



**Formosa Wireless Systems corp.**

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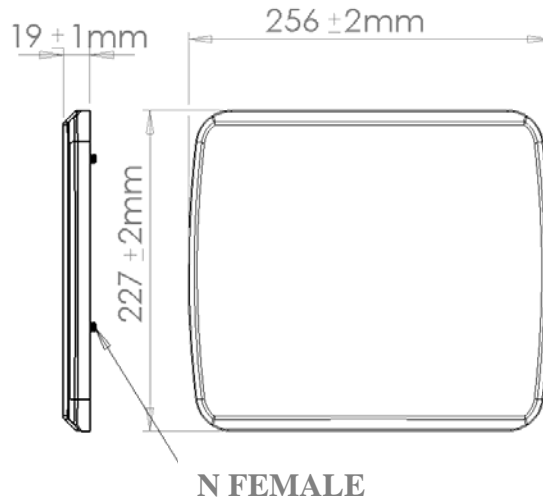
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3F-13, No.36, Taiyuan St., Chubei City, Hsinchu County 30265, Taiwan

# **DATA SHEET**

**Model No. :           ANT24-1310PC**  
**Description :        2.4 GHz PANEL DUAL**  
**POLARIZATION ANTENNA**  
**Date :                   2009/11/20**  
**Rev :                    2**

## 1. OVERVIEW & SPECIFICATIONS



### Electrical Specifications:

Frequency Range :	2.4GHz
VSWR :	≤ 2.0
Impedance :	50Ω ± 5Ω
Gain :	13dBi
Polarization :	Dual polarization
Power Handling :	10 Watt

### Mechanical Specifications:

Connector :	N FEMALE
Operation Temp. :	-30°C ~ +60°C
Material :	Radome: Aluminum Mount: Plating Zinc Iron Plate Radome: ABS
Dimension (L*W*H) :	256*227*19 mm
Weight	435g ± 10g (w/ mount)
Color	GRAY

### 3D Illustration



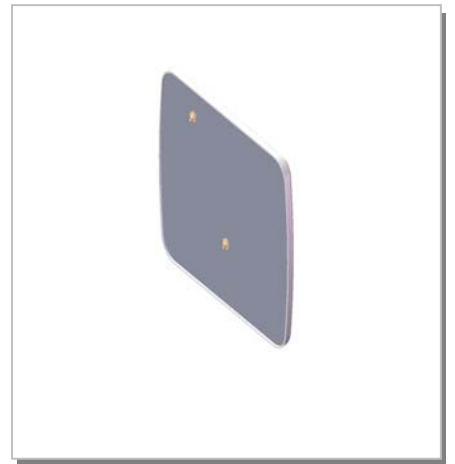
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TOUCH AND CONNECT!<sup>3/8</sup><sup>TM</sup>

WNet  
Green Network<sup>TM</sup>

## 2. TESTING CONDITION

### 2.1 TEST SETUP

VSWR measurement (S11): Use ROHDE & SCHWARZ ZV8 Network Analyzer with Harbour RG-142 coaxial cable: 1000mm length in free space.

#### 2.1.1 VSWR

The table as below summarizes concern about Return loss measurement according to The frequency band is based on FWS design. The detail be shown as appendix that is from ROHDE & SCHWARZ ZV8 Network Analyzer

	VSWR Performance ( port 1 )		
Freq(MHz)	2300	2400	2450
Free space	<b>2.2</b>	<b>1.4</b>	<b>1.3</b>
Freq(MHz)	2500	2600	2700
Free space	<b>1.3</b>	<b>1.2</b>	<b>2.2</b>

	VSWR Performance ( port 2 )		
Freq(MHz)	2300	2400	2450
Free space	<b>1.9</b>	<b>1.5</b>	<b>1.6</b>
Freq(MHz)	2500	2600	2700
Free space	<b>1.7</b>	<b>2.0</b>	<b>1.8</b>

## 3. GAIN MEASUREMENT



### 3.1 TEST SETUP

The gain of the antenna was measured by FWS Chamber. The chamber provides less than -30 dB reflectivity from 800 MHz through 6 GHz and a 60cm diameter spherical quiet zone. The measurement results are calibrated using both SCHWARZBECK horn standards. A decoupling sleeve is used to reduce feed line radiation

### 3.2 TEST RESULT

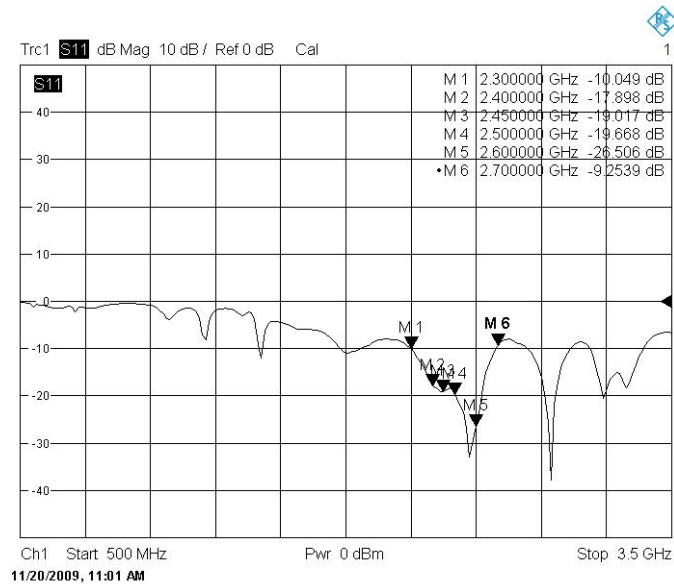
The peak gain is picked up as table list from Network analyzer in Chamber room, the completely gain plots also be shown as appendix.

	Peak Gain (dBi)		
Freq(MHz)	2300	2400	2450
H PLANE(port 1)	<b>12.85</b>	<b>12.83</b>	<b>13.21</b>
H PLANE(port 2)	<b>12.46</b>	<b>11.71</b>	<b>11.79</b>
Freq(MHz)	2500	2600	2700
H PLANE(port 1)	<b>12.65</b>	<b>12.09</b>	<b>11.96</b>
H PLANE(port 2)	<b>11.86</b>	<b>11.47</b>	<b>10.0</b>

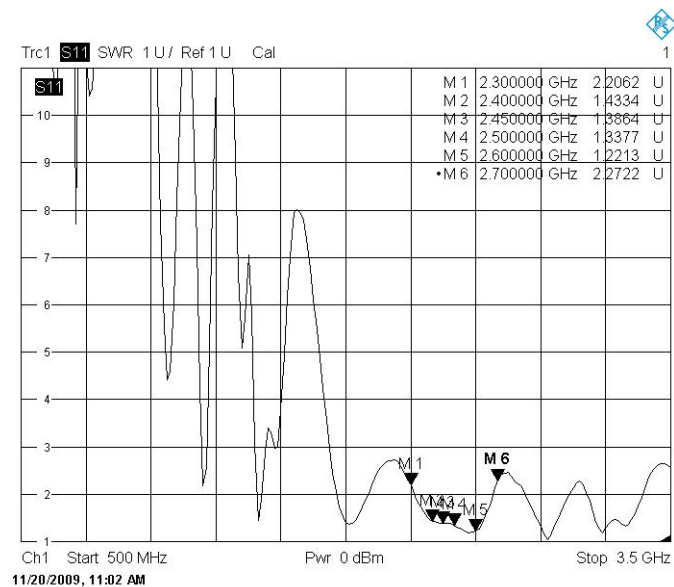
## 4. APPENDIX

### 4.1 RETURN LOSS & VSWR

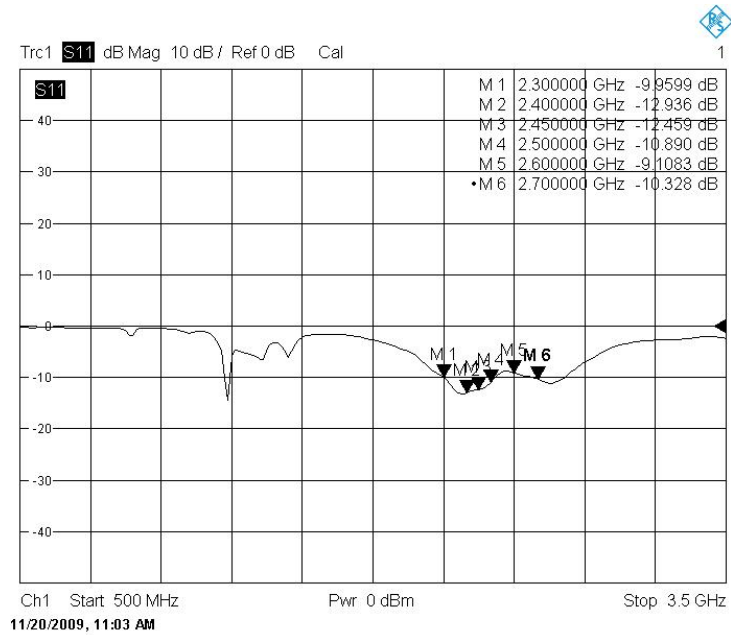
#### RETURN LOSS (port 1)



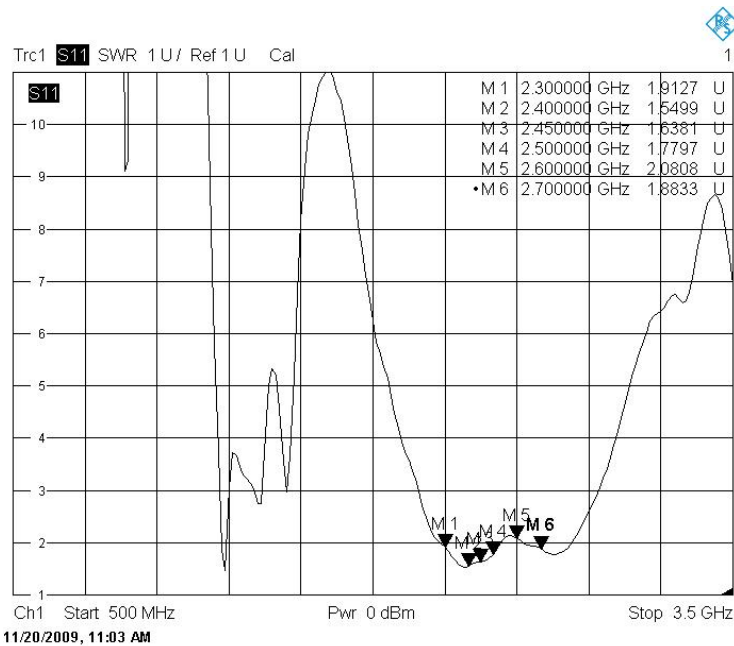
#### SWR (port 1)



## RETURN LOSS (port 2)



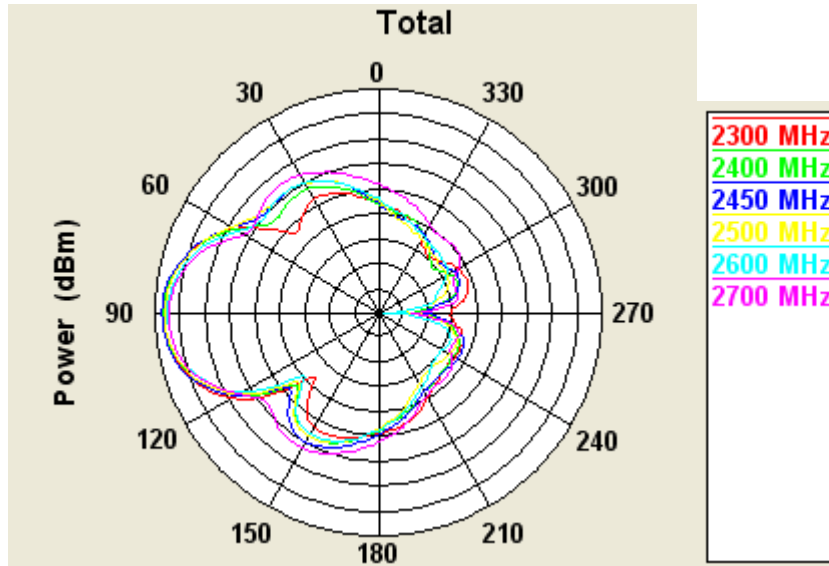
## SWR (port 2)



## 4.2 RADIATION PATTERN

### H-PLANE (port 1)

Gain Total



### H-PLANE (port 2)

Gain Total

