DATA SHEET

Customer :

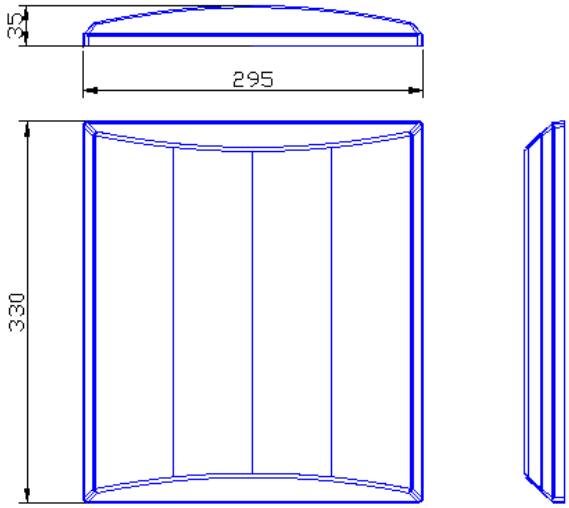
Model No. : **AP-8075**

Description : **2500~2700 MHz**
PANEL ANTENNA

Date : **2010/04/12**

Rev : **2**

1. OVERVIEW & SPECIFICATIONS



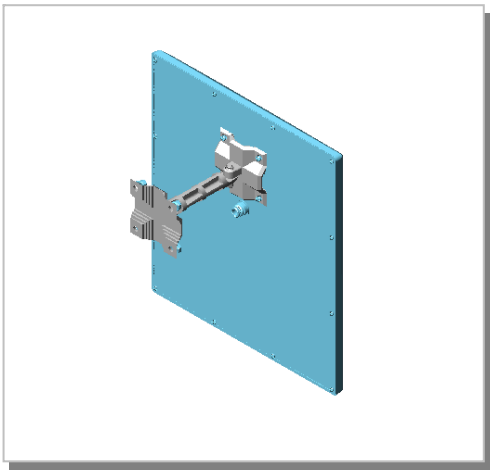
Electrical Specifications:

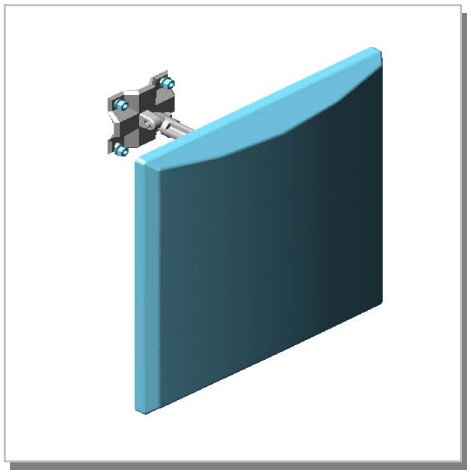
Frequency Range :	2500~2700MHz
VSWR :	≤ 2.0
Impedance :	50Ω ± 5Ω
Gain :	18 dBi
Polarization :	Vertical
Power HandlAing :	10 Watt

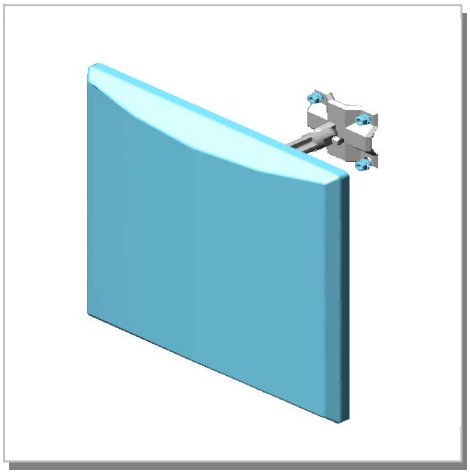
Mechanical Specifications:

Connector :	N Female
Operation Temp. :	-30℃ ~ +60℃
Material :	Radome: ABS
	Mount: Zinc alloy
Dimension (L*W*H) :	330*295*35 mm
Weight :	1334 ± 20g (w/ mount)
Color :	White

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 PRO-CELL design. The detail be shown as appendix that is from ROHDE & SCHWARZ ZV8 Network Analyzer

VSWR Performance			
Freq(MHz)	**2500**	**2600**	**2700**
Free space	1.22	1.272	1.489

3. GAIN MEASUREMENT

3.1 TEST SETUP

The gain of the antenna was measured by **PROCELL** 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

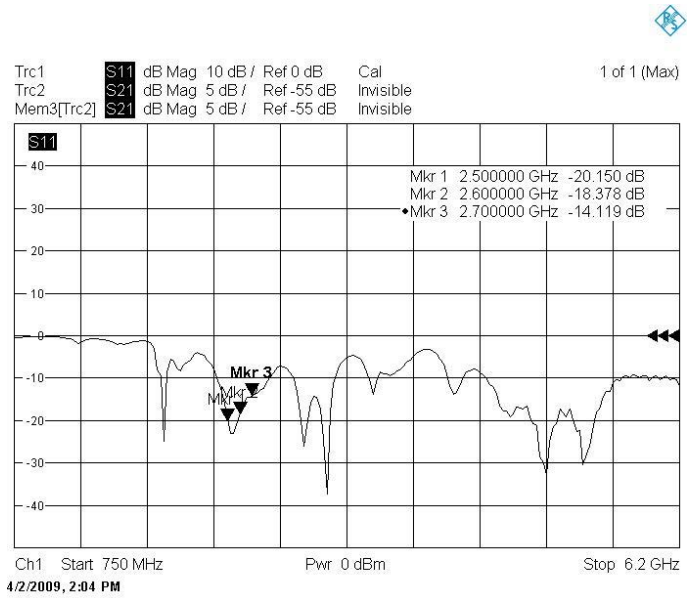
The peak gain is picked up as table list from Network analyzer in Chamber room, the completely gain plots also be shown as appendix.

Peak Gain (dBi) / Beam width(˚)			
Freq(MHz)	**2500**	**2600**	**2700**
H PLANE	16.95 / 26.6°	18.22 / 24.8°	18.25 / 23.8°
E PLANE	16.54 / 18.9°	17.49 / 18.2°	17.57/ 18°

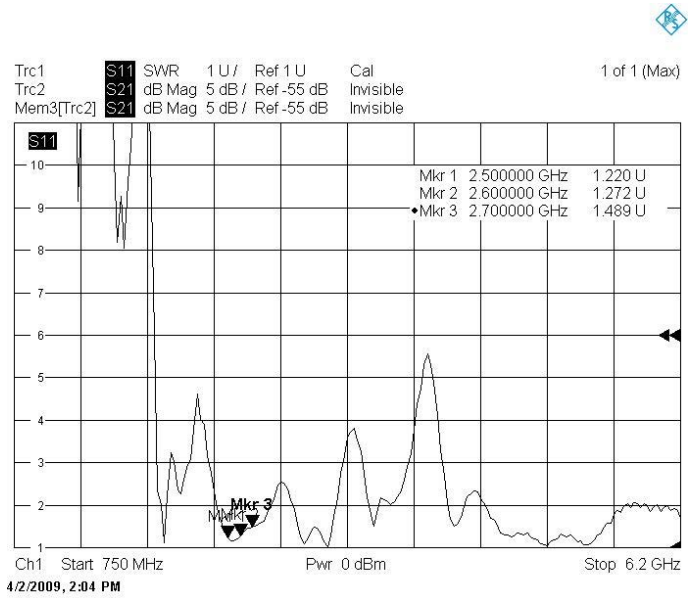
4. APPENDIX

4.1 RETURN LOSS & VSWR

RETURN LOSS

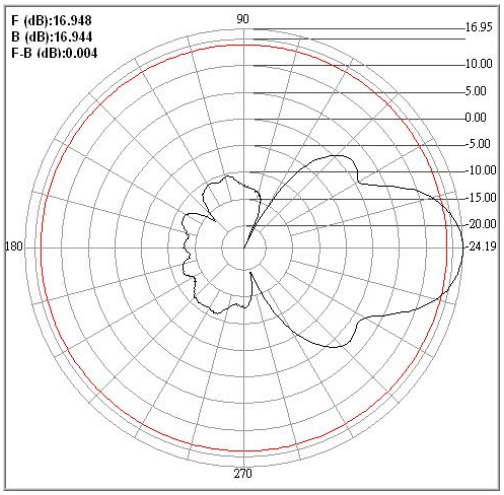


SWR

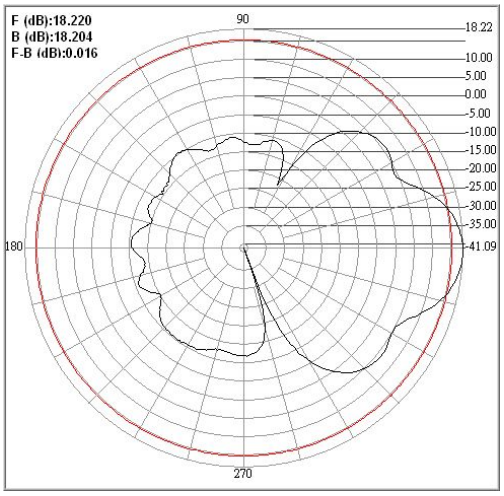


4.2 RADIATION PATTERN

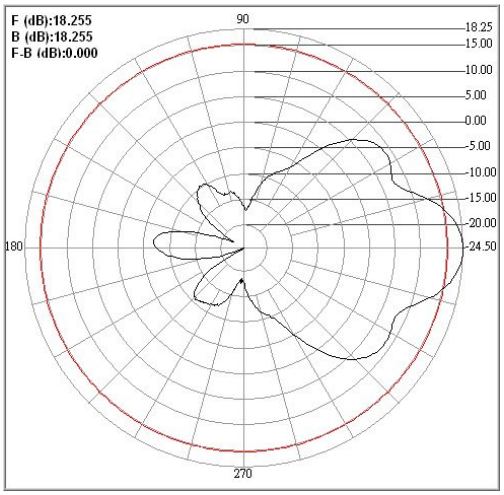
H-PLANE



Center freq.(MHz)**:2500**	Plane **:H Plane**	
Max gain(dBi) **:16.95**	Min gain(dBi) **:-24.19**	Avg gain(dBi) **:7.60**
-3dB1(°) **:372.20**	-3dB2(°) **:345.60**	HPB(°) **:26.60**
Front (dB) **:16.948**	Back (dB) **:16.944**	F B Ratio (dB) **:0.004**

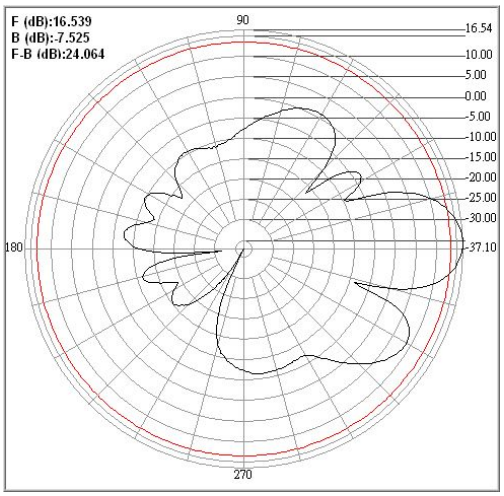


Center freq.(MHz)**:2600**	Plane **:H Plane**	
Max gain(dBi) **:18.22**	Min gain(dBi) **:-41.09**	Avg gain(dBi) **:8.50**
-3dB1(°) **:371.20**	-3dB2(°) **:346.40**	HPB(°) **:24.80**
Front (dB) **:18.220**	Back (dB) **:18.204**	F B Ratio (dB) **:0.016**

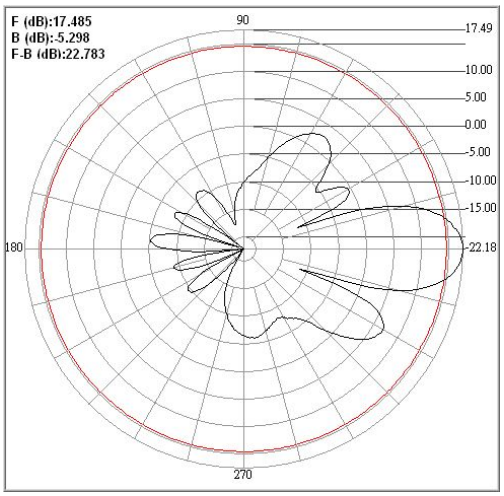


Center freq.(MHz)**:2700**	Plane **:H Plane**	
Max gain(dBi) **:18.25**	Min gain(dBi) **:-24.50**	Avg gain(dBi) **:8.95**
-3dB1(°) **:371.60**	-3dB2(°) **:347.80**	HPB(°) **:23.80**
Front (dB) **:18.255**	Back (dB) **:18.255**	F B Ratio (dB) **:0.000**

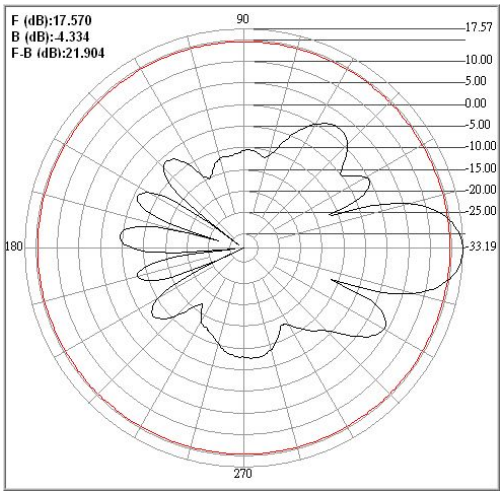
E-PLANE



Center freq.(MHz)**:2500**	Plane **:E Plane**	
Max gain(dBi) **:16.54**	Min gain(dBi) **:-37.10**	Avg gain(dBi) **:6.45**
-3dB1(°) **:11.50**	-3dB2(°) **:-7.40**	HPB(°) **:18.90**
Front (dB) **:16.539**	Back (dB) **:-7.525**	F B Ratio (dB) **:24.064**



Center freq.(MHz)**:2600**	Plane **:E Plane**	
Max gain(dBi) **:17.49**	Min gain(dBi) **:-22.18**	Avg gain(dBi) **:7.17**
-3dB1(°) **:8.90**	-3dB2(°) **:-9.30**	HPB(°) **:18.20**
Front (dB) **:17.485**	Back (dB) **:-5.298**	F B Ratio (dB) **:22.783**



Center freq.(MHz)**:2700**	Plane **:E Plane**	
Max gain(dBi) **:17.57**	Min gain(dBi) **:-33.19**	Avg gain(dBi) **:7.10**
-3dB1(°) **:8.60**	-3dB2(°) **:-9.40**	HPB(°) **:18.00**
Front (dB) **:17.570**	Back (dB) **:-4.334**	F B Ratio (dB) **:21.904**