

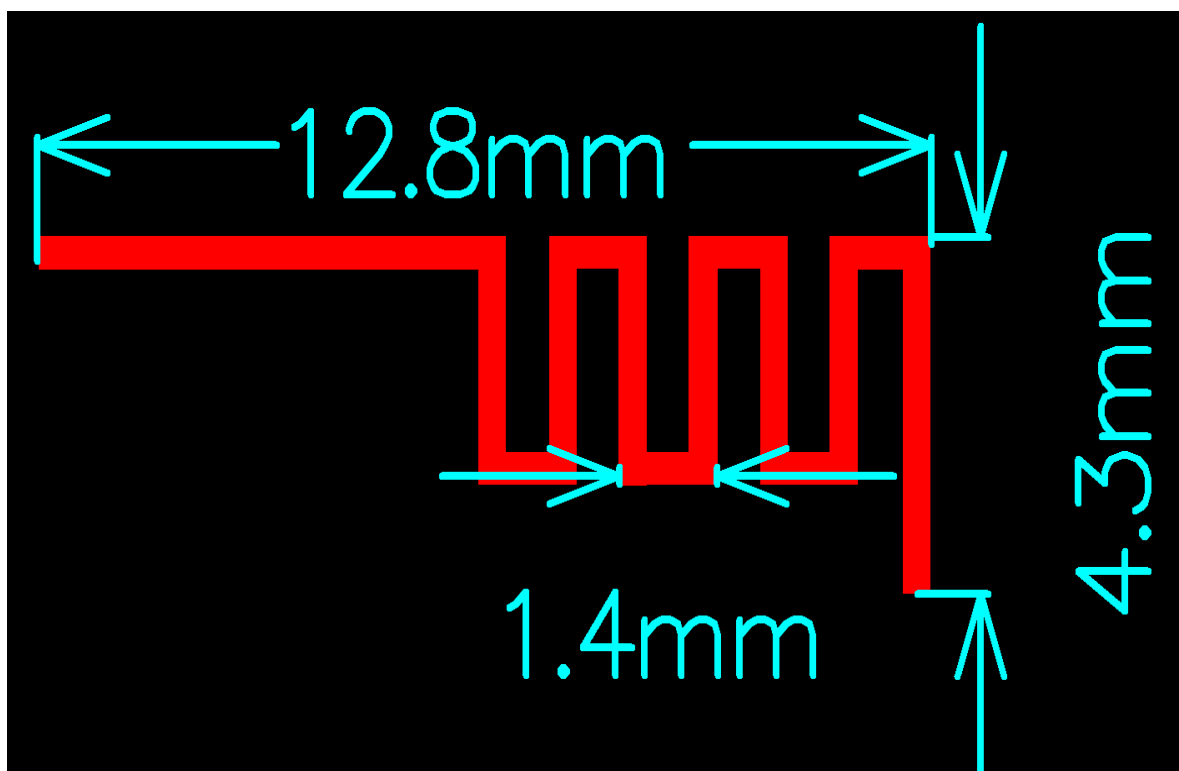
# Antenna Specification

## Specifications

### Summary

| ITEM                 | SPEC.                                     |                                  |
|----------------------|-------------------------------------------|----------------------------------|
| Model Name           | ISM 2.4 GHz                               |                                  |
| Center Frequency     | 2403.65 MHz<br>2441.65 MHz<br>2479.65 MHz | 3.85 dBi<br>3.18 dBi<br>2.80 dBi |
| MAX. GAIN            | 3.85 dBi                                  |                                  |
| Polarization         | Horizontal                                |                                  |
| Azimuth Beam Pattern | Omni-directional                          |                                  |
| Impedance            | 50 $\Omega$                               |                                  |
| Antenna Length       | 17.1 mm                                   |                                  |

### Antenna Photo & Length



# 1.Main antenna : 2403.65 MHz

## 1.1 Horizontal



**Advance Data Technology Corporation**

**誠信科技股份有限公司**

http://www.adt.com.tw E-mail: service@adt.com.tw

Hwa Ya Lab : No.19, Hwa Ya 2nd RD, Kwei San, Taoyuan, Taiwan, R.O.C.

Taiwan Lab : 13-1 Lane 19, Wu Kuan 3rd St, Kwei San, Taoyuan, Taiwan, R.O.C.

Hsichin Lab: 81-1 Lillackeng, 9th Lin, Wuling Tseu, Cihinglin, Hsichin, Taiwan, R.O.C.

Tel (03) 318-3232 Fax (03) 318-8050

Tel (03) 327-0910 Fax (03) 327-0892

Tel (03) 593-5343 Fax (03) 593-5342

Brand / Model : IBM 2.4GHz

Remark : E1

Tested by : SHELLY

EUT description :

Location: **RF Chamber3**

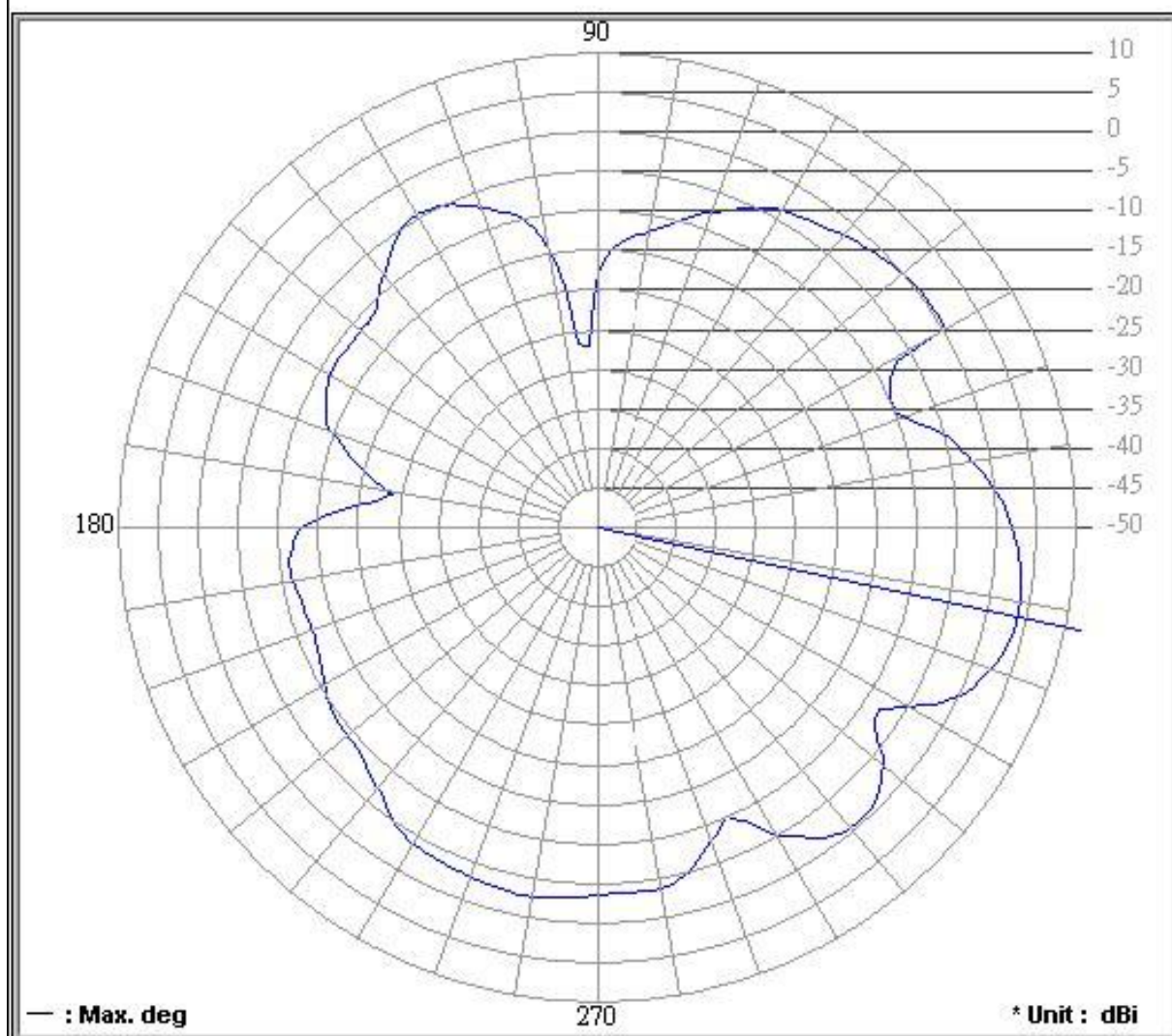
Date: **2018/8/16**

Time: **15:20:43**

Temperatuer (°C): **25**

Humidity (%): **75**

Approved by:



Frequency (MHz) : **2403.65**

Antenna Polarity : **Horizontal**

Average Gain (dB) : **-3.64**

Maximum Gain (dB) :

Maximum Gain (degree) : **346**

Minimum Gain (dB) : **-27.08**

Minimum Gain (degree) : **93**

C:\Antenna Pattern V5.0\Graph\0818\08180019.png

## 1.2 Vertical



**Advance Data Technology Corporation**

**誠信科技股份有限公司**

http://www.adt.com.tw E-mail: service@adt.com.tw

Hwa Ya Lab : No.19, Hwa Ya 2nd RD, Kieikiao, Taoyuan, Taiwan, R.O.C.

Tel (886) 318-3232 Fax (886) 318-6050

Taipei Lab : 13-1 Lane 19, Wei Sikai 3rd St, Kieikiao, Taoyuan, Taiwan, R.O.C.

Tel (886) 327-0910 Fax (886) 327-0892

Hsichia Lab: 81-1 Lidaokeng, 9th Lh, Wuling Tzuen, Ciktunglin, Hsichia, Taiwan, R.O.C.

Tel (886) 593-5343 Fax (886) 593-5342

Brand / Model : IBM 2.4GHz

Remark : E1

Tested by : SHELLY

EUT description :

Location: **RF Chamber3**

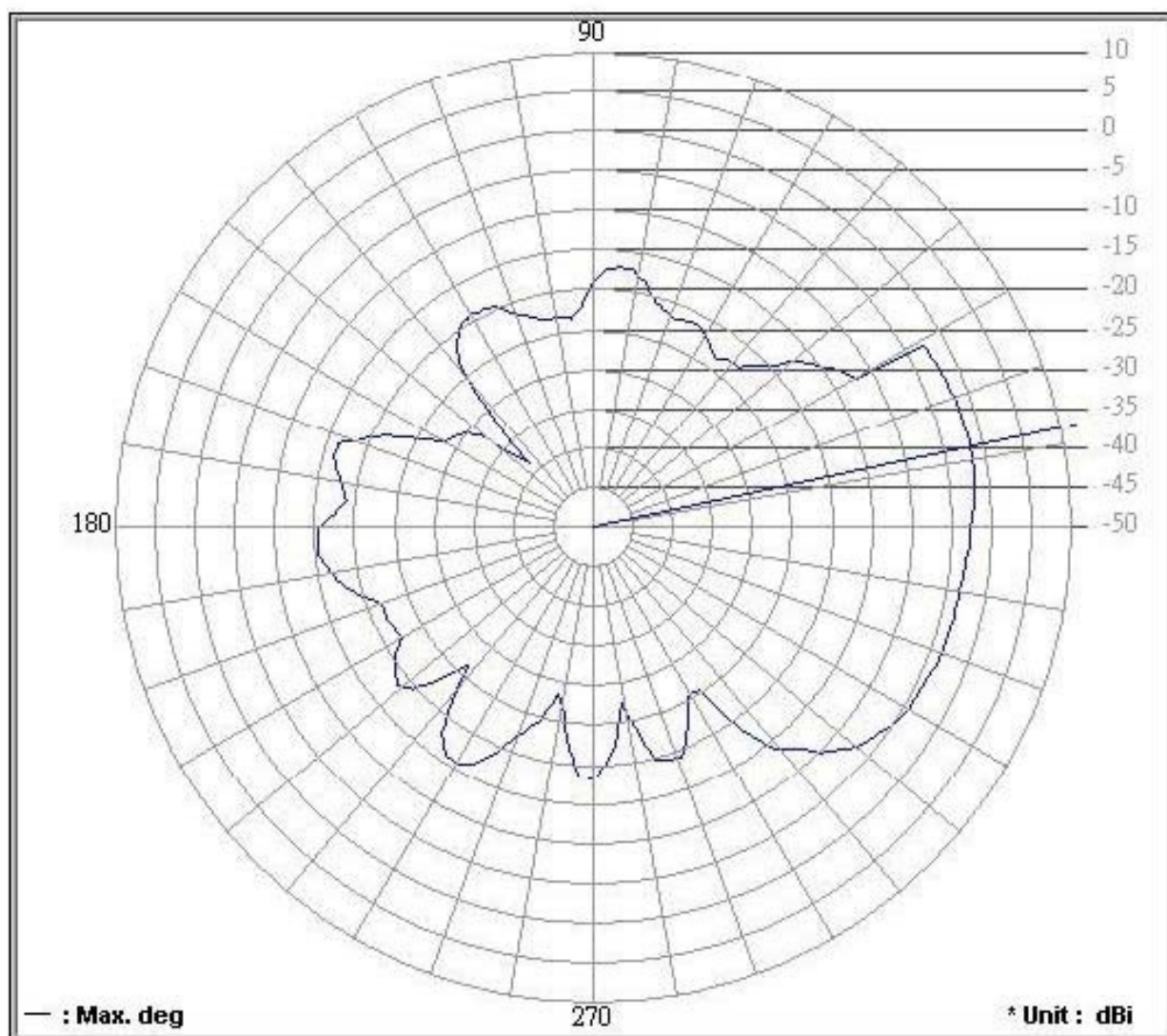
Date: **2018/8/16**

Time: **15:34:49**

Temperatuer (°C): **25**

Humidity (%): **75**

Approved by:



Frequency (MHz): **2403.65**

Antenna Polarity: **Vertical**

Average Gain (dB): **-9.57**

Maximum Gain (dB):

Maximum Gain (degree): **12**

Minimum Gain (dB): **-38.76**

Minimum Gain (degree): **135**

C:\Antenna Pattern V5.0\Graph\0818\08180024.png

## 2.Main antenna : 2441.65 MHz

### 2.1 Horizontal



**Advance Data Technology Corporation**

**誠信科技股份有限公司**

http://www.adt.com.tw E-mail: service@adt.com.tw

Hwa Ya Lab : No.19, Hwa Ya 2nd RD, Kieki kai, Taoyuan, Taiwan, R.O.C.

Tel (886) 318-3232 Fax (886) 318-6060

Taipei Lab : 13-1 Lane 19, Wei Shai 3rd St, Kieki kai, Taoyuan, Taiwan, R.O.C.

Tel (886) 327-0910 Fax (886) 327-0892

Hsichui Lab: 81-1 Lidaokang, 9th Lla, Wuling Tseai, Chinglin, Hsichui, Taiwan, R.O.C.

Tel (886) 593-5343 Fax (886) 593-5342

Brand / Model : IBM 2.4G-Hz

Remark : E1

Tested by : SHELLY

EUT description :

Location: **RF Chamber3**

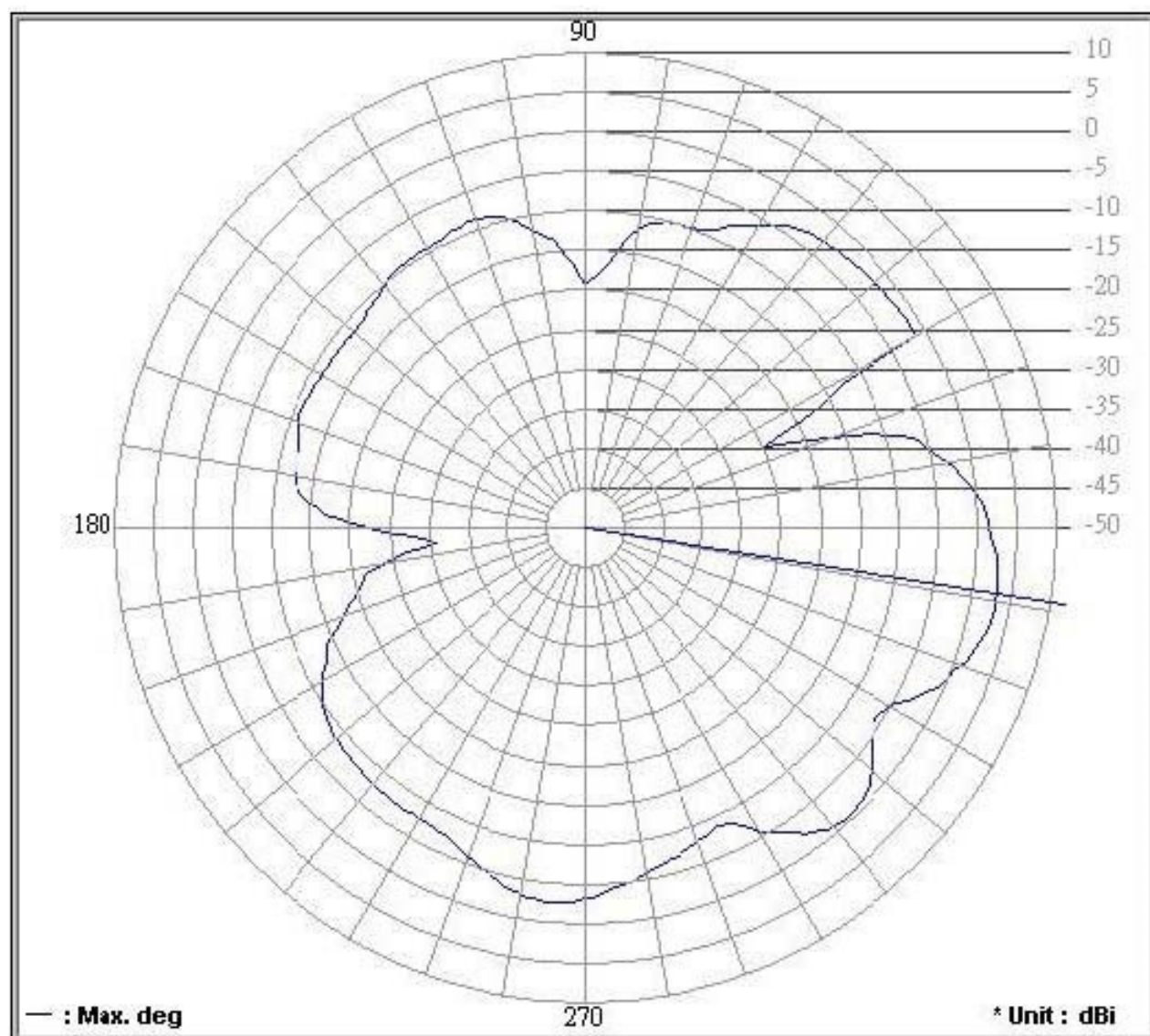
Date: **2018/8/16**

Time: **15:23:51**

Temperature (°C): **25**

Humidity (%): **75**

Approved by:



Frequency (MHz): **2441.65** Antenna Polarity: **Horizontal** Average Gain (dB): **-4.64**

Maximum Gain (dB): **-30.92** Maximum Gain (degree): **351**

Minimum Gain (dB): **-30.92** Minimum Gain (degree): **186**

C:\Antenna Pattern V5.0\Graph\0818\08180020.png

## 2.2 Vertical



**Advance Data Technology Corporation**

**誠信科技股份有限公司**

http://www.adt.com.tw E-mail: service@adt.com.tw

Hwa Ya Lab: No.19, Hwa Ya 2nd Rd, Kieik kai, Taoyuan, Taiwan, R.O.C.

Tel (03) 318-3232 Fax (03) 318-5050

Taipei Lab: 13-1 Lane 15, Wen Shai 3rd St, Kieik kai, Taoyuan, Taiwan, R.O.C.

Tel (03) 327-0910 Fax (03) 327-0892

Hsichui Lab: 81-1 Lida Rd, 9th Fl, Wuling Tzuen, Chinglin, Hsichui, Taiwan, R.O.C.

Tel (03) 593-5343 Fax (03) 593-5342

Brand / Model : IBM 2.4GHz

Remark : E1

Tested by : SHELLEY

EUT description :

Location: **RF Chamber3**

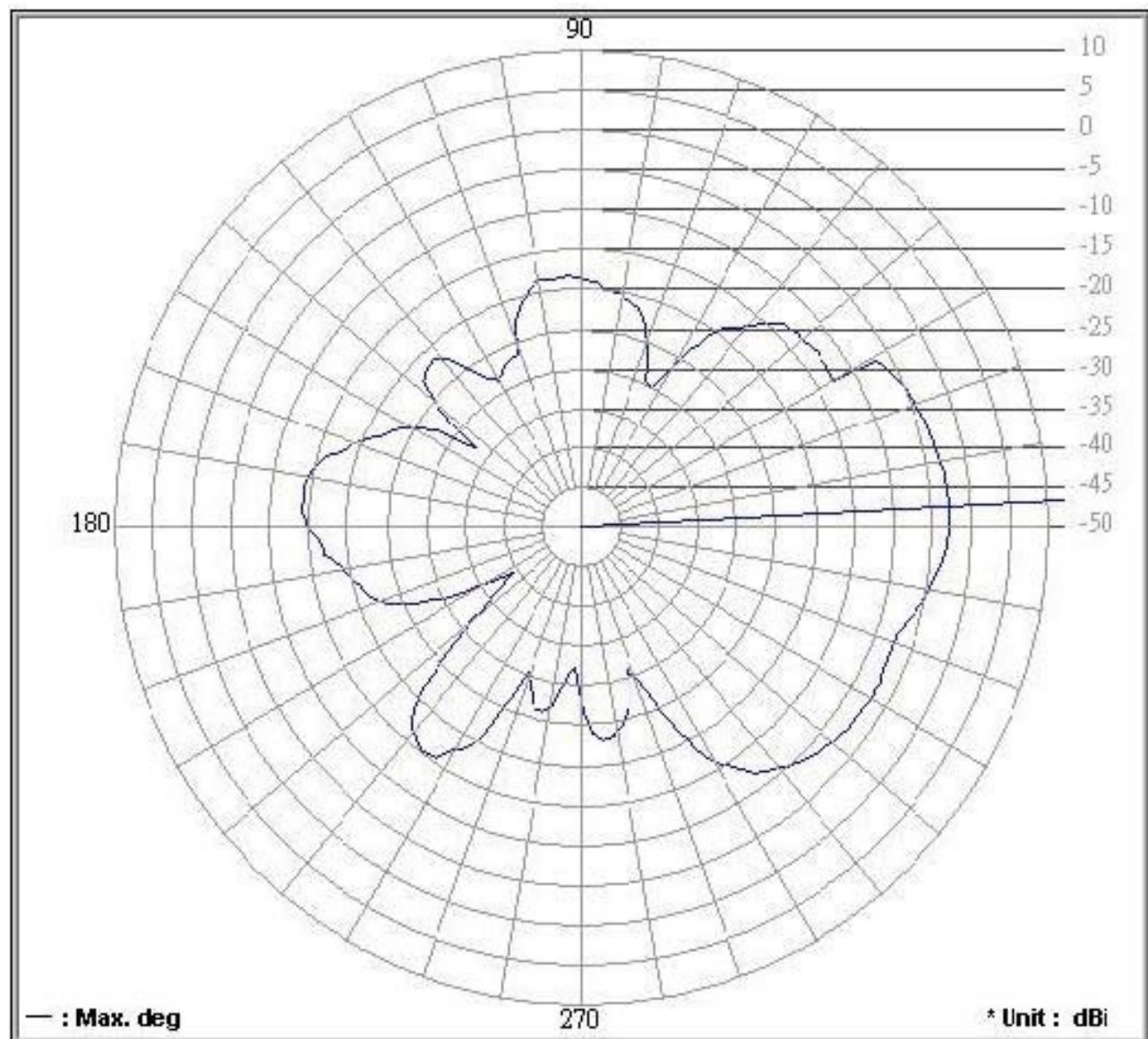
Date: **2018/8/16**

Time: **15:32:20**

Temperature (°C): **25**

Humidity (%): **75**

Approved by:



Frequency (MHz): **2441.65**

Antenna Polarity: **Vertical**

Average Gain (dBi): **-11.06**

Maximum Gain (dB):

Maximum Gain (degree): **3**

Minimum Gain (dB): **-39.35**

Minimum Gain (degree): **213**

C:\Antenna Pattern V5.0\Graph\0818\08180023.png

### 3.Main antenna : 2479.65 MHz

#### 3.1 Horizontal



Advance Data Technology Corporation

誠信科技股份有限公司

http://www.adt.com.tw/ E-mail: service@adt.com.tw

Hwa Ya Lab : No.19, Hwa Ya 2nd RD, Kieki kai, Taoyuan, Taiwan, R.O.C.

Tel (03) 318-3232 Fax (03) 318-6050

Tayuan Lab : 13-1 Lane 19, Wei Sikai 3rd St, Kieki kai, Taoyuan, Taiwan, R.O.C.

Tel (03) 327-0910 Fax (03) 327-0892

Hsichih Lab: 81-1 Lihlakaig, 9th Lla, Wuling Tseia, Chilinglin, Hsichih, Taiwan, R.O.C.

Tel (03) 693-6343 Fax (03) 693-6342

Brand / Model : IBM 2.4GHz

Remark : E1

Tested by : SHELLY

EUT description :

Location: **RF Chamber3**

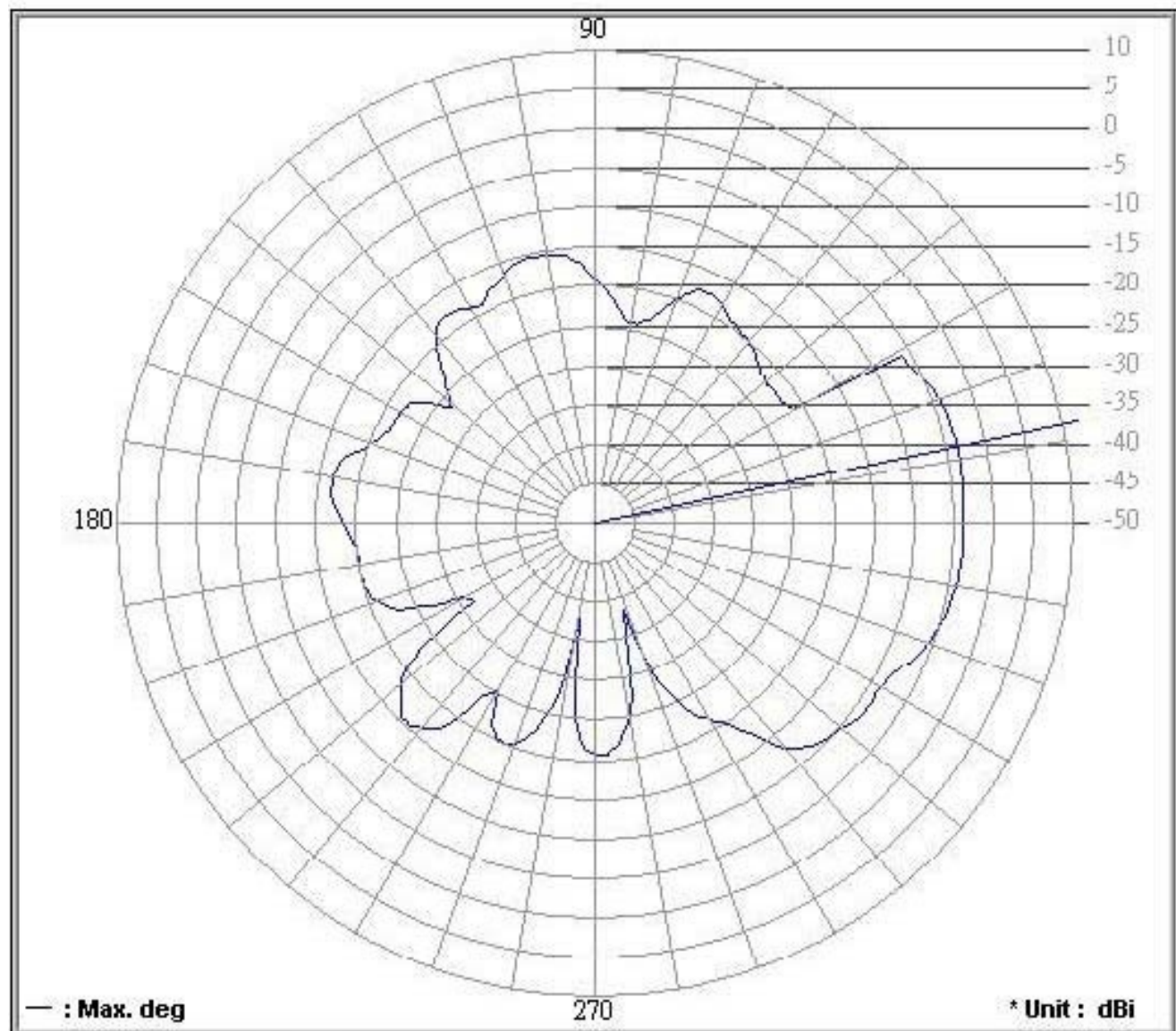
Date: **2018/8/16**

Time: **15:29:55**

Temperatuer (°C): **25**

Humidity (%): **75**

Approved by:



Frequency (MHz) : **2479.65**

Antenna Polarity : **Vertical**

Average Gain (dB) : **-11.34**

Maximum Gain (dB) :

Maximum Gain (degree) : **12**

Minimum Gain (dB) : **-38.33**

Minimum Gain (degree) : **288**

C:\Antenna Pattern V5.0\Graph\0818\08180022.png

### 3.2 Vertical



**Advance Data Technology Corporation**

**誠信科技股份有限公司**

http://www.adt.com.tw E-mail: service@adt.com.tw

Hwa Ya Lab : No.19, Hwa Ya 2nd RD, Kie K'ian, Taoyuan, Taiwan, R.O.C.

Tel (886) 318-3232 Fax (886) 318-5050

Tayuan Lab : 13-1 Lane 19, Wei Shai 3rd St, Kie K'ian, Taoyuan, Taiwan, R.O.C.

Tel (886) 327-0910 Fax (886) 327-0892

Heliokai Lab: 81-1 Lailokang, 9th Lla, Wukung Tones, Chinglis, Heliokai, Taiwan, R.O.C.

Tel (886) 603-6343 Fax (886) 603-6342

Brand / Model : IBM 2.4GHz

Remark : E1

Tested by : SHELLY

EUT description :

Location: **RF Chamber3**

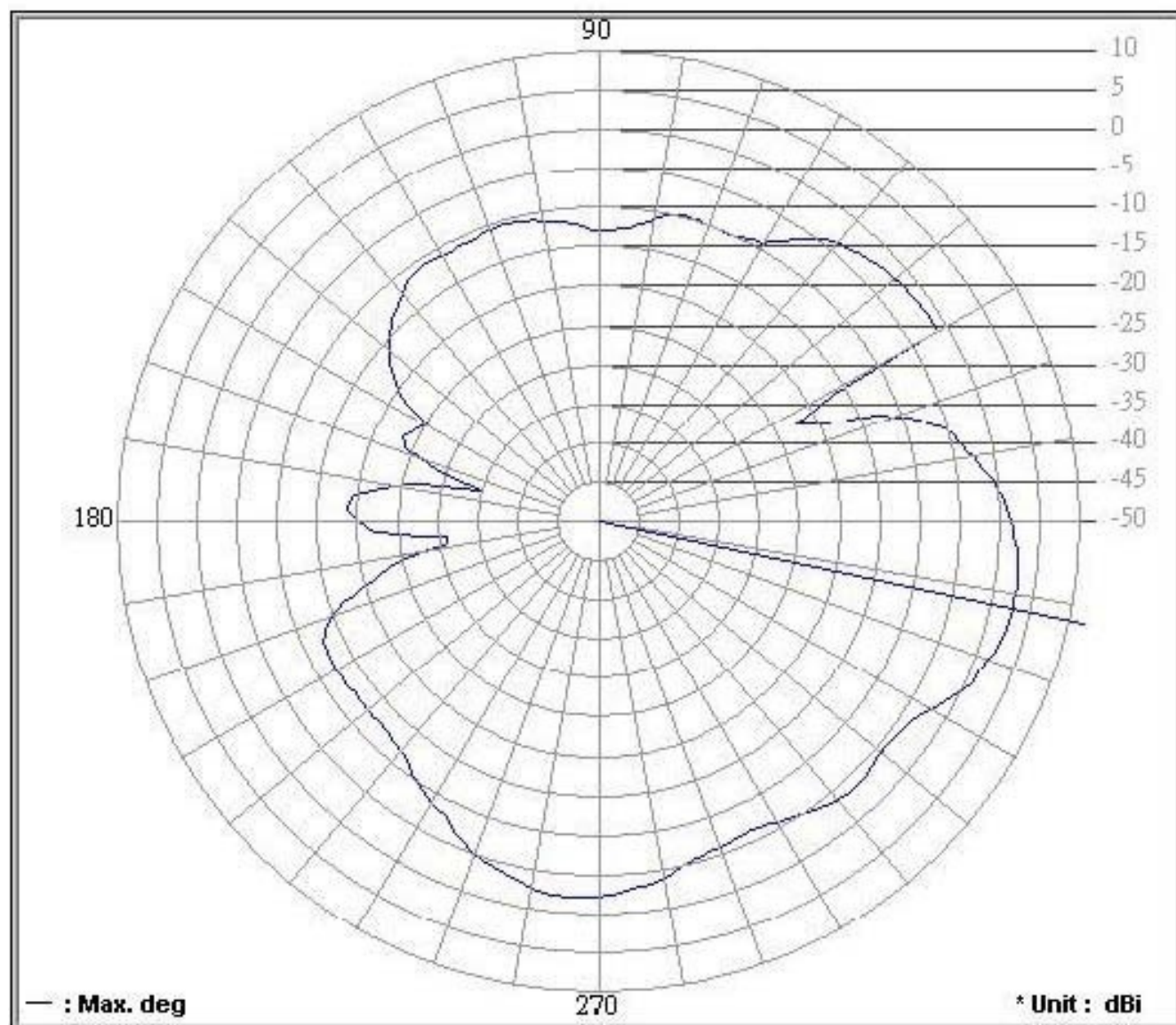
Date: **2018/8/16**

Time: **15:26:19**

Temperatuer (°C): **25**

Humidity (%): **75**

Approved by:



Frequency (MHz): **2479.65**

Antenna Polarity: **Horizontal**

Average Gain (dB): **-4.84**

Maximum Gain (dB):

Maximum Gain (degree): **348**

Minimum Gain (dB): **-34.80**

Minimum Gain (degree): **165**

C:\Antenna Pattern V5.0\Graph\0818\08180021.png

4. Result

| Center Frequency |   | Maximum Ant Gain |
|------------------|---|------------------|
| 2403.65 MHz      | H | 3.85 dBi         |
|                  | V | -1.54 dBi        |
| 2441.65 MHz      | H | 3.18 dBi         |
|                  | V | -2.58 dBi        |
| 2479.65 MHz      | H | 2.80 dBi         |
|                  | V | -3.47 dBi        |