

# Data Sheet

**CUSTOMER:** Pegatron

**MODEL NAME:** Splendor WIFI Antenna

**ACON P/N:** APP6P-700665



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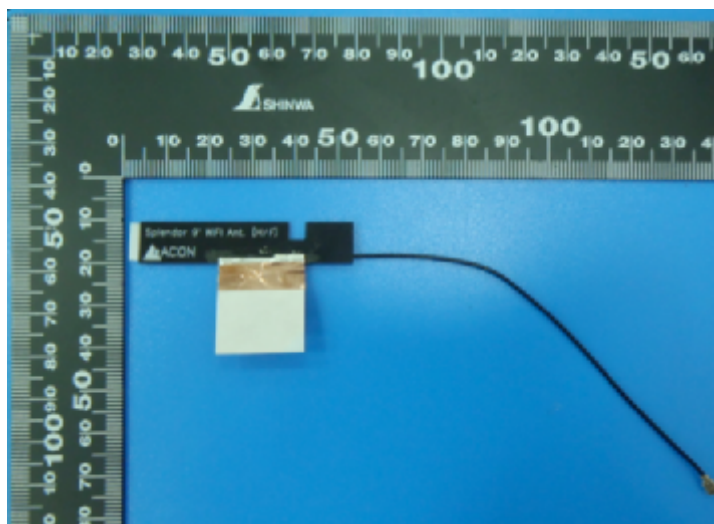
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## 1. Description

### 1.1 Specifications

Antennas Type	PIFA Antenna for WIFI 802.11a/b/g application	
Connector Type	I-PEX & Hirose Connector for 1.13 cable	
Cable Type	OD 1.13 RF Cable	
Impedance	50Ω	
Polarization	Linear	
Radiation pattern	Omni-directional	
Frequency	WIFI 802.11b/g	2.40~2.50 GHz
	WIFI 802.11a	5.15~5.85 GHz
VSWR	WIFI 802.11b/g	2.5 Max
	WIFI 802.11a	
Peak gain	WIFI 802.11b/g	-0.32 dBi
	WIFI 802.11a	1.51 dBi
Cable Loss	WIFI 802.11b/g	0.45 dBi
	WIFI 802.11a	0.66 dBi
Cable length	WIFI (APP6P-700665)	108mm, Black

### 1.2 Antenna Pictures



WIFI P/N: APP6P-700665

## **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. WIFI 802.11 b/g : 2.40~2.50 GHz
- B. WIFI 802.11 a : 5.15~5.85 GHz

#### **2.2.2 VSWR**

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



**Figure.1**

#### **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. 2).
- B. The antenna under tested is arranged in the turned table and a decoupling sleeve is used to reduce feed line radiation (see figure. 3).
- C. The measured results of the radiation patterns and antenna gain are obtained from the control system and showed on the monitor (see figure. 4 and 5).

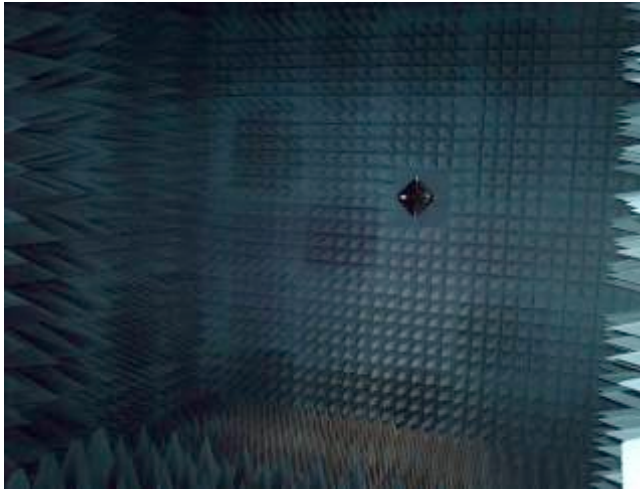


Figure.2

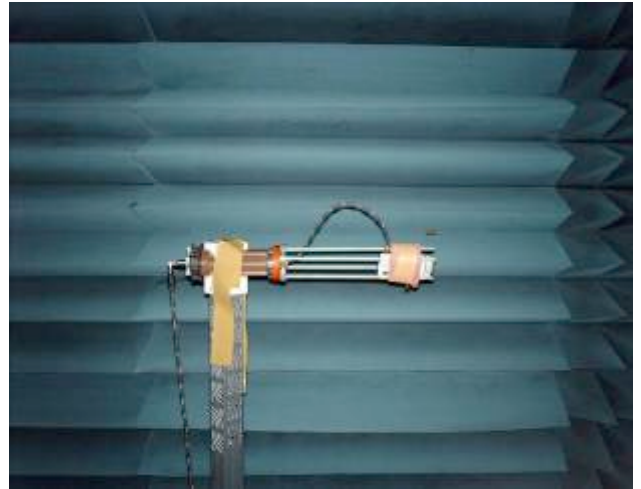


Figure.3



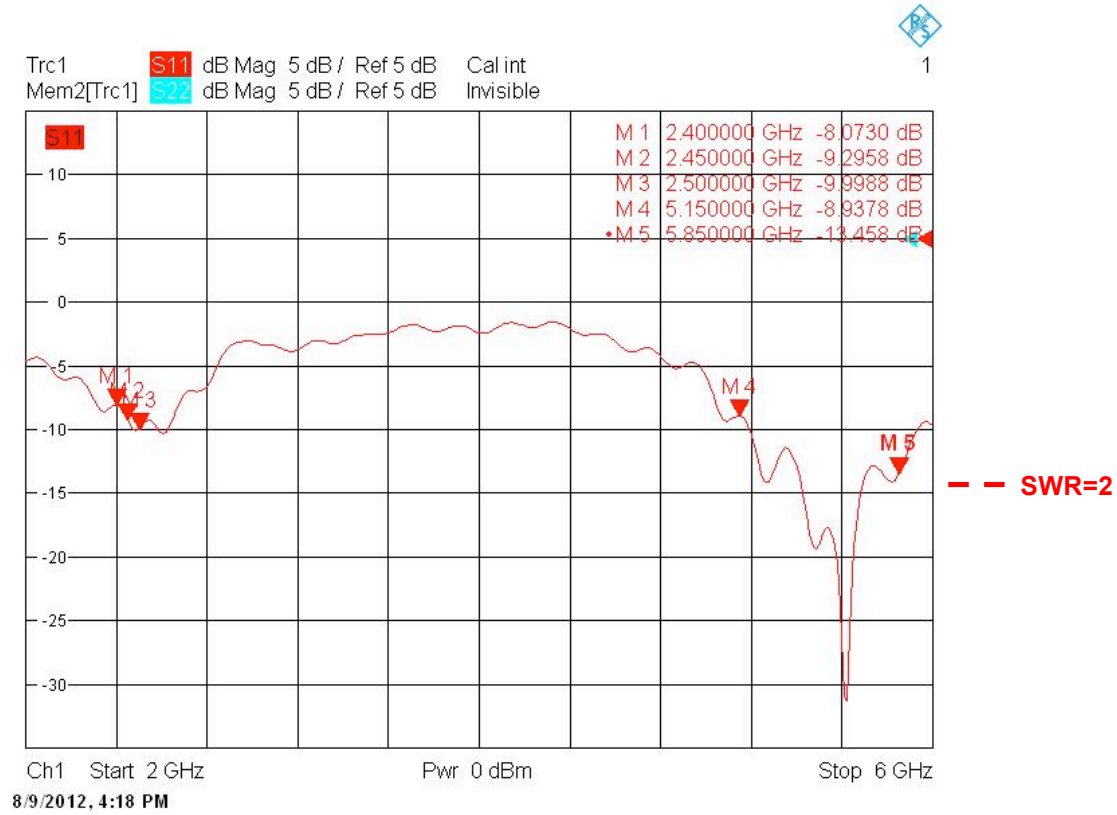
Figure.4



Figure.5

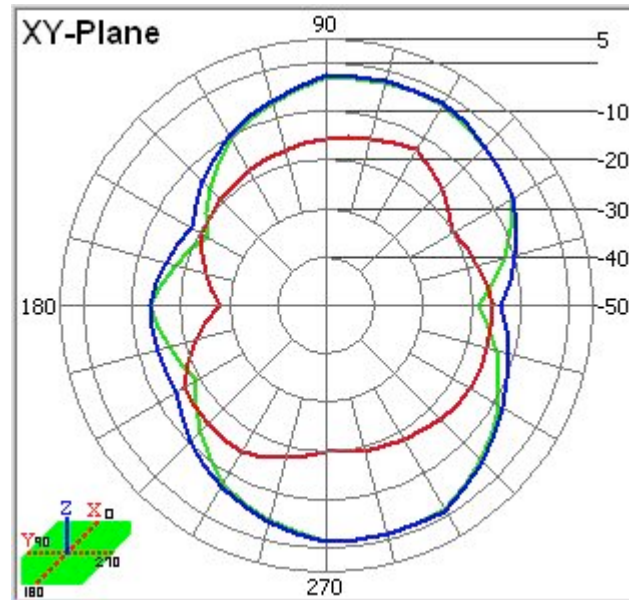
### 3. Performance Data

#### 3.1 VSWR



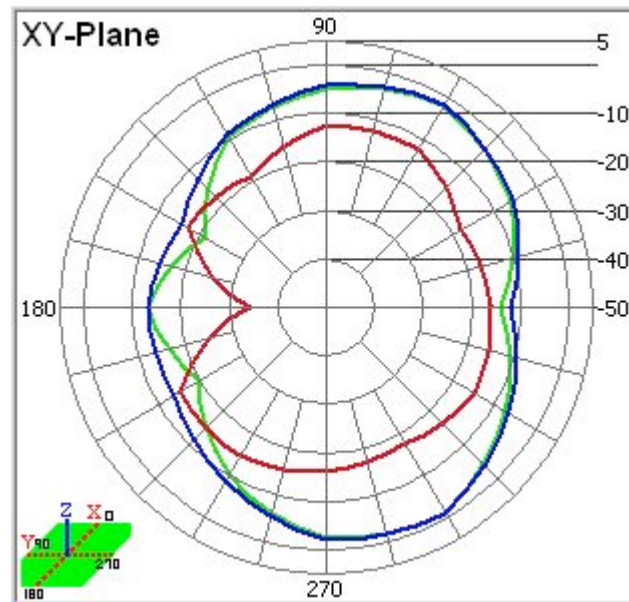
### 3.2 Radiation pattern & Gain (WIFI Antenna)

#### 3.2.1 2D WIFI Antenna (XY Plane)



Center Frequency	<b>2400 MHz</b>
Horizontal (dBi)	<b>-1.1</b>
Vertical (dBi) peak	<b>-12.93</b>

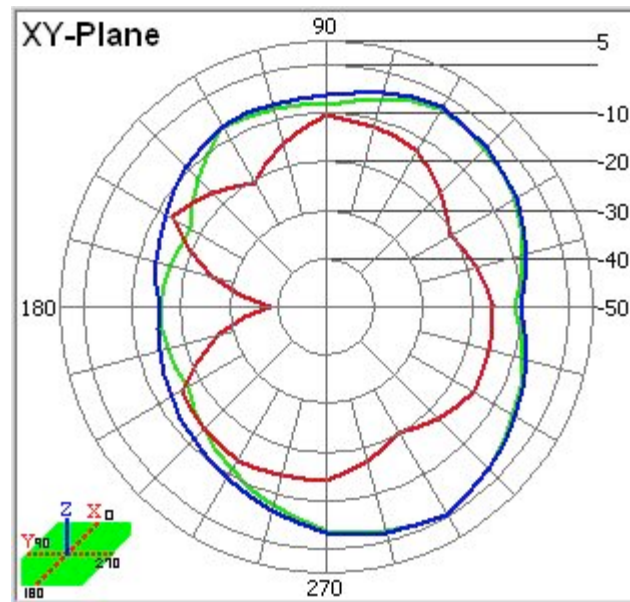
<span style="color: red;">—</span>	<b>Vertical</b>
<span style="color: green;">—</span>	<b>Horizontal</b>
<span style="color: blue;">—</span>	<b>H+V</b>



Center Frequency	<b>2442 MHz</b>
Horizontal (dBi)	-1
Vertical (dBi) peak	-12.26

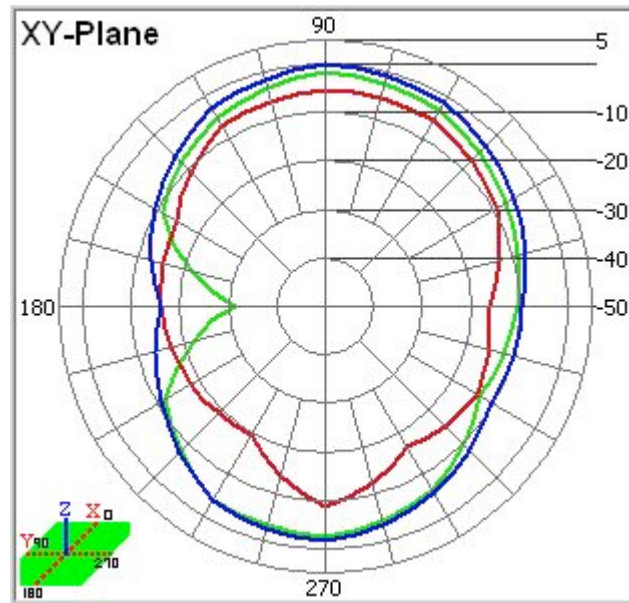
— **Vertical**  
— **Horizontal**  
— **H+V**





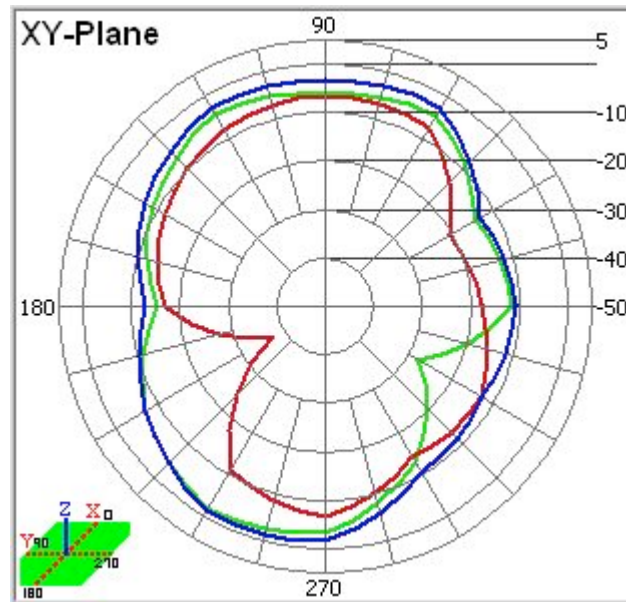
Center Frequency	<b>2484 MHz</b>
Horizontal (dBi)	-0.32
Vertical (dBi) peak	-10.49

<span style="color: red;">—</span>	<b>Vertical</b>
<span style="color: green;">—</span>	<b>Horizontal</b>
<span style="color: blue;">—</span>	<b>H+V</b>



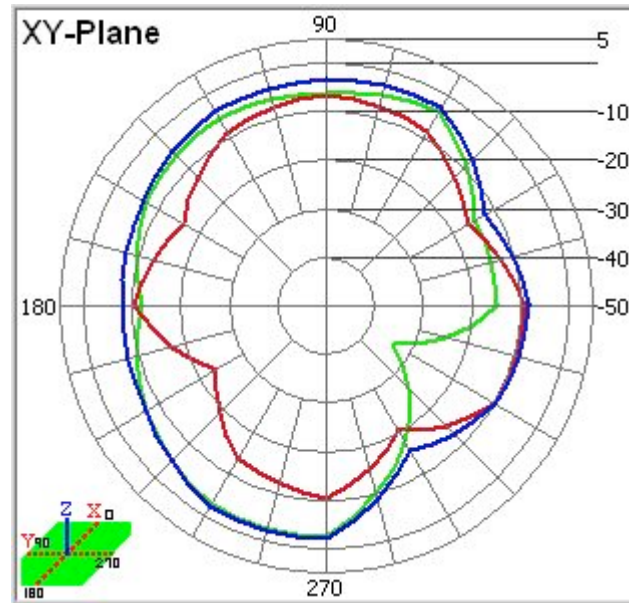
Center Frequency	<b>5150 MHz</b>
Horizontal (dBi)	<b>-1.63</b>
Vertical (dBi) peak	<b>-5.5</b>

<span style="color: red;">—</span>	<b>Vertical</b>
<span style="color: green;">—</span>	<b>Horizontal</b>
<span style="color: blue;">—</span>	<b>H+V</b>



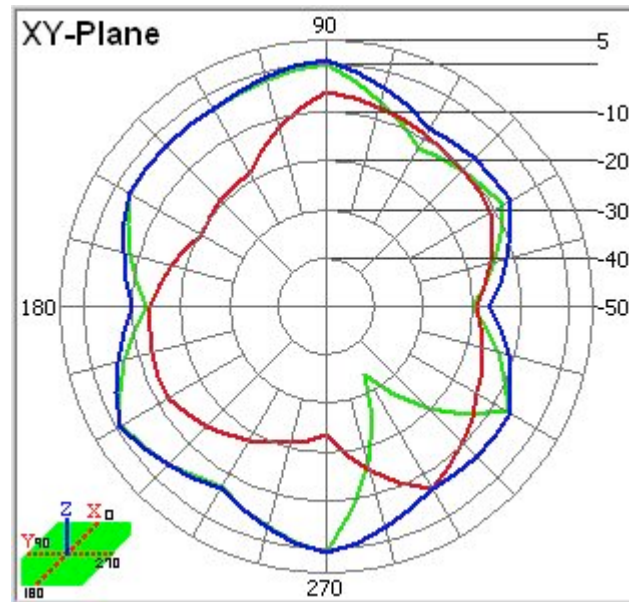
Center Frequency	<b>5350 MHz</b>
Horizontal (dBi)	-1.61
Vertical (dBi) peak	-6.43

<span style="color: red;">—</span>	<b>Vertical</b>
<span style="color: green;">—</span>	<b>Horizontal</b>
<span style="color: blue;">—</span>	<b>H+V</b>



Center Frequency	<b>5470 MHz</b>
Horizontal (dBi)	<b>-2.55</b>
Vertical (dBi) peak	<b>-6.44</b>

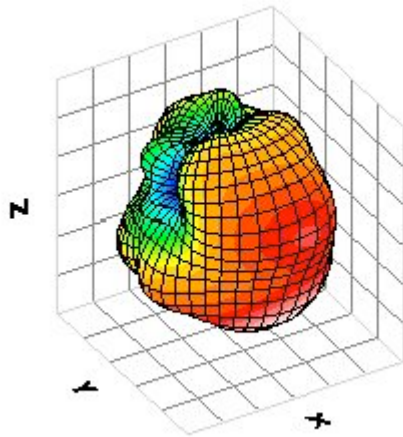
<span style="color: red;">—</span>	<b>Vertical</b>
<span style="color: green;">—</span>	<b>Horizontal</b>
<span style="color: blue;">—</span>	<b>H+V</b>



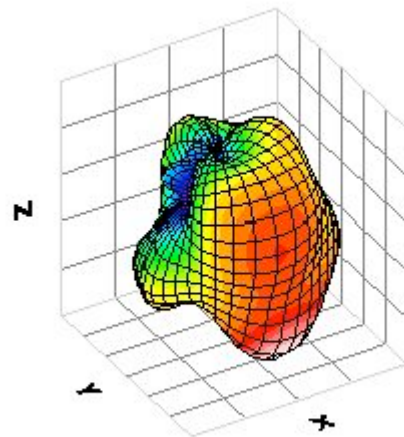
Center Frequency	<b>5875 MHz</b>
Horizontal (dBi)	1.04
Vertical (dBi) peak	-5.77

—	<b>Vertical</b>
—	<b>Horizontal</b>
—	<b>H+V</b>

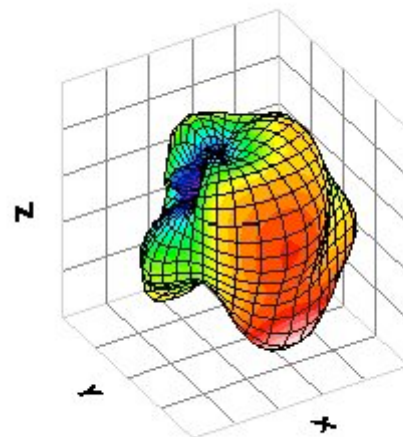
### 3.2.2 3D WIFI Antenna



2.40GHz

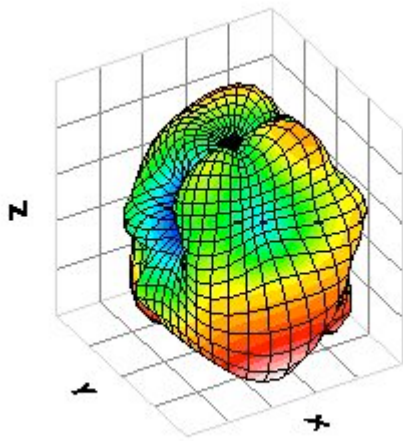


2.442GHz

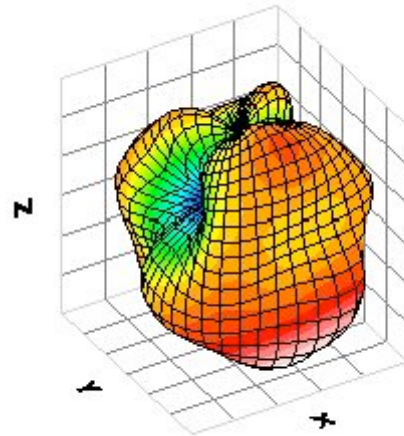


2.484GHz

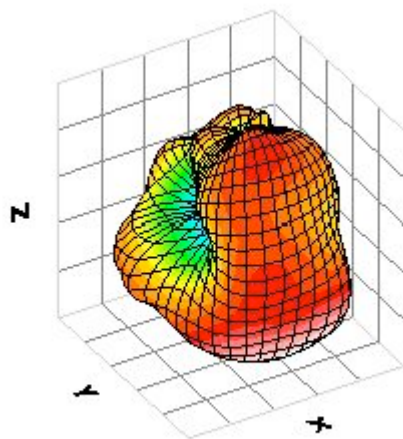
**WIFI Antenna 2.40GHz~2.50GHz**



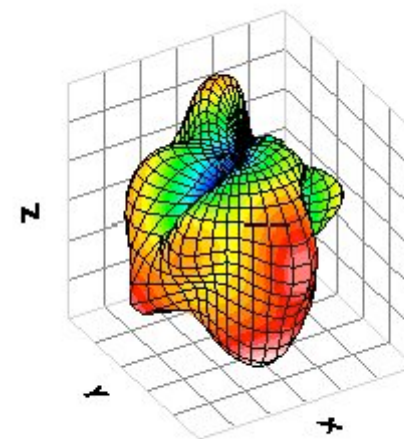
5.15GHz



5.35GHz



5.47GHz



5.85GHz

**WIFI Antenna 5.15GHz~5.85GHz**

### 3.3 Gain

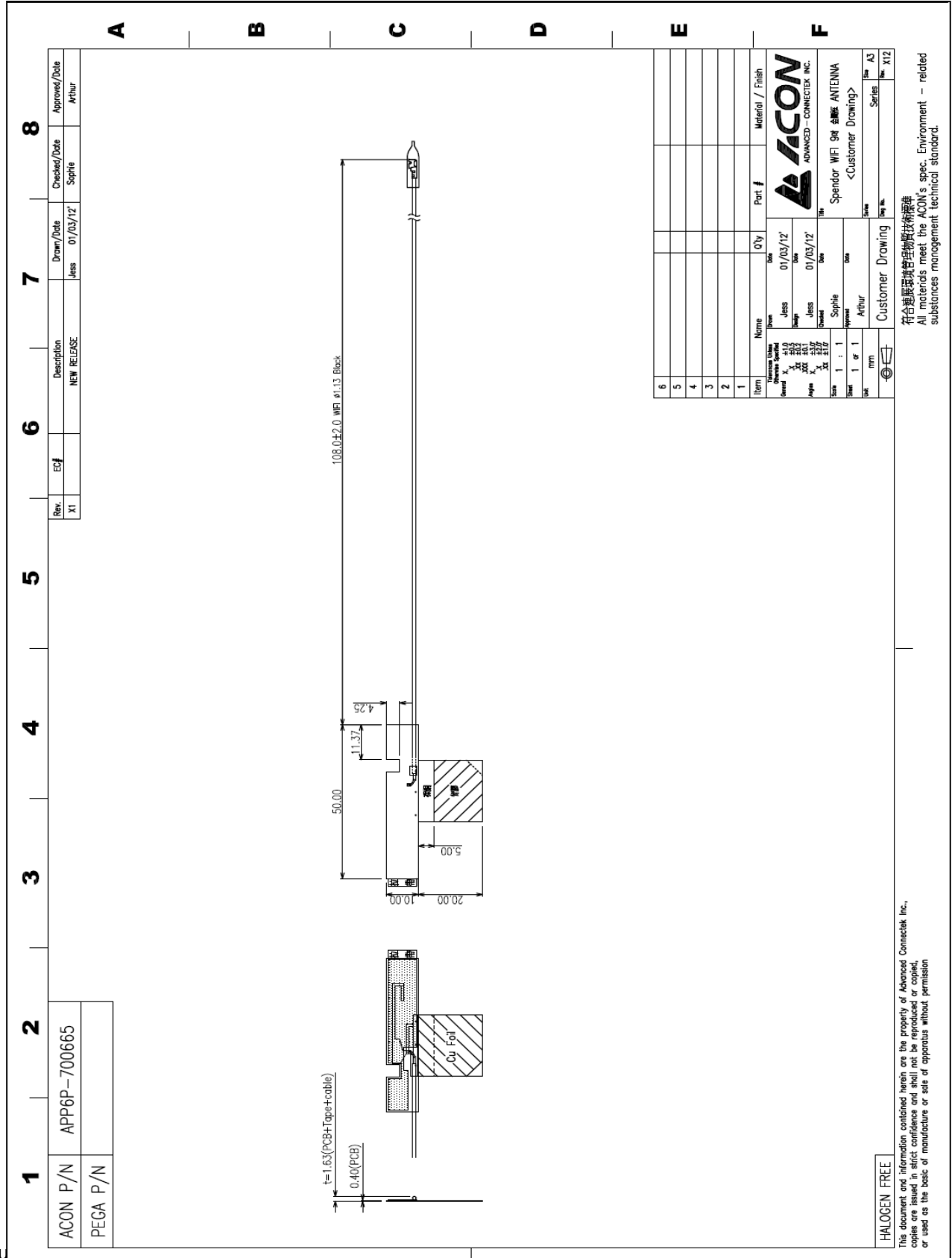
#### Antenna Gain Table:

WIFI Antenna Gain								
Frequency	MAX Value (dBi)			Average (dBi)				
	H-pol.	V-pol.	Total	H-pol.	V-pol.	Total	3D Gain	Efficiency %
2400(MH)	-1.1	-12.93	-1.04	-5.43	-16.76	-5.12	-4.32	36.99
2442(MH)	-1	-12.26	-0.9	-5.87	-15.58	-5.43	-4.45	35.87
2484(MH)	-0.32	-10.49	-0.28	-5.91	-14.85	-5.39	-4.52	35.28
5150(MH)	-1.63	-5.5	-0.14	-5.73	-10.05	-4.37	-3.94	40.37
5350(MH)	-1.61	-6.43	-1.12	-6.51	-10.43	-5.03	-4.08	39.11
5470(MH)	-2.55	-6.44	-1.93	-6.67	-10.77	-5.25	-4.21	37.96
5875(MH)	1.04	-5.77	1.05	-4.09	-11.28	-3.33	-3.86	41.16



## 4. Mechanical Specification

### 4.1 Assembly Drawing(WIFI Antenna)



## Revision

Revision	Date	Change Notification	Notes
Rev.0	2012-07-19	--	--