

RFDPA161600SFMB801

Specification

Part Series	Cellular DAS Antennas
Part No.	RFDPA161600SFMB801
Version	V0.1

Contents

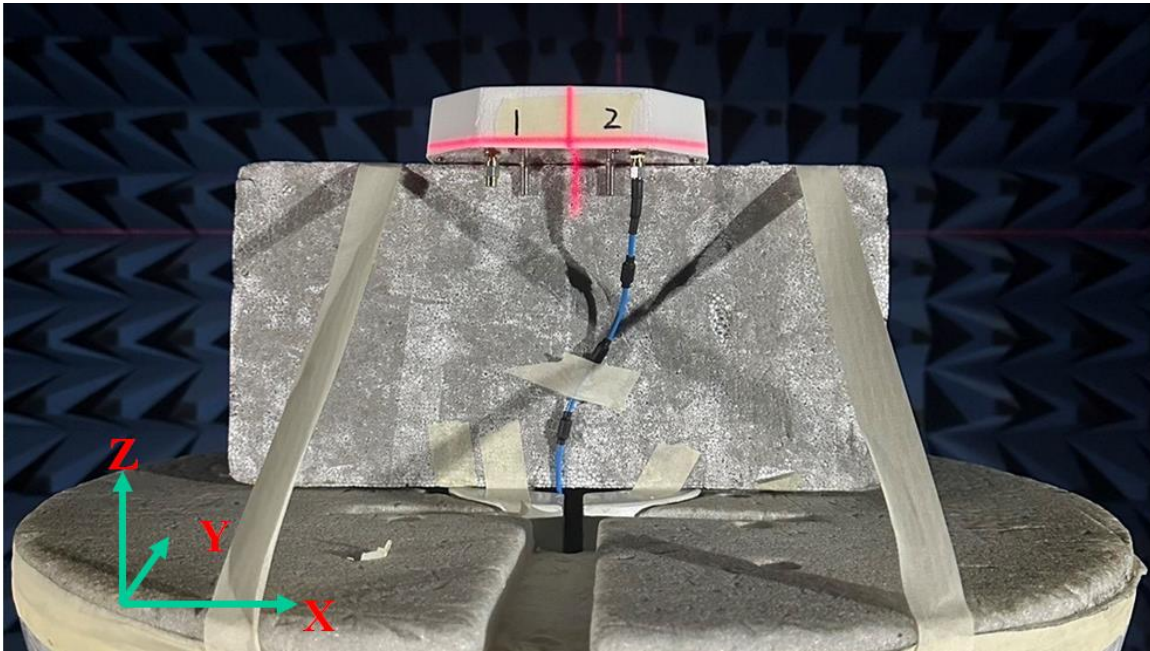
1. Performance	3
1.1 Antenna Performance.....	3
1.2 Experimental Setup	4
1.3 Antenna S-Parameter and Matching Factor	5
1.4 Antenna Efficiency & Peak Gain	6
1.5 Radiation Pattern.....	8
2. Mechanical Specification	23
3. Ordering Information.....	24
4. Version	25

1. Performance

1.1 Antenna Performance

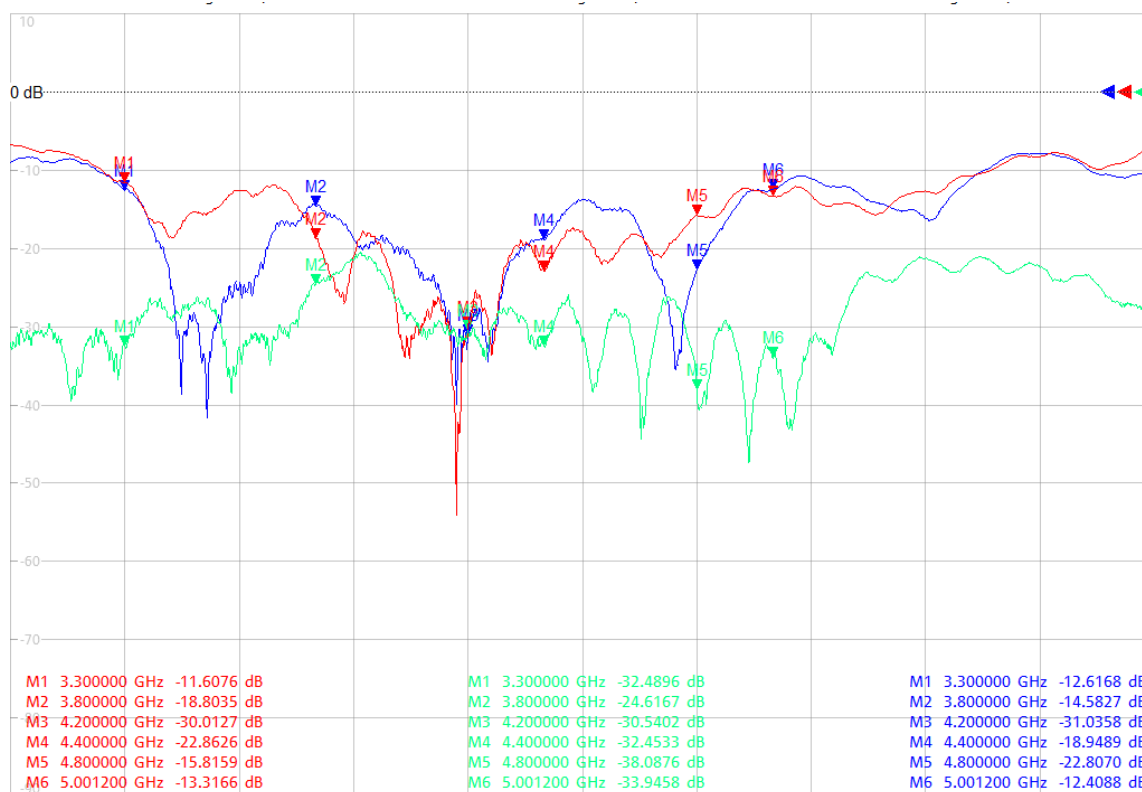
Item	Specification
Frequency Range	3300 ~ 5000 MHz
Impedance	50 Ohm Nominal
VSWR	2.0 (Max)
Return Loss	-10dB(Max)
Peak Gain	Port1 : 12.89 dBi Port2 : 13.26 dBi
Radiation	Directional
Polarization	Dual slant polarization
Operation Temperature	-20°C ~ +65°C

1.2 Experimental Setup



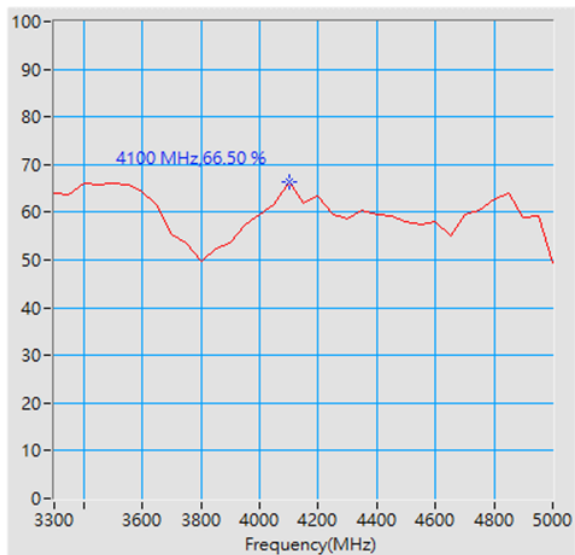
1.3 Antenna S-Parameter and Matching Factor

Return Loss & Isolation

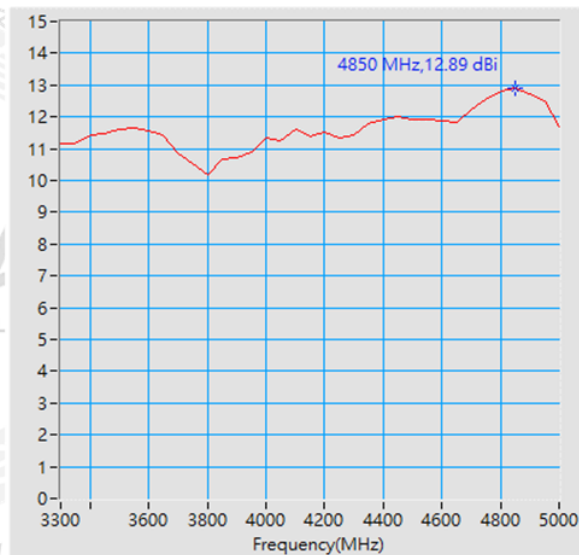


1.4 Antenna Efficiency & Peak Gain

Port1

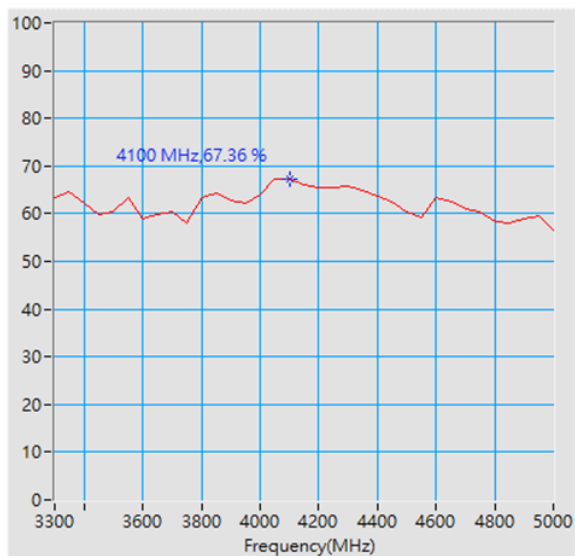


Maximum Efficiency at 4100 MHz : 66.50 %

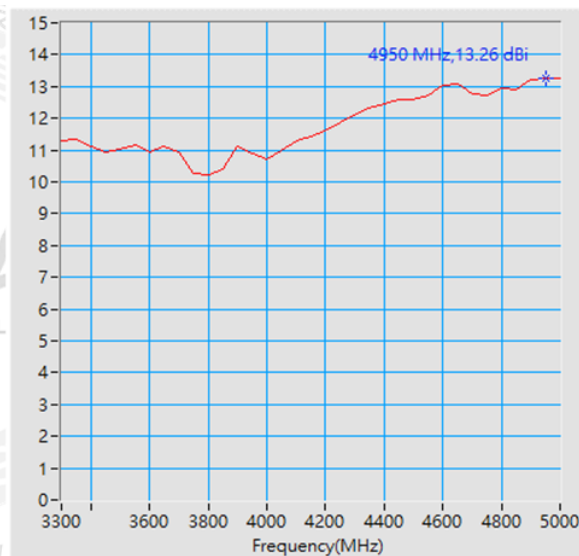


Maximum Peak Gain at 4850 MHz : 12.89 dBi

Port2



Maximum Efficiency at 4100 MHz : 67.36 %

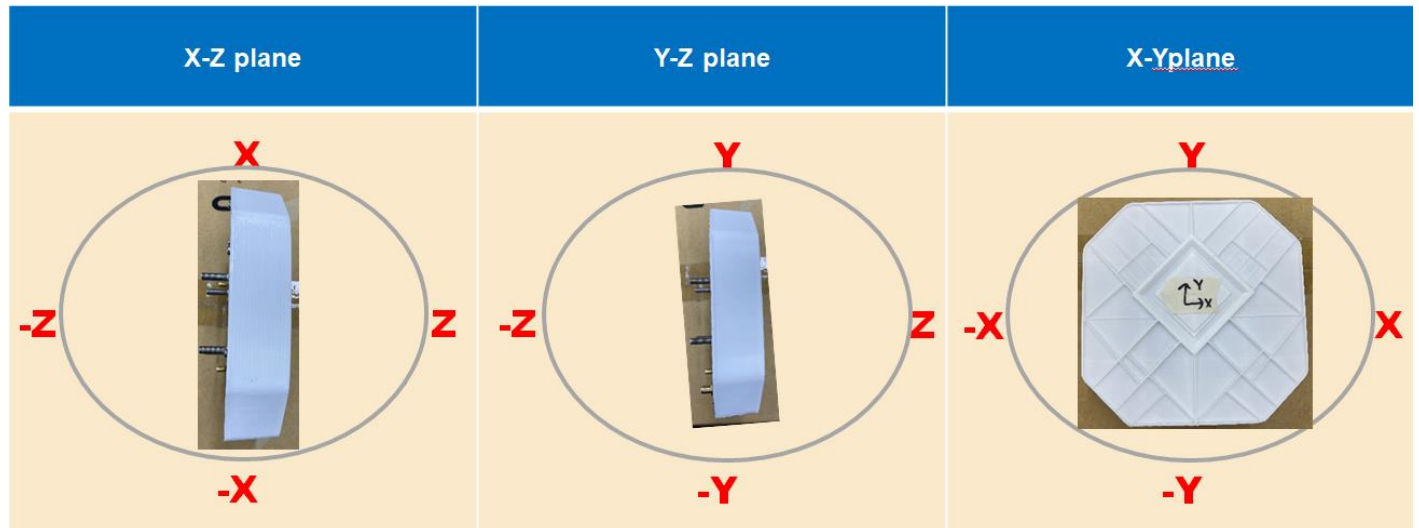


Maximum Peak Gain at 4950 MHz : 13.26 dBi

	Port1		Port2	
Frequency (GHz)	Efficiency (%)	Peak gain (dBi)	Efficiency (%)	Peak gain (dBi)
3.3	64.07	11.16	63.34	11.29
3.75	53.54	10.52	57.98	10.26
4.2	63.47	11.52	65.46	11.61
4.4	59.41	11.91	63.81	12.47
4.7	59.59	12.23	61.06	12.76
5.5	49.41	11.72	56.61	13.26

1.5 Radiation Pattern

3 views of antenna

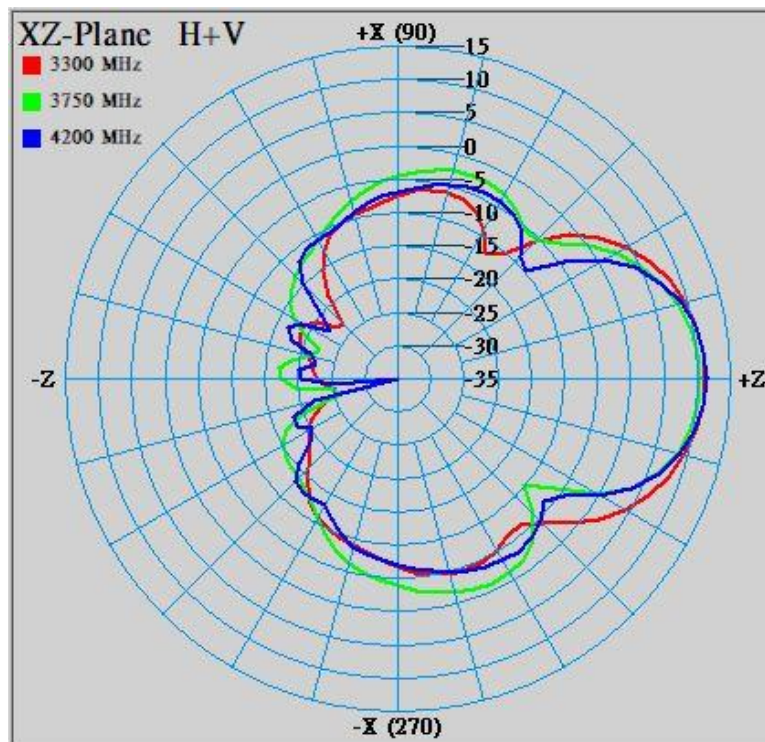


Port1 3300-4200MHz

X-Z Plane

Phi=0.00deg

Gain . dB

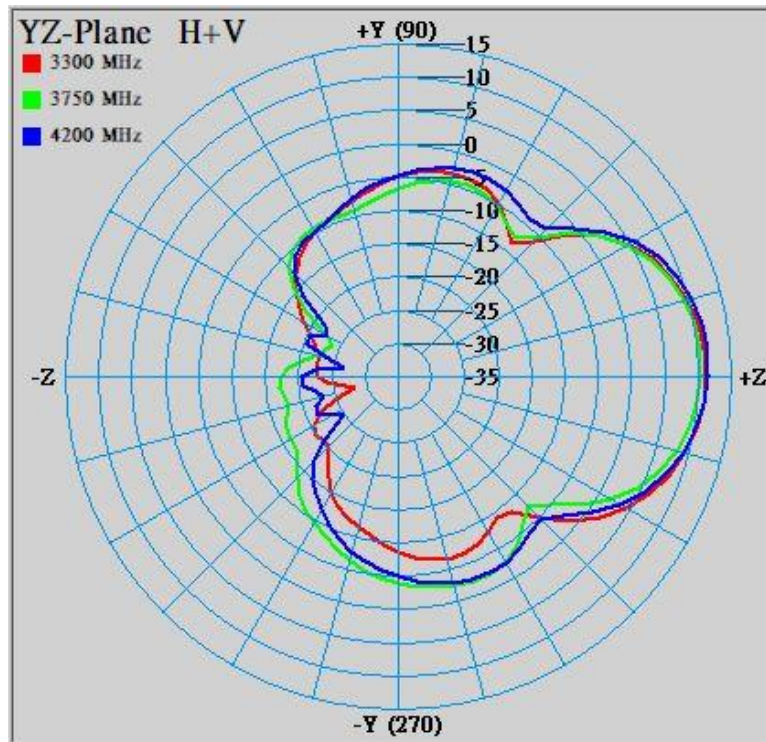


Port1 4400-5000MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

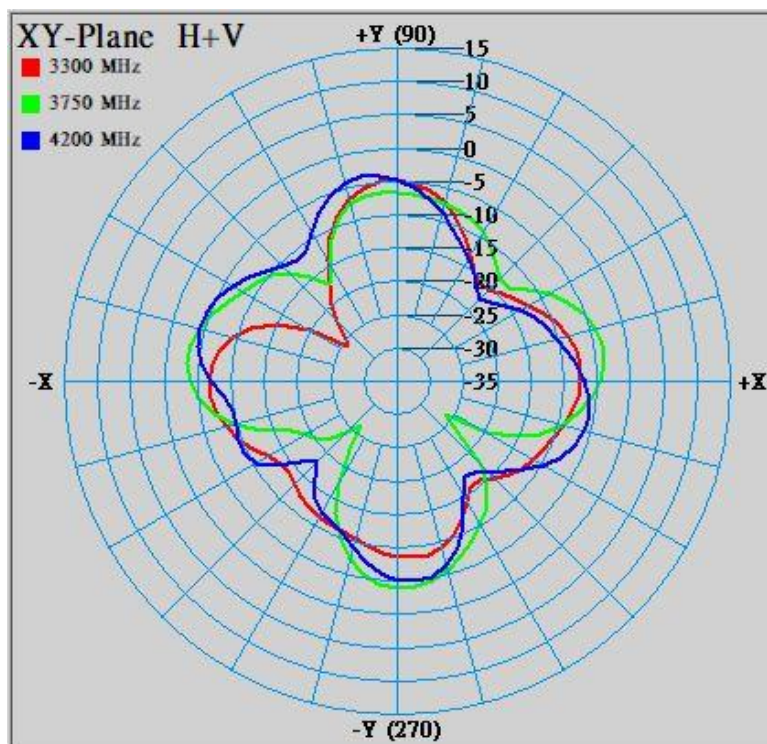


Port1 3300-4200MHz

X-Y Plane

Theta=90.00deg

Gain . dB



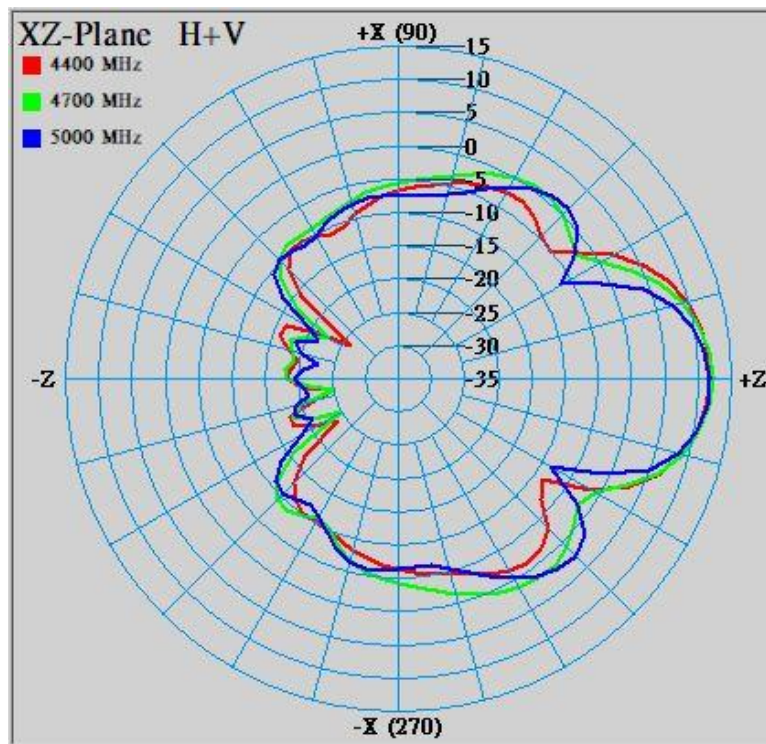
	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
3300	11.16	41.27	11.16	41.71	-4.83	-9.82
3750	10.46	36.28	10.52	40.19	-3.29	-7.93
4200	11.42	33.11	11.52	41.09	-3.86	-8.25

Port1 4400-5000MHz

X-Z Plane

Phi=0.00deg

Gain . dB

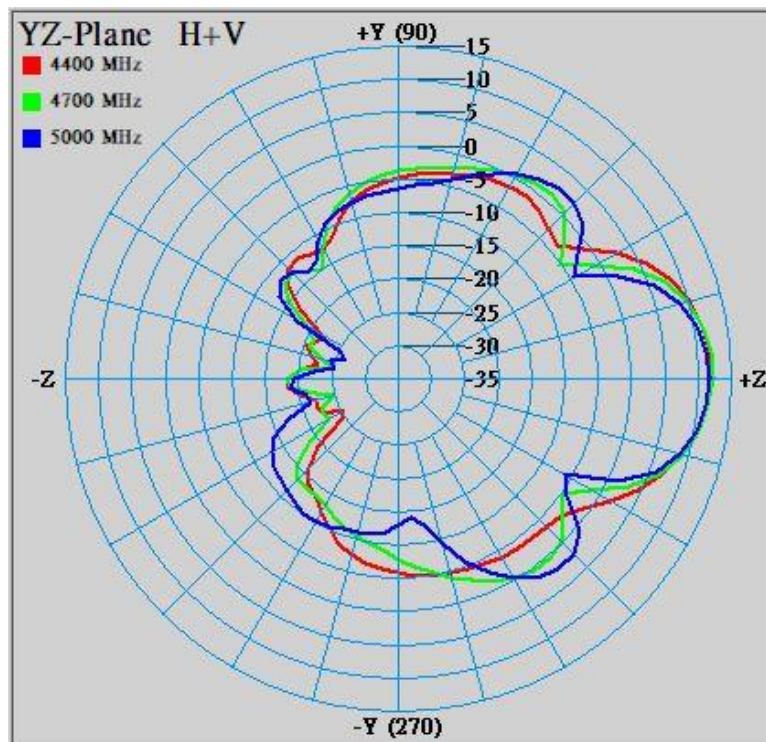


Port1 4400-5000MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

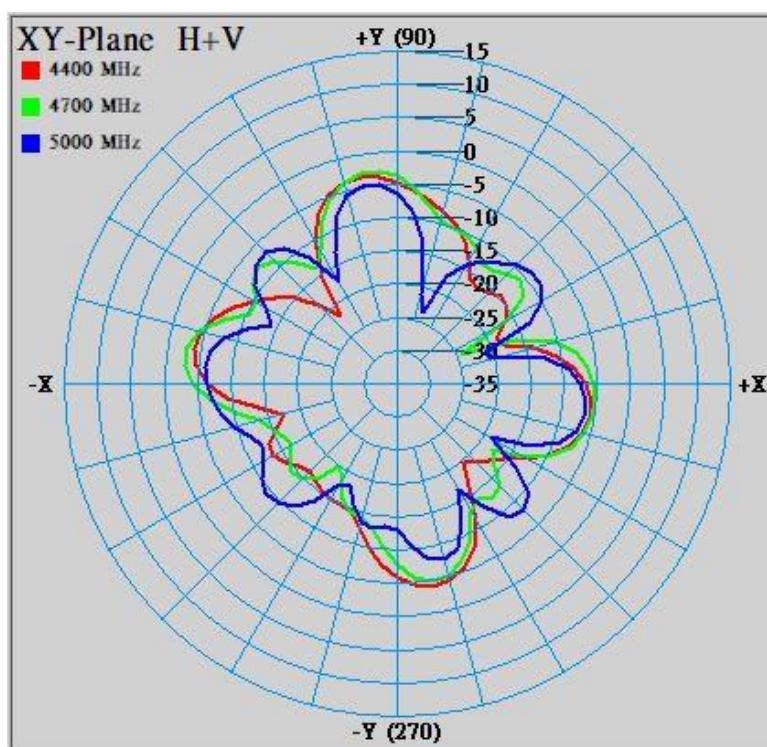


Port1 4400-5000MHz

X-Y Plane

Theta=90.00deg

Gain . dB



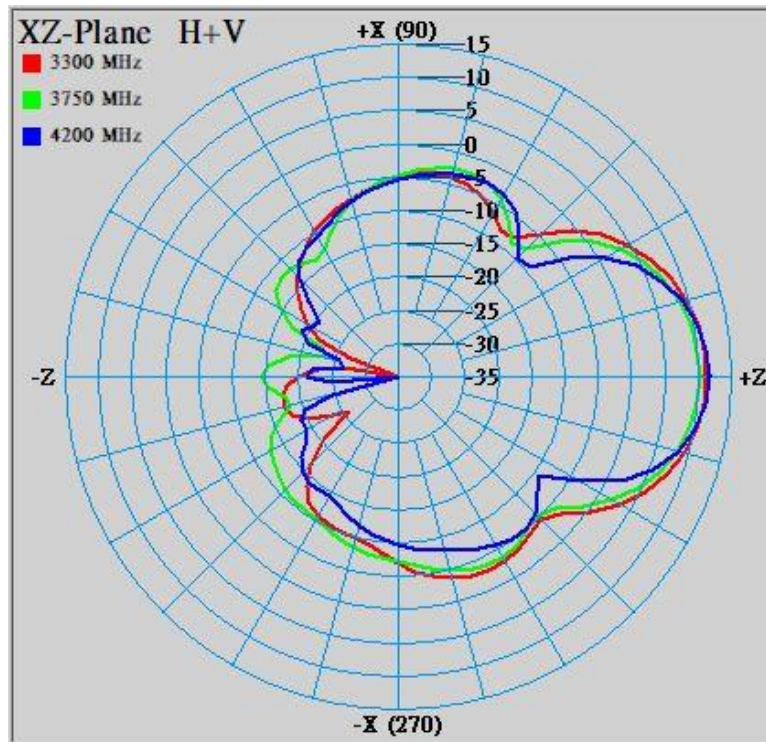
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
4400	11.86	33.19	11.91	34.20	-3.49	-8.74
4700	12.19	29.68	12.23	31.68	-2.85	-8.33
5000	11.71	27.27	11.71	30.66	-4.74	-9.71

Port2 3300-4200MHz

X-Z Plane

Phi=0.00deg

Gain . dB

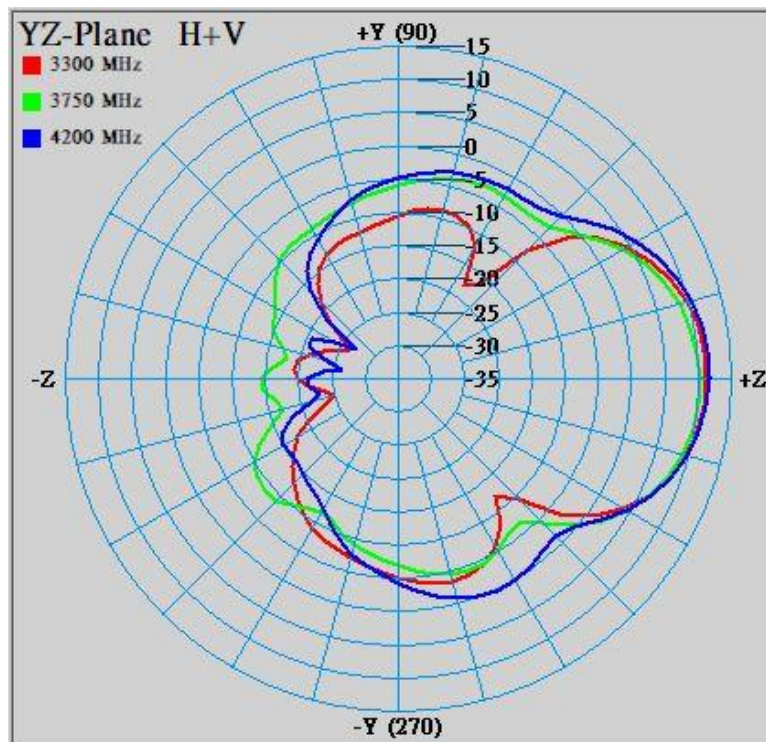


Port2 3300-4200MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

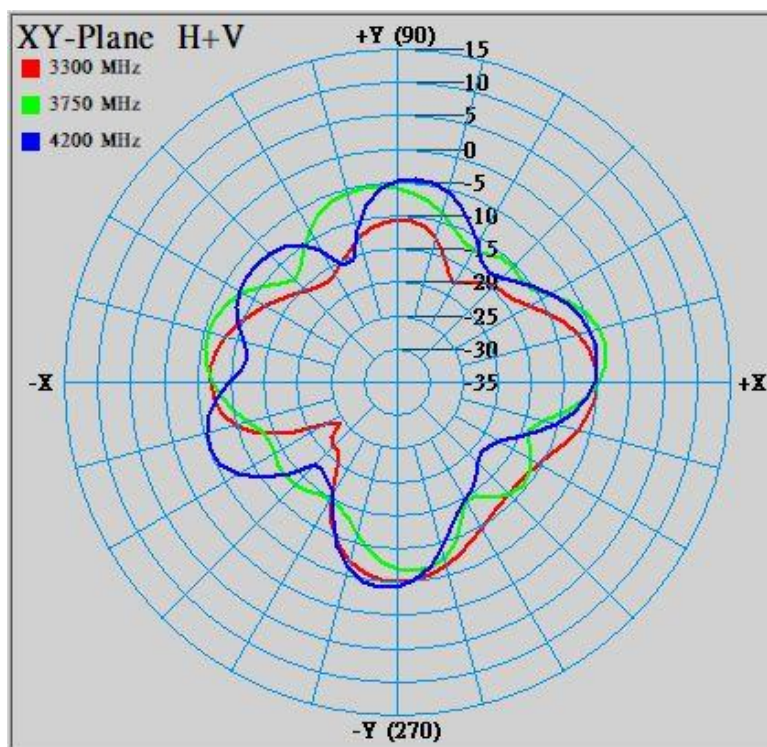


Port2 3300-4200MHz

X-Y Plane

Theta=90.00deg

Gain . dB



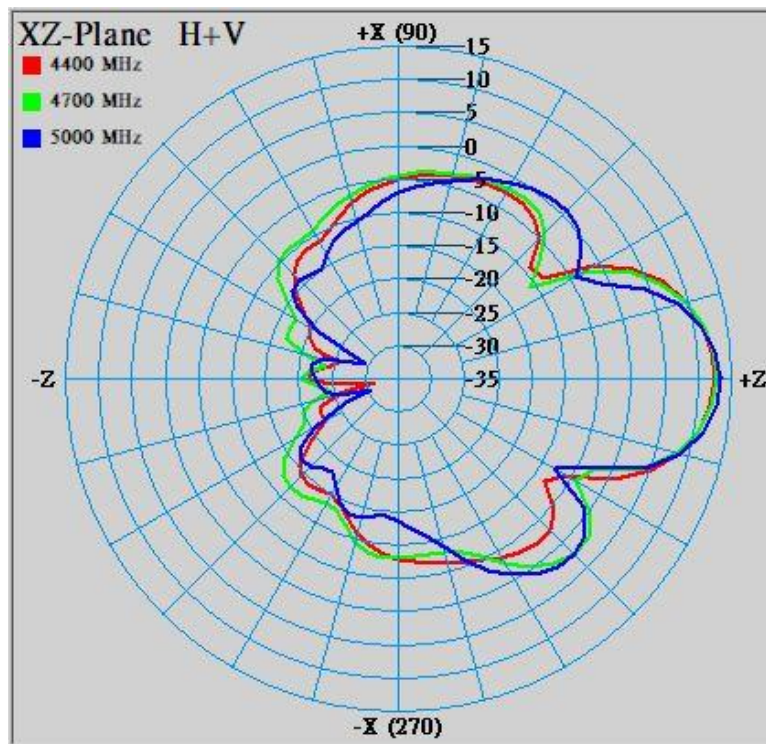
	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
3300	11.29	39.70	11.29	40.62	-5.02	-9.61
3750	10.24	39.24	10.26	43.62	-3.23	-8.51
4200	11.58	31.07	11.60	43.55	-3.95	-8.27

Port2 4400-5000MHz

X-Z Plane

Phi=0.00deg

Gain . dB

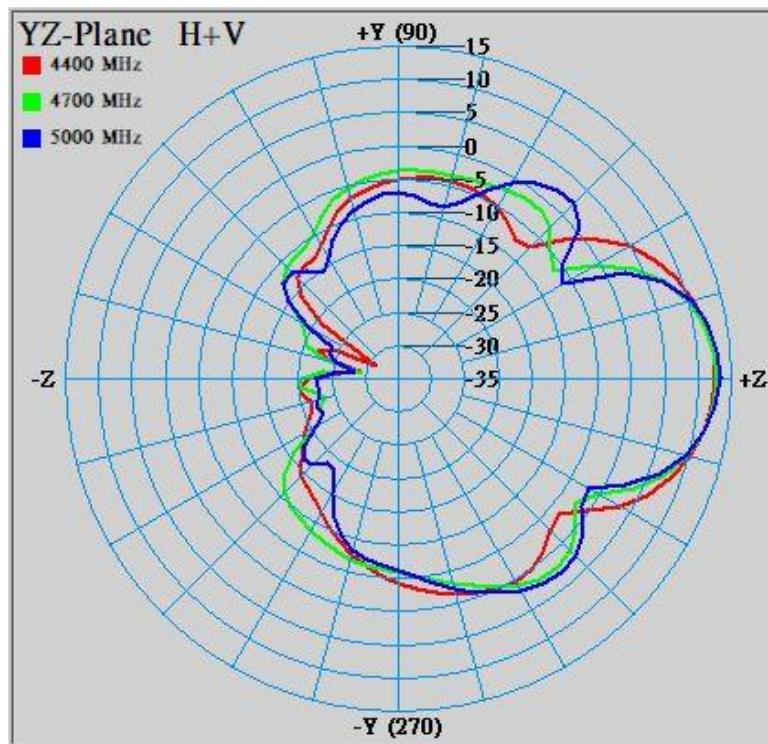


Port2 4400-5000MHz

Y-Z Plane

Phi=90.00deg

Gain . dB

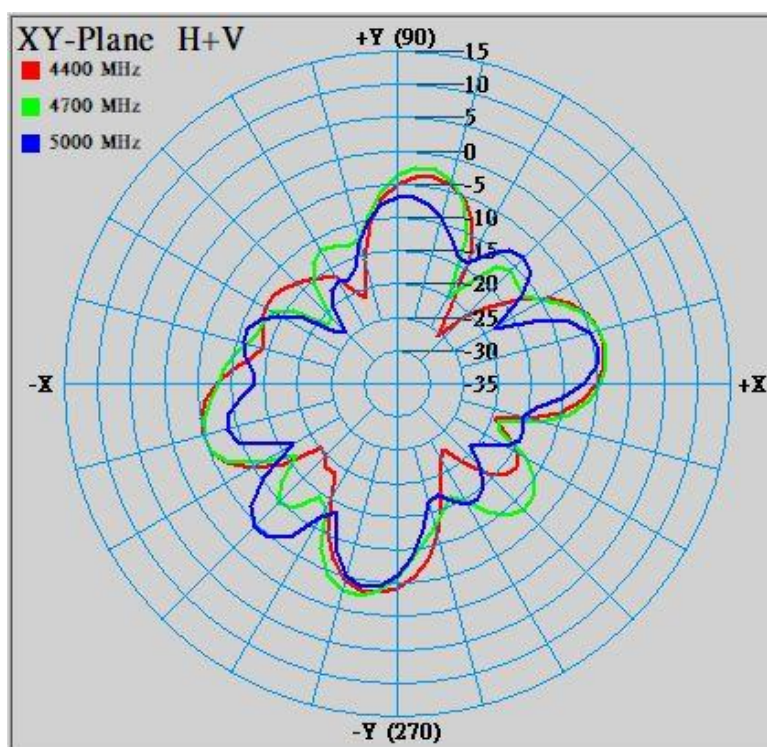


Port2 4400-5000MHz

X-Y Plane

Theta=90.00deg

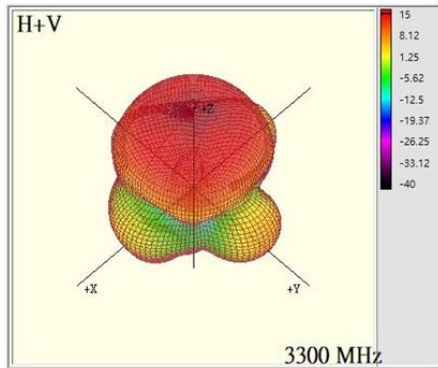
Gain . dB



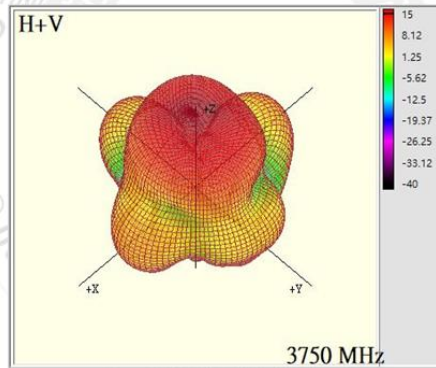
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	3dB BW [deg]	Max Value [dB]	3dB BW [deg]	Max Value [dB]	Average [dB]
4400	12.44	29.06	12.44	37.99	-3.43	-8.54
4700	12.76	27.20	12.76	31.20	-2.26	-7.86
5000	13.24	24.64	13.25	28.99	-4.11	-9.77

Port1

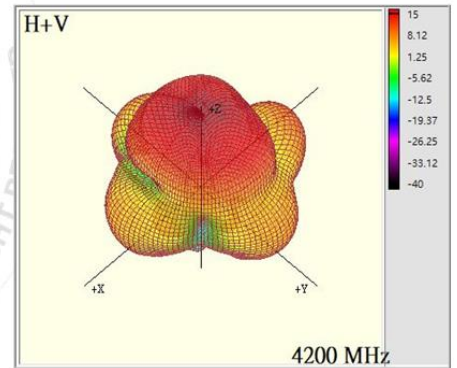
3300MHz



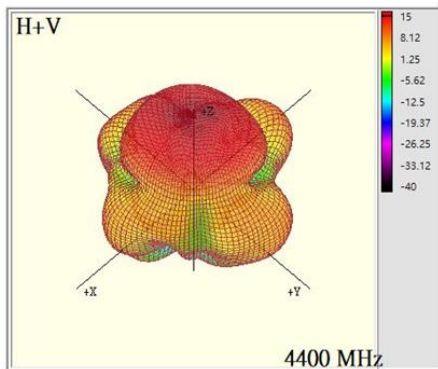
3750MHz



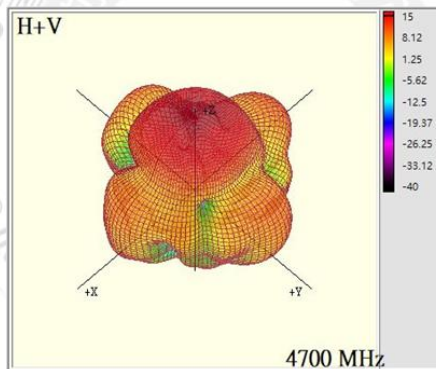
4200MHz



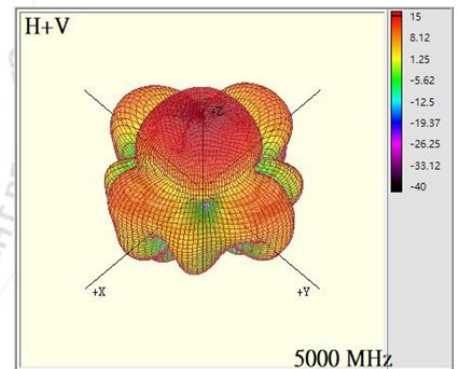
4400MHz



4700MHz

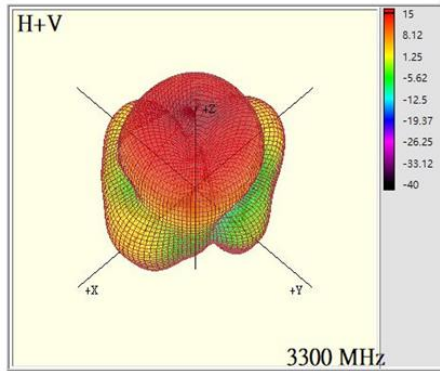


5000MHz

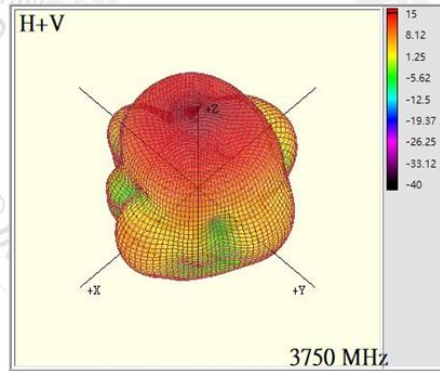


Port2

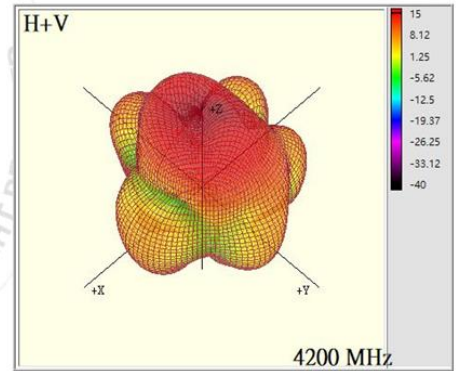
3300MHz



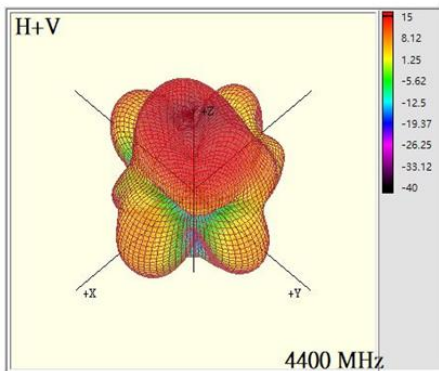
3750MHz



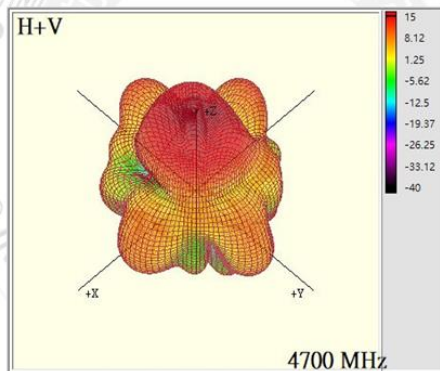
4200MHz



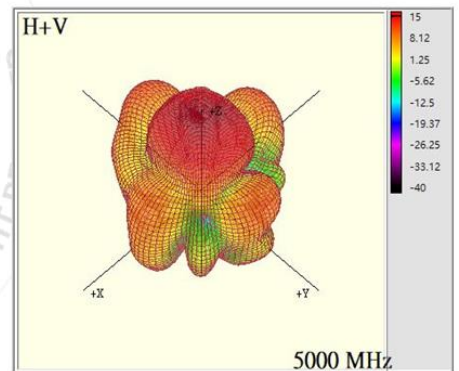
4400MHz



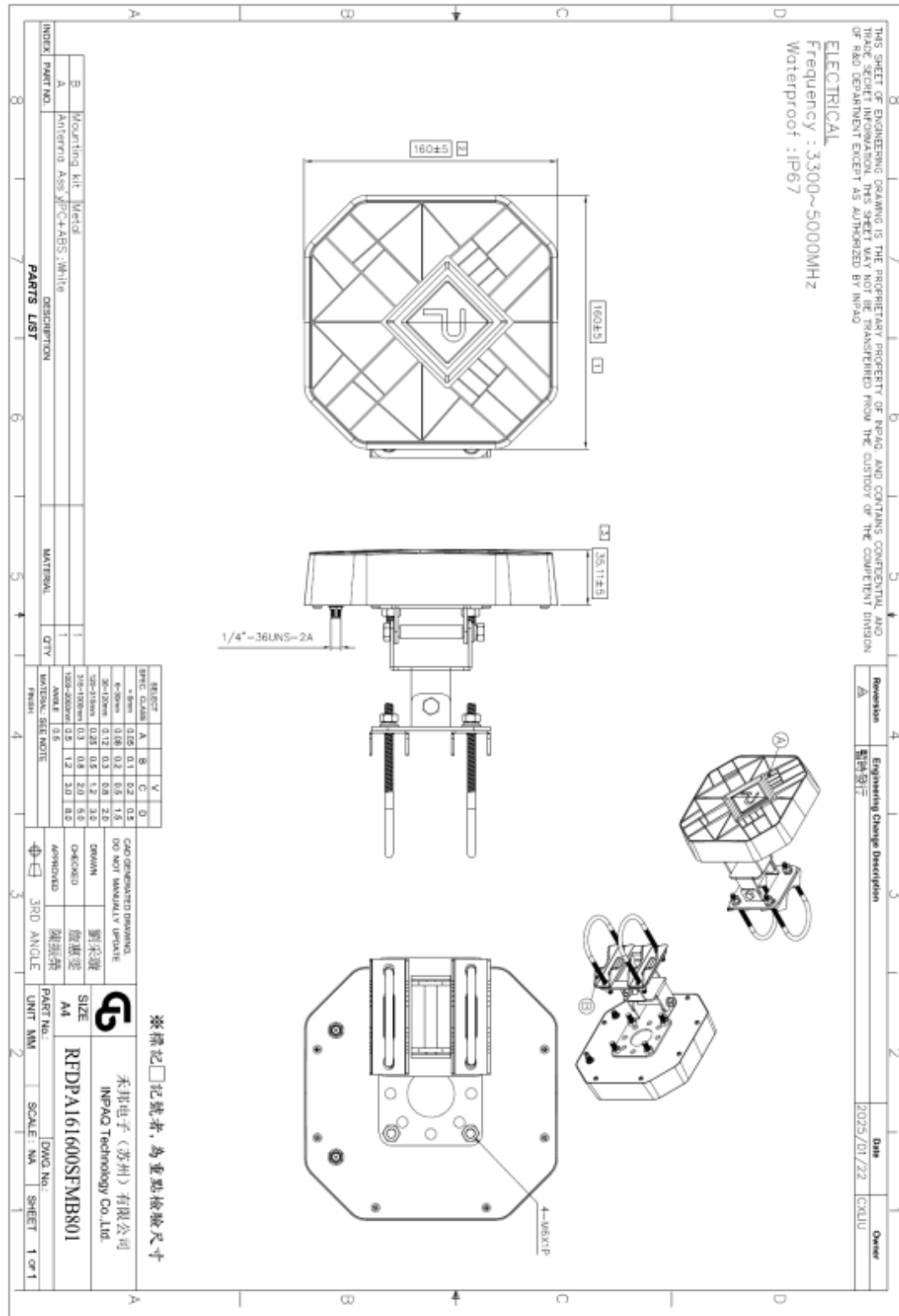
4700MHz



5000MHz



2. Mechanical Specification



3. Ordering Information

RF	DPA	1616	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.: 1616 Length 160mm, Width 160mm	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