# RF Antenna Assembly

## Specification

### 1. Electrical Properties :

1.1 Frequency Range……2.4GHz ~ 2.5GHz ;4.9GHz~5.825GHz

1.2 Impedance ……50Ω Nominal

1.3 VSWR ……2.1 :1Max.

1.4 Return Loss……-9 dB Max.

1.5 Radiation ……Omni-directional

1.6 Gain(peak)……3.5±0.5dBi @ 2.4GHz ~ 2.5GHz

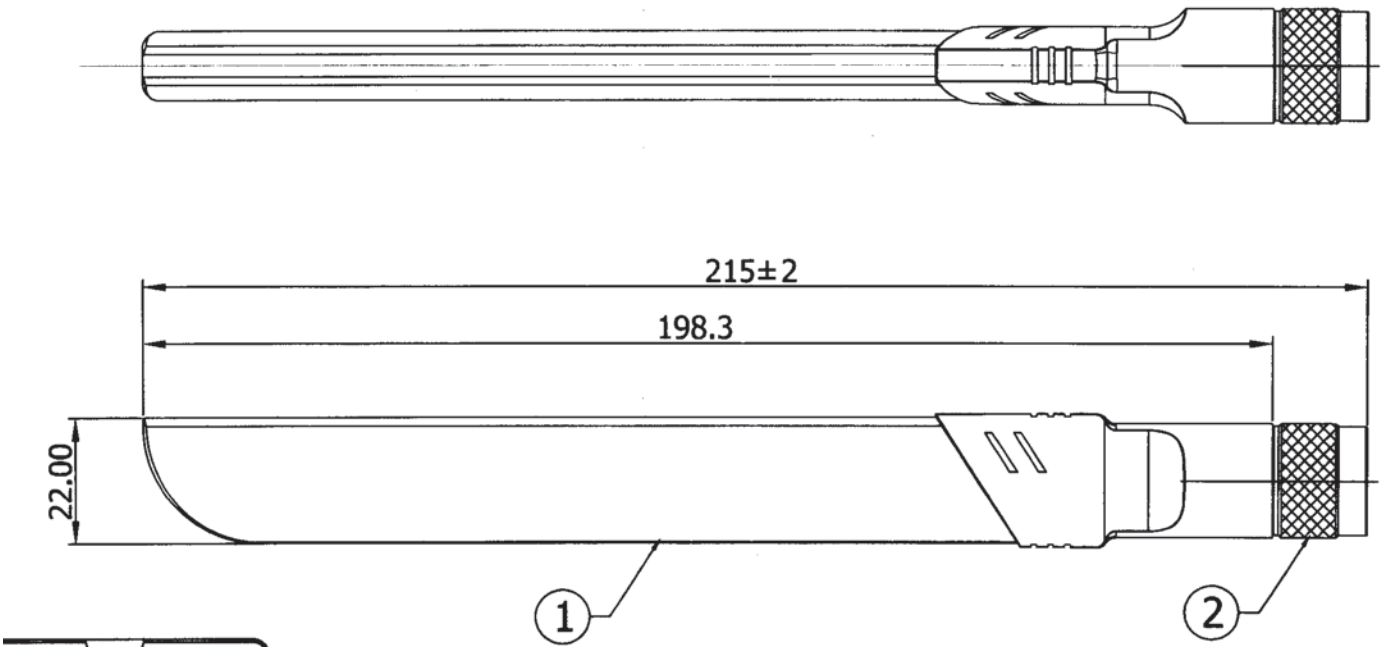
6.0±1.0dBi@ 4.9GHz ~ 5.825GHz

1.7 Polarization……Linear; Vertical

1.8 Admitted Power……1W

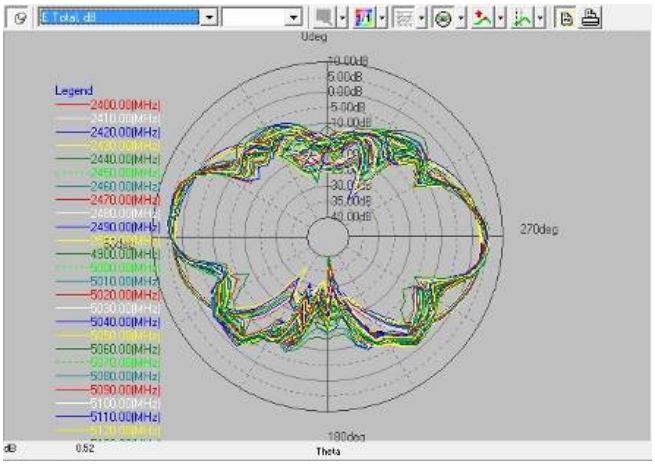
1.9 Cable…… RG-178 Coaxial Cable

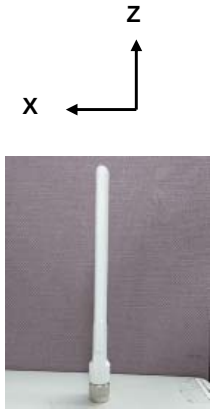
1.10 Connector…..…… N-type Plug Standard



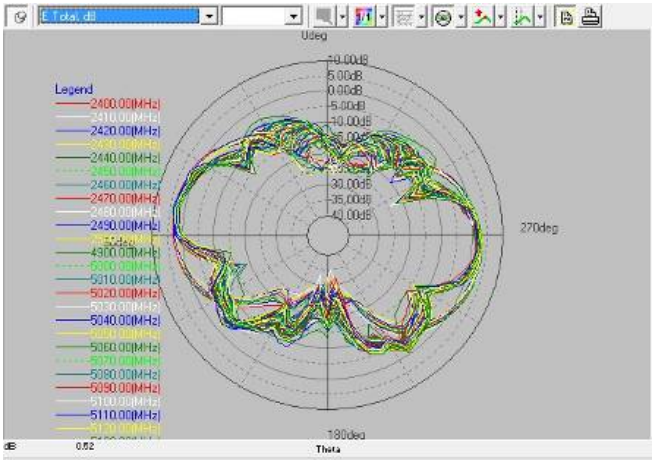
# 4.2 2D patterns

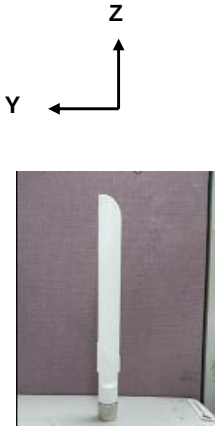
## 4.2.1 Ant 1



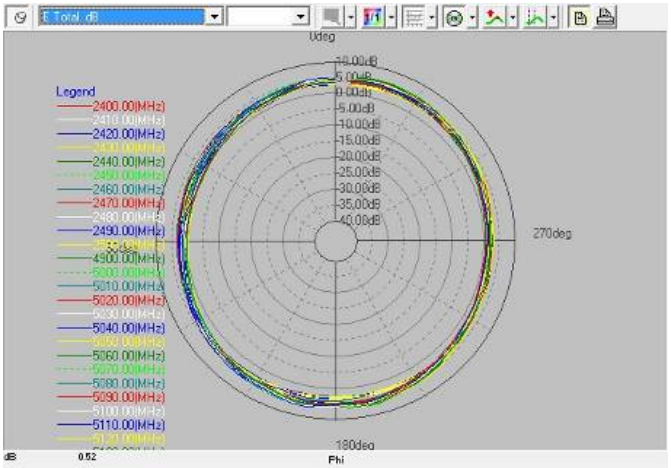



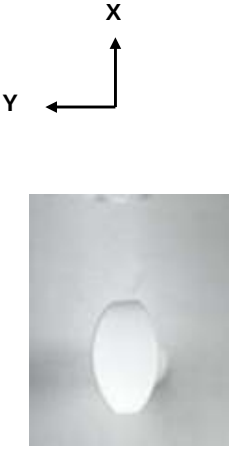

**X-Z Plane**




**Y-Z Plane**

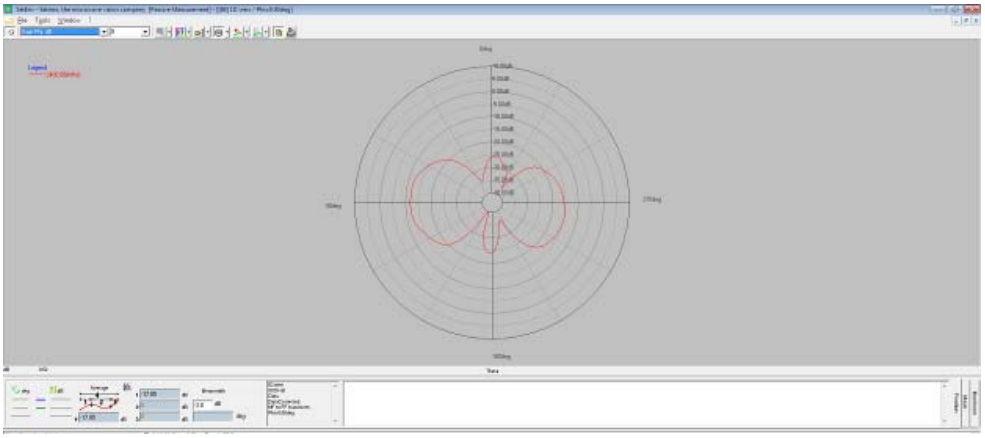


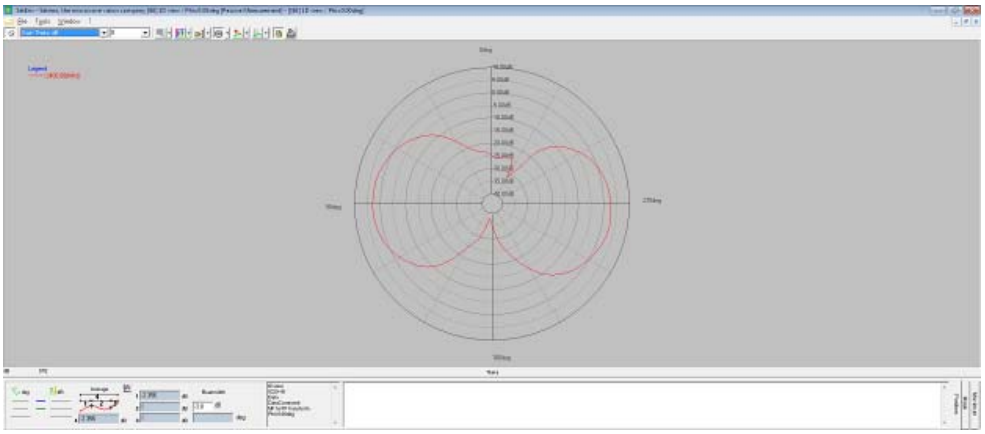

**X-Y Plane**

## 4.3 co port & cross port

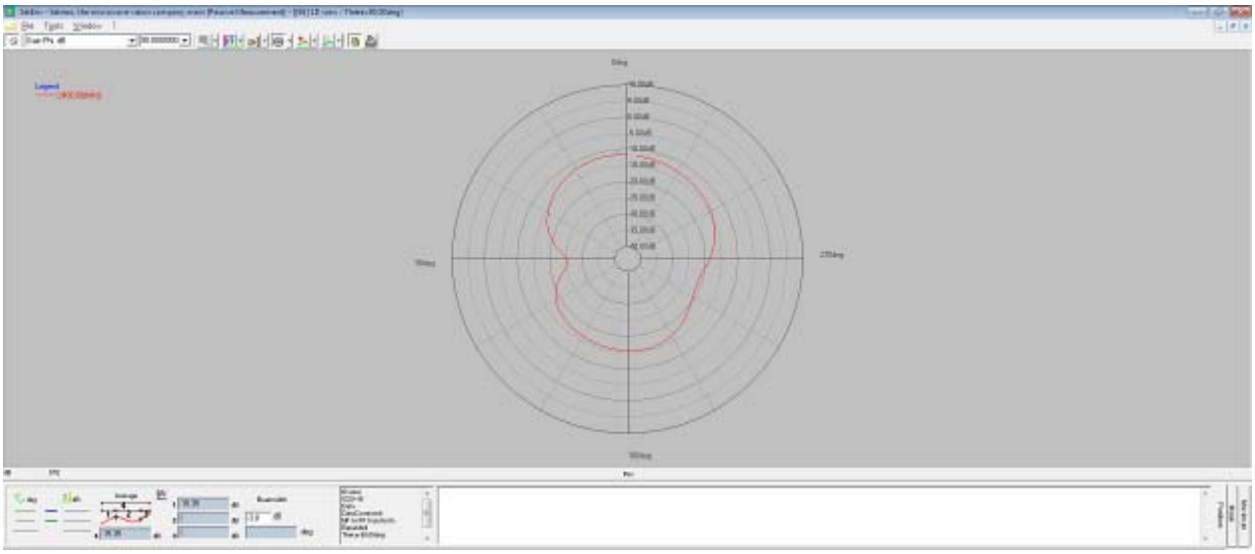
### 4.3.1 2400MHz



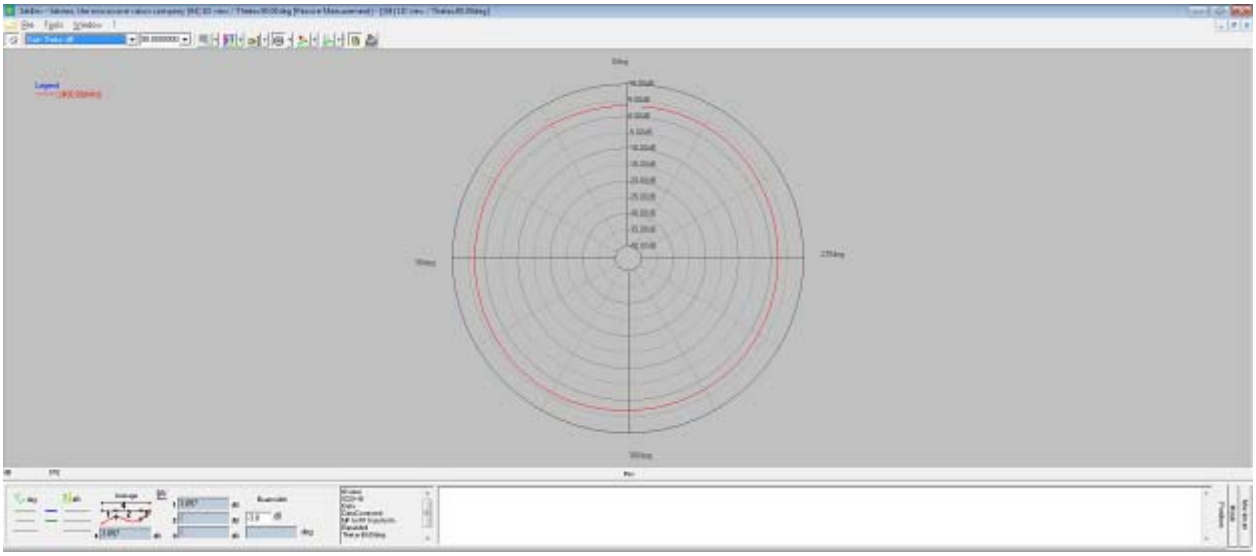
**XZ-Phi**



**XZ-Theta**

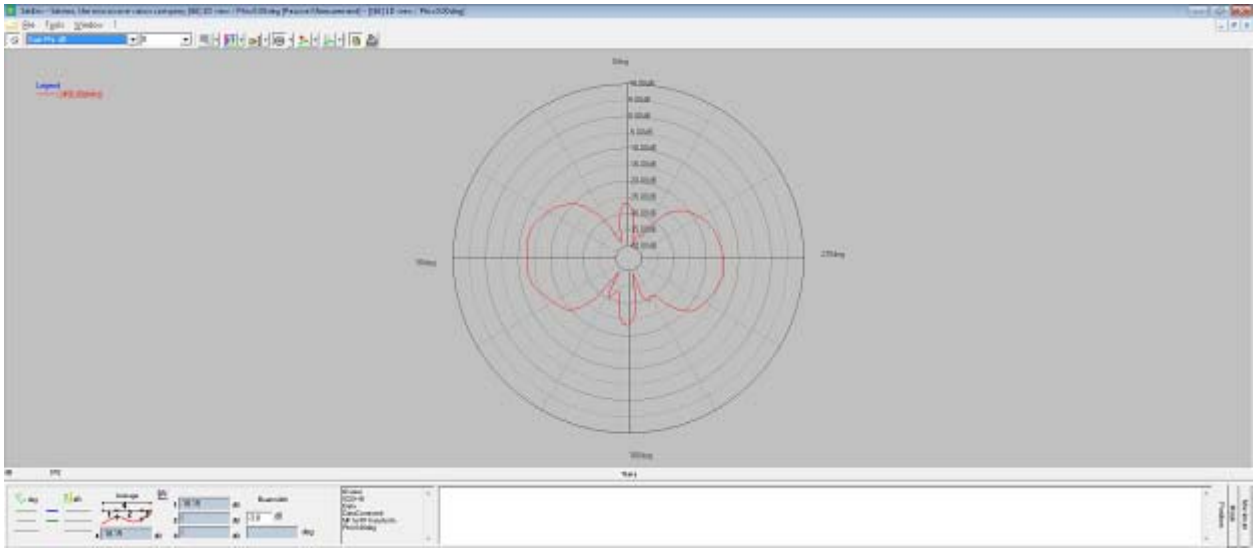


**XY-Phi**

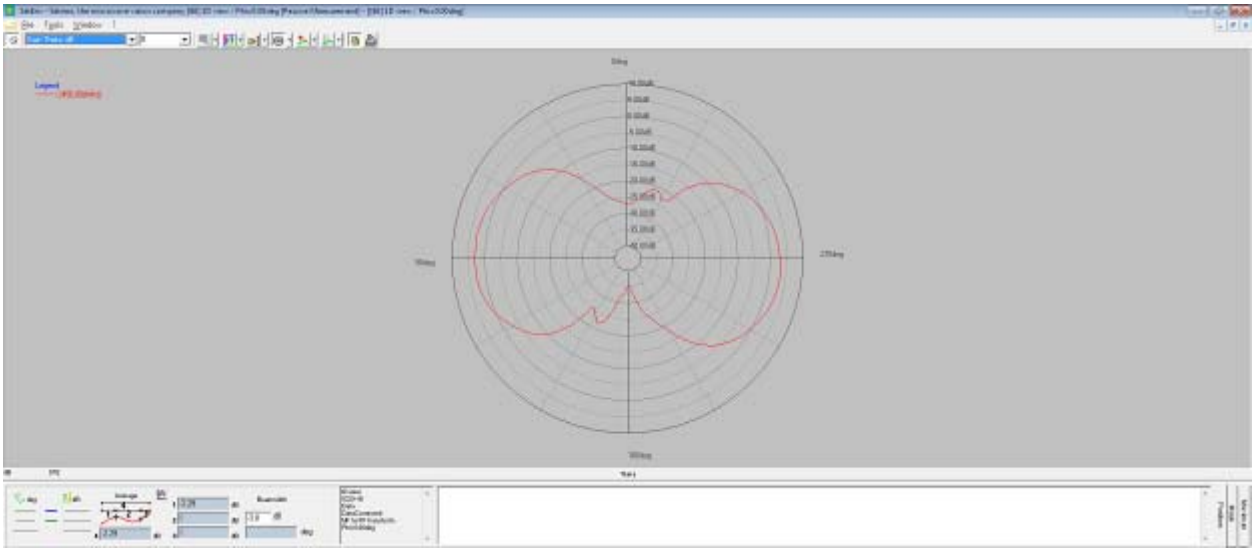


**XY-Theta**

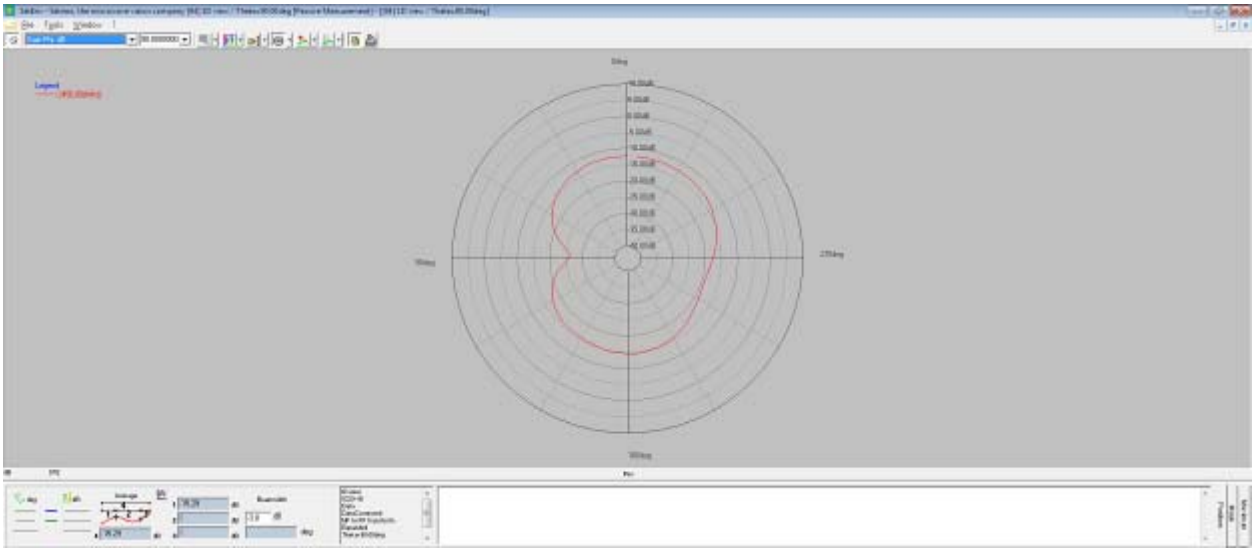
## 4.3.2 2450MHz



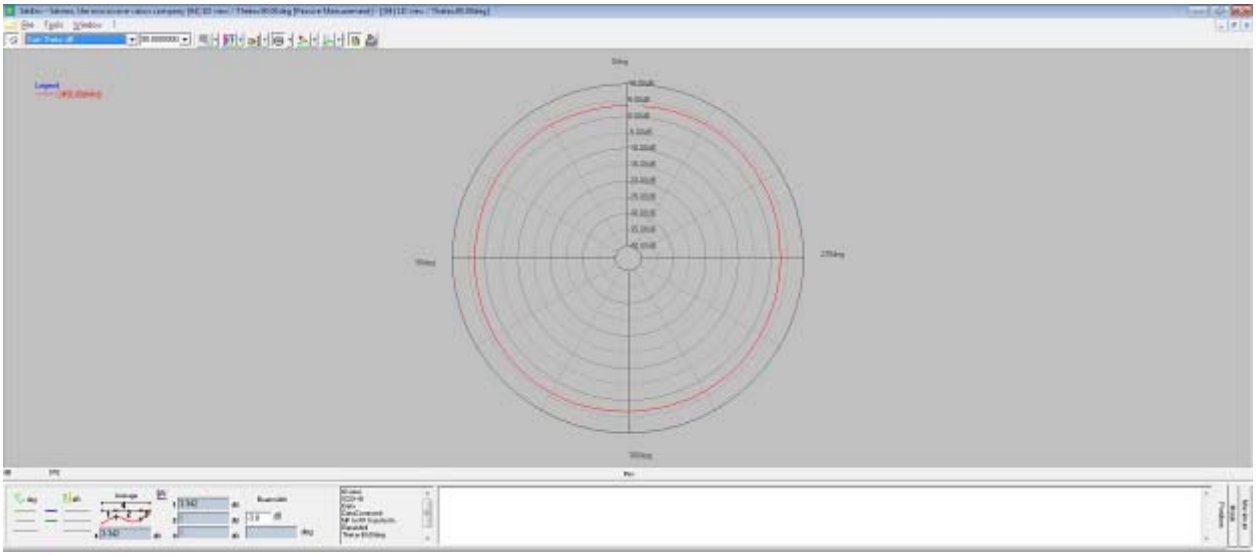
**XZ-Phi**



**XZ-Theta**

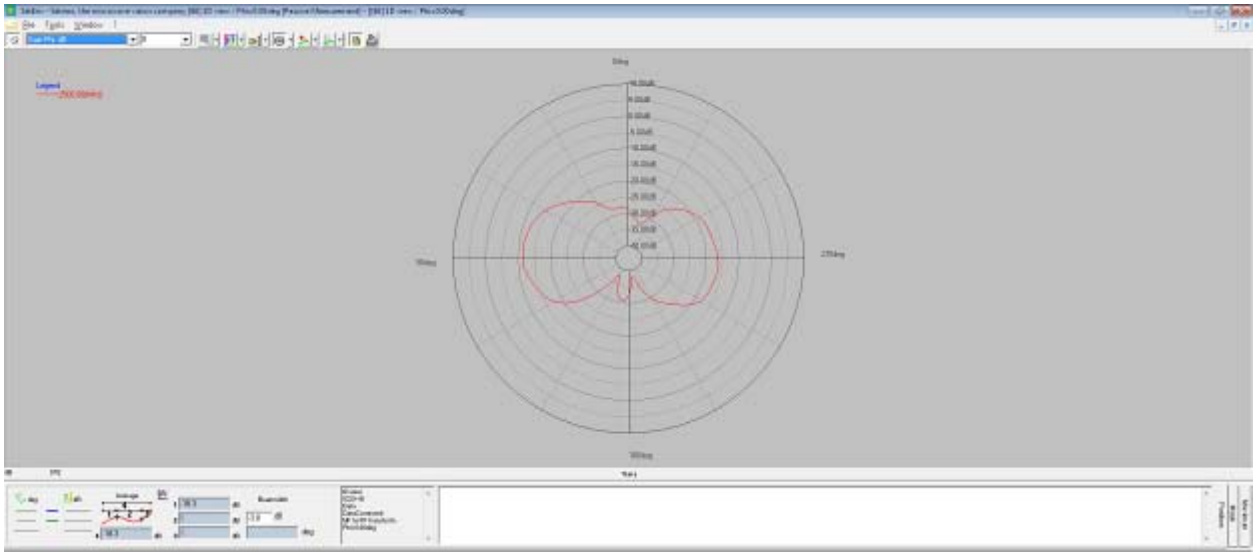


**XY-Phi**

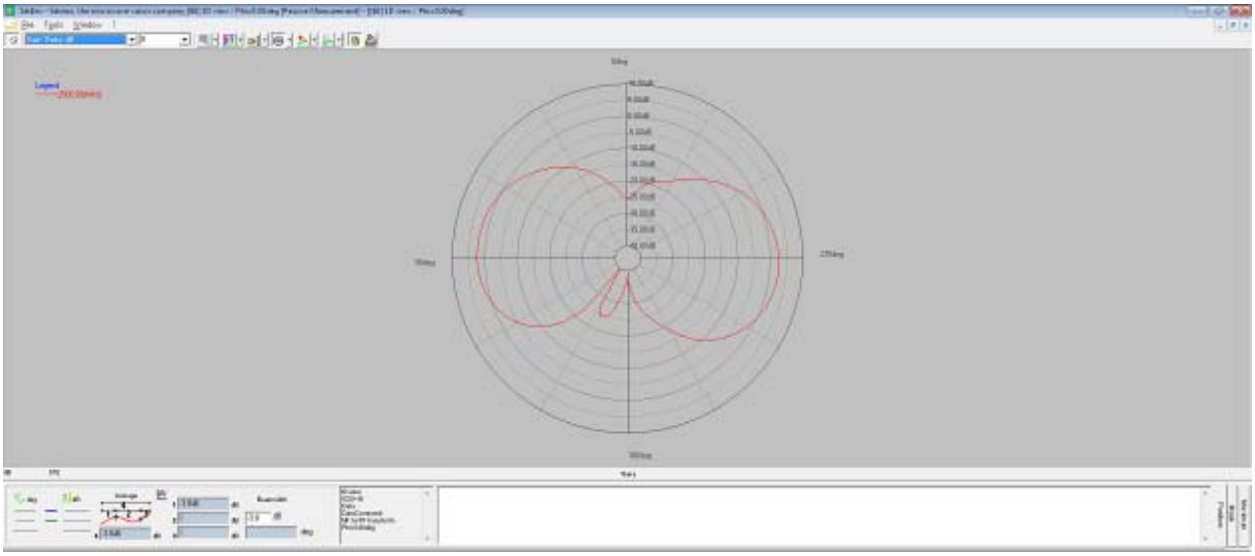


**XY-Theta**

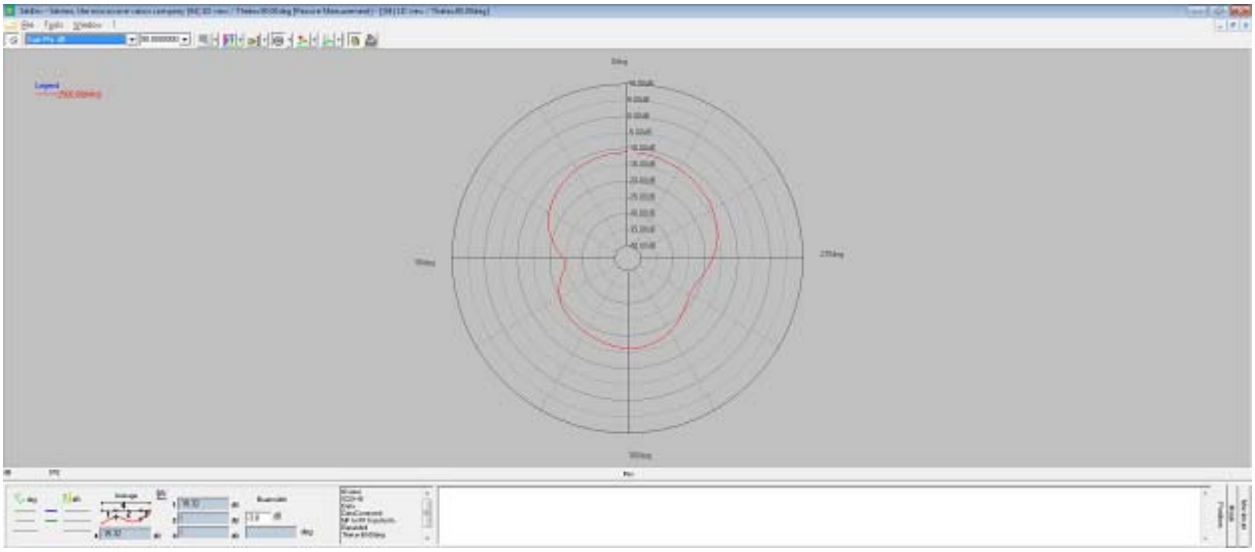
## 4.3.3 2500MHz



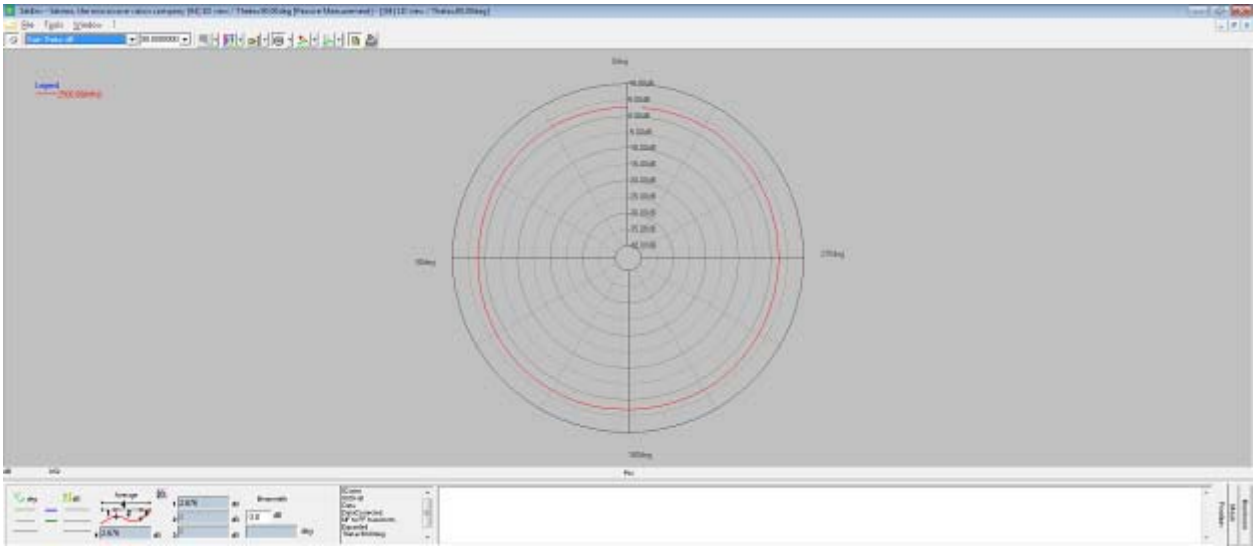
**XZ-Phi**



**XZ-Theta**

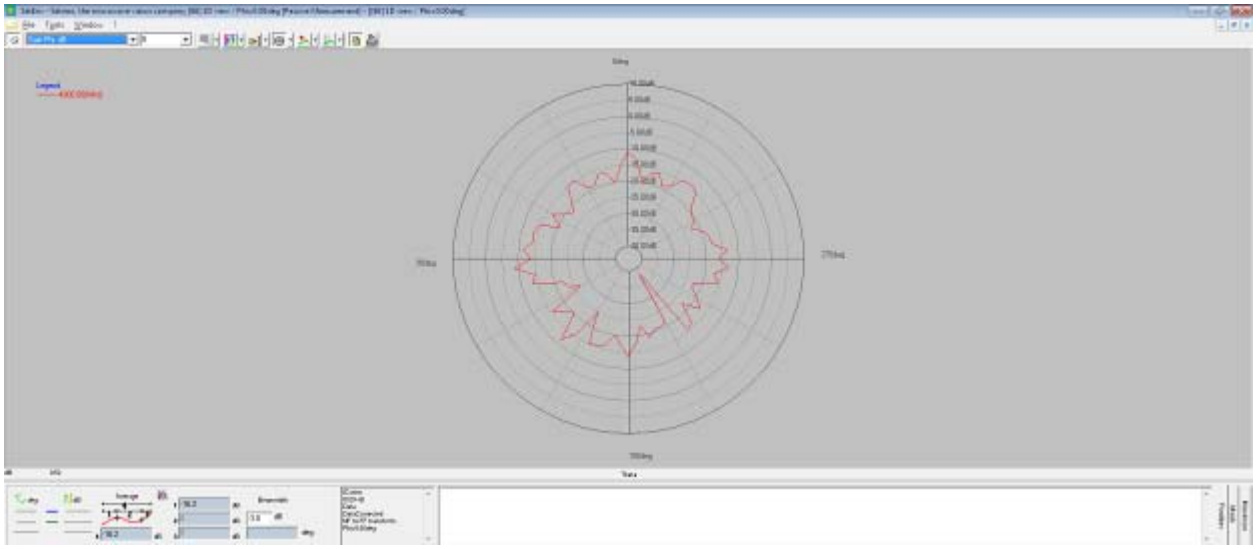


**XY-Phi**

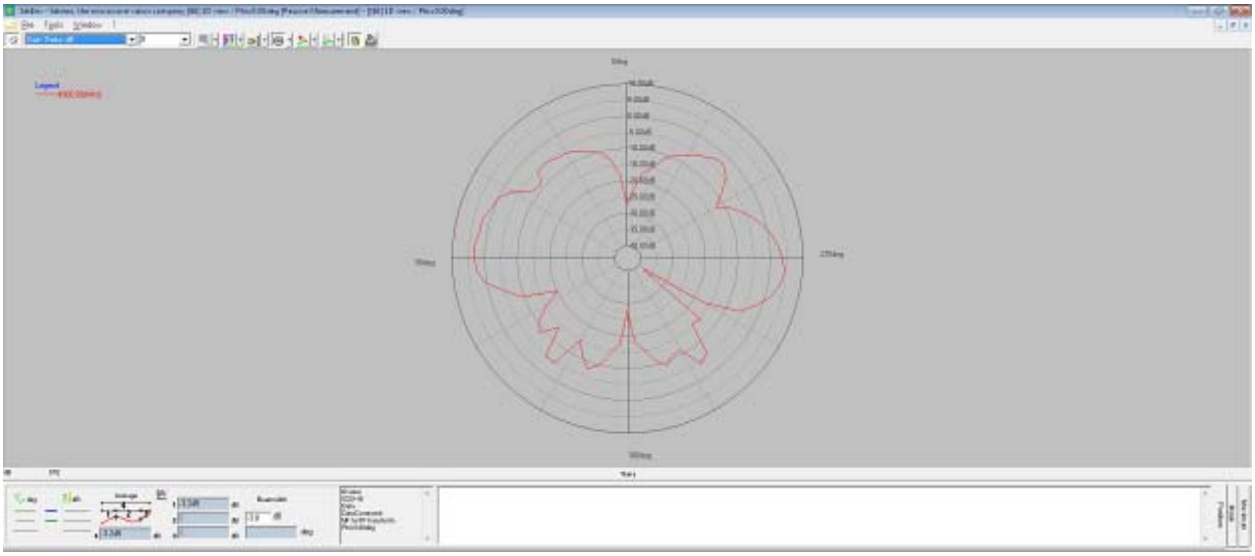


**XY-Theta**

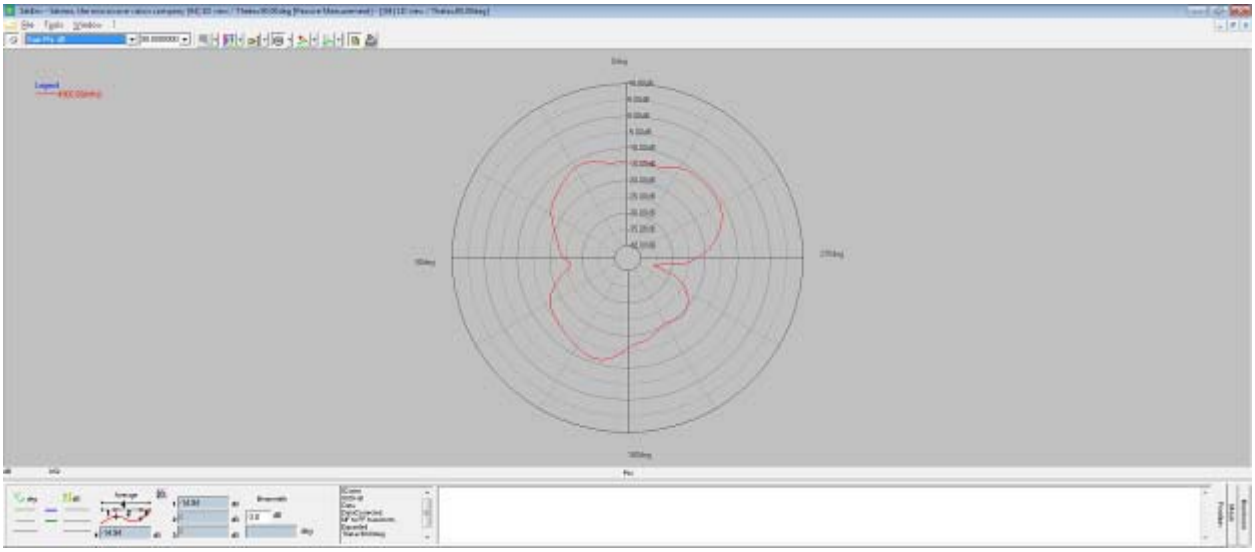
## 4.3.4 4900MHz



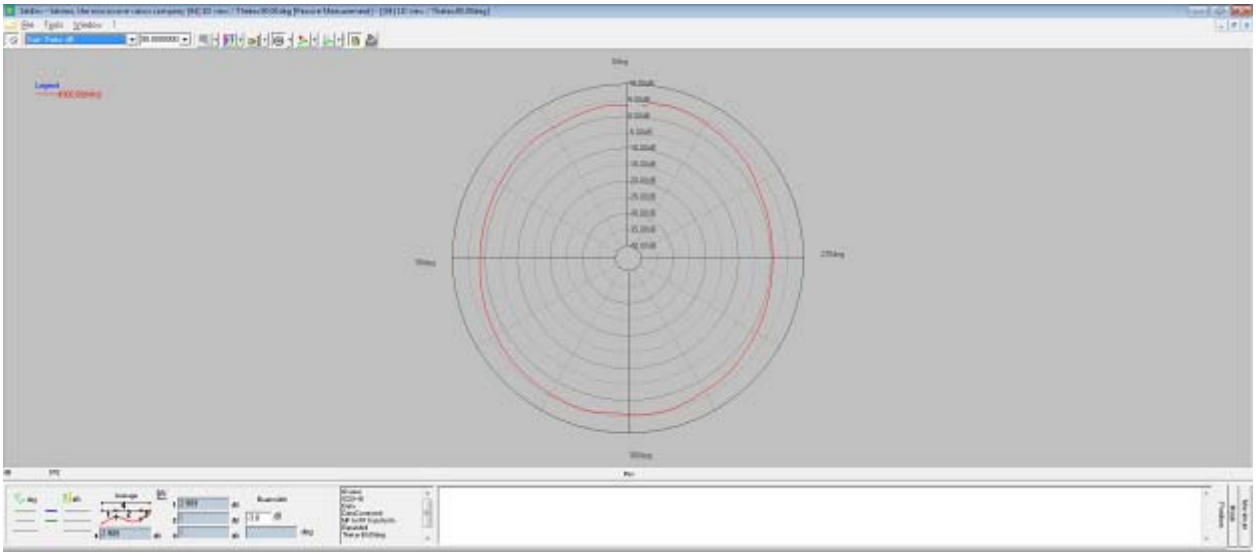
**XZ-Phi**



**XZ-Theta**

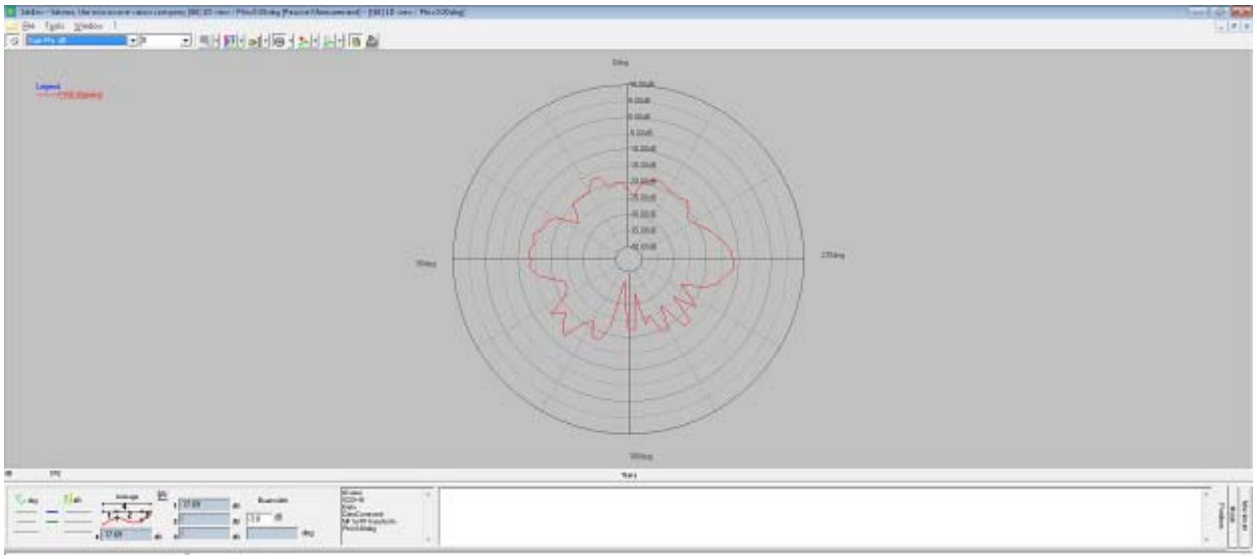


**XY-Phi**

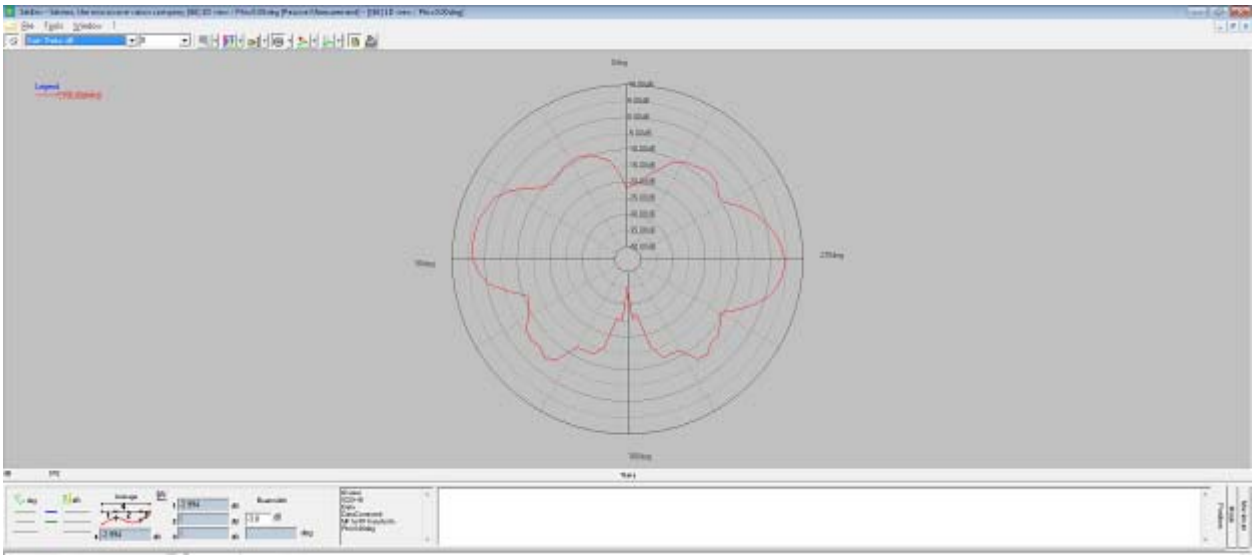


**XY-Theta**

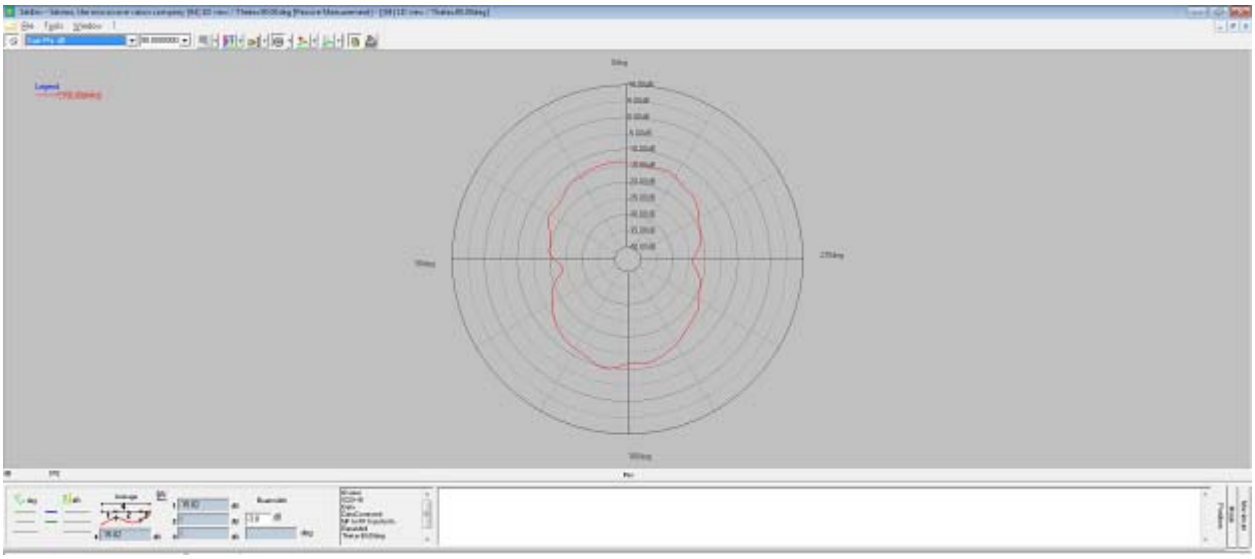
## 4.3.5 5150MHz



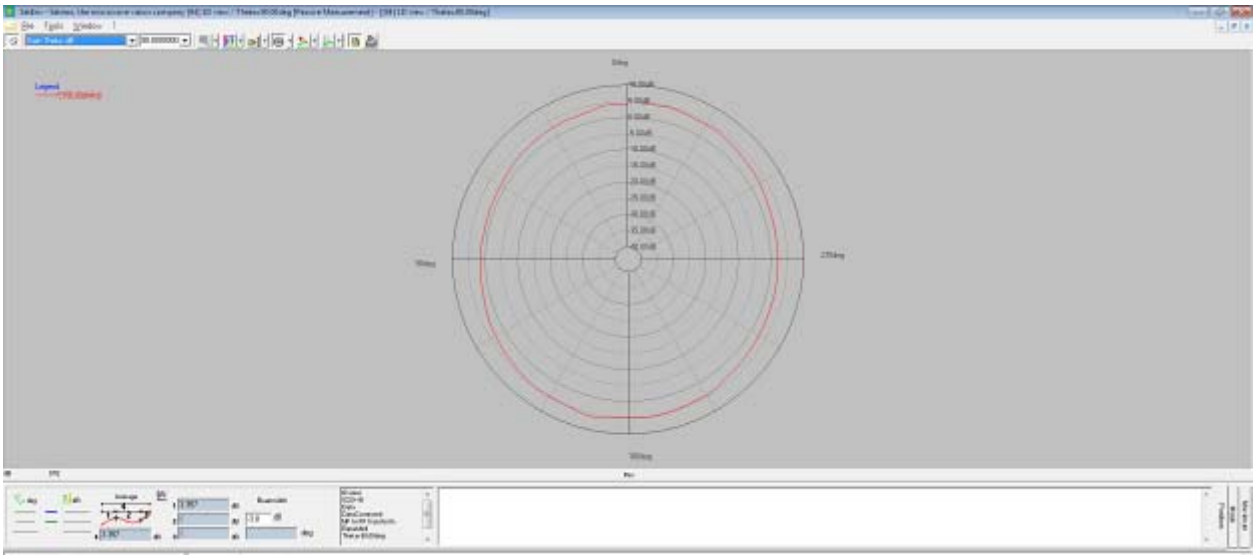
**XZ-Phi**



**XZ-Theta**

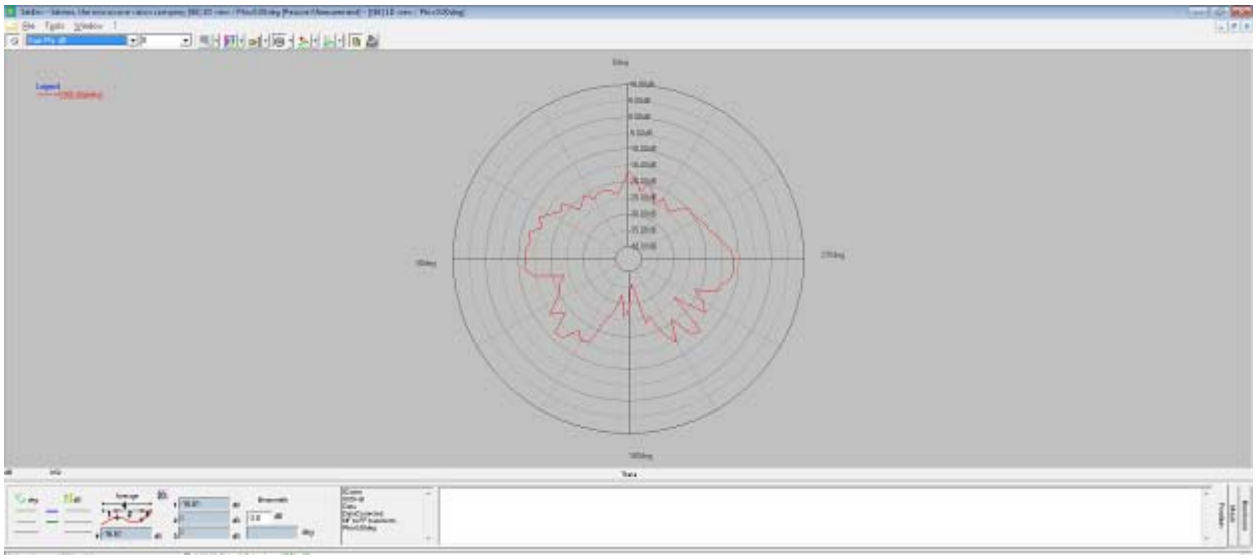


**XY-Phi**

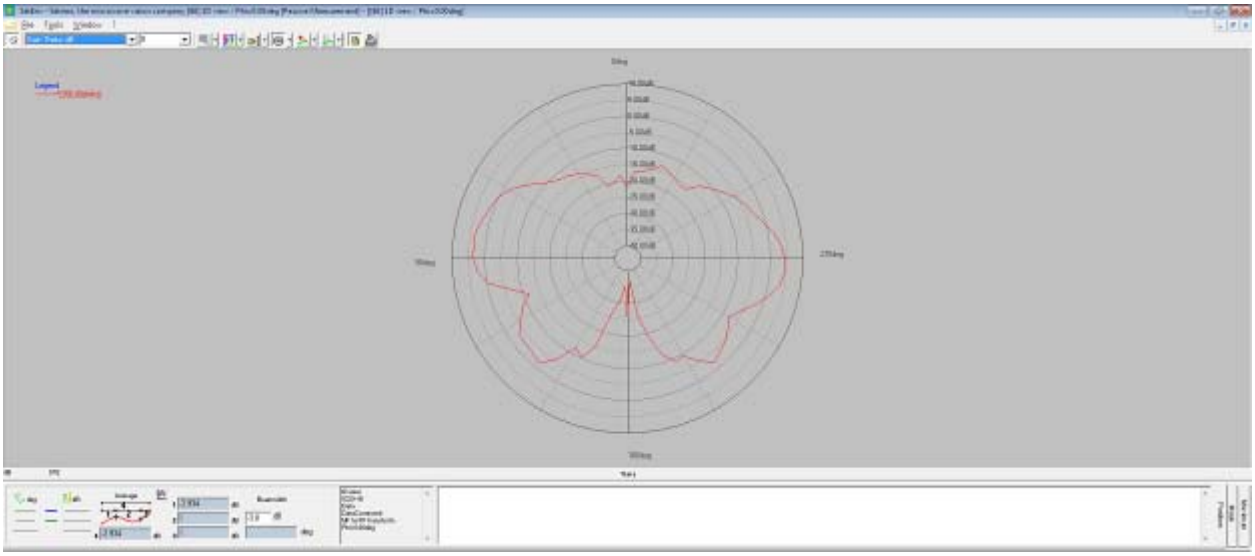


**XY-Theta**

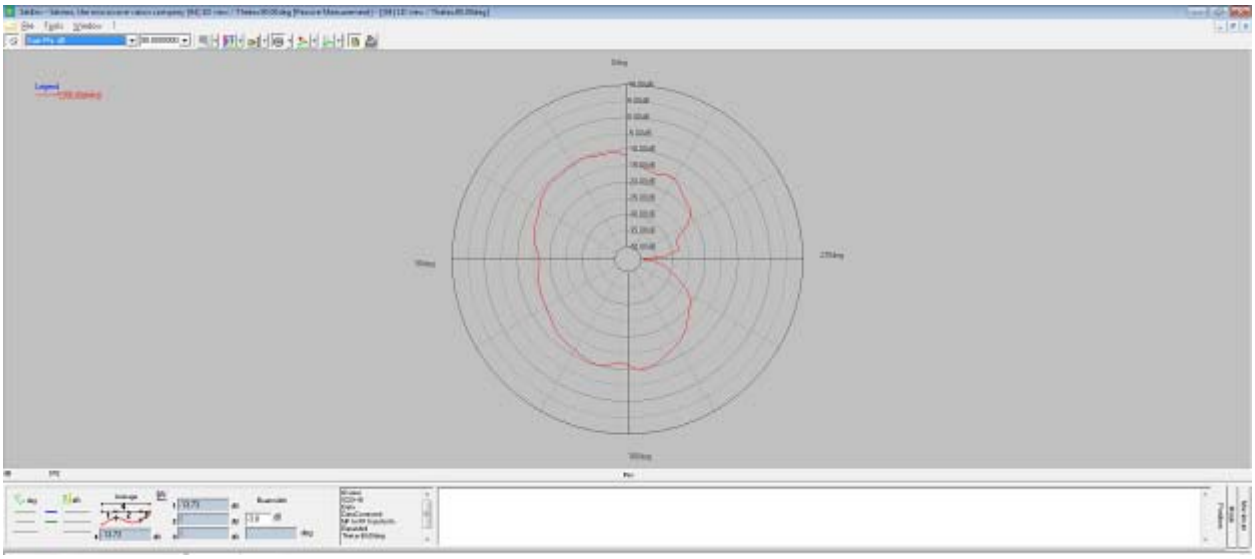
## 4.3.6 5350MHz



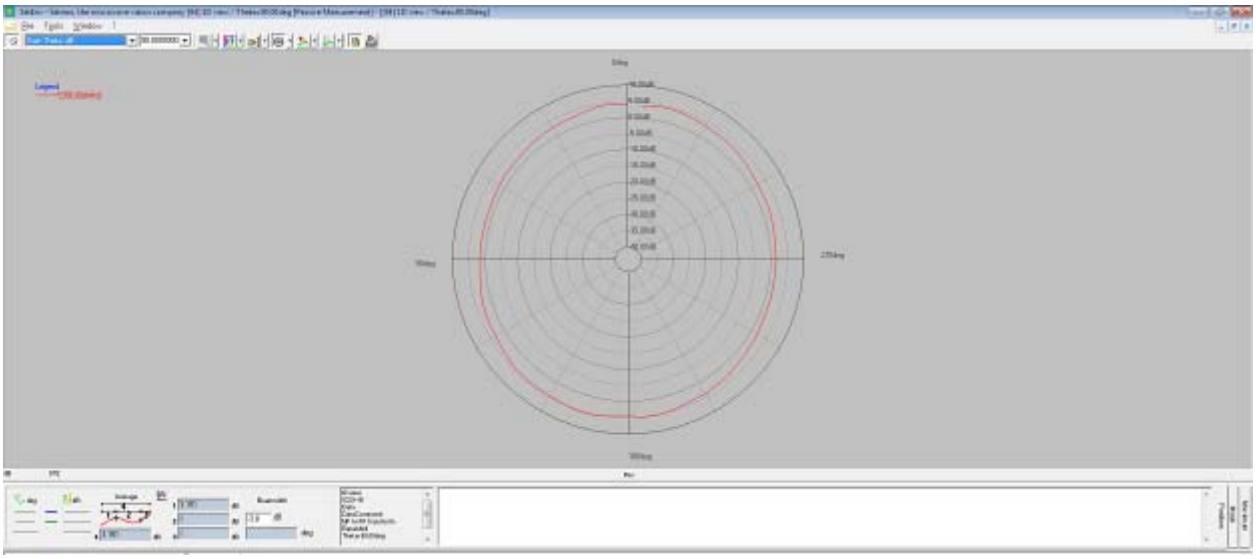
**XZ-Phi**



**XZ-Theta**

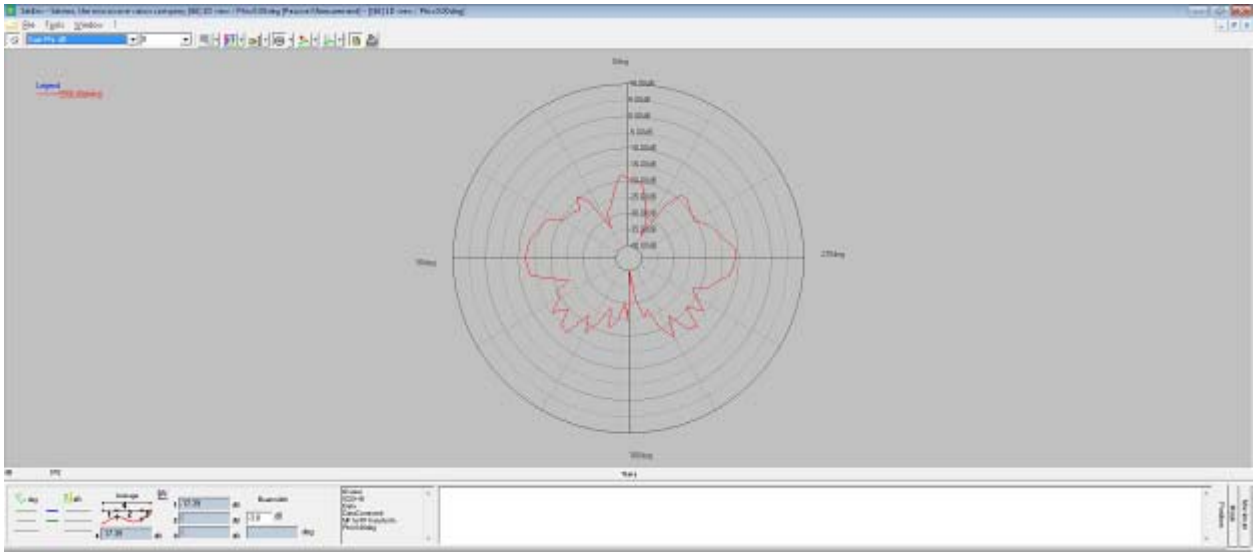


**XY-Phi**

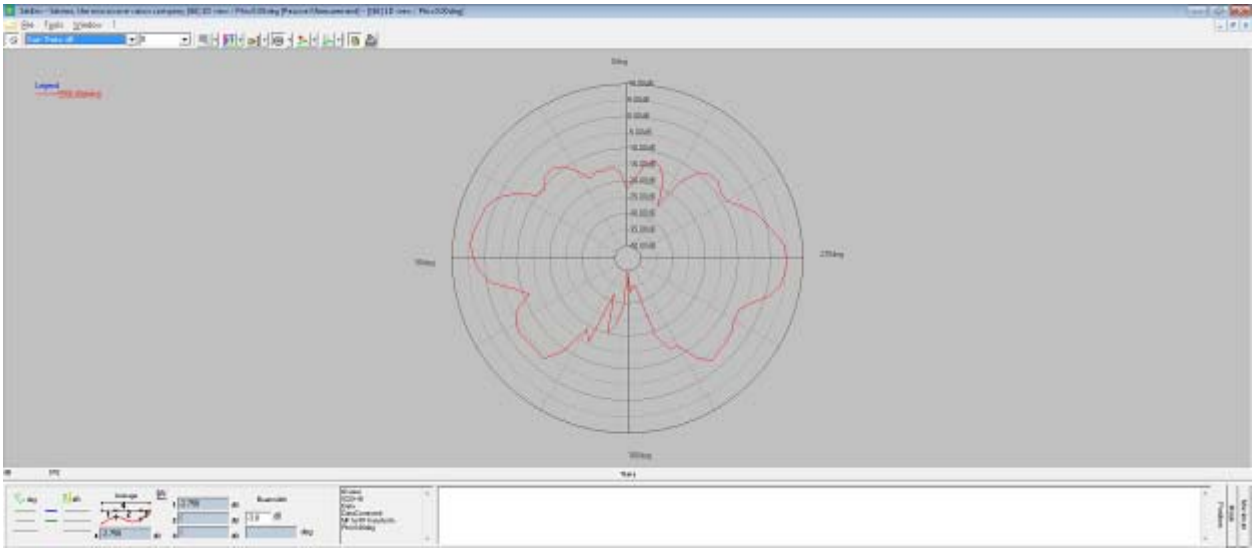


**XY-Theta**

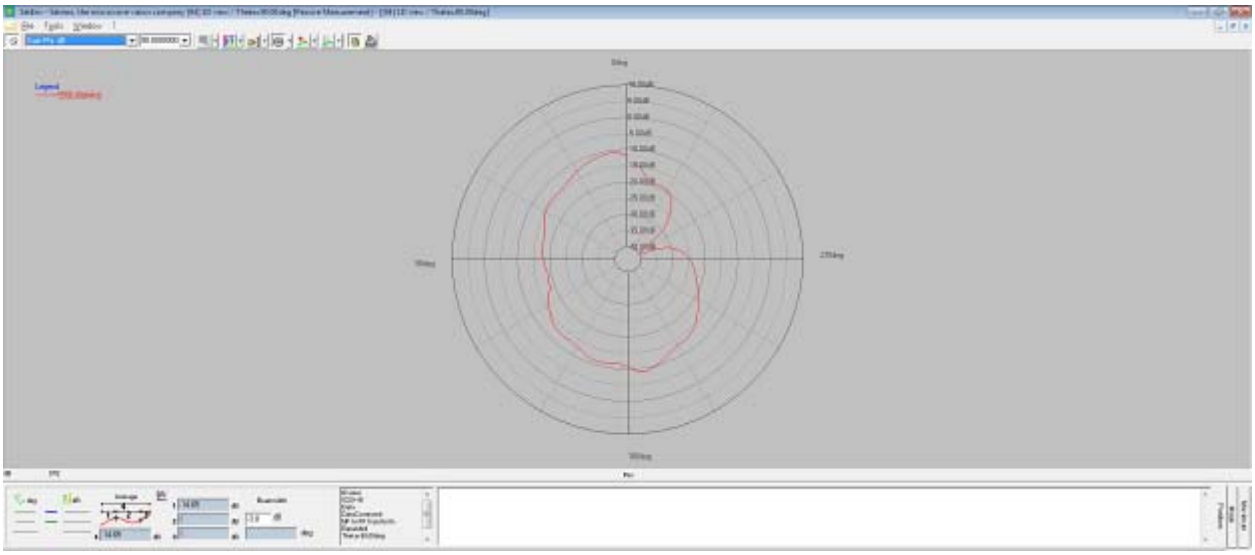
## 4.3.7 5550MHz



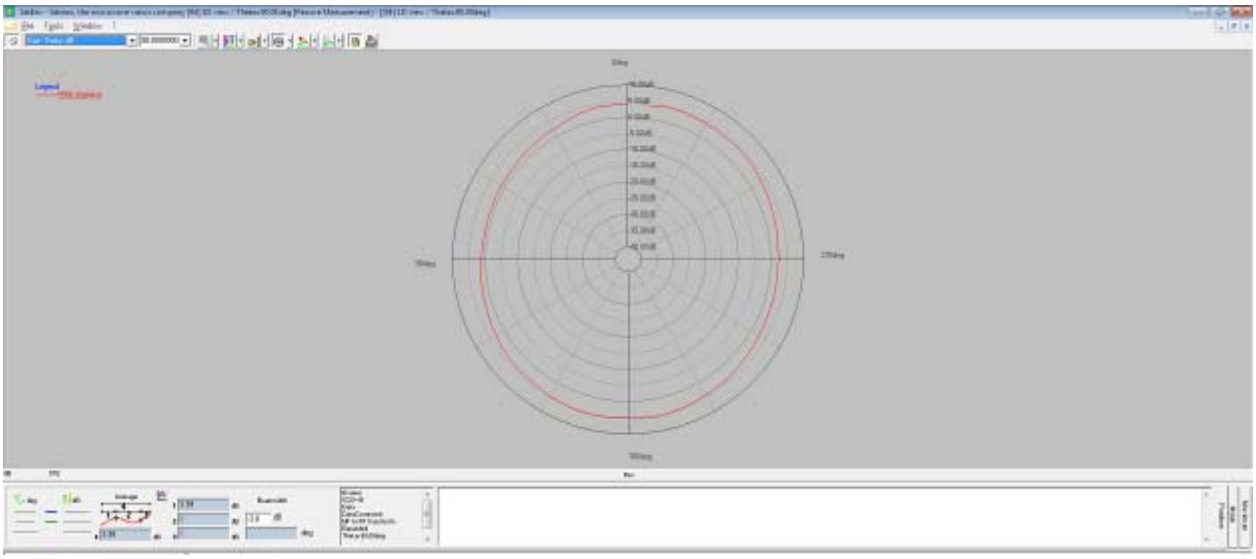
**XZ-Phi**



**XZ-Theta**

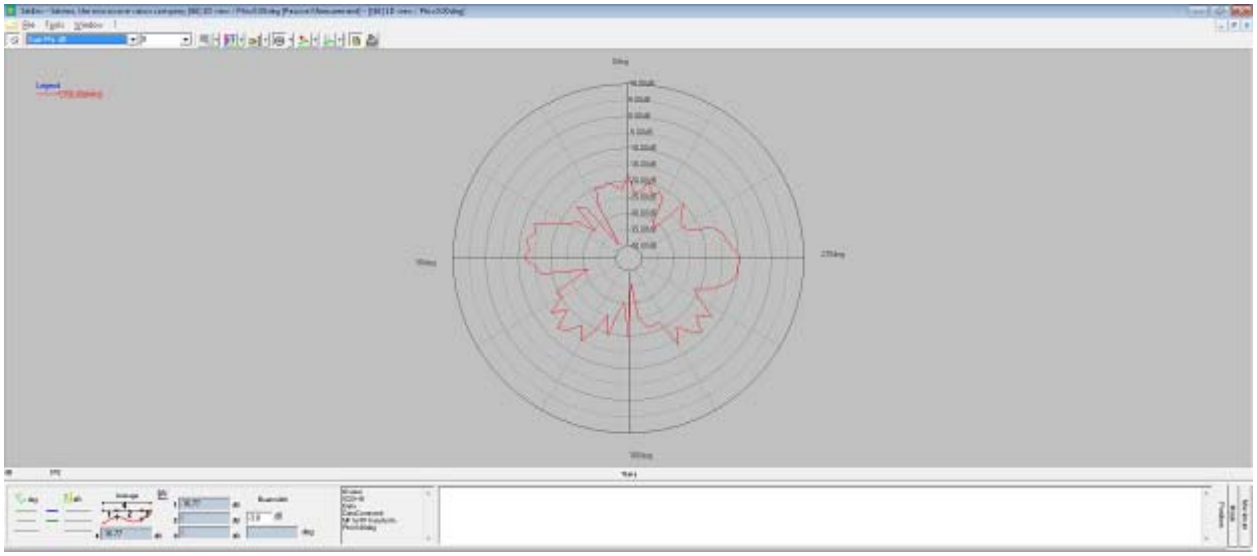


**XY-Phi**

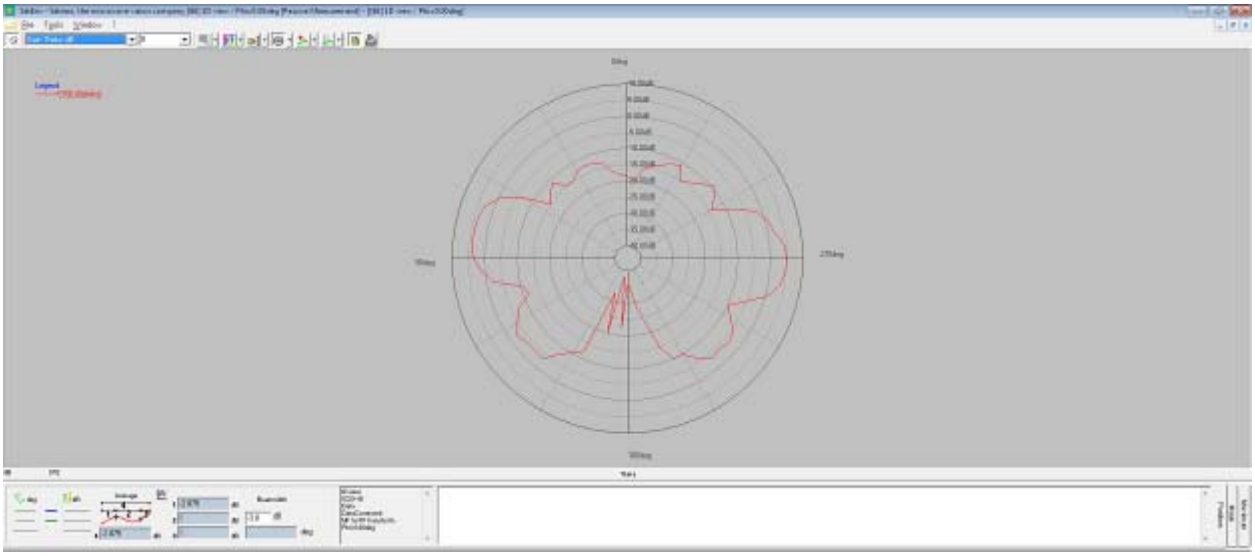


**XY-Theta**

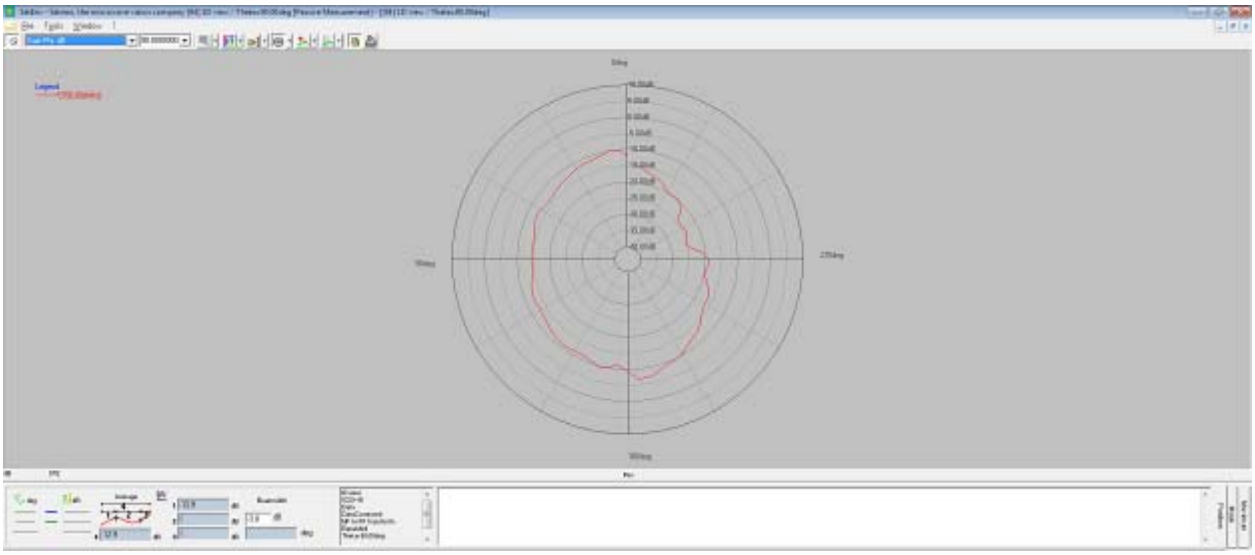
## 4.3.8 5750MHz



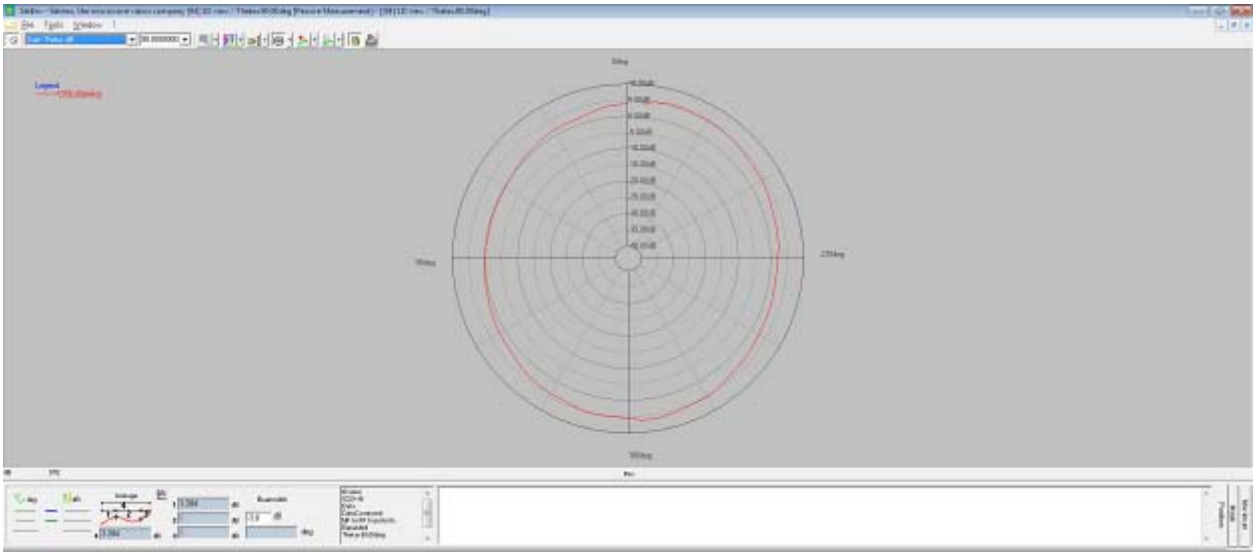
**XZ-Phi**



**XZ-Theta**

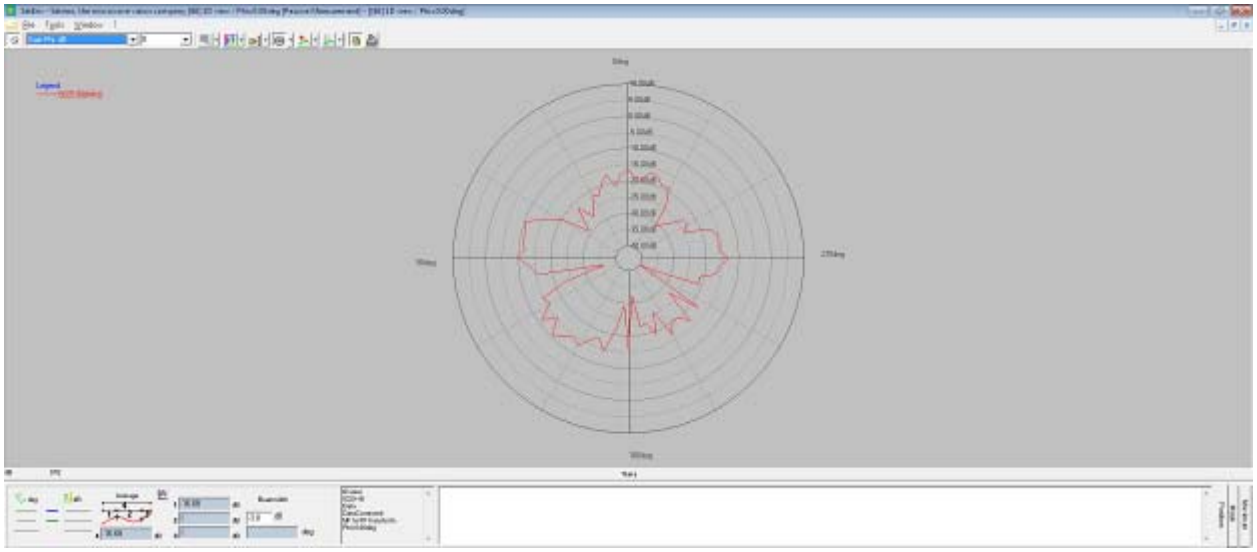


**XY-Phi**

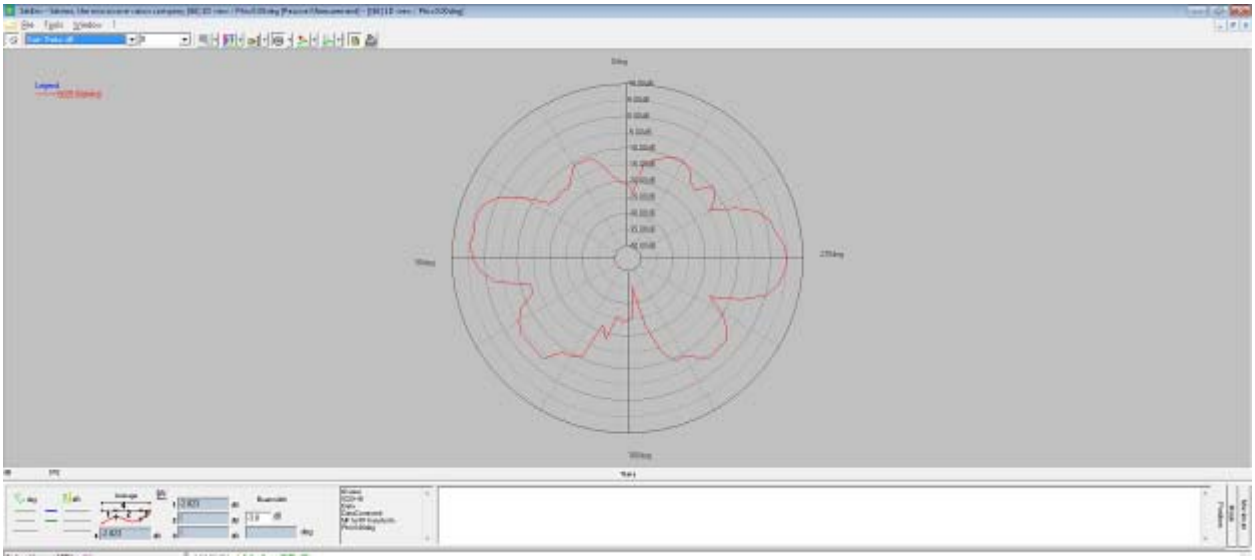


**XY-Theta**

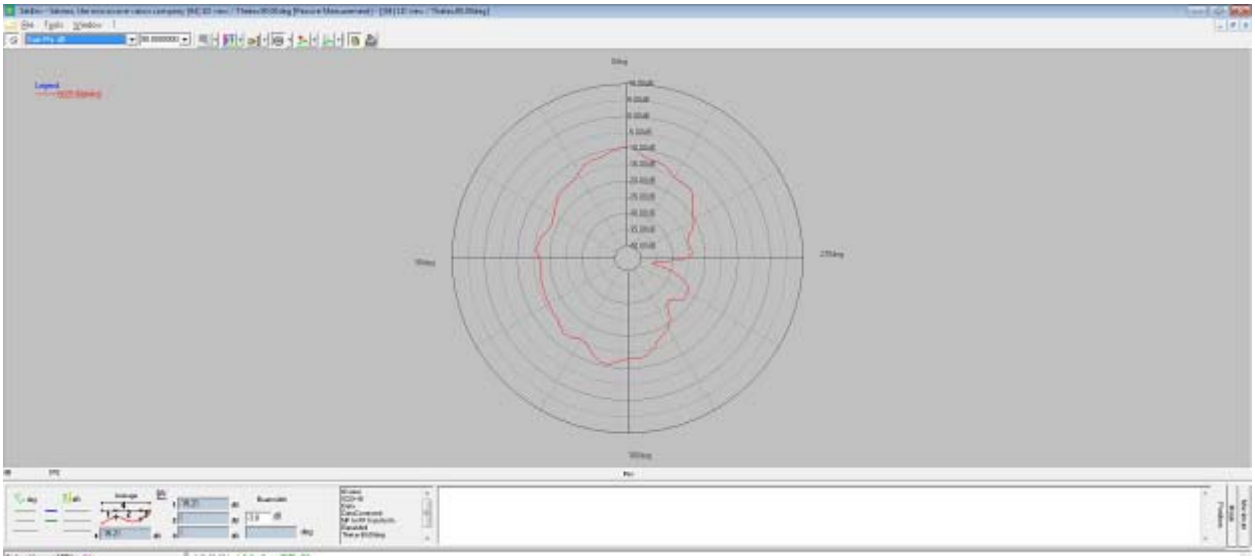
## 4.3.9 5825MHz



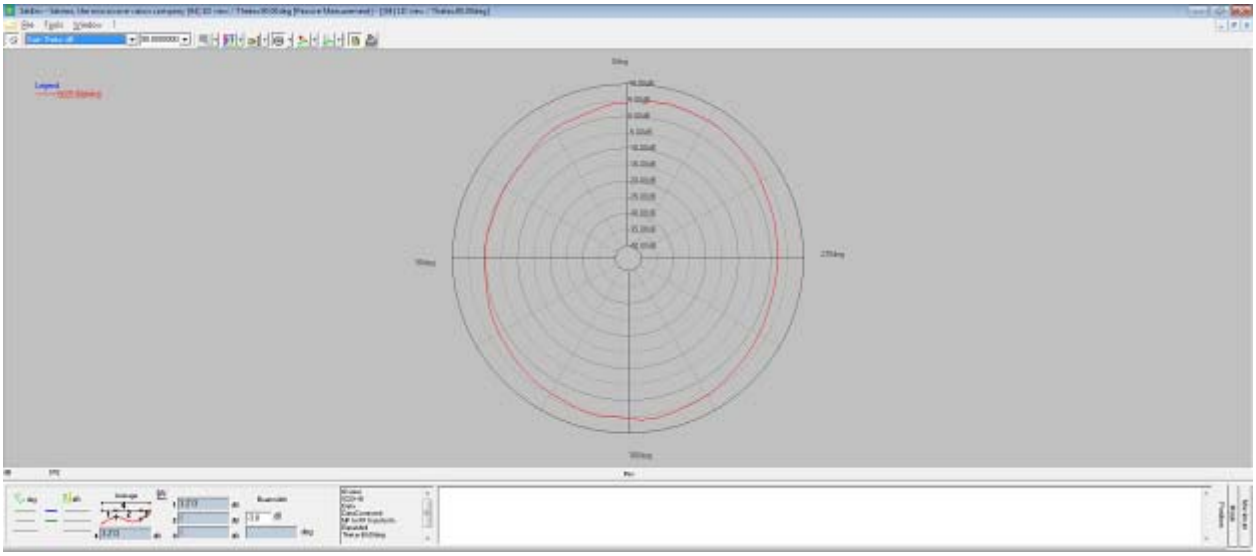
**XZ-Phi**



**XZ-Theta**



**XY-Phi**



**XY-Theta**

| Frequency | Ant_1 (dB) |
|---|---|
| 2400 MHz | -15.0 |
| 2450 MHz | -24.5 |
| 2500 MHz | -11.6 |
| 4900 MHz | -18.9 |
| 5150 MHz | -16.6 |
| 5350 MHz | -14.6 |
| 5550 MHz | -15.7 |
| 5750 MHz | -16.4 |
| 5825 MHz | -15.3 |

| Frequency | Ant 1 | |
|---|---|---|
| | Peak Gain (dBi) | Efficiency (%) |
| 2400MHz | 3.7 | 90% |
| 2450MHz | 3.8 | 93% |
| 2500MHz | 3.3 | 79% |
| 4900MHz | 5.2 | 63% |
| 5150MHz | 5.7 | 69% |
| 5350MHz | 5.7 | 68% |
| 5550MHz | 5.5 | 68% |
| 5750MHz | 6.3 | 69% |
| 5825MHz | 6.0 | 67% |