# Data Sheet

**CUSTOMER: PEGATRON**

**MODEL NAME: H00J WWAN R Antenna**

**ACON P/N: AMP8P-700139**

ADVANCED-CONNECTEK INC.

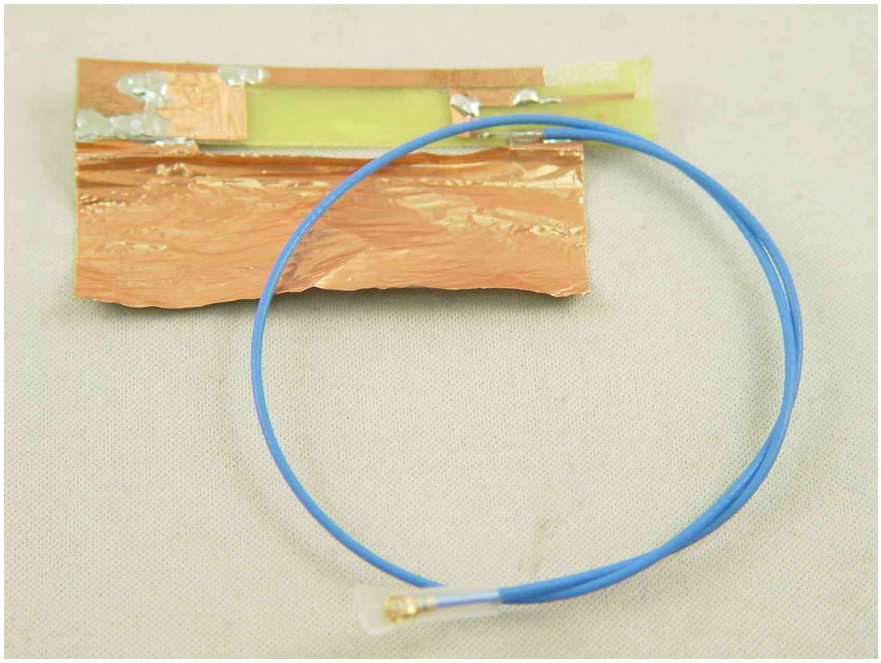
B1,No. 205, Sec.3, Bei-Hsin Rd., Hsin-Tien
Taipei, Taiwan, R.O.C
TEL：886-2-8913-1939
FAX：886-2-8913-2538
Http：//www.acon.com

# 1. Description

## 1.1 Specifications

| | | |
|---|---|---|
| Antennas Type | PIFA Antenna for WWAN IEEE802.20application | |
| Connector Type | I-PEX Connector for 1.37 cable | |
| Cable Type | OD 1.37 RF Cable | |
| Impedance | 50Ω | |
| Polarization | Linear | |
| Radiation pattern | Omni-directional | |
| Frequency | WWAN IEEE802.20 | 824~960MHz |
| | WWAN IEEE802.20 | 1710~2170MHz |
| VSWR | WWAN IEEE802.20 | 3.0Max |
| Peak gain(dBi) | WWAN IEEE802.20 | -0.45 |
| | WWAN IEEE802.20 | 1.95 |
| Cable length | WWAN( AMP8P-700139) | Main :310 mm, Blue |

## 1.2 Antenna Picture



**WWAN P/N: AMP8P-700139**

# 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. WWAN IEEE 802.20: 824～960MHz ,1710～2170MHz

### 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).

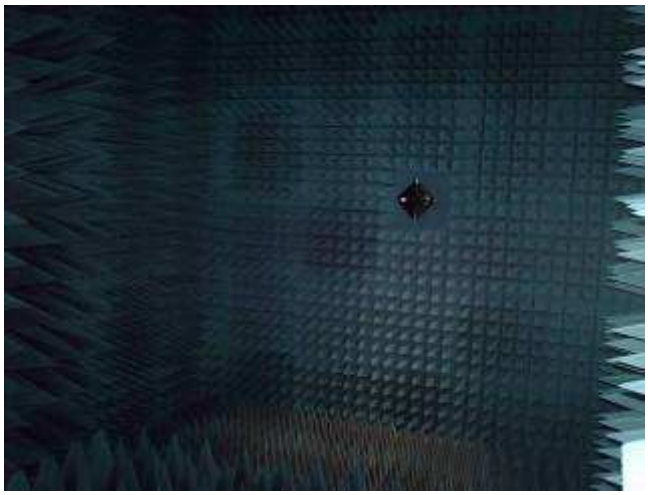


Figure. 2

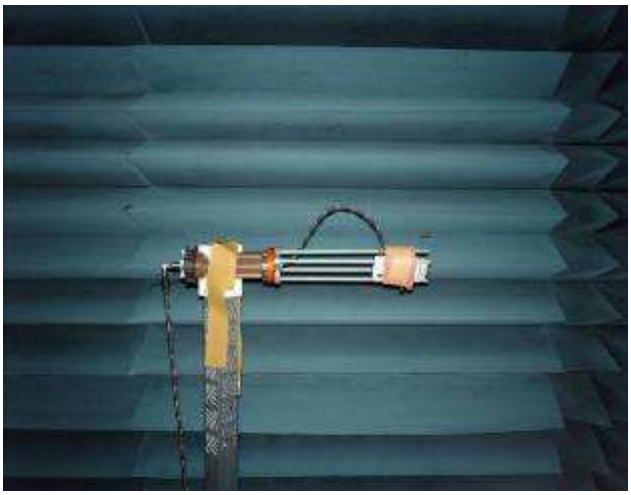


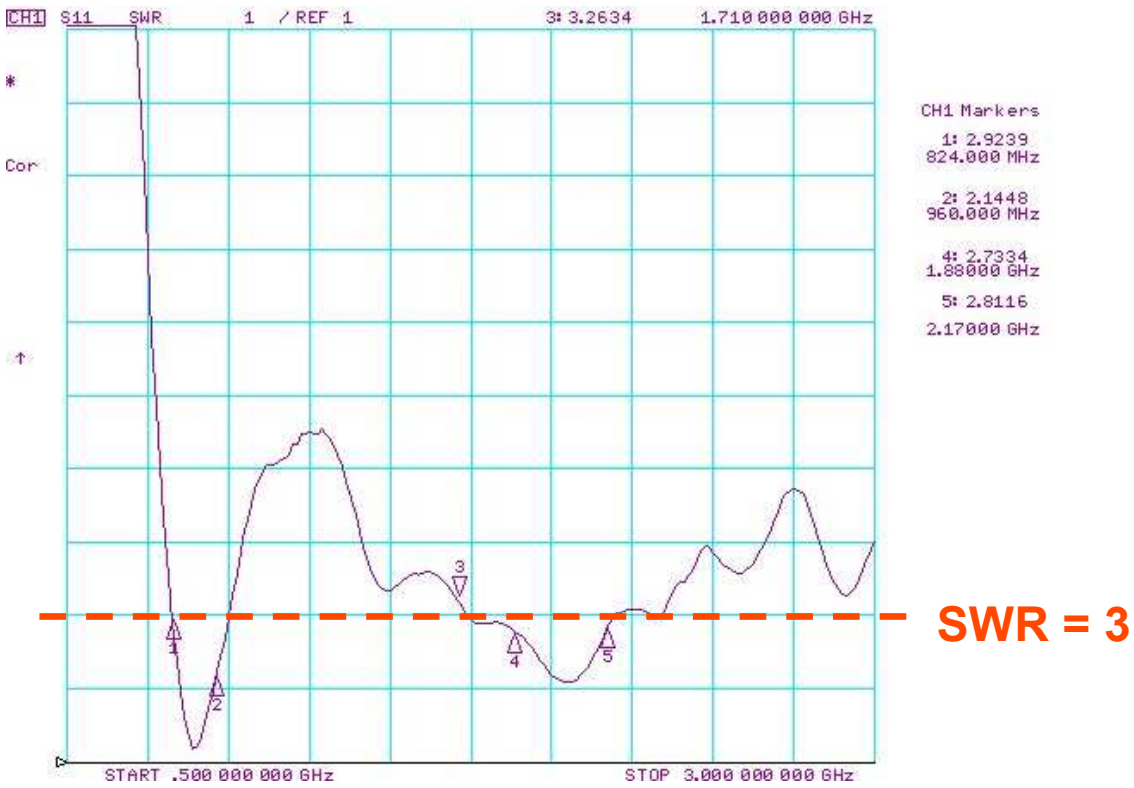
Figure. 3

Figure. 4

Figure. 5

# 3. Performance Data

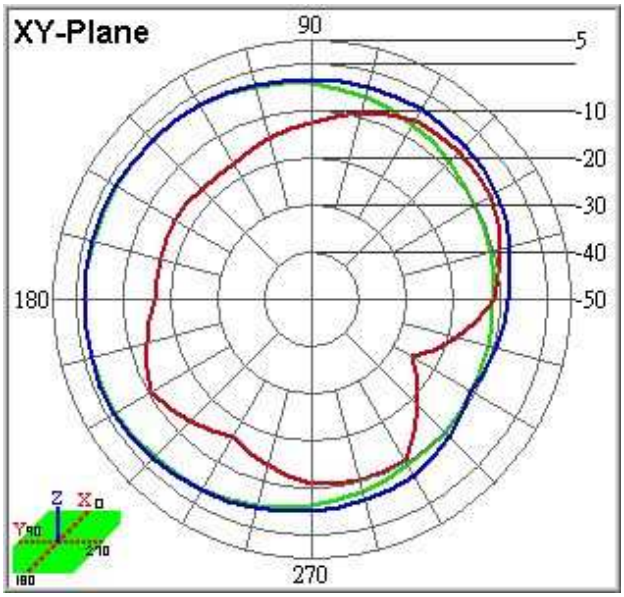
## 3.1 VSWR



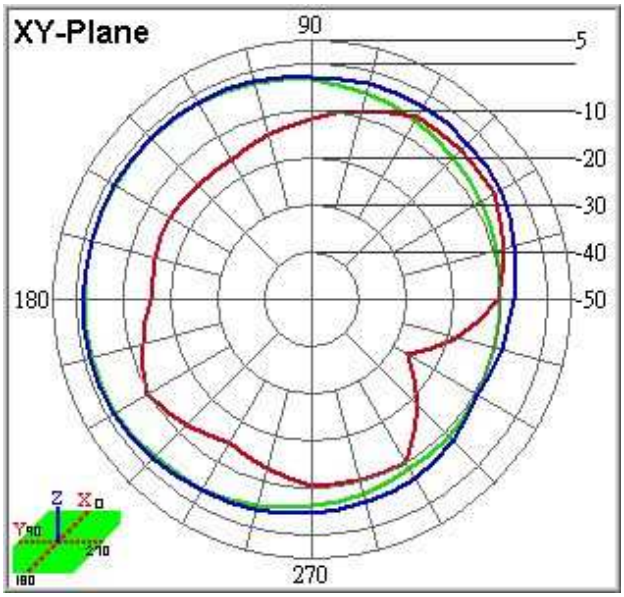

**WWAN P/N: AMP8P-700139**

## 3.2 Radiation pattern & Gain(WWAN- R Antenna XY Plane)

### 3.2.1 2D WWAN -R- Antenna

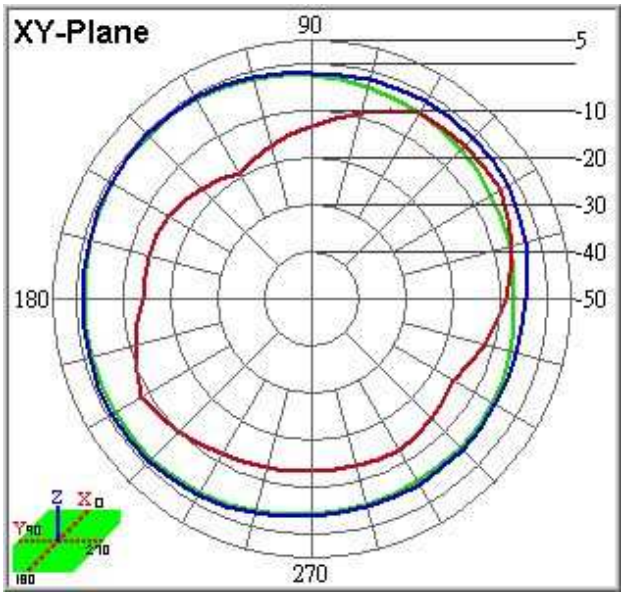



0.824 GHz




0.836 GHz

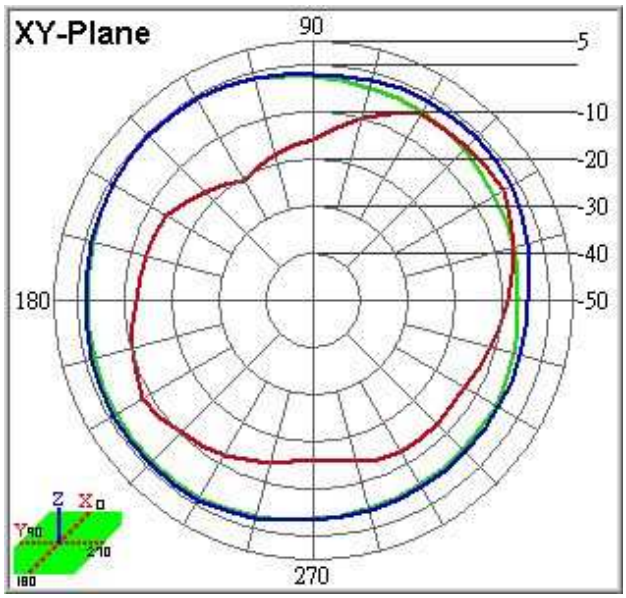
---------Horizontal
---------Vertical
---------H+V



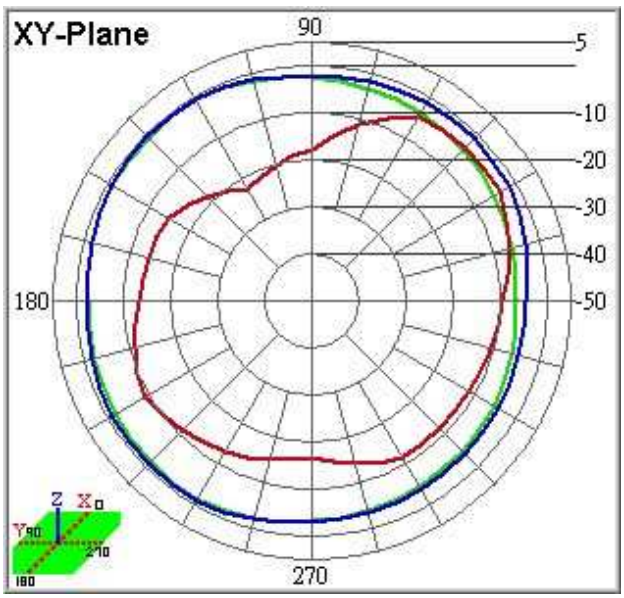

0.880 GHz

---------Horizontal
---------Vertical
---------H+V

**WWAN R Antenna 0.824GHz~0.880GHz**

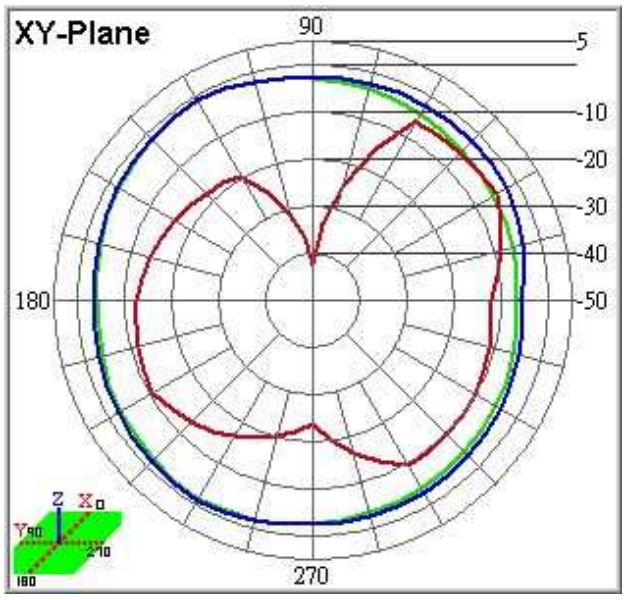



0.894 GHz

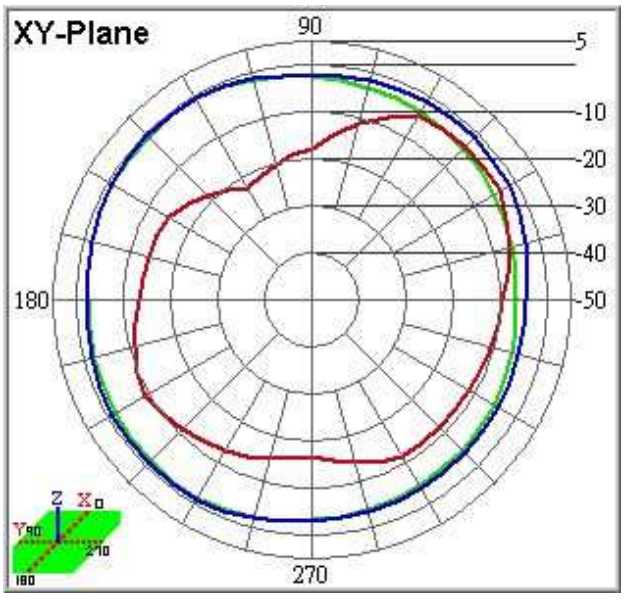



0.900 GHz

---------Horizontal
---------Vertical
---------H+V



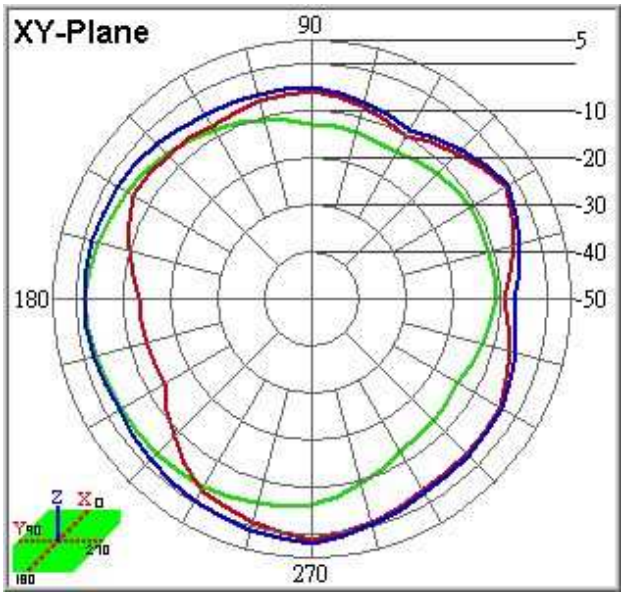

0.925GHz



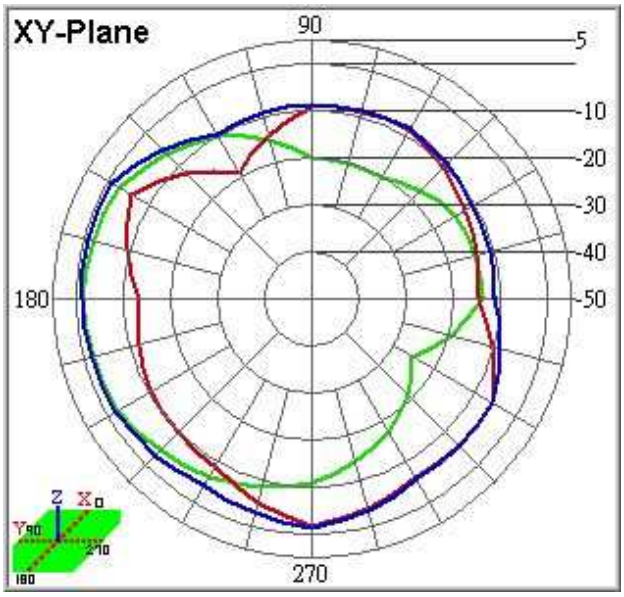

0.960 GHz

---------Horizontal
---------Vertical
---------H+V

**WWAN –R Antenna 0.894GHz~0.960GHz**

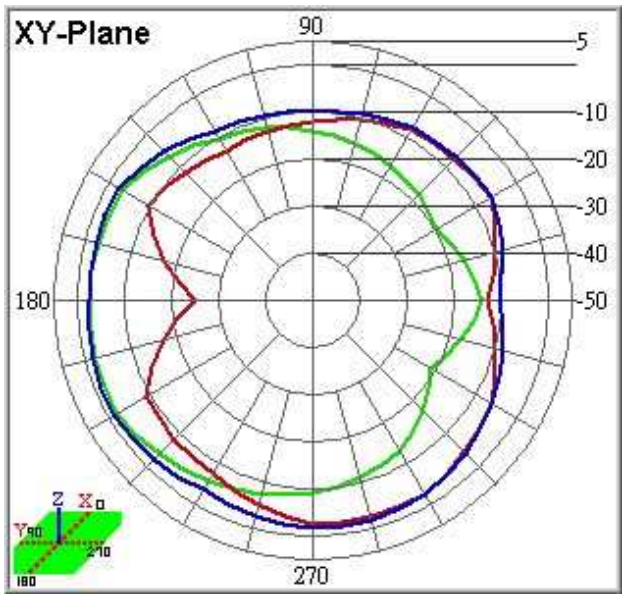



1.710GHz

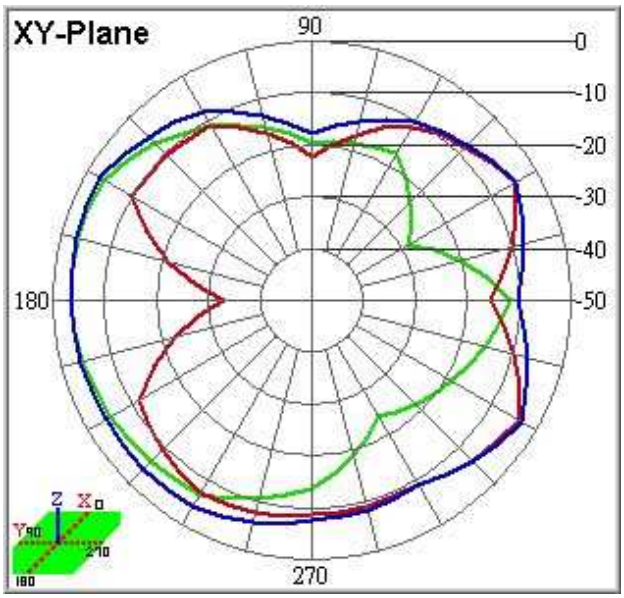



1.880GHz

---------Horizontal
---------Vertical
---------H+V




1.980GHz

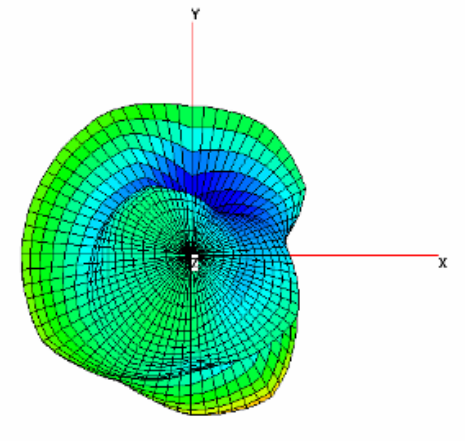



2.170GHz

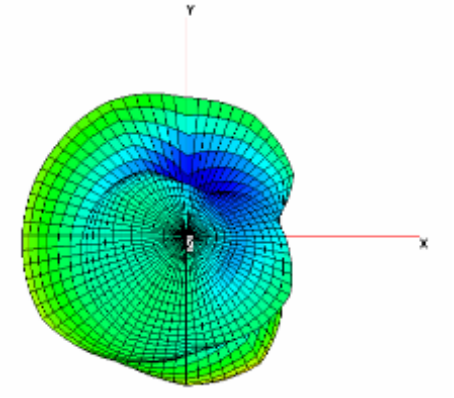
---------Horizontal
---------Vertical
---------H+V

**WWAN -R Antenna 1.710GHz~2.170GHz**

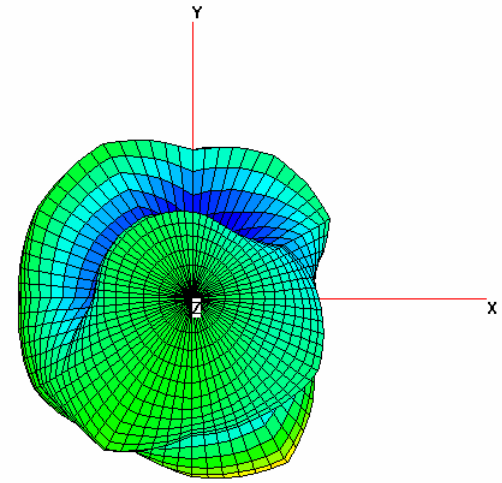
### 3.2.2 3D WWAN -R- Antenna




0.824 GHz

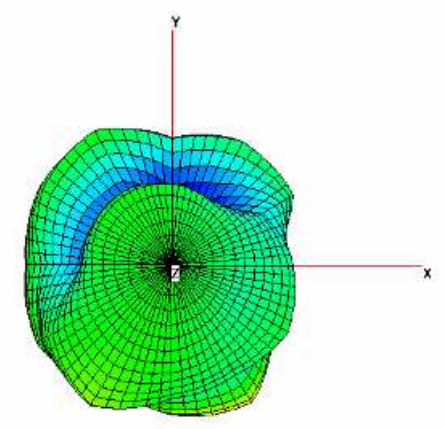



0.836GHz

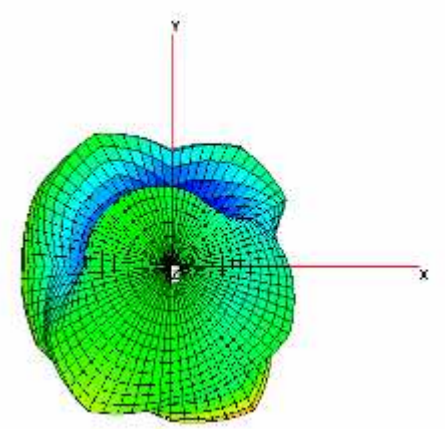



0.880 GHz

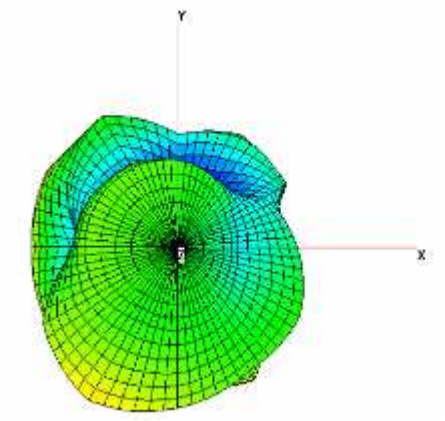
**WWAN -R Antenna 0.824GHz~0.880GHz**



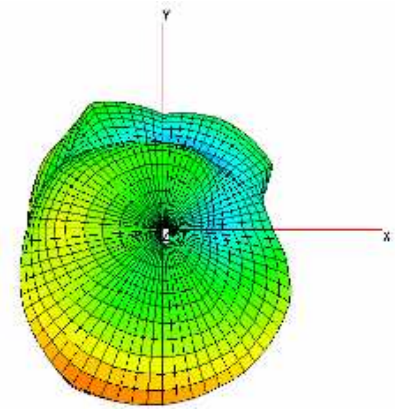

0.894 GHz




0.900GHz

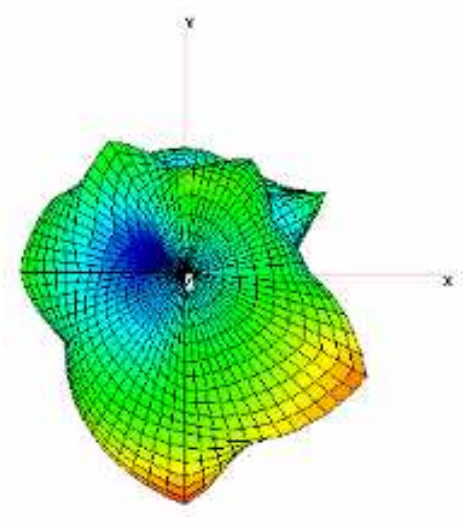



0.925GHz

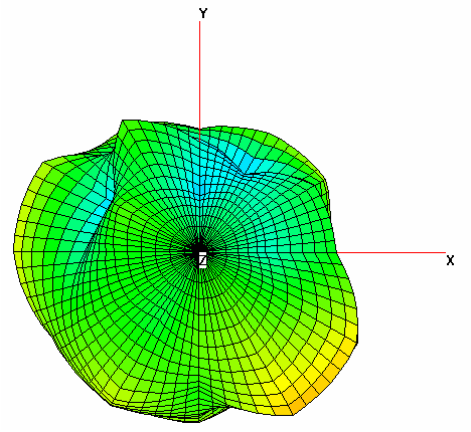



0.960GHz

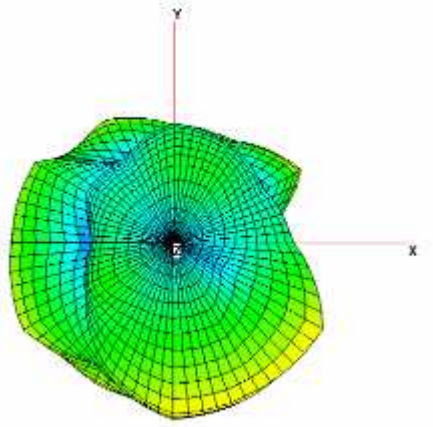
**WWAN -R Antenna 0.894GHz~0.960GHz**



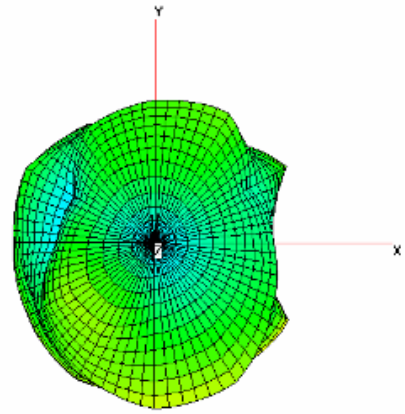

1.710GHz




1.880GHz




1.980GHz




2.170GHz

**WWAN -R Antenna 1.710GHz~2.170GHz**

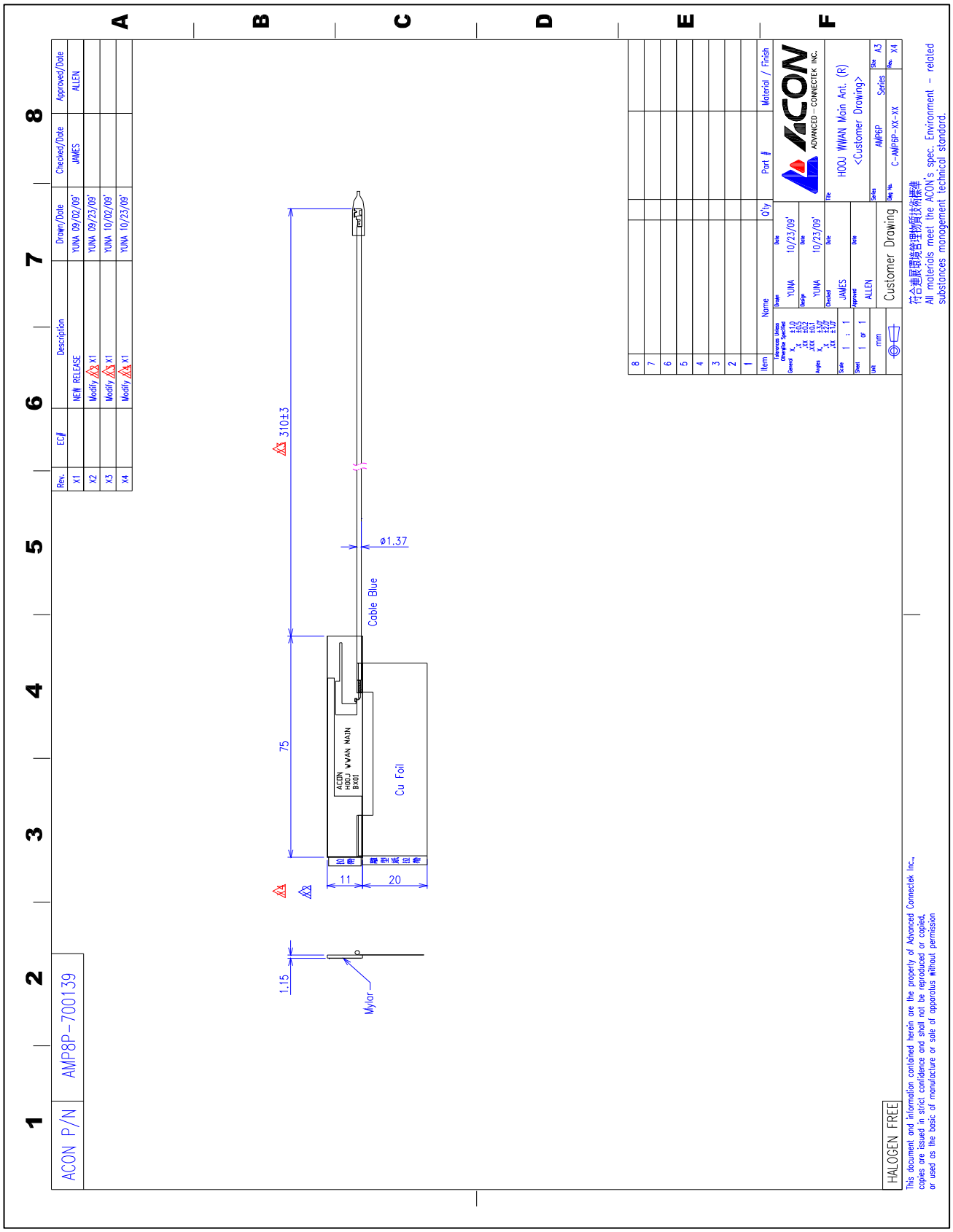
## 3.4 Gain

### Antenna Gain Table:

| WWAN -R Antenna | | | | | | |
|---|---|---|---|---|---|---|
| Frequency | MAX Value (dBi) | | | Average (dBi) | | |
| | H-pol | V-pol | Total | H-pol | V-pol | Total |
| 824(MHz) | -1.71 | -6.09 | -1.39 | -4.62 | -10.87 | -3.70 |
| 836(MHz) | -1.59 | -5.36 | -1.28 | -4.22 | -10.19 | -3.24 |
| 880(MHz) | -0.71 | -3.66 | -0.65 | -3.07 | -9.35 | -2.15 |
| 894(MHz) | -0.49 | -3.47 | -0.45 | -2.89 | -9.33 | -2.00 |
| 900(MHz) | -0.50 | -3.71 | -0.48 | -2.85 | -9.58 | -2.01 |
| 925(MHz) | -1.07 | -4.91 | -1.01 | -3.27 | -10.64 | -2.54 |
| 960(MHz) | -0.89 | -6.20 | -0.79 | -3.43 | -11.26 | -2.77 |
| 1710(MHz) | -1.80 | 1.21 | 1.95 | -6.60 | -4.43 | -2.37 |
| 1880(MHz) | -1.31 | -1.85 | -0.92 | -7.05 | -7.63 | -4.32 |
| 1980(MHz) | -1.92 | -2.40 | -1.17 | -7.09 | -7.17 | -4.12 |
| 2170(MHz) | -3.44 | -3.50 | -2.57 | -8.63 | -8.70 | -5.66 |

# 4.Mechanical Specification

## 4.1 Assembly Drawing(WWAN -R Ant.)



# Revision

| Revision | Date | Change Notification | Notes |
|---|---|---|---|
| Rev.0 | 2009-10-26 | -- | -- |
| | | | |