

617~960/1710~2690/3300~4200/5150~7150MHz
Working Frequency
Halogens Free Product

RFDPA161500SMMB801

Specification

Product Name	INPAQ RF Dipole Antenna
Series/PN	RFDPA161500SMMB801

ELECTRICAL CHARACTERISTICS

Item	Specification
Frequency Range	617 ~960 / 1710 ~ 2690 /3300 ~4200 / 5150 ~7150 MHz (note-1)
Return Loss	-6.0 dB(Max)(@ 617 ~960 / 1710 ~ 2690 MHz) -6.0 dB(Max)(@ 3300 ~4200 / 5150 ~7150 MHz)
VSWR	3.0 (Max)(@ 617 ~960 / 1710 ~ 2690 MHz) 3.0 (Max)(@ 3300 ~4200 / 5150 ~7150 MHz)
Radiation	Omni-directional
Gain(peak)	0.93 dBi(@ 617 ~960 MHz) 2.71 dBi(@ 1710 ~ 2690 MHz) 3.66 dBi(@ 3300 ~4200 MHz) 4.37 dBi(@5150 ~7150 MHz)
Impedance	50 Ohm Nominal
Polarization	Linear Vertical
Admitted Power	1W
Operation Temperature	-20°C ~ +65°C

*note-1: Electrical characteristics will depend on customer's final application.

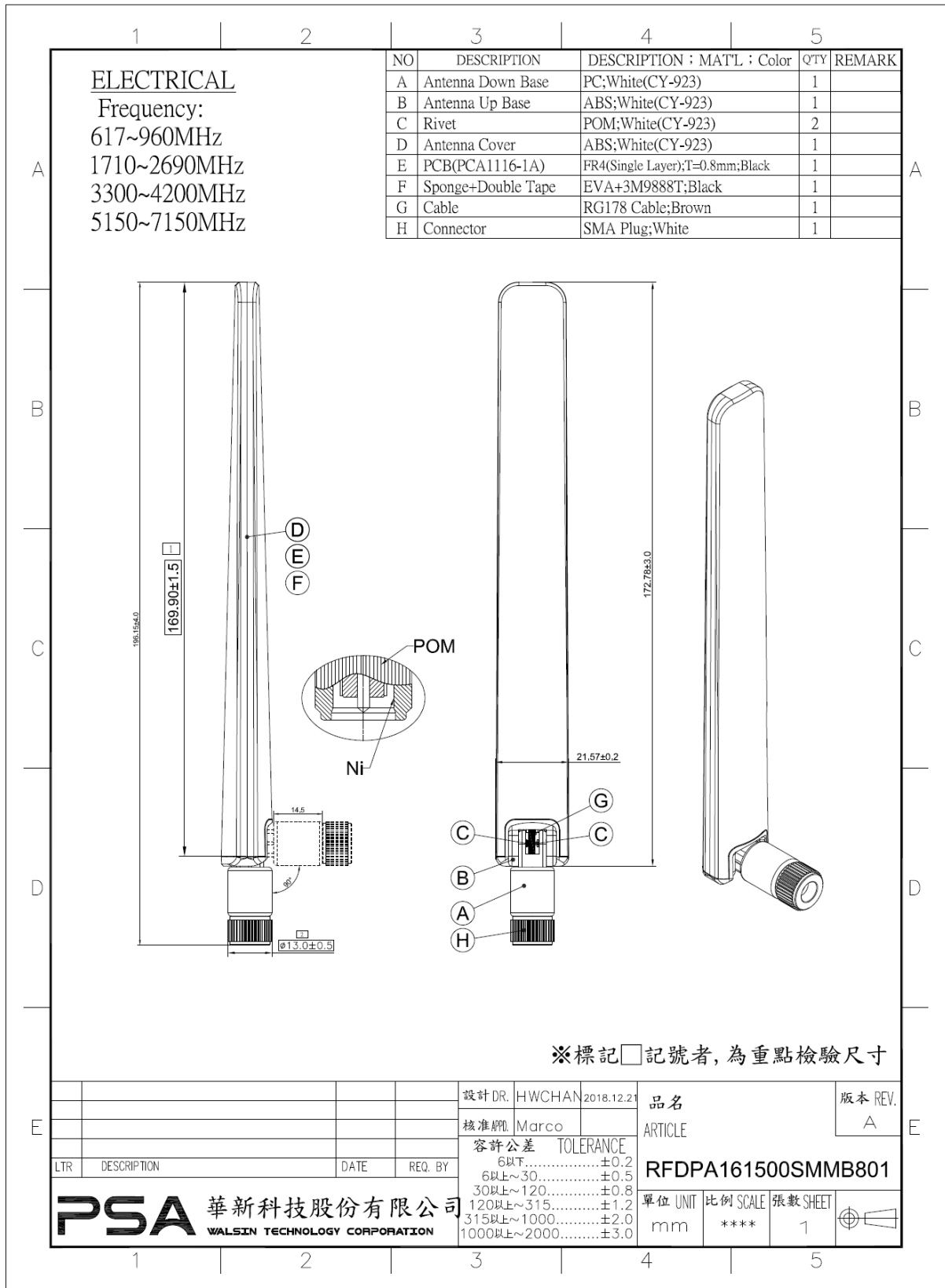
MATERIAL TABLE

Items	Description
Antenna Cover	ABS(White)
Antenna Up Base	ABS (White)
Antenna Down Base	PC (White)
Rivet	POM (White)
PCB	FR4(Single Layer);T=0.8mm(Black)
泡棉單面膠	EVA+單面 3M9888T
Cable	RG178 Cable;Brown
Connector	SMA PLUG(White)

ORDERING RULE

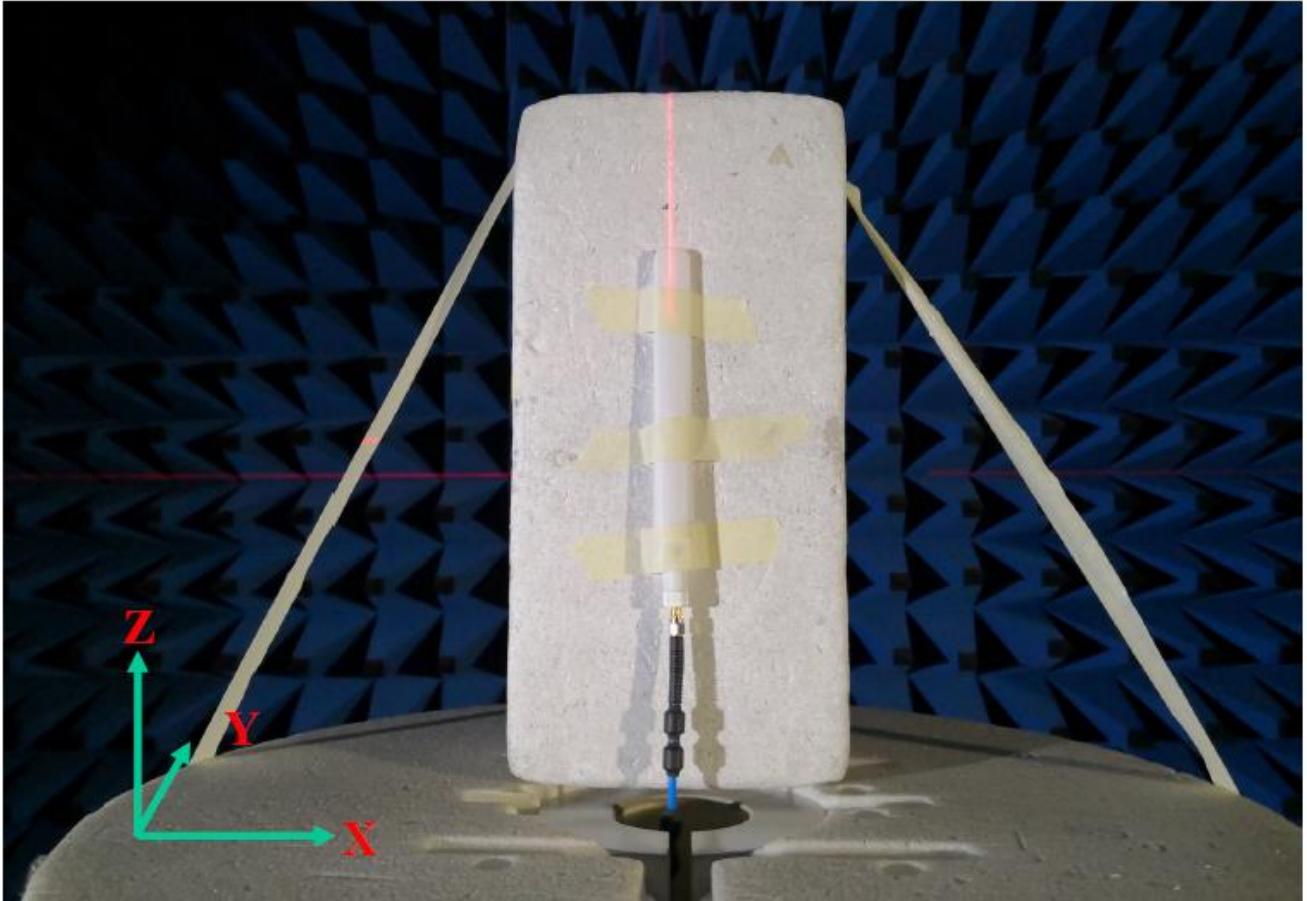
RF	DPA	1615	00	S	M	M	B	8	01
Type Code	Product Code	Dipole Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	DPA: Dipole Antenna	Per 2 digits of length, width e.g.: 1615 Length 169.9mm, Width 13.0mm	2 digits for cable length e.g.: Non 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	0:None B: MP T:During Test X: Pile Run	1:Ø0.81 3:Ø1.13 6:RG316 7:Ø1.37 8:RG178 9:Ø1.37 Low Loss	01-99 series number

DIMENSIONS



Test Report

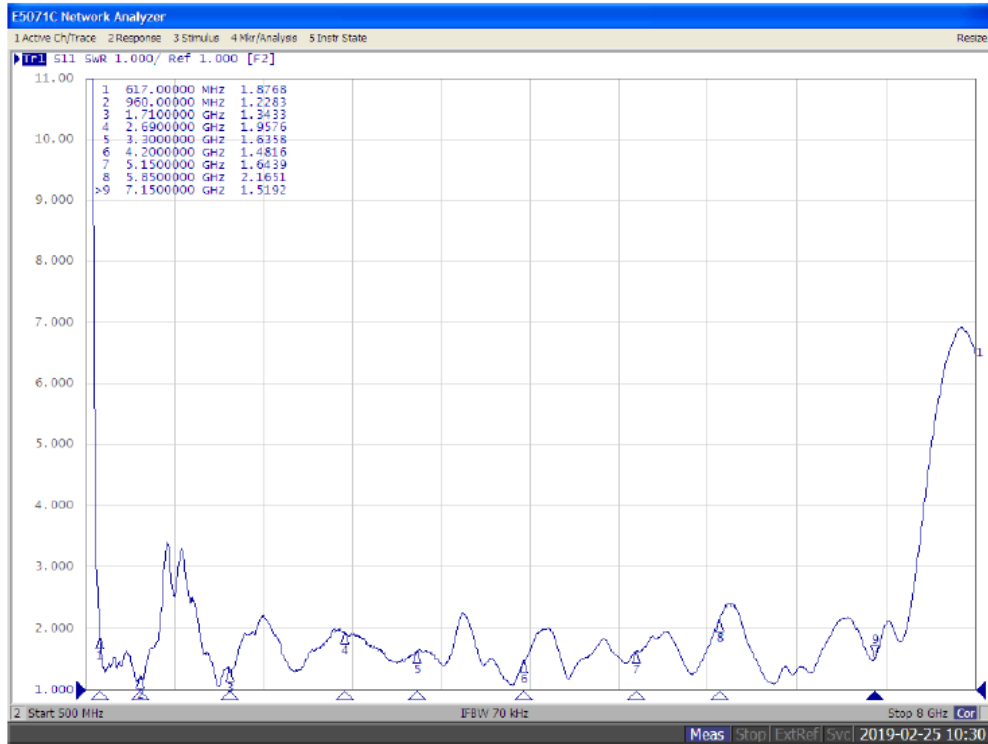
■ EXPERIMENTAL SETUP



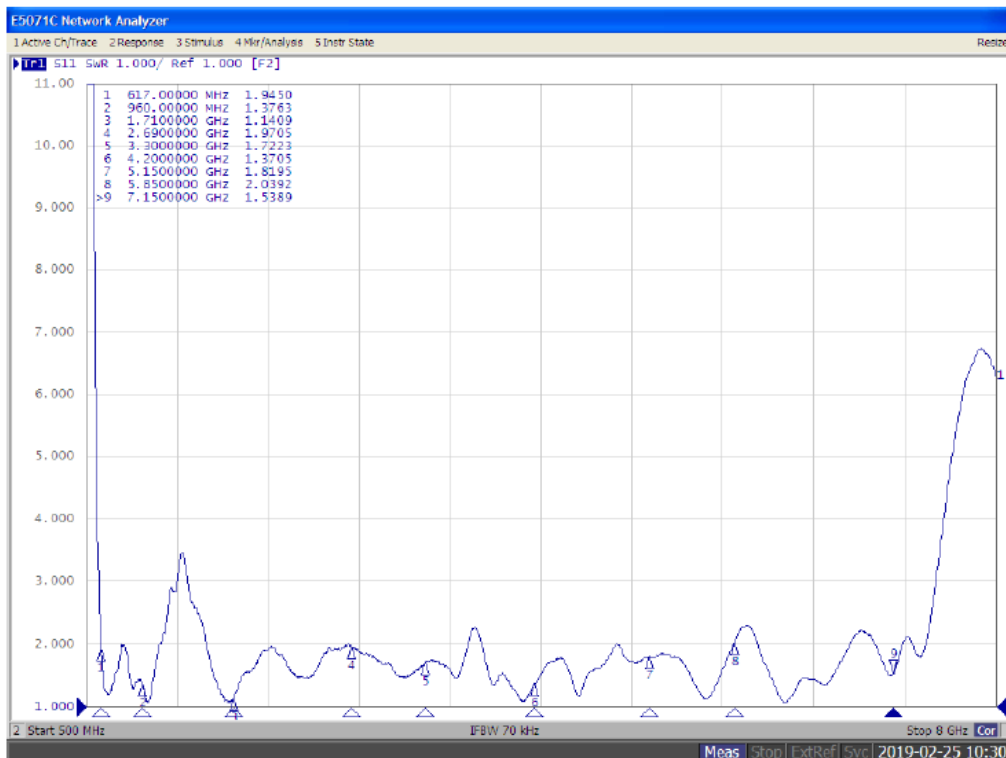
ELECTRICAL CHARACTERISTICS

VSWR

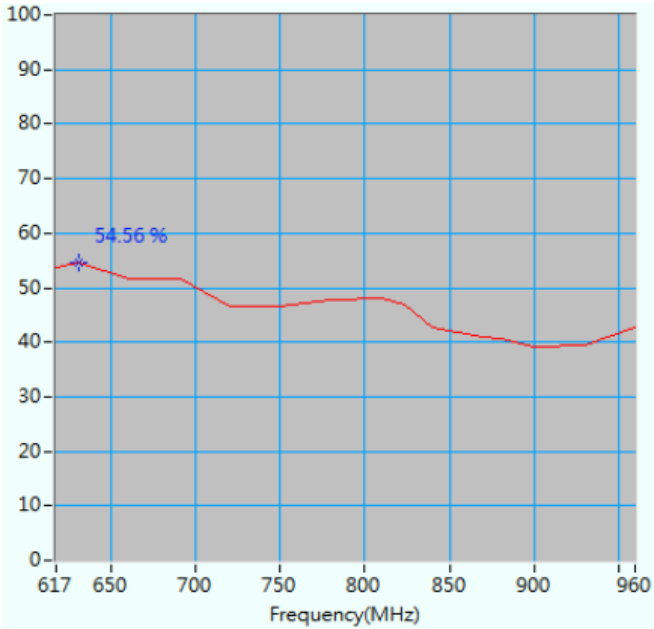
0 Degree



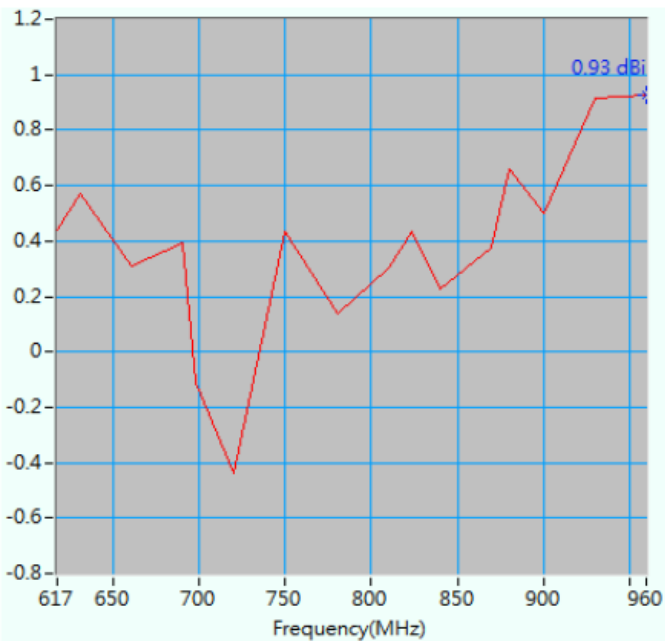
90 Degree



■ **Antenna Efficiency and Peak Gain**
617~960MHz

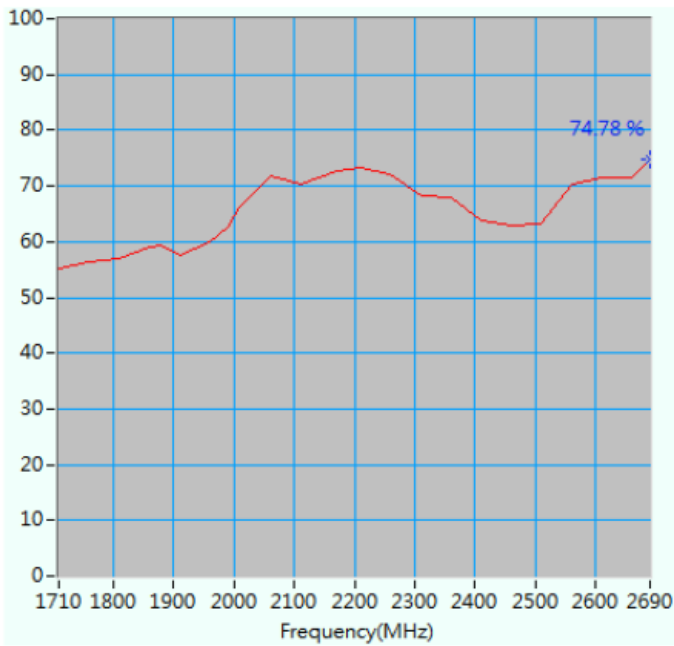


Maximum Efficiency at 630 MHz : 54.5 %

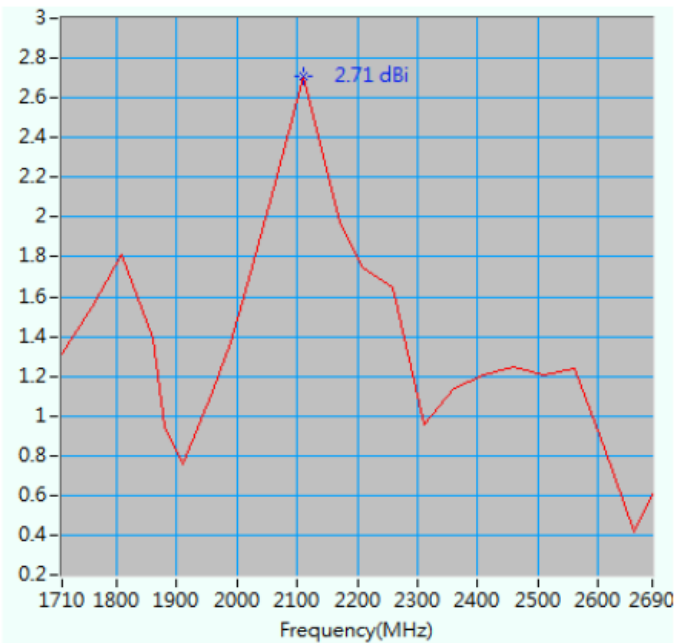


Maximum Peak Gain at 960 MHz : 0.93 dBi

1710~2690MHz

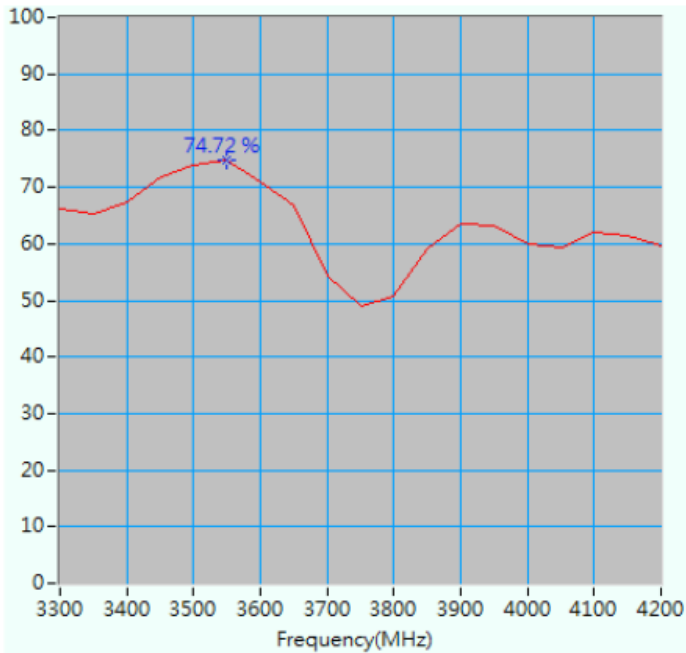


Maximum Efficiency at 2690 MHz : 74.7 %

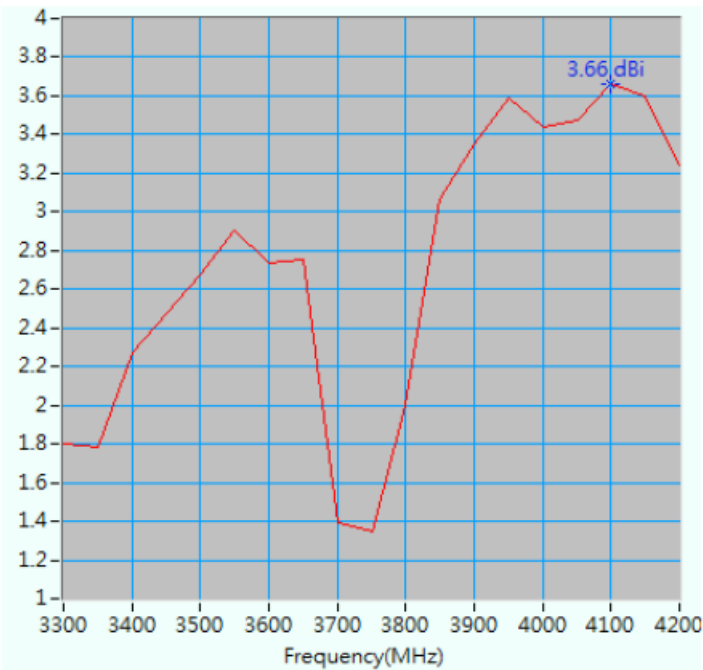


Maximum Peak Gain at 2110 MHz : 2.71 dBi

3300~4200MHz

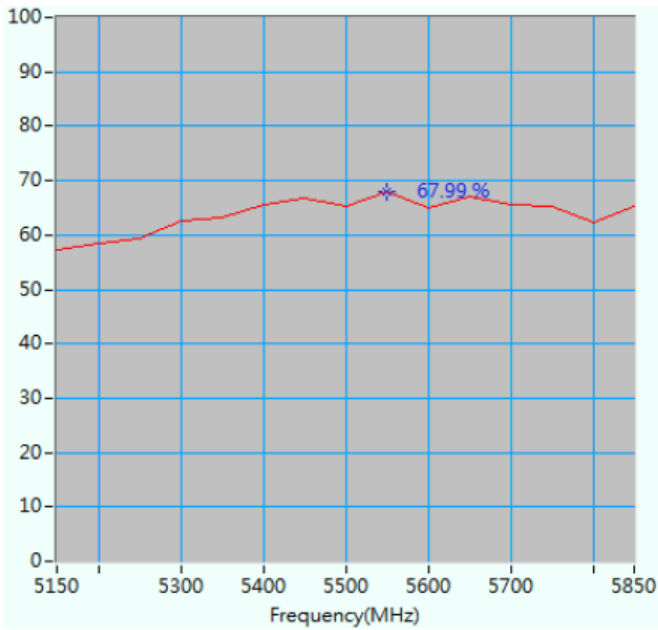


Maximum Efficiency at 3550 MHz : 74.7 %

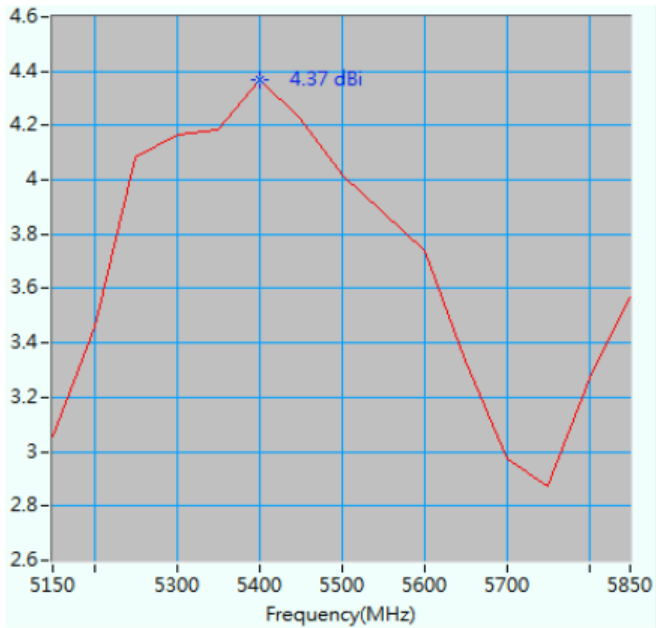


Maximum Peak Gain at 4100 MHz : 3.66 dBi

5150~7150MHz



Maximum Efficiency at 5550 MHz : 67.9 %



Maximum Peak Gain at 5400 MHz : 4.37 dBi

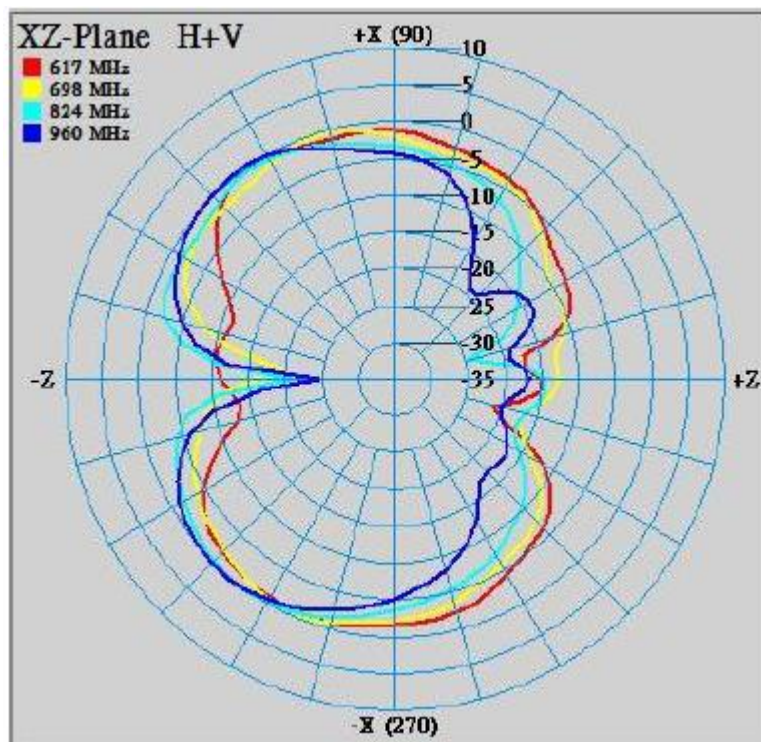
■ RADIATION PATTERN

617~960MHz

X-Z Plane

Phi=0.00deg

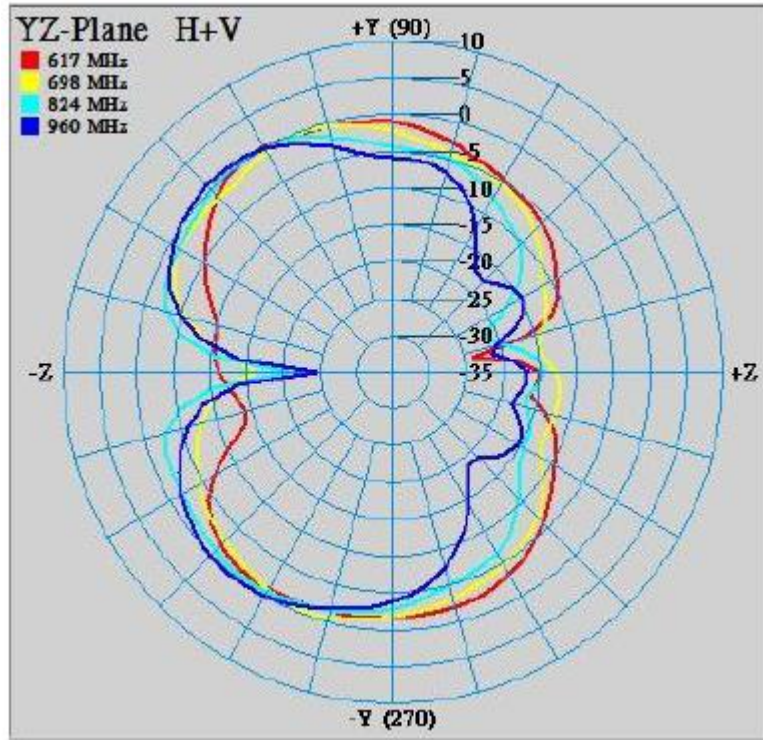
Gain . dB



Y-Z Plane

Phi=90.00deg

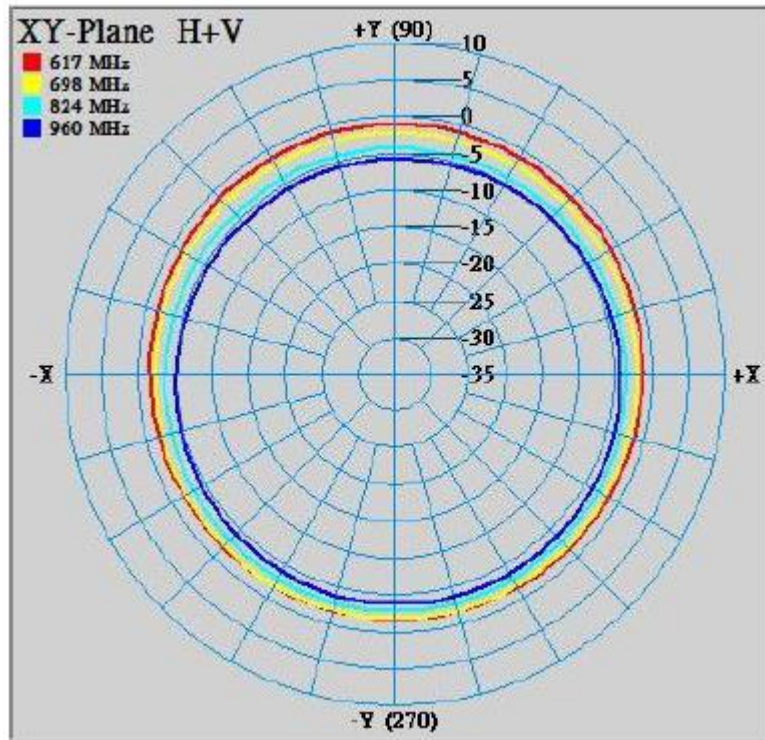
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB



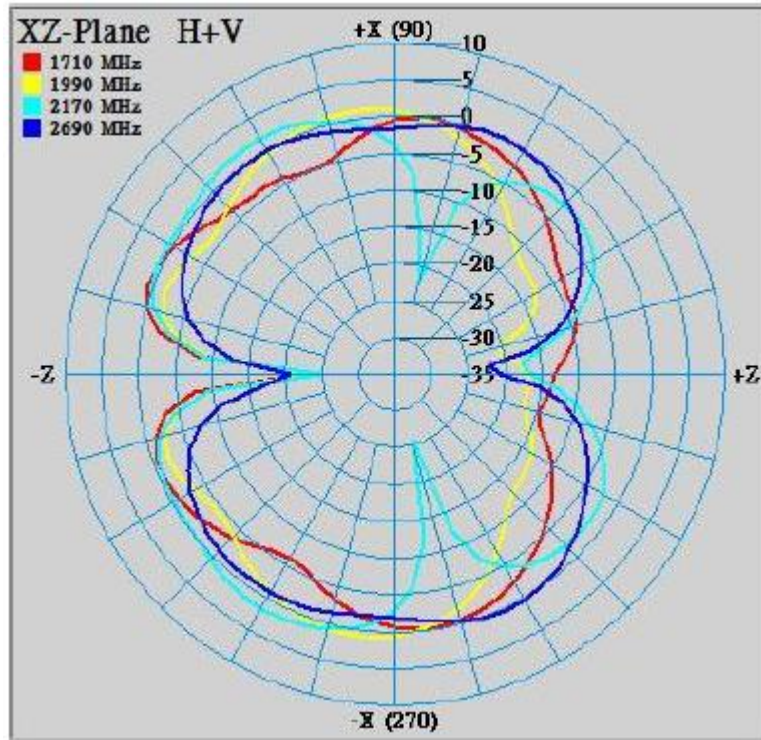
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
617	0.03	-3.93	0.32	-3.85	-0.94	-1.36
698	-0.15	-4.03	-0.12	-3.90	-1.77	-2.03
824	0.22	-4.02	0.38	-3.92	-2.81	-3.52
960	0.58	-4.41	0.93	-4.28	-3.73	-4.66

1710~2690MHz

X-Z Plane

Phi=0.00deg

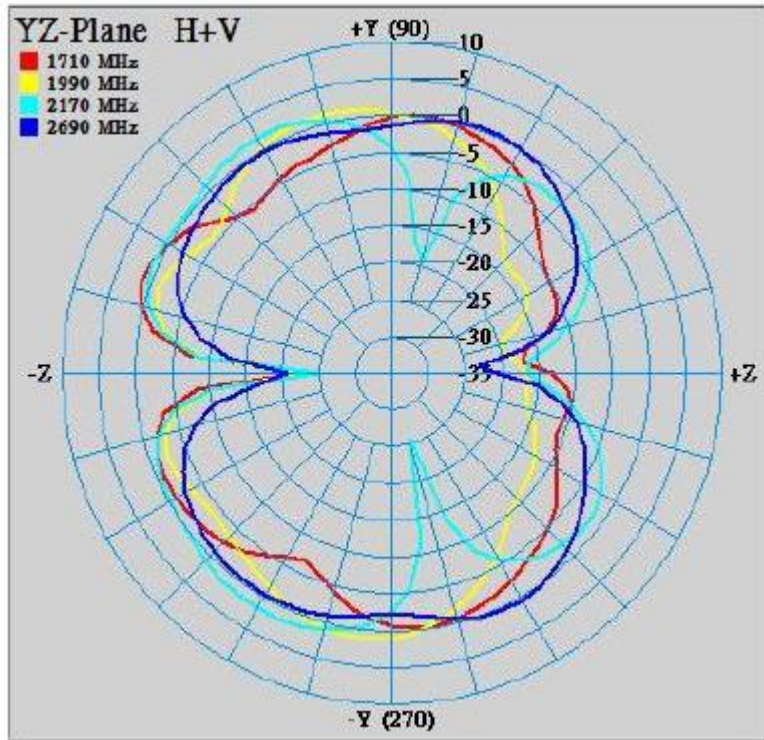
Gain . dB



Y-Z Plane

Phi=90.00deg

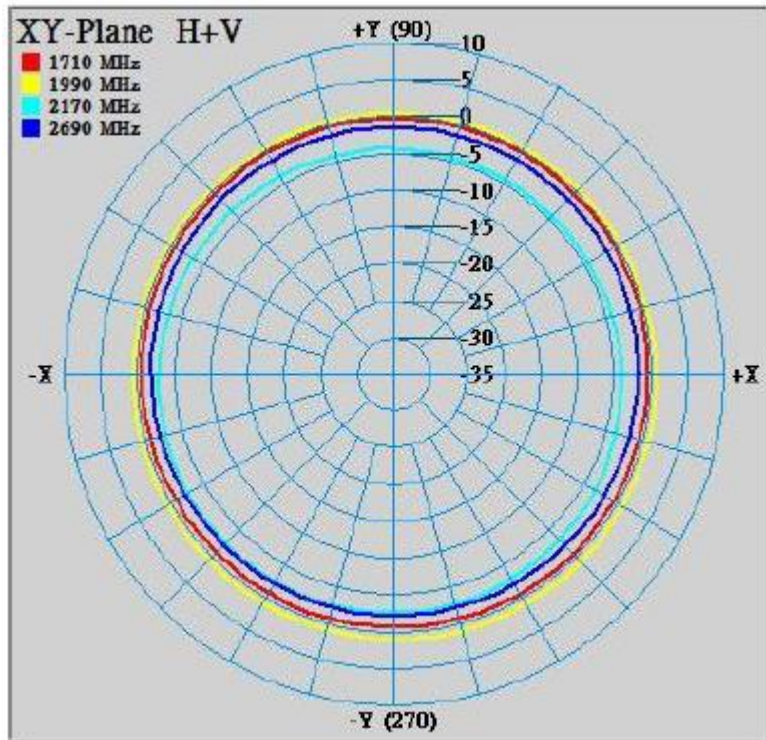
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB



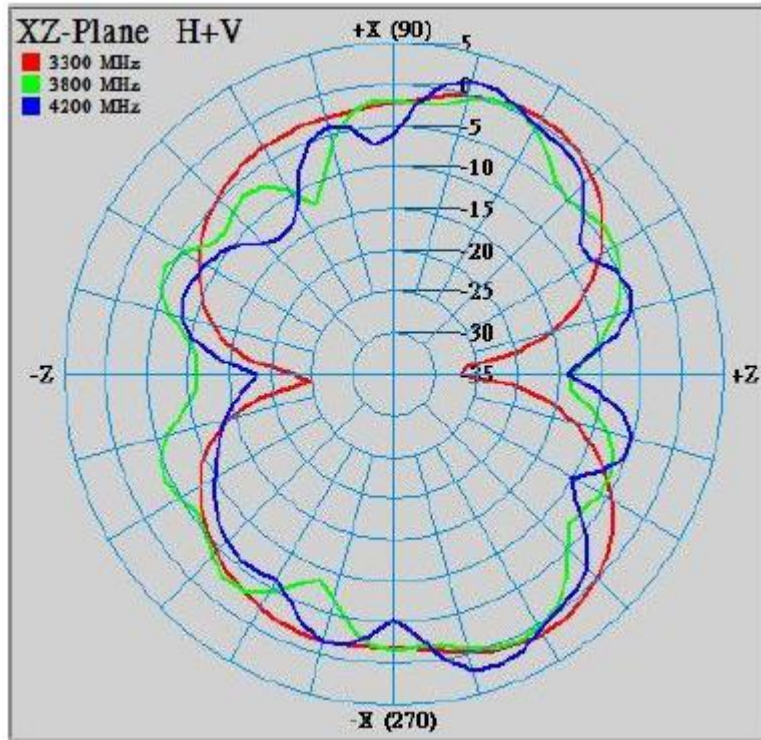
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
1710	0.75	-3.17	1.20	-3.10	-0.19	-0.43
1990	1.19	-3.15	1.37	-3.05	1.05	0.70
2170	1.96	-1.86	1.92	-1.82	-2.45	-3.39
2690	0.57	-2.26	0.60	-2.20	-1.40	-1.80

3300~4200MHz

X-Z Plane

Phi=0.00deg

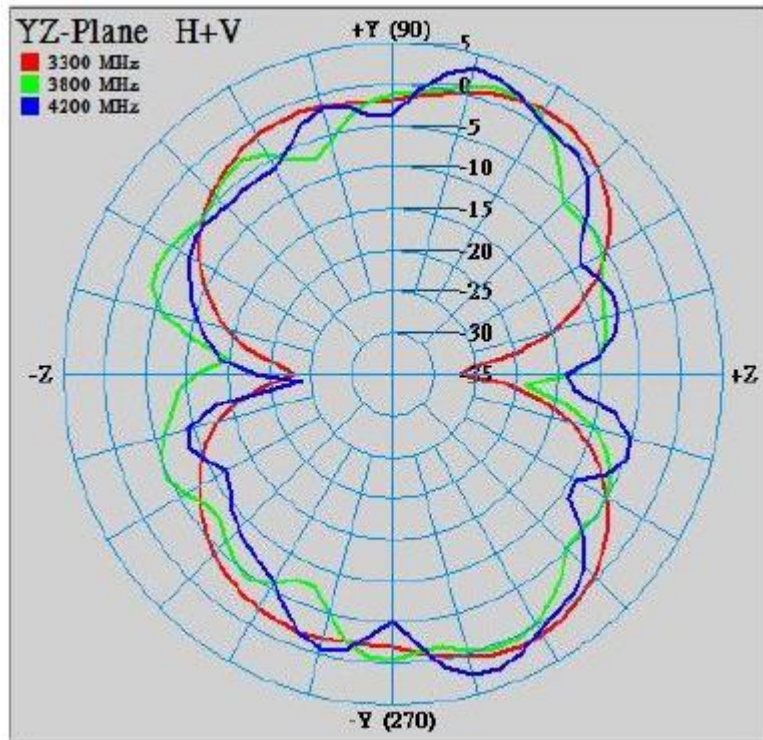
Gain . dB



Y-Z Plane

Phi=90.00deg

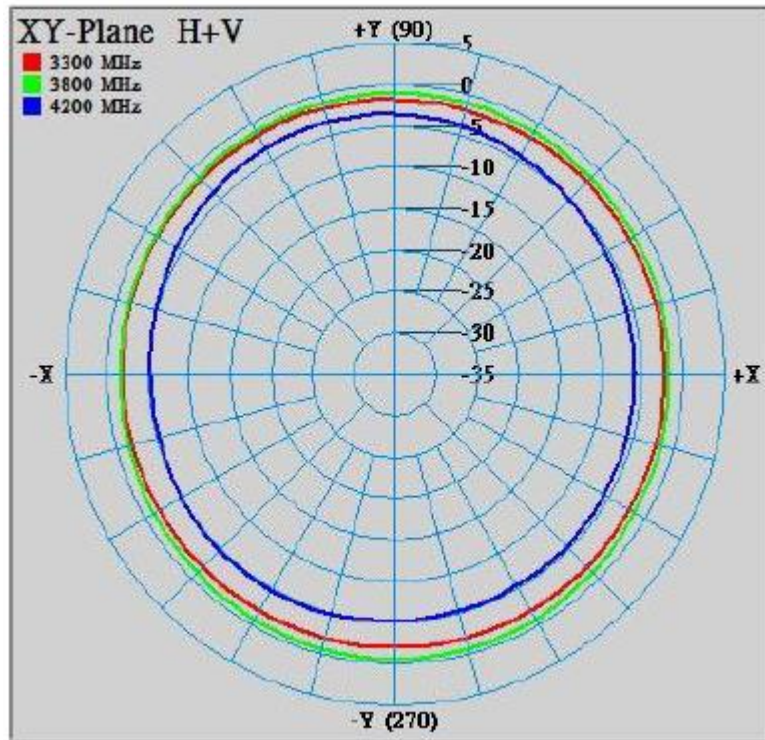
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB



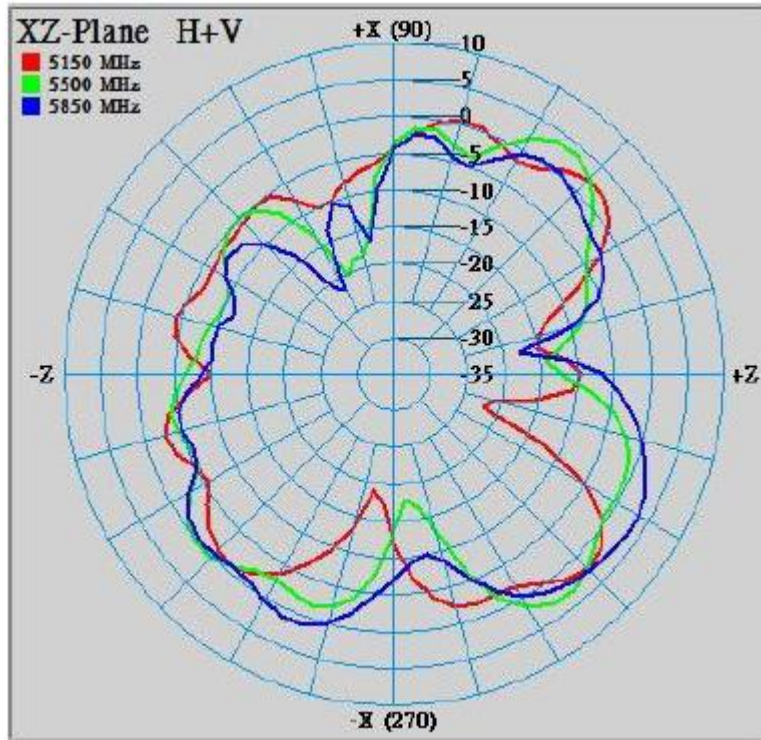
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
3300	1.23	-3.20	1.75	-2.75	-1.64	-1.95
3800	0.67	-4.14	1.94	-3.63	-0.55	-1.21
4200	2.51	-3.81	3.18	-3.04	-3.40	-4.86

5150~7150MHz

X-Z Plane

Phi=0.00deg

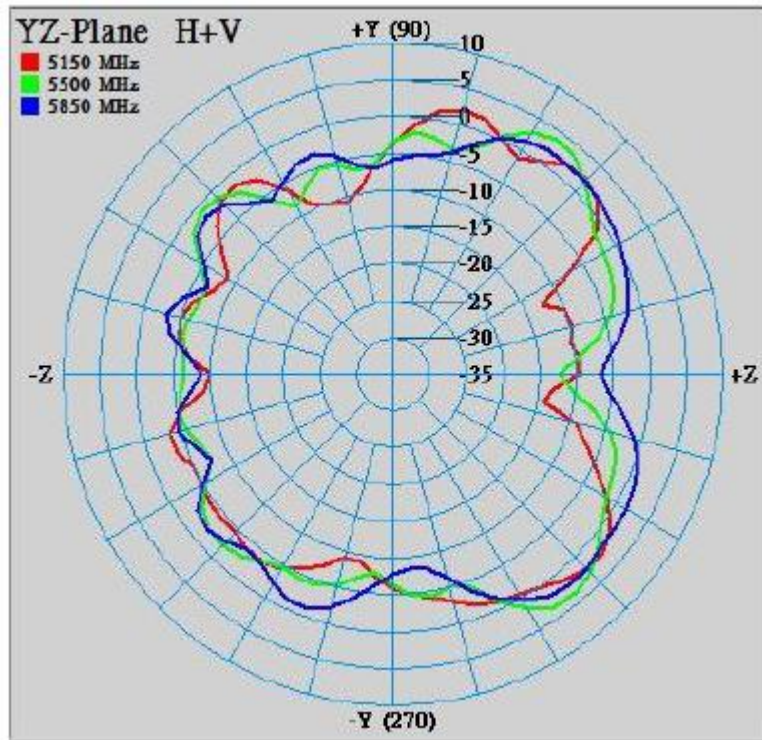
Gain . dB



Y-Z Plane

Phi=90.00deg

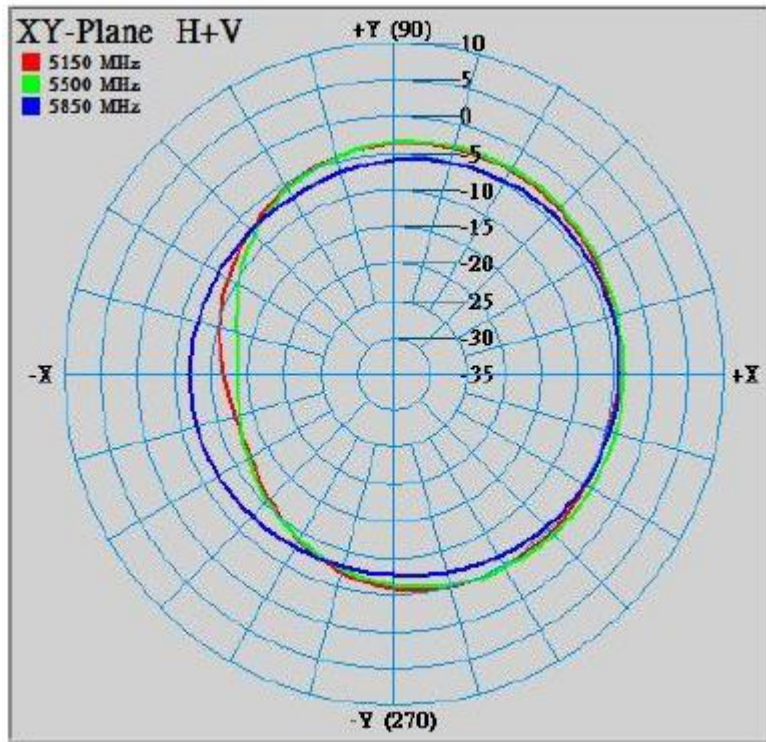
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
5150	2.64	-3.19	2.62	-2.82	-3.05	-5.61
5500	3.86	-2.46	4.01	-2.12	-2.76	-5.41
5850	3.52	-2.25	2.42	-1.82	-4.14	-6.04