Measurement Report for FIC

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Abstract :

This document reports the testing results of WTC's PCA antennas solution. The testing includes the antenna characteristics measurement.

OUTLINE :

1.Experimental Setup

2.Antenna Location In Notebook

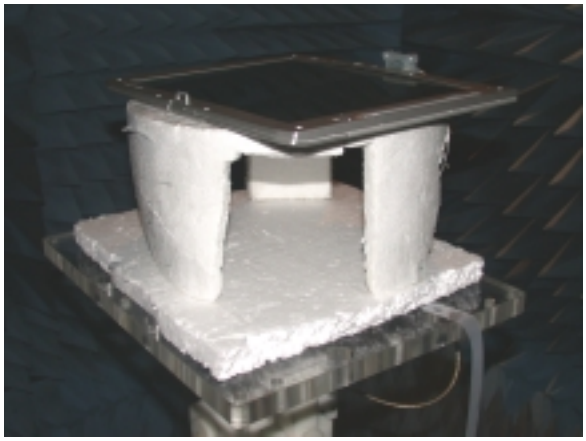
3. Return loss and VSWR and Isolation

4. Radiation Pattern

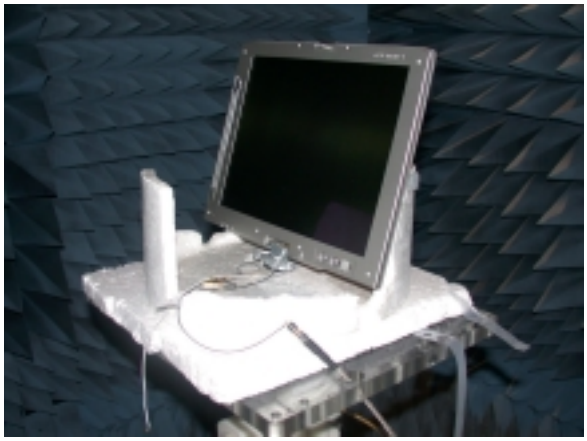
1. Experimental Setup

- Antenna under test (AUT) :

H type



V type



- Measurement Item :
  a. Return loss
  b. Radiation pattern

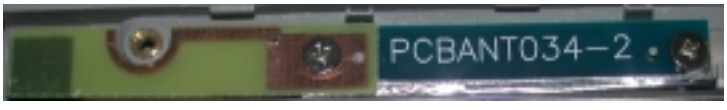
- Return Loss :
  a. Instrument : vector network analyzer – Agilent 8719ES
  b. Calibration method : open/short/load

- Radiation Pattern :
  a. Instrument: WALSIN In-house antenna measurement system
  b. Calibration method : ETS pyramidal standard horn antennas

2. Antenna Location In Notebook

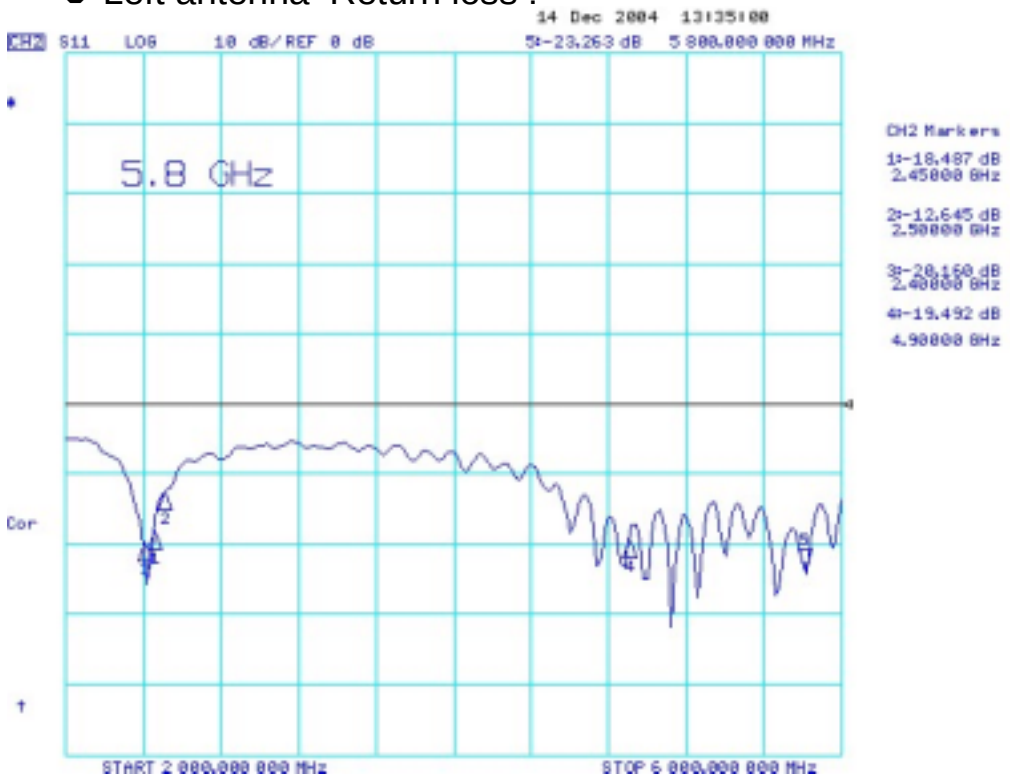
Left Antenna Right Antenna

Left Antenna Right Antenna

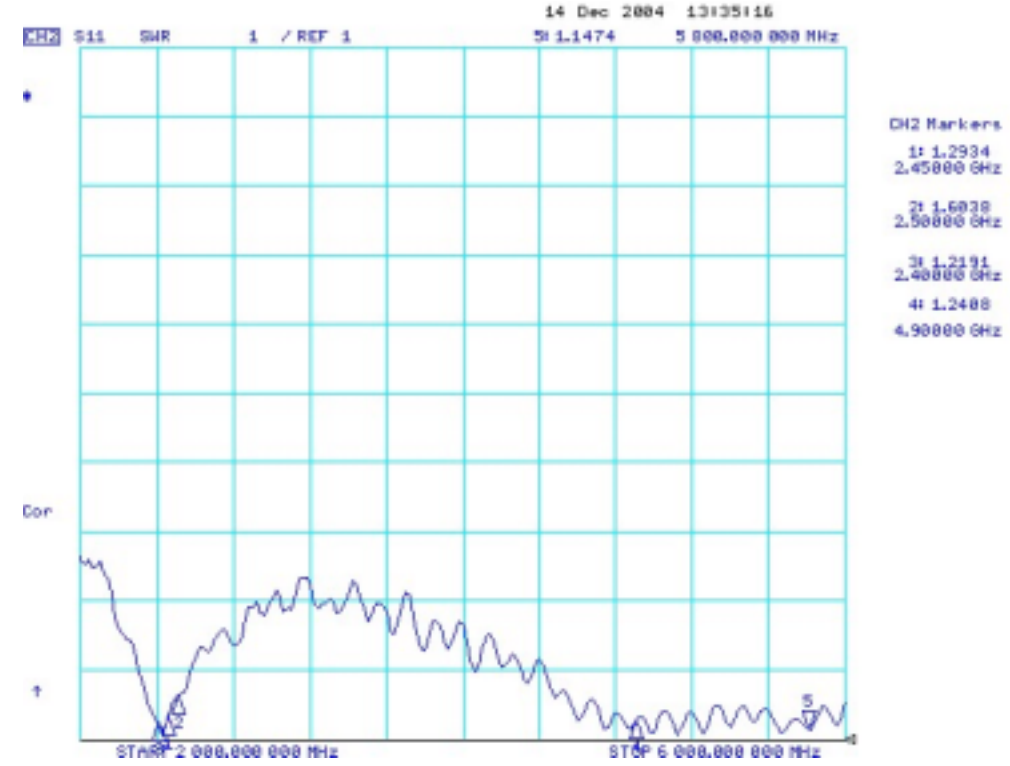


3. Return loss and VSWR and Isolation

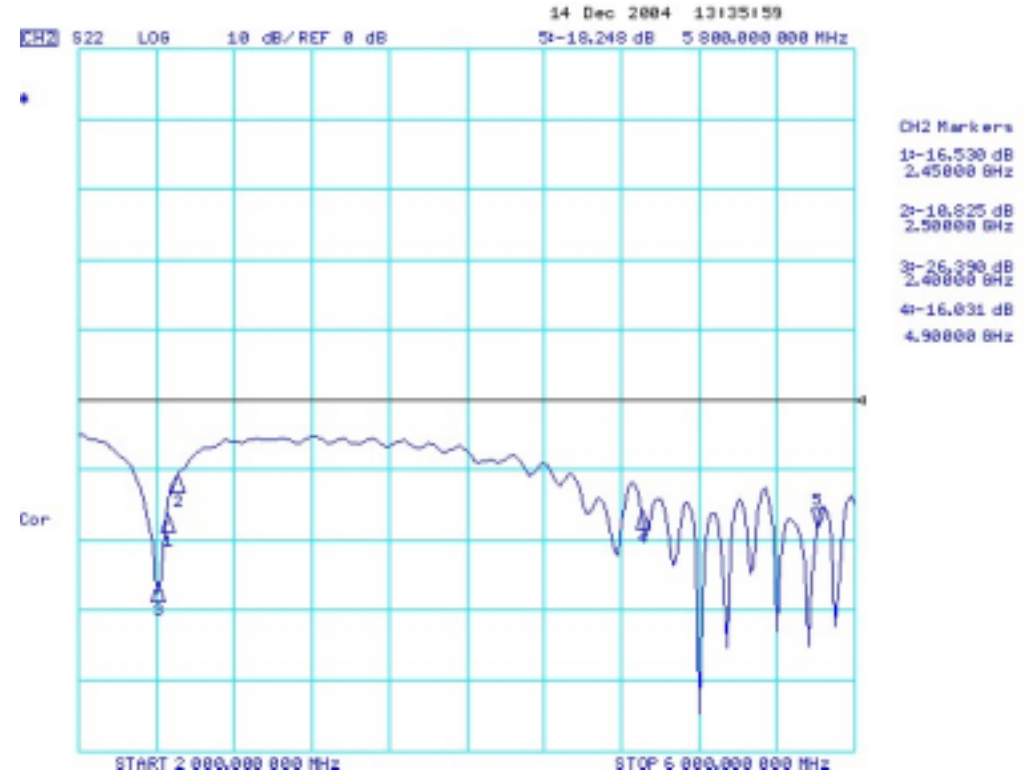
- Left antenna Return loss :



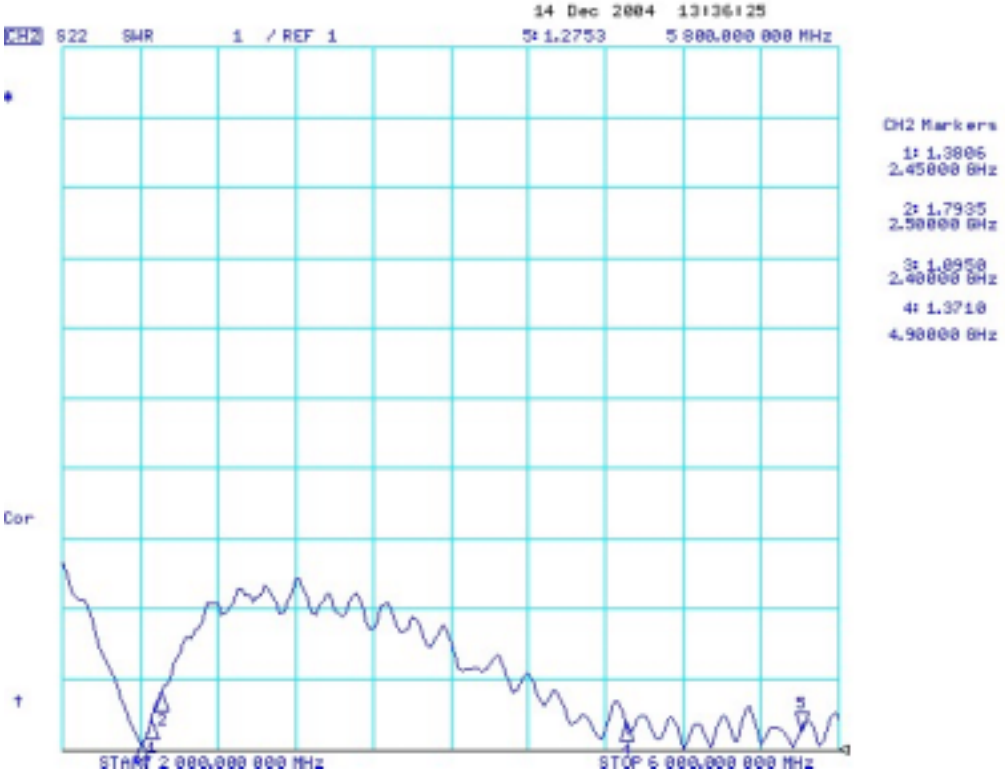
- Left antenna VSWR :



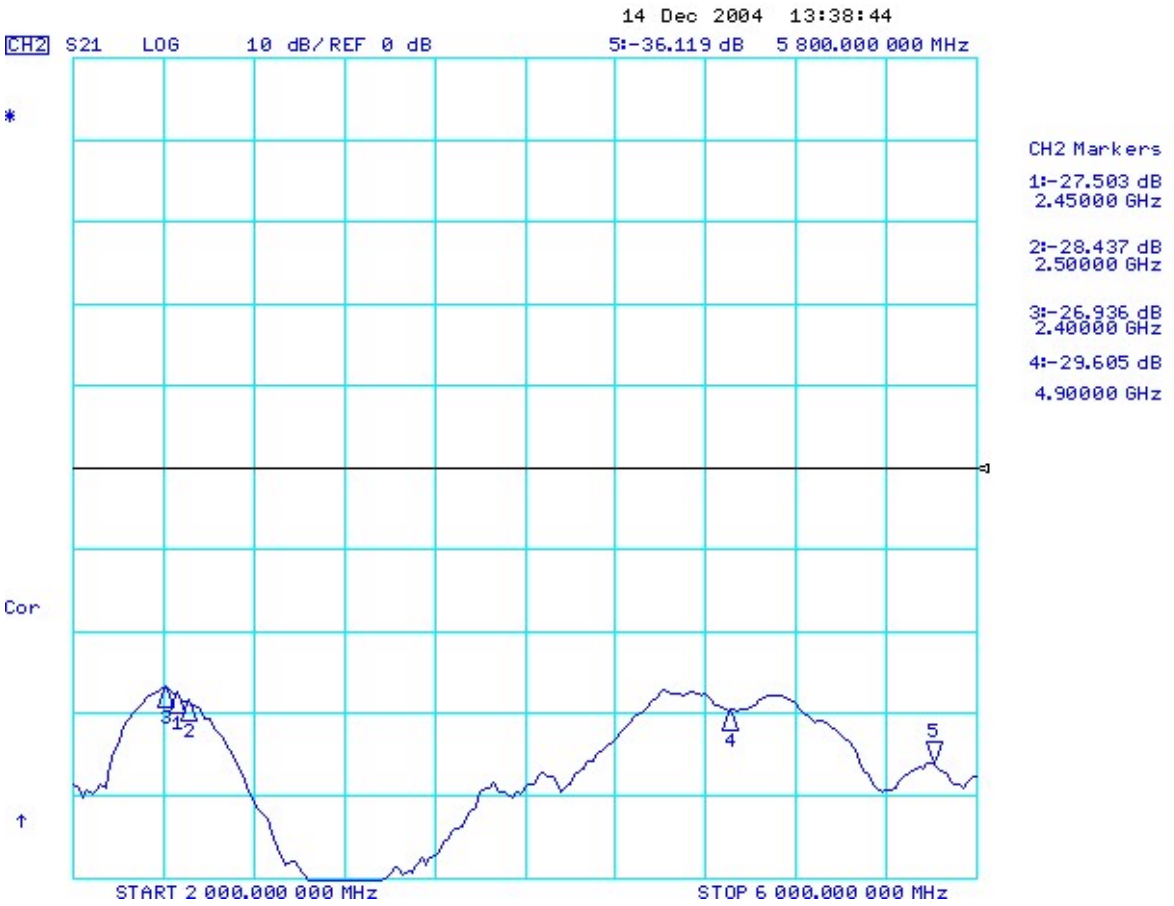
- Right antenna Return loss



- Right antenna VSWR :



* Isolation:

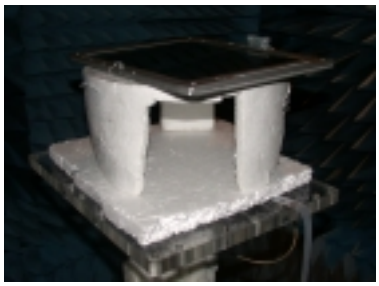


4. Radiation Patterns

Unit : dBi

Polarization directions : ⟷ parallel to paper

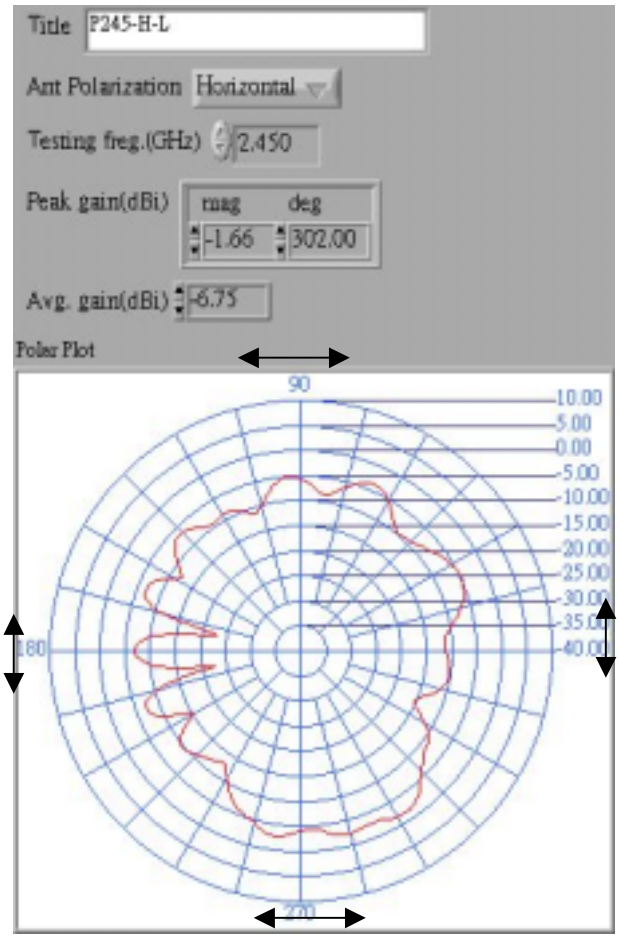
⊙ normal to paper



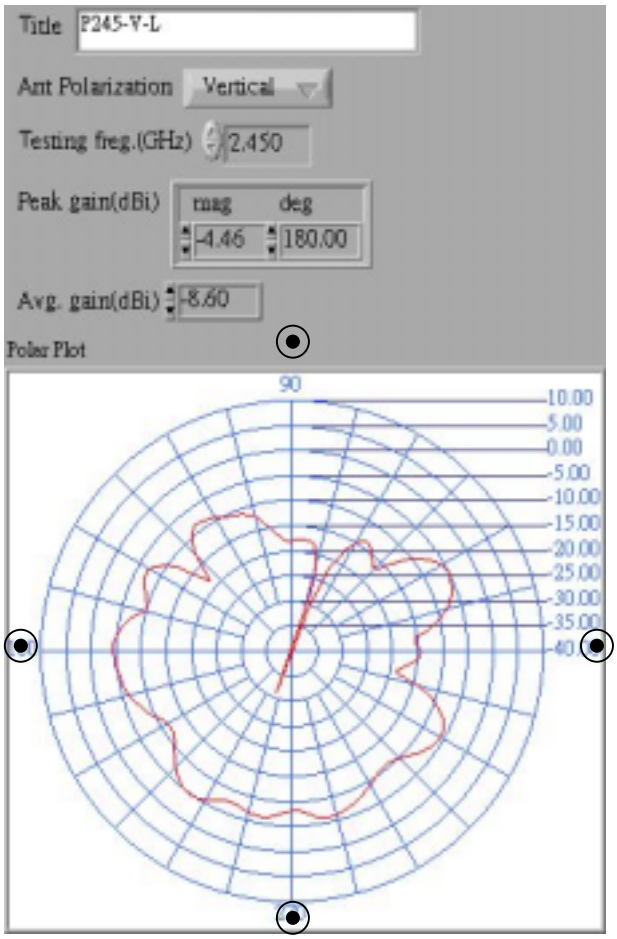
- Frequency = 2.45 GHz

  Left antenna

Horizontal Polarization



Vertical Polarization

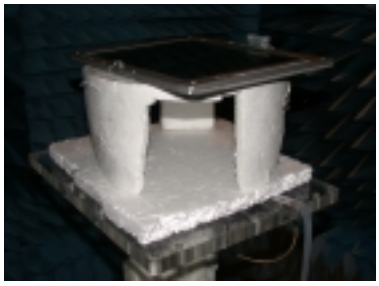


Peak Gain:-1.66dBi

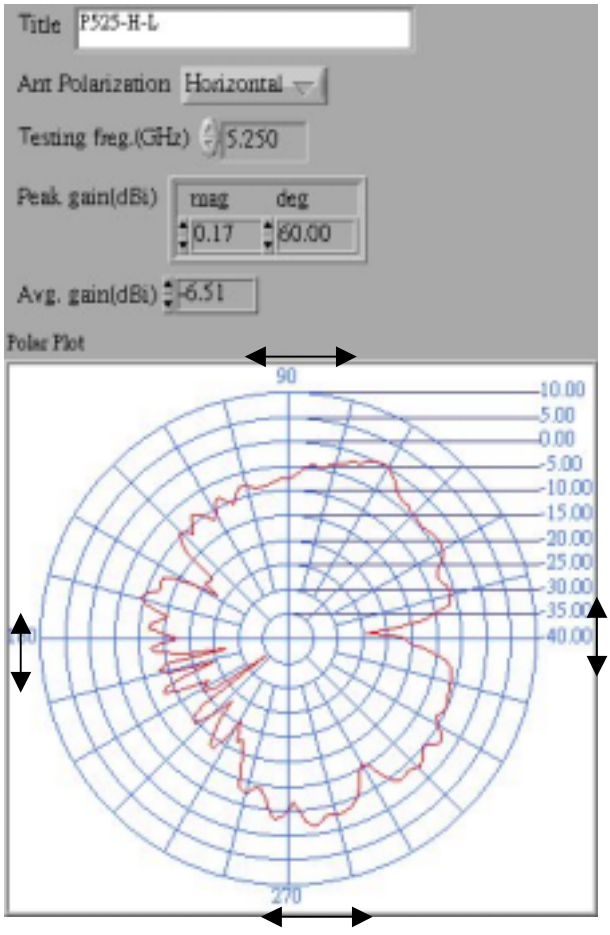
V+H Average Gain:-4.567dBi

- Frequency = 5.25 GHz

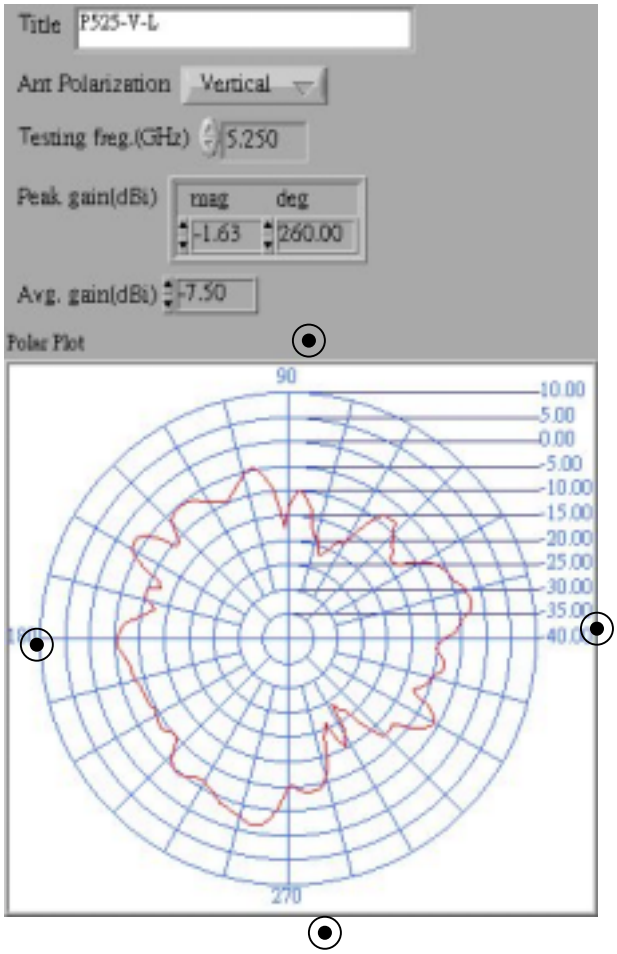
  Left antenna



Horizontal Polarization



Vertical Polarization

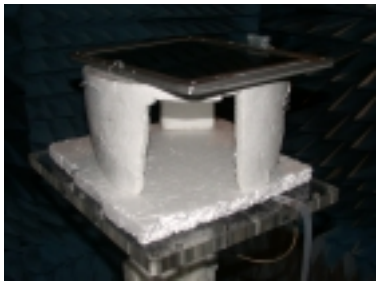


Peak Gain:0.17dBi

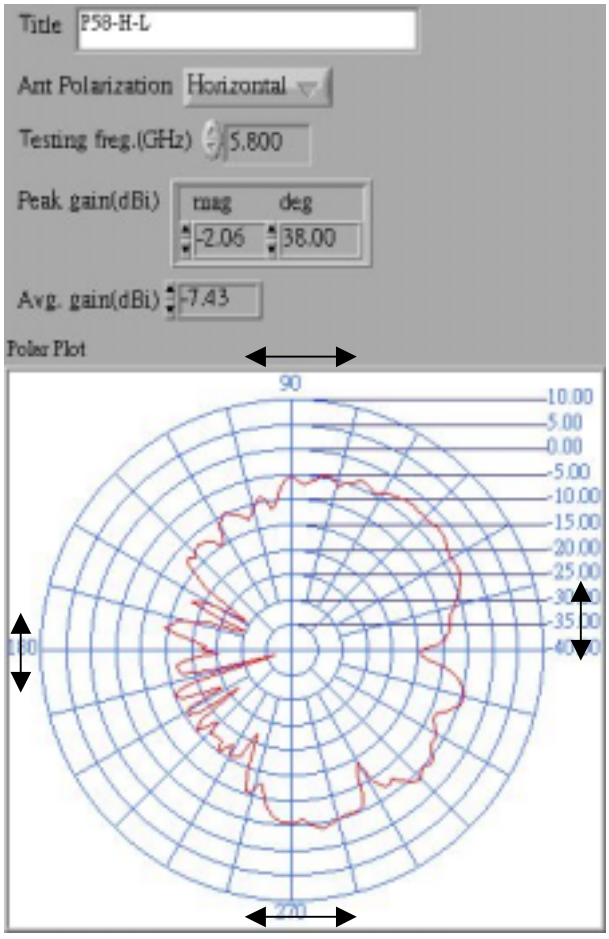
V+H Average Gain:-3.967dBi

- Frequency = 5.8 GHz

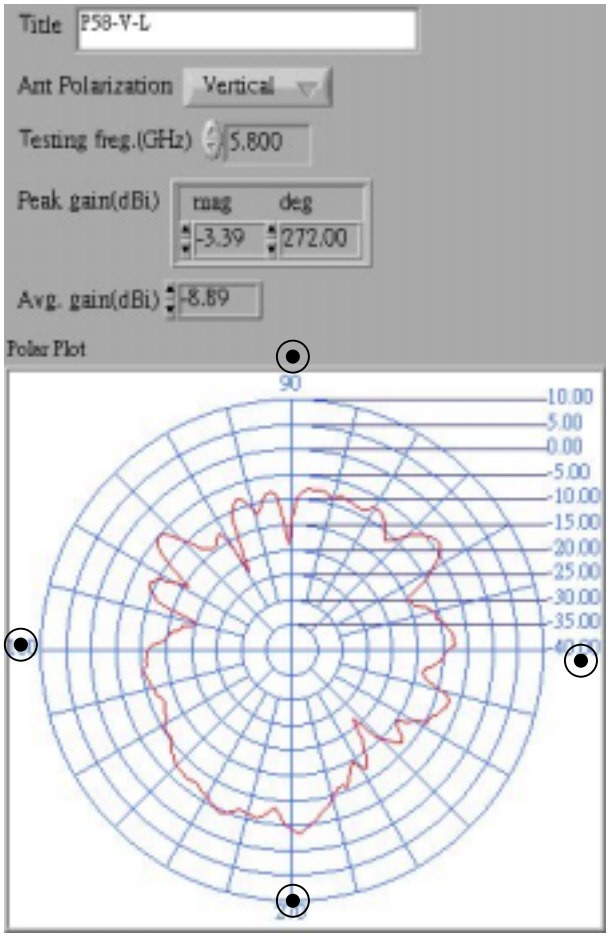
  Left antenna



Horizontal Polarization



Vertical Polarization

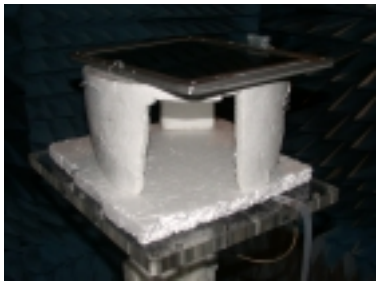


Peak Gain:-2.06dBi

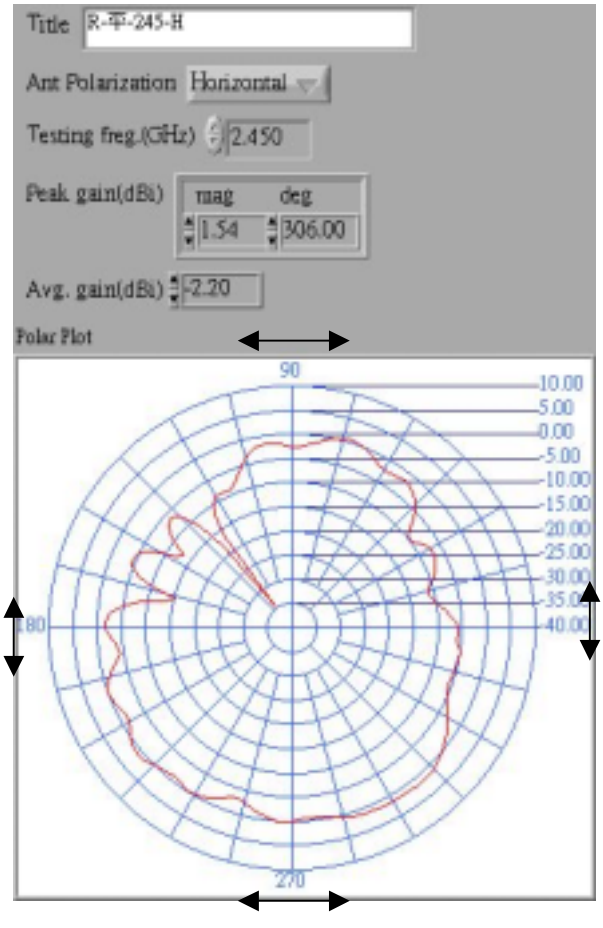
V+H Average Gain:-5.089dBi

- Frequency = 2.45GHz

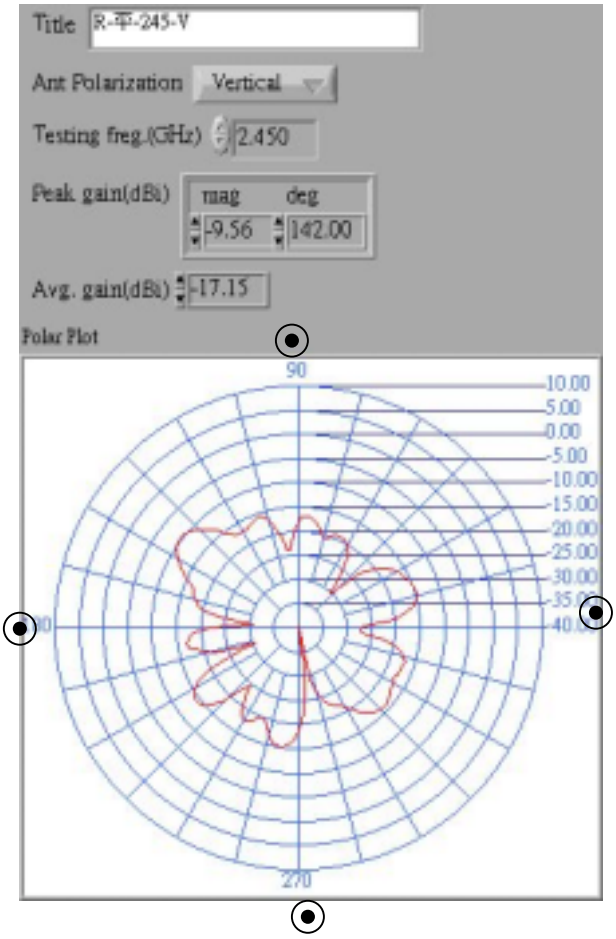
Right antenna



Horizontal Polarization



Vertical Polarization

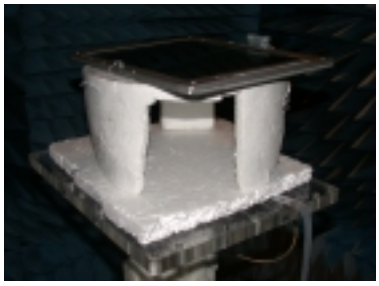


Peak Gain:1.54dBi

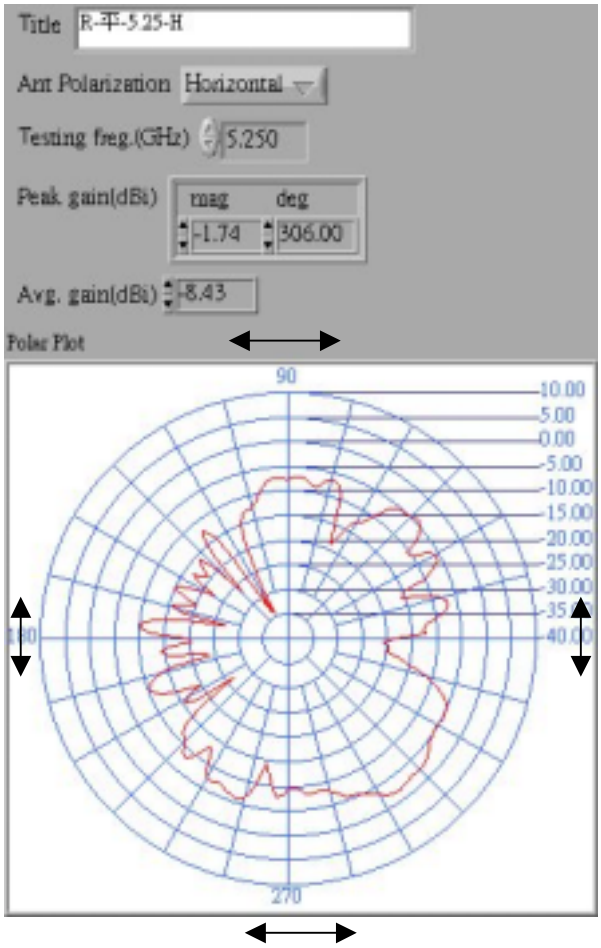
V+H Average Gain:-2.063dBi

- Frequency =5.25 GHz

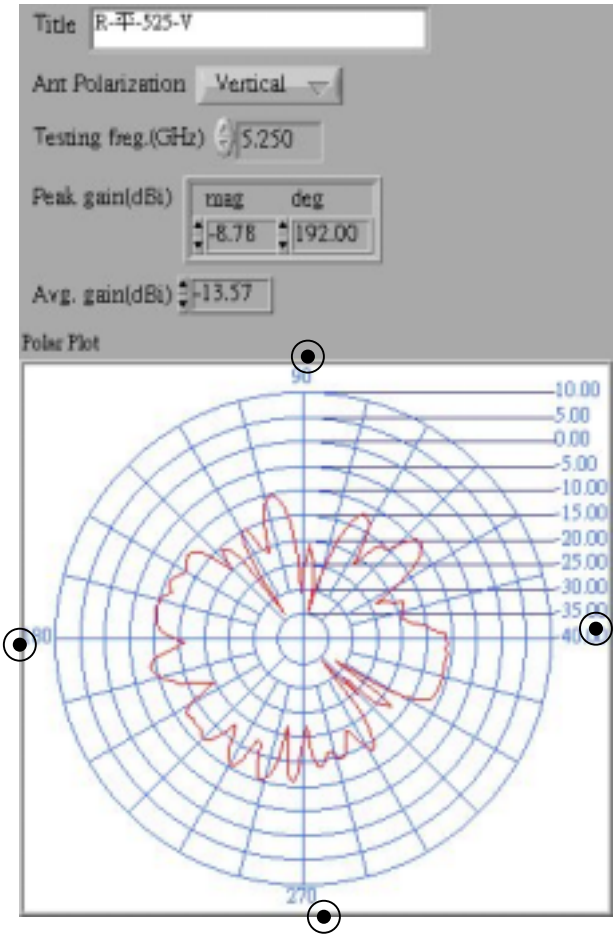
  Right antenna



Horizontal Polarization



Vertical Polarization

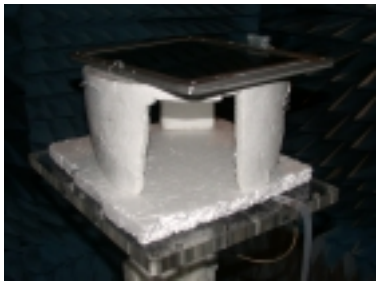


Peak Gain:-1.74dBi

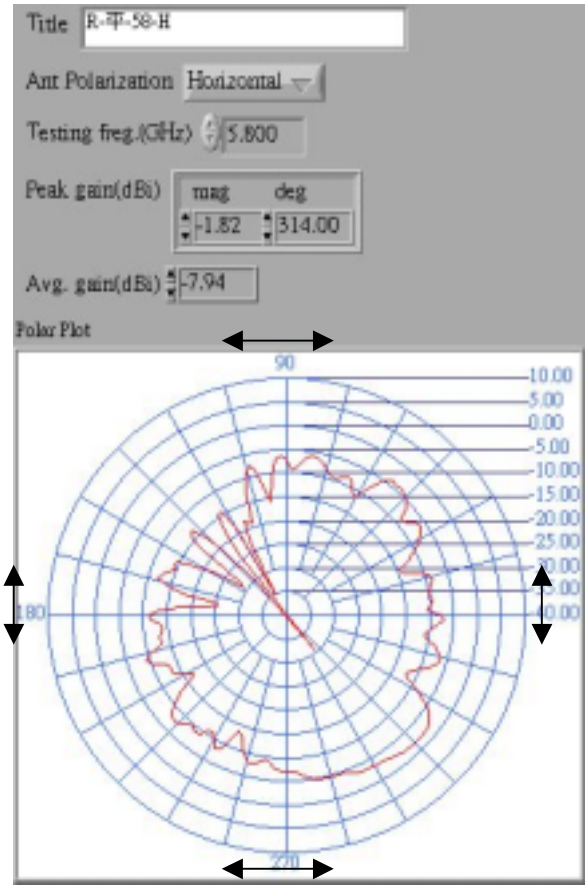
V+H Average Gain:-7.27dBi

- Frequency = 5.8 GHz

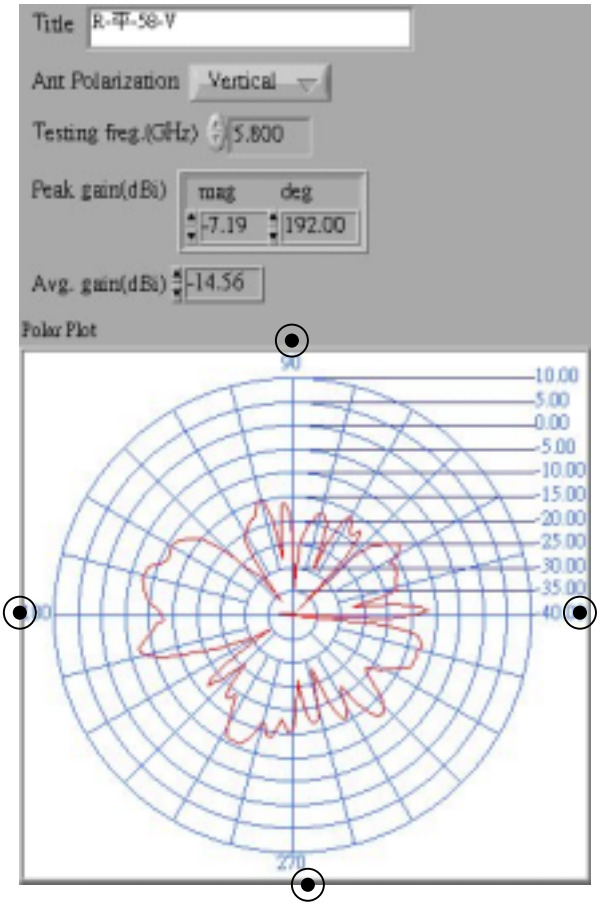
  Right antenna



Horizontal Polarization



Vertical Polarization



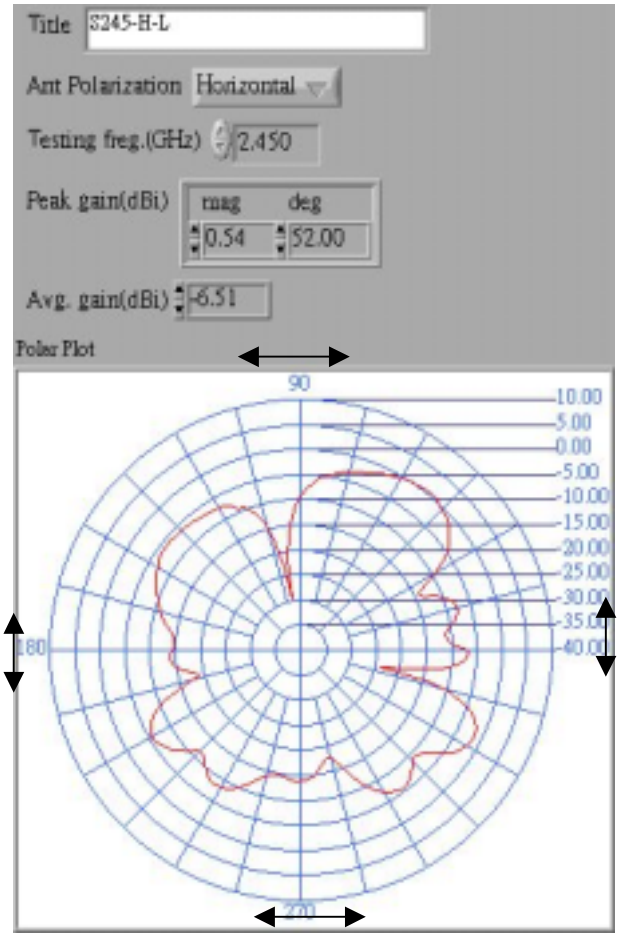
Peak Gain:-1.82dBi

V+H Average Gain:-7.084dBi

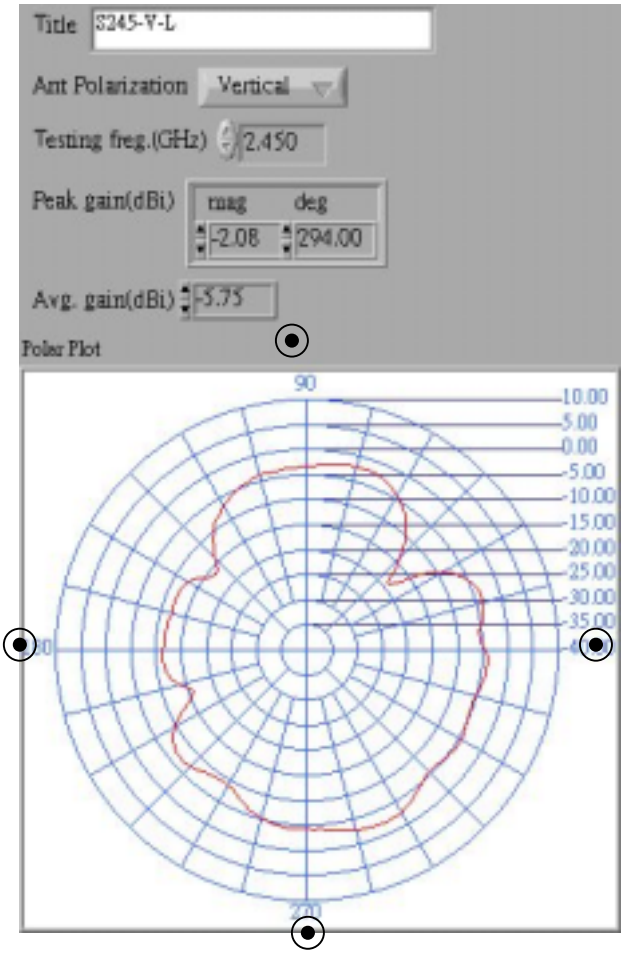
- Frequency = 2.45 GHz

  Left antenna

Horizontal Polarization



Vertical Polarization



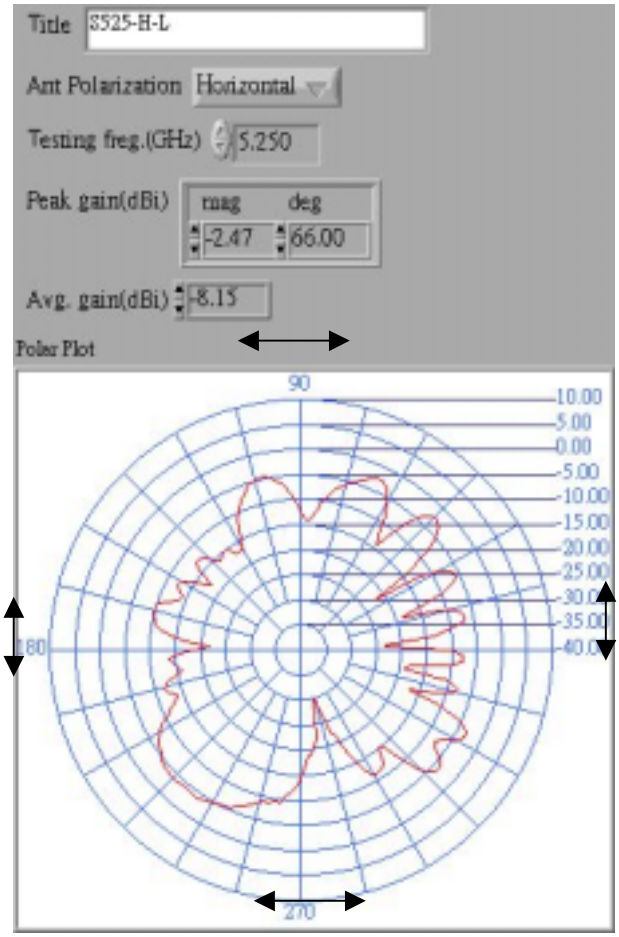
Peak Gain:0.54dBi

V+H Average Gain:-3.103dBi

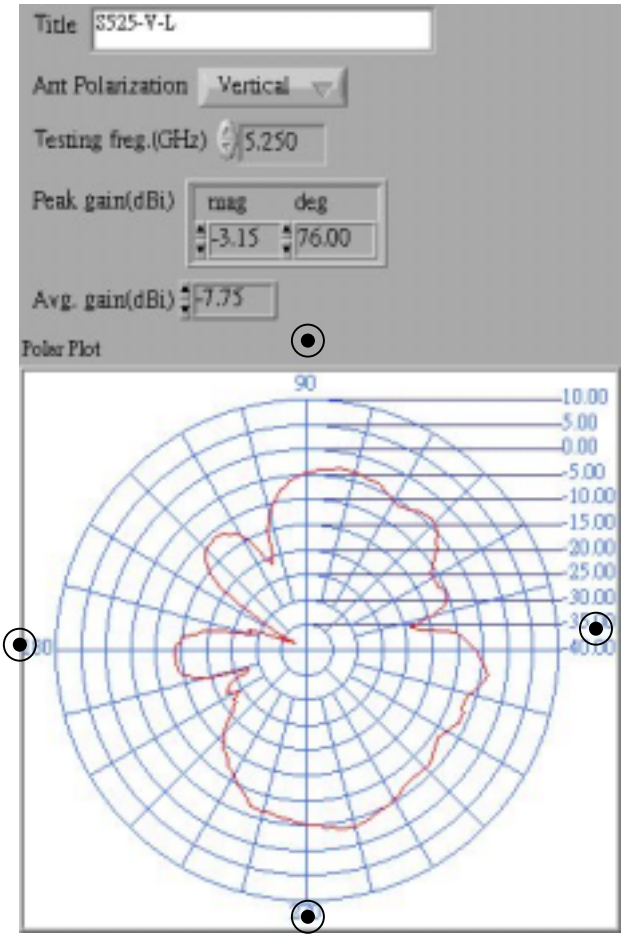
- Frequency = 5.25 GHz

  Left antenna

Horizontal Polarization



Vertical Polarization



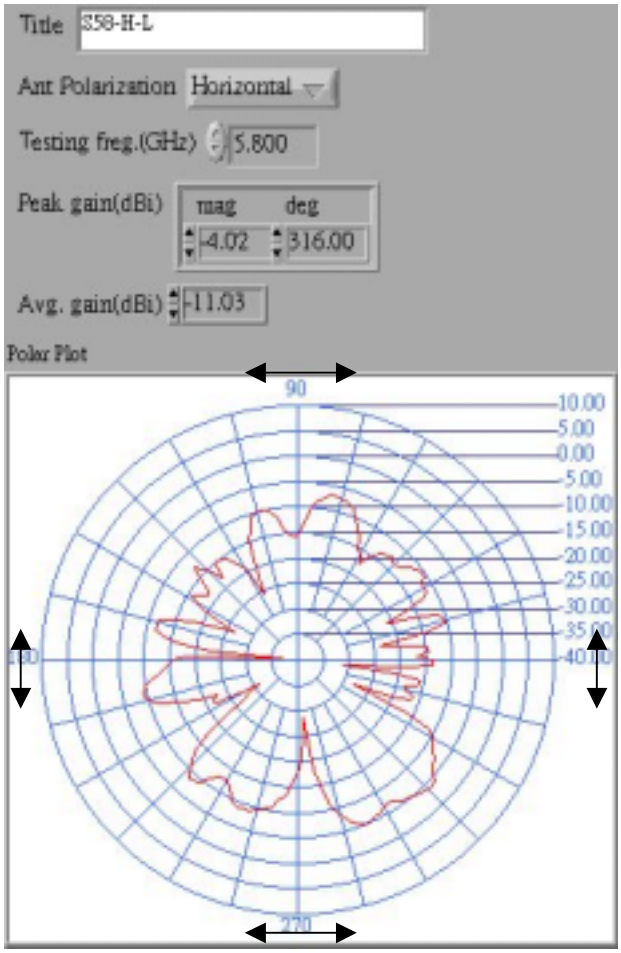
Peak Gain:-2.47dBi

V+H Average Gain:-4.935dBi

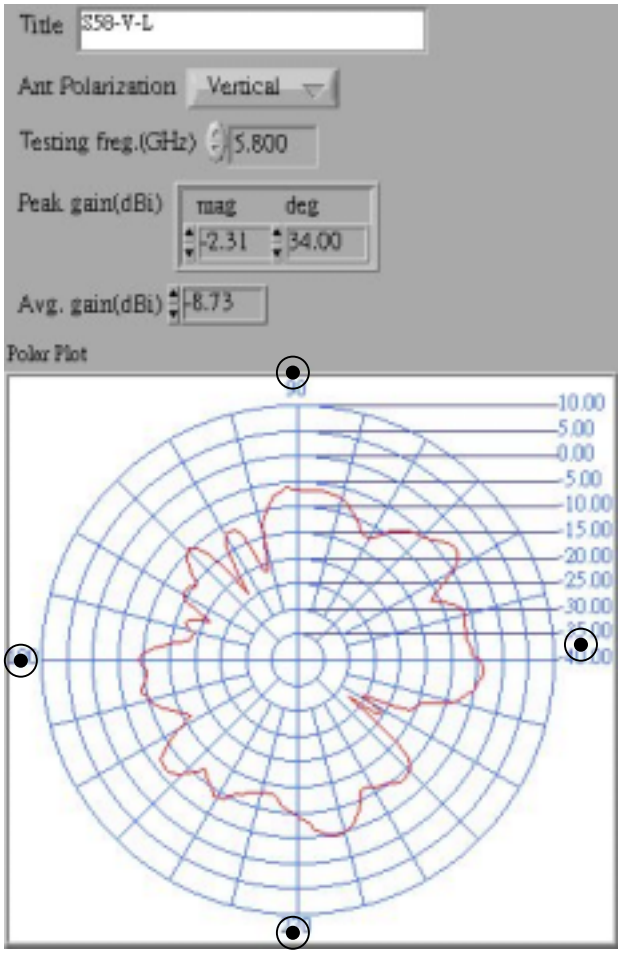
- Frequency = 5.8 GHz

  Left antenna

Horizontal Polarization



Vertical Polarization



Peak Gain:-2.31dBi

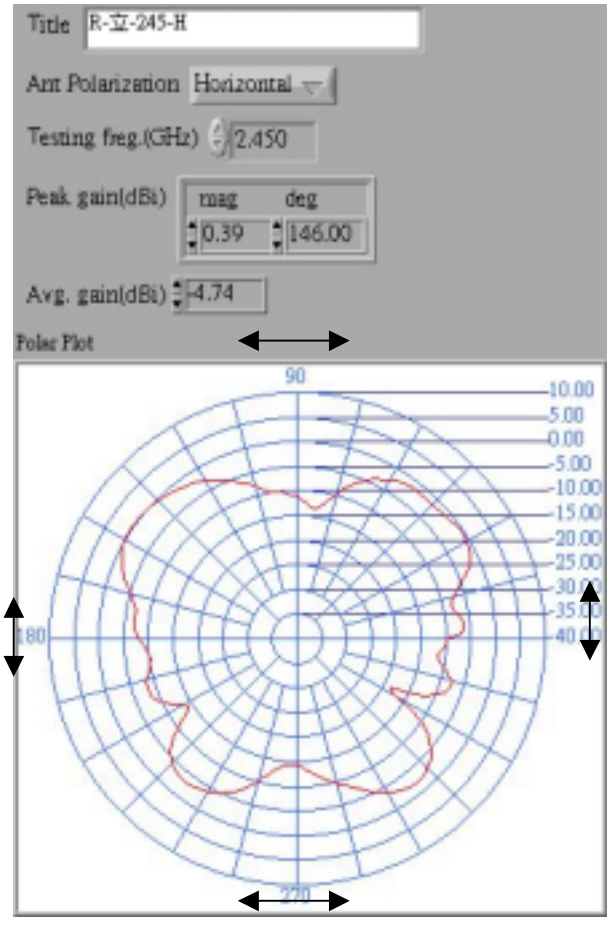
V+H Average Gain:-6.719dBi

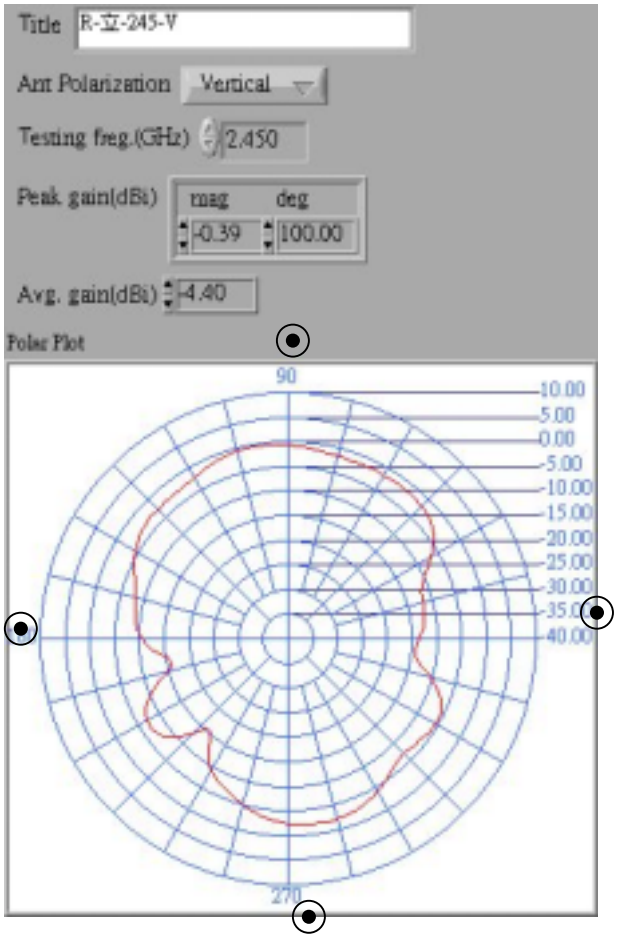
- Frequency = 2.45GHz

Right antenna

Horizontal Polarization

Vertical Polarization





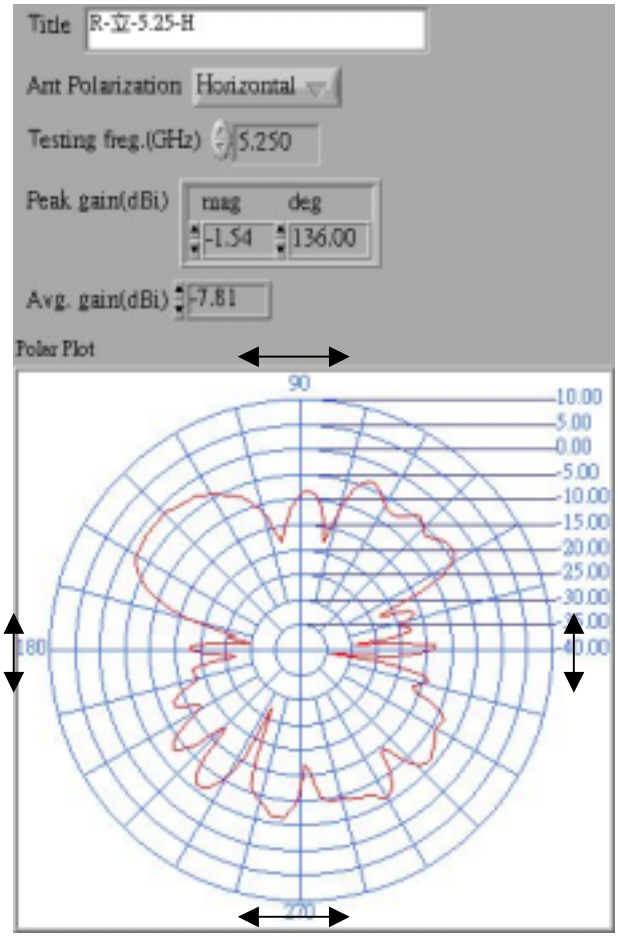
Peak Gain:0.39dBi

V+H Average Gain:-1.556dBi

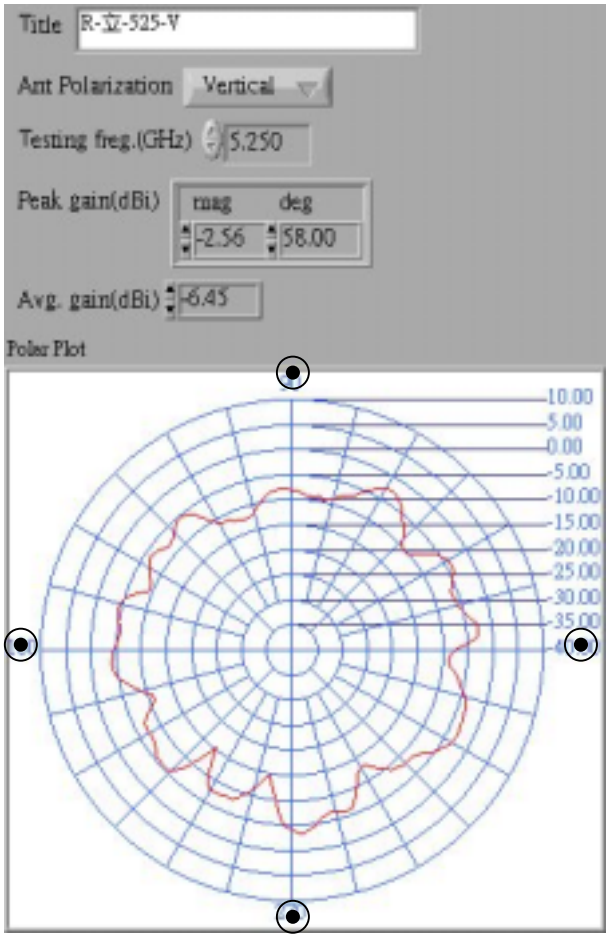
- Frequency =5.25 GHz

  Right antenna

Horizontal Polarization



Vertical Polarization



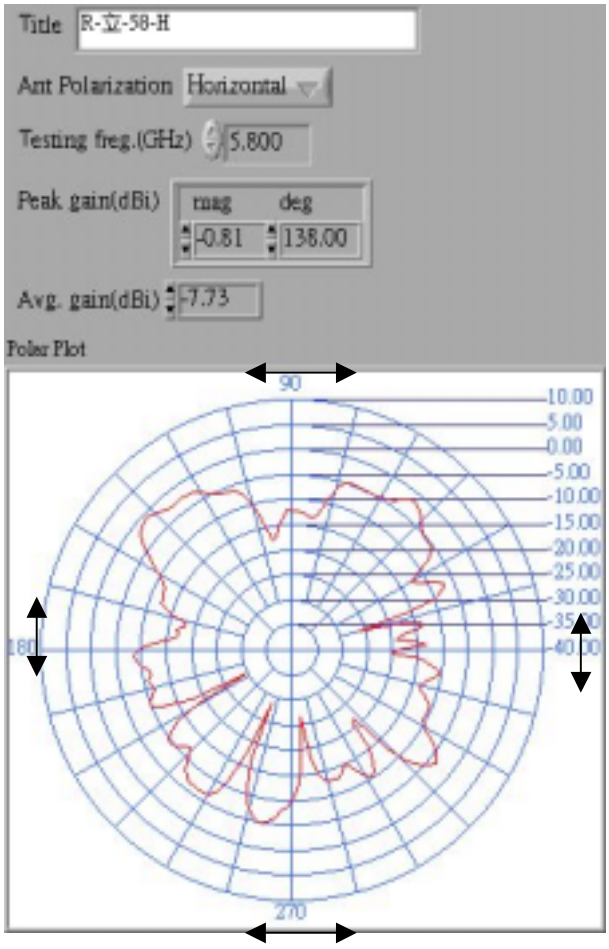
Peak Gain:-1.54dBi

V+H Average Gain:-4.067dBi

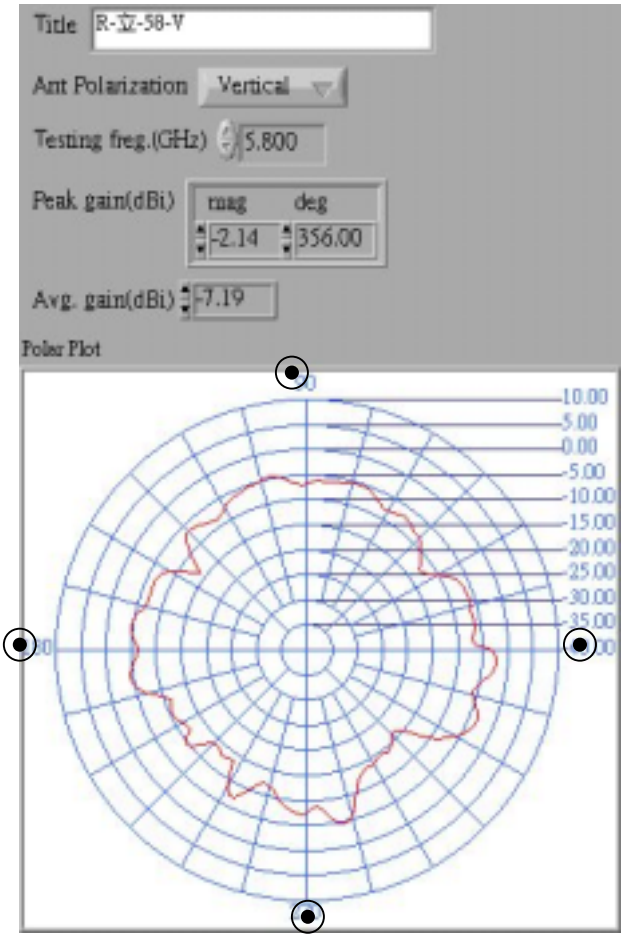
- Frequency = 5.8 GHz

  Right antenna

Horizontal Polarization



Vertical Polarization



Peak Gain:-0.81dBi

V+H Average Gain:-4.441dBi