




DATE : Jul.16.2004

CUSTOMER: CLEVO CO.

# TEST REPORT

|                     |                                      |
|---------------------|--------------------------------------|
| <b>MODEL</b>        | <b>D900T</b>                         |
| <b>DESCRIPTION</b>  | <b>PIFA For Wireless LAN Antenna</b> |
| <b>SUPPLIER P/N</b> |                                      |
| <b>CUSTOMER P/N</b> |                                      |
| <b>FILE P/N</b>     |                                      |

| <b>FAVORTRON</b>  |   |   | <b>Customer</b> |  |
|---|---|---|-----------------|--|
| <b>Manager</b>  | <b>Supervisor</b>   | <b>Engineer</b>   |                 |  |
|  |  |  |                 |  |



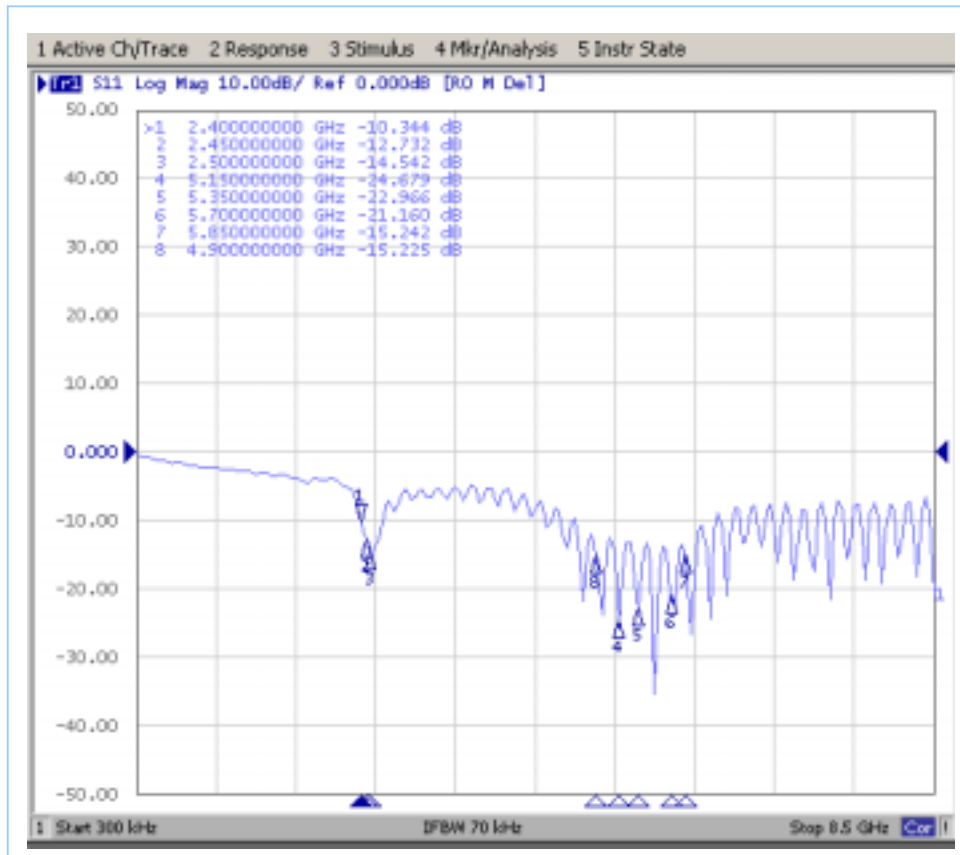
**惠寶電子股份有限公司**  
**FAVORTRON CO., LTD**

台北縣中和市中正路 866 號 17F TEL: (02) 8227-5669

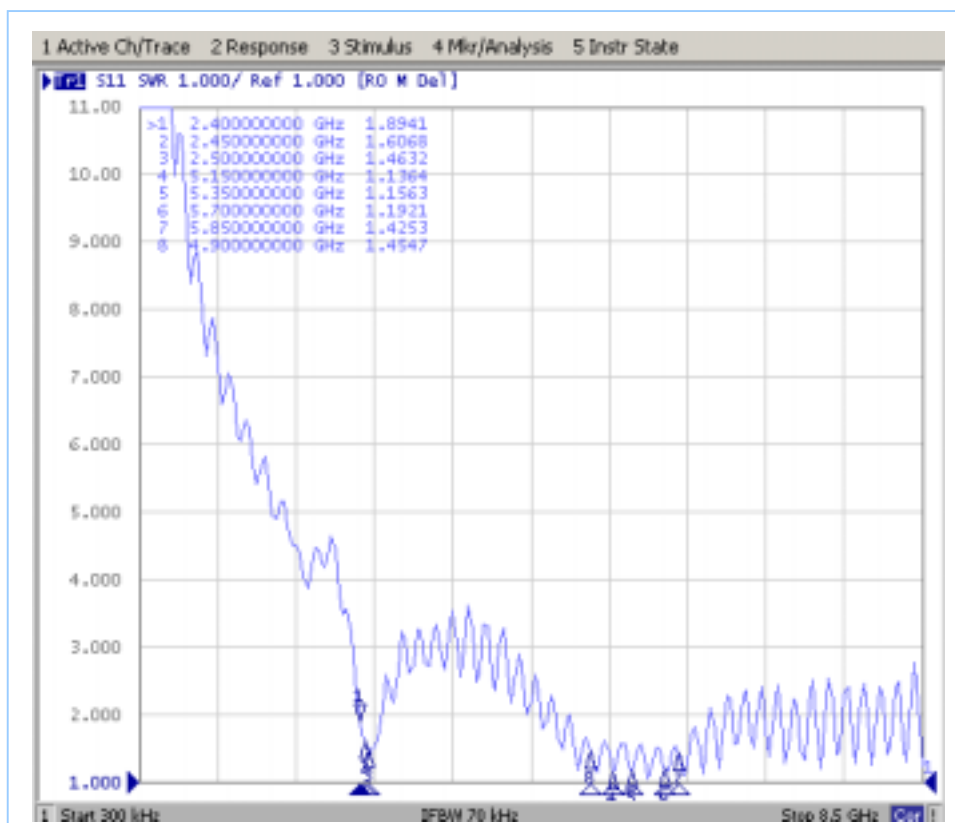
17<sup>nd</sup> F, no. 866, Zhong Zheng Rd., FAX: (02) 8227-5667  
Zhong He City, Taipei Hsien, Taiwan R.O.C

# 1. WLAN Ant./In Notebook ( RIGHT )

## ***2.4~ 2.5GHz & 5.15~ 5.85GHz / Return Loss***

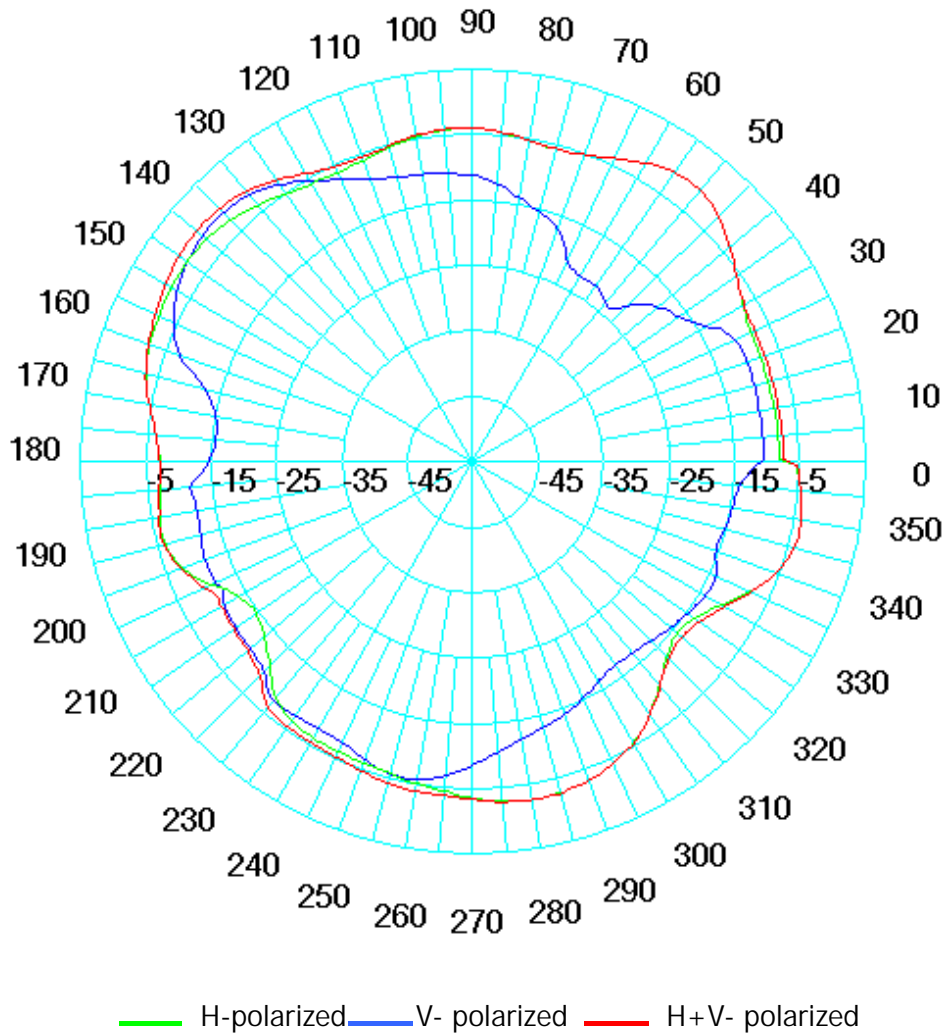


## ***2.4~ 2.5GHz & 5.15~ 5.85GHz / Vswr***



# 4. Gain&PATTERN-WLAN( right )ANT./IN Notebook

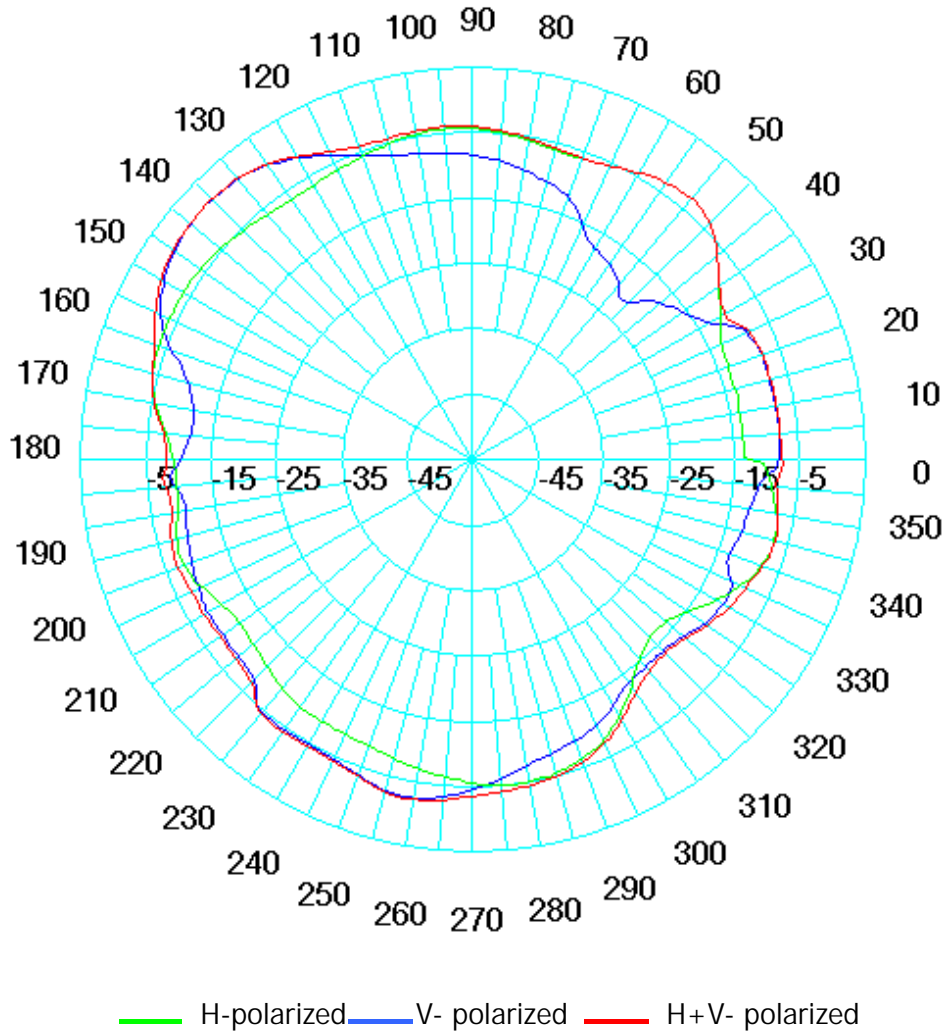
## 2.4GHz



## Gain data

| Antenna  | Gain of XY Plane(Azimuth) |        |        |
|----------|---------------------------|--------|--------|
|          | Frequency                 | 2.4GHz |        |
| PIFA     | H                         | Peak   | -0.35  |
|          |                           | Avg.   | -5.54  |
|          | V                         | Peak   | -0.45  |
|          |                           | Avg.   | -10.25 |
|          | H + V                     | Peak   | 0.48   |
|          |                           | Avg.   | -4.82  |
| %> -5dBi |                           | 58.62% |        |

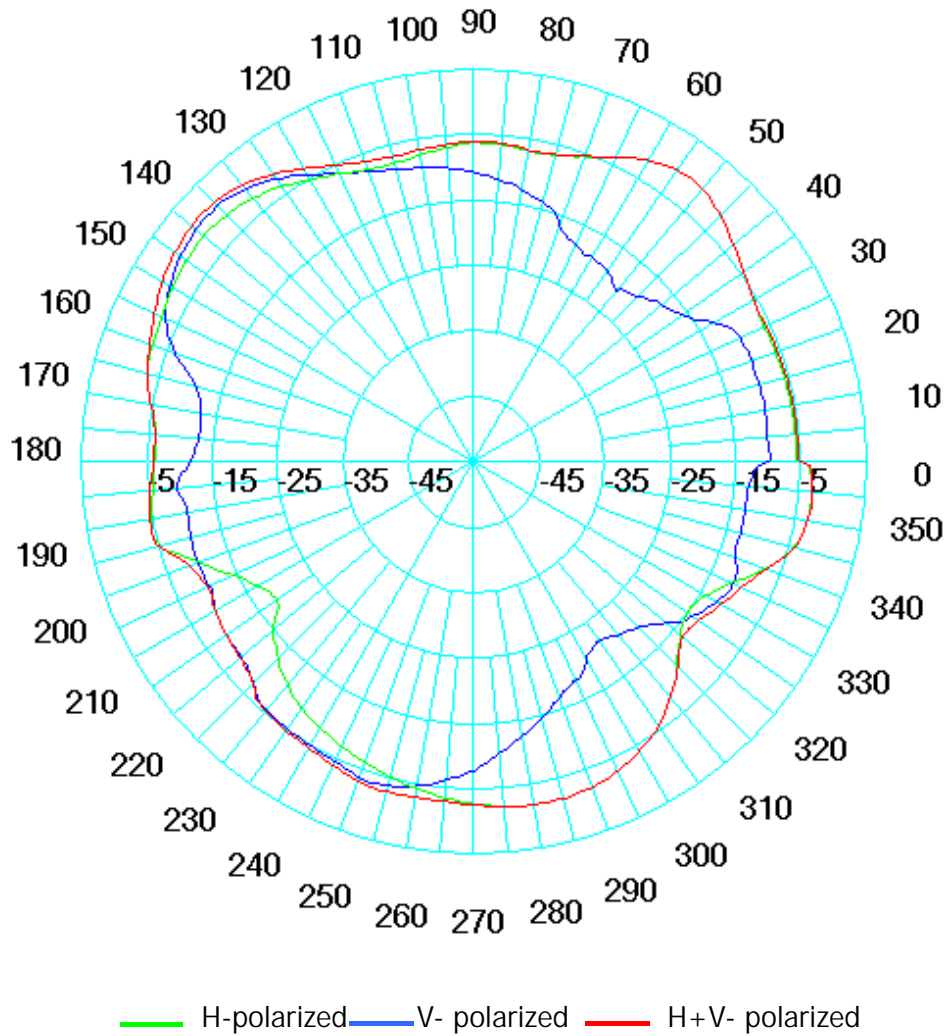
## 2.45GHz



## Gain data

| Antenna  | Gain of XY Plane(Azimuth) |         |       |
|----------|---------------------------|---------|-------|
|          | Frequency                 | 2.45GHz |       |
| PIFA     | H                         | Peak    | -1.63 |
|          |                           | Avg.    | -7.12 |
|          | V                         | Peak    | 2.35  |
|          |                           | Avg.    | -7.65 |
|          | H + V                     | Peak    | 2.45  |
|          |                           | Avg.    | -4.89 |
| %> -5dBi |                           | 59.45%  |       |

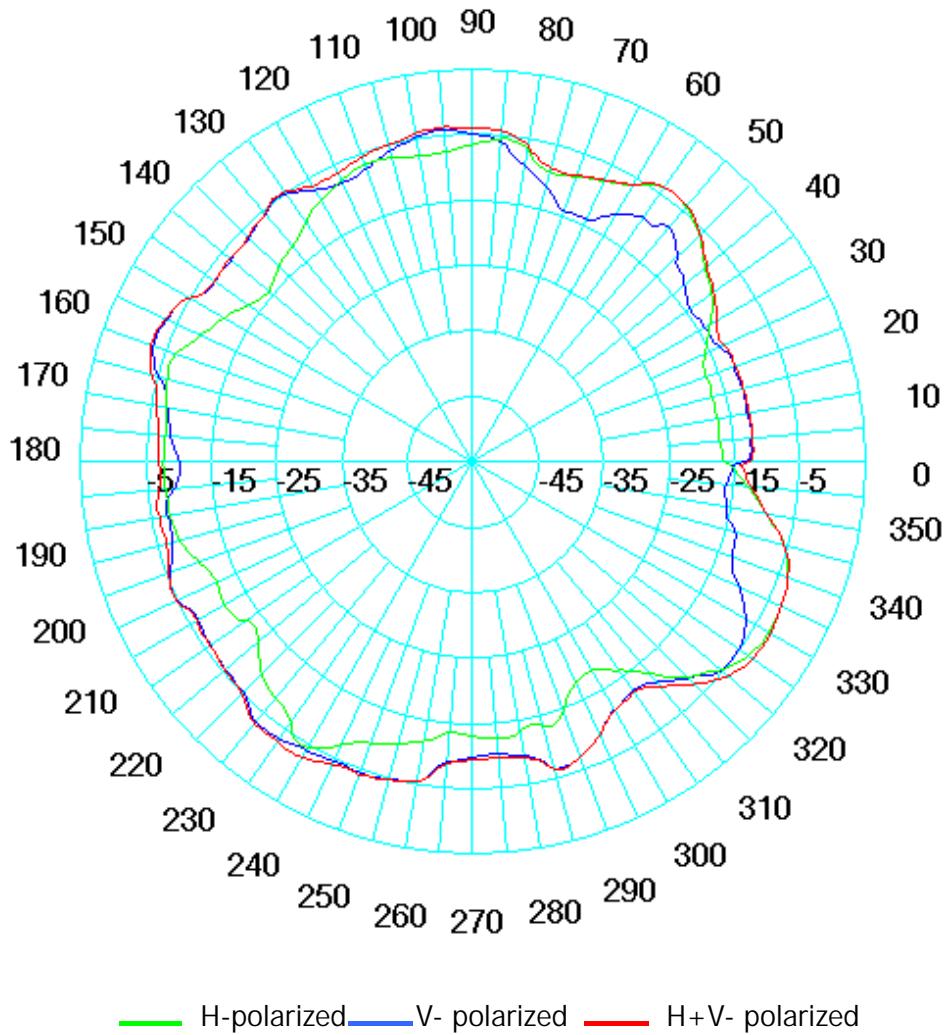
## 2.5GHz



## Gain data

| Antenna  | Gain of XY Plane(Azimuth) |        |       |
|----------|---------------------------|--------|-------|
|          | Frequency                 | 2.5GHz |       |
| PIFA     | H                         | Peak   | -0.54 |
|          |                           | Avg.   | -5.89 |
|          | V                         | Peak   | 0.59  |
|          |                           | Avg.   | -9.96 |
|          | H + V                     | Peak   | 1.25  |
|          |                           | Avg.   | -4.85 |
| %> -5dBi |                           | 50.54% |       |

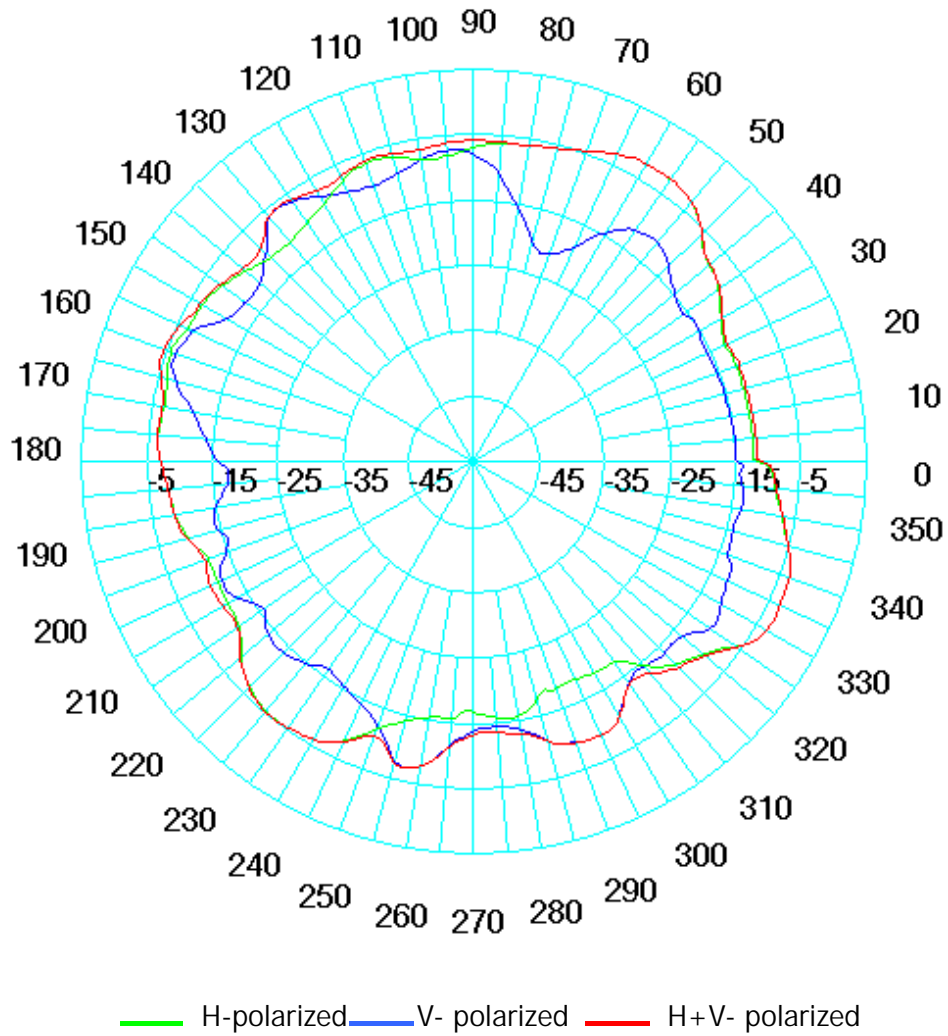
## 5.15GHz



## Gain data

| Antenna | Gain of XY Plane(Azimuth) |          |        |
|---------|---------------------------|----------|--------|
|         | Frequency                 | 5.15GHz  |        |
| PIFA    | H                         | Peak     | -1.12  |
|         |                           | Avg.     | -8.24  |
|         | V                         | Peak     | -1.21  |
|         |                           | Avg.     | -6.54  |
|         | H + V                     | Peak     | -0.83  |
|         |                           | Avg.     | -4.86  |
|         |                           | %> -5dBi | 55.56% |

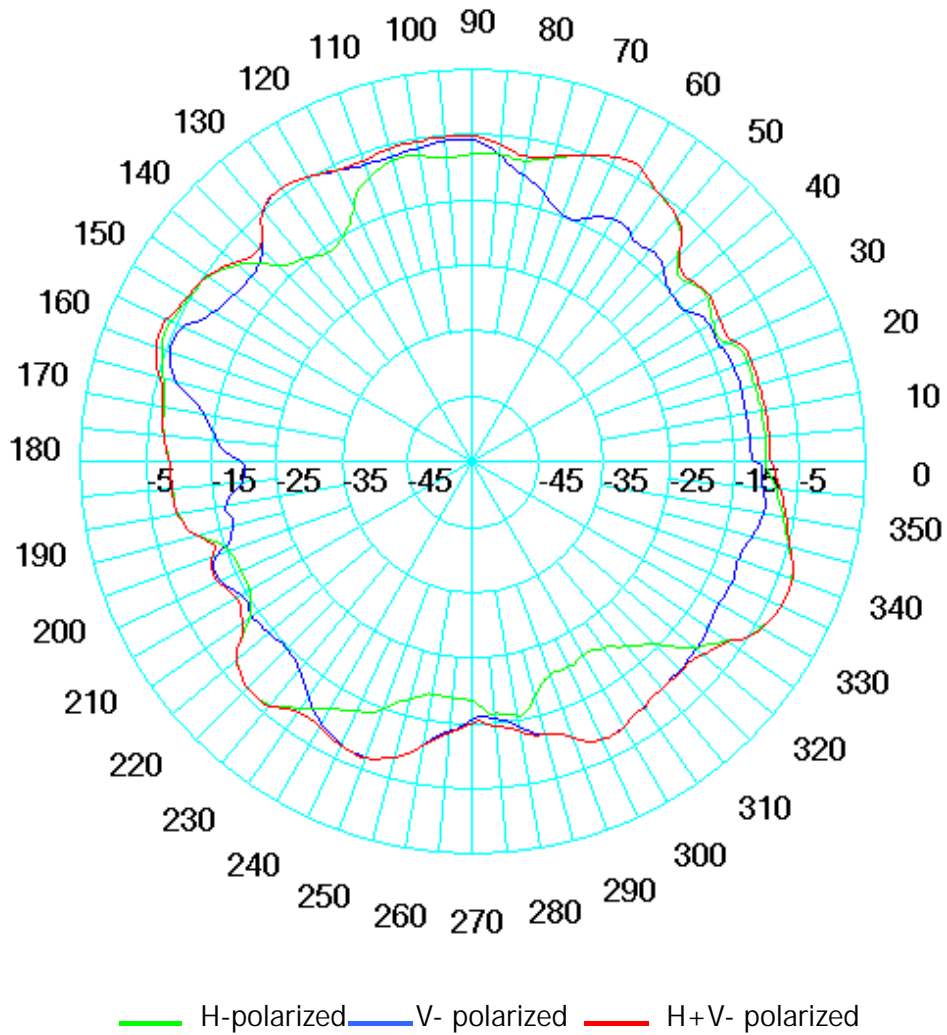
## 5.25GHz



## Gain data

| Antenna  | Gain of XY Plane(Azimuth) |         |       |
|----------|---------------------------|---------|-------|
|          | Frequency                 | 5.25GHz |       |
| PIFA     | H                         | Peak    | 0.86  |
|          |                           | Avg.    | -5.89 |
|          | V                         | Peak    | -2.76 |
|          |                           | Avg.    | -9.45 |
|          | H + V                     | Peak    | 0.82  |
|          |                           | Avg.    | -4.74 |
| %> -5dBi |                           | 58.86%  |       |

## 5.35GHz

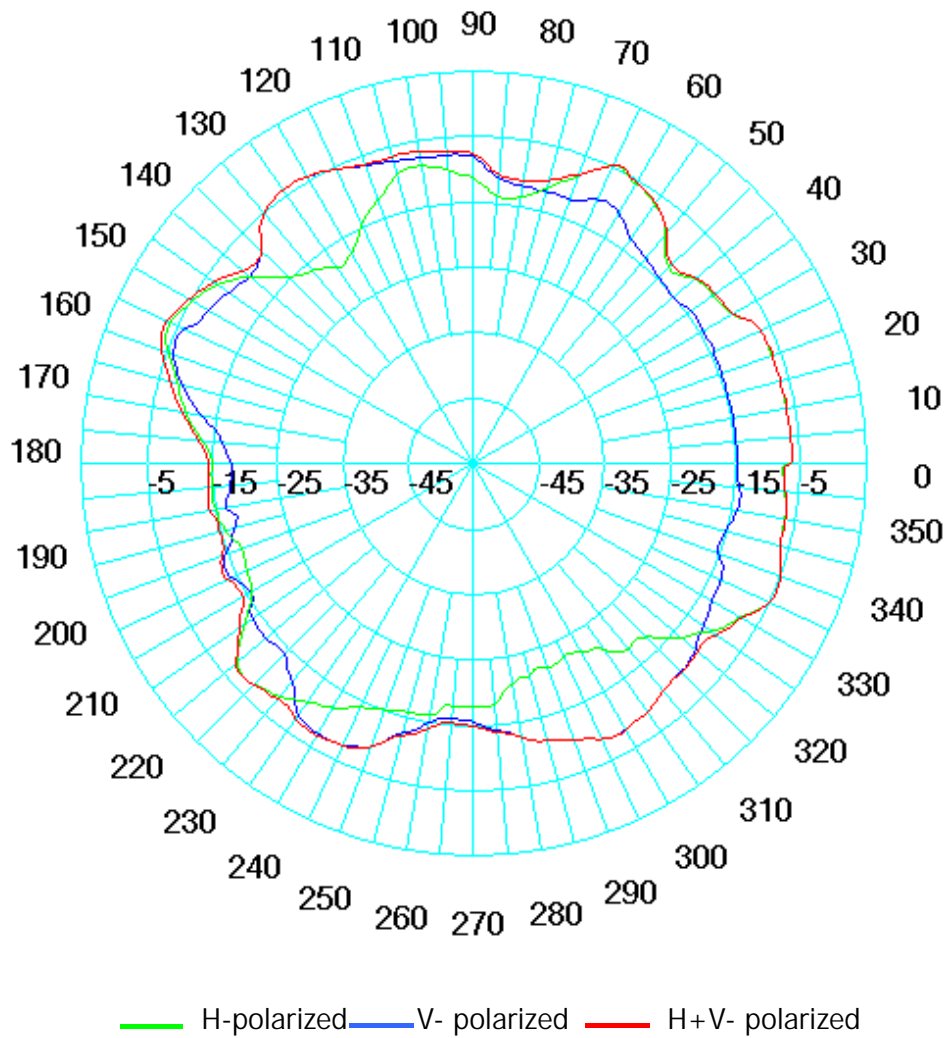


## Gain data

| Antenna  | Gain of XY Plane(Azimuth) |         |       |
|----------|---------------------------|---------|-------|
|          | Frequency                 | 5.35GHz |       |
| PIFA     | H                         | Peak    | -0.12 |
|          |                           | Avg.    | -7.54 |
|          | V                         | Peak    | -1.43 |
|          |                           | Avg.    | -8.12 |
|          | H + V                     | Peak    | 0.01  |
|          |                           | Avg.    | -5.12 |
| %> -5dBi |                           | 56.21%  |       |



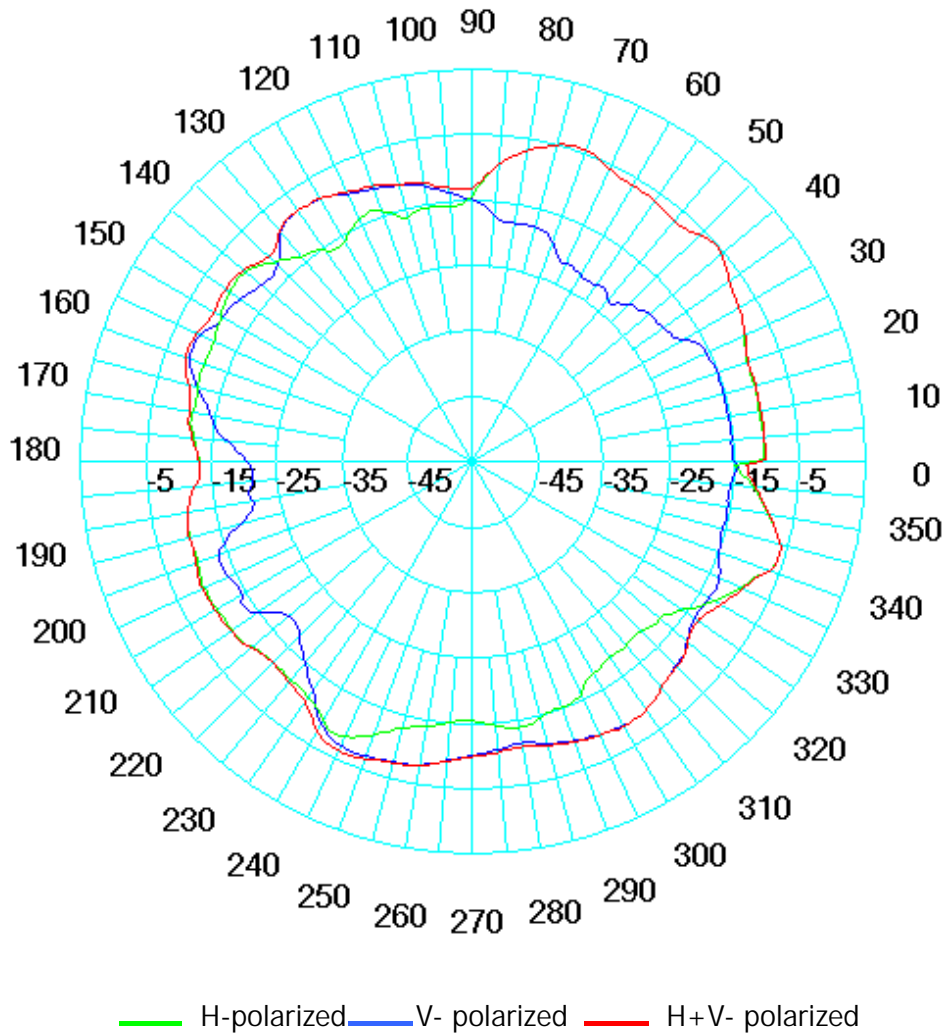
## 5.45GHz



## Gain data

| Antenna  | Gain of XY Plane(Azimuth) |         |       |
|----------|---------------------------|---------|-------|
|          | Frequency                 | 5.45GHz |       |
| PIFA     | H                         | Peak    | -0.18 |
|          |                           | Avg.    | -8.24 |
|          | V                         | Peak    | -0.43 |
|          |                           | Avg.    | -8.08 |
|          | H + V                     | Peak    | 0.52  |
|          |                           | Avg.    | -5.22 |
| %> -5dBi |                           | 58.42%  |       |

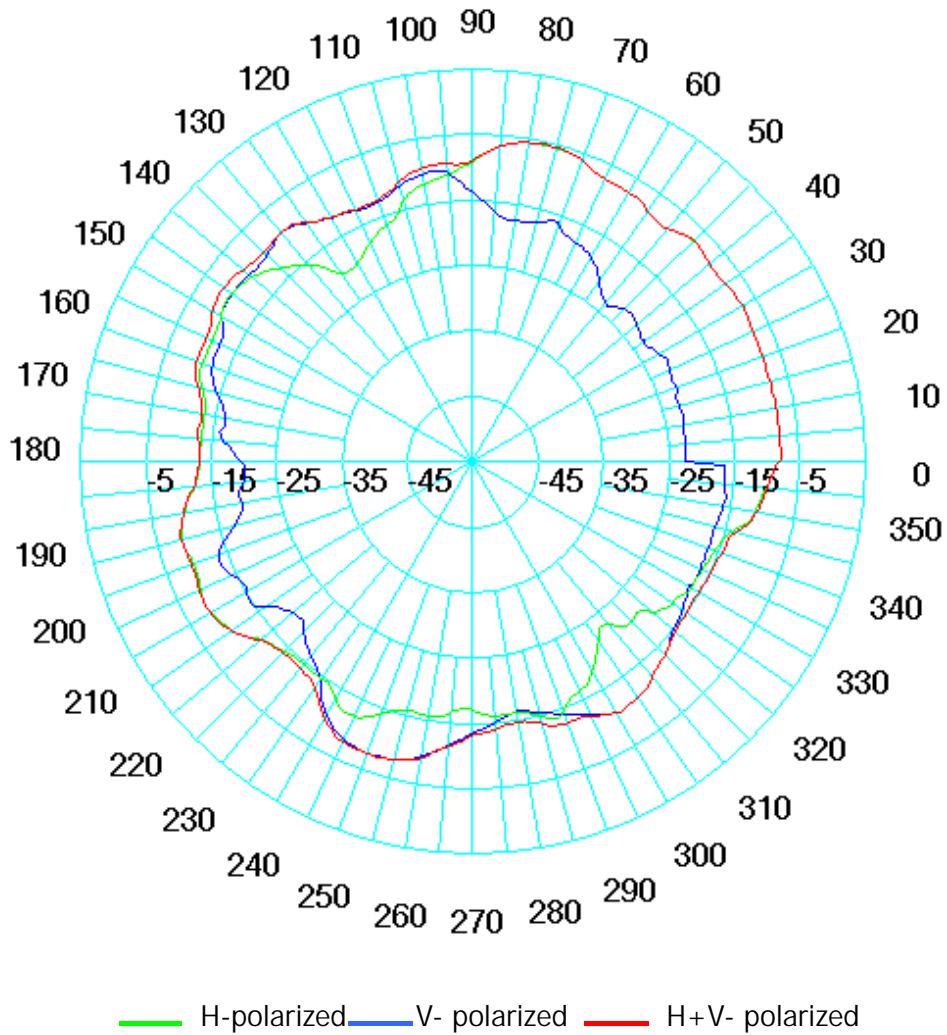
## 5.725GHz



## Gain data

| Antenna | Gain of XY Plane(Azimuth) |          |        |
|---------|---------------------------|----------|--------|
|         | Frequency                 | 5.725GHz |        |
| PIFA    | H                         | Peak     | -0.21  |
|         |                           | Avg.     | -7.42  |
|         | V                         | Peak     | -2.89  |
|         |                           | Avg.     | -9.87  |
|         | H + V                     | Peak     | -0.43  |
|         |                           | Avg.     | -5.45  |
|         |                           | %> -5dBi | 56.65% |

## 5.85GHz



## Gain data

| Antenna  | Gain of XY Plane(Azimuth) |         |        |
|----------|---------------------------|---------|--------|
|          | Frequency                 | 5.85GHz |        |
| PIFA     | H                         | Peak    | -0.54  |
|          |                           | Avg.    | -7.42  |
|          | V                         | Peak    | -2.87  |
|          |                           | Avg.    | -11.12 |
|          | H + V                     | Peak    | -0.48  |
|          |                           | Avg.    | -5.62  |
| %> -5dBi |                           | 50.89%  |        |

## 5. SPECIFICATIONS:

### Electrical Properties

Frequency Range : 2.4~2.5GHz & 5.15~5.85GHz

Impedance : 50 ohm

VSWR(2.4~2.5GHZ) : 2.0

VSWR(5.15~5.85GHz) : < 2.5

Peak Gain : 3dBi

Average Gain : >-5dB