

DATE. MAR. 26. 2006

CUSTOMER : First international Computer, Inc.

TEST REPORT

MODEL	GE2 (MAIN)
DESCRIPTION	PIFA For Wireless LAN Antenna 2.4~2.5GHZ / 5.15~5.875GHZ 275mm(Left, Black)
SUPPLIER P/N	K05004001301
CUSTOMER P/N	21-92526-01
FILE P/N	

FAVORTRON			CUSTOMER	
Manager	Supervisor	Engineer		
Nick	James	James		



惠賢電子股份有限公司
FAVORTRON CO., LTD

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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 : 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

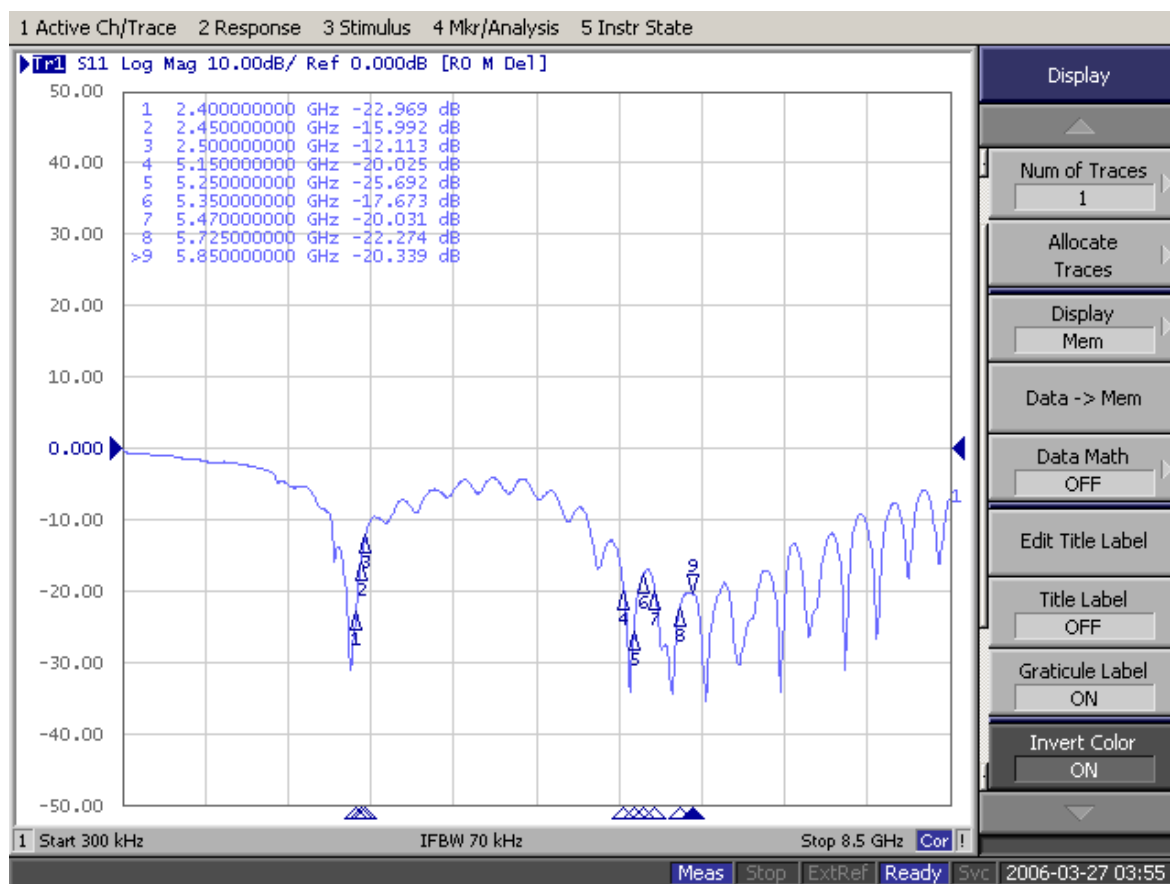
Antenna	Peak Gain (dBi)			Average Gain (dBi)		
	Frequency			Frequency		
	5.15GHz	5.25GHz	5.35GHz	5.15GHz	5.25GHz	5.35GHz
Main	≤ 6	≤ 6	≤ 6	≥ -4.8	≥ -4.8	≥ -4.8
Auxiliary	≤ 6	≤ 6	≤ 6	≥ -4.8	≥ -4.8	≥ -4.8

2. DESCRIPTION

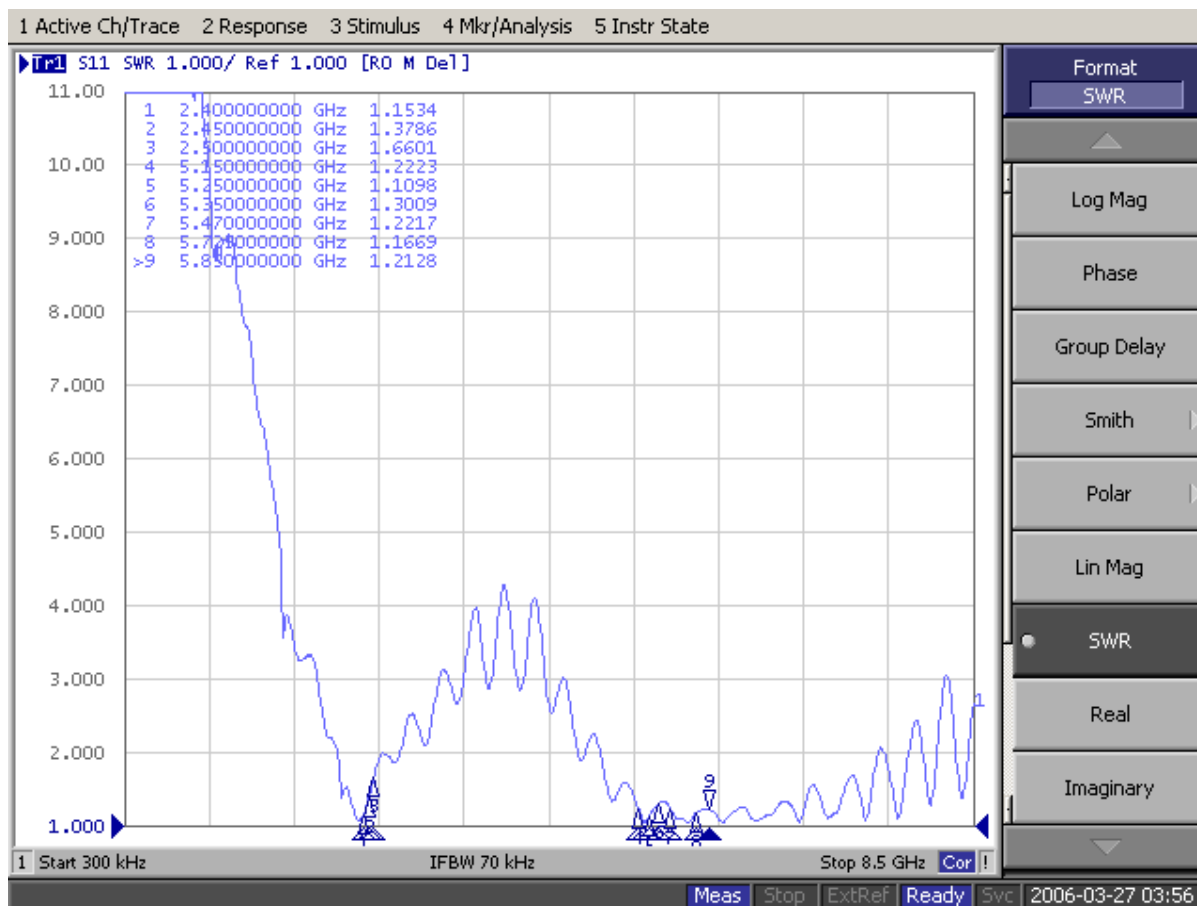
- a. FIC Project Name & FIC P/N : GE2(MAIN)
- & Frequency : 2.4~2.5GHZ / 5.15~5.875GHZ
- b. Vendor's antenna P/N : K05004001301
- c. Antenna P/N & type & material : M02007013001
- d. Coaxial cable length & diameter(Φ) : 275mm(MAIN, Black) / & 1.13Φ
- & Cable P/N
- & Vendor
- e. Connector model no. & vendor

3. WLAN Main /Ant.(MAIN)

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



2.4~2.5GHZ & 5.15~5.875GHZ / VSWR



4. Gain & Pattern – W/L / MAIN Ant.

a. 2.4GHz



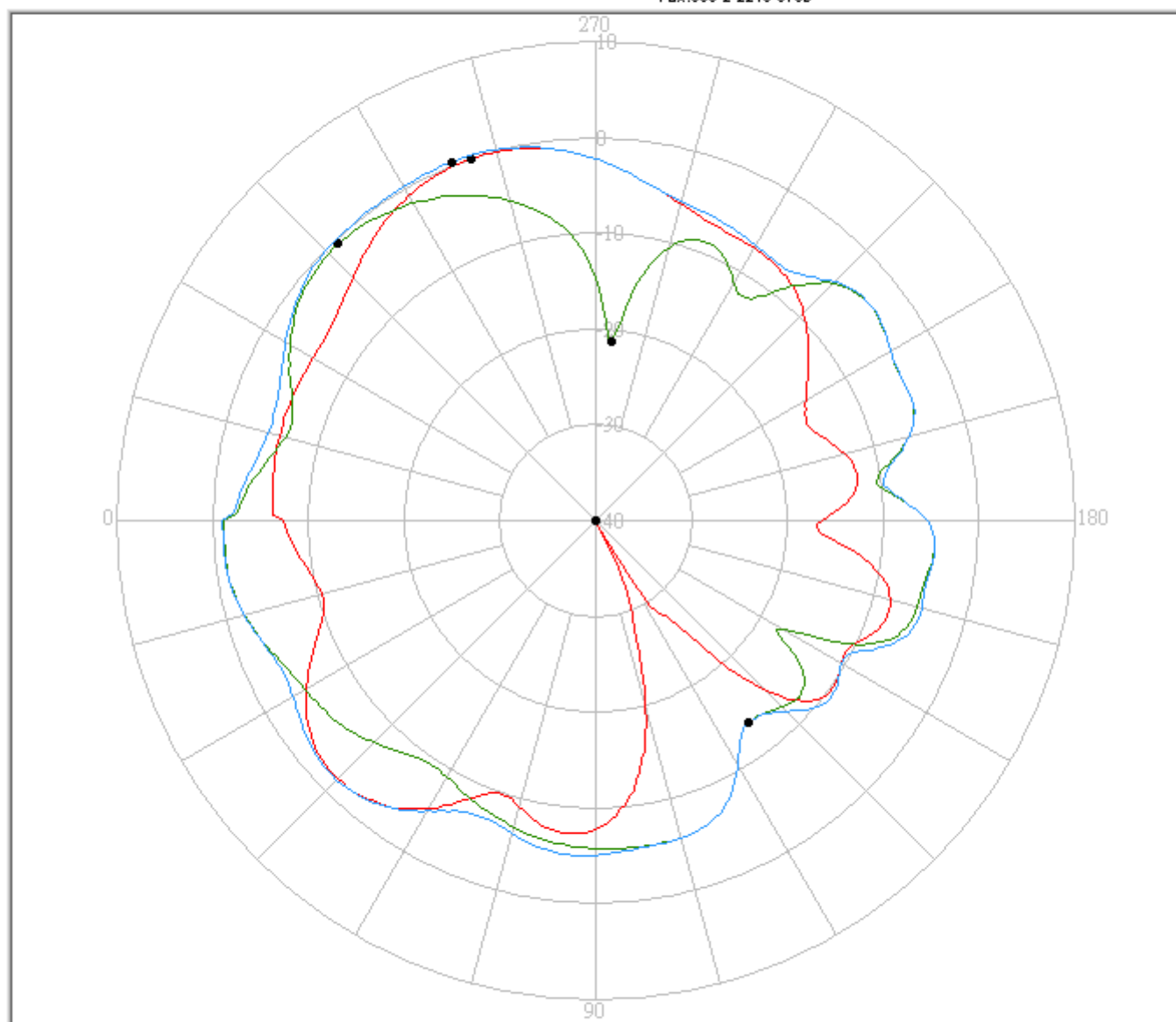
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Antenna Pattern Measurement

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	MAIN	2400.00	-0.03 / 289.00	-46.22 / 118.00	-5.98	Ver.	2006/3/26
2	GE2	MAIN	2400.00	-0.53 / 313.00	-21.20 / 265.00	-5.33	Hor.	2006/3/26
3	GE2	MAIN	2400.00	0.32 / 292.00	-13.60 / 127.00	-3.65	V+H	2006/3/26

b. 2.45GHz



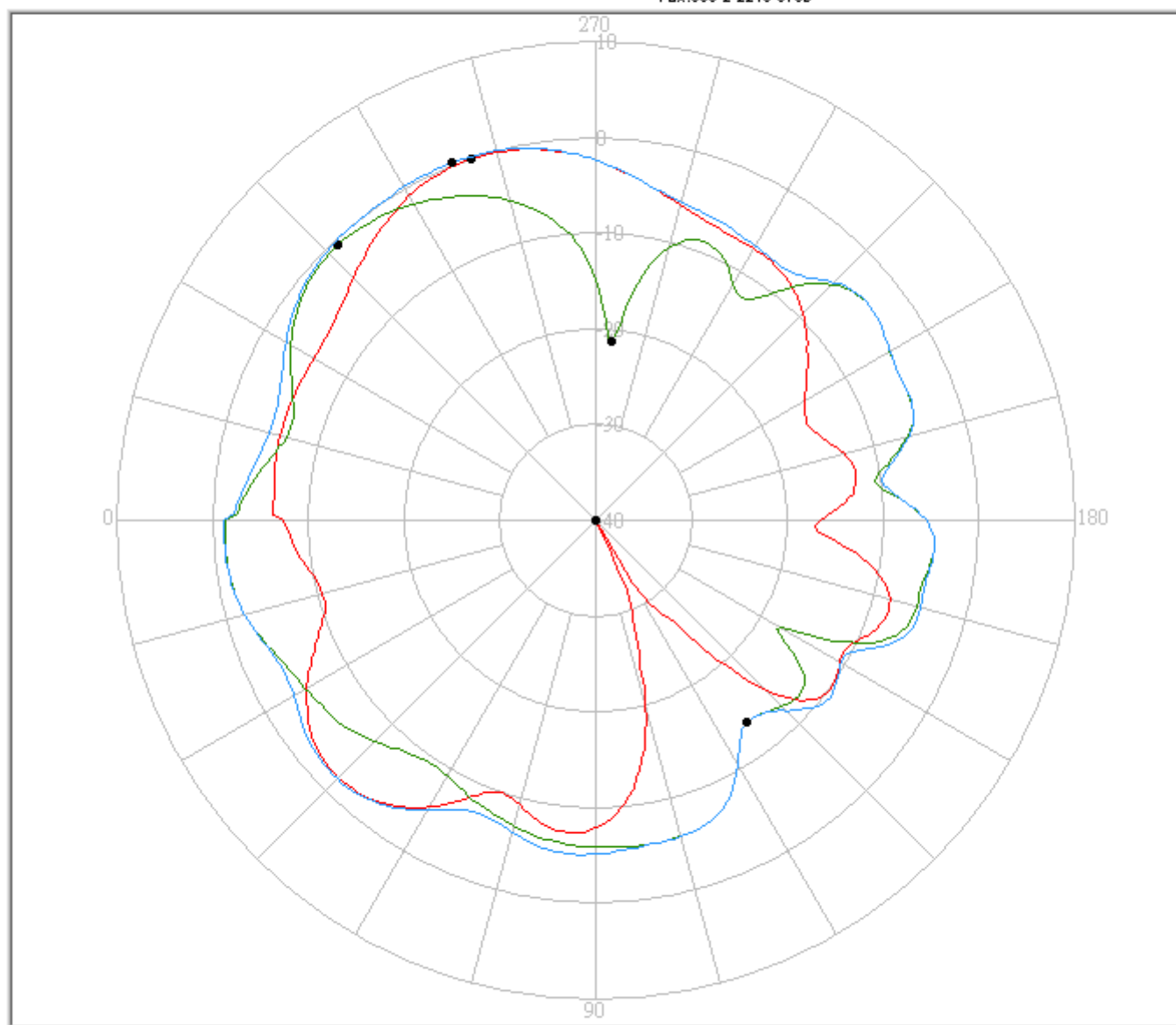
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	MAIN	2450.00	-0.12 / 289.00	-46.31 / 118.00	-6.07	Ver.	2006/3/26
2	GE2	MAIN	2450.00	-0.62 / 313.00	-21.29 / 265.00	-5.42	Hor.	2006/3/26
3	GE2	MAIN	2450.00	0.23 / 292.00	-13.69 / 127.00	-3.74	V+H	2006/3/26

c. 2.5GHz



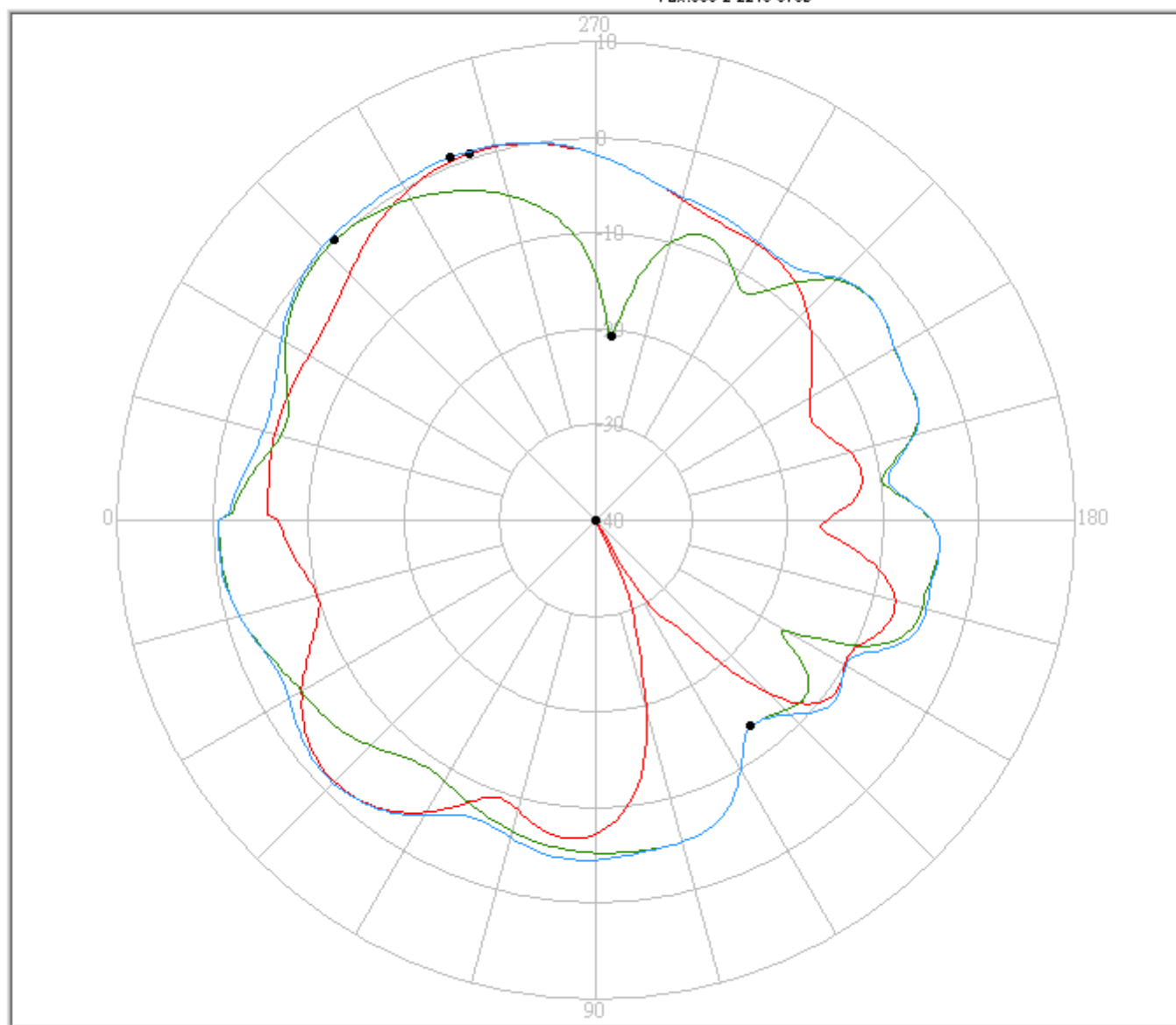
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	MAIN	2500.00	0.47 / 289.00	-45.72 / 118.00	-5.48	Ver.	2006/3/26
2	GE2	MAIN	2500.00	-0.03 / 313.00	-20.70 / 265.00	-4.83	Hor.	2006/3/26
3	GE2	MAIN	2500.00	0.82 / 292.00	-13.10 / 127.00	-3.15	V+H	2006/3/26

d. 5.15GHz



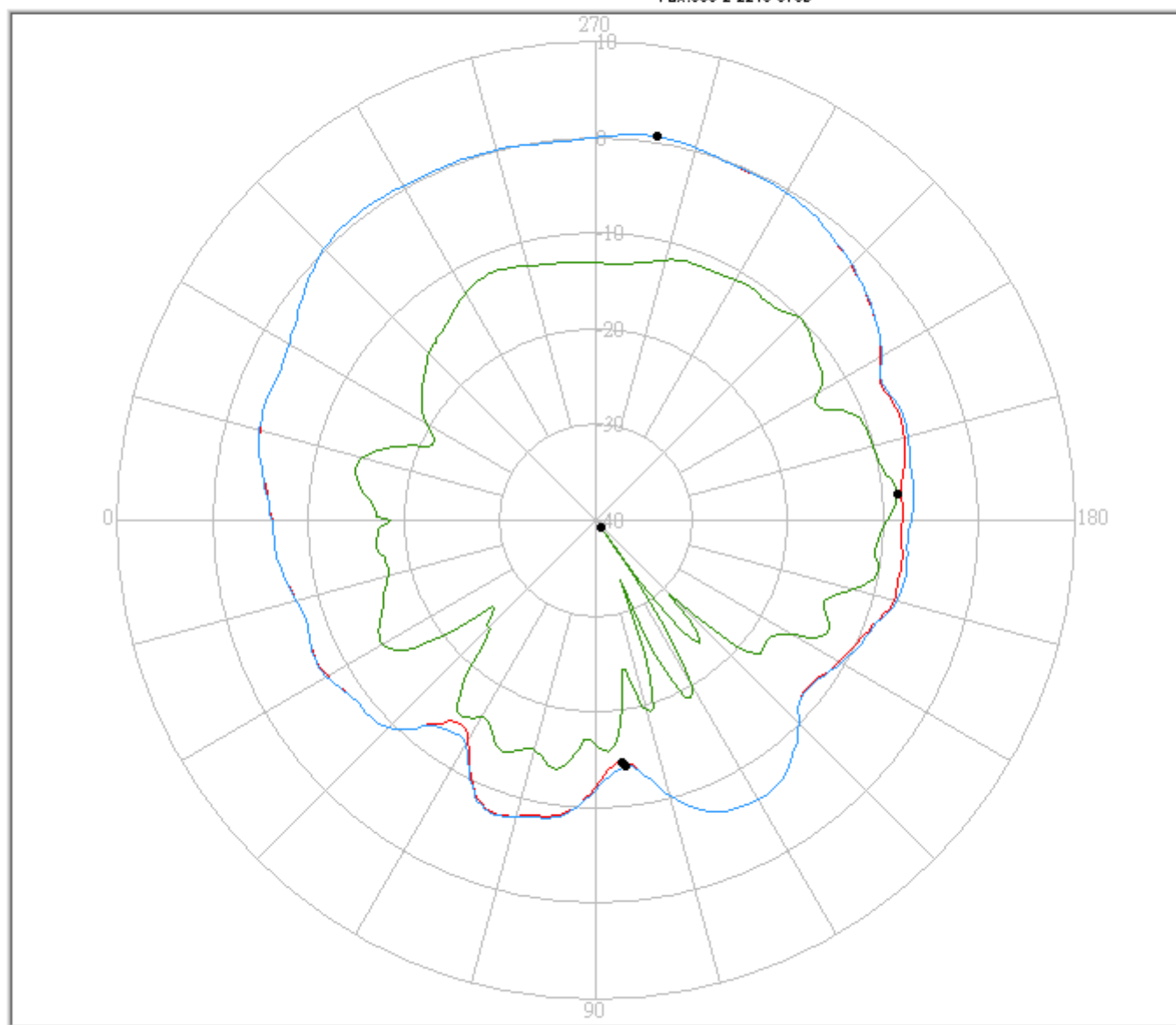
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	MAIN	5150.00	0.57 / 261.00	-14.58 / 96.00	-3.88	Ver.	2006/3/26
2	GE2	MAIN	5150.00	-8.42 / 185.00	-39.19 / 125.00	-13.77	Hor.	2006/3/26
3	GE2	MAIN	5150.00	0.57 / 261.00	-14.17 / 97.00	-3.82	V+H	2006/3/26

e. 5.25GHz



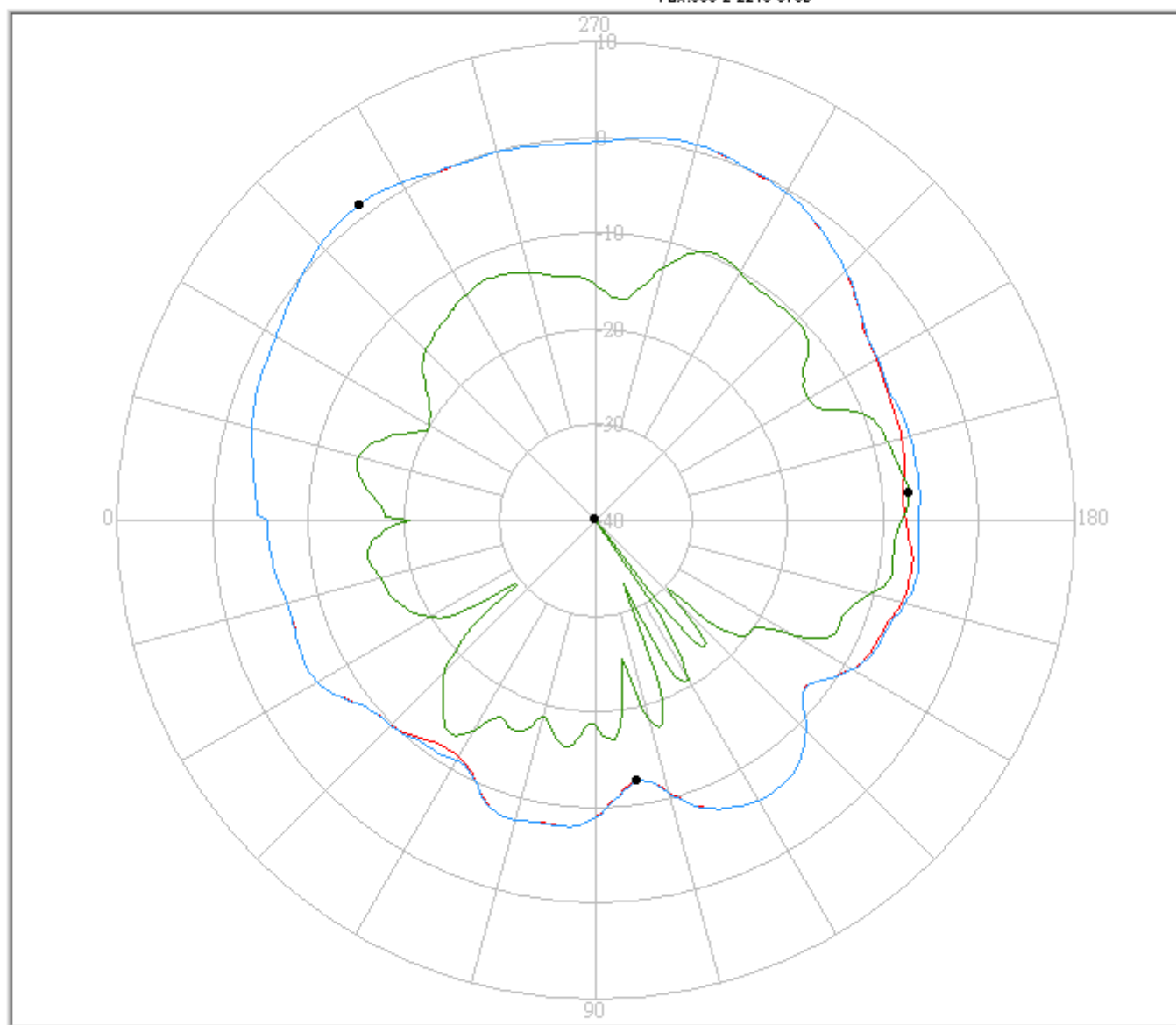
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	MAIN	5250.00	1.17 / 307.00	-12.53 / 99.00	-3.59	Ver.	2006/3/26
2	GE2	MAIN	5250.00	-7.23 / 185.00	-40.29 / 125.00	-13.50	Hor.	2006/3/26
3	GE2	MAIN	5250.00	1.17 / 307.00	-12.50 / 99.00	-3.52	V+H	2006/3/26

f. Hz. 5.35GHz



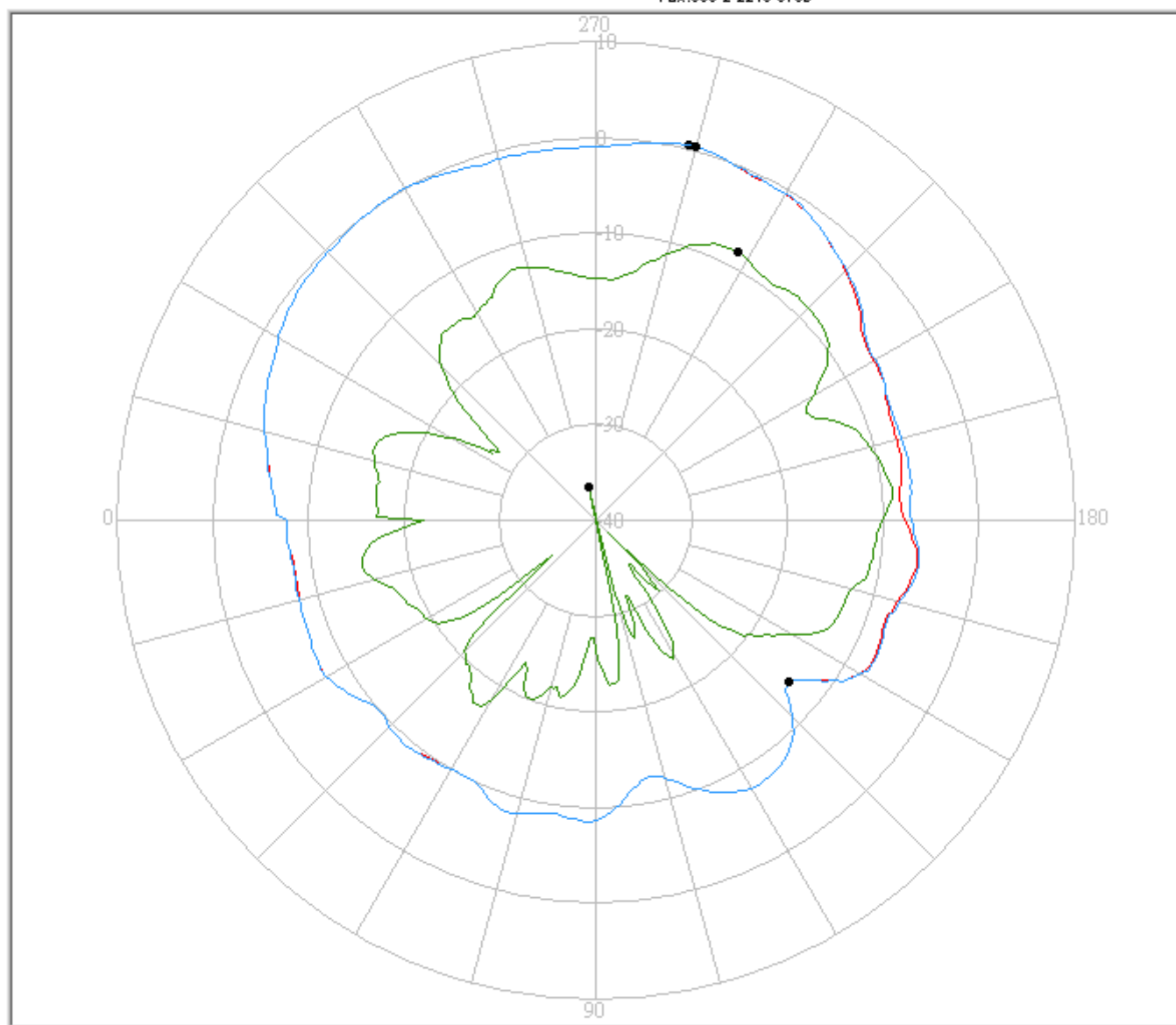
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	MAIN	5350.00	0.31 / 256.00	-13.82 / 140.00	-4.21	Ver.	2006/3/26
2	GE2	MAIN	5350.00	-8.27 / 242.00	-43.60 / 103.00	-14.03	Hor.	2006/3/26
3	GE2	MAIN	5350.00	0.32 / 255.00	-13.78 / 140.00	-4.15	V+H	2006/3/26

g. 5.47GHz



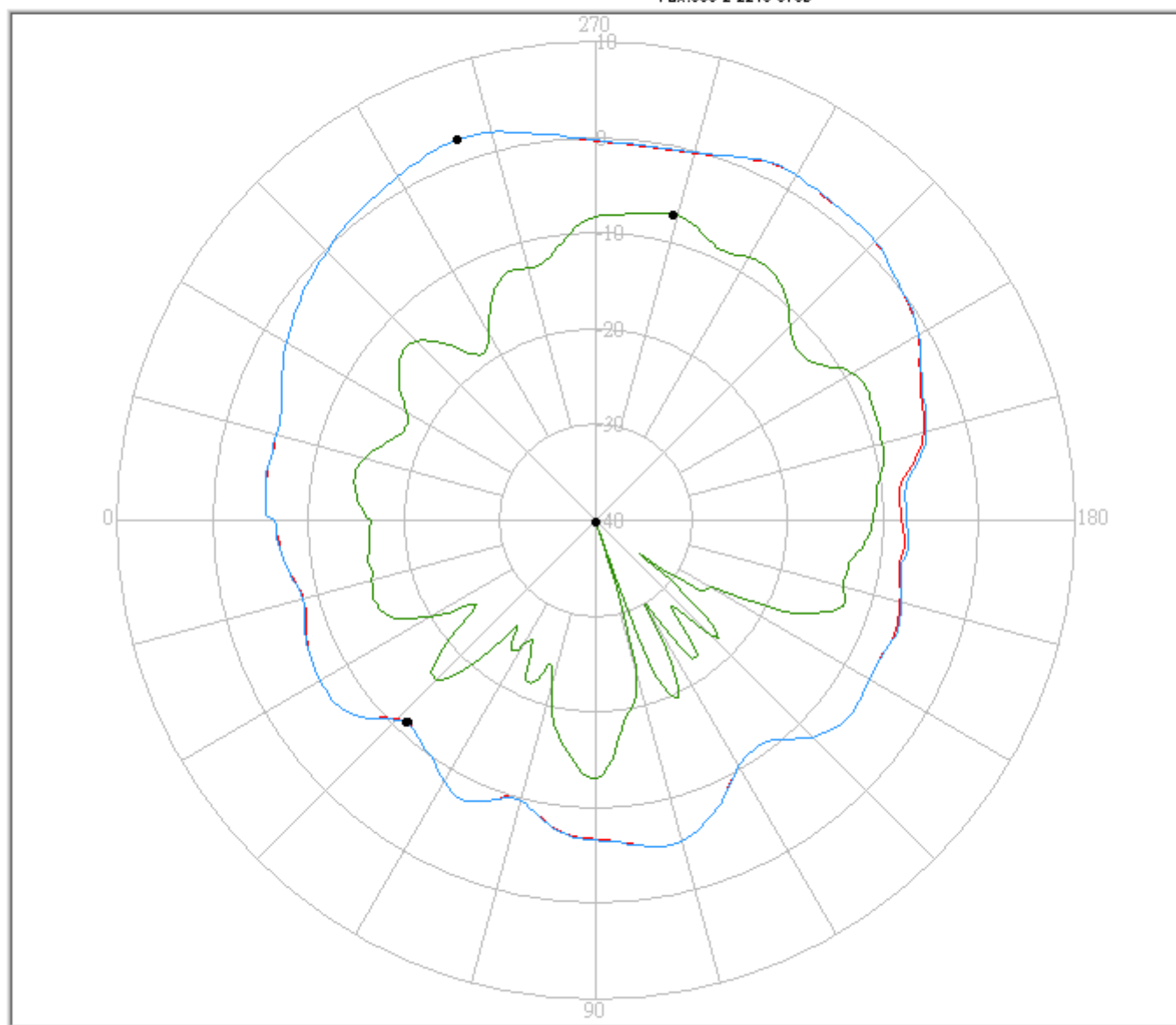
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	MAIN	5470.00	2.24 / 290.00	-11.21 / 47.00	-2.80	Ver.	2006/3/26
2	GE2	MAIN	5470.00	-7.06 / 256.00	-39.85 / 108.00	-12.93	Hor.	2006/3/26
3	GE2	MAIN	5470.00	2.24 / 290.00	-11.08 / 47.00	-2.76	V+H	2006/3/26

h. 5.597GHz



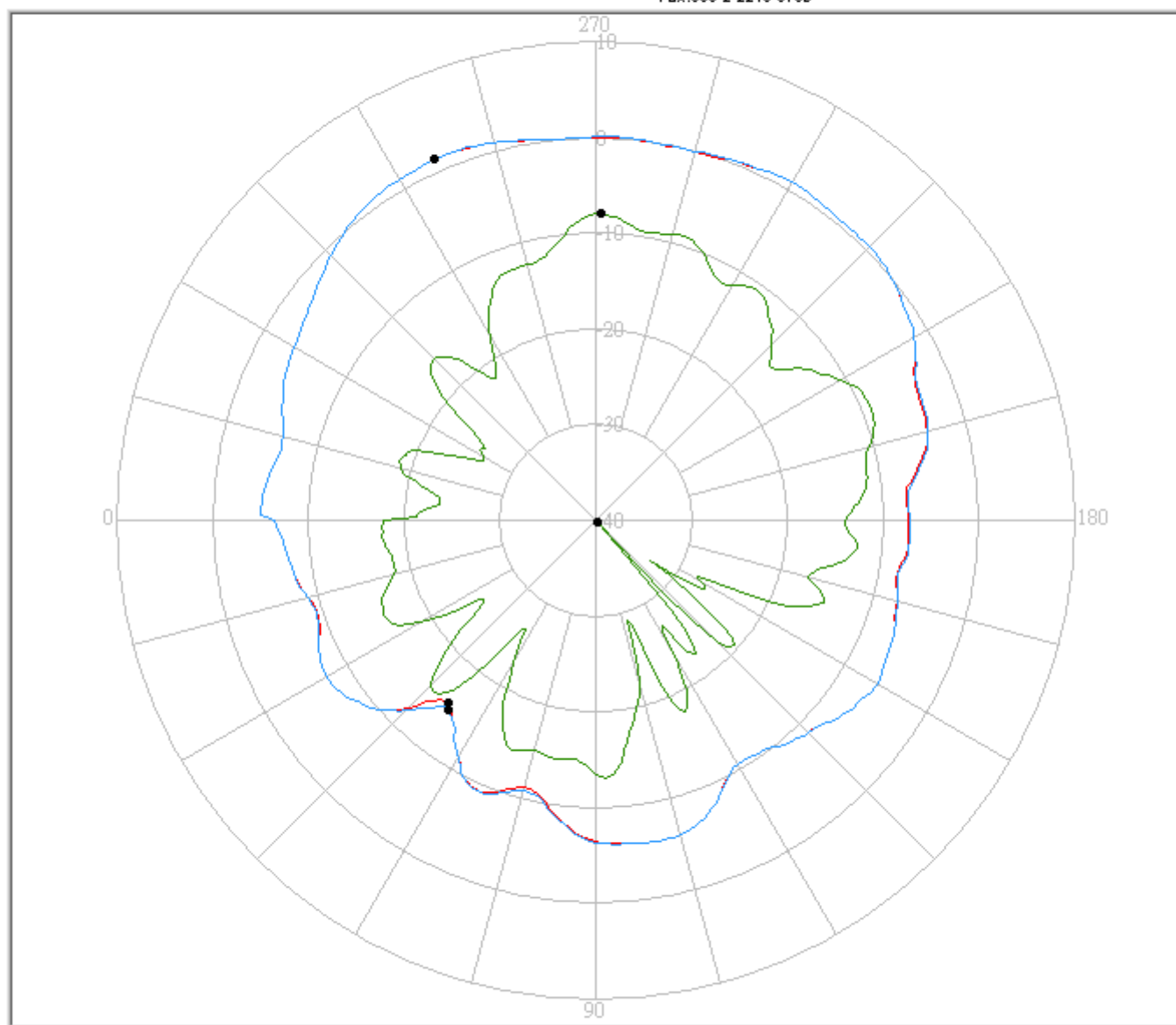
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	MAIN	5597.50	1.23 / 294.00	-15.56 / 51.00	-3.29	Ver.	2006/3/26
2	GE2	MAIN	5597.50	-8.03 / 269.00	-39.78 / 132.00	-14.18	Hor.	2006/3/26
3	GE2	MAIN	5597.50	1.23 / 294.00	-15.00 / 52.00	-3.26	V+H	2006/3/26

i. 5.725GHz



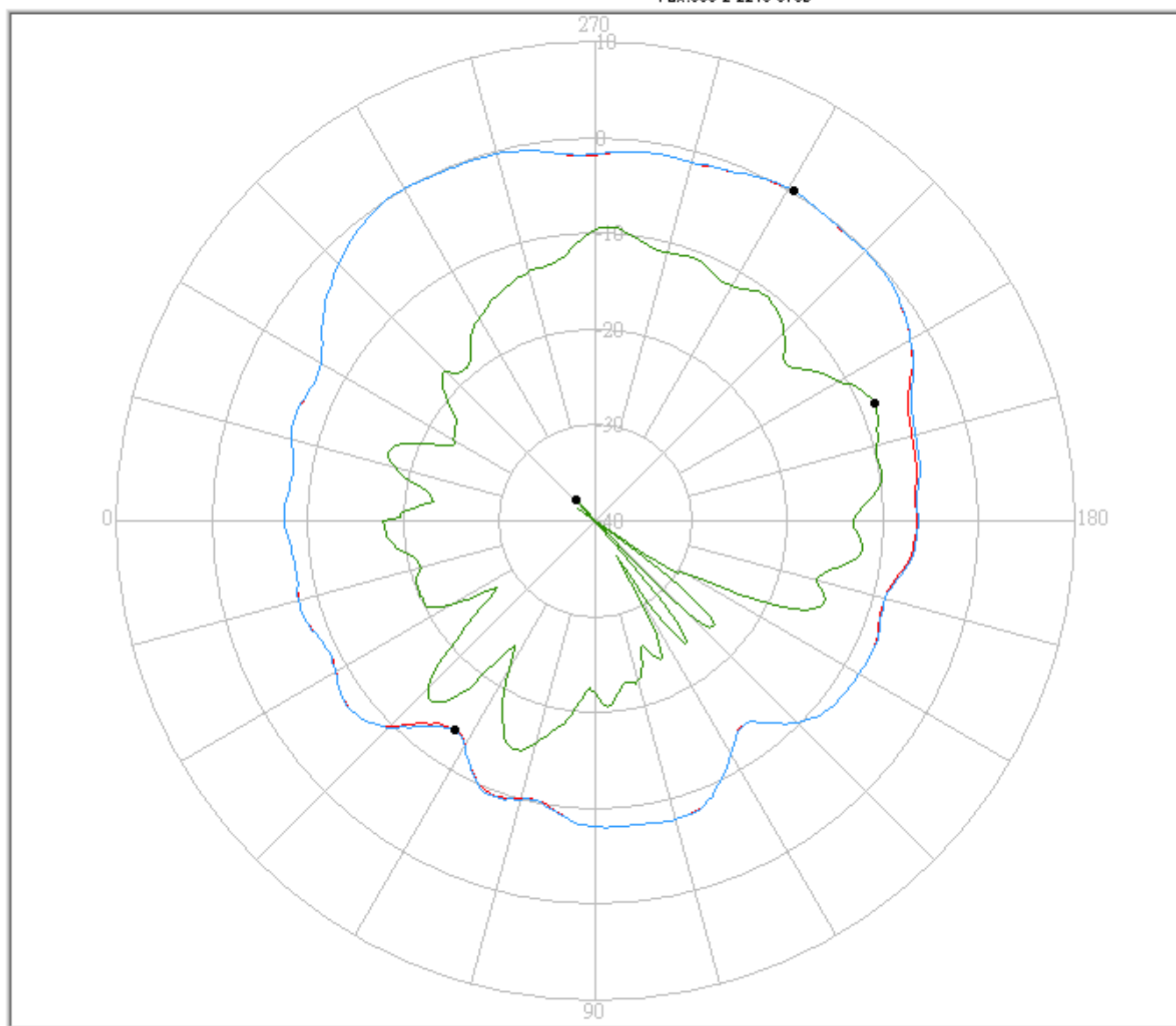
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	MAIN	5725.00	0.11 / 239.00	-13.69 / 56.00	-4.33	Ver.	2006/3/26
2	GE2	MAIN	5725.00	-8.43 / 203.00	-42.92 / 132.00	-14.60	Hor.	2006/3/26
3	GE2	MAIN	5725.00	0.12 / 239.00	-13.67 / 56.00	-4.29	V+H	2006/3/26

j. 5.785GHz



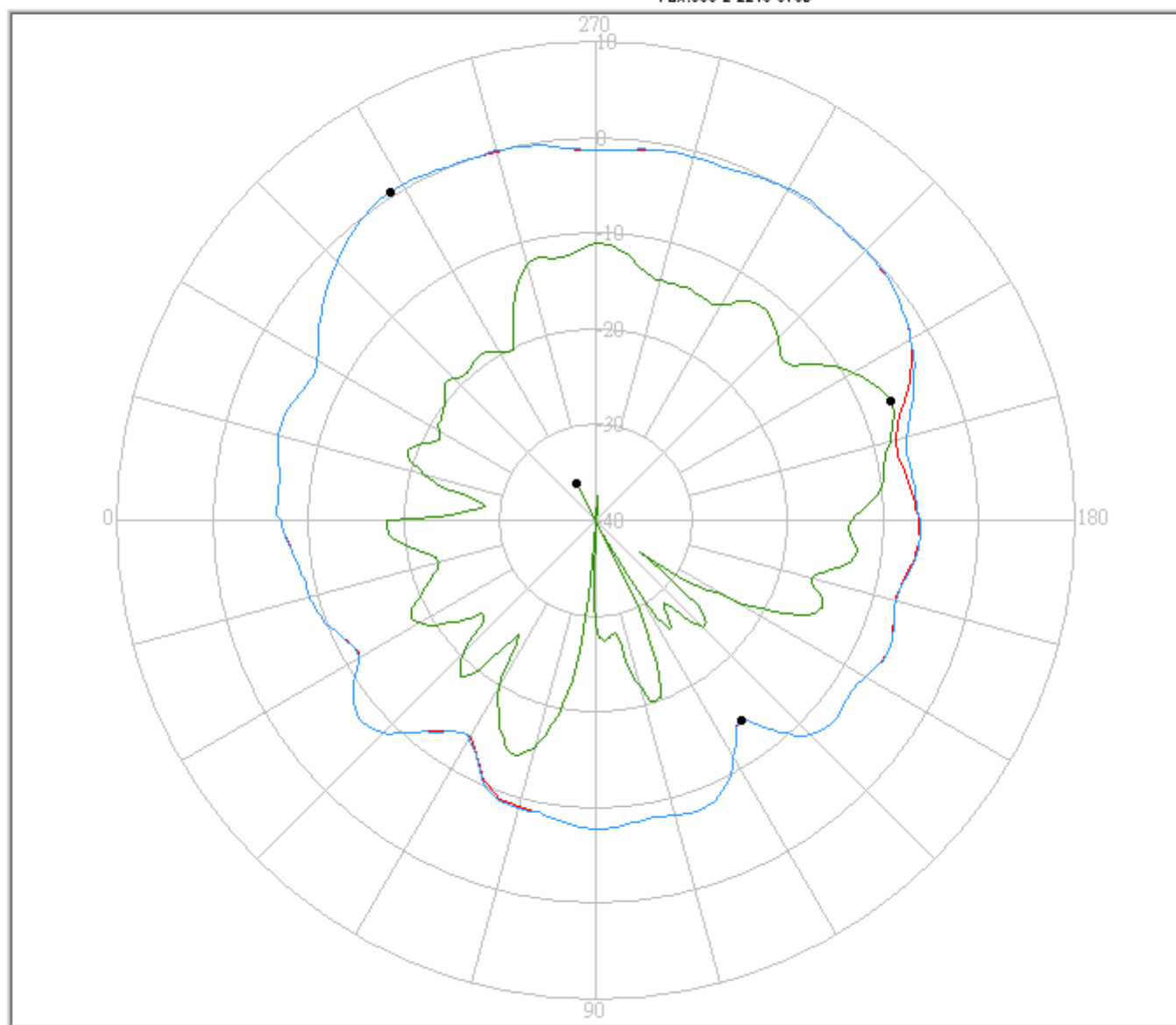
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	MAIN	5785.00	0.43 / 302.00	-14.22 / 126.00	-4.09	Ver.	2006/3/26
2	GE2	MAIN	5785.00	-6.85 / 202.00	-44.31 / 118.00	-14.98	Hor.	2006/3/26
3	GE2	MAIN	5785.00	0.43 / 302.00	-14.21 / 126.00	-4.04	V+H	2006/3/26

k. 5.85GHz



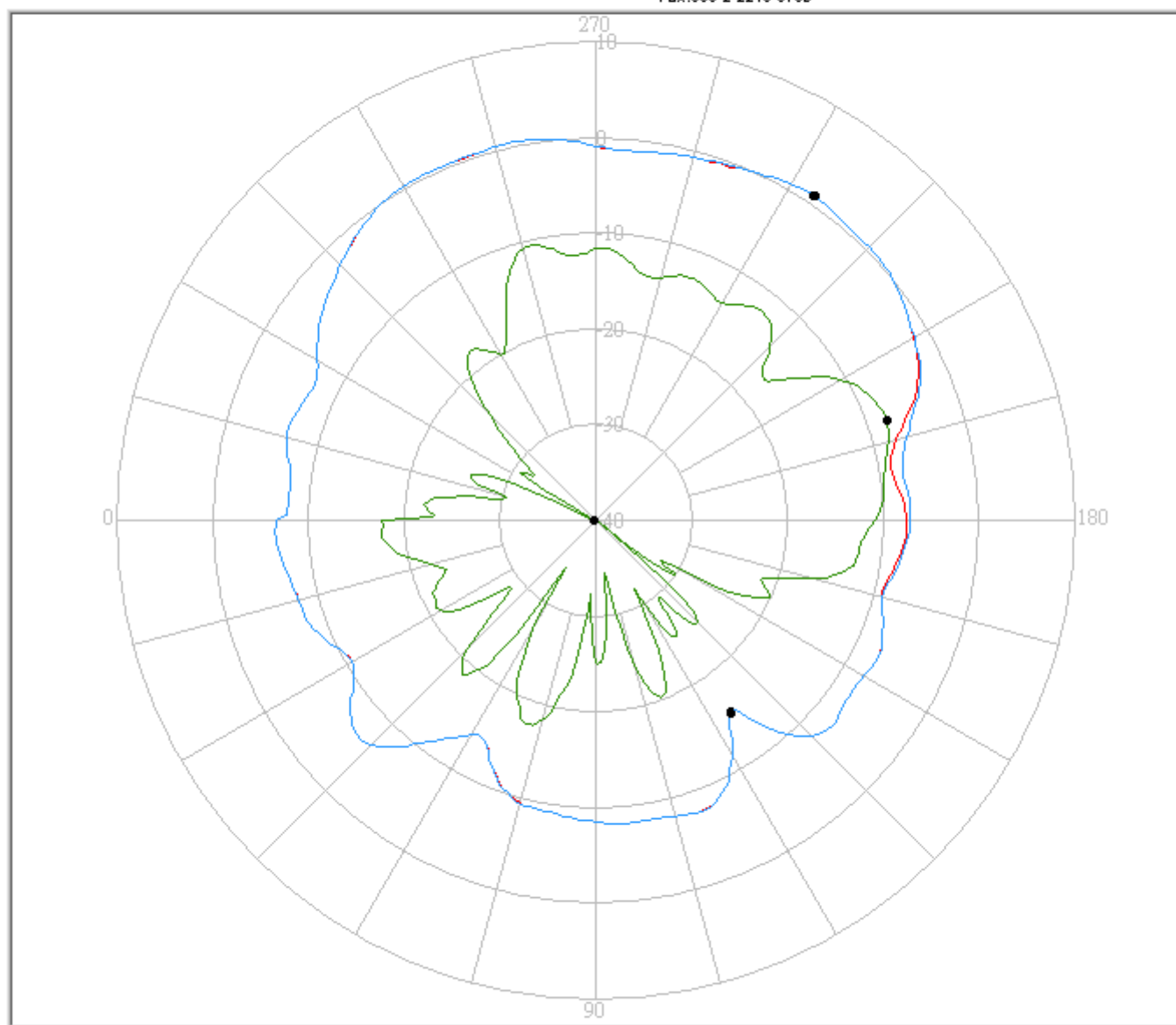
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	MAIN	5850.00	0.78 / 236.00	-15.54 / 125.00	-3.95	Ver.	2006/3/26
2	GE2	MAIN	5850.00	-7.89 / 199.00	-39.84 / 334.00	-15.43	Hor.	2006/3/26
3	GE2	MAIN	5850.00	0.78 / 236.00	-15.52 / 125.00	-3.91	V+H	2006/3/26

1. 5.875GHz



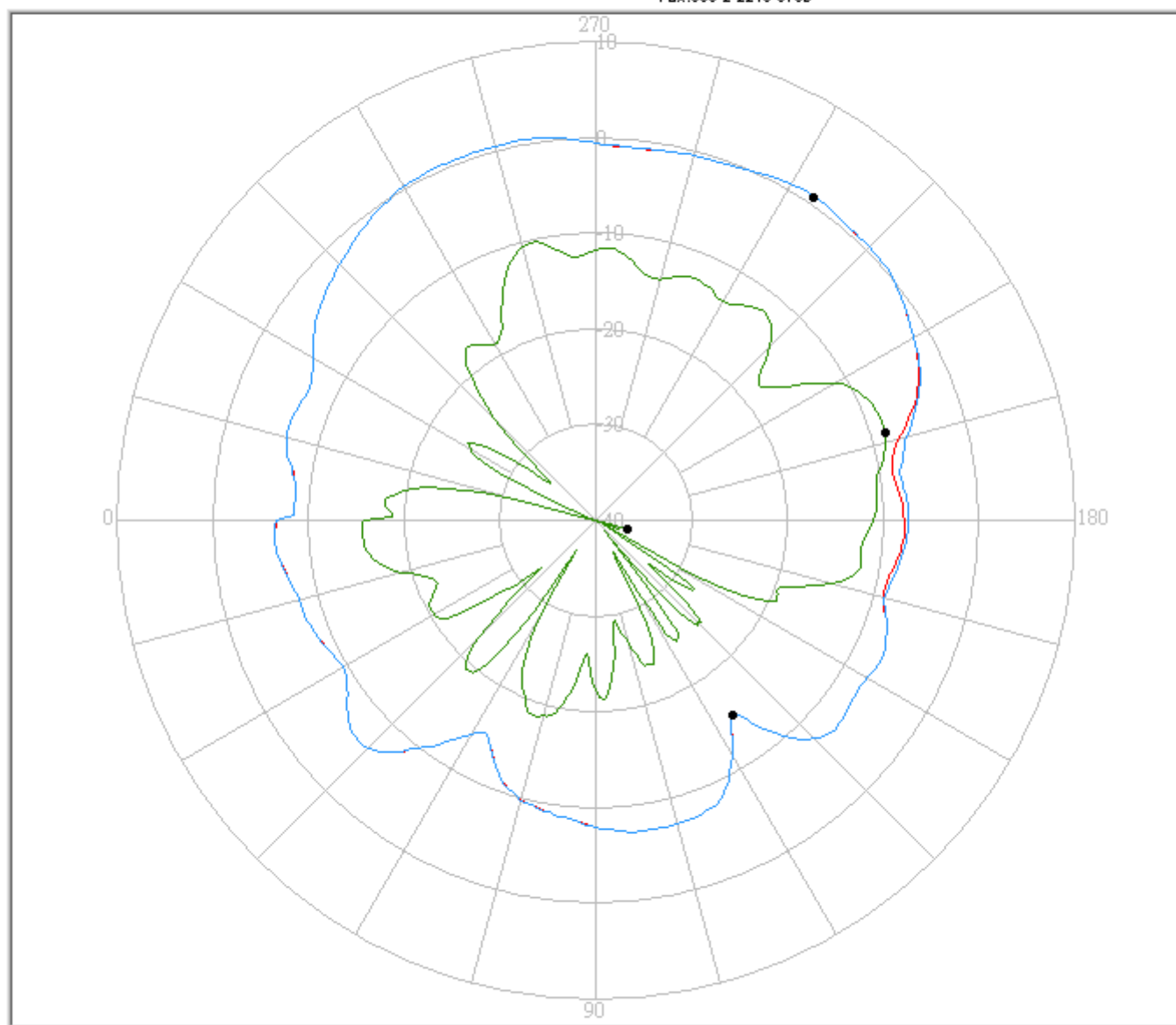
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	GE2	MAIN	5875.00	0.74 / 236.00	-15.23 / 125.00	-3.82	Ver.	2006/3/26
2	GE2	MAIN	5875.00	-8.45 / 197.00	-43.38 / 343.00	-15.41	Hor.	2006/3/26
3	GE2	MAIN	5875.00	0.75 / 236.00	-15.21 / 125.00	-3.79	V+H	2006/3/26