



## Specifications Sheet

|                   |                         |                   |                   |
|-------------------|-------------------------|-------------------|-------------------|
| <b>Object</b>     | Internal Antenna        | <b>Page</b>       | 1 of 6            |
| <b>Customer</b>   |                         | <b>Date</b>       | February 19, 2010 |
| <b>System</b>     | WLAN/ Bluetooth/ Zigbee | <b>Rev.</b>       | A                 |
| <b>Model Name</b> | W5I-BO-07               | <b>Written by</b> | W. I. KWAK        |

### Electrical Specifications

|                                |                 |
|--------------------------------|-----------------|
| <b>Frequency Range ( MHz )</b> | 2400 ~ 2483.5   |
| <b>Band Width ( MHz )</b>      | 83.5            |
| <b>V.S.W.R ( Min )</b>         | 1.9 : 1         |
| <b>Gain ( Max )</b>            | 2.5 ± 1 ( dBi ) |
| <b>Input Impedance</b>         | 50 ( Ω )        |
| <b>Polarization</b>            | Linear          |

### Mechanical Specifications

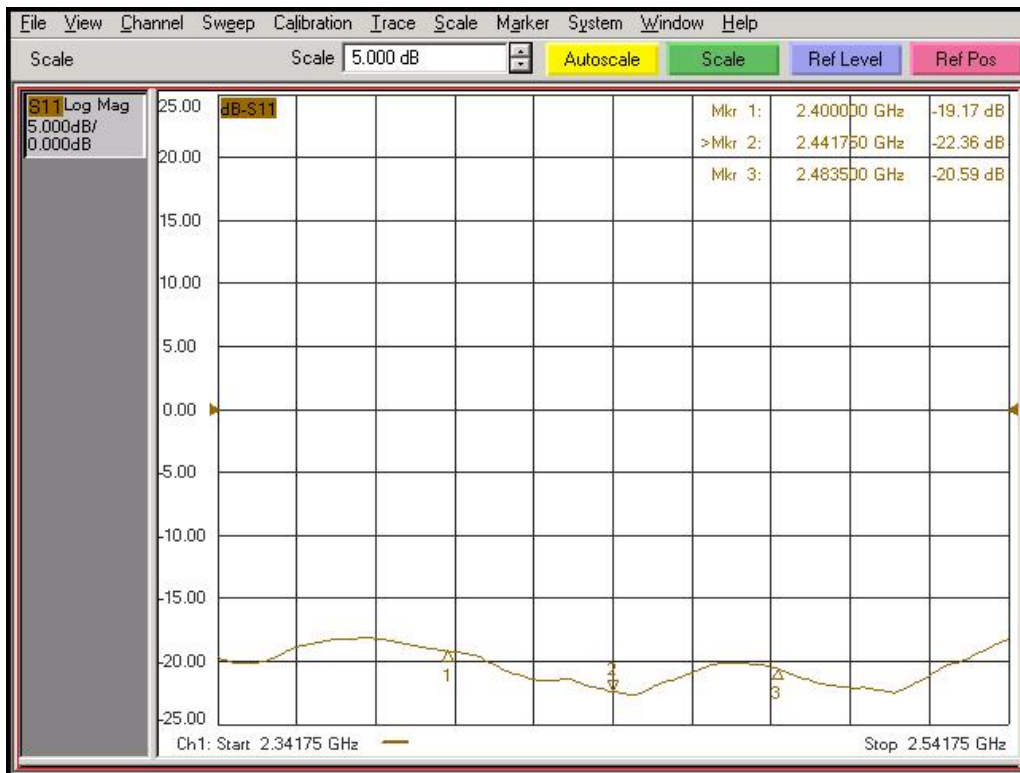
|   |                  |
|---|------------------|
| <b>Antenna Size ( Length x Width x Height )</b> | 48 × 8 × 1 mm    |
| <b>Weight</b>                                   | N / A            |
| <b>Connector</b>                                | I-PEX MHF        |
| <b>Cable Length</b>                             | 130 mm           |
| <b>Radiator Material</b>                        | Copper           |
| <b>Operation Temperature</b>                    | - 30 ~ 70 ( °C ) |
| <b>Operation Humidity</b>                       | 10 ~ 90 ( % )    |

|                |                              |
|----------------|------------------------------|
| <b>Option</b>  |                              |
| <b>Remarks</b> | Data measured at free-space. |

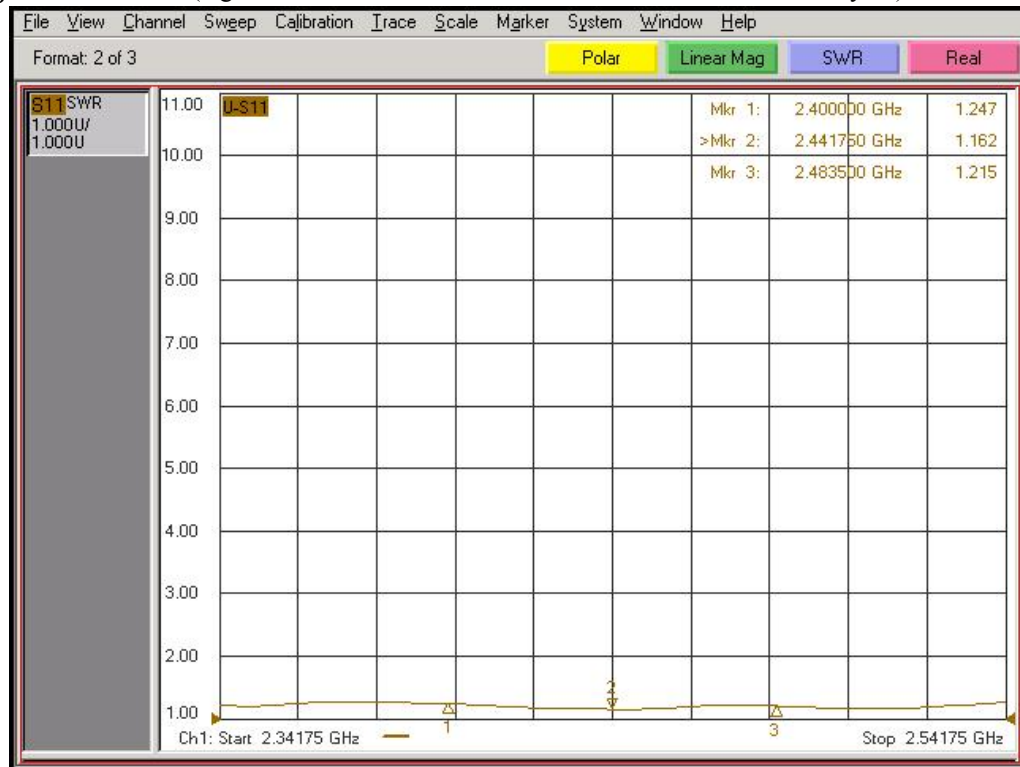
**WINiZEN Co., Ltd.**



**Fig 1. Return Loss** (Agilent E8357A 300KHz~6GHz PNA Series Network Analyzer)



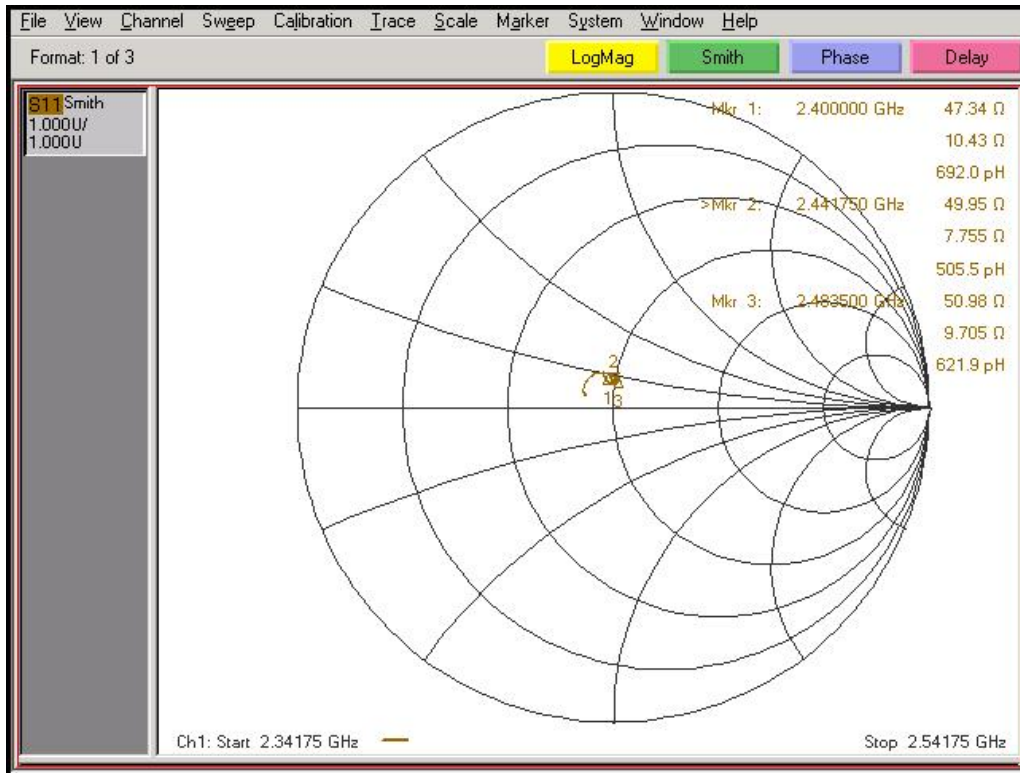
**Fig 2. V.S.W.R** (Agilent E8357A 300KHz~6GHz PNA Series Network Analyzer)



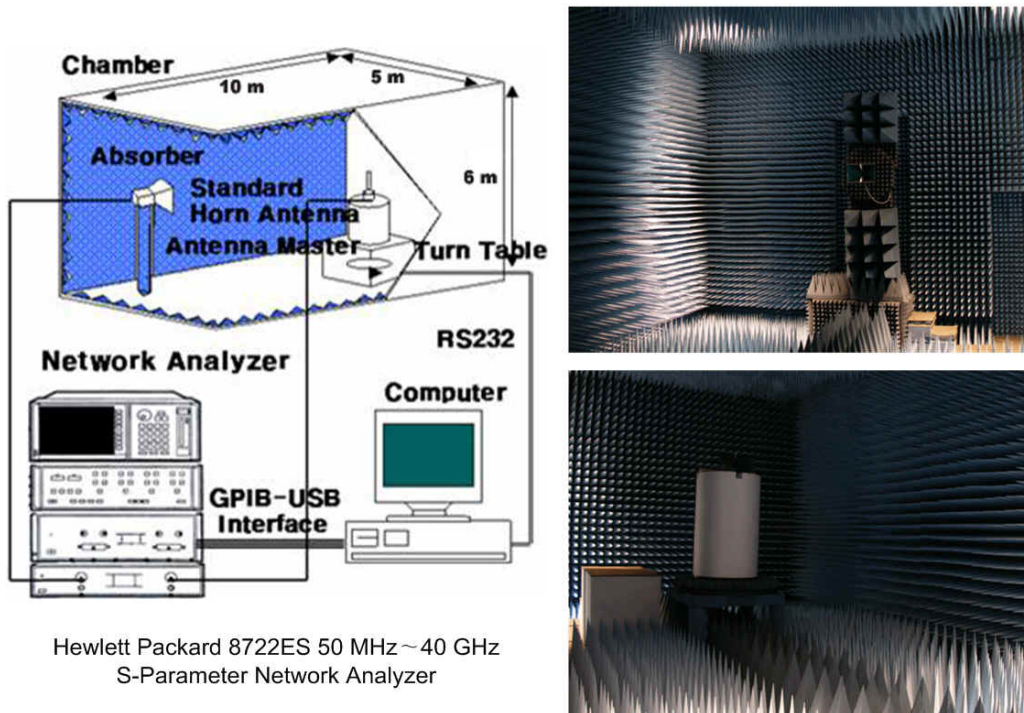


**Fig 3. Smith Chart** (Agilent E8357A 300KHz ~ 6GHz PNA Series Network Analyzer)

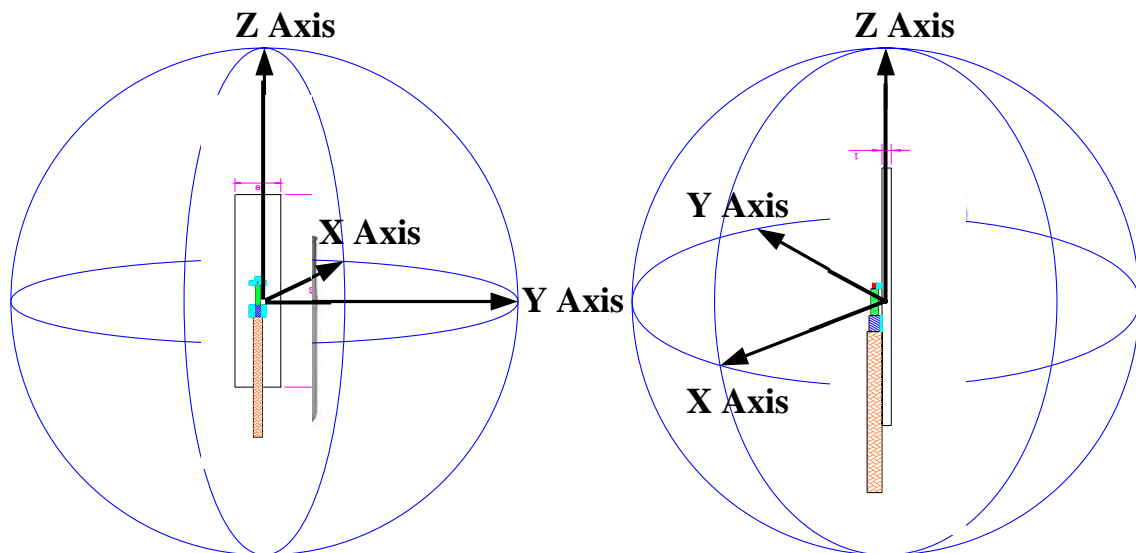
**LEFT**



**Fig 4. Measurement Configuration**



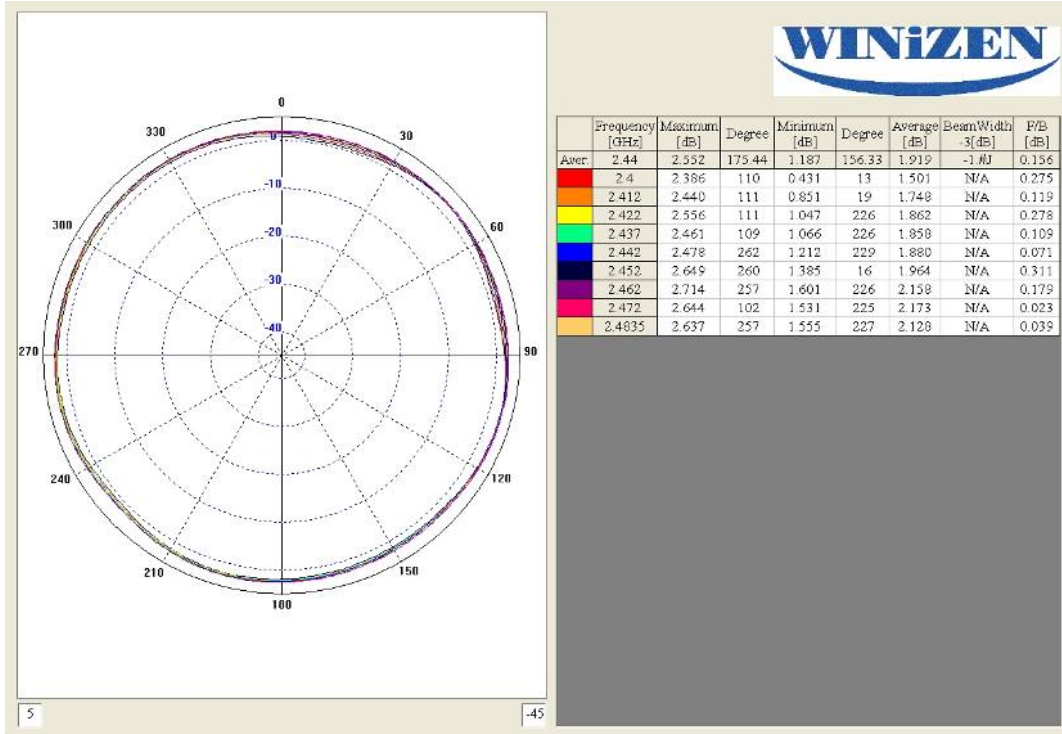
**Fig 5. Axis Definitions (Antenna Center)**



- a. Azimuth Pattern (Co-pol) : XY Plane ; Horn Antenna Polarization : Vertical
- b. Elevation Pattern (Co-pol) : XZ Plane ; Horn Antenna Polarization : Horizontal
- c. Elevation Side Pattern (Co-pol) : YZ Plane ; Horn Antenna Polarization : Horizontal

**Fig 6. Gain Patterns**

**a. Azimuth Pattern**



**b. Elevation Pattern**

