

DATE : MAR. 26. 2006

CUSTOMER : First international Computer,.

# TEST REPORT

<b>MODEL</b>	GE2 (TOP)
<b>DESCRIPTION</b>	PIFA For Wireless LAN Antenna 2.4~2.5GHZ 148mm(Top, Black) & 1.13Φ
<b>SUPPLIER P/N</b>	K05004001201
<b>CUSTOMER P/N</b>	21-92472-01
<b>FILE P/N</b>	

FAVORTRON			CUSTOMER	
<b>Manager</b>	<b>Supervisor</b>	<b>Engineer</b>		
Nick	James	James		



**惠貿電子股份有限公司**  
**FAVORTRON CO., LTD**

台北縣新店市民權路 108-1 號 4F  
4F, No. 108-1, MinChzuan Rd., SHzindian City,  
Taipei HZsien 231, Taiwan. R.O.C

TEL: (02) 2218-2189  
FAX: (02) 2218-5420  
[URL:www.fvc.com.tw](http://www.fvc.com.tw)

# 1. Antenna Spec. For WLAN

## 1. 802.11b Spec.

- a. Frequency range : 2.4 ~ 2.5GHz (Nominal)
- b. Impedance : 50Ω
- c. LCD Panel : Open ( 100° ) / Close ( 0° ).
- d. System Plane : XY plane
- e. VSWR : ≤ 2 ( Main & Aux. Antenna )
- f. Return Loss : ≤ -10dB ( Main & Aux. Antenna )
- g. Band Width : ≥ 130MHz ( 2450MHz±65MHz at least ).
- h. Diversity Sum : ≥ -2.5dBi
- i. Any 30° angle range can't has null depth.
- j. Average gain & Peak gain

Antenna	Peak Gain (dBi)			Average Gain (dBi)		
	Frequency			Frequency		
	2.4GHz	2.45GHz	2.5GHz	2.4GHz	2.45GHz	2.5GHz
Main	≤ 3	≤ 3	≤ 3	≥ -4	≥ -4	≥ -4
Auxiliary	≤ 3	≤ 3	≤ 3	≥ -4.5	≥ -4.5	≥ -4.5

## 2. 802.11a Spec.

- a. Frequency range : (Nominal)
- b. Impedance : 50Ω
- c. LCD Panel : Open ( 100° ) / Close ( 0° ).
- d. System Plane : XY plane
- e. VSWR : ≤ 2 ( Main & Aux. Antenna )
- f. Return Loss : ≤ -10dB ( Main & Aux. Antenna )
- g. Band Width : ≥ 250MHz ( 5250MHz±125MHz at least ).
- h. Diversity Sum : ≥ -3.5dBi
- i. Any 30° angle range can't has null depth.
- j. Average gain & Peak gain

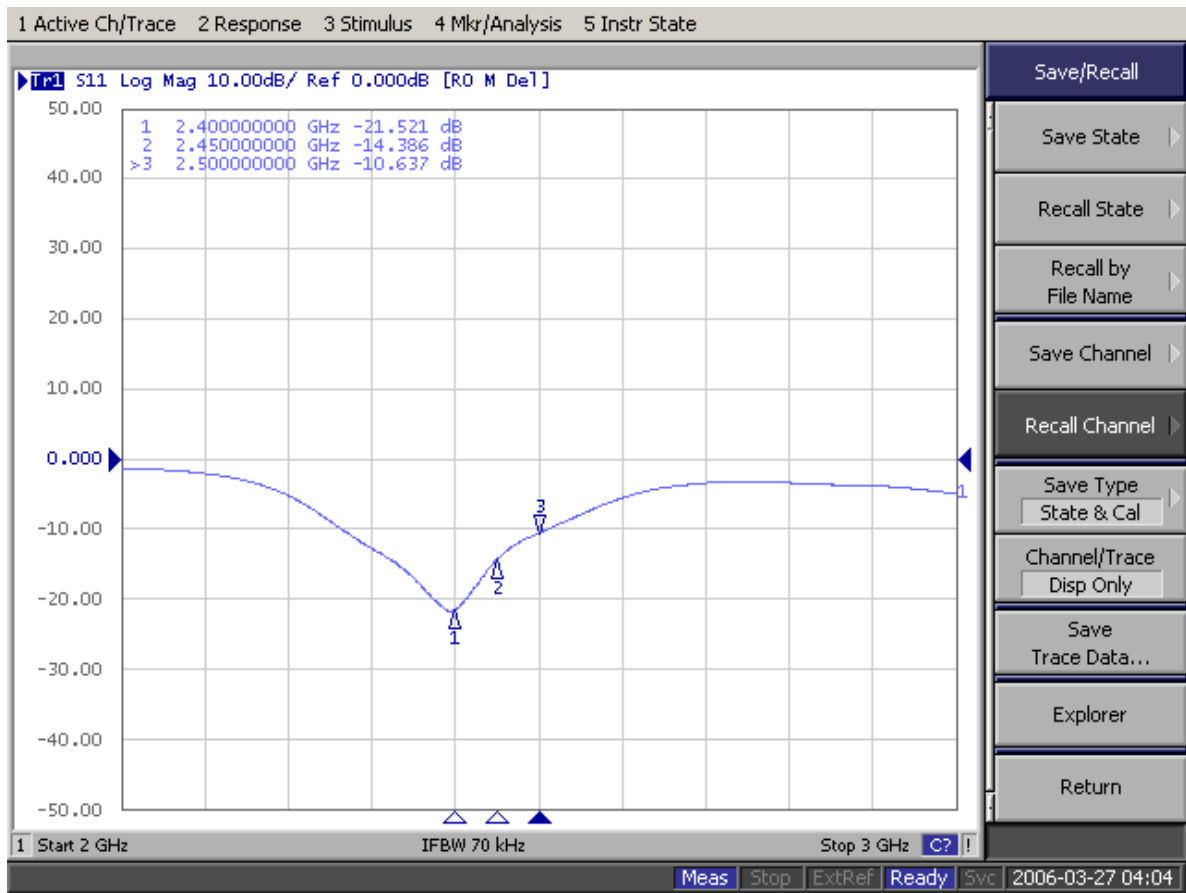
Antenna	Peak Gain (dBi)			Average Gain (dBi)		
	Frequency			Frequency		
	5.15GHz	5.25GHz	5.35GHz	5.15GHz	5.25GHz	5.35GHz
Main						
Auxiliary						

# 2. DESCRIPTION

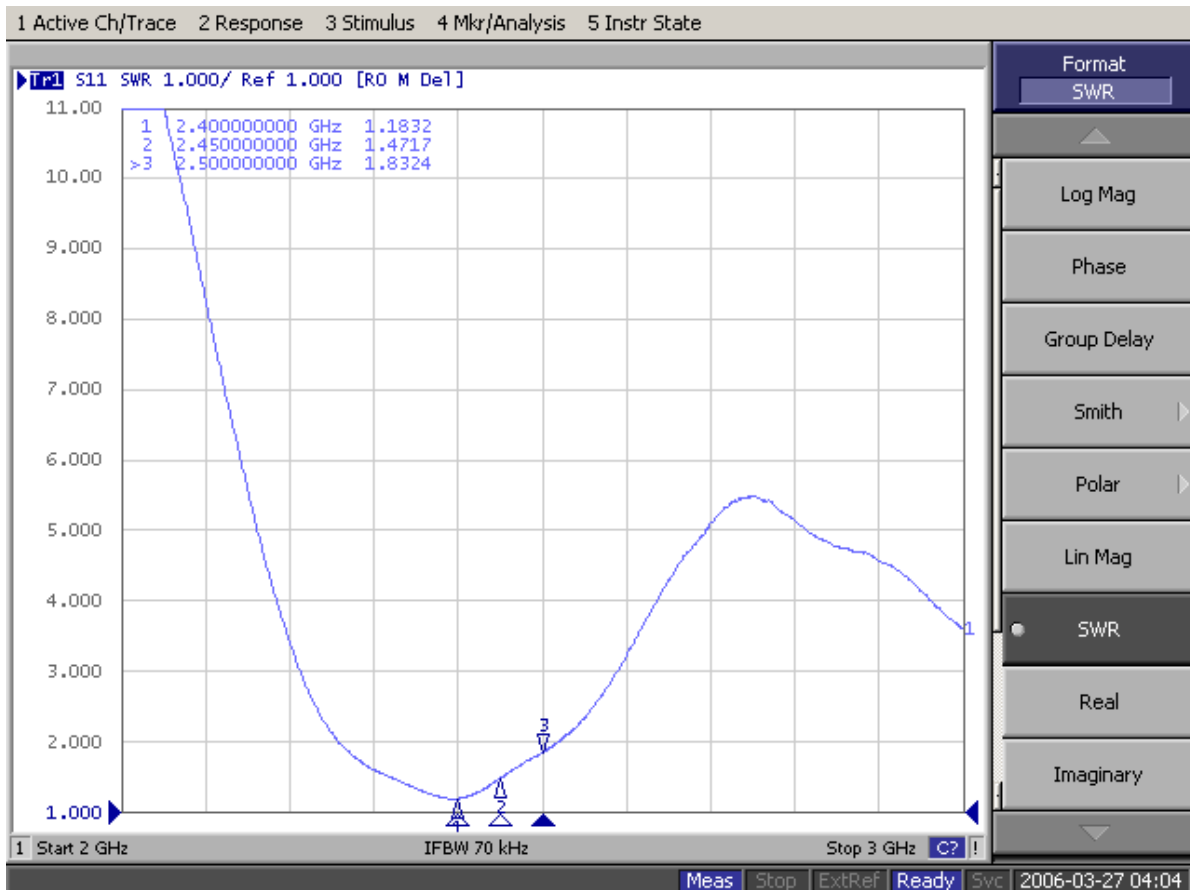
- a. FIC Project Name & FIC P/N : GE2(TOP)
- & Frequency : **24~2.5GHz**
- b. Vendor's antenna P/N : **K05004001201**
- c. Antenna P/N & type & material
- d. Coaxial cable length & diameter(Φ) : 148mm(Right, Black) & 1.13Φ
- & Cable P/N
- & Vendor
- e. Connector model no. & vendor

### 3. Bluetooth TOP/Ant

#### 2.4~2.5GHZ & 5.15~5.875GHZ / Return Loss



#### 2.4~2.5GHZ & 5.15~5.875GHZ / VSWR



## 4. Gain & Pattern –Bluetooth TOP/Ant

### 5. a. 2.4GHz



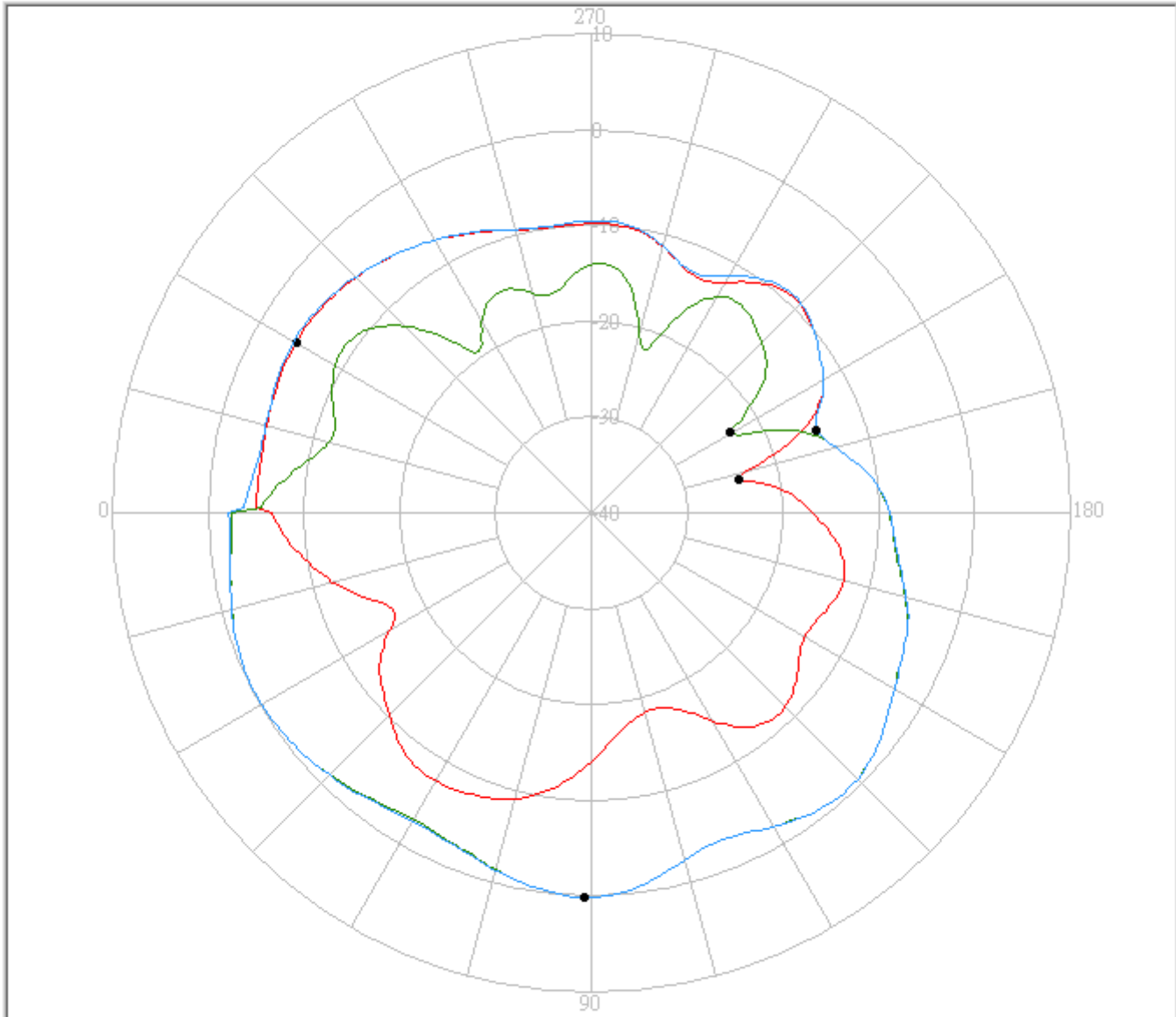
eService for Customer Satisfaction

**FAVORTRON**

**FAVORTRON Co. Ltd**

**Antenna Pattern Measurement**

4F, No. 108-1, Min Chuan Rd., Hsin-Tien City, Taipei, Taiwan, R.O.C. Tel:886-2-2218-2189,  
Fax:886-2-2218-5760



Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	TO	2400.00	-4.43 / 330.00	-24.18 / 193.00	-9.47	Ver.	2006/3/22
2	GE2	TOP	2400.00	0.12 / 89.00	-23.19 / 210.00	-4.56	Hor.	2006/3/22
3	GE2	TOP	2400.00	0.13 / 89.00	-14.97 / 200.00	-3.85	V+H	2006/3/22

## b. 2.45GHz



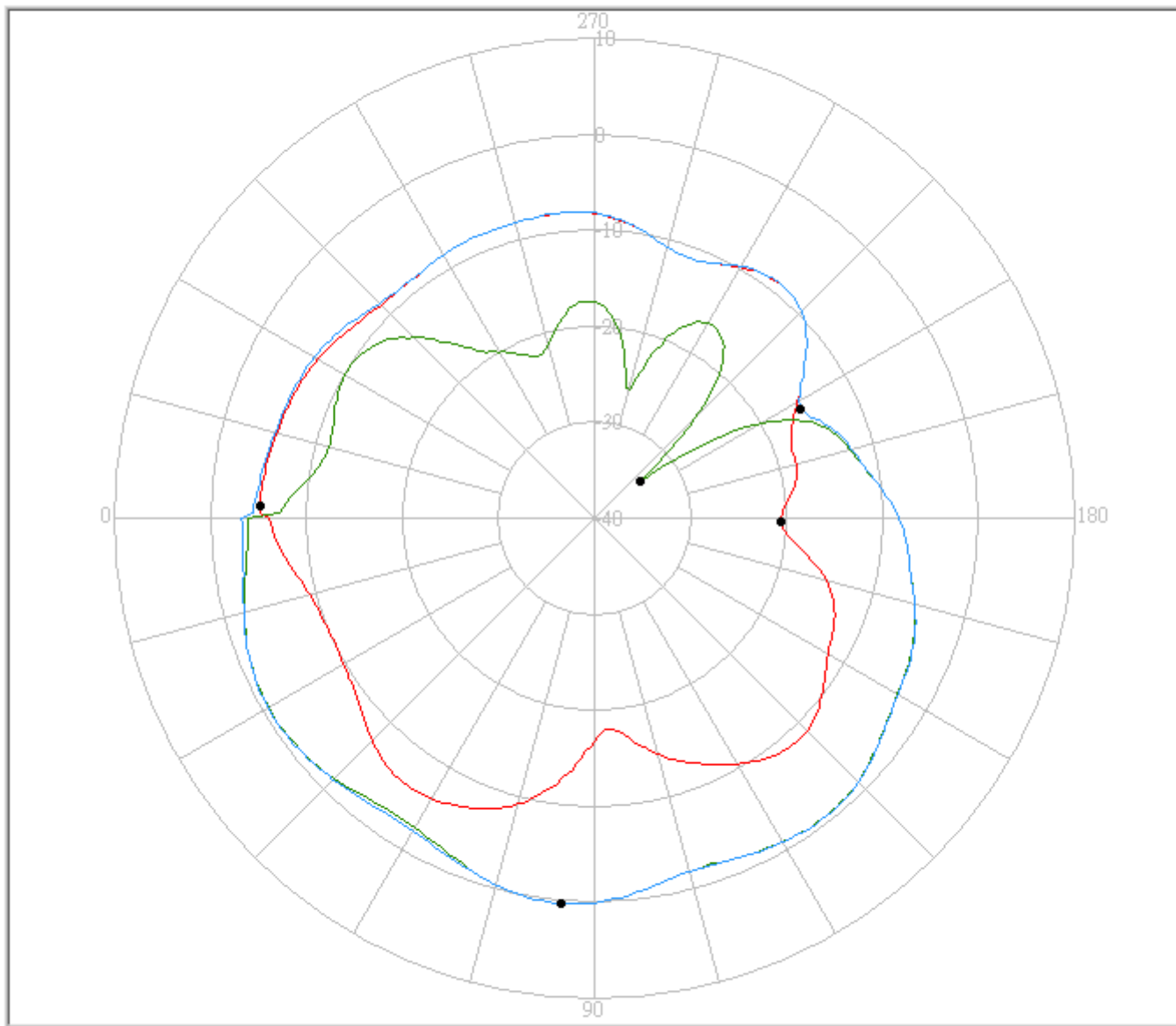
eService for Customer Satisfaction

**FAVORTRON**

# FAVORTRON Co. Ltd

## Antenna Pattern Measurement

4F, No. 108-1, Min Chuan Rd., Hsin-Tien City, Taipei, Taiwan, R.O.C. Tel:886-2-2218-2189,  
Fax:886-2-2218-5760



Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	TOP	2450.00	-5.15 / 358.00	-20.50 / 179.00	-9.30	Ver.	2006/3/22
2	GE2	TOP	2450.00	0.27 / 85.00	-33.87 / 219.00	-4.64	Hor.	2006/3/22
3	GE2	TOP	2450.00	0.27 / 85.00	-15.71 / 208.00	-3.96	V+H	2006/3/22

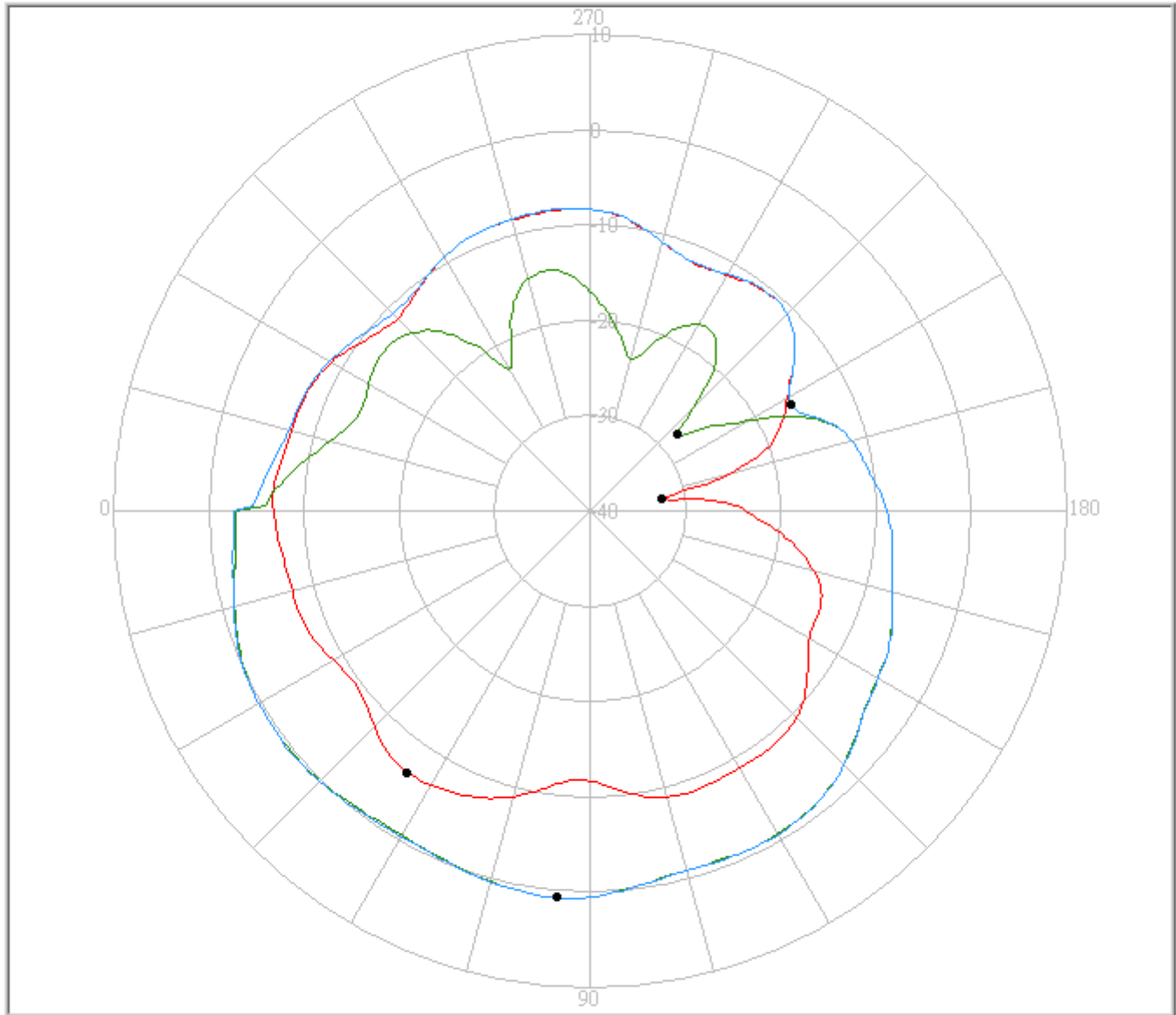
c. 2.5GHz



# FAVORTRON Co. Ltd

## Antenna Pattern Measurement

4F, No. 108-1, Min Chuan Rd., Hsin-Tien City, Taipei, Taiwan, R.O.C. Tel:886-2-2218-2189,  
Fax:886-2-2218-5760



Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	TOP	2500.00	-6.54 / 55.00	-32.29 / 190.00	-9.67	Ver.	2006/3/22
2	GE2	TOP	2500.00	0.71 / 85.00	-27.75 / 221.00	-4.09	Hor.	2006/3/22
3	GE2	TOP	2500.00	0.72 / 85.00	-16.20 / 208.00	-3.64	V+H	2006/3/22