

DATE : MAR. 26. 2006

CUSTOMER : First international Computer, Inc.

TEST REPORT

MODEL	GE2 (AUX)
DESCRIPTION	PIFA For Wireless LAN Antenna 2.4~2.5GHZ / 5.15~5.875GHZ 75mm(Left, Gray)
SUPPLIER P/N	K05004001101
CUSTOMER P/N	21-92471-01
FILE P/N	

FAVORTRON			CUSTOMER	
Manager	Supervisor	Engineer		
Nick	James	James		



惠貿電子股份有限公司
FAVORTRON CO., LTD

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[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 : 5.15 ~ 5.35GHz (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

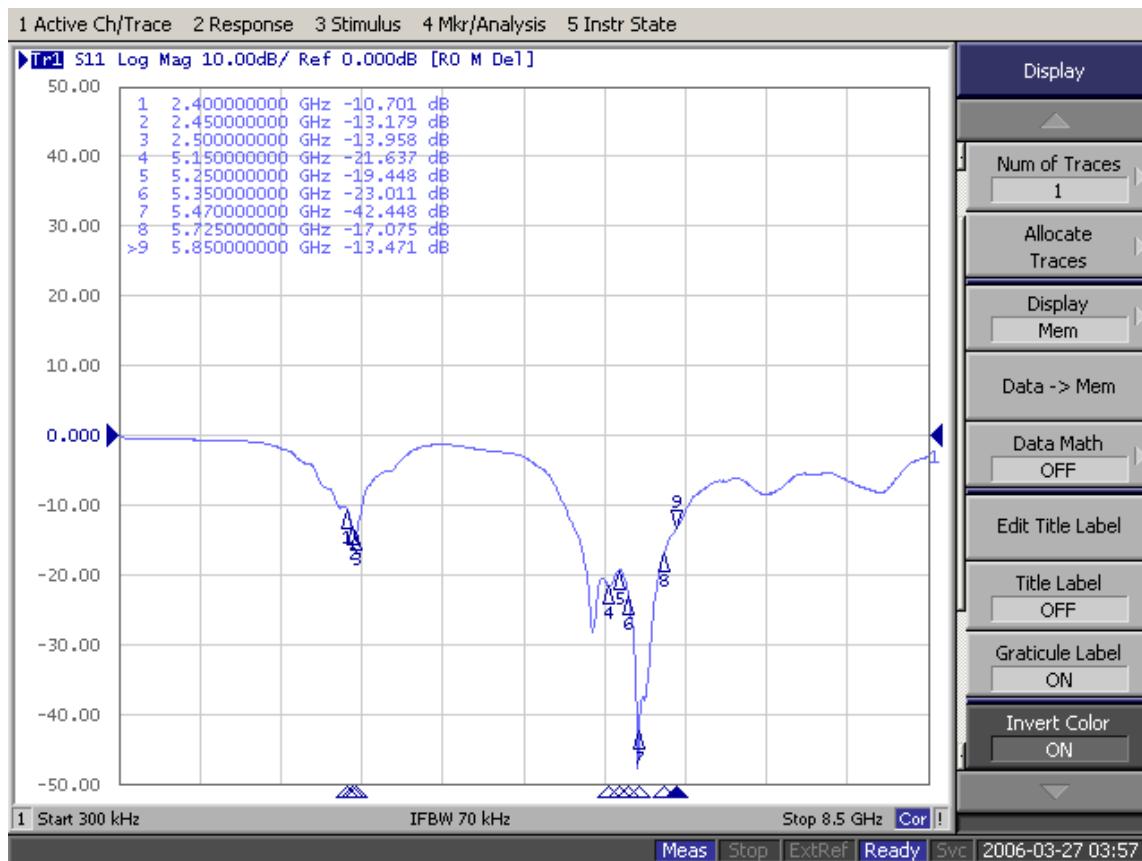
Antenna	Peak Gain (dBi)			Average Gain (dBi)		
	Frequency			Frequency		
	5.15GHz	5.25GHz	5.35GHz	5.15GHz	5.25GHz	5.35GHz
Main	≤ 6	≤ 6	≤ 6	≥ -4.8	≥ -4.8	≥ -4.8
Auxiliary	≤ 6	≤ 6	≤ 6	≥ -4.8	≥ -4.8	≥ -4.8

2. DESCRIPTION

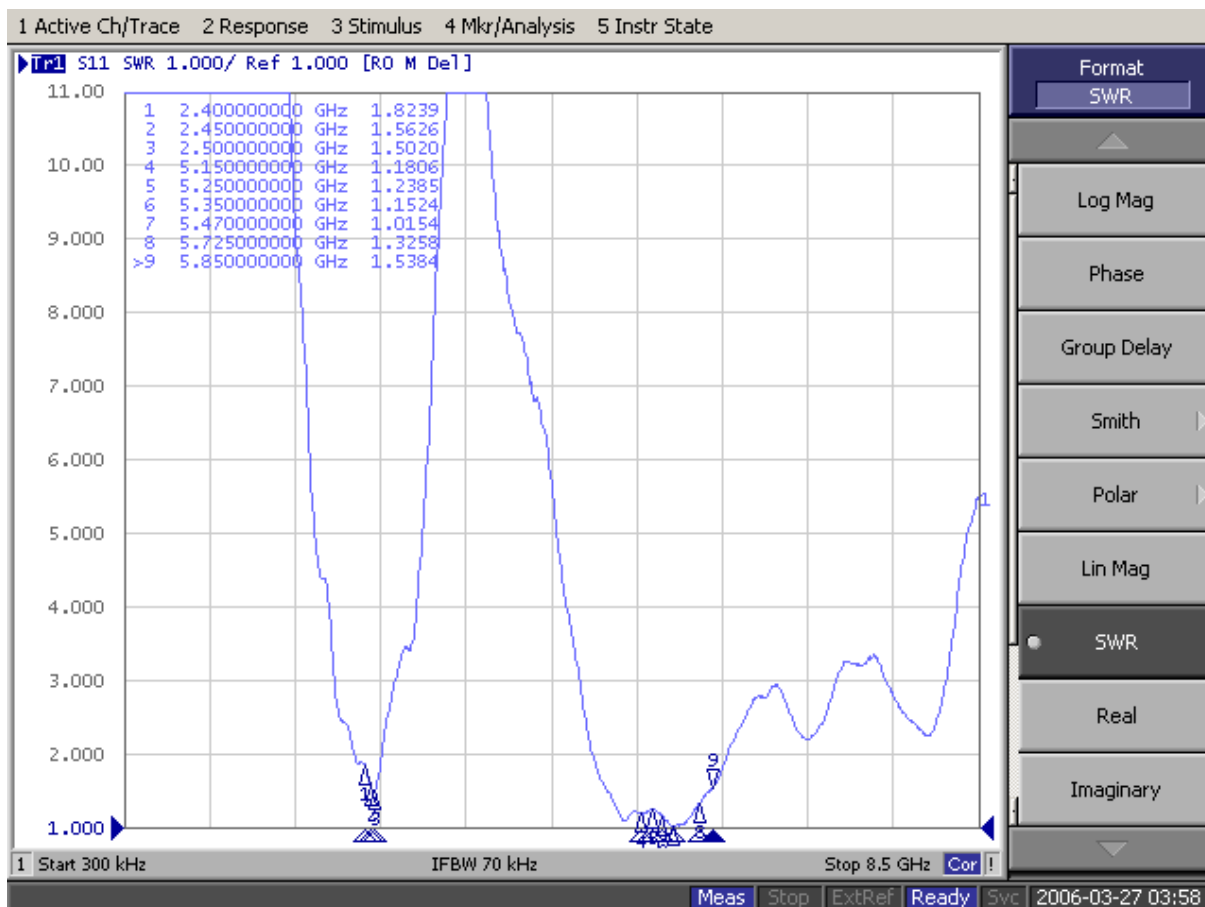
- a. FIC Project Name & FIC P/N : GE2(AUX)
- & Frequency : **2.4~2.5GHZ / 5.15~5.875GHZ**
- b. Vendor's antenna P/N : K05004001101
- c. Antenna P/N & type & material : **M02007012001**
- d. Coaxial cable length & diameter(Φ) : 75mm(Left, Gray) / & 1.13Φ
- & Cable P/N
- & Vendor
- e. Connector model no. & vendor

3. WLAN Main /Ant.(AUX)

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



2.4~2.5GHZ & 5.15~5.875GHZ / VSWR



4. Gain & Pattern – W/L / AUX Ant.

a. 2.4GHz



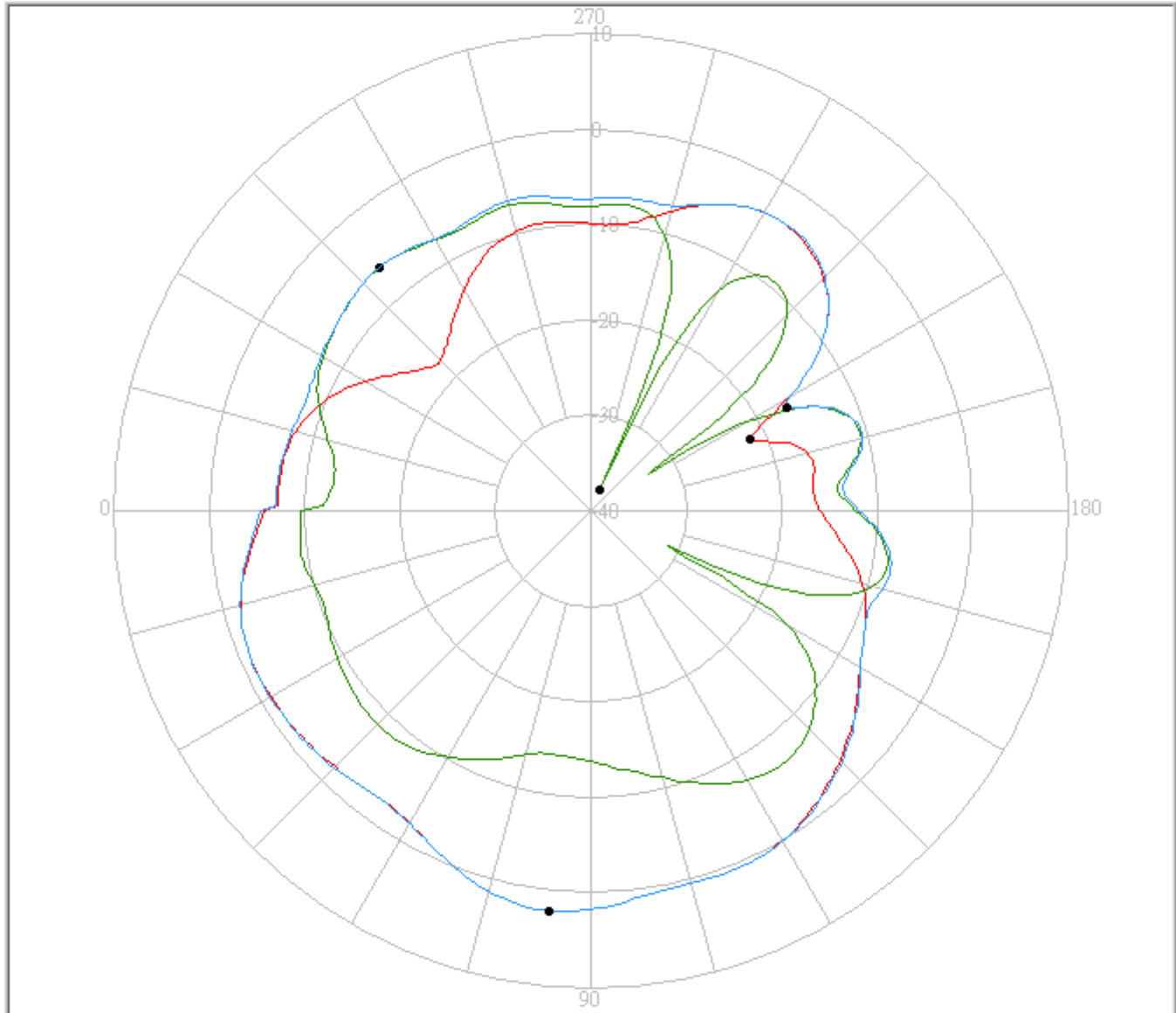
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Antenna Pattern Measurement

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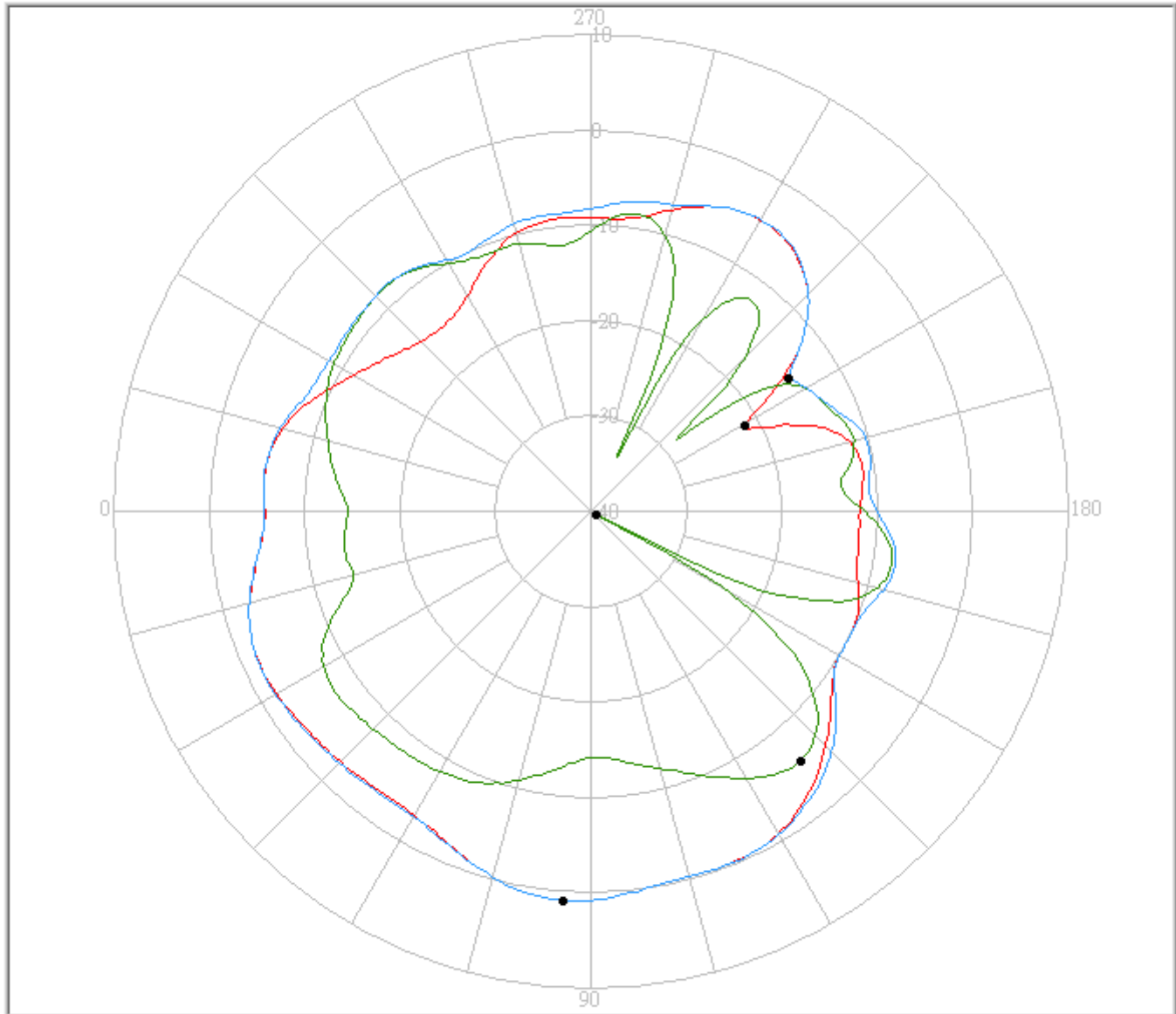
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	AUX	2400.00	2.13 / 84.00	-21.72 / 204.00	-3.82	Ver.	2006/3/24
2	GE2	AUX	2400.00	-6.19 / 311.00	-37.68 / 246.00	-9.67	Hor.	2006/3/24
3	GE2	AUX	2400.00	2.13 / 84.00	-16.83 / 208.00	-3.39	V+H	2006/3/24

b. 2.45GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	AUX	2450.00	0.88 / 86.00	-21.67 / 209.00	-4.67	Ver.	2006/3/24
2	GE2	AUX	2450.00	-5.87 / 130.00	-39.36 / 152.00	-10.40	Hor.	2006/3/24
3	GE2	AUX	2450.00	0.88 / 86.00	-15.04 / 214.00	-4.32	V+H	2006/3/24

c. 2.5GHz



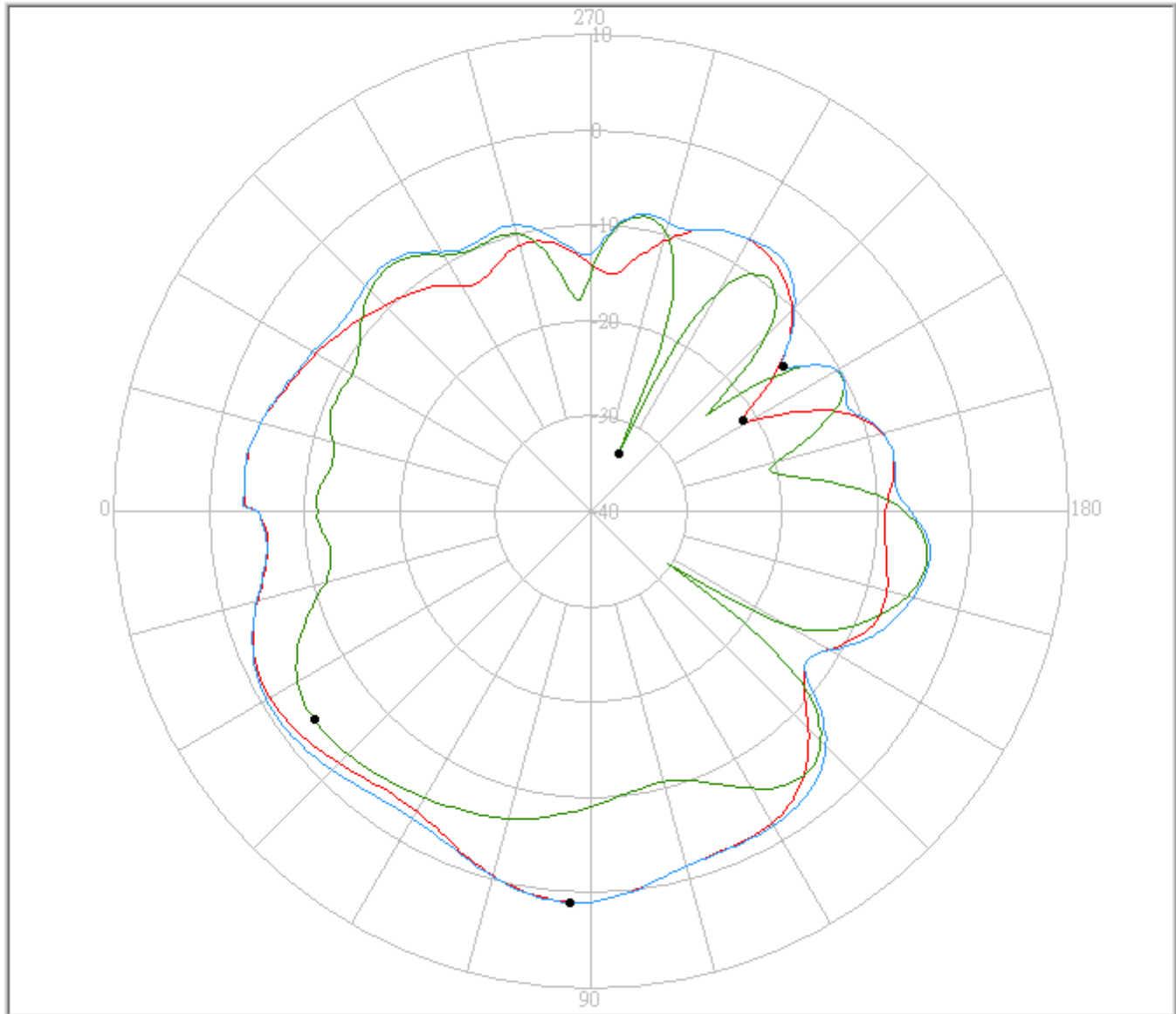
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	AUX	2500.00	1.04 / 87.00	-21.51 / 211.00	-4.83	Ver.	2006/3/24
2	GE2	AUX	2500.00	-3.67 / 37.00	-33.25 / 245.00	-8.40	Hor.	2006/3/24
3	GE2	AUX	2500.00	1.07 / 87.00	-14.76 / 217.00	-4.21	V+H	2006/3/24

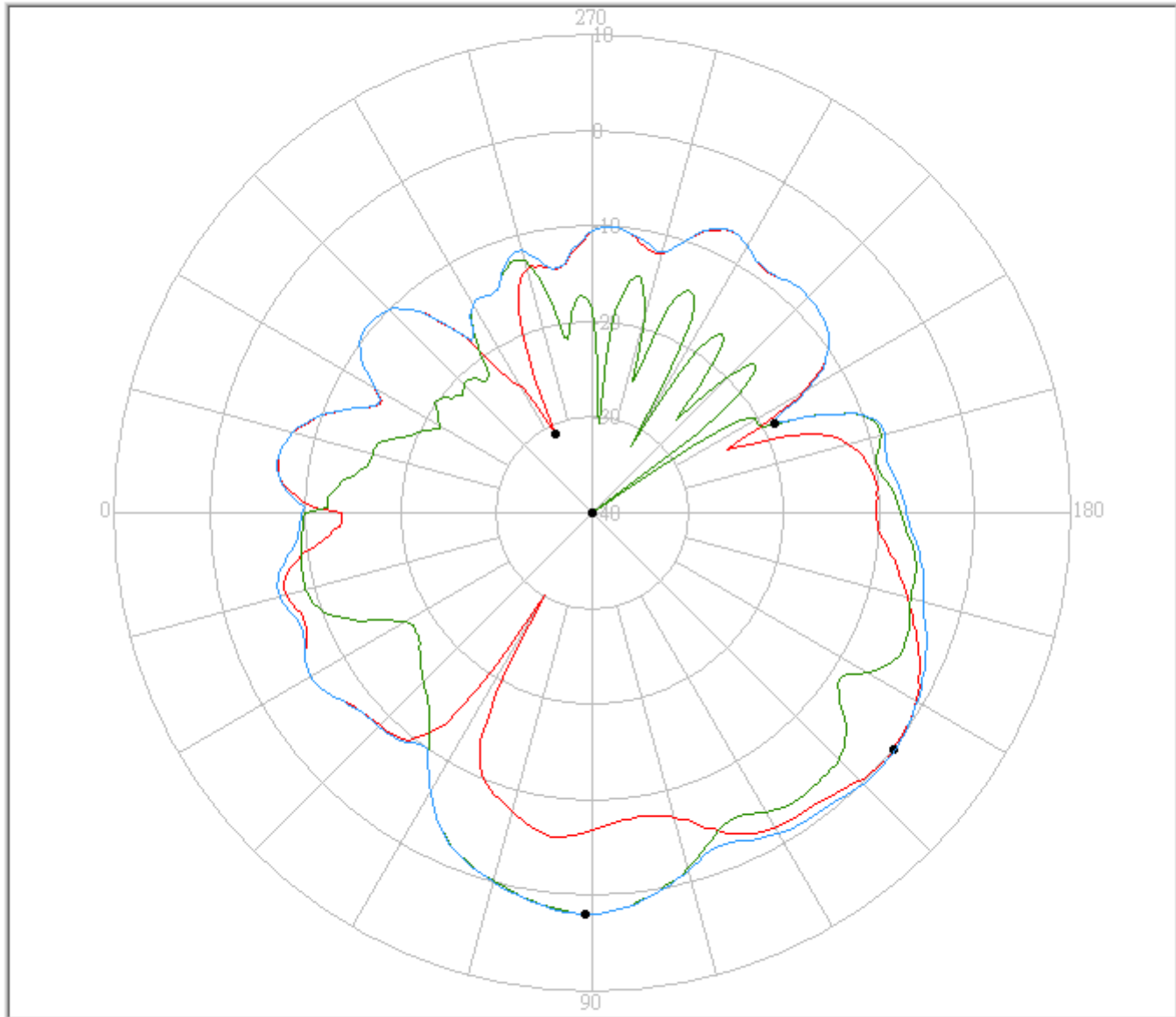
d. 5.15GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	AUX	5150.00	0.06 / 142.00	-30.90 / 295.00	-6.94	Ver.	2006/3/24
2	GE2	AUX	5150.00	1.90 / 89.00	-40.22 / 216.00	-6.42	Hor.	2006/3/24
3	GE2	AUX	5150.00	1.94 / 89.00	-18.72 / 206.00	-4.55	V+H	2006/3/24

e. 5.25GHz



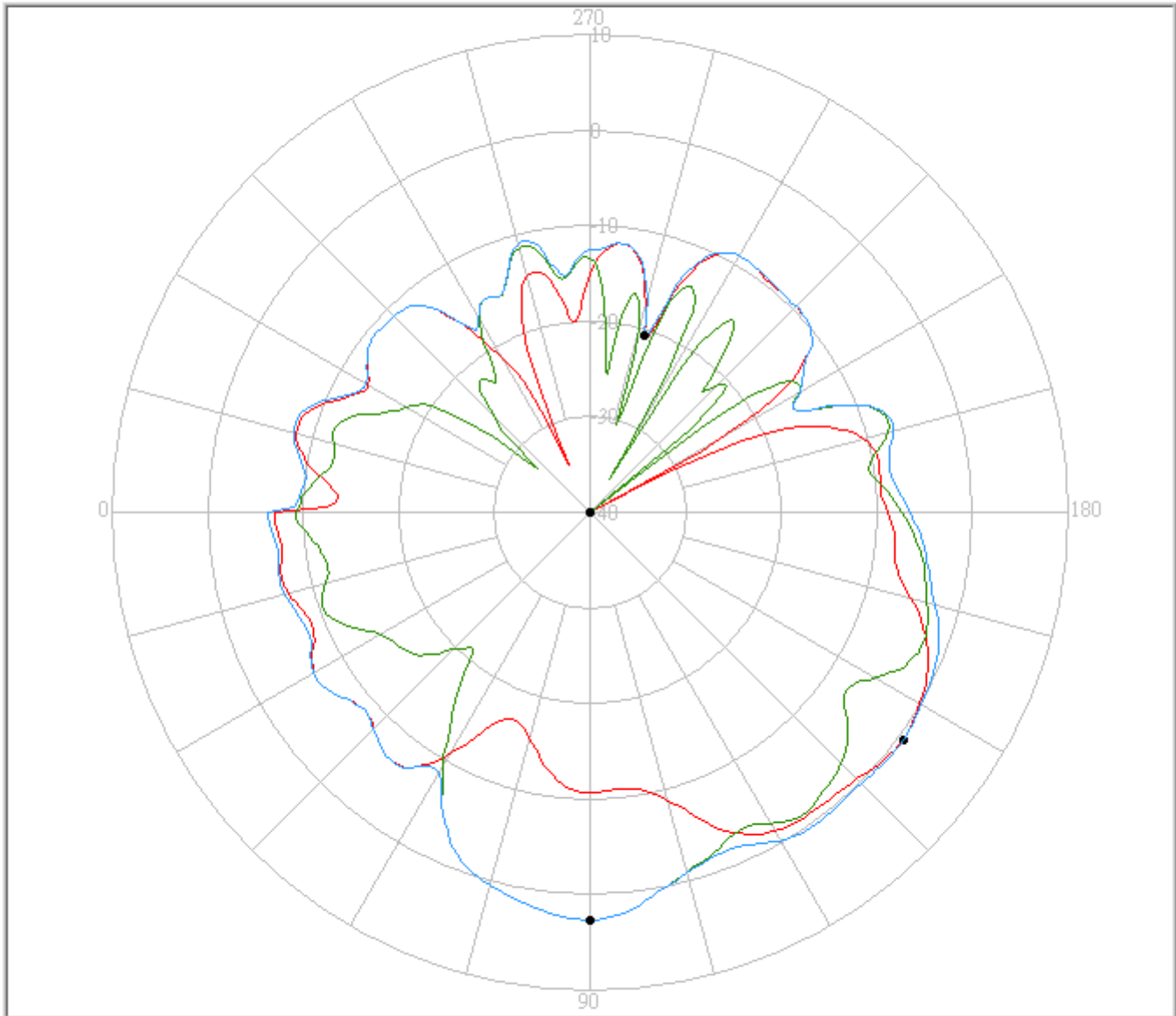
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	AUX	5250.00	0.45 / 144.00	-41.13 / 208.00	-7.04	Ver.	2006/3/24
2	GE2	AUX	5250.00	2.64 / 90.00	-43.06 / 219.00	-5.69	Hor.	2006/3/24
3	GE2	AUX	5250.00	2.65 / 90.00	-20.71 / 253.00	-4.13	V+H	2006/3/24

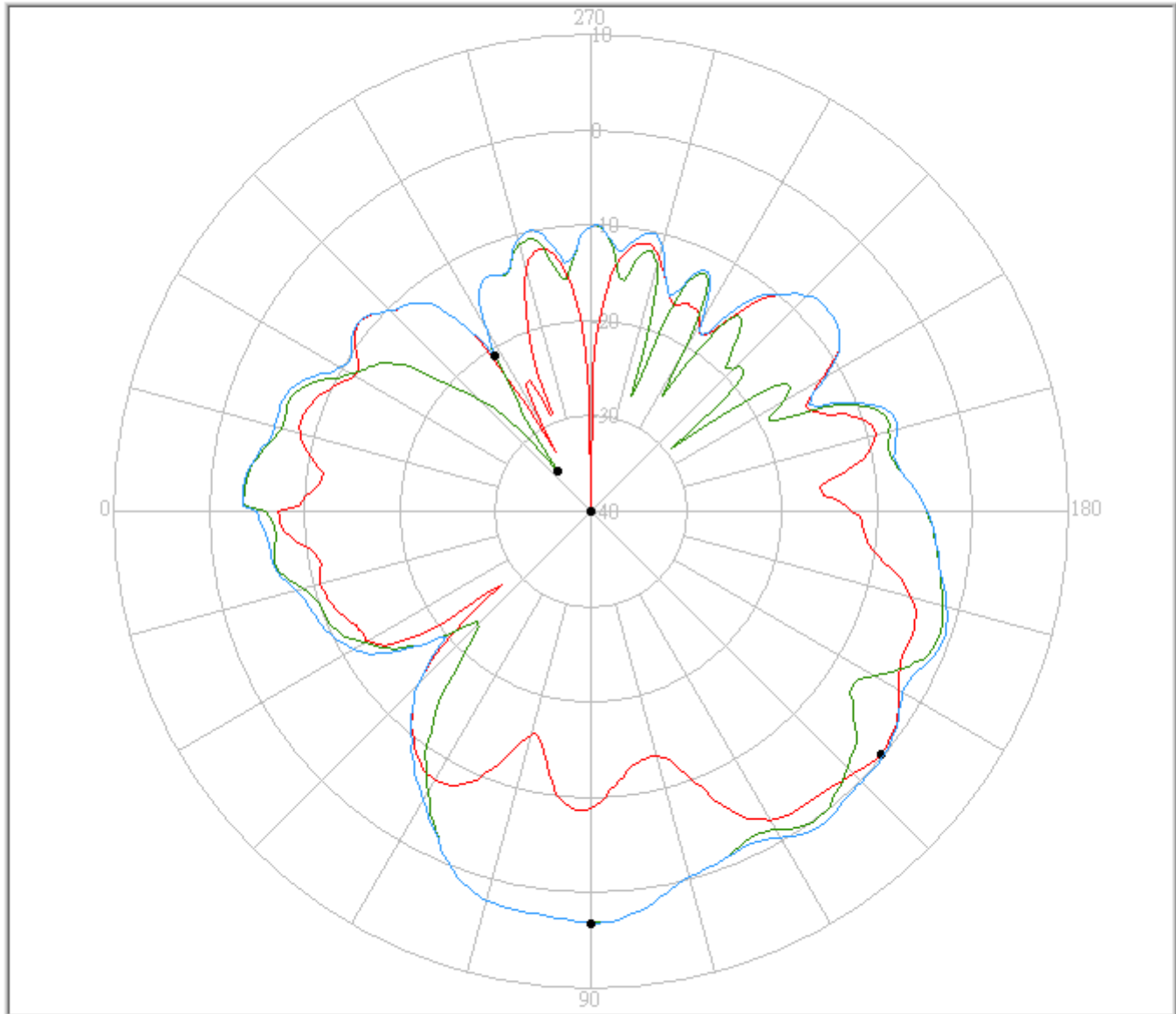
f. Hz. 5.35GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	AUX	5350.00	-0.42 / 140.00	-41.89 / 270.00	-8.22	Ver.	2006/3/24
2	GE2	AUX	5350.00	3.13 / 90.00	-34.56 / 309.00	-4.32	Hor.	2006/3/24
3	GE2	AUX	5350.00	3.14 / 90.00	-20.85 / 302.00	-3.61	V+H	2006/3/24

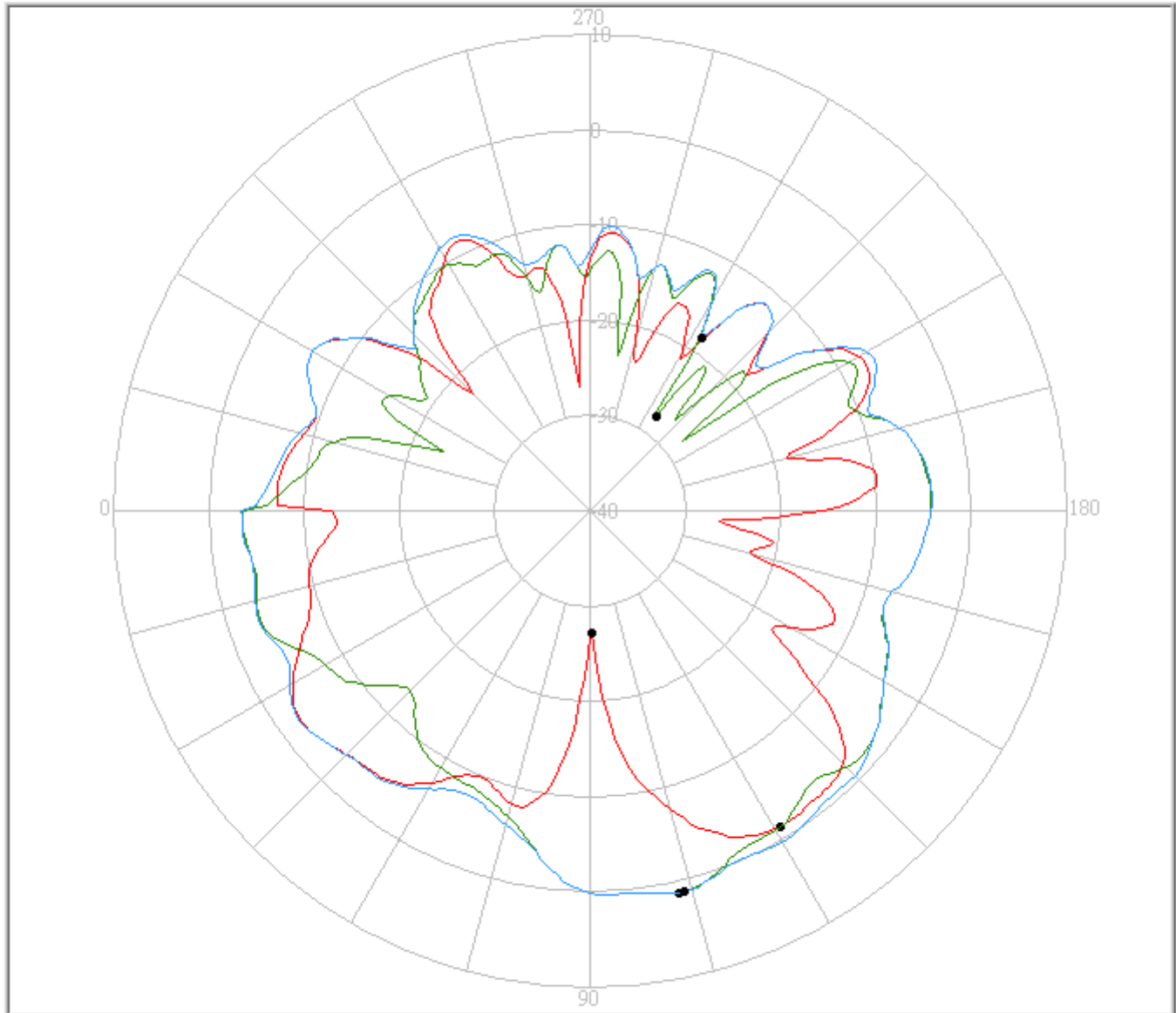
g. 5.47GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	AUX	5470.00	-1.35 / 121.00	-27.09 / 91.00	-8.12	Ver.	2006/3/24
2	GE2	AUX	5470.00	1.17 / 103.00	-27.92 / 235.00	-5.77	Hor.	2006/3/24
3	GE2	AUX	5470.00	1.19 / 104.00	-18.33 / 237.00	-4.64	V+H	2006/3/24

h. 5.597GHz



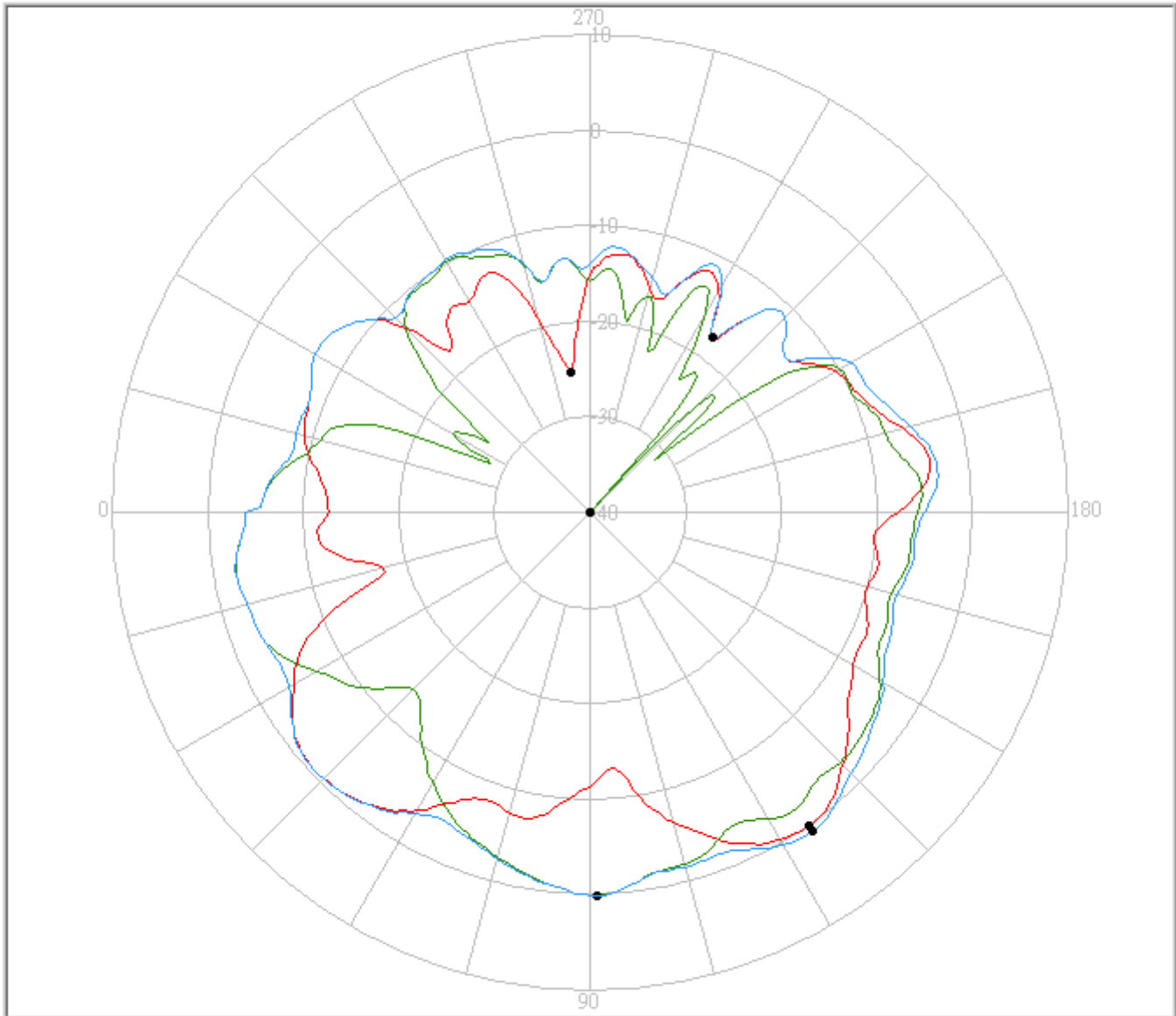
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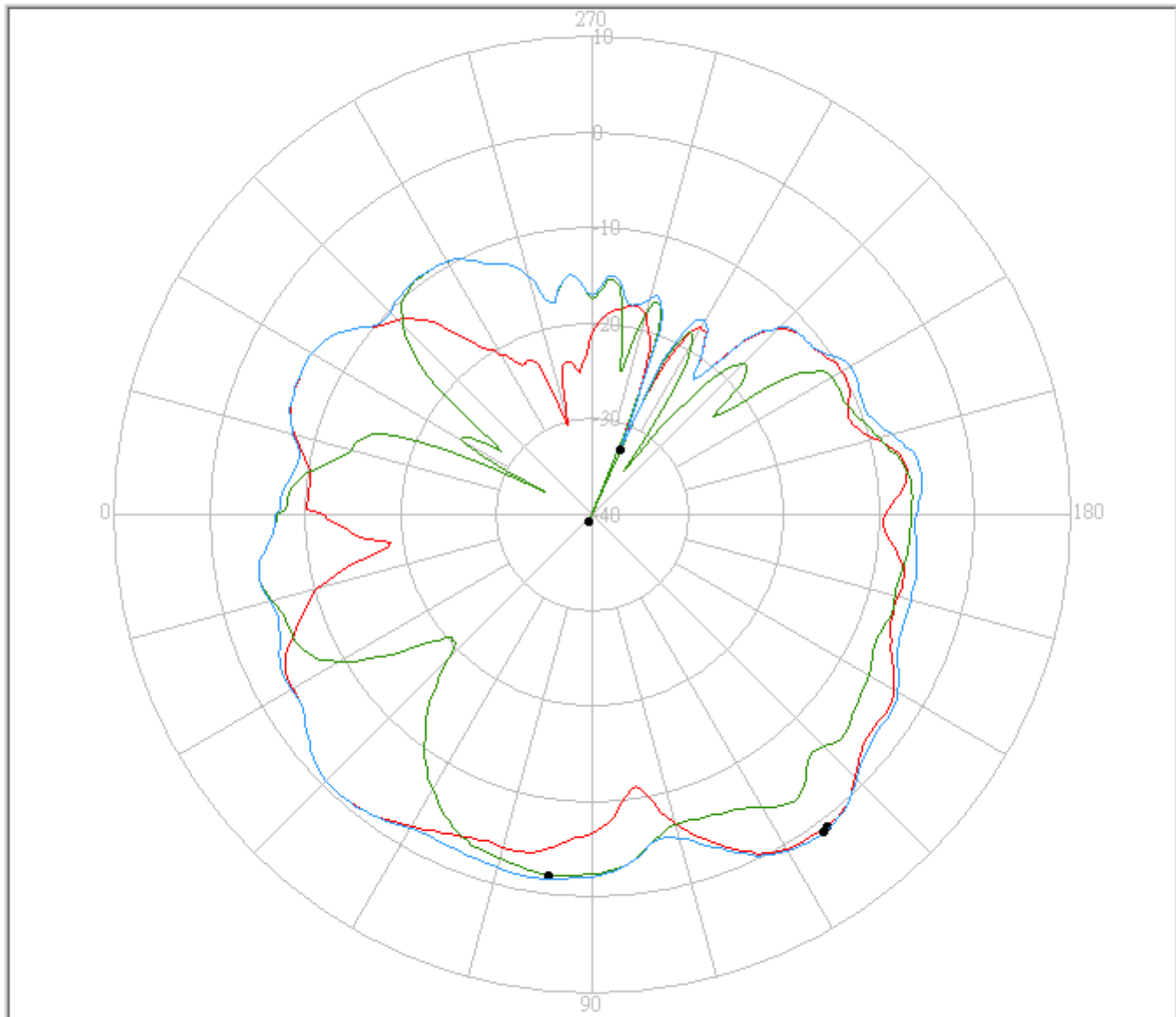
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	AUX	5597.50	0.05 / 125.00	-25.20 / 278.00	-6.73	Ver.	2006/3/24
2	GE2	AUX	5597.50	0.09 / 91.00	-45.12 / 228.00	-6.13	Hor.	2006/3/24
3	GE2	AUX	5597.50	0.70 / 125.00	-17.72 / 235.00	-4.36	V+H	2006/3/24

i. 5.725GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	AUX-	5725.00	0.78 / 127.00	-32.66 / 247.00	-5.90	Ver.	2006/3/24
2	GE2	AUX	5725.00	-2.05 / 83.00	-40.73 / 247.00	-7.81	Hor.	2006/3/24
3	GE2	AUX	5725.00	1.06 / 126.00	-32.60 / 247.00	-4.75	V+H	2006/3/24

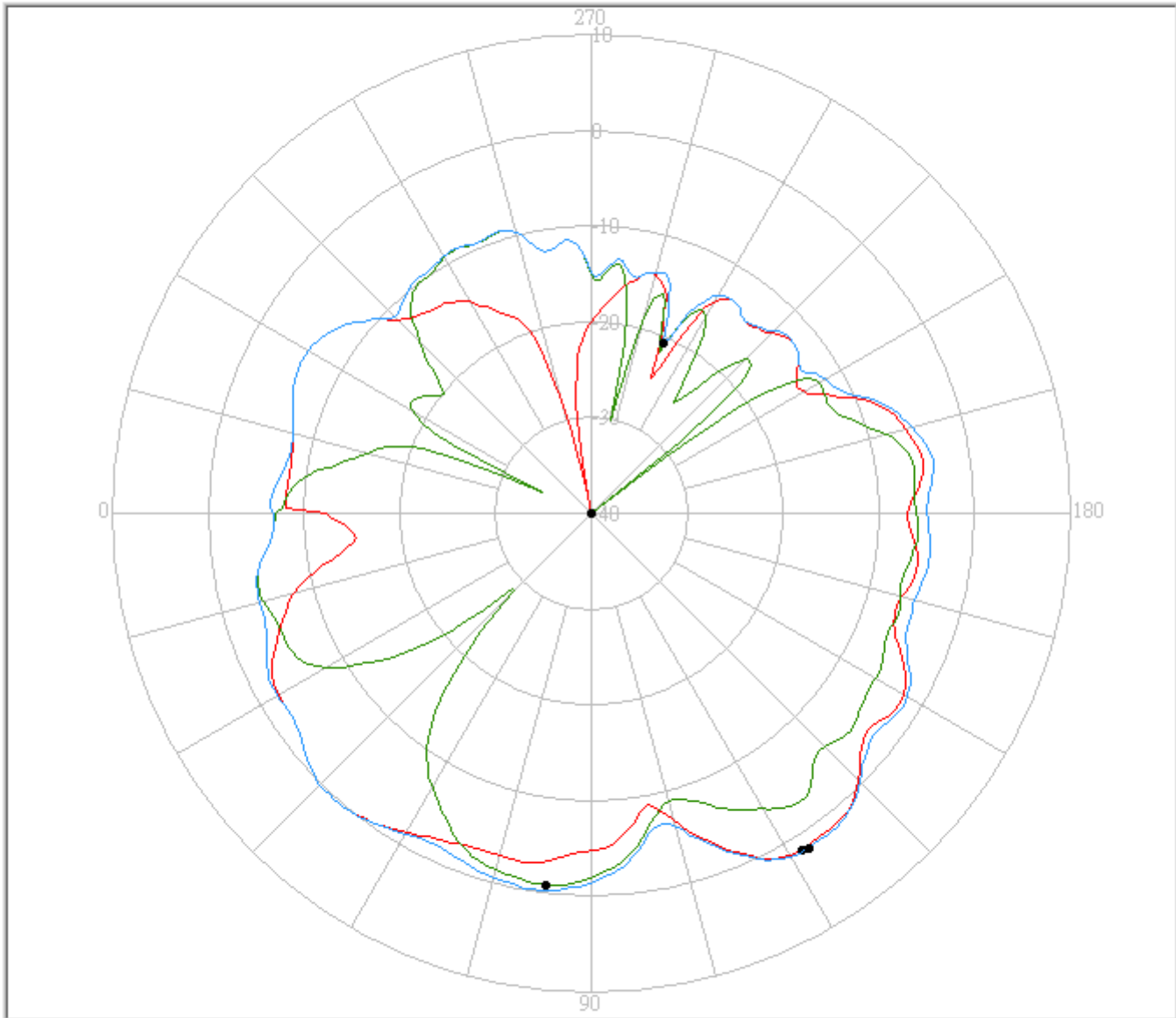
j. 5.785GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	AUX	5785.00	1.43 / 122.00	-40.53 / 282.00	-5.00	Ver.	2006/3/24
2	GE2	AUX	5785.00	-0.88 / 83.00	-45.20 / 218.00	-7.36	Hor.	2006/3/24
3	GE2	AUX	5785.00	1.65 / 123.00	-20.76 / 247.00	-4.03	V+H	2006/3/24

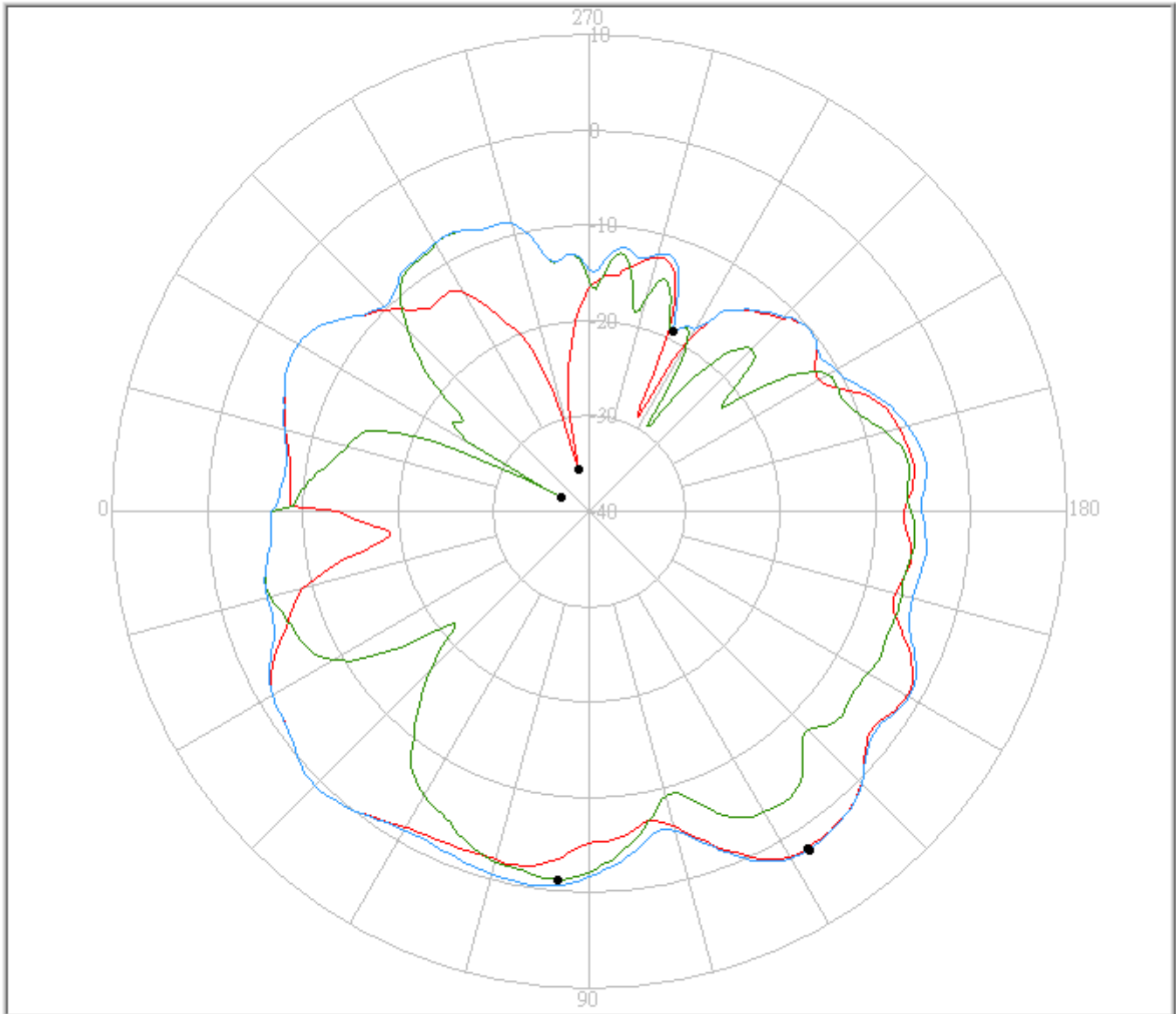
k. 5.85GHz



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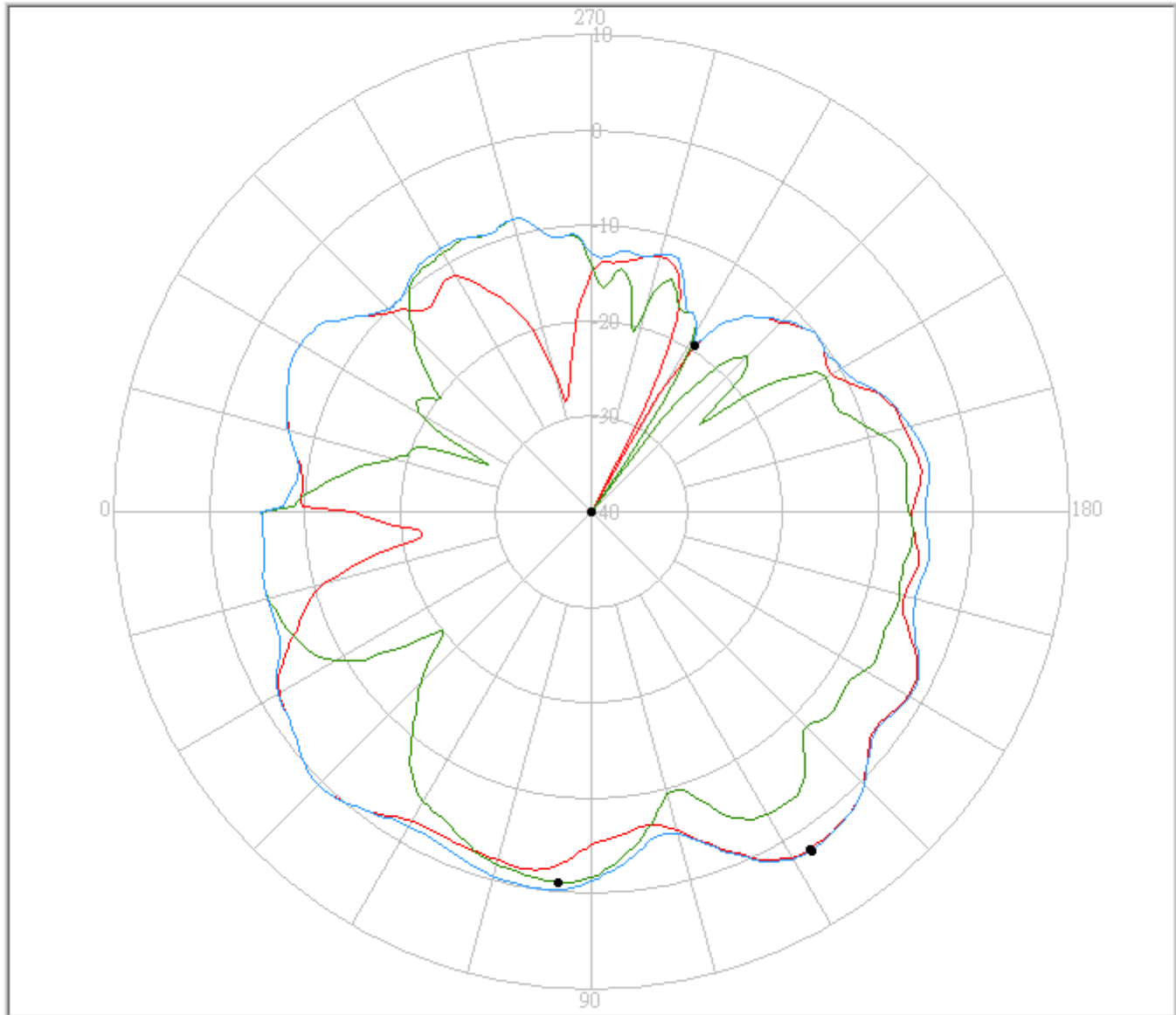
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	AUX	5850.00	2.11 / 123.00	-35.42 / 284.00	-4.51	Ver.	2006/3/24
2	GE2	AUX	5850.00	-1.28 / 85.00	-36.69 / 333.00	-7.46	Hor.	2006/3/24
3	GE2	AUX	5850.00	2.27 / 123.00	-19.09 / 245.00	-3.70	V+H	2006/3/24

1. 5.875GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	AUX	5875.00	2.11 / 123.00	-38.59 / 242.00	-4.60	Ver.	2006/3/24
2	GE2	AUX	5875.00	-1.06 / 85.00	-44.35 / 235.00	-7.48	Hor.	2006/3/24
3	GE2	AUX	5875.00	2.29 / 123.00	-19.53 / 238.00	-3.75	V+H	2006/3/24