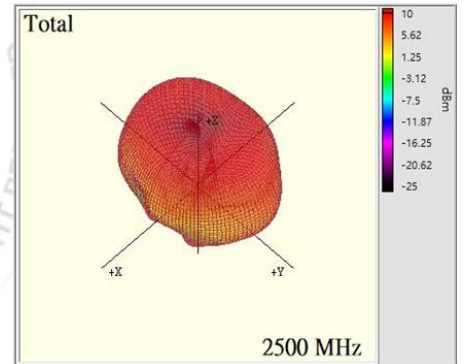
2400MHz



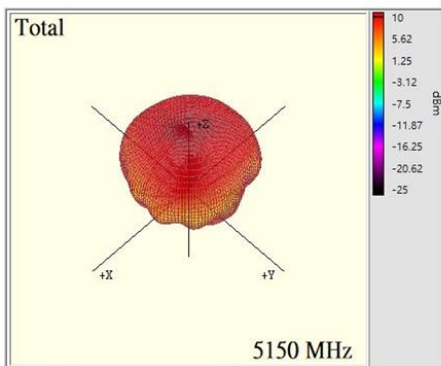
2450MHz



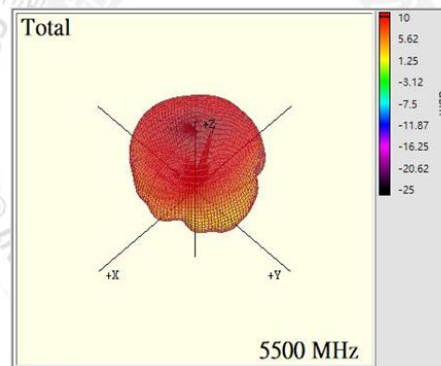
2500MHz



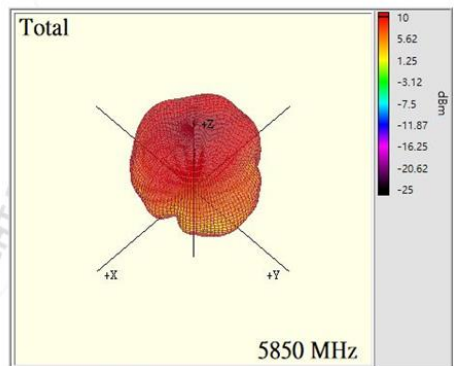
5150MHz



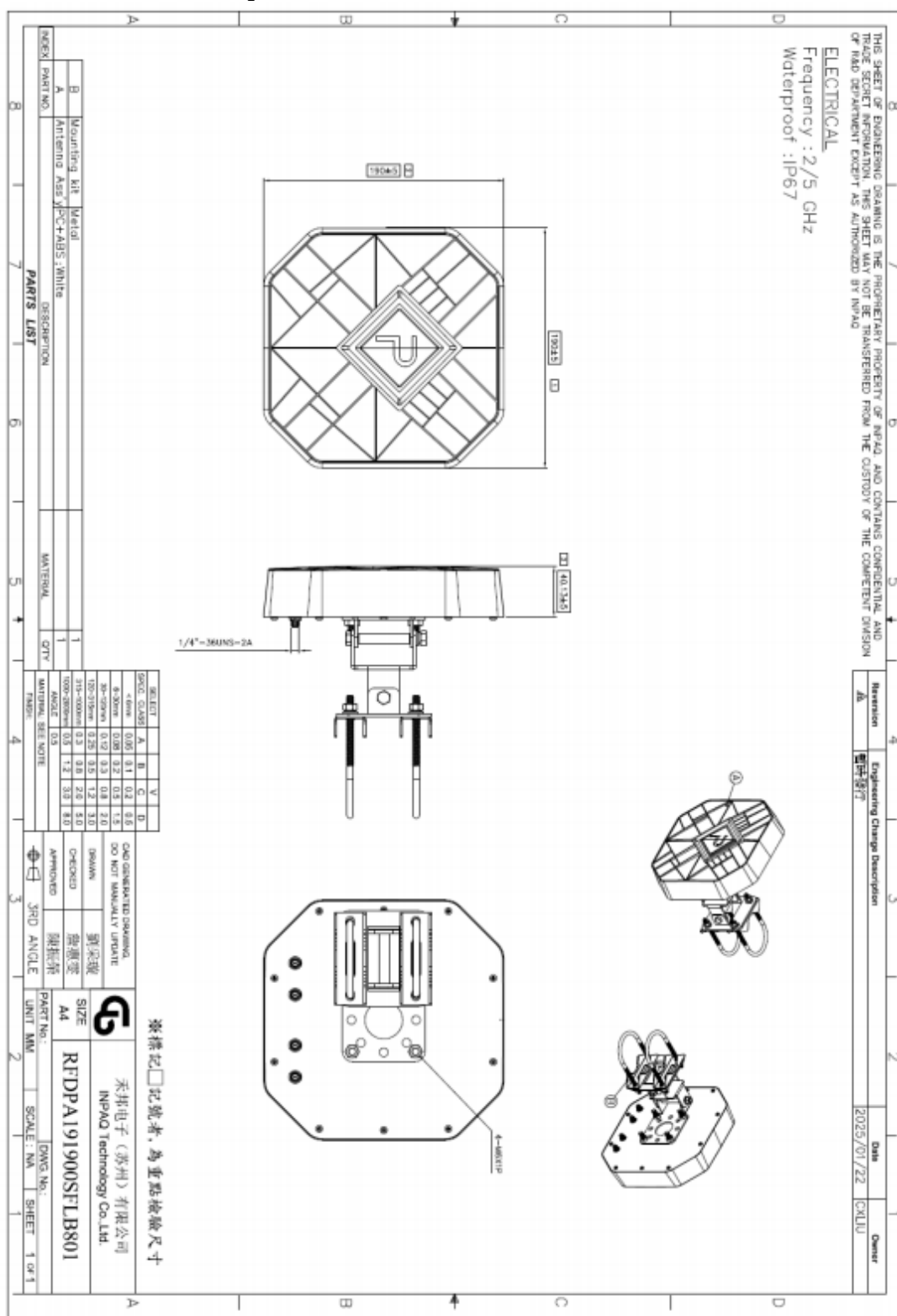
5500MHz



5850MHz



2. Mechanical Specification



3. Ordering Information

RF	DPA	1919	00	S	F	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.: 1919 Length 190mm, Width 190mm	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