

Data Sheet

CUSTOMER: ASUS

MODEL NAME: F6 WLAN Antenna

A-CON P/N: APP6P-700093

APP6P-700098



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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
	WLAN 802.11a	5.15~5.85 GHz
VSWR	WLAN 802.11b/g	2.0 Max
	WLAN 802.11a	2.5 Max
Peak gain(dBi)	WLAN 802.11b/g	2.4 dBi
	WLAN 802.11a	0.3 dBi
Cable length	WLAN-L(APP6P-700098)	856 mm, White
	WLAN-R(APP6P-700093)	632 mm, Black

1.2 Antenna Pictures



WLAN-L P/N: APP6P-700098



WLAN-R P/N: APP6P-700093

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

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



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).

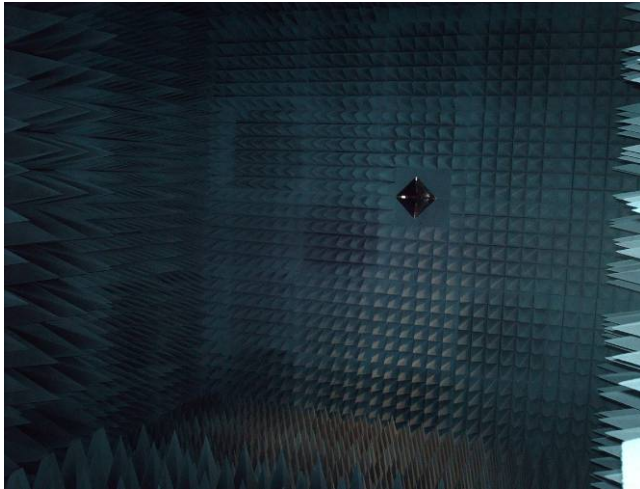


Figure. 3

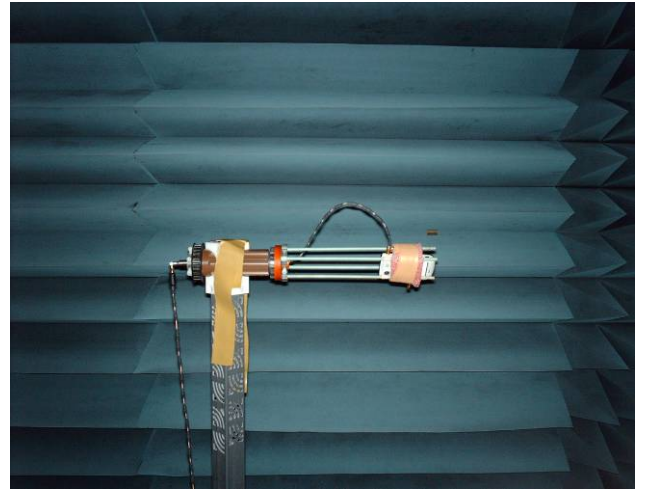


Figure. 4



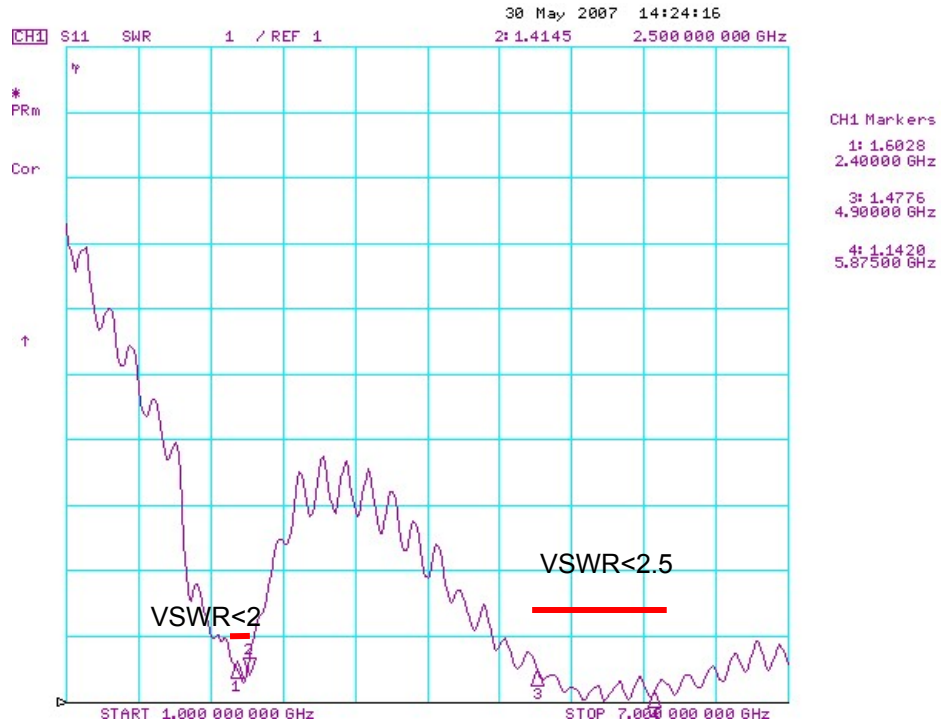
Figure. 5



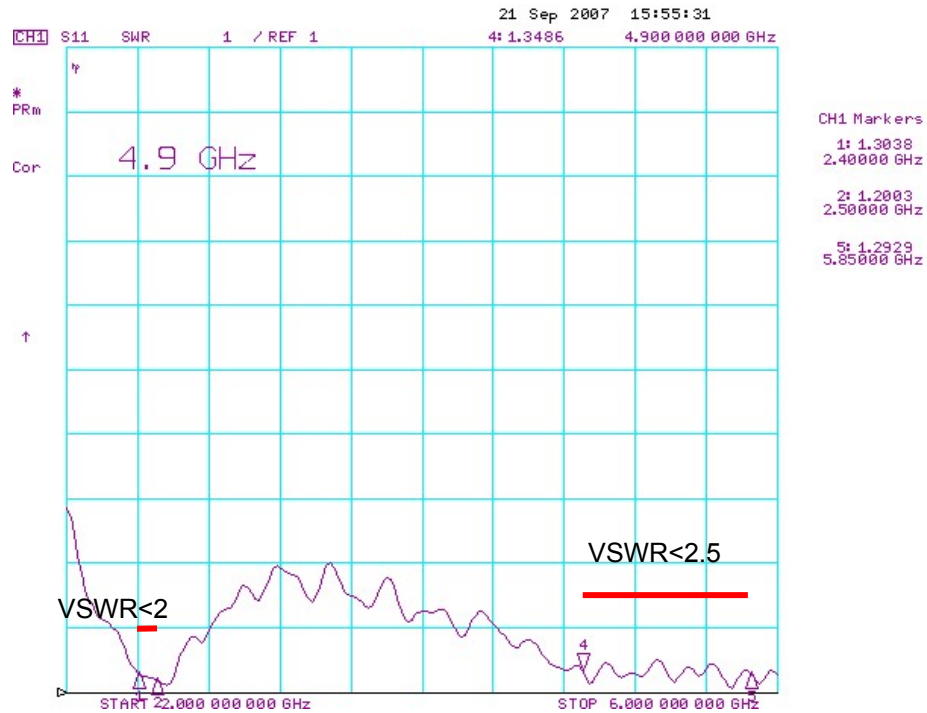
Figure. 6

3. Performance Data

3.1 VSWR

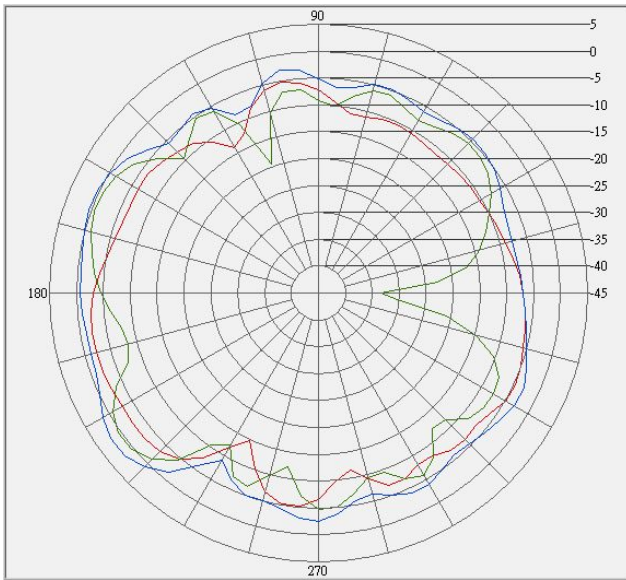


WLAN-L Antenna

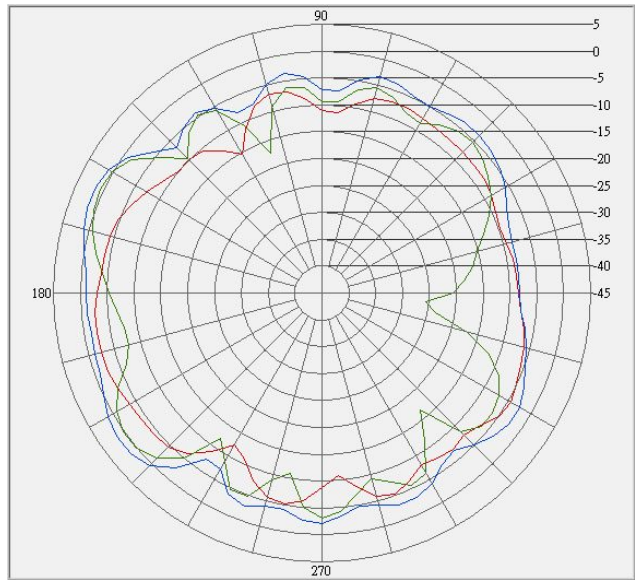


WLAN-R Antenna

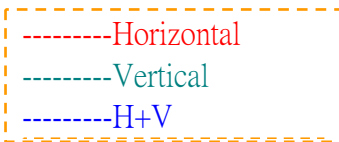
3.2 Radiation pattern & Gain (WLAN-R Antenna)



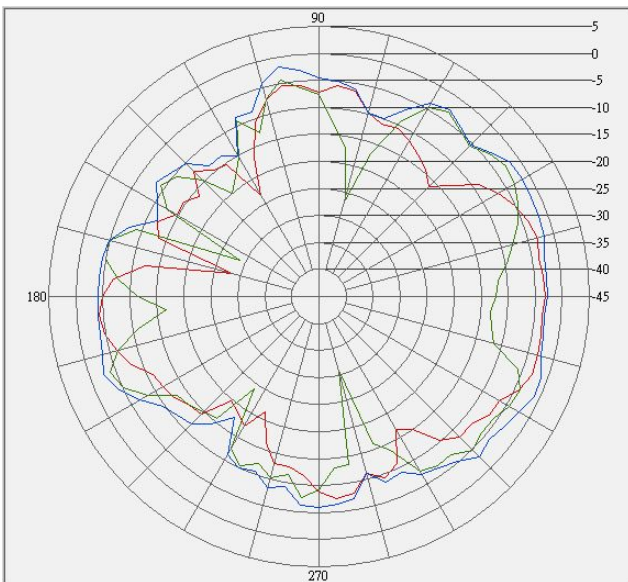
2.40GHz



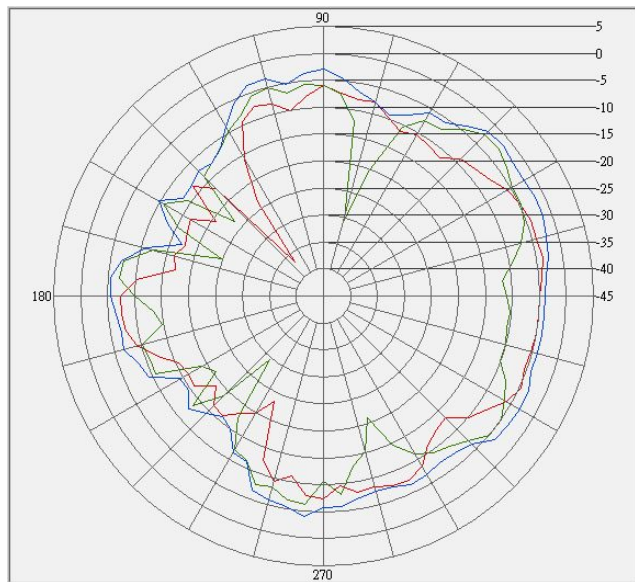
2.50GHz



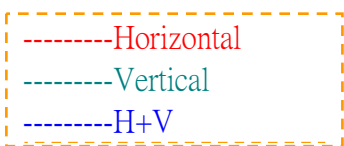
WLAN-R Antenna 2.40GHz~2.50GHz



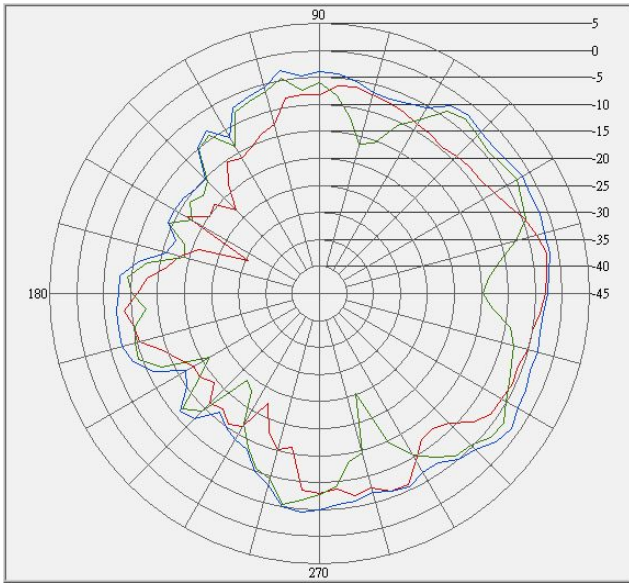
5.15GHz



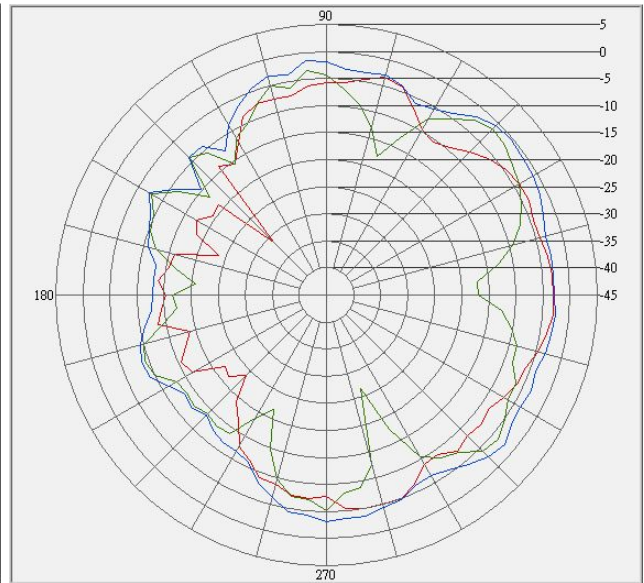
5.35GHz



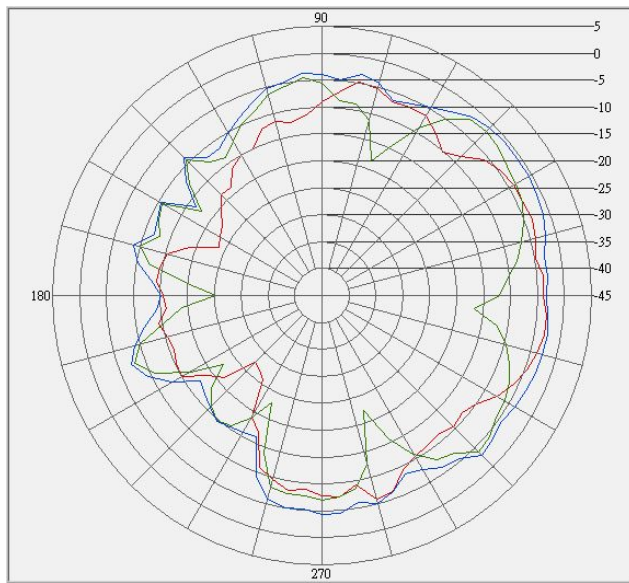
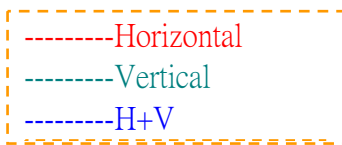
WLAN-R Antenna 5.15GHz~5.35GHz



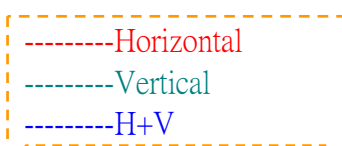
5.47GHz



5.725GHz

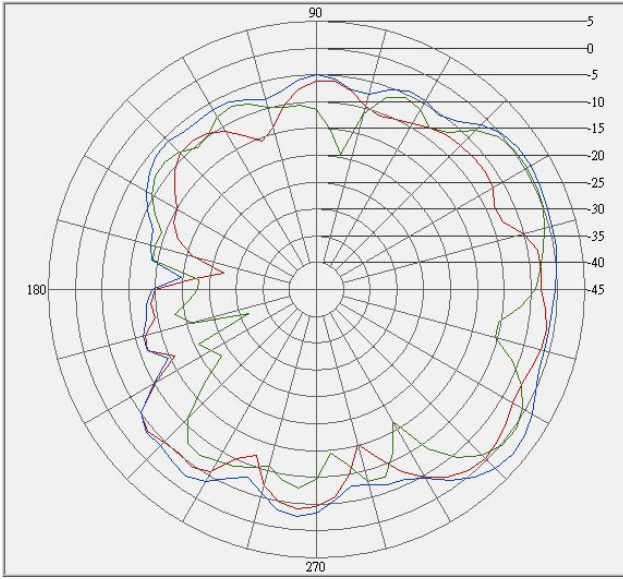


5.85GHz

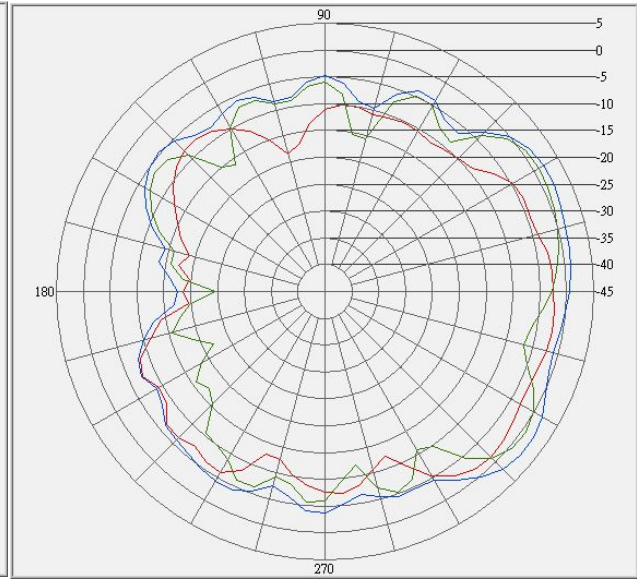


WLAN-R Antenna 5.47GHz~5.85GHz

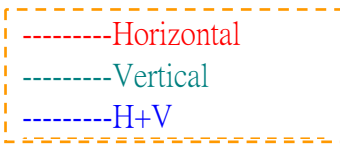
3.3 Radiation pattern & Gain (WLAN-L Antenna)



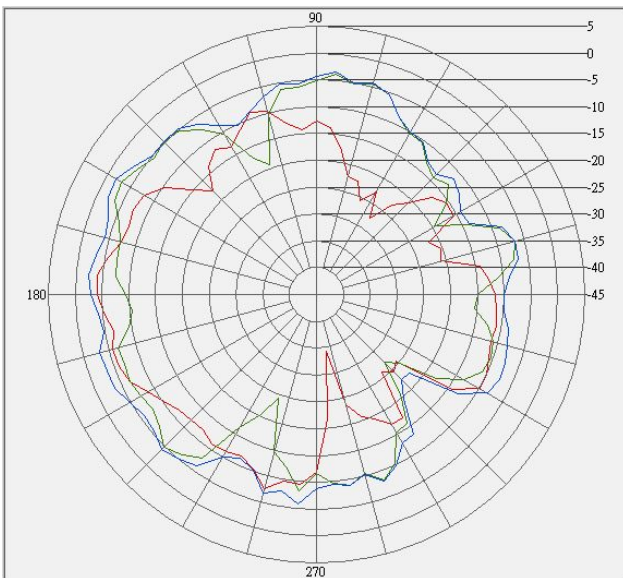
2.40GHz



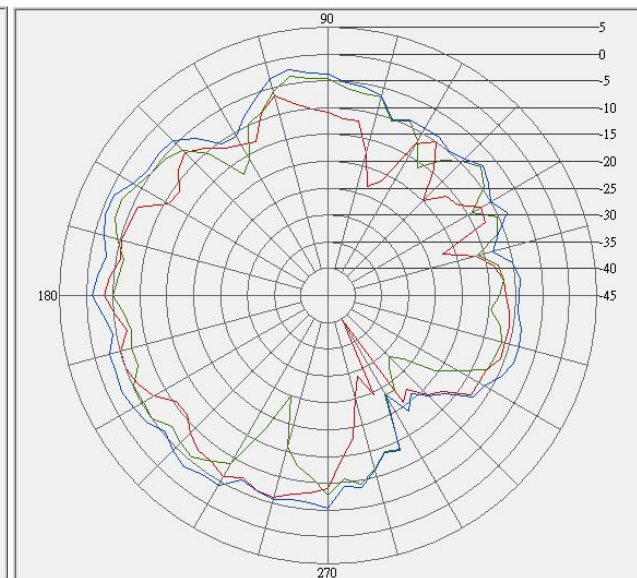
2.50GHz



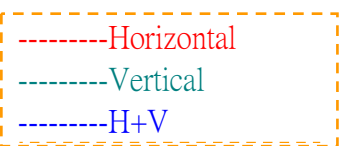
WLAN-L Antenna 2.40GHz~2.50GHz



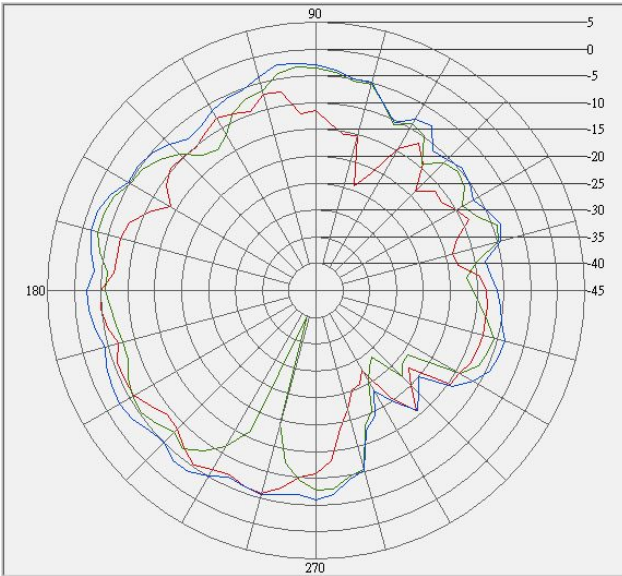
5.15GHz



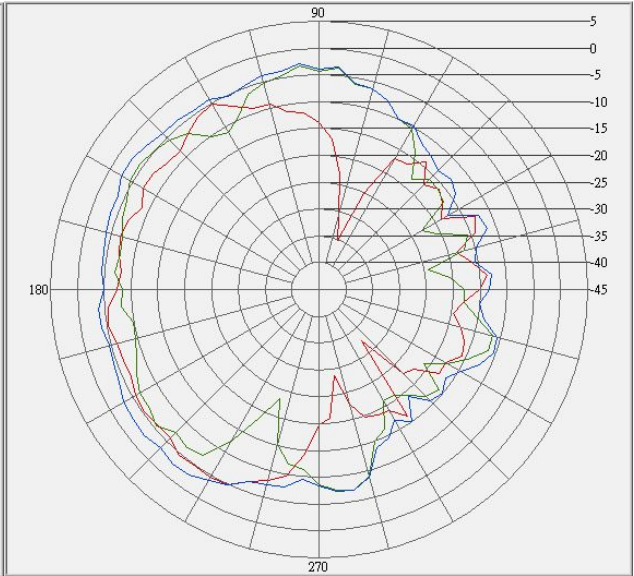
5.35GHz



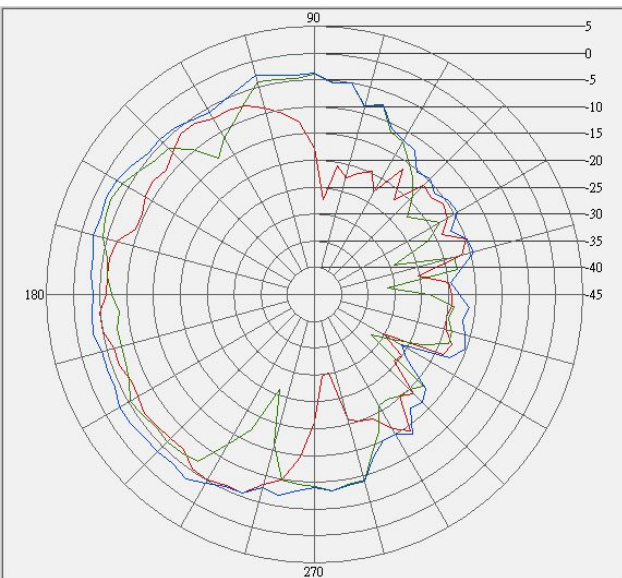
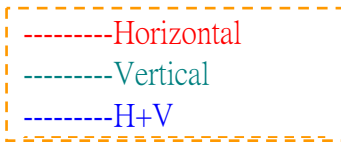
WLAN-L Antenna 5.15GHz~5.35GHz



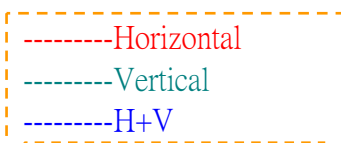
5.47GHz



5.725GHz



5.85GHz



WLAN-L Antenna 5.47GHz~5.85GHz

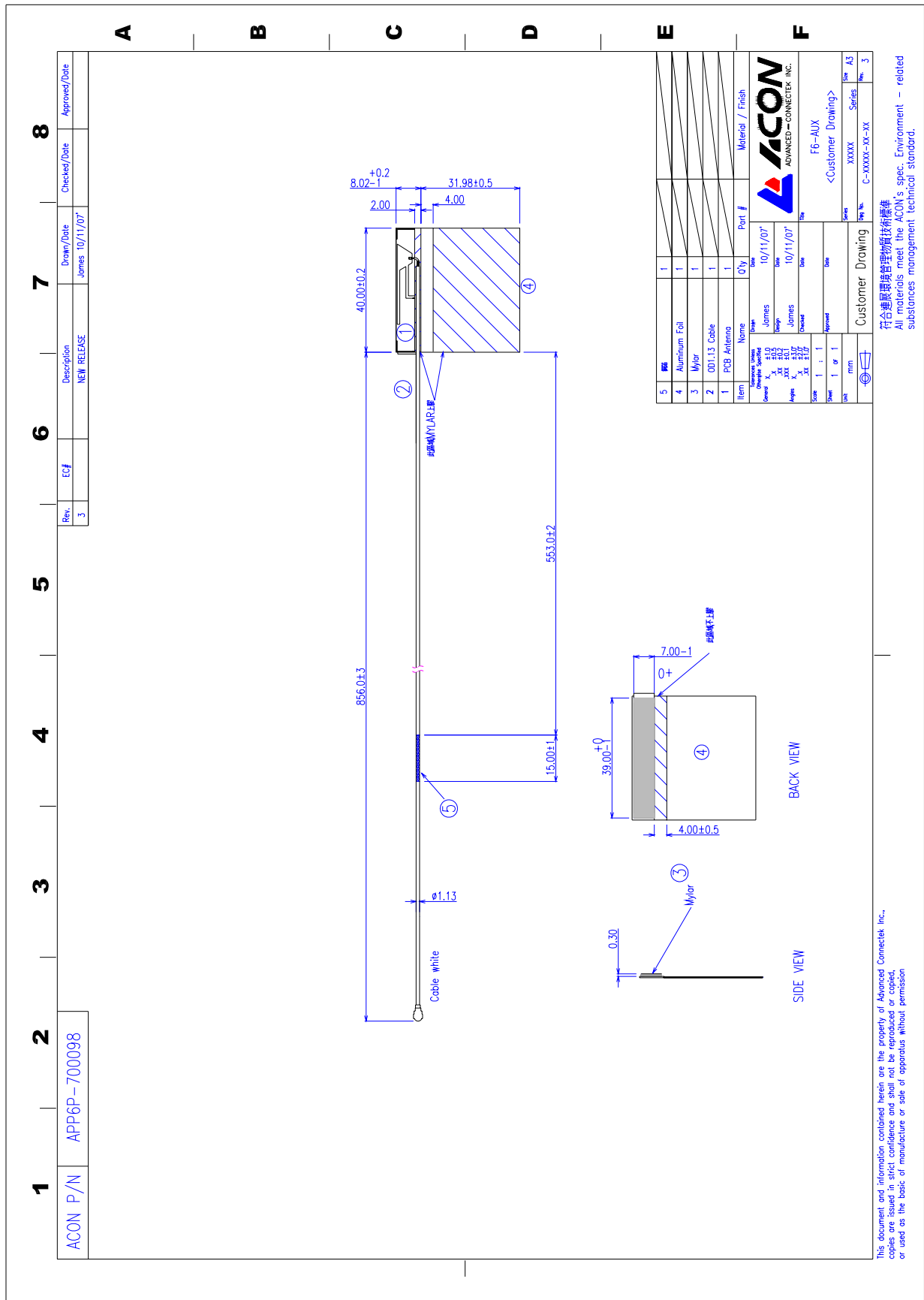
3.4 Gain

Antenna Gain Table:

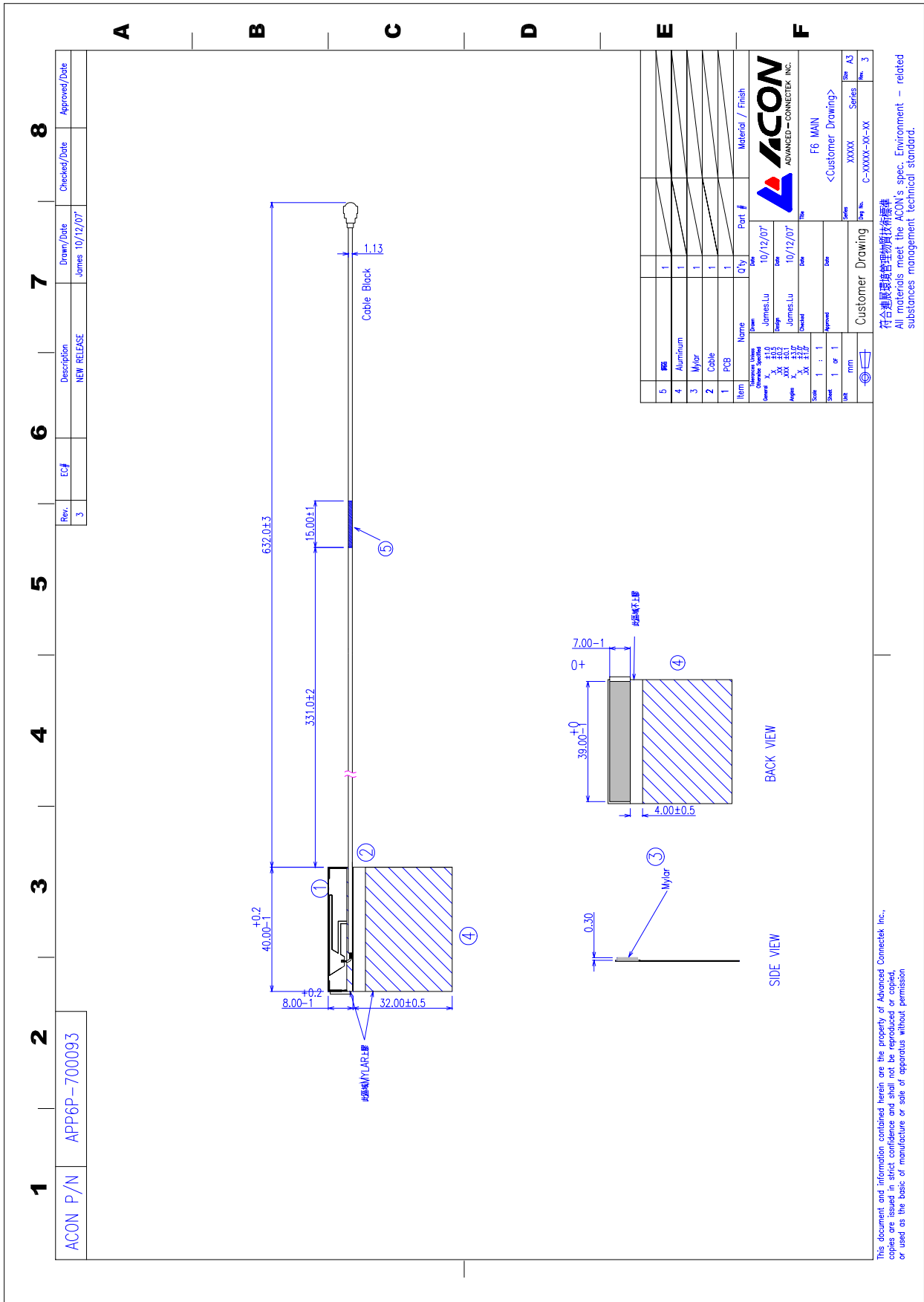
WLAN-L Antenna Gain						
Frequency	MAX Value (dBi)			Average (dBi)		
	H-pol	V-pol	Total	H-pol	V-pol	Total
2400(MHz)	-2.7	-2.2	0.3	-6.7	-7.1	-3.9
2450(MHz)	-2.6	-2.6	-0.8	-6.5	-6.8	-3.6
2500(MHz)	-4.1	-2.7	-1.3	-8.0	-7.2	-4.6
5150(MHz)	-5.9	-4.2	-3.4	-10.6	-9.6	-6.8
5250(MHz)	-5.1	-2.7	-2.3	-10.4	-8.5	-6.4
5350(MHz)	-6.1	-3.2	-2.7	-10.5	-9.4	-7.3
5470(MHz)	-5.9	-1.3	-0.8	-10.0	-7.6	-5.6
5600(MHz)	-4.6	-0.4	0.0	-8.8	-6.8	-4.7
5725(MHz)	-3.4	-0.6	-0.5	-9.4	-7.0	-5.0
5785(MHz)	-3.6	0.3	0.5	-10.1	-7.1	-5.3
5850(MHz)	-2.4	0.1	0.3	-9.6	-6.6	-4.9
WLAN-R Antenna Gain						
Frequency	MAX Value (dBi)			Average (dBi)		
	H-pol	V-pol	Total	H-pol	V-pol	Total
2400(MHz)	-2.2	0.4	2.1	-6.1	-6.0	-3.1
2450(MHz)	-1.4	1.0	2.4	-5.8	-4.9	-2.3
2500(MHz)	-2.4	0.6	1.5	-6.7	-5.2	-2.9
5150(MHz)	-3.1	-2.7	-1.1	-10.8	-8.4	-6.4
5250(MHz)	-3.5	-3.2	-1.2	-10.5	-7.8	-5.9
5350(MHz)	-3.7	-2.6	-1.6	-9.4	-8.2	-5.8
5470(MHz)	-2.3	-2.9	-1.4	-9.9	-8.2	-5.9
5600(MHz)	-2.2	-2.8	-1.5	-9.6	-8.2	-5.8
5725(MHz)	-3.0	-1.7	-0.6	-9.6	-8.8	-6.2
5785(MHz)	-2.7	-1.4	-0.2	-9.7	-8.8	-6.2
5850(MHz)	-3.1	-1.7	-0.6	-10.0	-8.7	-6.3

4. Mechanical Specification

4.1 Assembly Drawing(WLAN-L Ant.)



4.2 Assembly Drawing(WLAN-R Ant.)



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Revision

Revision	Date	Change Notification	Notes
Rev.0	2007-10-02	--	--