

# Data Sheet

CUSTOMER: ASUS

MODEL NAME: F80-series(F80L/S/Cr)

A-CON P/N: APP6P-700136

APP6P-700137



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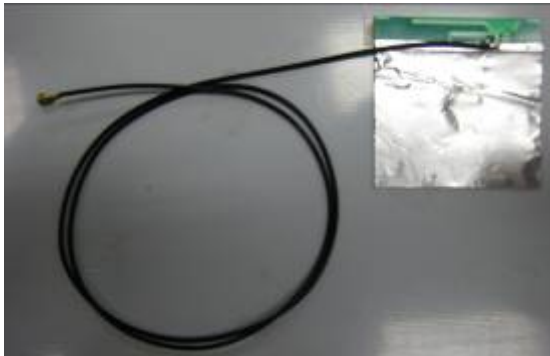
1. Description-----	1
1.1 Specifications-----	1
1.2 Antenna Pictures-----	1
2. Electrical Specification-----	2
2.1 Test Equipment-----	2
2.2 Test Setup-----	2
2.2.1 Frequency Range-----	2
2.2.2 VSWR-----	2
2.2.3 Radiation Pattern & Gain-----	2
3. Performance Data-----	4
3.1 VSWR-----	4
3.2 Radiation pattern & Gain (WLAN-R Antenna)-----	5
3.3 Radiation pattern & Gain (WLAN-L Antenna)-----	7
3.4 Gain-----	7
4. Mechanical Specification-----	10
4.1 Assembly Drawing(WLAN-L Ant.)-----	10
4.2 Assembly Drawing(WLAN-R Ant.)-----	11

# 1. Description

## 1.1 Specifications

Antennas Type	PCB Antenna for WLAN 802.11a/b/g application	
Connector Type	I-PEX Connector for 1.13 cable	
Cable Type	OD 1.13 RF Cable	
Impedance	50Ω	
Polarization	Linear	
Radiation pattern	Omni-directional	
Frequency	WLAN 802.11b/g	2.40~2.50 GHz
	WiMAX 802.16n	2.30~2.70GHz 3.30~3.80GHz
	WLAN 802.11a	5.15~5.85 GHz
VSWR	WLAN 802.11b/g	2.0 Max
	WiMAX 802.16n	2.5 Max
	WLAN 802.11a	2.5 Max
Peak gain(dBi)	WLAN 802.11b/g	-0.70 dBi
	WLAN 802.11a	0.55 dBi
Cable length	WLAN-L( APP6P-700136)	522 mm, Black
	WLAN-R(APP6P-700137)	670 mm, White

## 1.2 Antenna Pictures



WLAN-L P/N: APP6P-700136



WLAN-R P/N: APP6P-700137

## 2. Electrical Specification

### 2.1 Test Equipment

- A. VSWR and input impedance: Agilent 8720/8753 Network Analyzer
- B. Antenna gain and efficiency: ETS three-dimensional anechoic chamber

### 2.2 Test Setup

#### 2.2.1 Frequency Range

- A. WLAN 802.11 b/g: 2.40~2.50 GHz
- B. WLAN 802.11a: 5.15~5.85 GHz
- C. WiMAX 802.16n: 2.30~2.70GHz / 3.30~3.80GHz

#### 2.2.2 VSWR

- Step 1: The antenna is arranged on the customer provided test fixture (see figure. 1).
- Step 2: The VSWR of the antenna is measured via Agilent 8720/8753 Network Analyzer (see figure. 2).



Figure.1

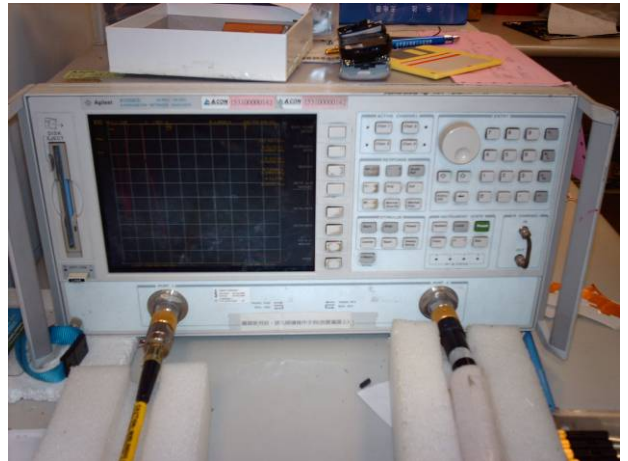
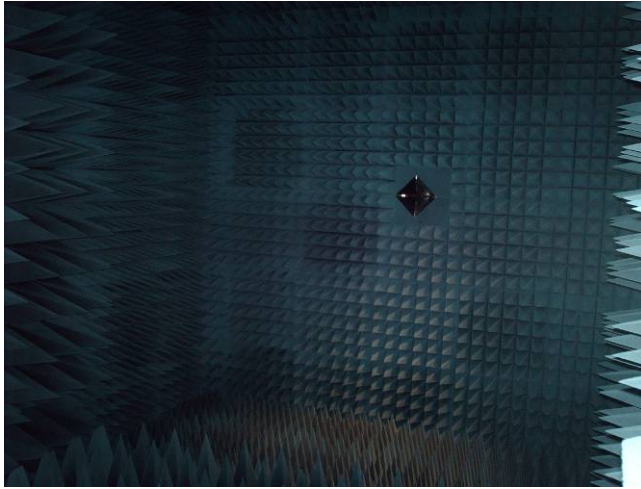


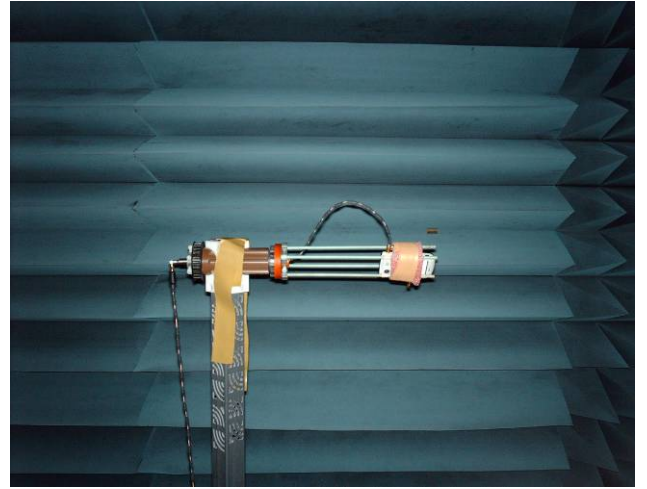
Figure.2

#### 2.2.3 Radiation pattern and Gain

- A. The 3D chamber provides less than -40dB reflectivity from 800MHz to 6GHz and a 40cm diameter spherical quiet zone. The measurement results are calibrated using both dipoles and standard gain horns (see figure. 3).
- B. The antenna under tested is arranged in the turned table and a decoupling sleeve is used to reduce feed line radiation (see figure. 4).
- C. The measured results of the radiation patterns and antenna gain are obtained from the control system and showed on the monitor (see figure. 5 and 6).



**Figure. 3**



**Figure. 4**



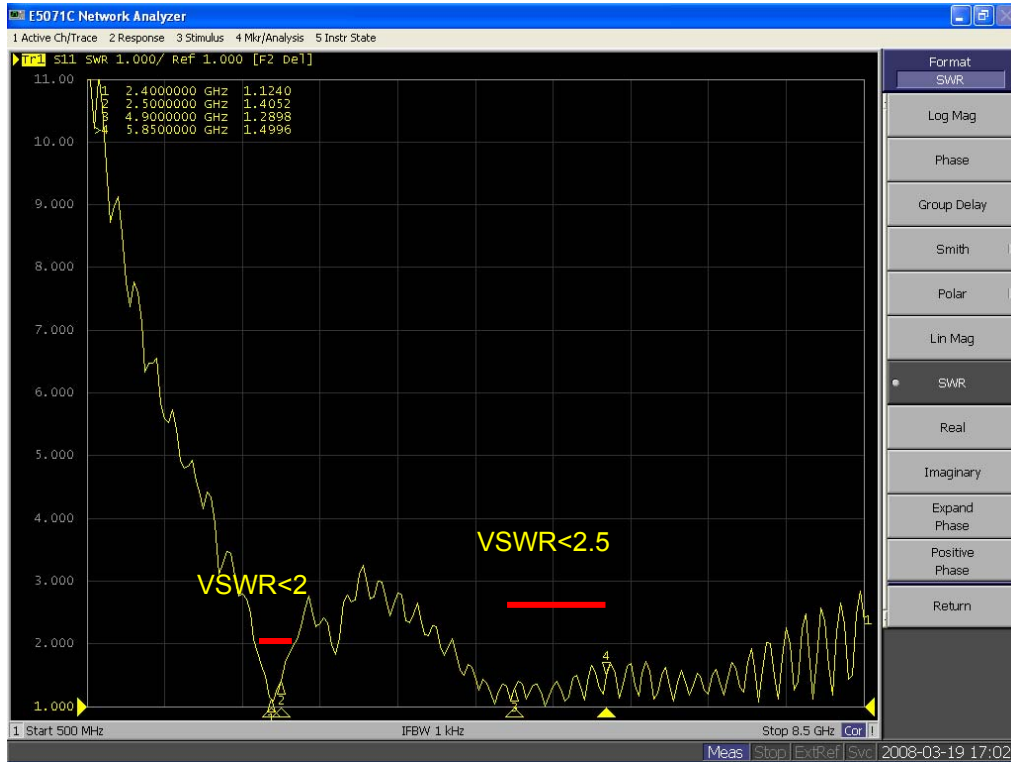
**Figure. 5**



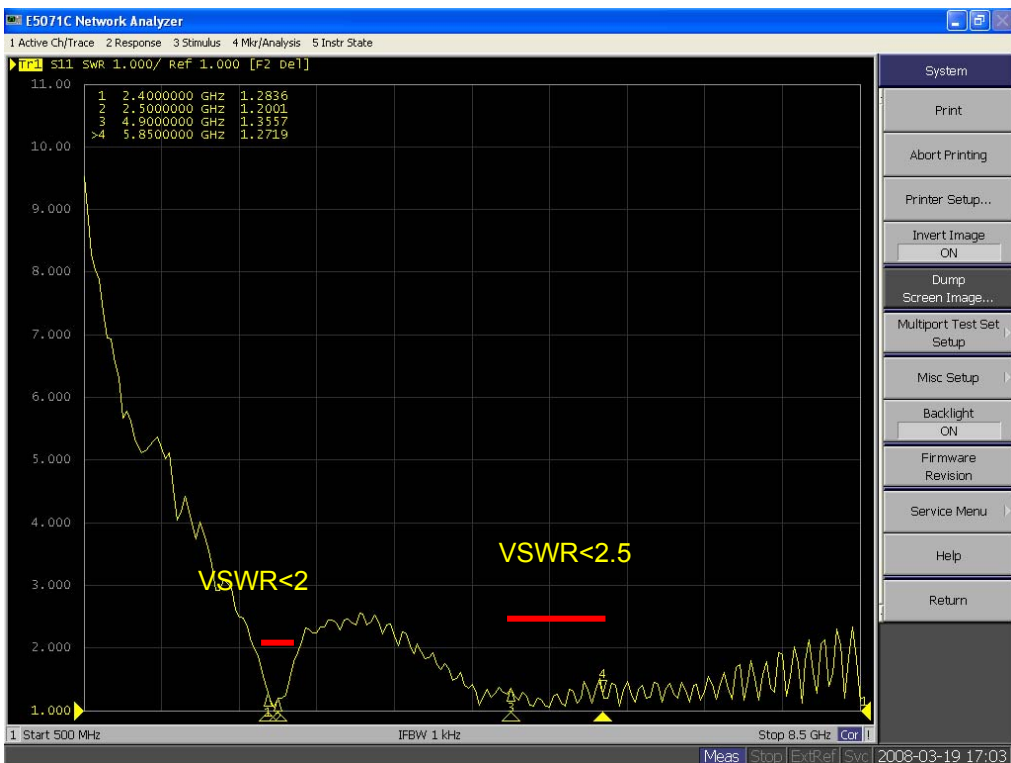
**Figure. 6**

### 3. Performance Data

#### 3.1 VSWR



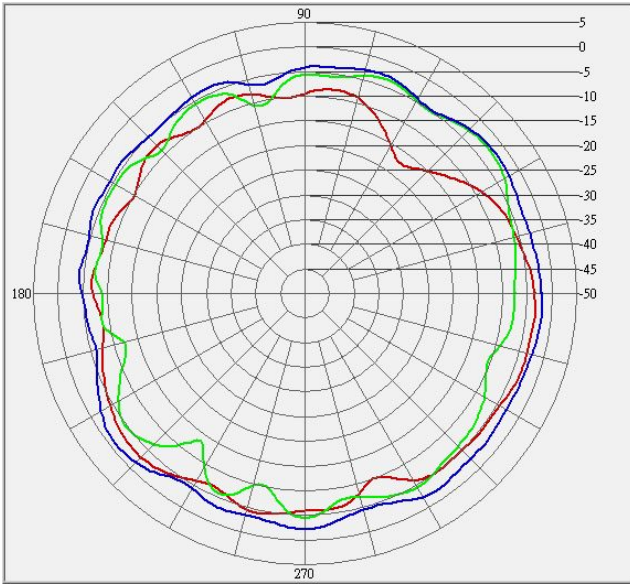
WLAN-L Antenna



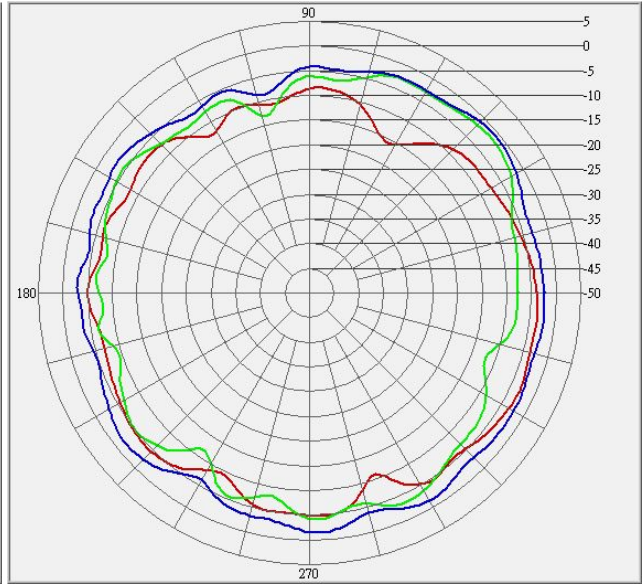
WLAN-R Antenna



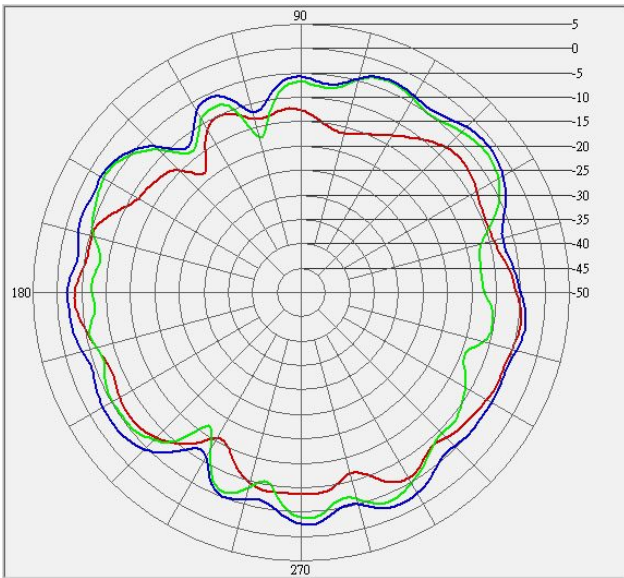
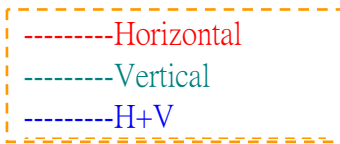
### 3.2 Radiation pattern & Gain (WLAN-R Antenna)



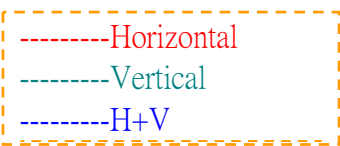
2.40GHz



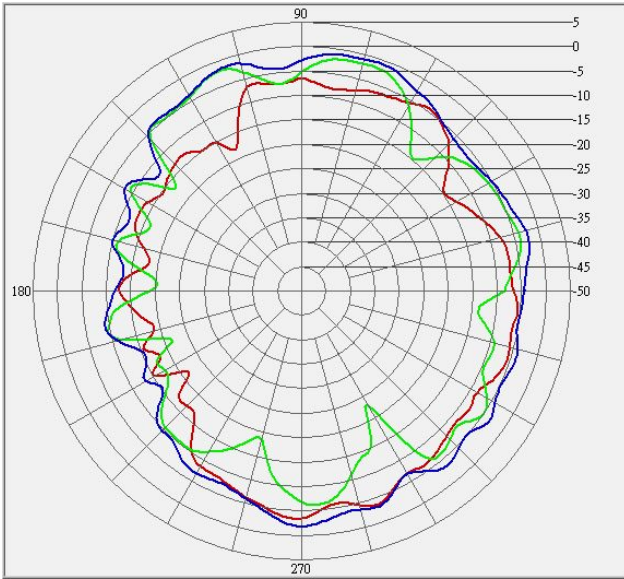
2.45GHz



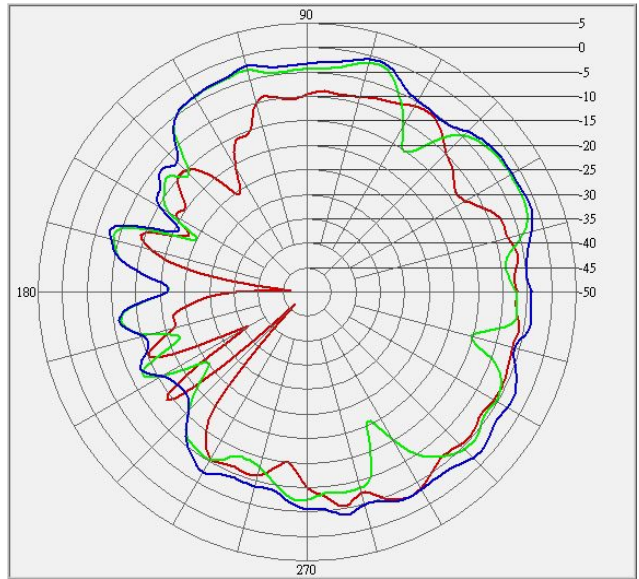
2.50GHz



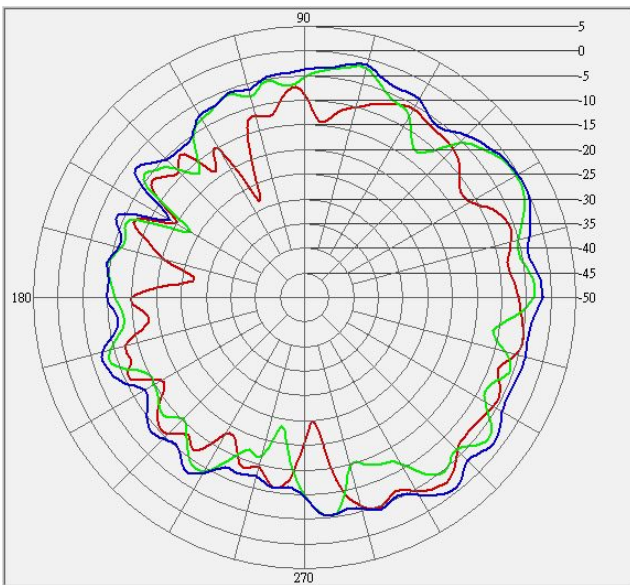
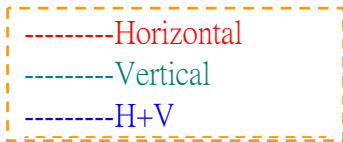
#### WLAN-R Antenna 2.40GHz~2.50GHz



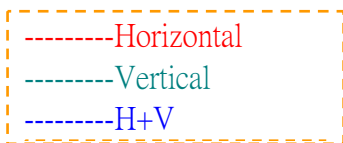
5.15GHz



5.470GHz



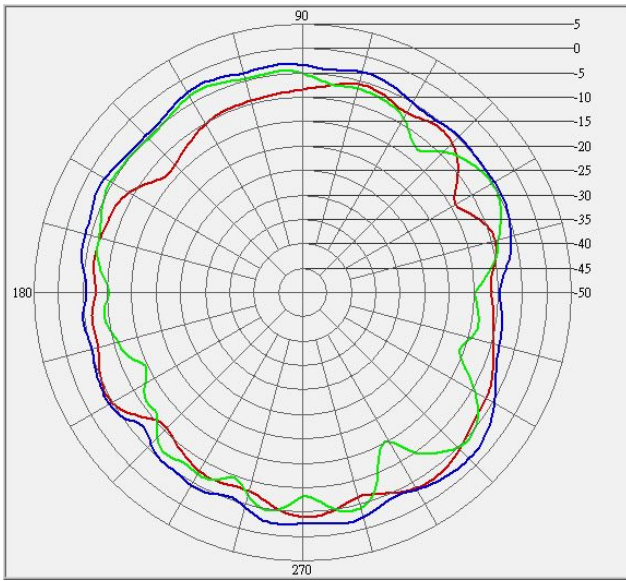
5.85GHz



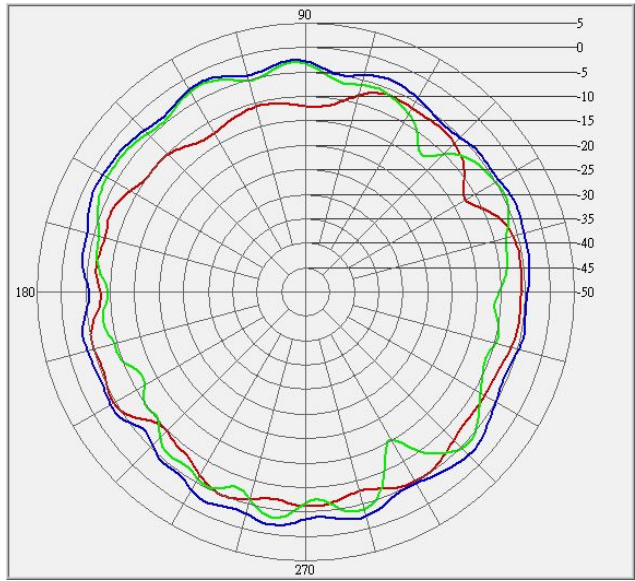
**WLAN-R Antenna 5.15Hz~5.85GHz**



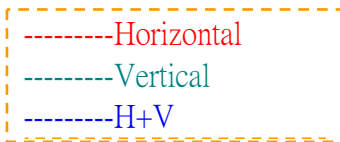
### 3.3 Radiation pattern & Gain (WLAN-L Antenna)



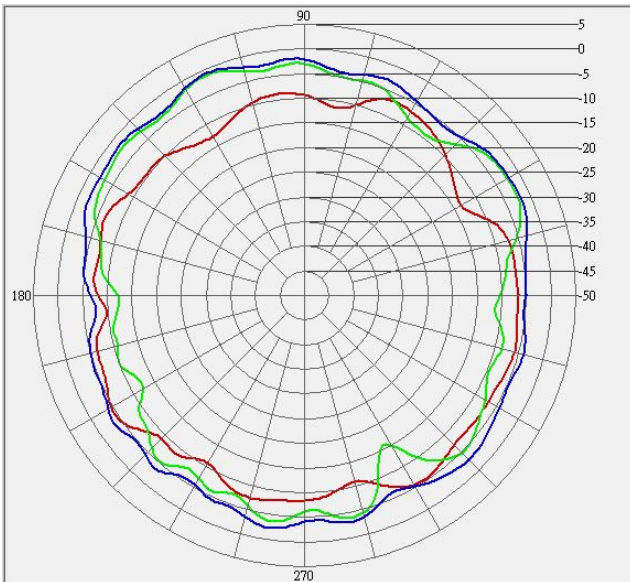
2.40GHz



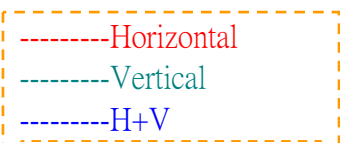
2.45GHz



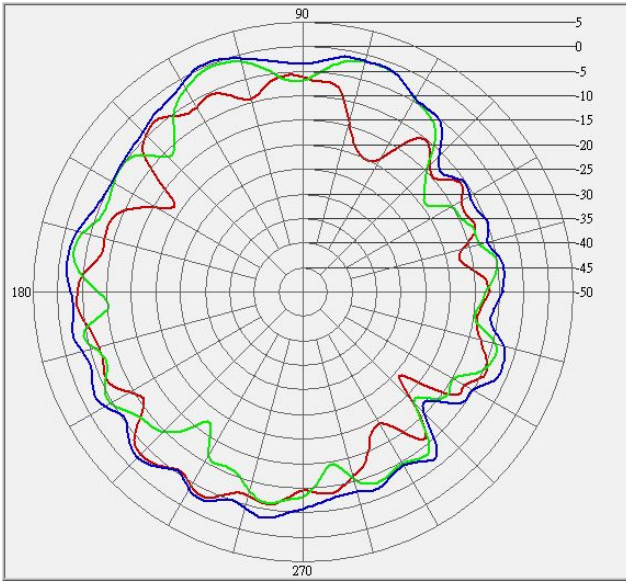
#### WLAN-L Antenna 2.30GHz~2.40GHz



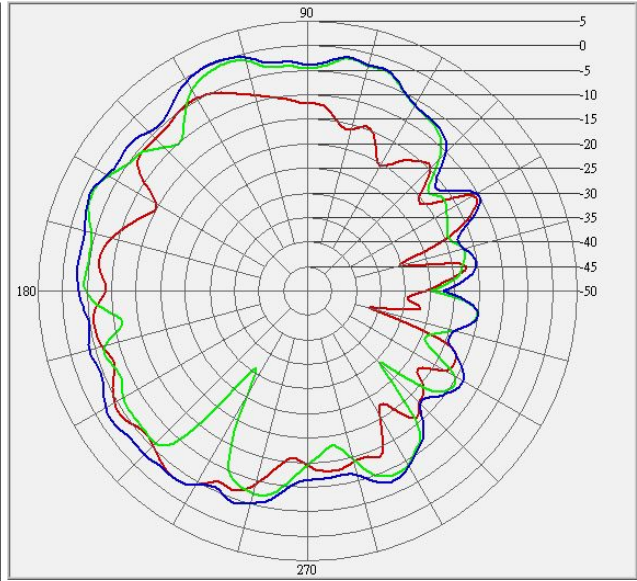
2.50GHz



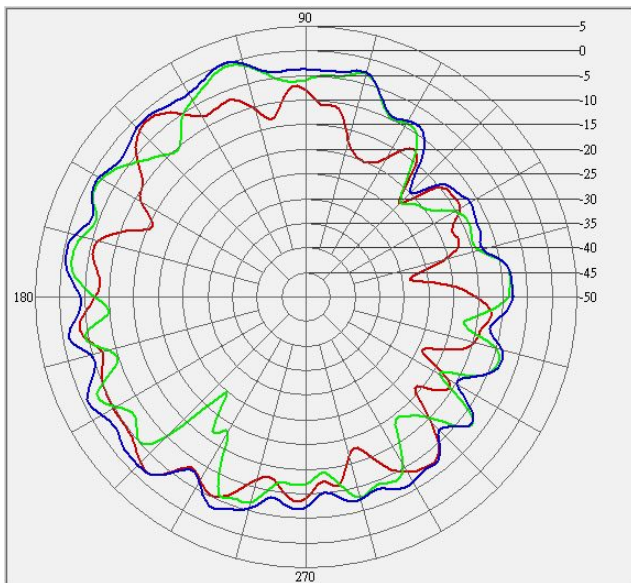
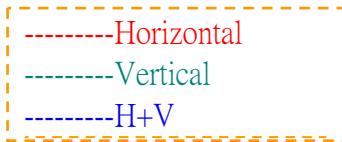
#### WLAN-L Antenna 2.40GHz~2.50GHz



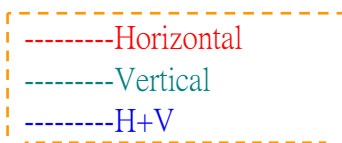
5.15GHz



5.470GHz



5.85GHz



**WLAN-L Antenna 5.15Hz~5.85GHz**

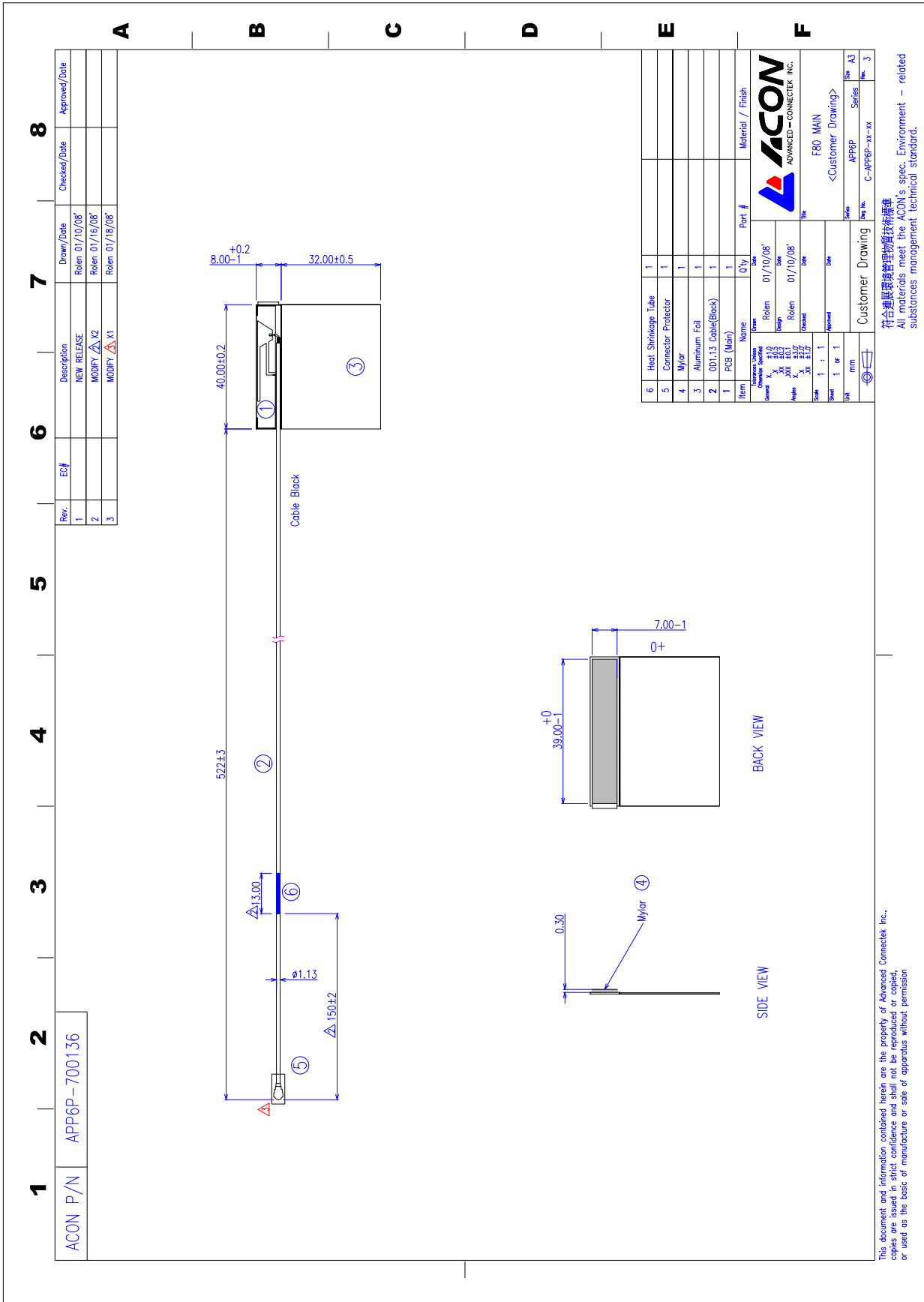
### 3.4 Gain

**Antenna Gain Table:**

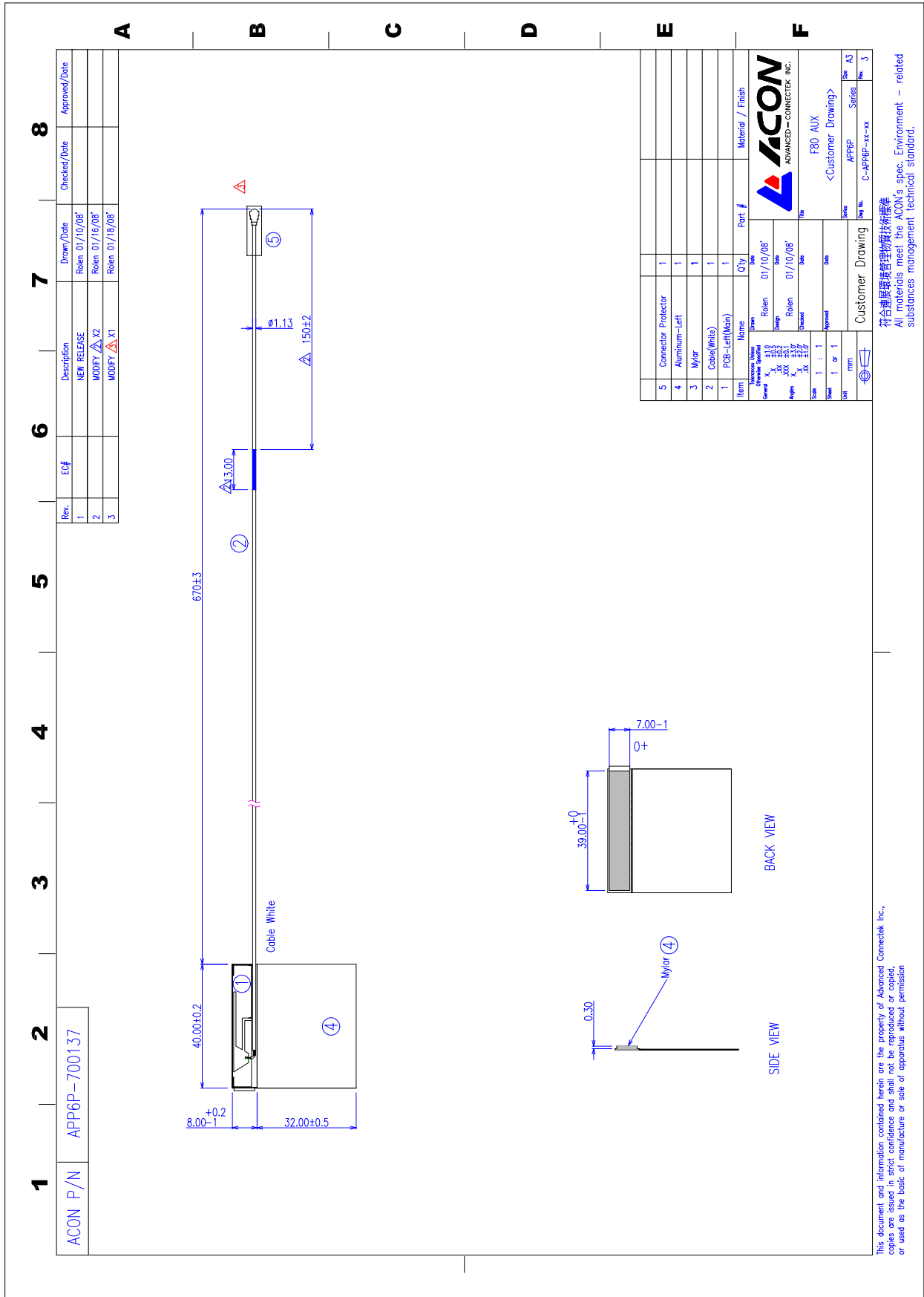
WLAN-L Antenna Gain						
Frequency	MAX Value (dBi)			Average (dBi)		
	H-pol	V-pol	Total	H-pol	V-pol	Total
2400	-3.41	-3.46	-1.82	-7.29	-7.08	-4.17
2450	-4.62	-2.54	-1.96	-7.32	-6.21	-3.72
2500	-4.71	-1.08	-0.74	-7.98	-5.51	-3.57
5150	-3.13	-0.42	0.55	-8.29	-6.59	-4.35
5250	-2.18	-0.89	0.31	-7.95	-6.42	-4.11
5350	-2.74	-1.53	-0.44	-8.56	-6.96	-4.67
5470	-3.07	-0.64	0.23	-9.39	-6.91	-4.96
5600	-2.78	-1.18	-0.11	-8.80	-6.84	-4.70
5725	-3.04	-2.06	-0.51	-8.73	-7.34	-4.97
5785	-2.60	-0.89	0.22	-8.25	-7.14	-4.65
5850	-1.97	-0.50	0.31	-8.44	-6.93	-4.61
WLAN-R Antenna Gain						
Frequency	MAX Value (dBi)			Average (dBi)		
	H-pol	V-pol	Total	H-pol	V-pol	Total
2400	-3.04	-2.64	-1.02	-6.44	-6.31	-3.37
2450	-2.99	-1.60	-0.70	-6.45	-5.88	-3.15
2500	-3.62	-2.50	-1.33	-8.23	-6.56	-4.31
5150	-3.44	-2.26	-0.68	-8.22	-7.65	-4.77
5250	-3.83	-1.86	-0.38	-8.30	-7.39	-4.69
5350	-3.76	-1.04	-0.34	-8.91	-7.17	-4.93
5470	-3.28	-1.21	-0.77	-9.22	-7.15	-4.91
5600	-3.81	-1.53	-1.07	-9.13	-6.91	-4.93
5725	-3.83	-2.34	-1.31	-9.25	-7.01	-4.87
5785	-4.21	-2.56	-1.39	-9.20	-7.49	-4.98
5850	-3.05	-2.49	-0.02	-9.09	-7.71	-4.88

# 4. Mechanical Specification

## 4.1 Assembly Drawing(WLAN-L Ant.)



### 4.2 Assembly Drawing(WLAN-R Ant.)





## Revision

Revision	Date	Change Notification	Notes
Rev.0	2008-03-18	--	--