

DATA SHEET

Customer :

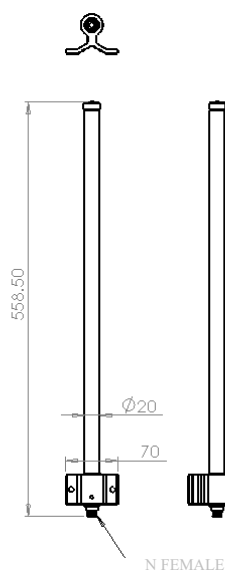
Model No. : AO-8045

Description : 2.5~2.7 GHz OMNI ANTENNA

Date : 2010/04/12

Rev : 1

1. OVERVIEW & SPECIFICATIONS



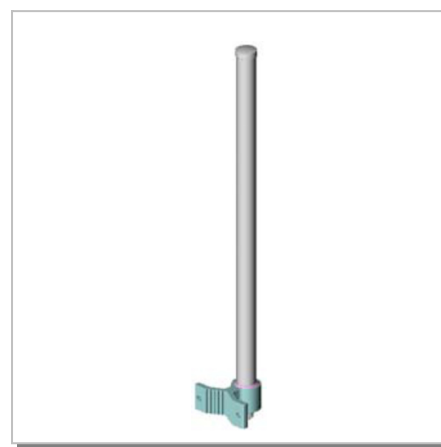
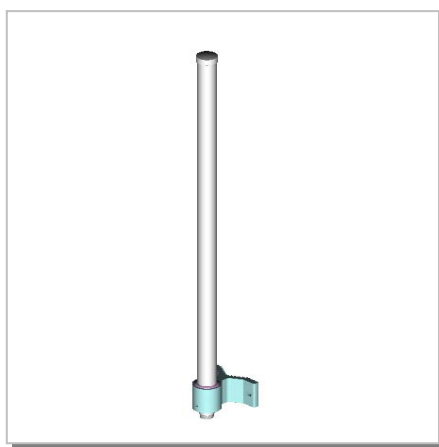
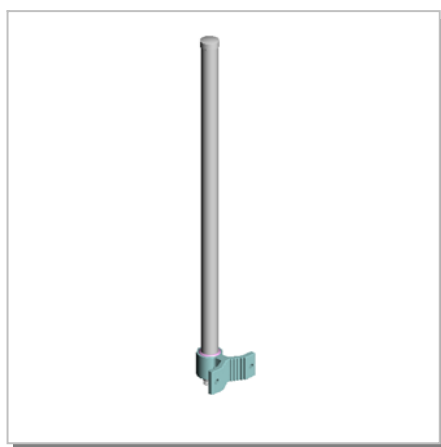
Electrical Specifications:

Frequency Range :	2.5~2.7GHz
VSWR :	≤ 2.0
Impedance :	$50\Omega \pm 5\Omega$
Gain :	9dBi
Polarization :	Vertical
Power Handling :	10 Watt

Mechanical Specifications:

Connector :	N FEMALE
Cable :	PRO-100
Operation Temp. :	-30°C ~ +60°C
Material :	Radome: Fiberglass Base: Aluminum Alloy Mount: Stainless
Dimension (L*W*H) :	$\varnothing 20 \times 558.8$ mm
Weight :	340g $\pm$ 10g (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	1.8	1.3	1.1

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 quiet 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

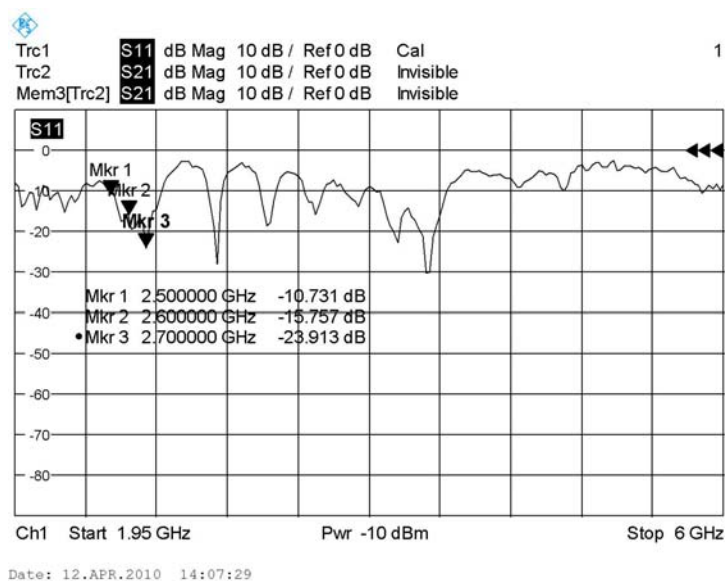
The peak gain is picked up as table list from Network analyzer in Chamber room, the completely gain plots also be shown as appendix.

Peak Gain (dBi) / Beam width(°)			
Freq(MHz)	2500	2600	2700
H PLANE	10.4/360°	9.7/360°	8.6/360°
E PLANE	10.1/16.4°	8.4/14.6°	8.9/16.6°

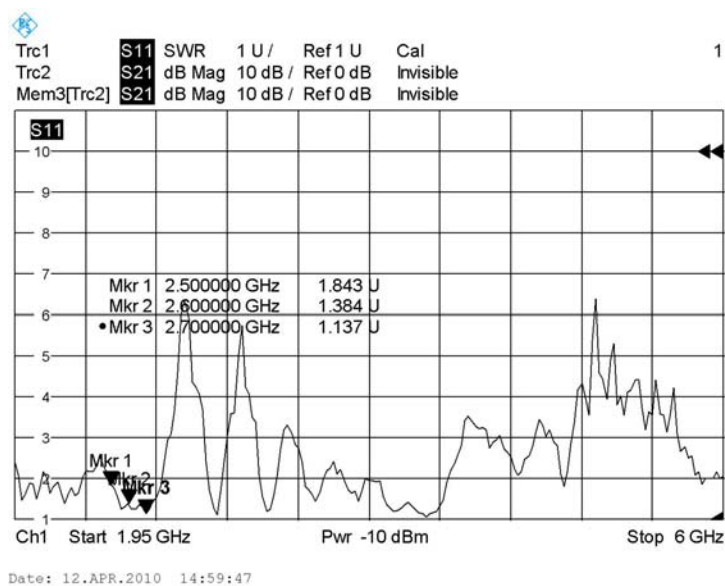
4. APPENDIX

4.1 RETURN LOSS & VSWR

RETURN LOSS

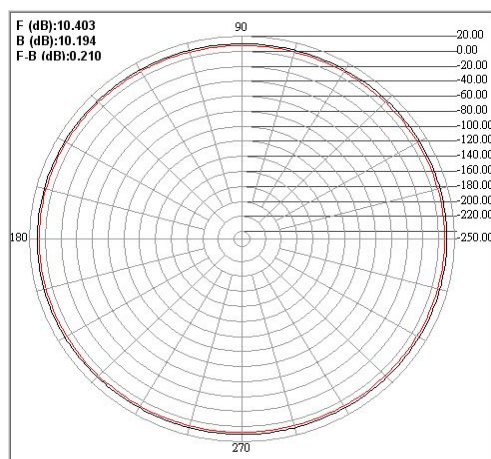


SWR

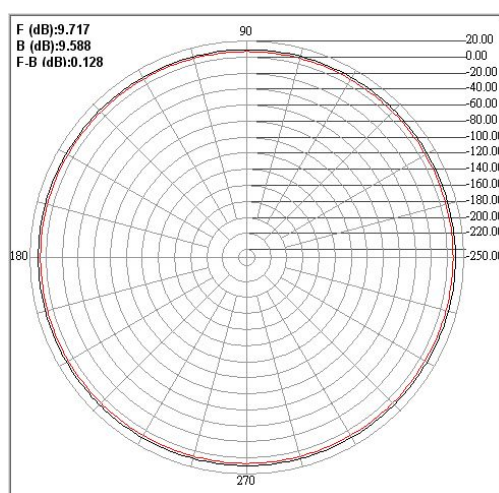


4.2 RADIATION PATTERN

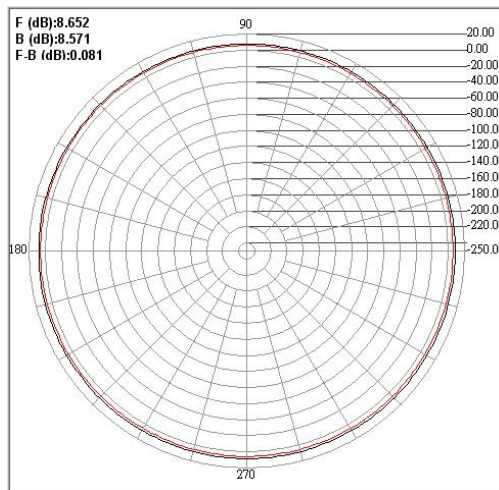
H-PLANE



Center freq.(MHz): 2500	Plane : H Plane	
Max gain(dBi) : 10.40	Min gain(dBi) : 9.68	Avg gain(dBi) : 10.08
-3dB1(°) : 0.00	-3dB2(°) : 0.00	HPB(°) : 360.00
Front (dB) : 10.403	Back (dB) : 10.194	F B Ratio (dB) : 0.210

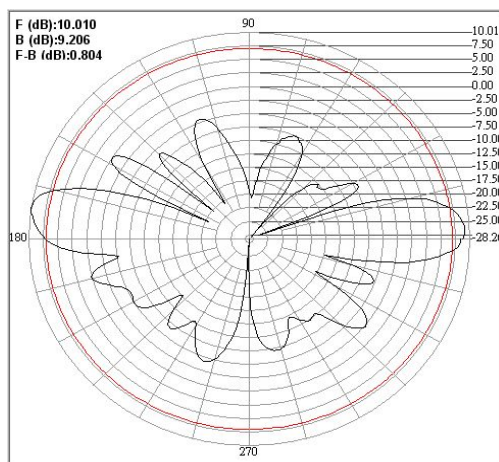


Center freq.(MHz): 2600	Plane : H Plane	
Max gain(dBi) : 9.72	Min gain(dBi) : 9.01	Avg gain(dBi) : 9.47
-3dB1(°) : 0.00	-3dB2(°) : 0.00	HPB(°) : 360.00
Front (dB) : 9.717	Back (dB) : 9.588	F B Ratio (dB) : 0.128

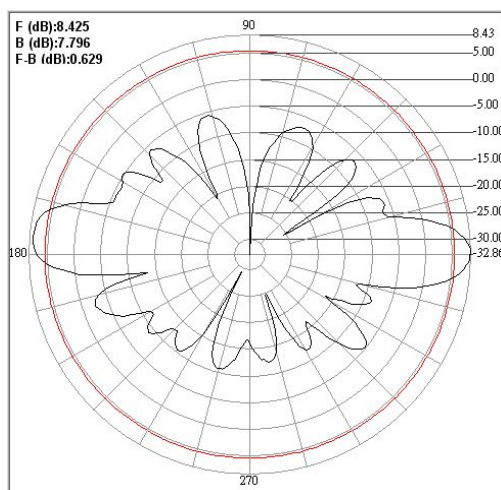


Center freq.(MHz): 2700	Plane : H Plane	
Max gain(dBi) : 8.65	Min gain(dBi) : 7.33	Avg gain(dBi) : 8.13
-3dB1(°) : 0.00	-3dB2(°) : 0.00	HPB(°) : 360.00
Front (dB) : 8.652	Back (dB) : 8.571	F B Ratio (dB) : 0.081

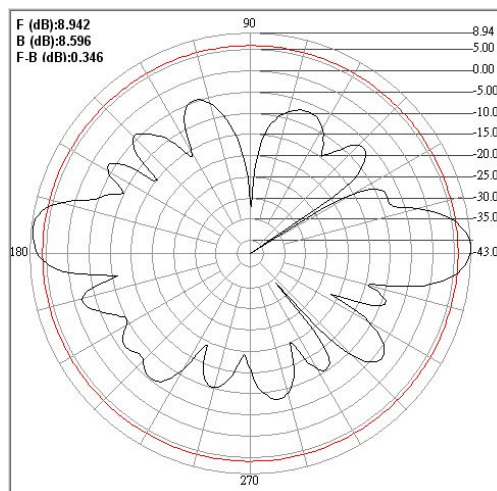
E-PLANE



Center freq.(MHz): 2500	Plane : E Plane	
Max gain(dBi) : 10.01	Min gain(dBi) : -28.26	Avg gain(dBi) : 0.27
-3dB1(°) : 181.40	-3dB2(°) : 165.00	HPB(°) : 16.40
Front (dB) : 10.010	Back (dB) : 9.206	F B Ratio (dB) : 0.804



Center freq.(MHz): 2600	Plane : E Plane	
Max gain(dBi) : 8.43	Min gain(dBi) : -32.86	Avg gain(dBi) : -1.07
-3dB1(°) : 8.10	-3dB2(°) : -6.50	HPB(°) : 14.60
Front (dB) : 8.425	Back (dB) : 7.796	F B Ratio (dB) : 0.629



Center freq.(MHz): 2700	Plane : E Plane	
Max gain(dBi) : 8.94	Min gain(dBi) : -43.09	Avg gain(dBi) : -0.40
-3dB1(°) : 9.90	-3dB2(°) : -6.70	HPB(°) : 16.60
Front (dB) : 8.942	Back (dB) : 8.596	F B Ratio (dB) : 0.346