

## *The KT2 Antenna Performance Testing Report*

|      |                   |                  |                  |                                |
|------|-------------------|------------------|------------------|--------------------------------|
| By   | Approved          | Checked          | Prepared         | Issued By:<br>Taipei Cable R&D |
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| Date | 2004/04/19        | 2004/04/19       | 2004/04/19       |                                |

**Antenna Description**

| Item                   | Note                                                                                                                                                                                                                                                            | Antenna fixed in machine diagram                                                    |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Main<br/>(Left)</b> | <ol style="list-style-type: none"><li>1. Antenna is fixed on the left hinge of NB.</li><li>2. Cable: 1.13 mm (OD) x 300 mm (Gray).</li><li>3. Connector: Foxconn SGX0001 RF jack connector.</li><li>4. Monopole type PCB antenna with FR4 material.</li></ol>   |   |
| <b>Aux<br/>(Right)</b> | <ol style="list-style-type: none"><li>1. Antenna is fixed on the right hinge of NB.</li><li>2. Cable: 1.13 mm (OD) x 500 mm (Black).</li><li>3. Connector: Foxconn SGX0001 RF jack connector.</li><li>4. Monopole type PCB antenna with FR4 material.</li></ol> |  |

**Antenna fixed in the machine photo: Left & Right**

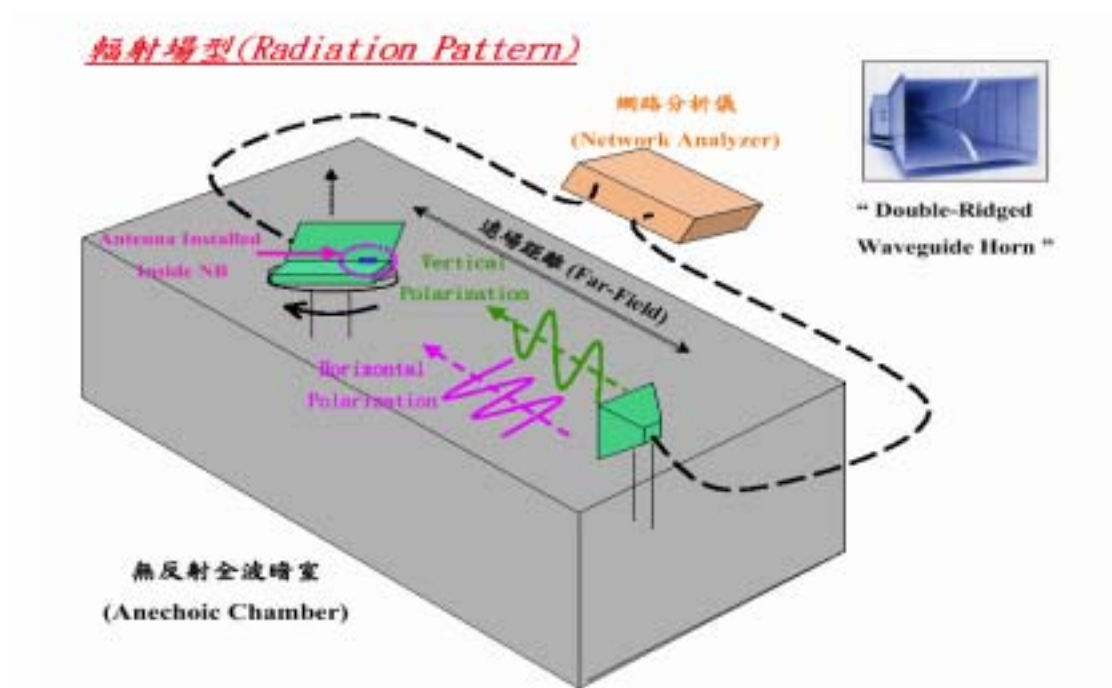
**Test Item:**

1. VSWR (2.0 ~ 3.0 GHz)
2. Gain @ 2.4 ~ 2.5GHz

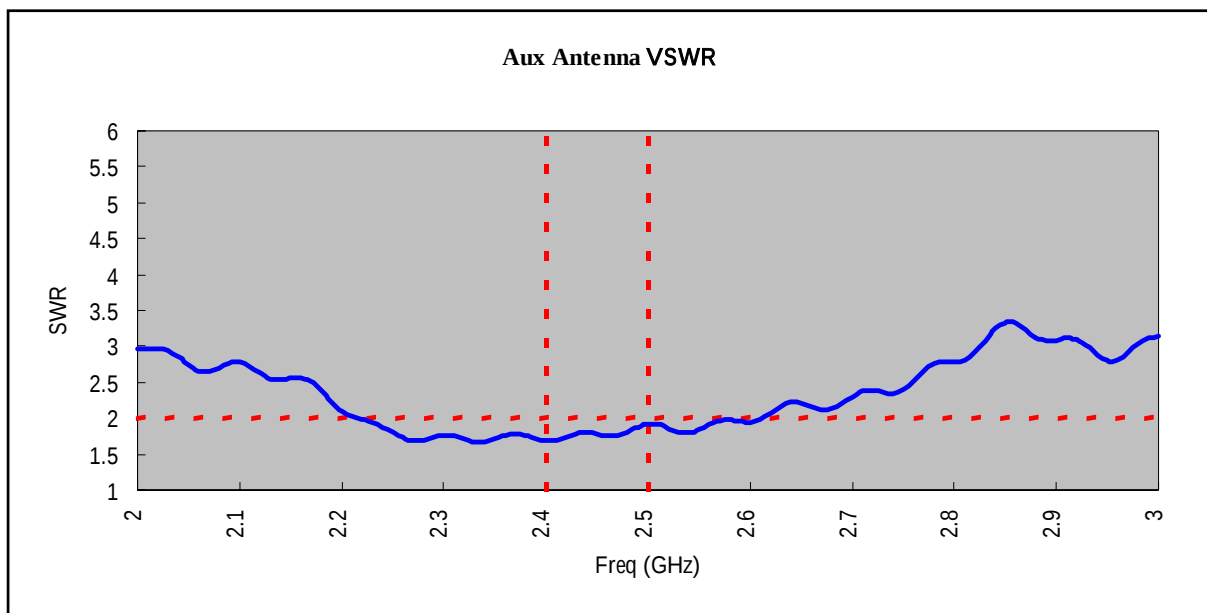
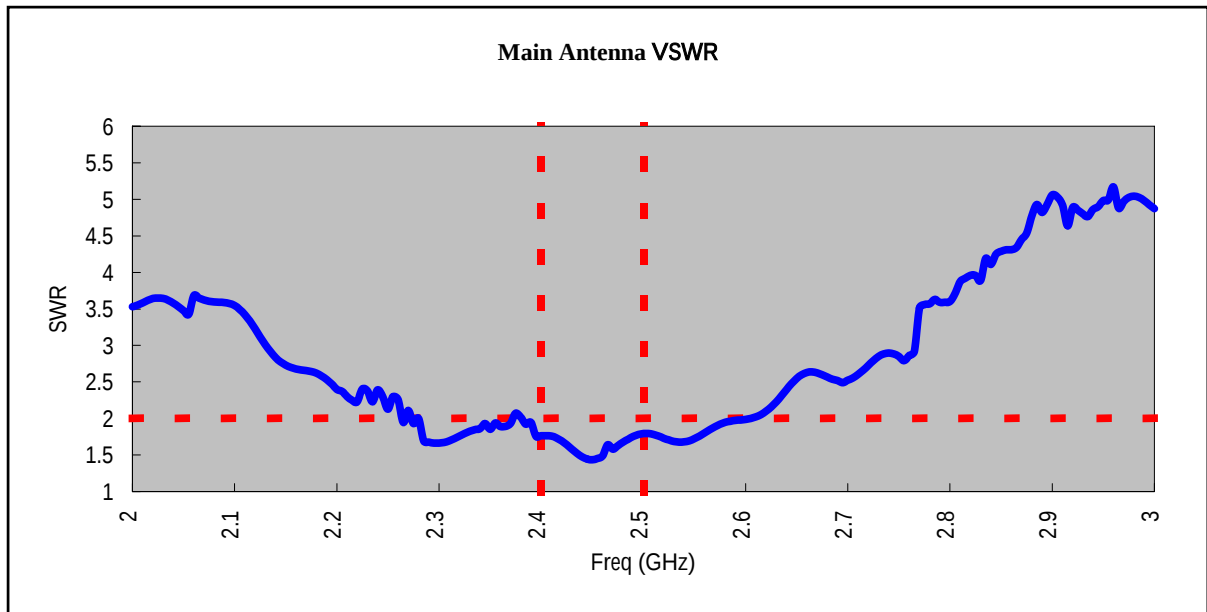
**Equipment:**

1. RF Network Analyzer, HP8720D
2. Anechoic Chamber
3. Double-Ridged Waveguide Horn
4. Rotational Platform with step motor

**Antenna Gain and Radiation Pattern Measuring Structure Diagram**

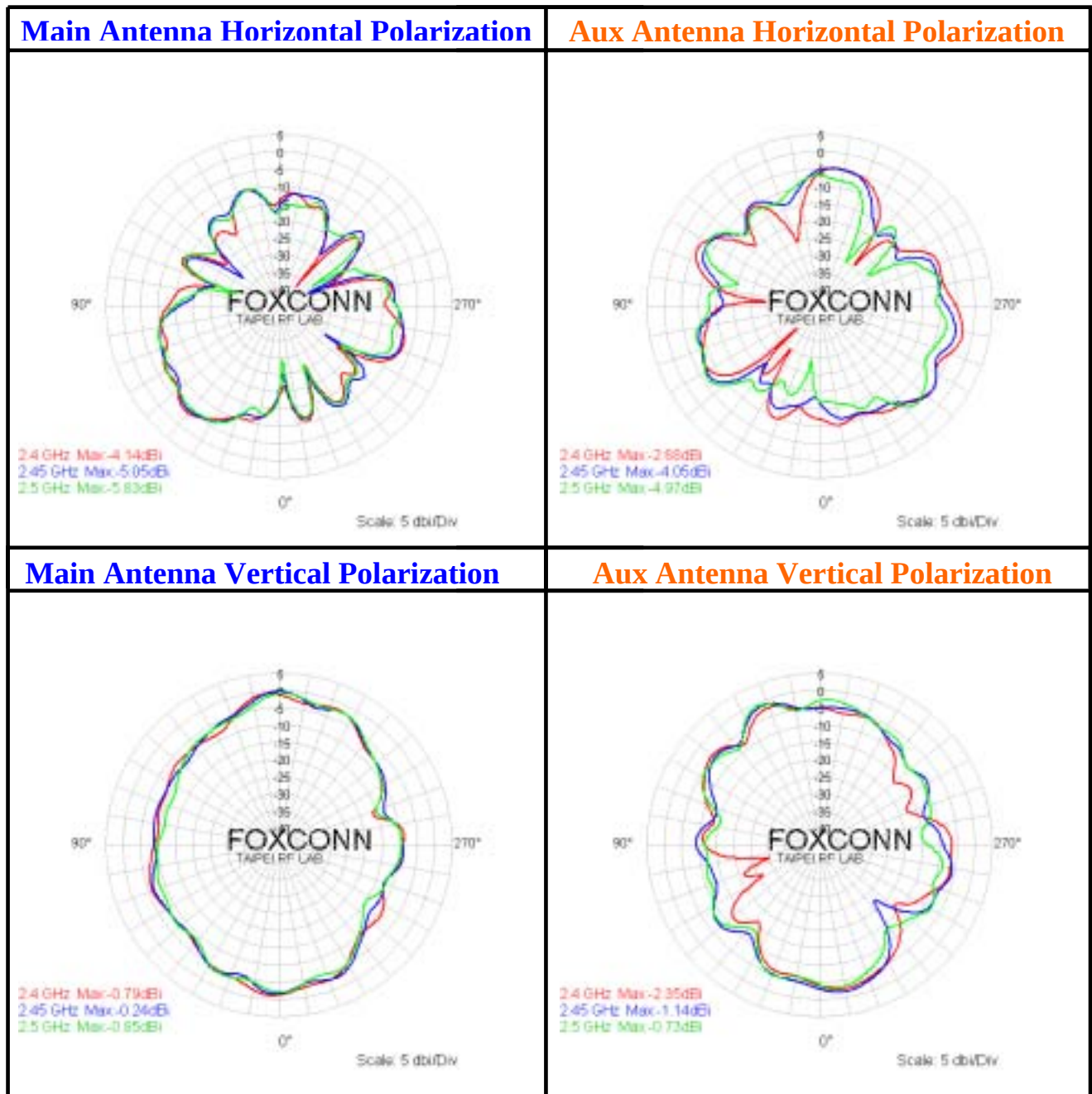


1. VSWR @ 2.0 ~ 3.0 GHz



| Marker Point (GHz)      | 2.400 | 2.450 | 2.500 |
|-------------------------|-------|-------|-------|
| Main Antenna VSWR Value | 1.764 | 1.437 | 1.794 |
| Aux Antenna VSWR Value  | 1.683 | 1.785 | 1.922 |

## 2. Antenna Radiation Pattern @ 2.40 ~ 2.50 GHz



## Main Antenna Average Gain

| Freq (GHz)   | 2.40    | 2.45    | 2.50    |
|--------------|---------|---------|---------|
| XY-H (dBi)   | -11.726 | -11.667 | -12.215 |
| XY-V (dBi)   | -5.510  | -5.620  | -6.065  |
| Average Gain | -4.579  | -4.656  | -5.121  |

## Main Antenna Peak Gain

| Freq (GHz) | 2.40  | 2.45  | 2.50  |
|------------|-------|-------|-------|
| XY-H (dBi) | -4.14 | -5.05 | -5.83 |
| XY-V (dBi) | -0.79 | -0.24 | -0.85 |

## Aux Antenna Average Gain

| Freq (GHz)   | 2.40   | 2.45   | 2.50    |
|--------------|--------|--------|---------|
| XY-H (dBi)   | -8.829 | -9.395 | -10.683 |
| XY-V (dBi)   | -7.247 | -6.430 | -6.839  |
| Average Gain | -4.956 | -4.654 | -5.339  |

## Aux Antenna Peak Gain

| Freq (GHz) | 2.40  | 2.45  | 2.50  |
|------------|-------|-------|-------|
| XY-H (dBi) | -2.68 | -4.05 | -4.97 |
| XY-V (dBi) | -2.35 | -1.14 | -0.73 |

3. Antenna Photo for R & L

