



## Antenna Approval Sheet

For

**WIFI-PCB 天线 Project**

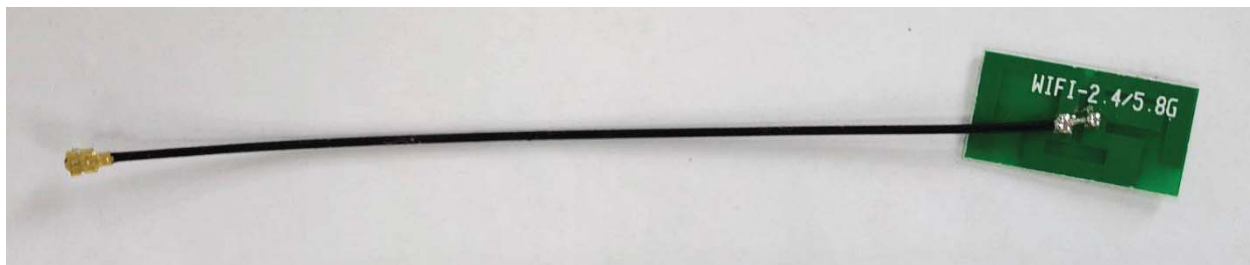
|          |                           |         |             |
|----------|---------------------------|---------|-------------|
| Customer | 爱尚互动                      | Project | WIFI-PCB 天线 |
| Band     | WiFi 2.4GHZ/5GHZ/BT2.4GHZ |         |             |
| ZC PN    | AE001-PA-96               |         |             |
| Version  | R:A                       | Data    | 2024-4-10   |

|              |  |    |  |
|--------------|--|----|--|
| RF           |  | ME |  |
| Checked By   |  |    |  |
| Confirmed By |  |    |  |
| Cust Confirm |  |    |  |



## 1. Summary of the DUT

### Antenna Picture



## 2. Electrical Specification:

|                  |                                                |
|------------------|------------------------------------------------|
| Antenna types    | Built-in WIFI Antenna                          |
| Frequency        | 2400-2500 MHz, 5150-5350MHz, 5725-5850MHz      |
| Impedance        | 50 $\Omega$                                    |
| VSWR             | < 2.0                                          |
| Peak Gain        | 2.4GHZ 1.73dbi, 5.1GHZ 4.31dbi, 5.8GHZ 4.45dbi |
| Efficiency       | >35 %                                          |
| Antenna Material | PCB+同轴线                                        |
| Connector Type   | 1.13 MHF-1-Plug                                |

## 3. Test Condition

| 3.1  | 测试项目                                                                  | 测试设备和型号                                                          | 备注 |
|------|-----------------------------------------------------------------------|------------------------------------------------------------------|----|
| 无源测试 | 1. Antenna Gain<br>2. S.W.R<br>3. Return Loss<br>4. Radiation Pattern | 1. Network analyzer (R&S ZVL6)<br>2. Network analyzer (HP 8753D) |    |

### 3.2 Matching Circuit The matching circuit was Default



## 4. RF Performance

### 4.1 Passive parameters

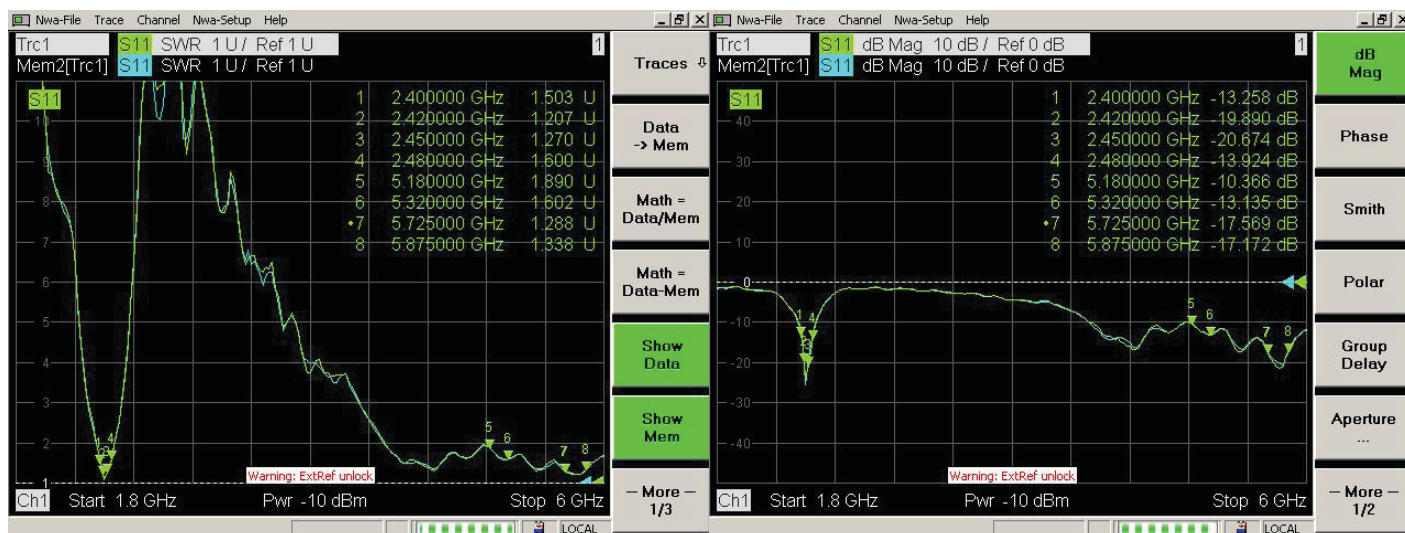
| Freq. (MHz) | 2400 | 2410 | 2420 | 2430 | 2440 | 2450 | 2460 | 2470 | 2480 | 2490 | 2500 |
|-------------|------|------|------|------|------|------|------|------|------|------|------|
| Gain (dBi)  | 0.58 | 0.66 | 1.1  | 1.02 | 1.17 | 1.59 | 0.72 | 0.08 | 0.72 | 1.19 | 1.73 |

| Freq. (MHz) | 5150 | 5170 | 5190 | 5210 | 5230 | 5250 | 5270 | 5290 | 5310 | 5330 | 5350 |
|-------------|------|------|------|------|------|------|------|------|------|------|------|
| Gain (dBi)  | 3.13 | 3.45 | 3.56 | 4.11 | 4.31 | 4.21 | 4.1  | 3.82 | 3.28 | 3.19 | 3.04 |

| Freq. (MHz) | 5720 | 5740 | 5760 | 5780 | 5800 | 5820 | 5840 | 5860 | 5880 |
|-------------|------|------|------|------|------|------|------|------|------|
| Gain (dBi)  | 2.51 | 4.45 | 3.32 | 4.18 | 2.54 | 4.01 | 1.41 | 2.47 | 1.09 |

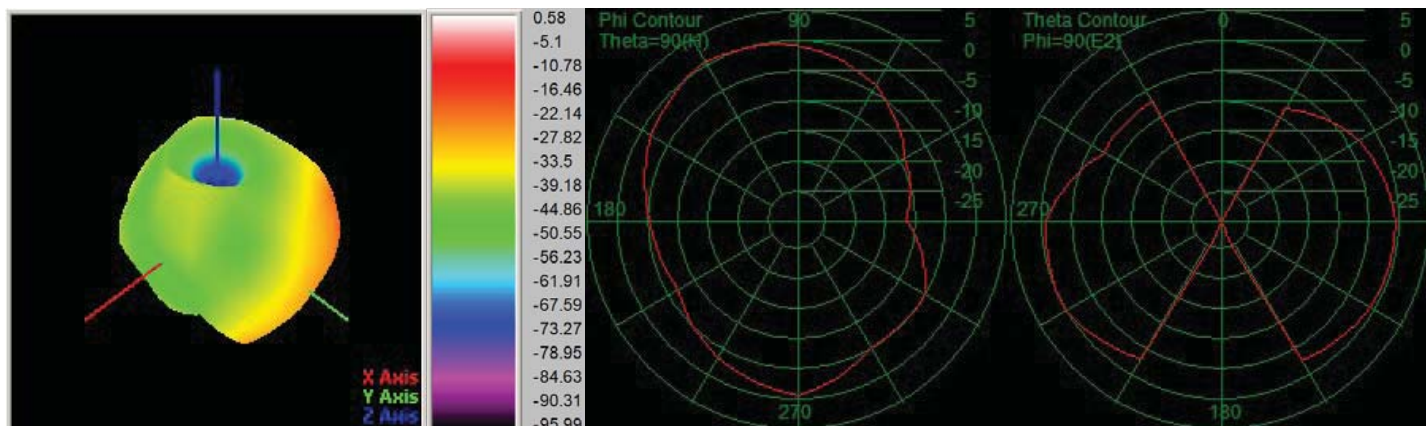
### 4.2 S Parameter

| Frequency (MHz)  | 2400   | 2450   | 2480   |
|------------------|--------|--------|--------|
| Return Loss (dB) | -20.58 | -22.74 | -15.39 |
| VSWR             | 1.63   | 1.28   | 1.81   |



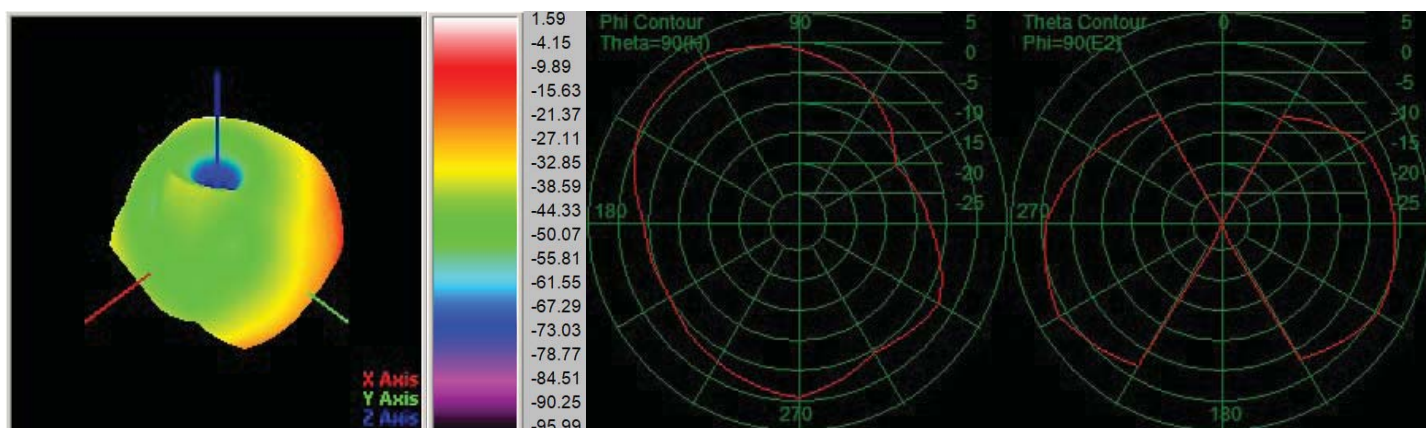


### 4.3 Radiation



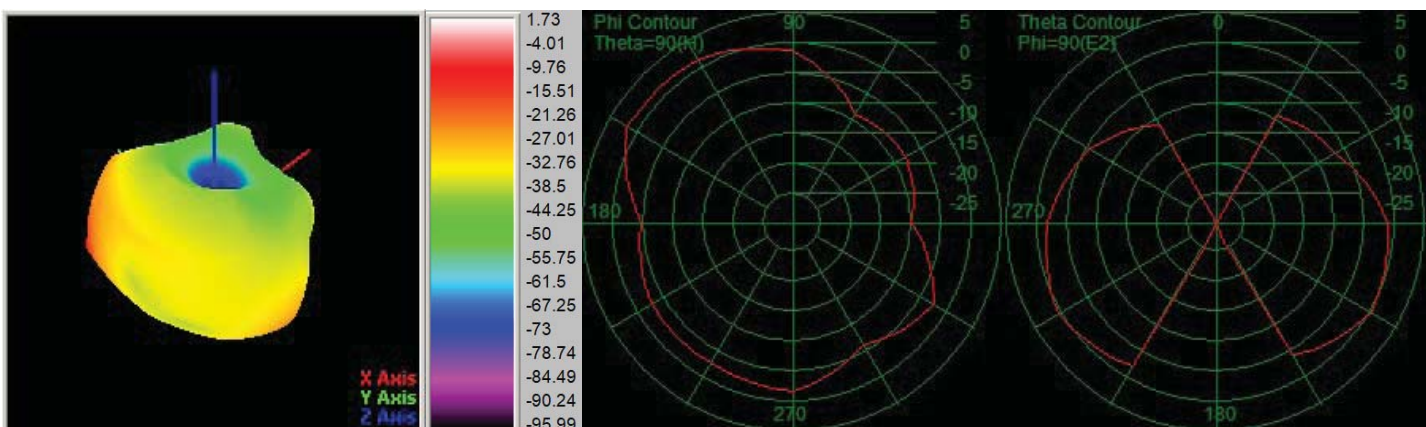
Passive -Freq2400.00MHZ

Gain:0.58(dBi)



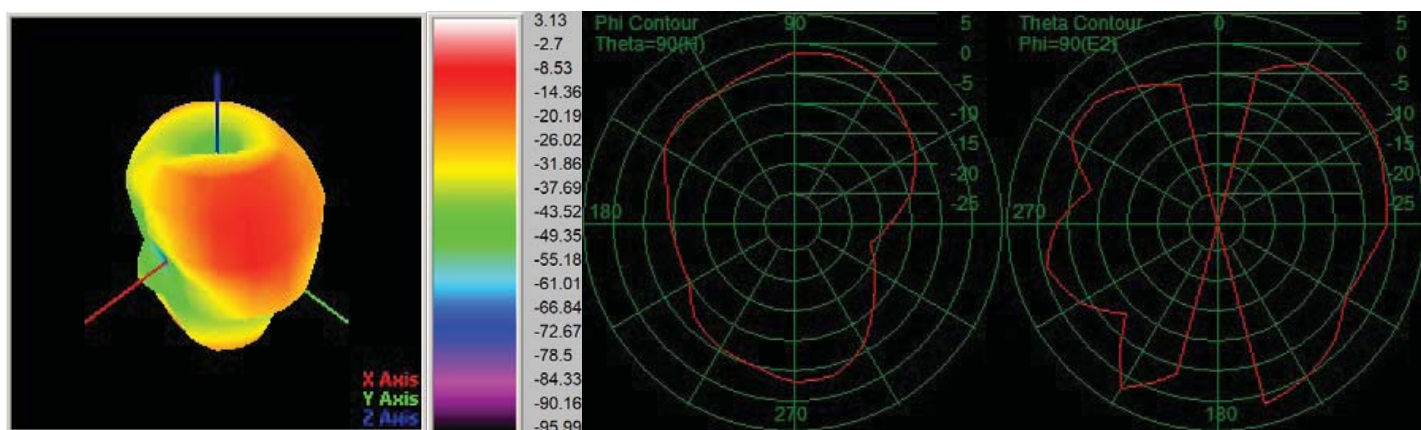
Passive -Freq2450.00MHZ

Gain: 1.59(dBi)



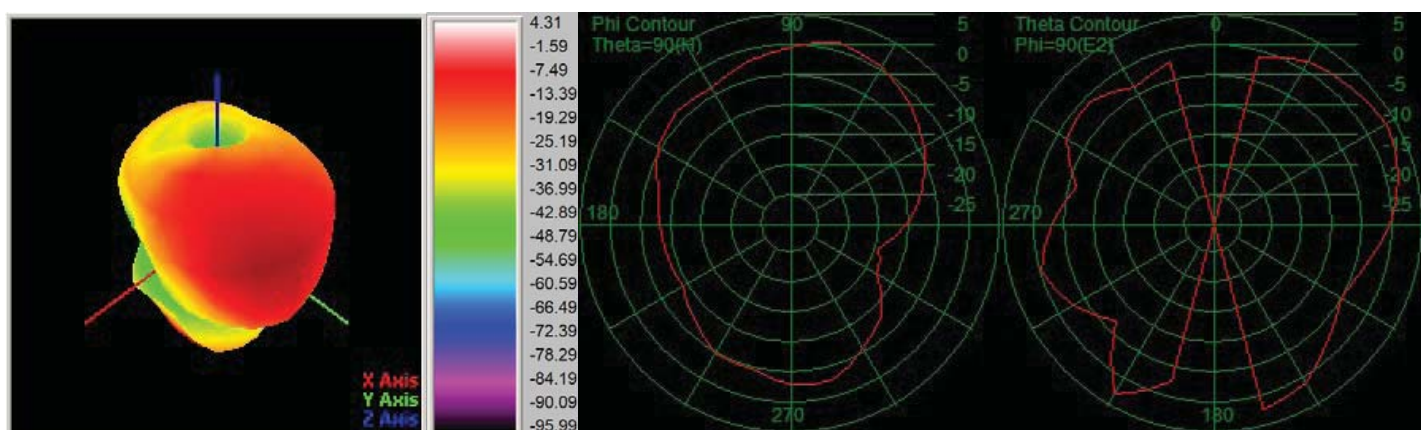
Passive -Freq2500.00MHZ

Gain: 1.73(dBi)



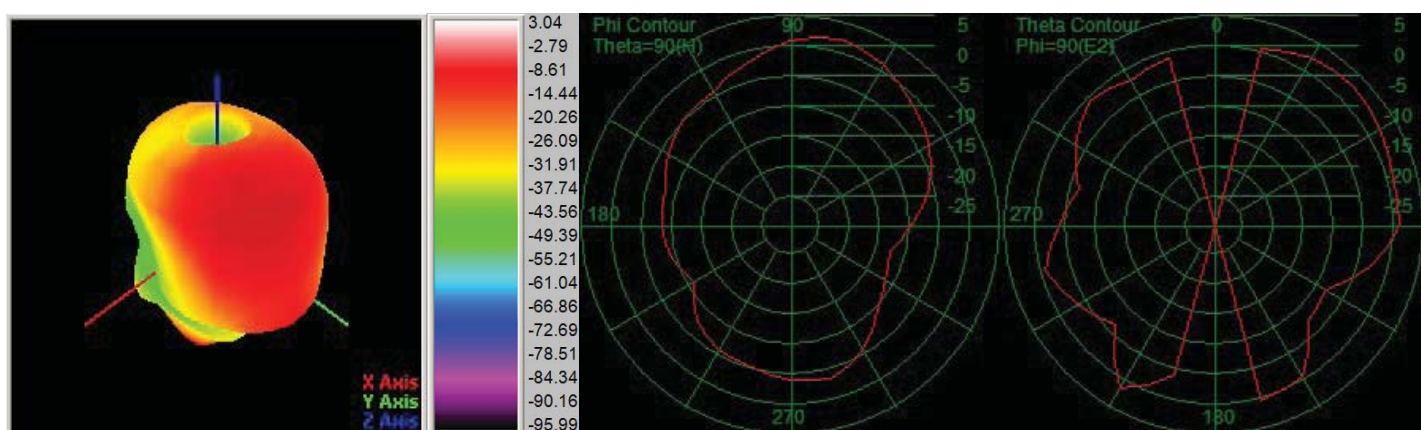
Passive -Freq5150.00MHZ

Gain: 3.13(dBi)



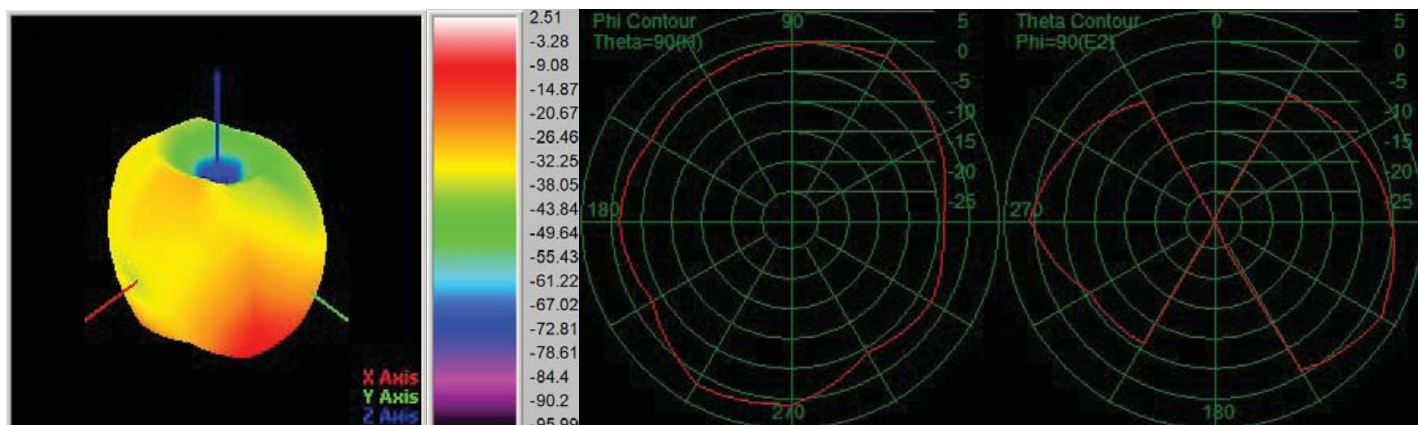
Passive -Freq5230.00MHZ

Gain: 4.31(dBi)



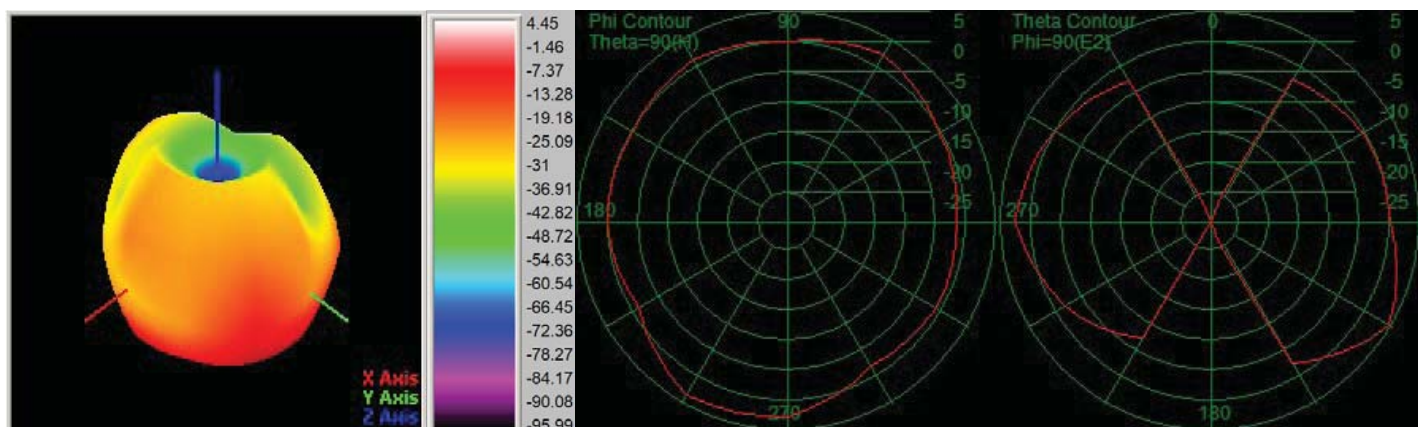
Passive -Freq5350.00MHZ

Gain: 3.04(dBi)



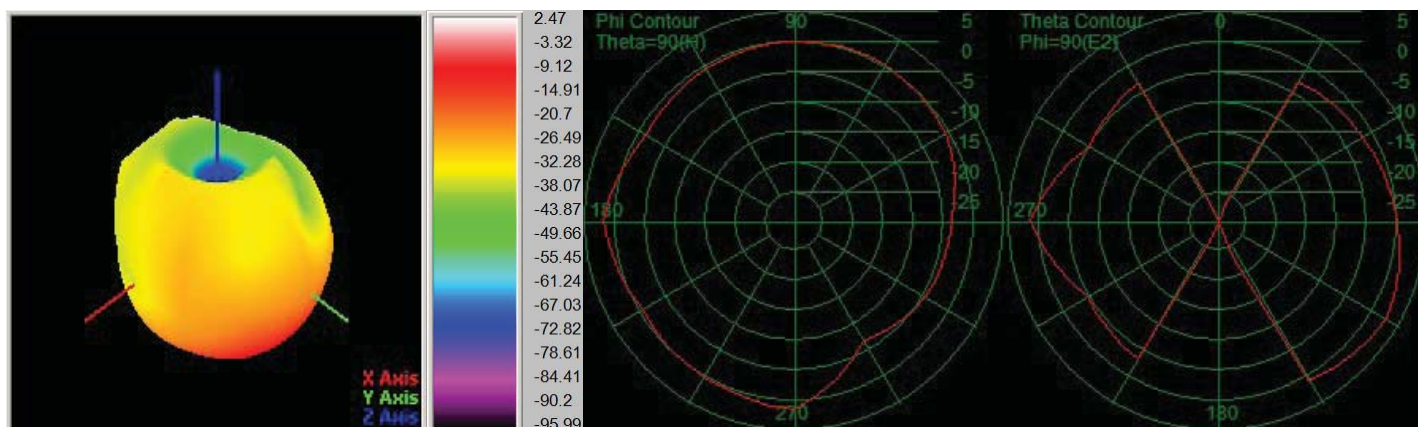
Passive -Freq5720.00MHZ

Gain:2.51(dBi)



Passive -Freq5740.00MHZ

Gain: 4.45(dBi)



Passive -Freq5860.00MHZ

Gain: 2.47(dBi)

## 5. ME Drawing for the antenna

