

Asustek L5H Project Free space gain Report

PHYCOMP Dual Band Wireless LAN Antenna

Reported by:

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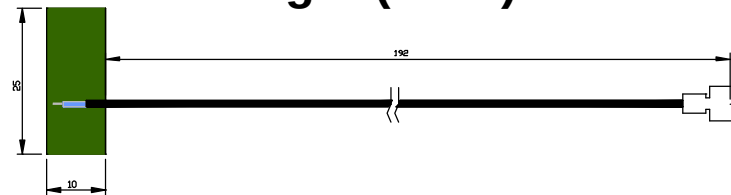
Date: Apr. 10, 2003



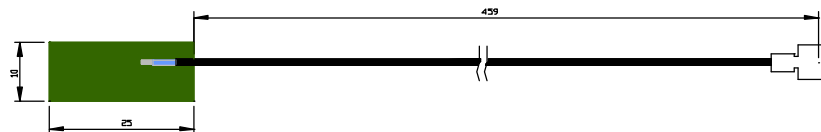
1. Antenna Dimension

PCB Thickness 0.4mm

L5H Right (Main) Antenna

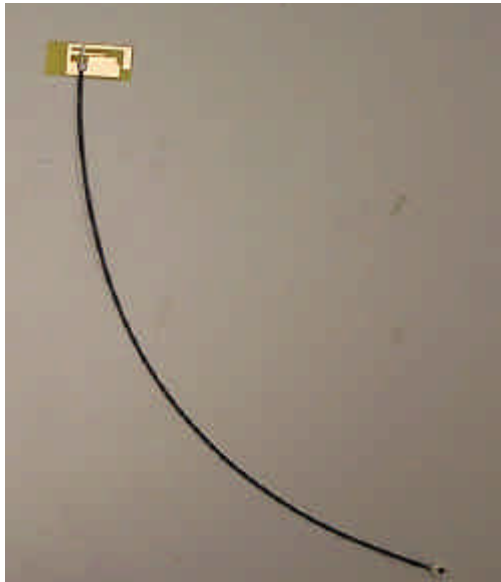


L5H Left (Aux) Antenna



Antenna Substance

Right (Main) Antenna

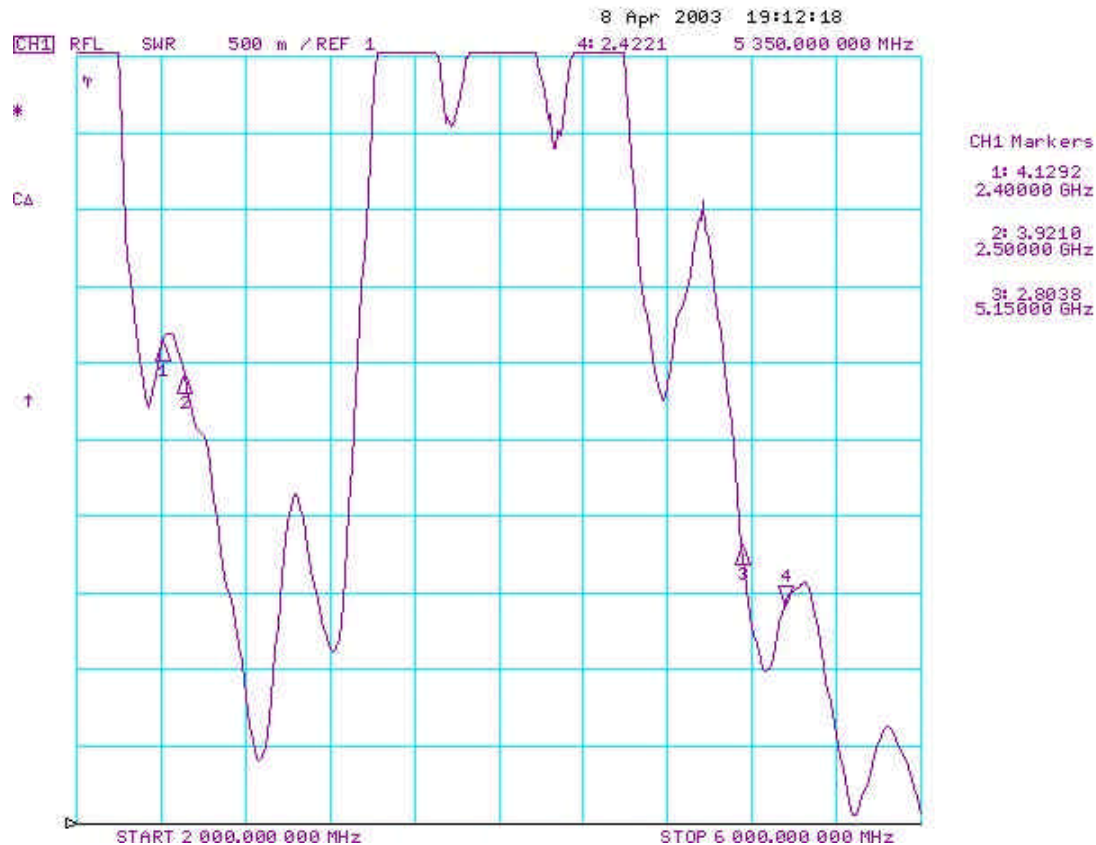


Left (Aux) Antenna



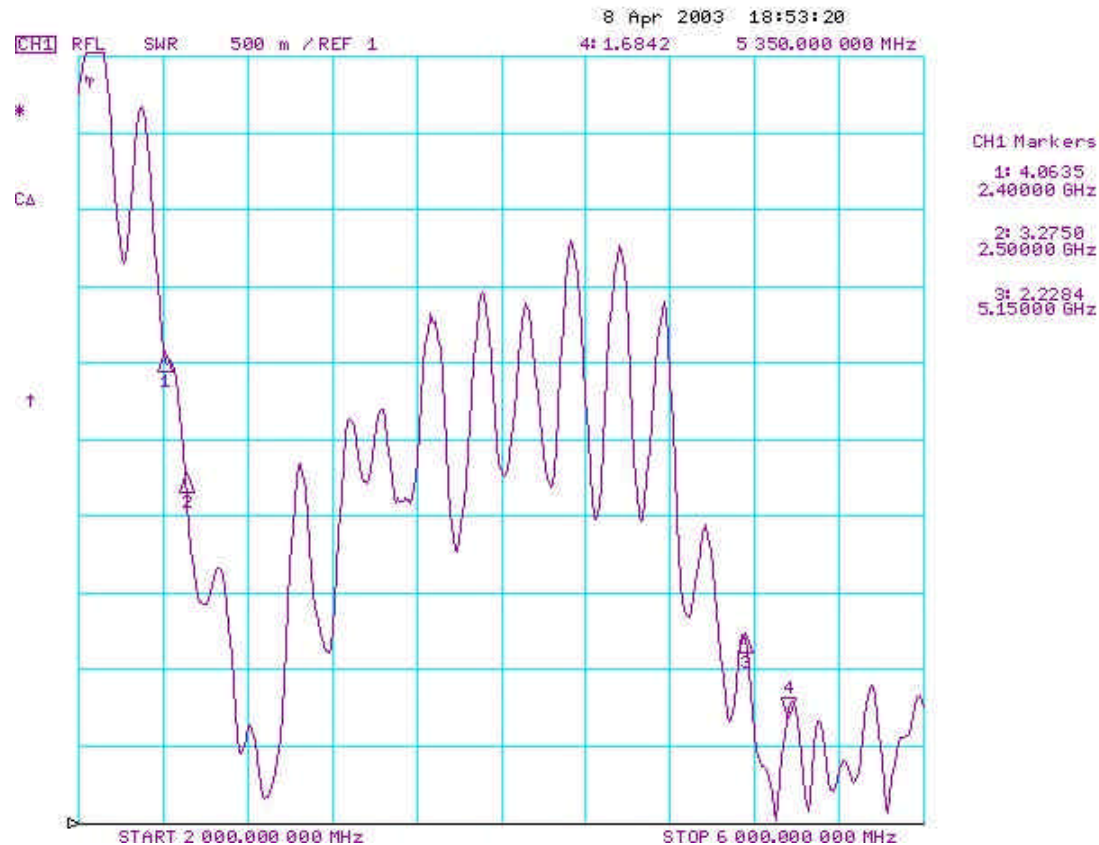
2. Free space Frequency response

- Right (Main) Antenna with 192mm cable length



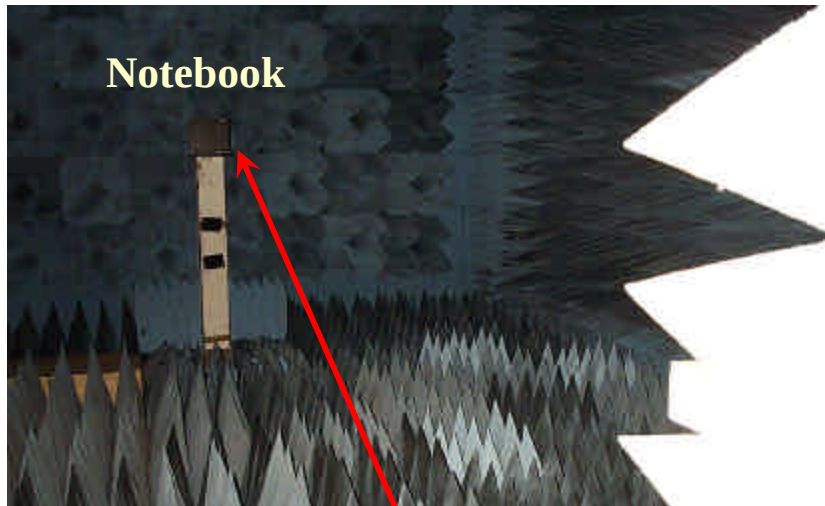
IEEE 802.11 b (2.4~2.5GHz) + 11a (5.15~5.35GHz) Dual Band

2. Free Space Frequency response - Left (Aux) Antenna with 459mm cable length



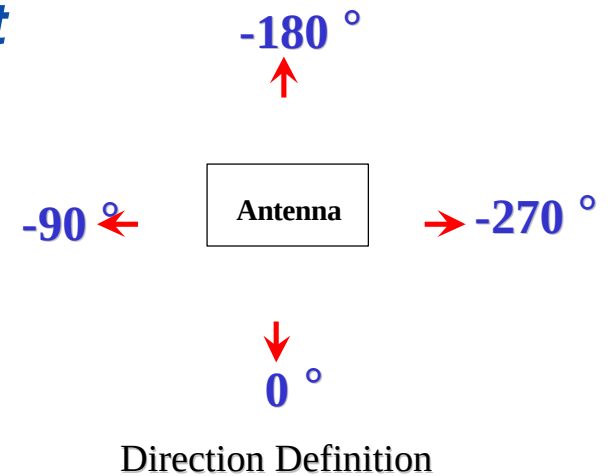
IEEE 802.11 b (2.4~2.5GHz) + 11a (5.15~5.35GHz) Dual Band

3. Radiation Pattern Measurement - The Anechoic Chamber



Notebook

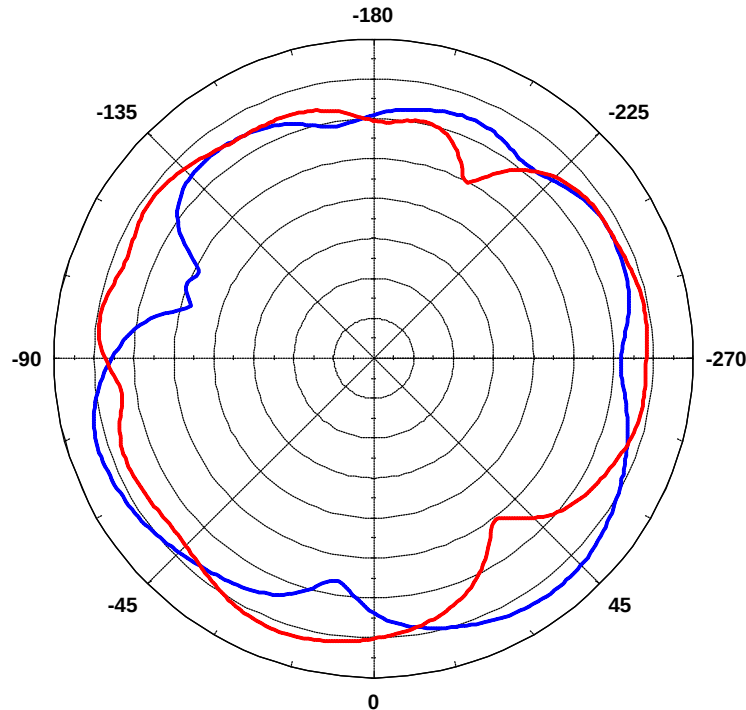
Measurement



Standard Horn Antenna

3. Free Space Radiation Pattern Measurement

- Right (Main) Antenna with 192mm cable length @2.412GHz

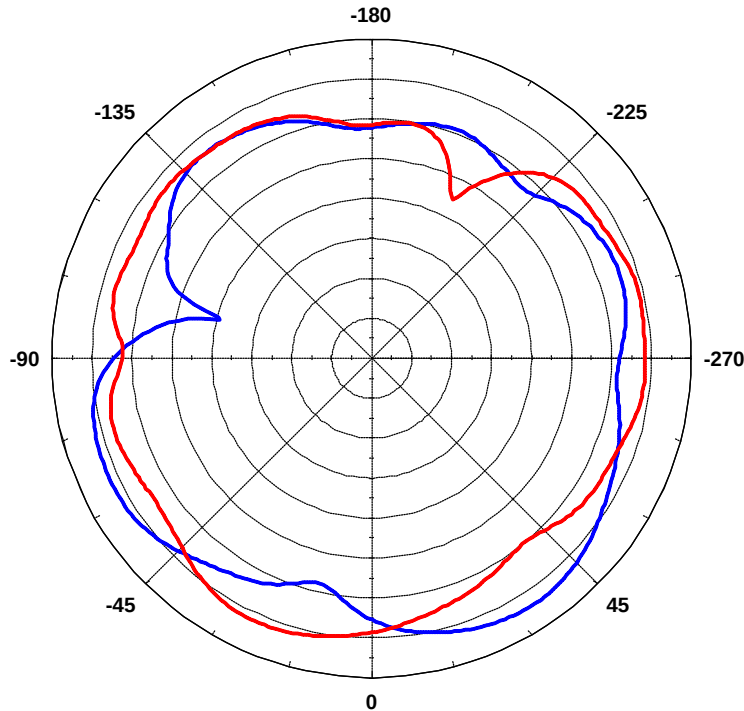


— Vertical Polarization
— Horizontal Polarization

Vertical Pol.(max)=	-2.6
Vertical Pol.(avg)=	-8.1
Horizontal Pol.(max)=	-1.3
Horizontal Pol.(avg)=	-7.3
Total Gain(max)=	-1.3
Total Gain(avg)=	-5.5

3. Free Space Radiation Pattern Measurement

- Right (Main) Antenna with 192mm cable length @2.437GHz

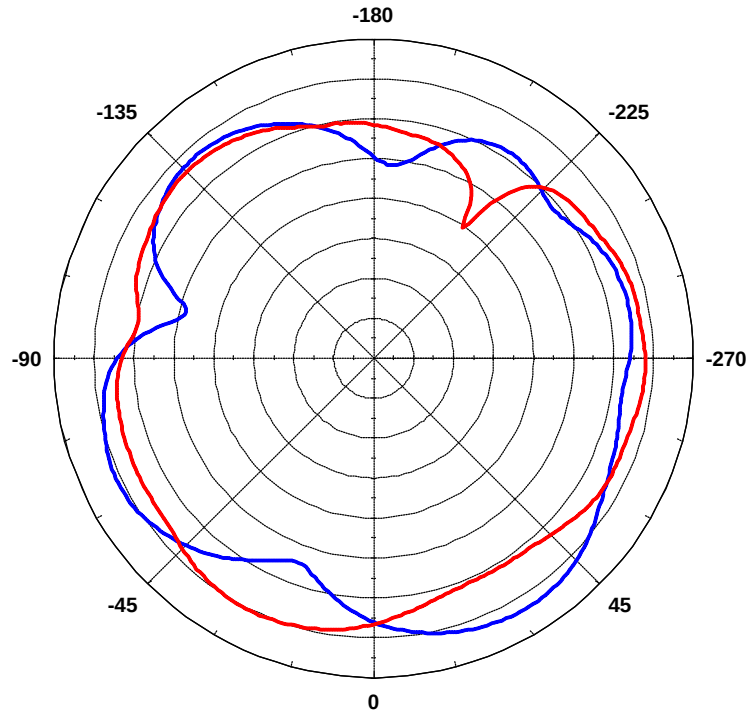


— Vertical Polarization
— Horizontal Polarization

Vertical Pol.(max)=	-2.9
Vertical Pol.(avg)=	-8.5
Horizontal Pol.(max)=	-1.2
Horizontal Pol.(avg)=	-7.7
Total Gain(max)=	-1.2
Total Gain(avg)=	-5.9

3. Free Space Radiation Pattern Measurement

- Right (Main) Antenna with 192mm cable length @2.462GHz

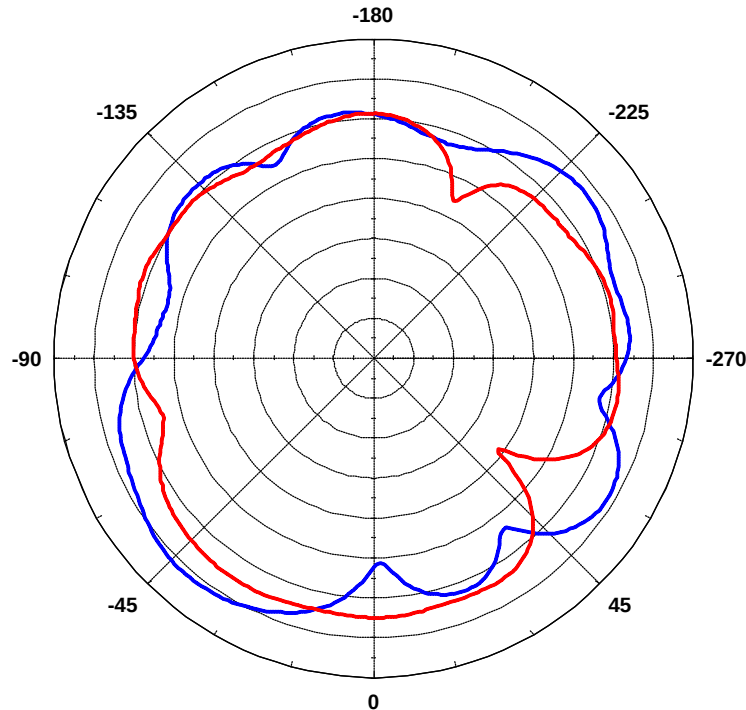


— Vertical Polarization
— Horizontal Polarization

Vertical Pol.(max)=	-4.6
Vertical Pol.(avg)=	-9.7
Horizontal Pol.(max)=	-1.6
Horizontal Pol.(avg)=	-8.3
Total Gain(max)=	-1.6
Total Gain(avg)=	-6.8

3. Free Space Radiation Pattern Measurement

- Left (Aux) Antenna with 459mm cable length @2.412GHz

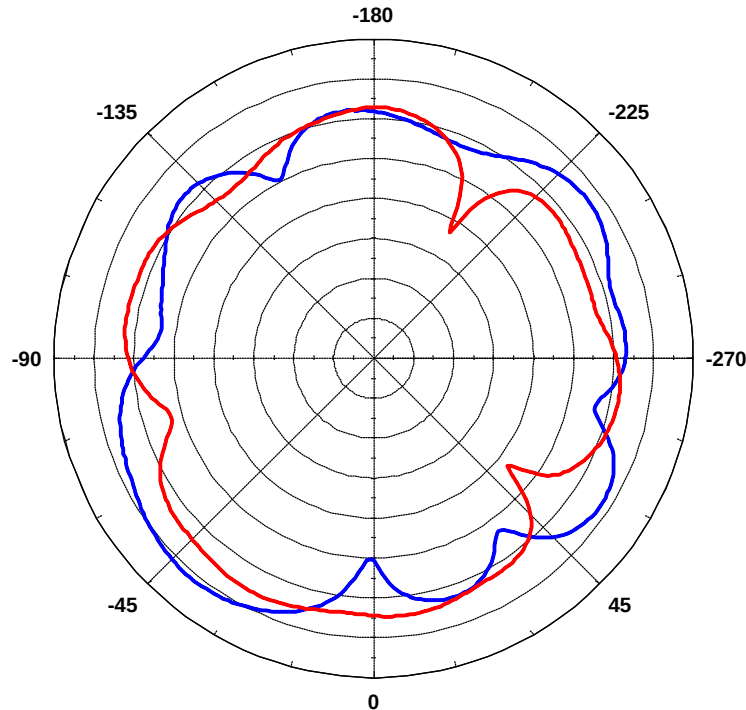


— Vertical Polarization
— Horizontal Polarization

Vertical Pol.(max)=	-9.6
Vertical Pol.(avg)=	-13.7
Horizontal Pol.(max)=	-3.3
Horizontal Pol.(avg)=	-10.2
Total Gain(max)=	-3.2
Total Gain(avg)=	-9.4

3. Free Space Radiation Pattern Measurement

- Left (Aux) Antenna with 459mm cable length @2.437GHz

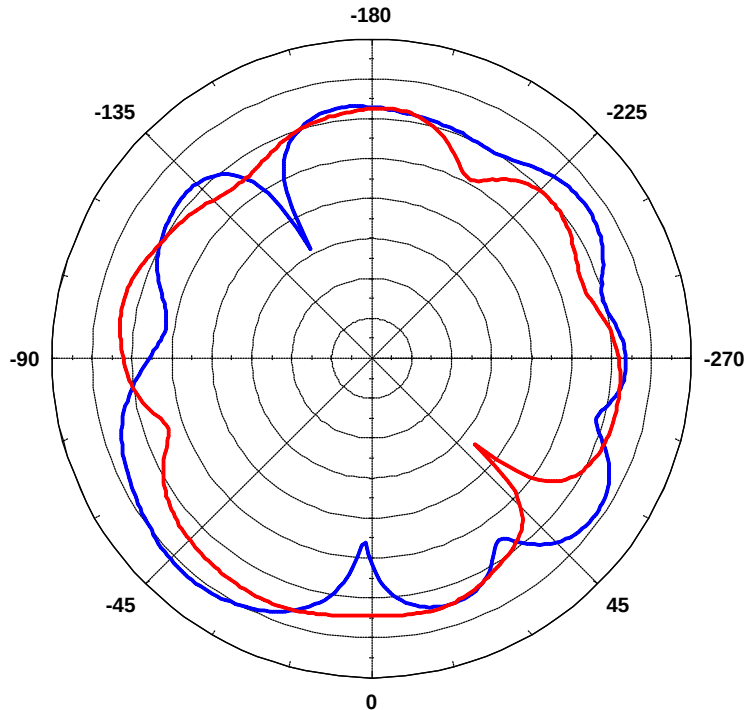


— Vertical Polarization
— Horizontal Polarization

Vertical Pol.(max)=	-9.0
Vertical Pol.(avg)=	-13.6
Horizontal Pol.(max)=	-3.3
Horizontal Pol.(avg)=	-10.4
Total Gain(max)=	-3.3
Total Gain(avg)=	-9.6

3. Free Space Radiation Pattern Measurement

- Left (Aux) Antenna with 459mm cable length @2.462GHz



— Vertical Polarization
— Horizontal Polarization

Vertical Pol.(max)=	-8.7
Vertical Pol.(avg)=	-13.3
Horizontal Pol.(max)=	-3.5
Horizontal Pol.(avg)=	-10.4
Total Gain(max)=	-3.4
Total Gain(avg)=	-9.5