

5. Antenna Test

5.1 FIC 802.11b, 802.11g Specification

- 5.1.1 Frequency range : 2.4 – 2.5GHz
- 5.1.2 Impedance : 50Ω
- 5.1.3 LCD Panel : Open (90^0)
- 5.1.4 System Plane : XY plane
- 5.1.5 VSWR : ≤ 2
- 5.1.6 Return Loss : $\leq -10\text{dB}$
- 5.1.7 Average gain & Peak gain

5.2.1 VSWR Test

Test condition

Connector : **I-PEX**

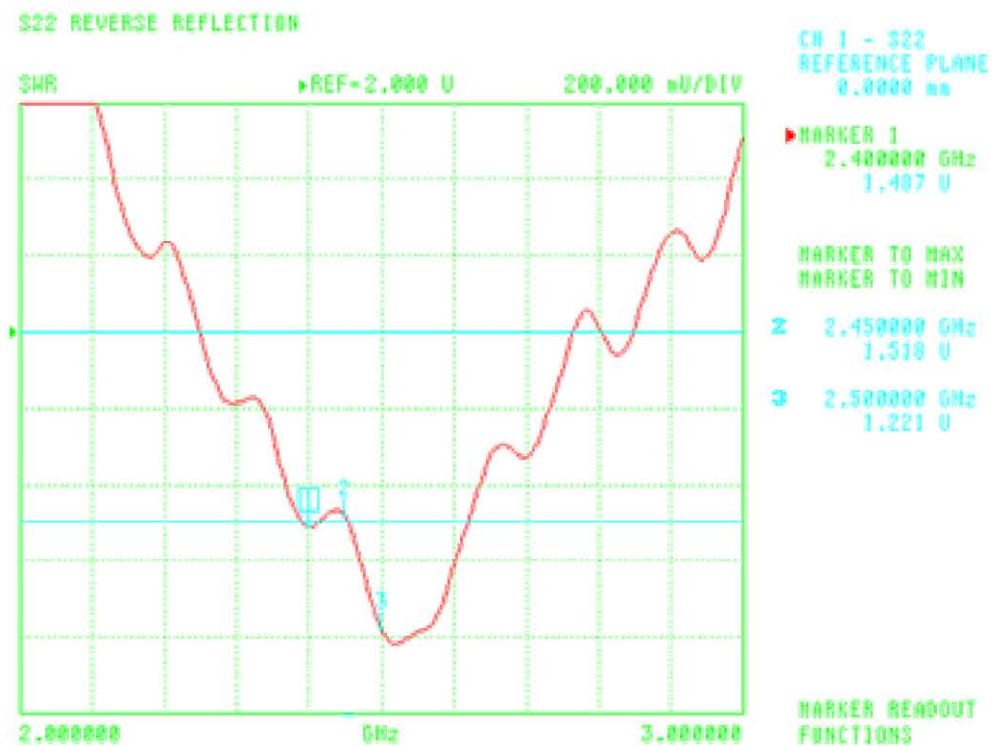
Adopter : **HRMP-U.FLJ** (Hirose Electric CO.,LTD)

Network analyzer : **HP 8753D**

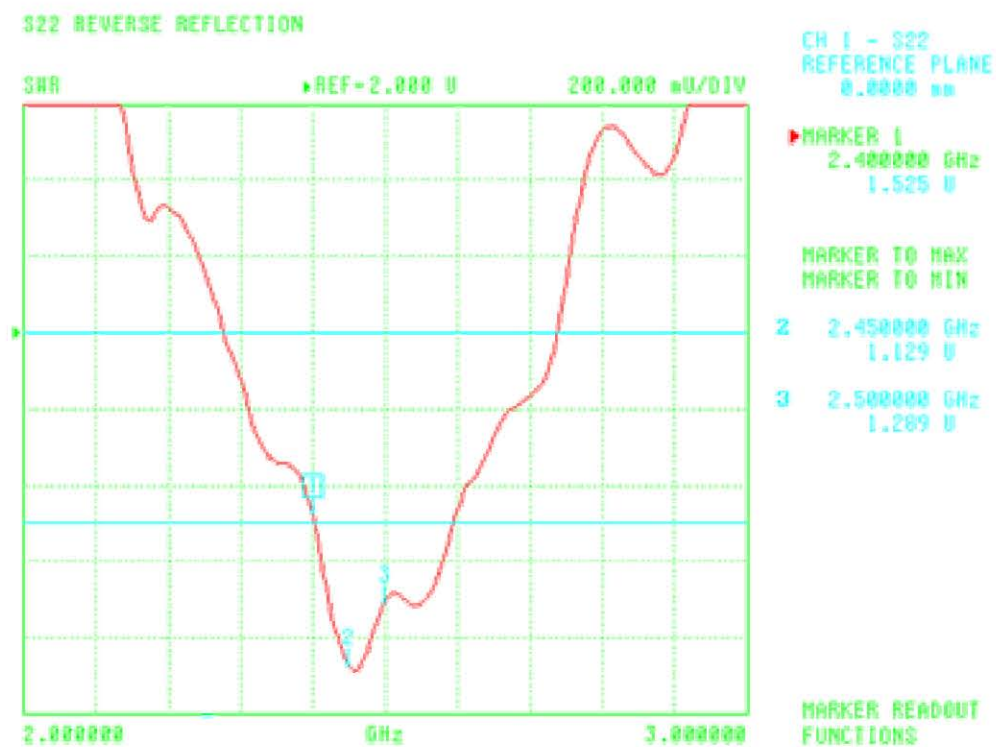
Housing : **LM7W Notebook**

5.2.2 VSWR Test Result

LCD Right Side Antenna for WLAN (Main antenna)



LCD Left Side Antenna for WLAN (Auxiliary antenna)



5.3 Antenna Gain Test

Gain & Radiation Pattern Test

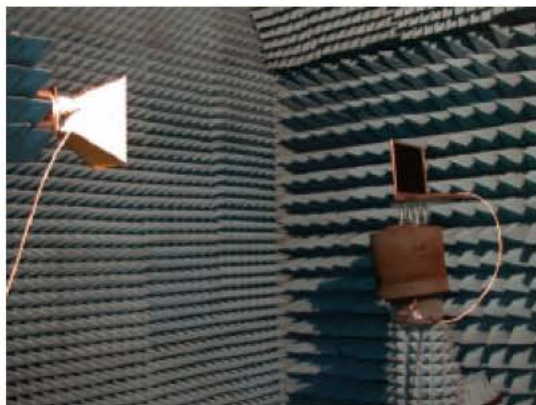
Test condition

Network Analyzer : HP 8722D 30kHz ~ 40 GHz

Standard gain horn : EMCO Model 3115 Double Ridged Guide Antenna 1~18 GHz

Anechoic Chamber : Antcom NFH003 (5' x5' x5') Hybrid Near-field System

- * 450 MHz - 40 GHz
- * 7 axes scanner system
- * Planar, cylindrical, and spherical scanning
- * Far-field scan option



5.3.1 Antenna Gain Test

Gain Test: Left Antenna

Frequency (MHz)	Peak Gain (dBi)	Average Gain (dBi)
2400	0.78	-3.14
2450	0.23	-3.76
2500	1.12	-3.40

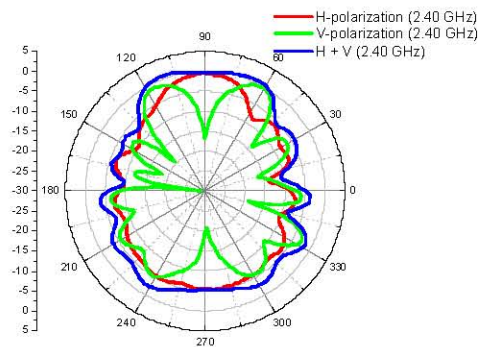
Gain Test: Right Antenna

Frequency (MHz)	Peak Gain (dBi)	Average Gain (dBi)
2400	2.27	-2.35
2450	2.67	-2.11
2500	2.52	-2.20

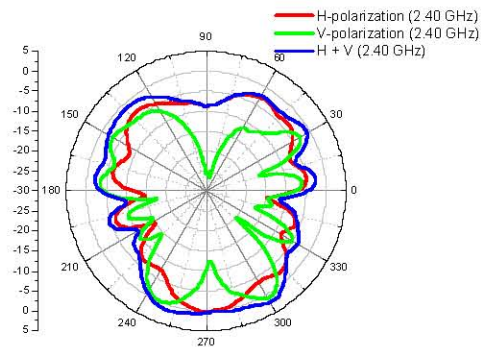
5.3.2 Antenna Radiation Pattern

Radiation Pattern Test Result: 2400 MHz

Left Antenna

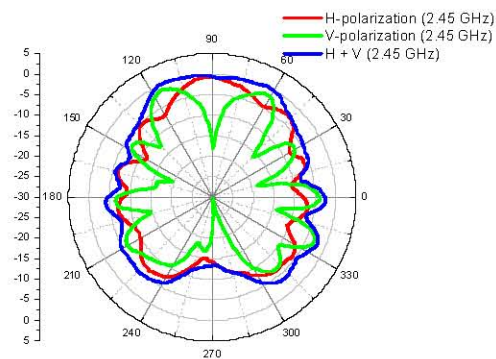


Right Antenna

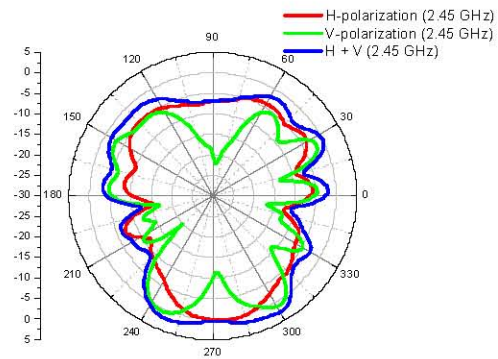


Radiation Pattern Test Result: 2450 MHz

Left Antenna

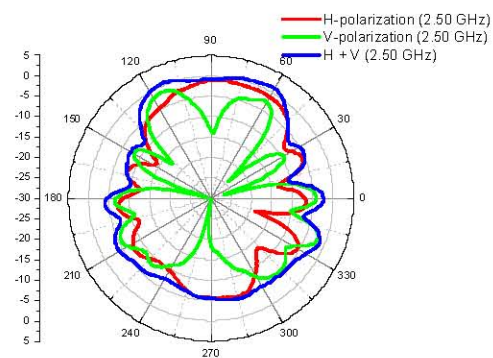


Right Antenna



Radiation Pattern Test Result: 2500 MHz

Left Antenna



Right Antenna

