

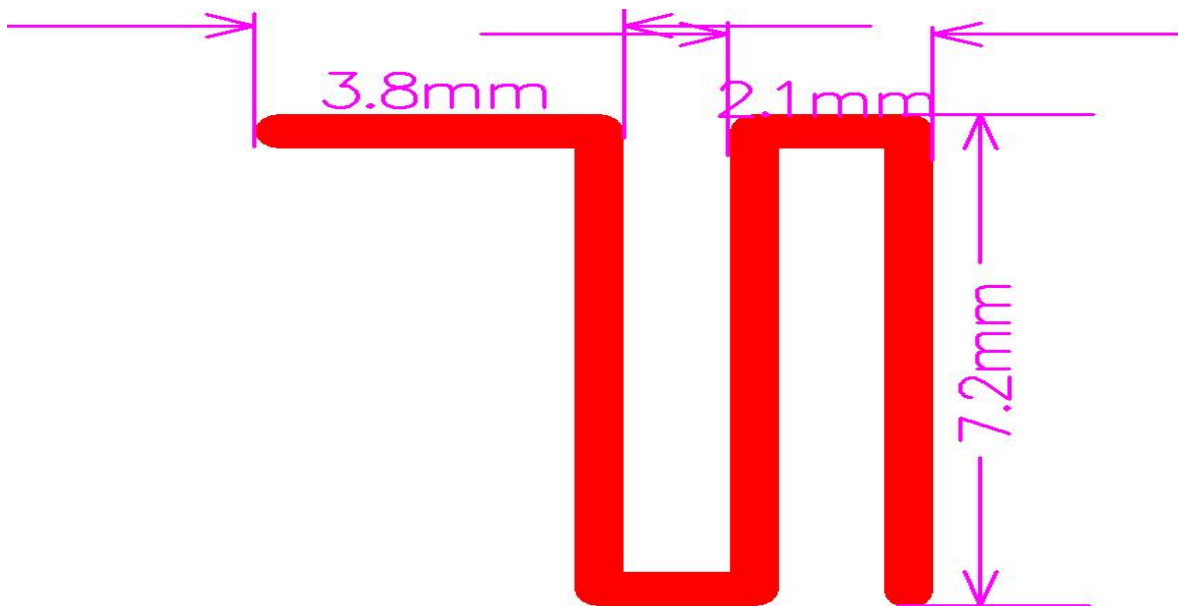
# Antenna Specification

## Specifications

### Summary

ITEM	SPEC.	
Model Name	ISM 2.4 GHz	
Center Frequency	2403.65 MHz 2441.65 MHz 2479.65 MHz	3.85 dBi 3.18 dBi 2.80 dBi
MAX. GAIN	3.85 dBi	
Polarization	Horizontal	
Azimuth Beam Pattern	Omni-directional	
Impedance	50 $\Omega$	
Antenna Length	13.1 mm	

### Antenna Photo & Length



# 1.Main antenna : 2403.65 MHz

## 1.1 Horizontal



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

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

Brand / Model : IBM 2.4GHz

Remark : E1

Tested by : SHELLY

EUT description :

Location: **RF Chamber3**

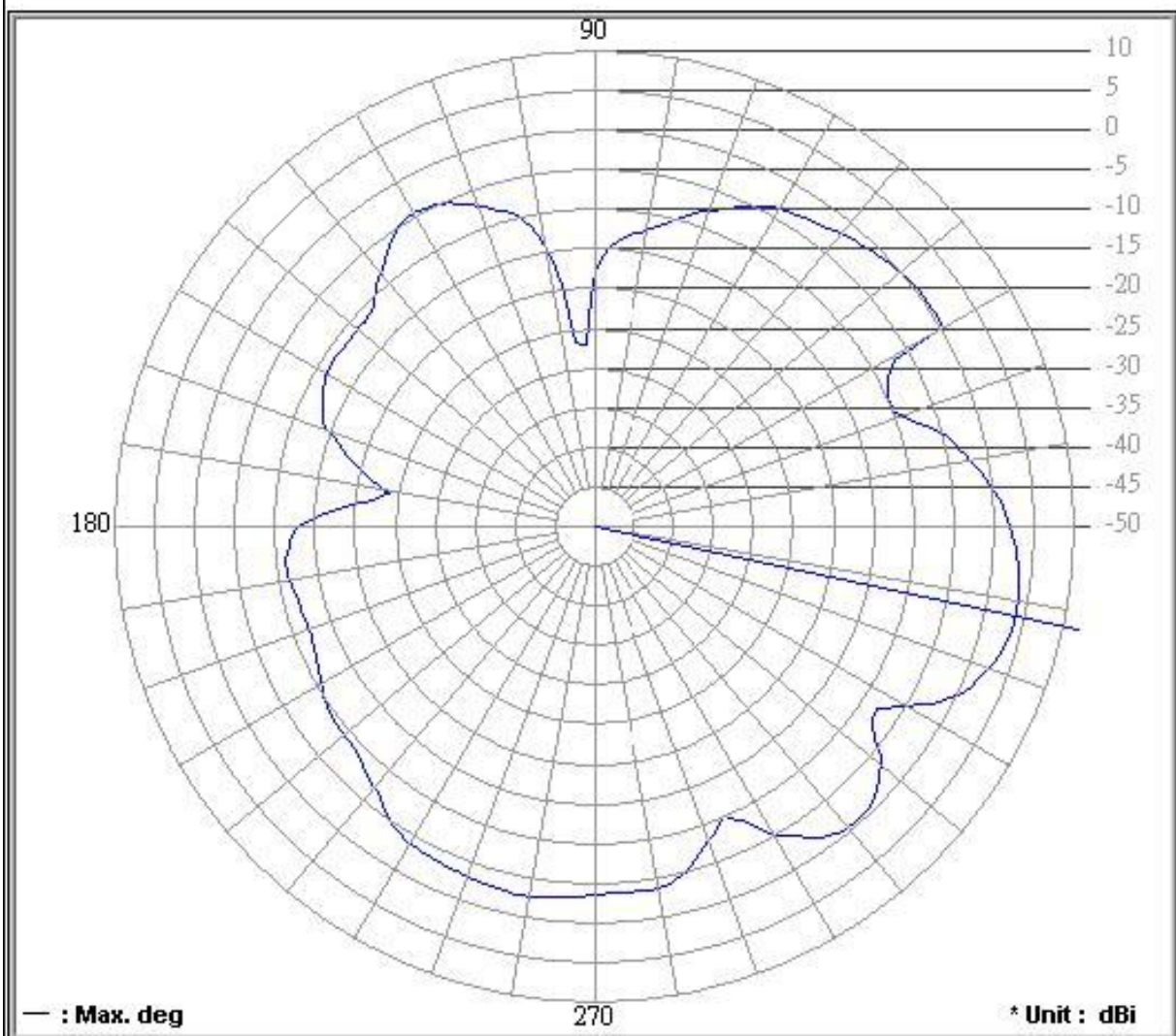
Date: **2018/8/16**

Time: **15:20:43**

Temperature (°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**

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## 1.2 Vertical



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

Brand / Model : IBM 2.4GHz

Remark : E1

Tested by : SHELLY

EUT description :

Location: **RF Chamber3**

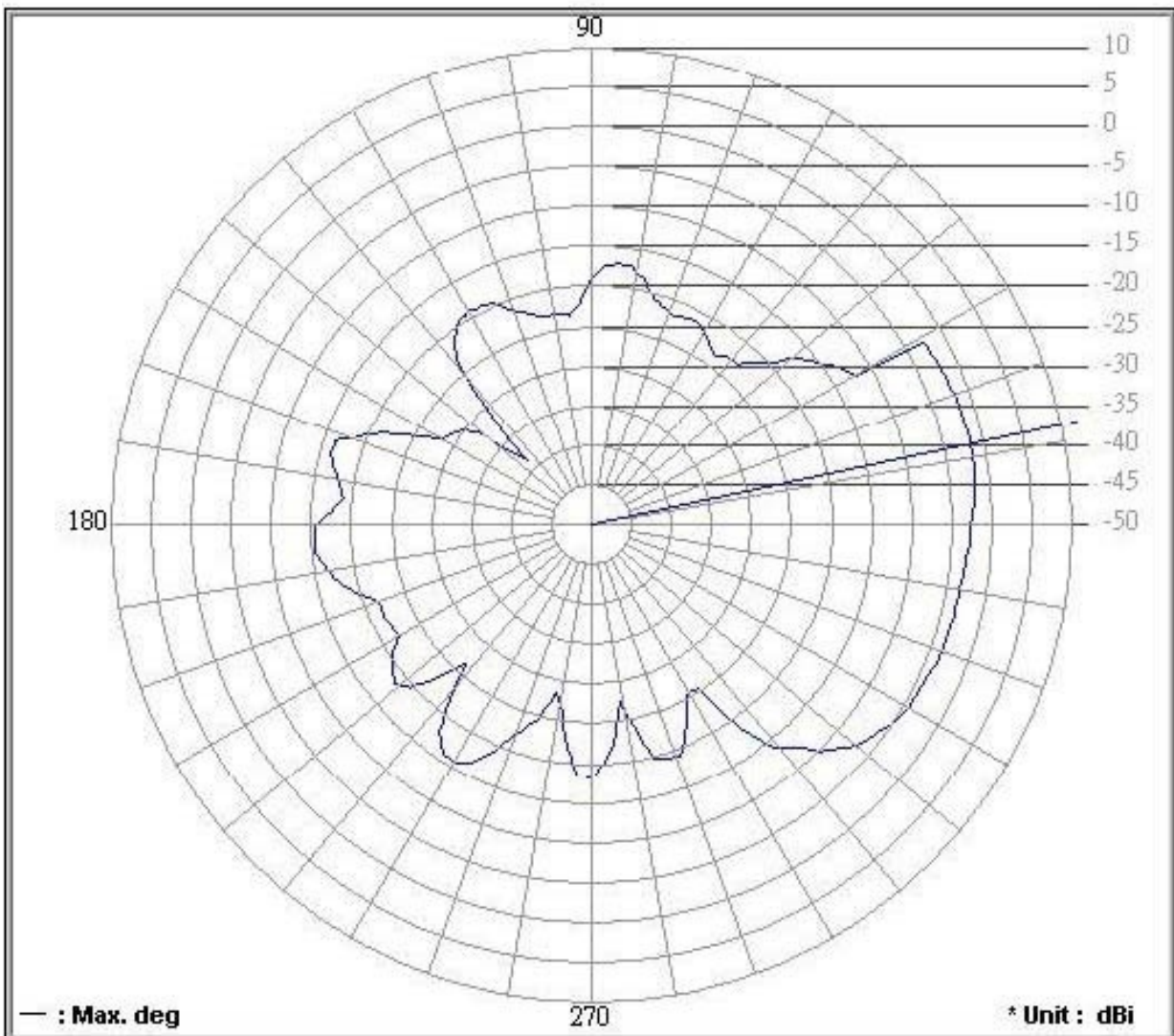
Date: **2018/8/16**

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**

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## 2.Main antenna : 2441.65 MHz

### 2.1 Horizontal



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Brand / Model : IBM 2.4GHz

Remark : E1

Tested by : SHELLY

EUT description :

Location: **RF Chamber3**

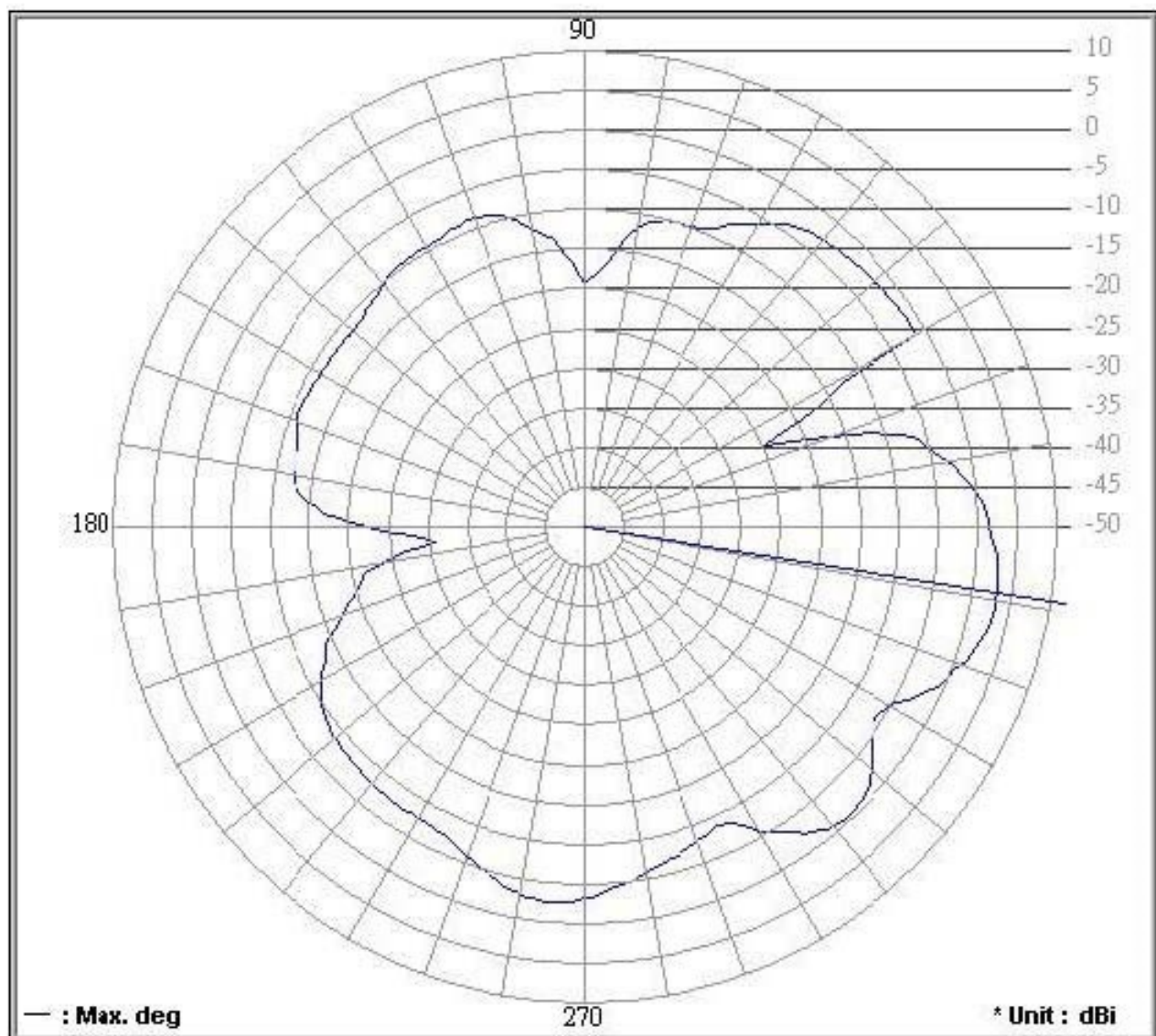
Date: **2018/8/16**

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): **186**

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

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## 2.2 Vertical



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Brand / Model : IBM 2.4GHz

Remark : E1

Tested by : SHELLY

EUT description :

Location: **RF Chamber3**

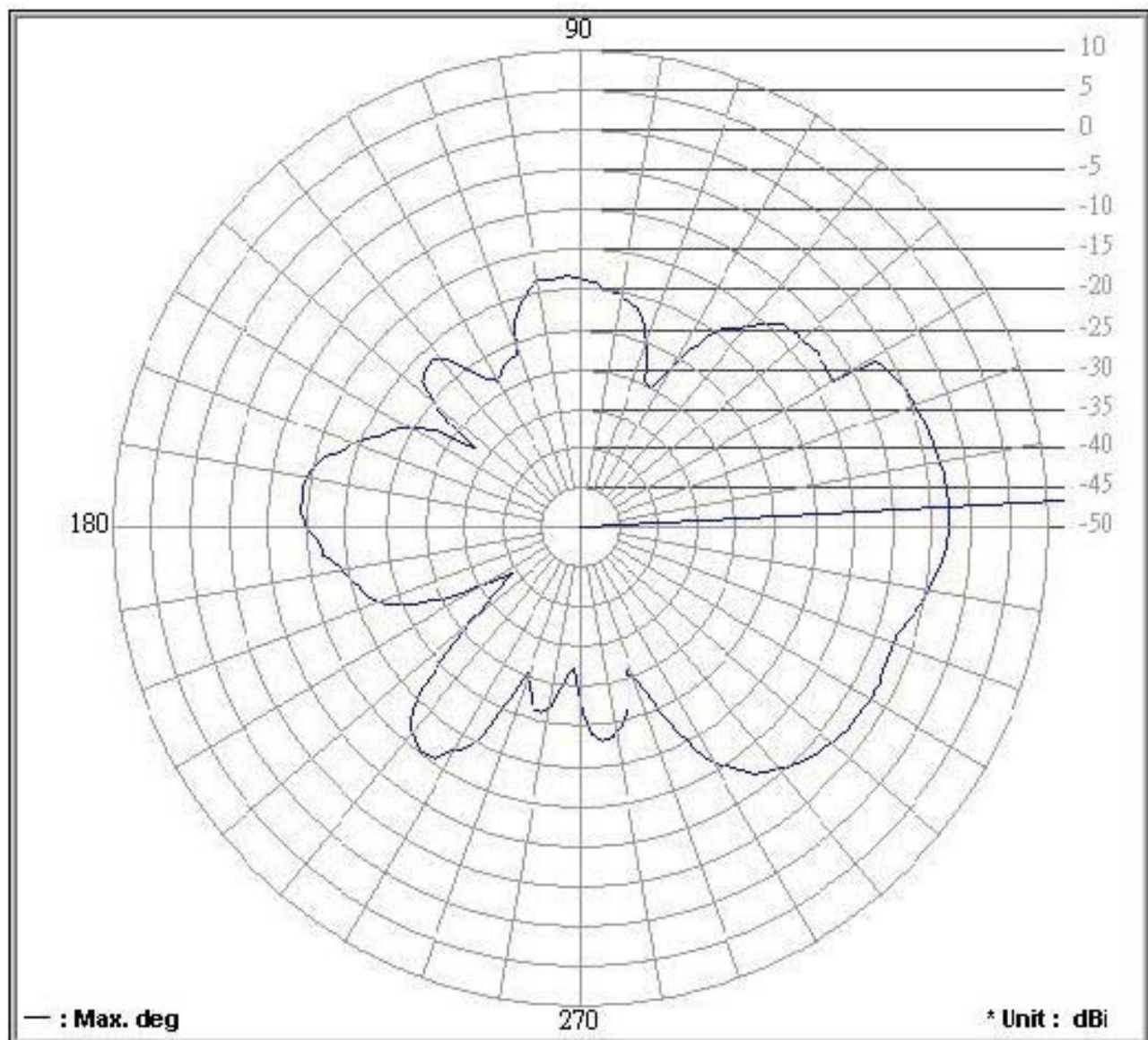
Date: **2018/8/16**

Time: **15:32:20**

Temperature (°C): **25**

Humidity (%): **75**

Approved by:



Frequency (MHz) : **2441.65**

Antenna Polarity : **Vertical**

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

Maximum Gain (dB) :

Maximum Gain (degree) : **3**

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

Minimum Gain (degree) : **213**

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### 3.Main antenna : 2479.65 MHz

#### 3.1 Horizontal



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Brand / Model : IBM 2.4GHz

Remark : E1

Tested by : SHELLY

EUT description :

Location: **RF Chamber3**

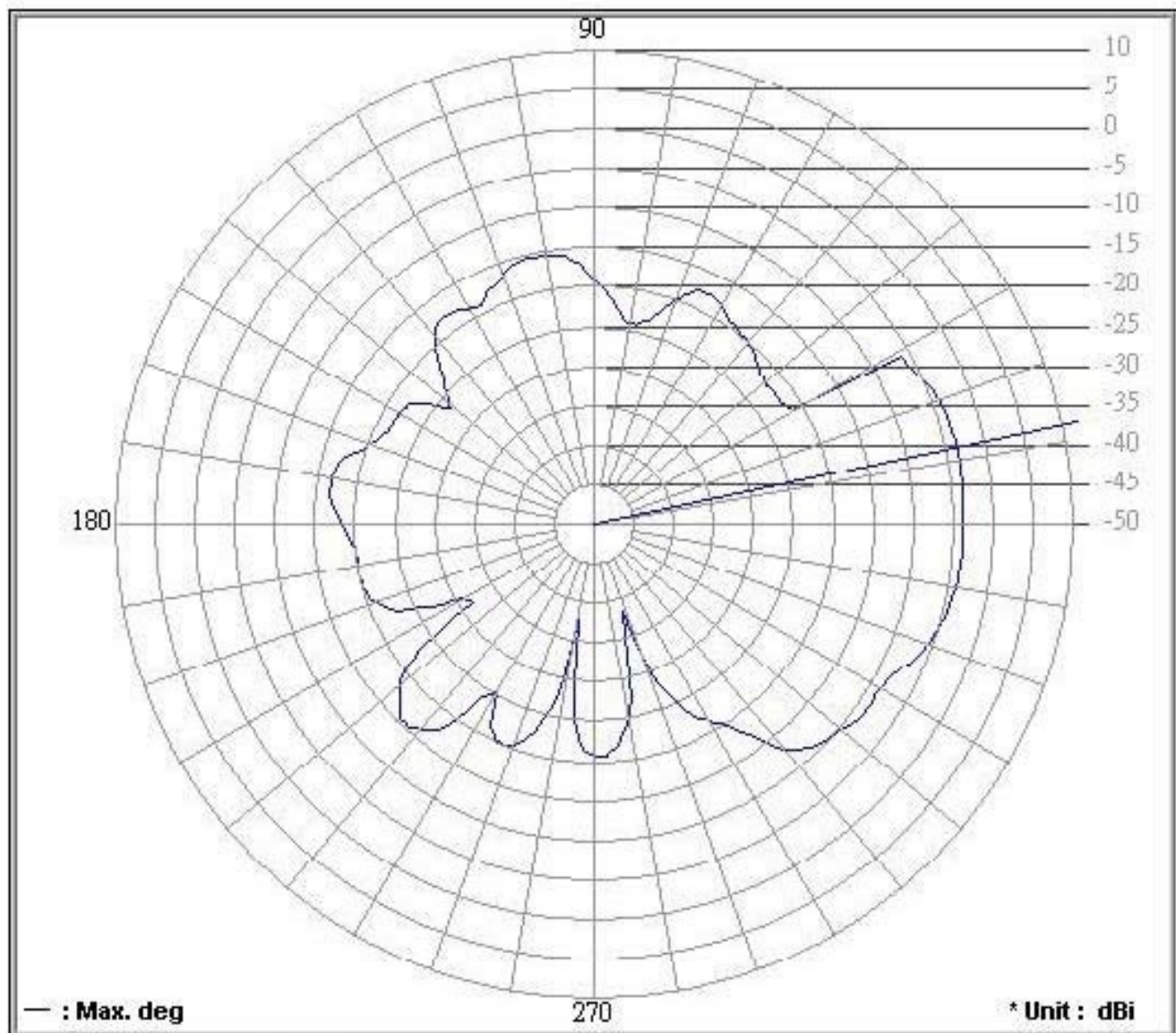
Date: **2018/8/16**

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



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

Brand / Model : IBM 2.4GHz

Remark : E1

Tested by : SHELLY

EUT description :

Location: **RF Chamber3**

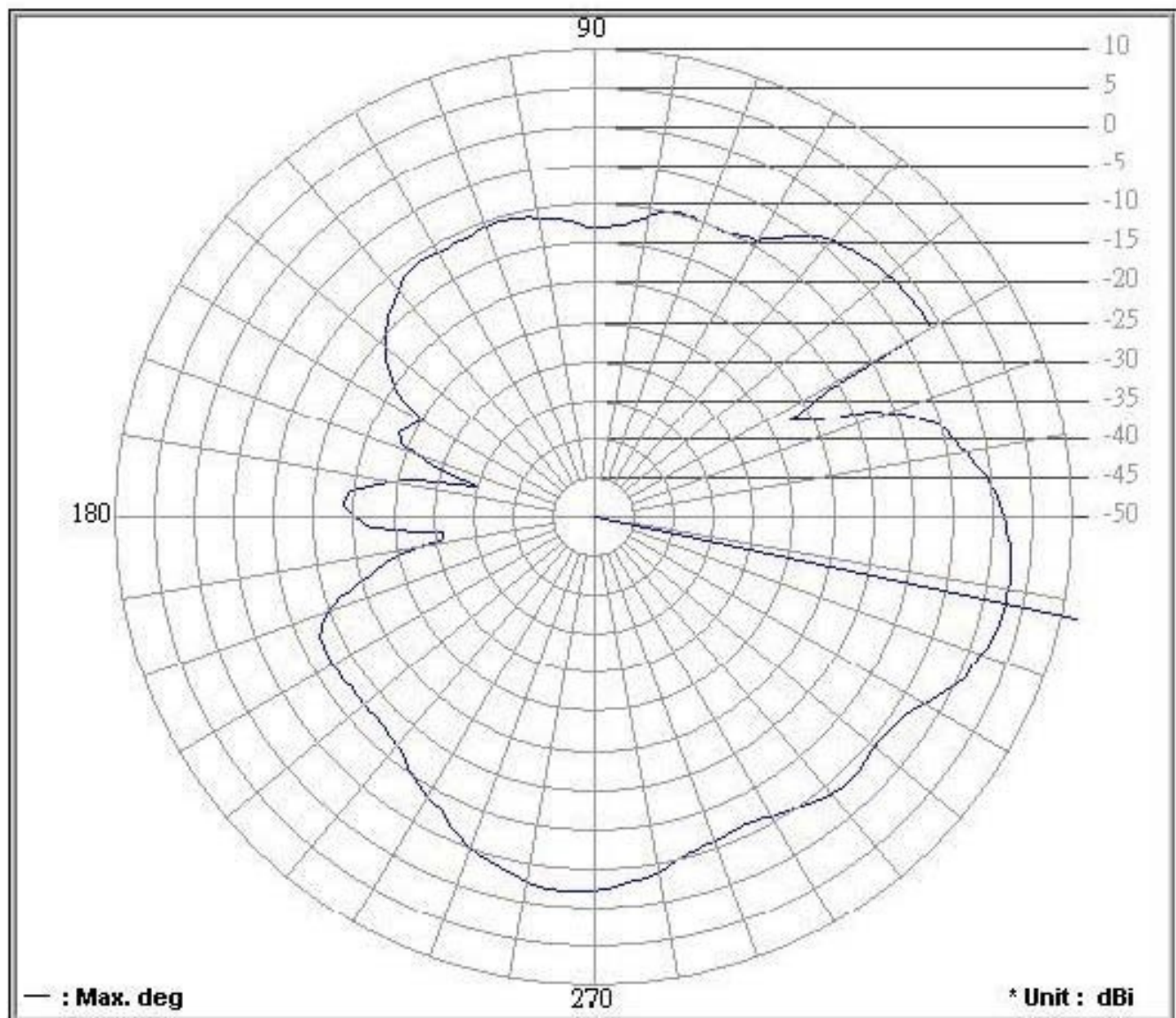
Date: **2018/8/16**

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**

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#### 4. Result

<b>Center Frequency</b>		<b>Maximum Ant Gain</b>
<b>2403.65 MHz</b>	<b>H</b>	<b>3.85 dBi</b>
	<b>V</b>	<b>-1.54 dBi</b>
<b>2441.65 MHz</b>	<b>H</b>	<b>3.18 dBi</b>
	<b>V</b>	<b>-2.58 dBi</b>
<b>2479.65 MHz</b>	<b>H</b>	<b>2.80 dBi</b>
	<b>V</b>	<b>-3.47 dBi</b>