



## Specifications Sheet

|                   |                  |                   |                   |
|-------------------|------------------|-------------------|-------------------|
| <b>Object</b>     | Internal Antenna | <b>Page</b>       | 1 of 9            |
| <b>Customer</b>   | Clipcomm         | <b>Date</b>       | December 18, 2006 |
| <b>System</b>     | Bluetooth        | <b>Rev.</b>       | IR                |
| <b>Model Name</b> | W6I – BF – 19    | <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>            | $2.5 \pm 1$ ( dBi ) |
| <b>Input Impedance</b>         | 50 ( $\Omega$ )     |
| <b>Polarization</b>            | Linear              |

### Mechanical Specifications

|                                                 |                                  |
|-------------------------------------------------|----------------------------------|
| <b>Antenna Size ( Width x Length x Height )</b> | $20 \times 7.6 \times 2.9$ mm    |
| <b>Weight</b>                                   | N / A                            |
| <b>Radiator Material</b>                        | Copper                           |
| <b>Operation Temperature</b>                    | - 30 ~ 90 ( $^{\circ}\text{C}$ ) |
| <b>Operation Humidity</b>                       | 10 ~ 90 ( % )                    |

|                |  |
|----------------|--|
| <b>Option</b>  |  |
| <b>Remarks</b> |  |

**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)

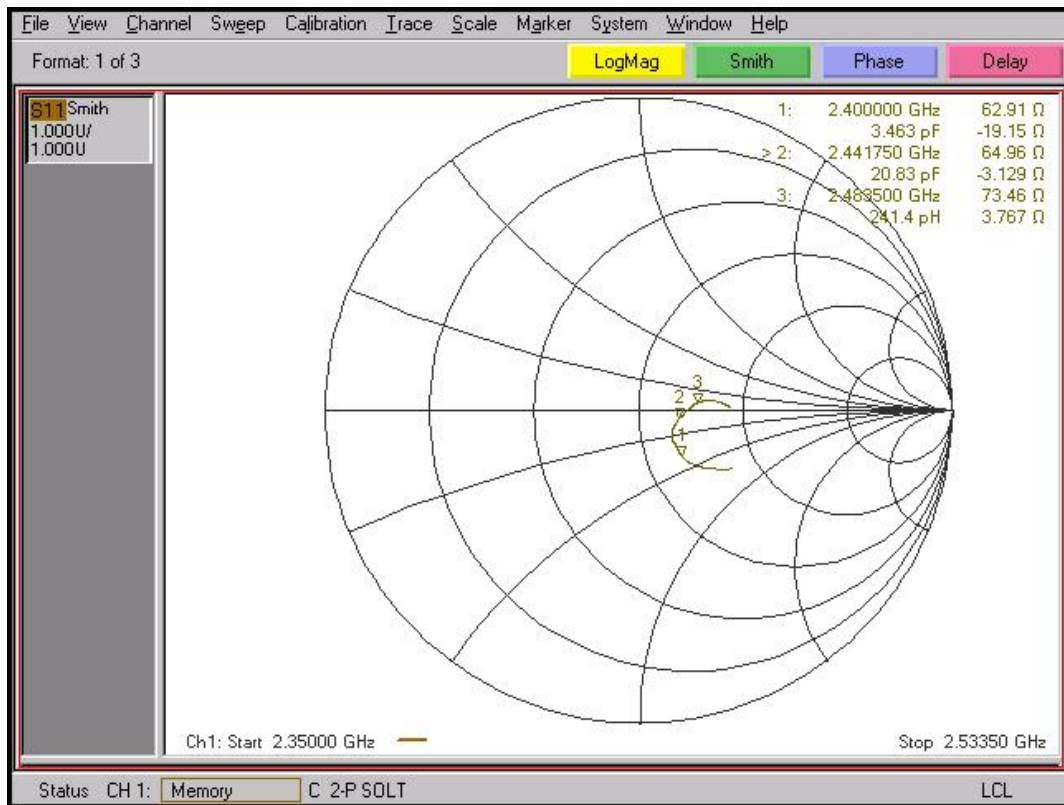


**Fig 4. Measurement Configuration**

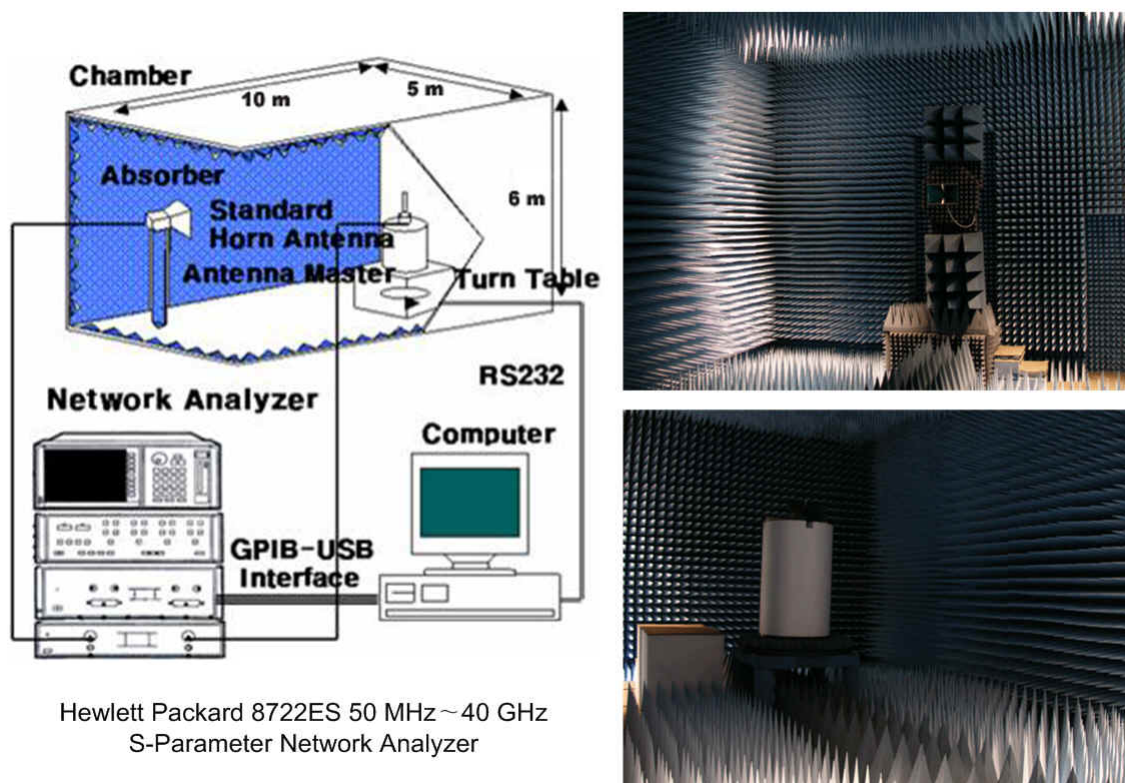


**Fig 5. Axis Definitions (Antenna Center)**

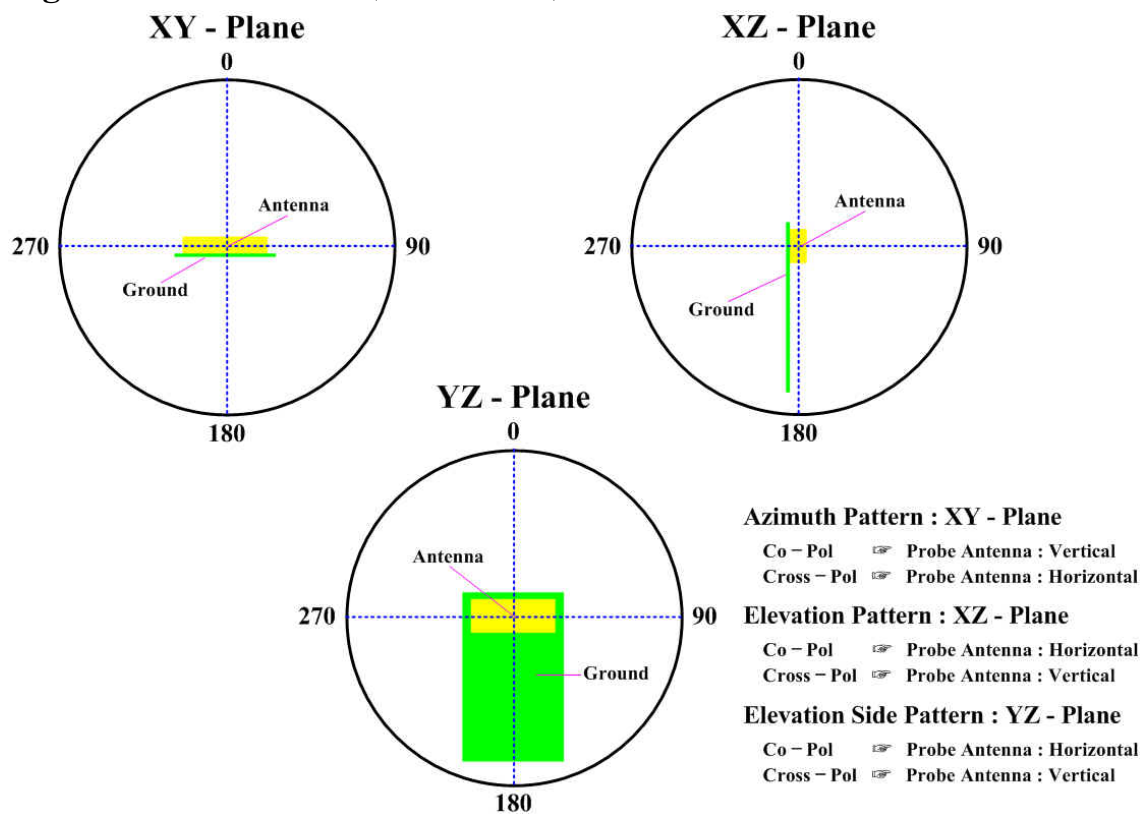
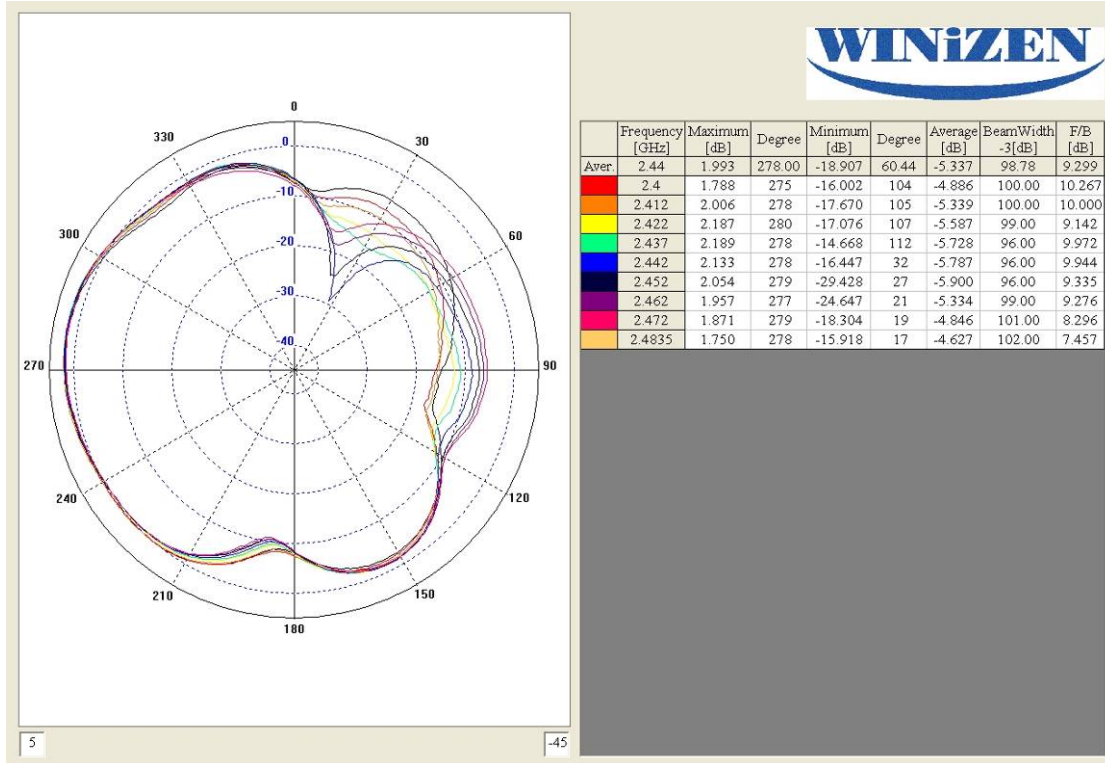




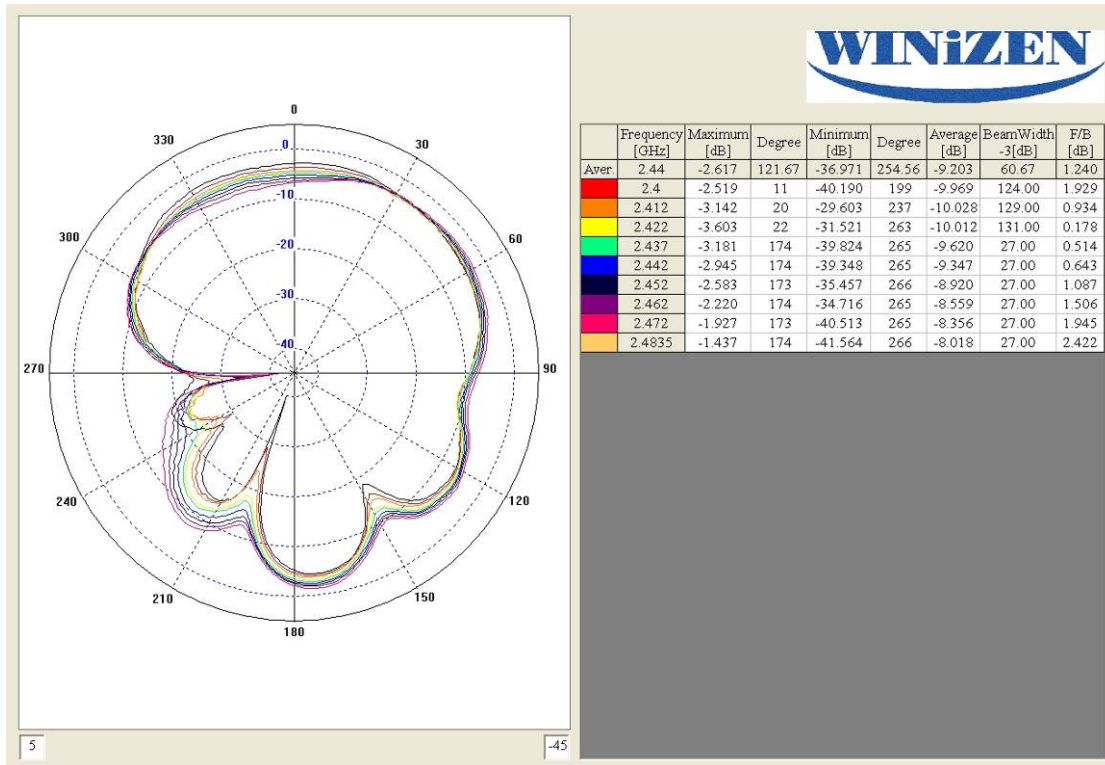
**Fig 6. Gain Patterns**

**a. Azimuth Pattern**

**Co - pol**



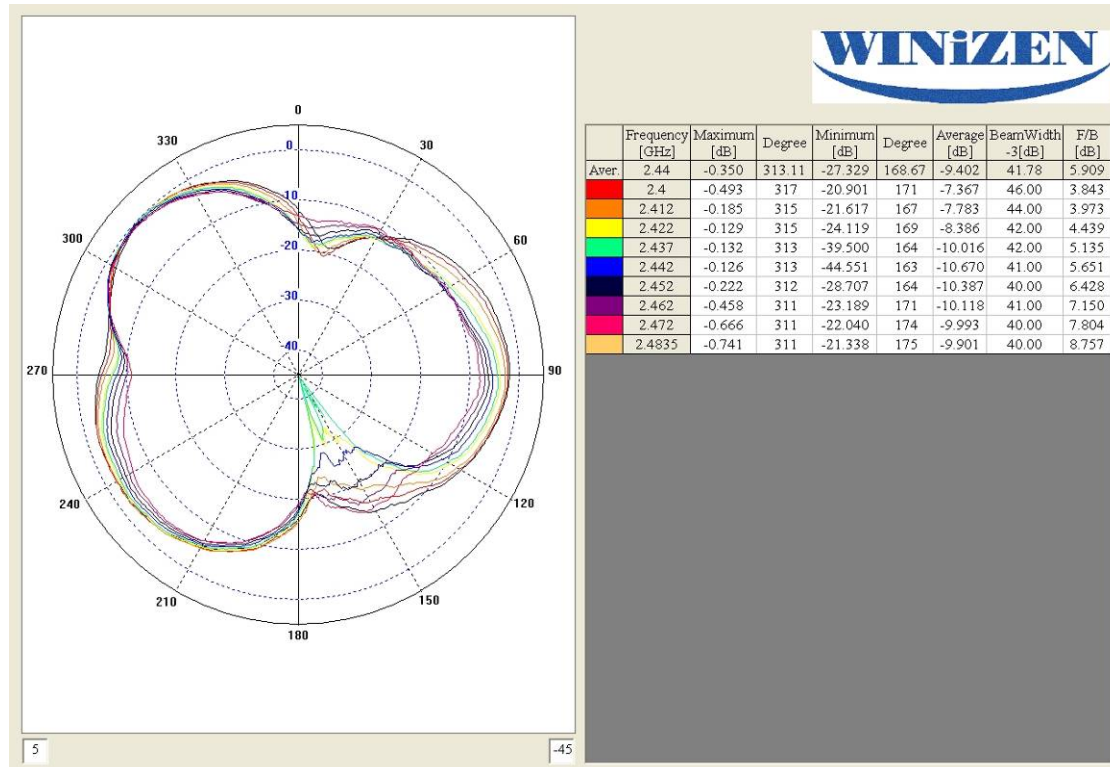
**Cross - pol**



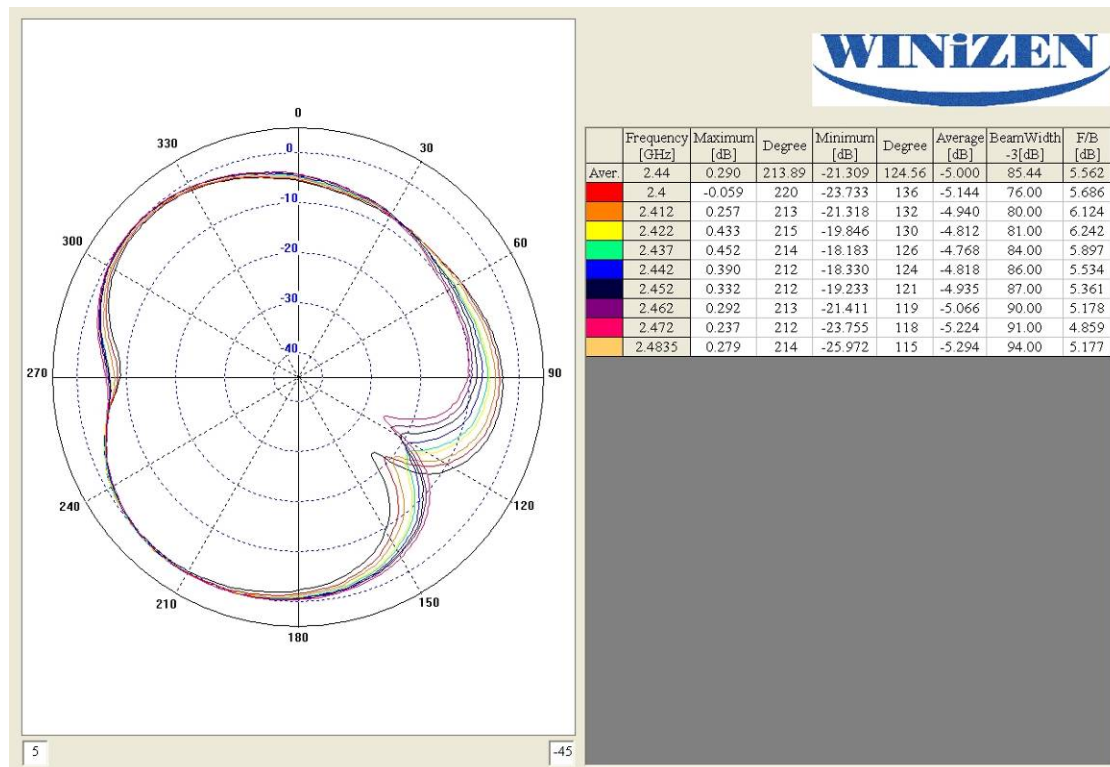


## b. Elevation Pattern

### Co - pol



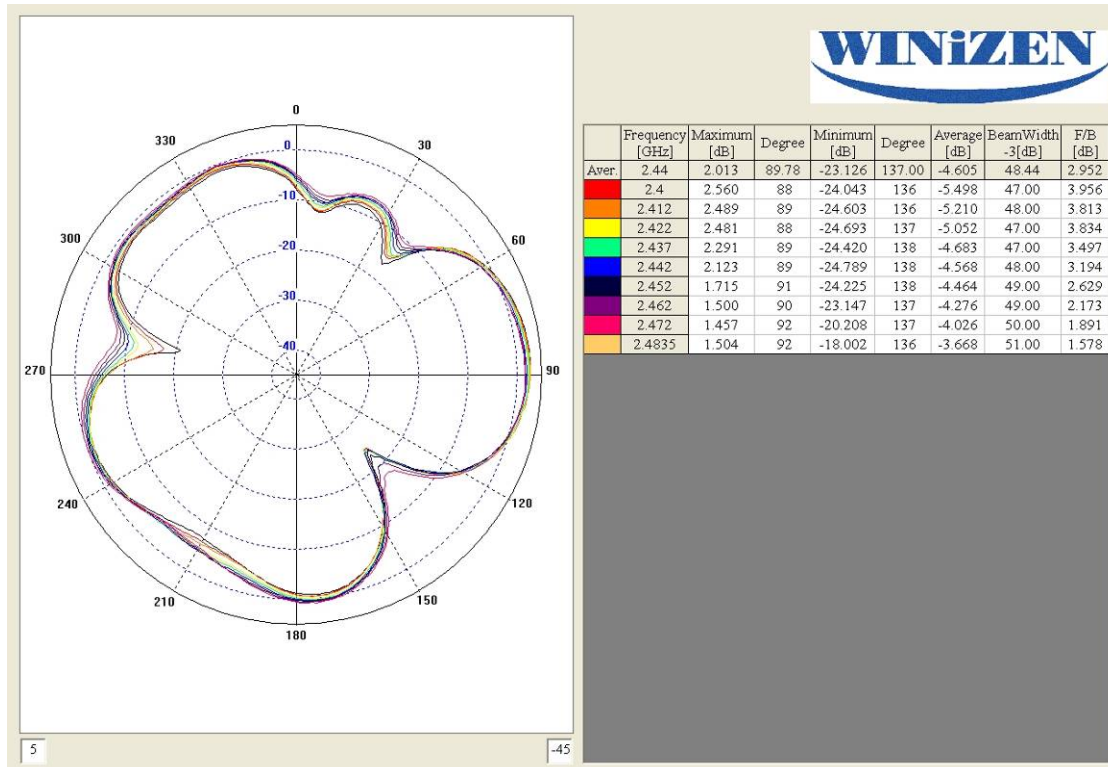
### Cross - pol





### c. Elevation Side Pattern

Co - pol



Cross - pol

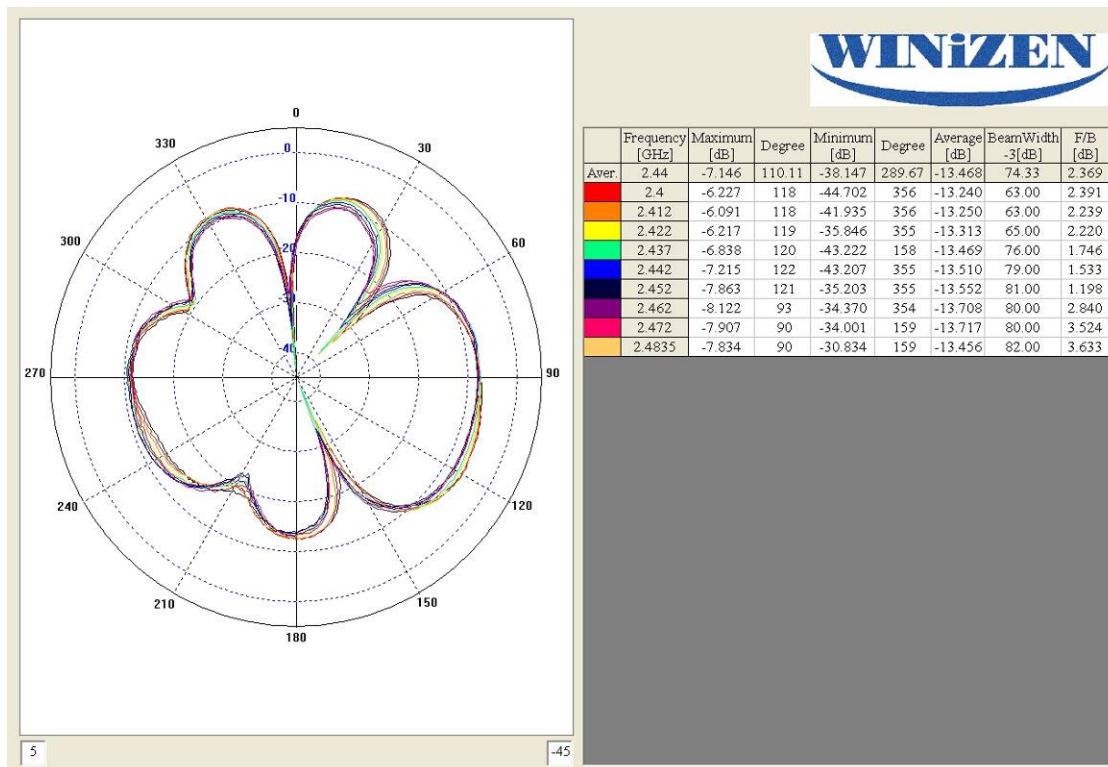




**Fig 7. Circuit Matching**

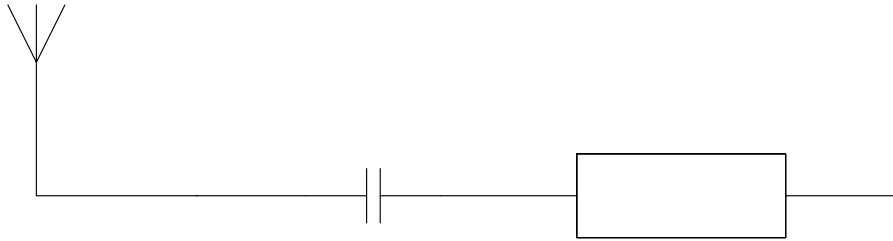
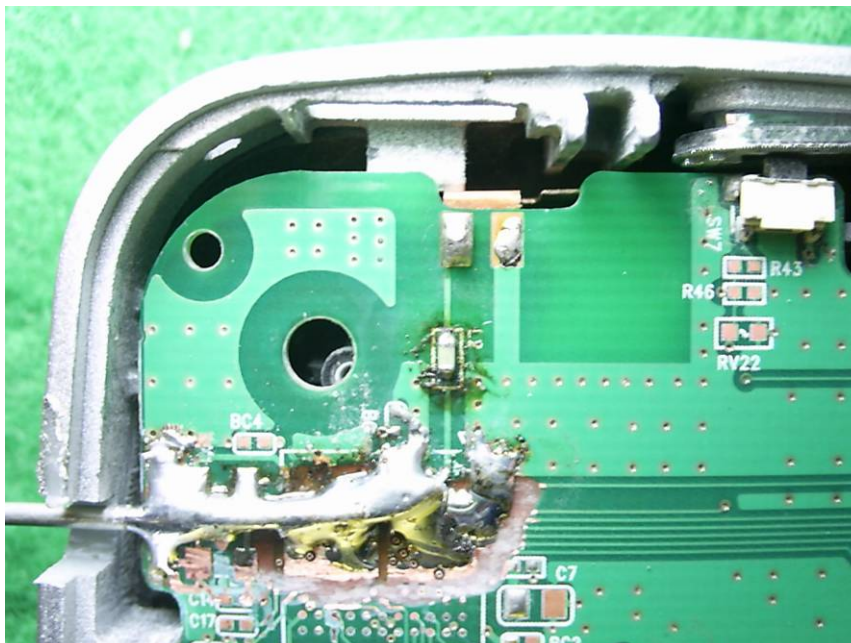


**Fig 8. Antenna Photo**



a

2.2 pF

