*F*ormosa *W*ireless *S*ystems corp.
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SPECIFICATION
FOR
APPROVAL

Model No. : **ANT07-0804PC**

Description: **700~800 MHz PANEL ANTENNA**

Date: **2012/02/25**

Rev： **1**

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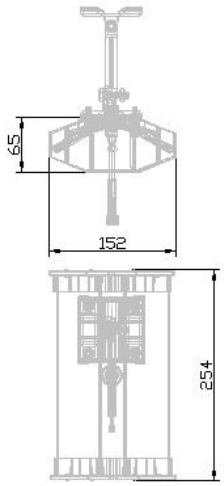
1. OVERVIEW & SPECIFICATIONS



Electrical Specifications:

Frequency Range :	700~800MHz
VSWR :	≤ 2.0
Impedance :	50Ω ± 5Ω
Gain :	8dBi
Polarization :	Vertical
Power Handling :	10Watt

Mechanical Specifications:

Connector :	N Female
Operation Temp :	-30℃~+60℃
Material :	Radome: Aluminum
	Base: ABS
	Mount: Zinc alloy
Dimension (L*W*H) :	254*152 mm(with mount)
Weight :	900g ± 20g

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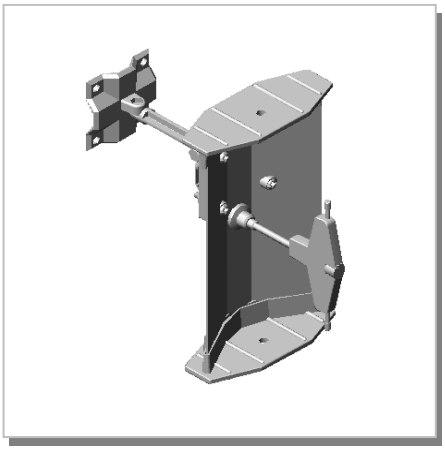
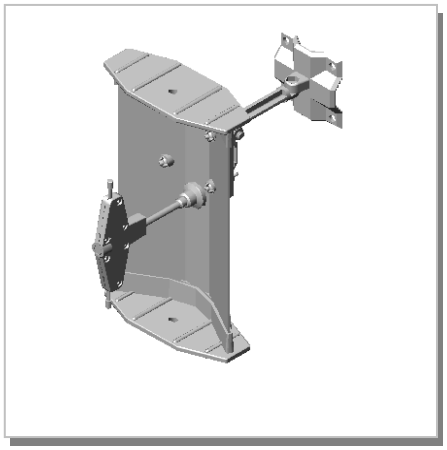
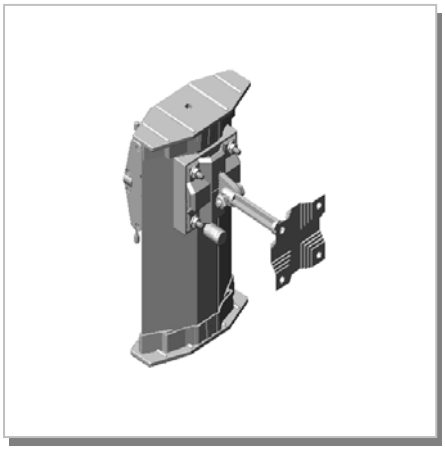
3D Illustration







2. TESTING CONDITION

2.1 TEST SETUP

VSWR measurement (S11): Use ROHDE & SCHWARZ ZV8 Network Analyzer with Harbour RG-142 coaxial cable: 1000mm length in free space.

2.1.1 VSWR

The table as below summarizes concern about Return loss measurement according to The frequency band is based on FWS design. The detail be shown as appendix that is from ROHDE & SCHWARZ ZV8 Network Analyzer

	VSWR Performance		
Freq(MHz)	700	760	800
Free space	1.5	1.3	1.9

3. GAIN MEASUREMENT

3.1 TEST SETUP

The gain of the antenna was measured by **FWS** Chamber. The chamber provides less than –30 dB reflectivity from 800 MHz through 6 GHz and a 60cm diameter spherical quite zone. The measurement results are calibrated using both **SCHWARZBECK** horn standards. A decoupling sleeve is used to reduce feed line radiation

3.2 TEST RESULT

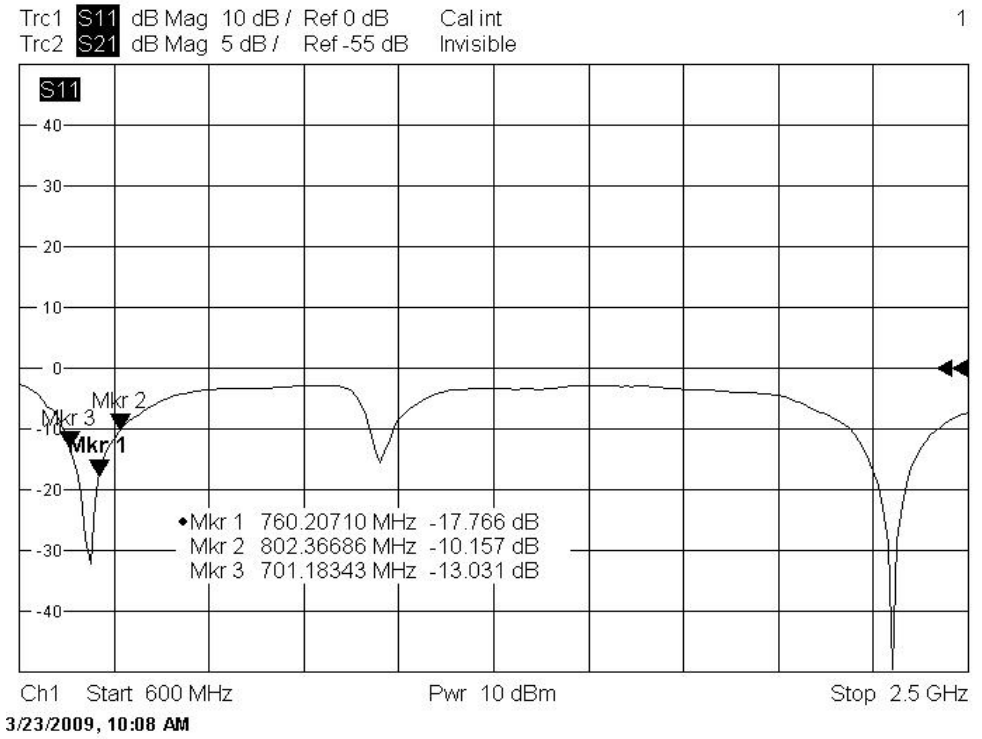
The peak gain is picked up as table list from Network analyzer in Chamber room, the completely gain plots also be shown as appendix.

	Peak Gain		
Freq(MHz)	700	760	800
Peak Gain	9.6	8.8	6.5

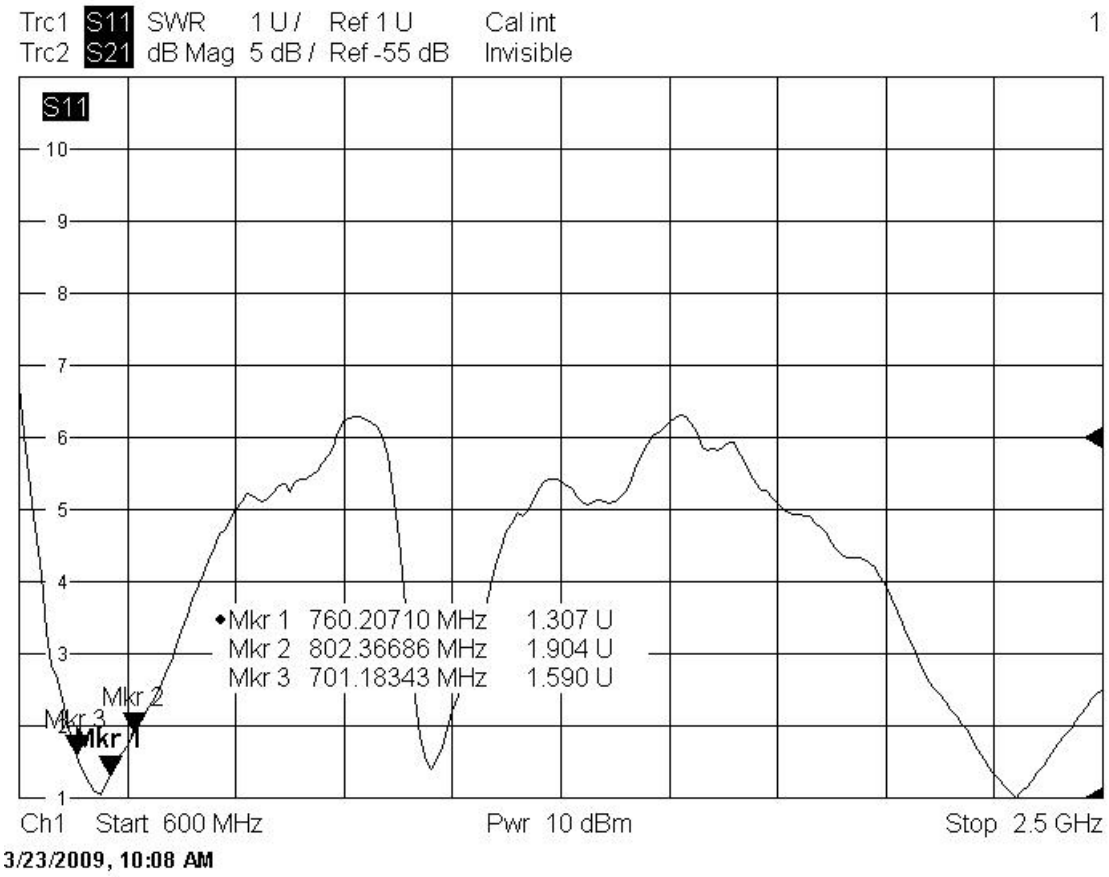
4. APPENDIX

4.1 RETURN LOSS & VSWR

RETURN LOSS

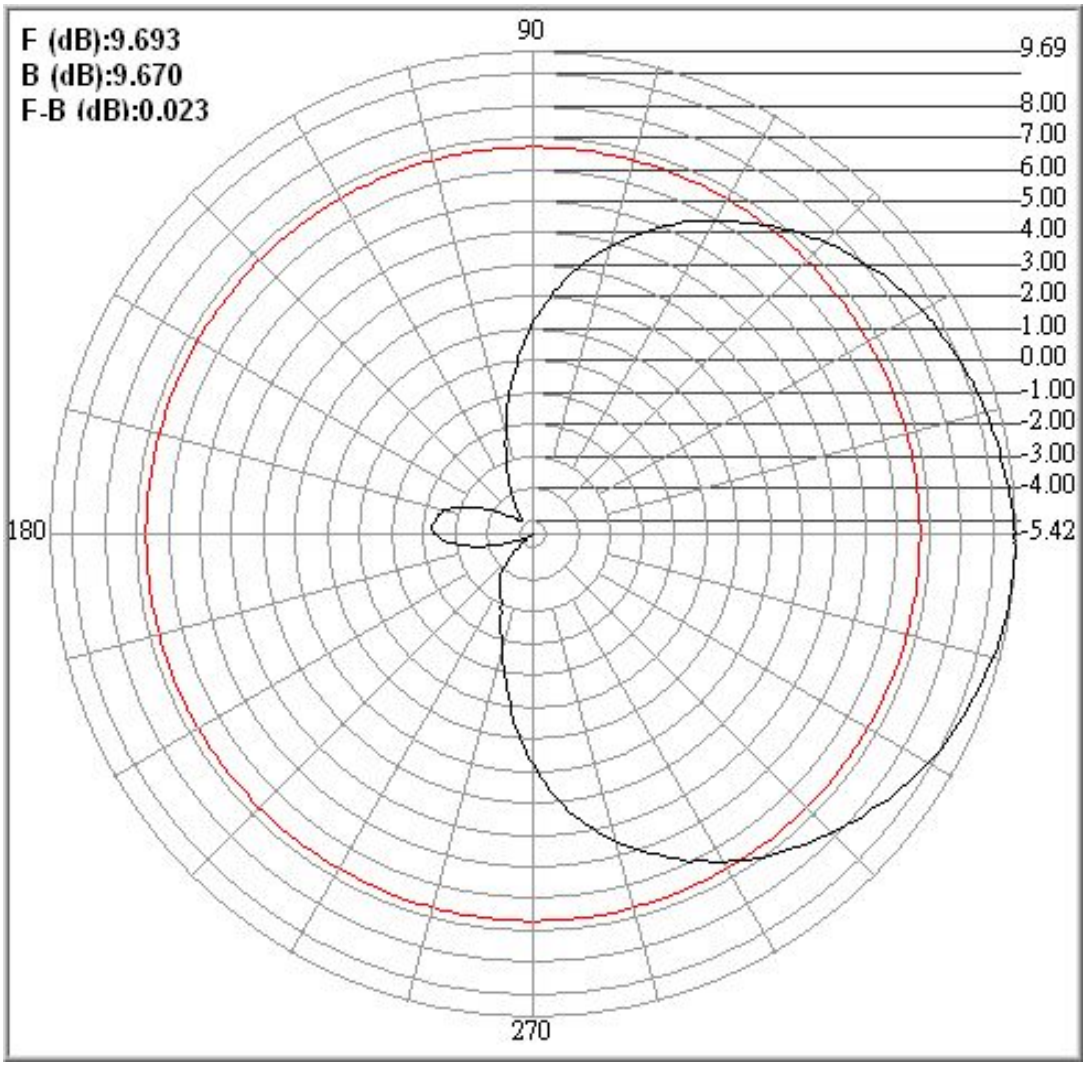


SWR

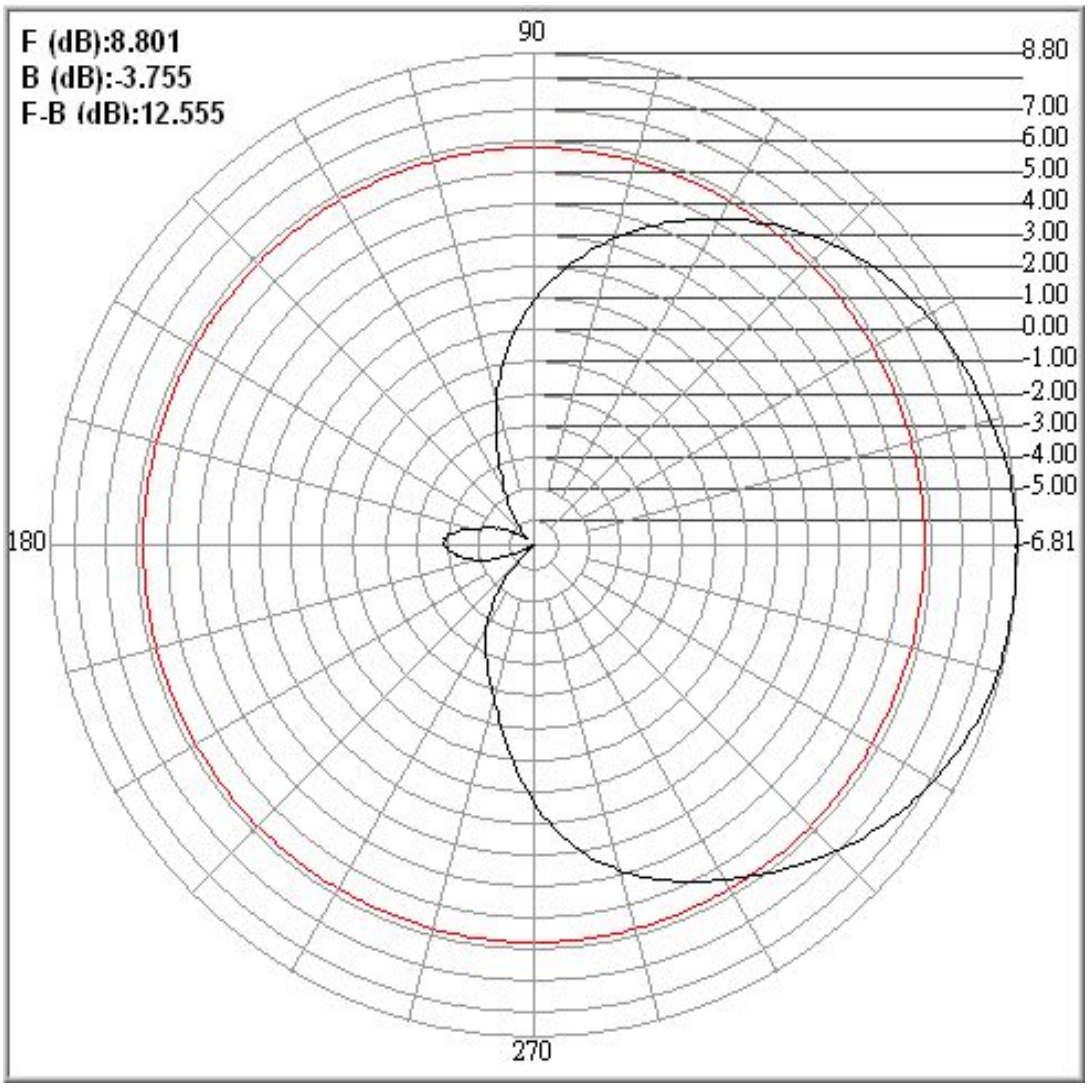


4.2 RADIATION PATTERN

H-PLANE



Center freq.(MHz)**:700**	Plane **:H Plane**	
Max gain(dBi) **:9.69**	Min gain(dBi) **:-5.42**	Avg gain(dBi) **:5.27**
-3dB1(°) **:413.50**	-3dB2(°) **:302.50**	HPB(°) **:111.00**
Front (dB) **:9.693**	Back (dB) **:9.670**	F B Ratio (dB) **:0.023**



Center freq.(MHz)**:760**	Plane **:H Plane**	
Max gain(dBi) **:8.80**	Min gain(dBi) **:-6.81**	Avg gain(dBi) **:4.46**
-3dB1(°) **:54.60**	-3dB2(°) **:-57.30**	HPB(°) **:111.90**
Front (dB) **:8.801**	Back (dB) **:-3.755**	F B Ratio (dB) **:12.555**

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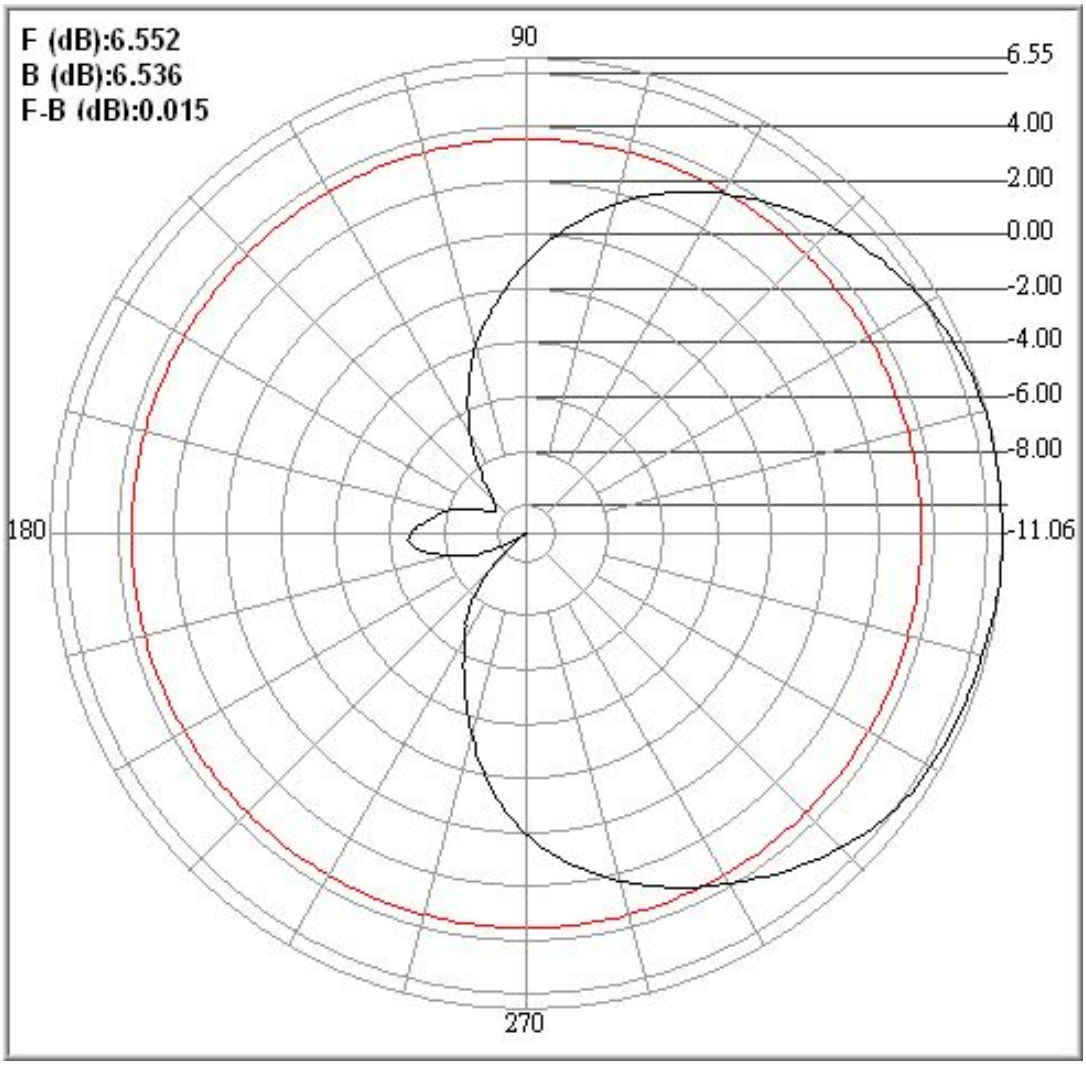

Center freq.(MHz)**:800**	Plane **:H Plane**	
Max gain(dBi) **:6.55**	Min gain(dBi) **:-11.06**	Avg gain(dBi) **:2.49**
-3dB1(°) **:419.40**	-3dB2(°) **:296.50**	HPB(°) **:122.90**
Front (dB) **:6.552**	Back (dB) **:6.536**	F B Ratio (dB) **:0.015**

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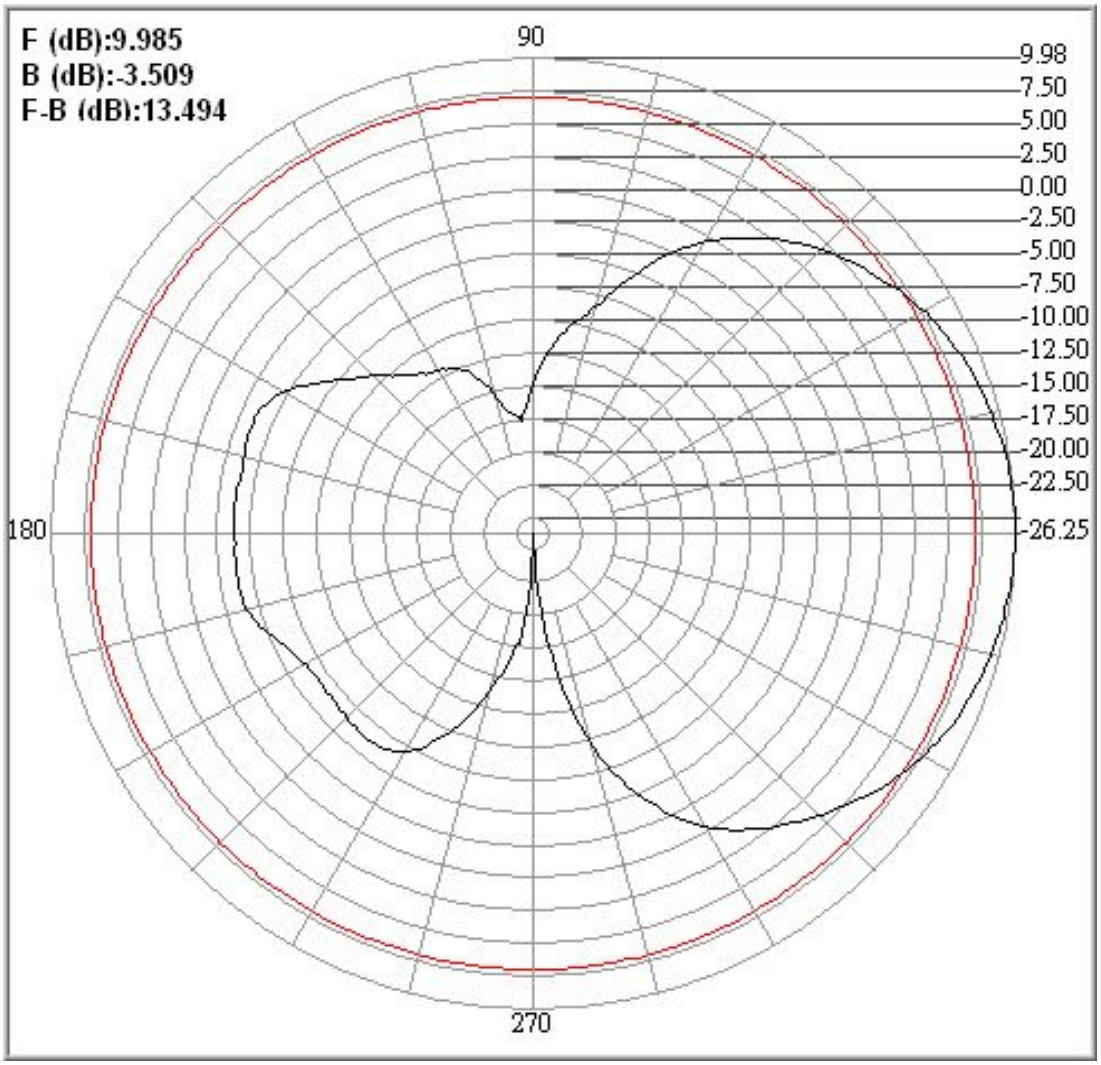
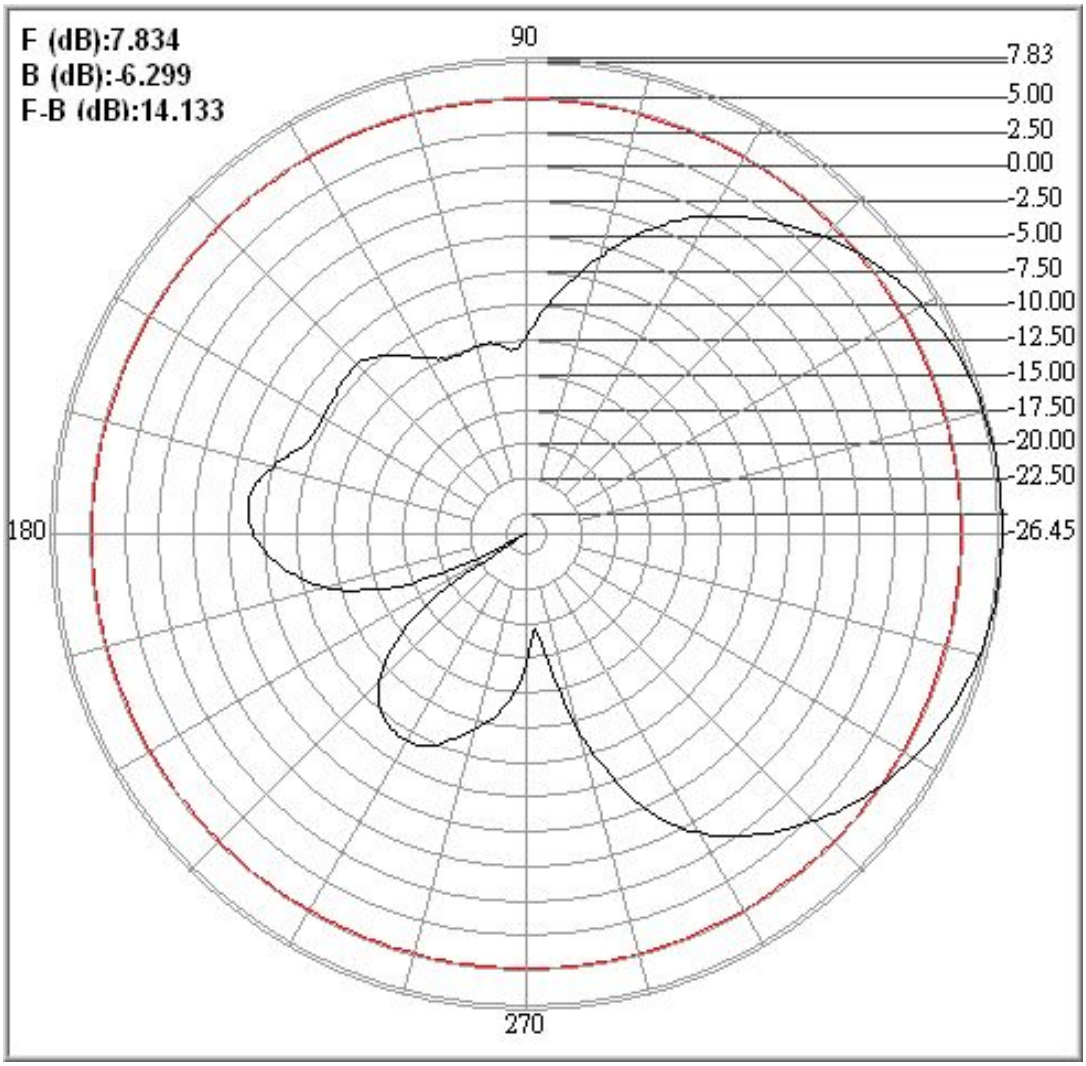
E-PLANE



Center freq.(MHz)**:700**	Plane **:E Plane**	
Max gain(dBi) **:9.98**	Min gain(dBi) **:-26.25**	Avg gain(dBi) **:3.71**
-3dB1(°) **:33.60**	-3dB2(°) **:-33.40**	HPB(°) **:67.00**
Front (dB) **:9.985**	Back (dB) **:-3.509**	F B Ratio (dB) **:13.494**



Center freq.(MHz)**:760**	Plane **:E Plane**	
Max gain(dBi) **:7.83**	Min gain(dBi) **:-26.45**	Avg gain(dBi) **:1.92**
-3dB1(°) **:41.20**	-3dB2(°) **:-36.20**	HPB(°) **:77.40**
Front (dB) **:7.834**	Back (dB) **:-6.299**	F B Ratio (dB) **:14.133**

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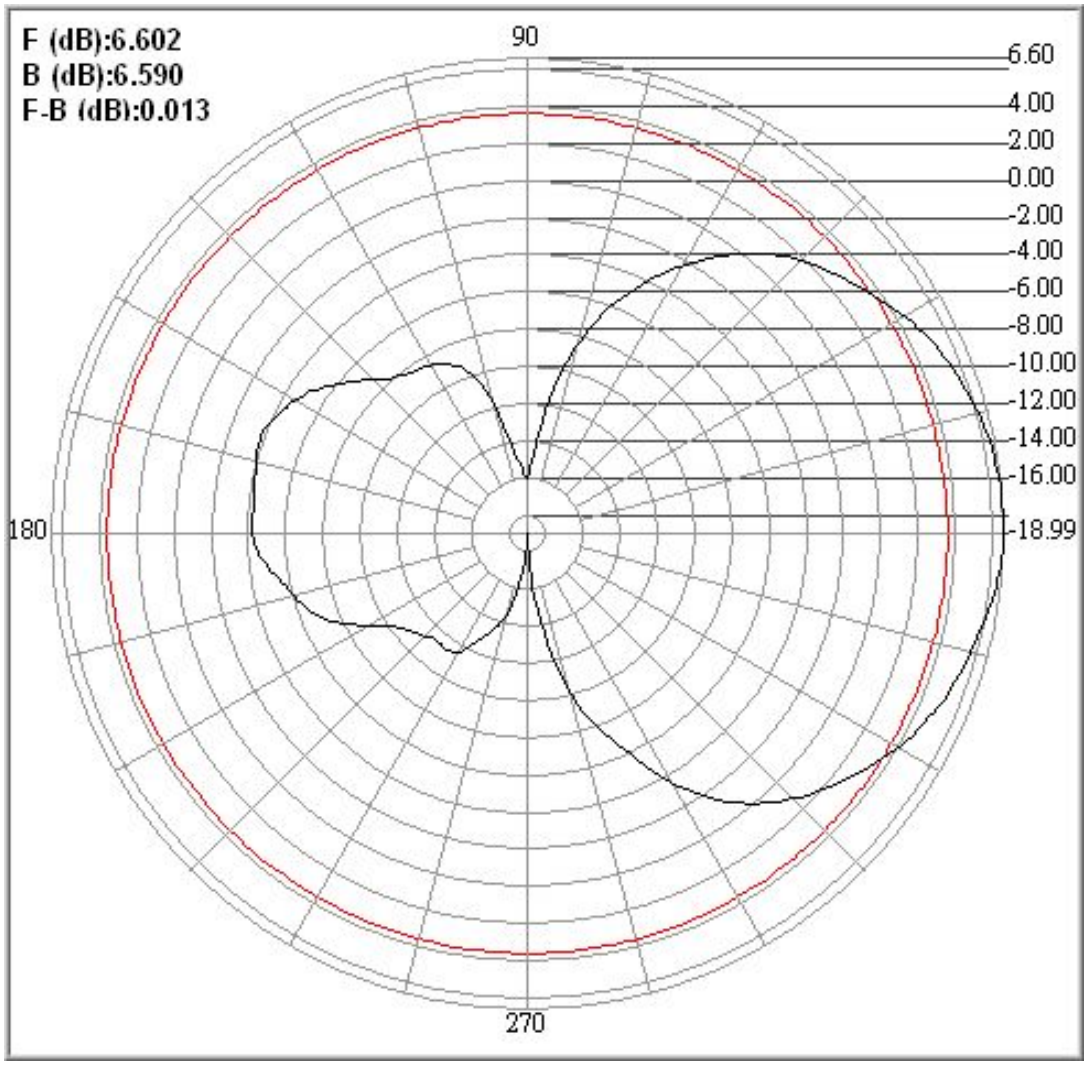

Center freq.(MHz)**:800**	Plane **:H Plane**	
Max gain(dBi) **:6.60**	Min gain(dBi) **:-18.99**	Avg gain(dBi) **:0.57**
-3dB1(°) **:395.40**	-3dB2(°) **:327.50**	HPB(°) **:67.90**
Front (dB) **:6.602**	Back (dB) **:6.590**	F B Ratio (dB) **:0.013**