

DATE : 2006/04/03

CUSTOMER : UNIWILL CORP.

APPROVAL SHEET

MODEL	L51
DESCRIPTION	PIFA For Wireless LAN Antenna 2.4~2.5GHZ /4.9~5.875GHZ PCB For GPRS Antenna 800~900MHZ/1.7~1.9GHZ
SUPPLIER P/N	-----
CUSTOMER P/N	-----
FILE P/N	

FAVORTRON			CUSTOMER	
Manager	Supervisor	Engineer		
Nick	James	Vincent		

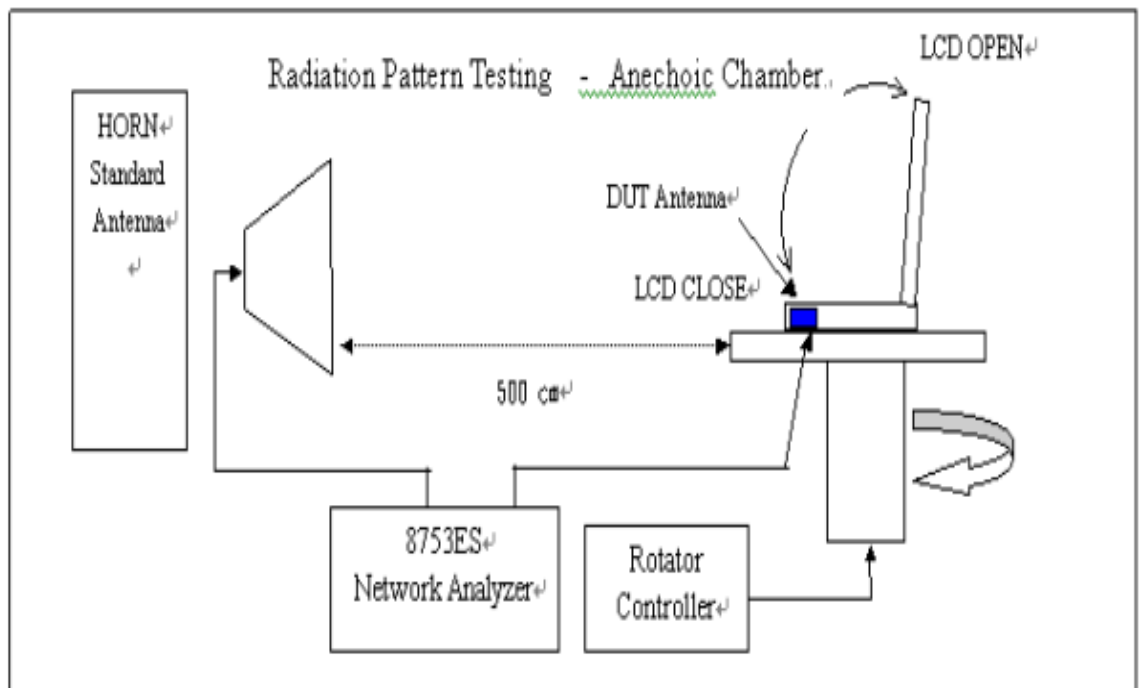


惠寶電子股份有限公司
FAVORTRON CO., LTD

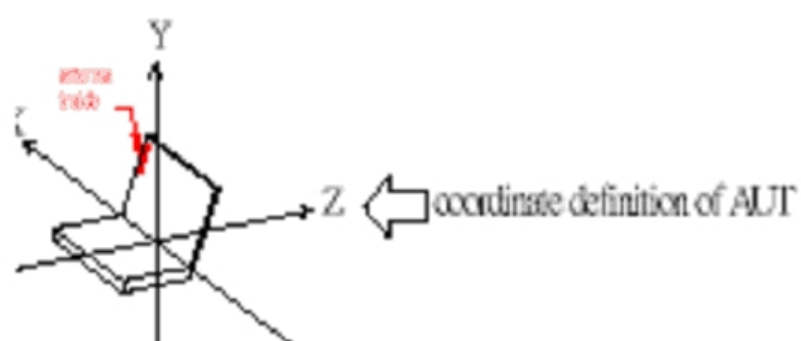
台北縣新店市民權路 108-1 號 4F
4F, No. 108-1, Minchziuan Rd., SHzindian City,
Taipei HZsien 231, Taiwan. R.O.C

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

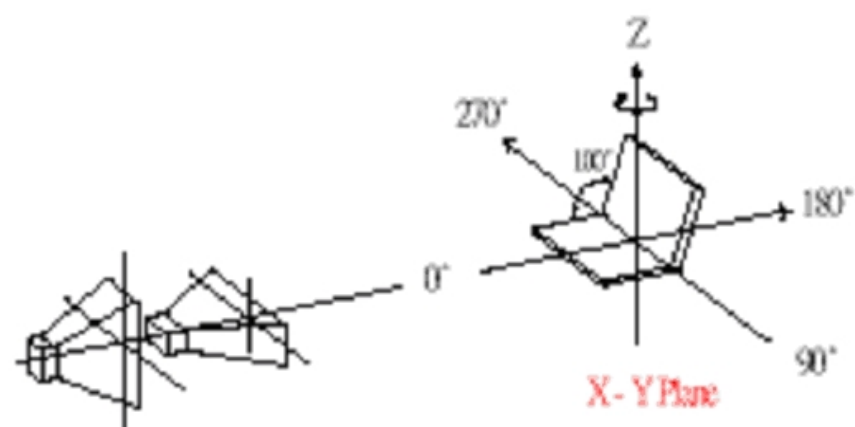
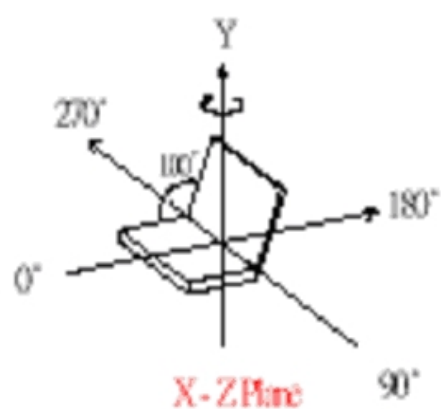
天線測試方法



Coordinate Definition

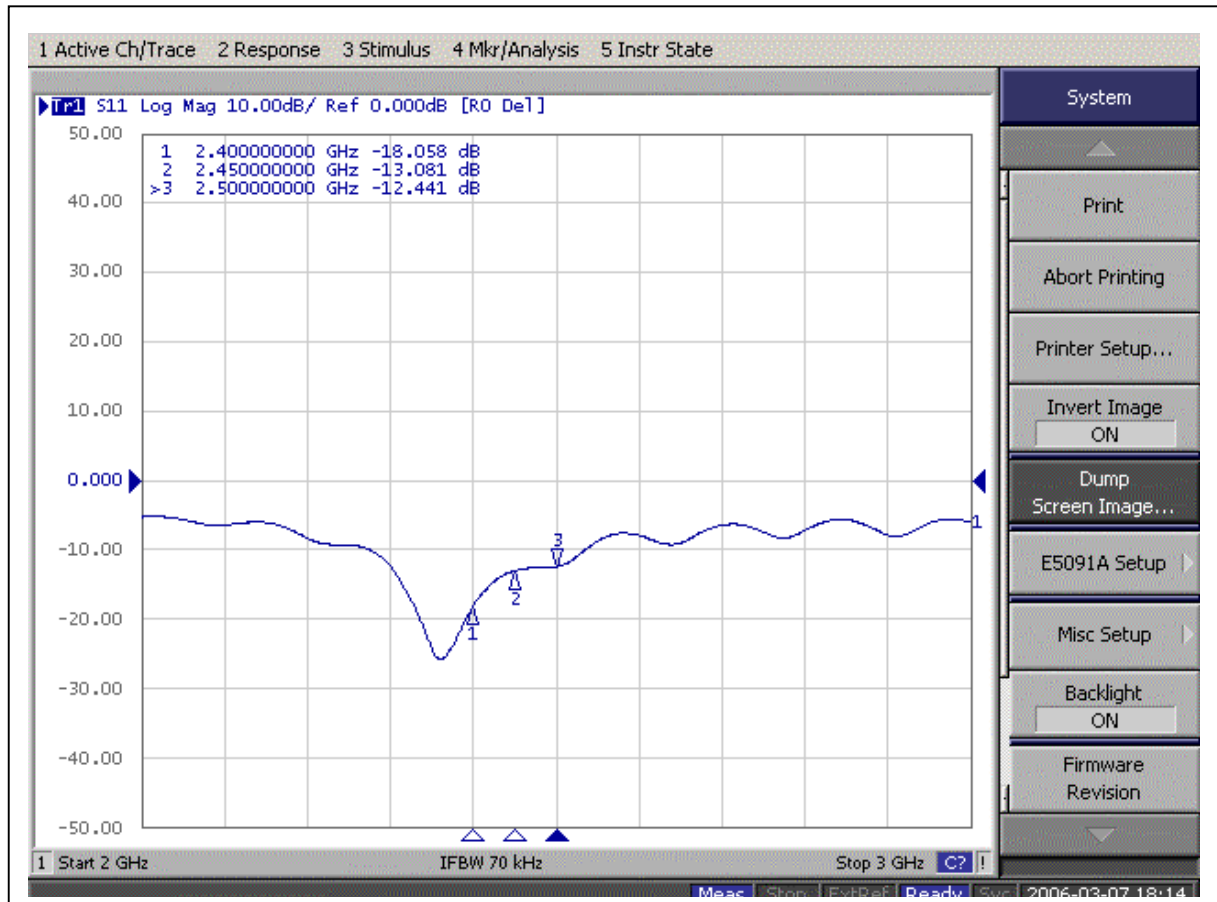


ORN ANTENNA

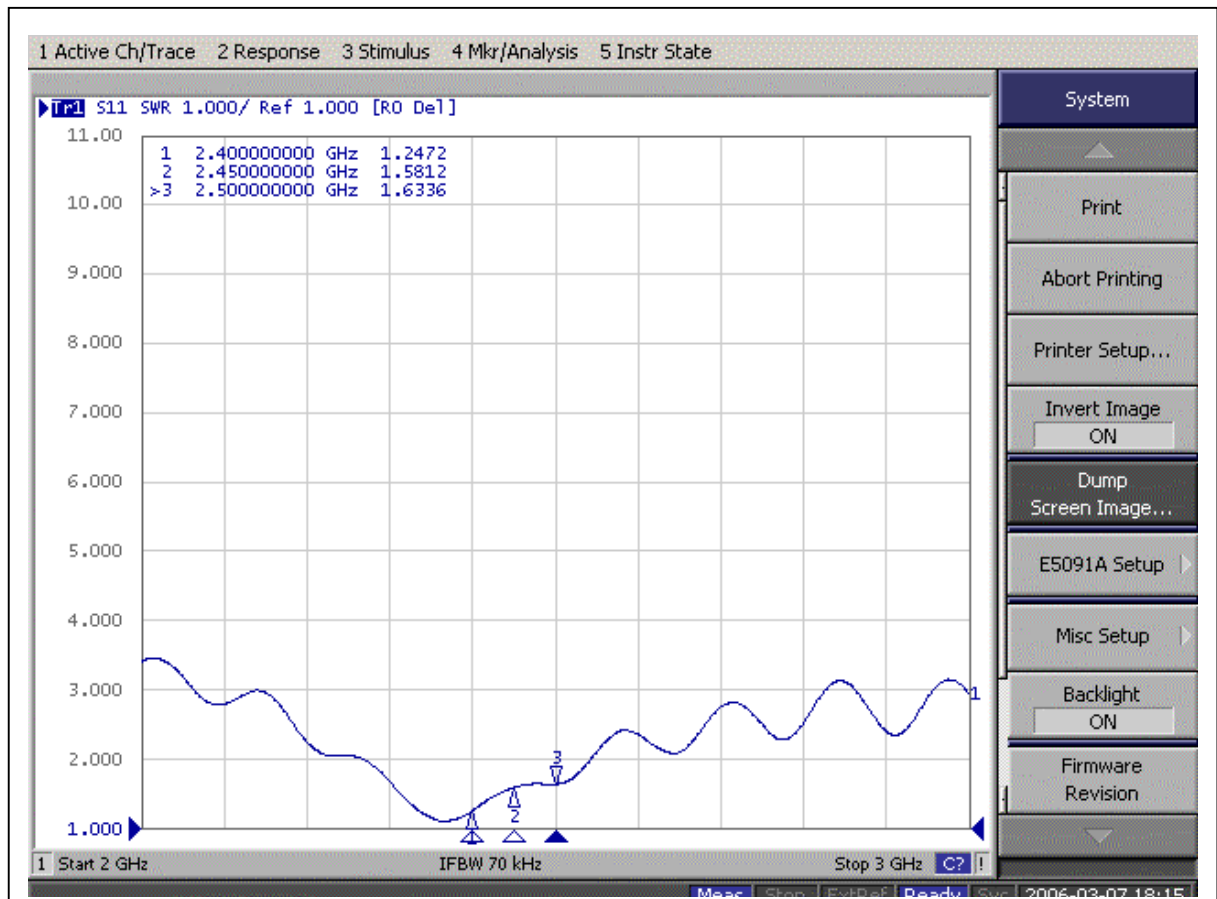


2. WLAN Ant./ (LEFT)

2.4~2.5GHZ / Return Loss

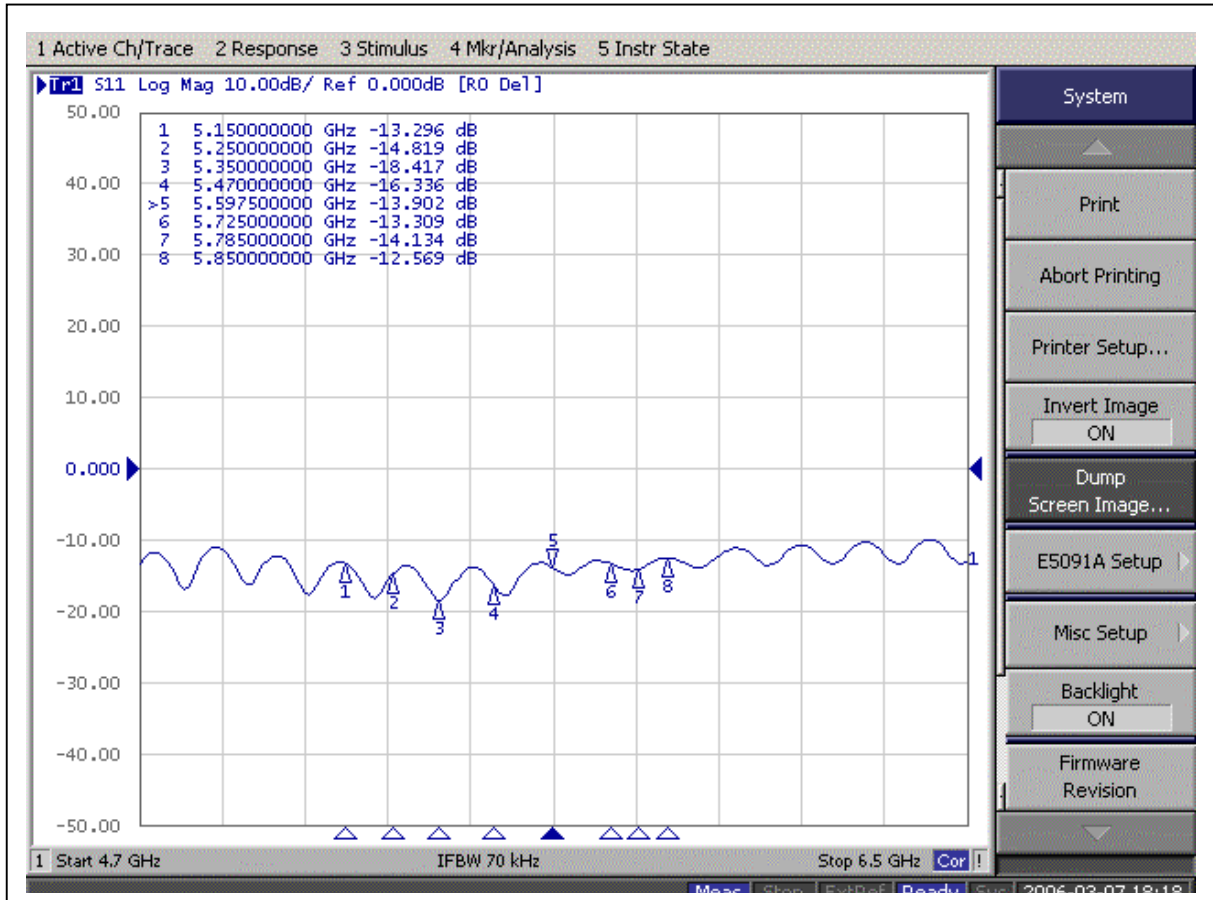


2.4~2.5GHZ / VSWR

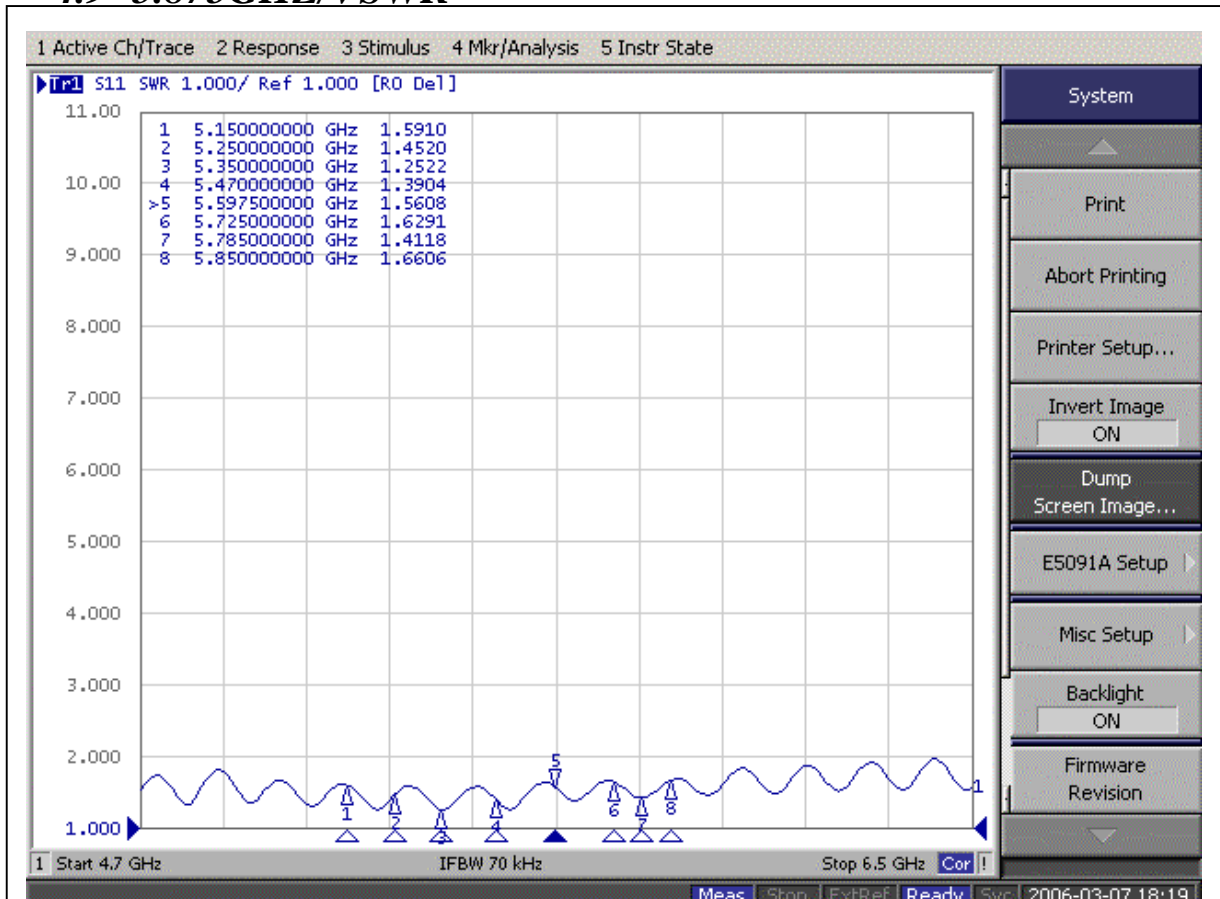


WLAN Ant./ (LEFT)

4.9~5.875GHZ/Return Loss

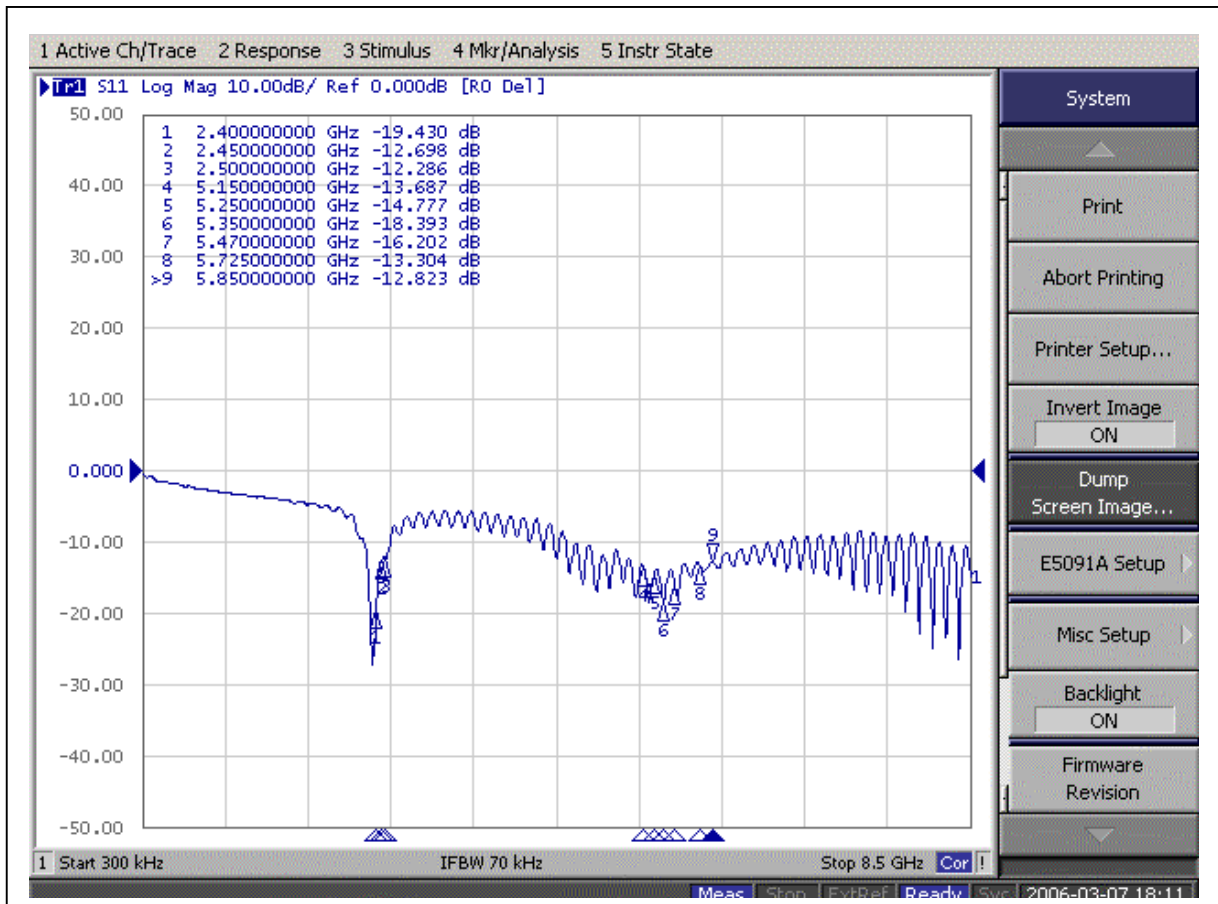


4.9~5.875GHZ/VSWR

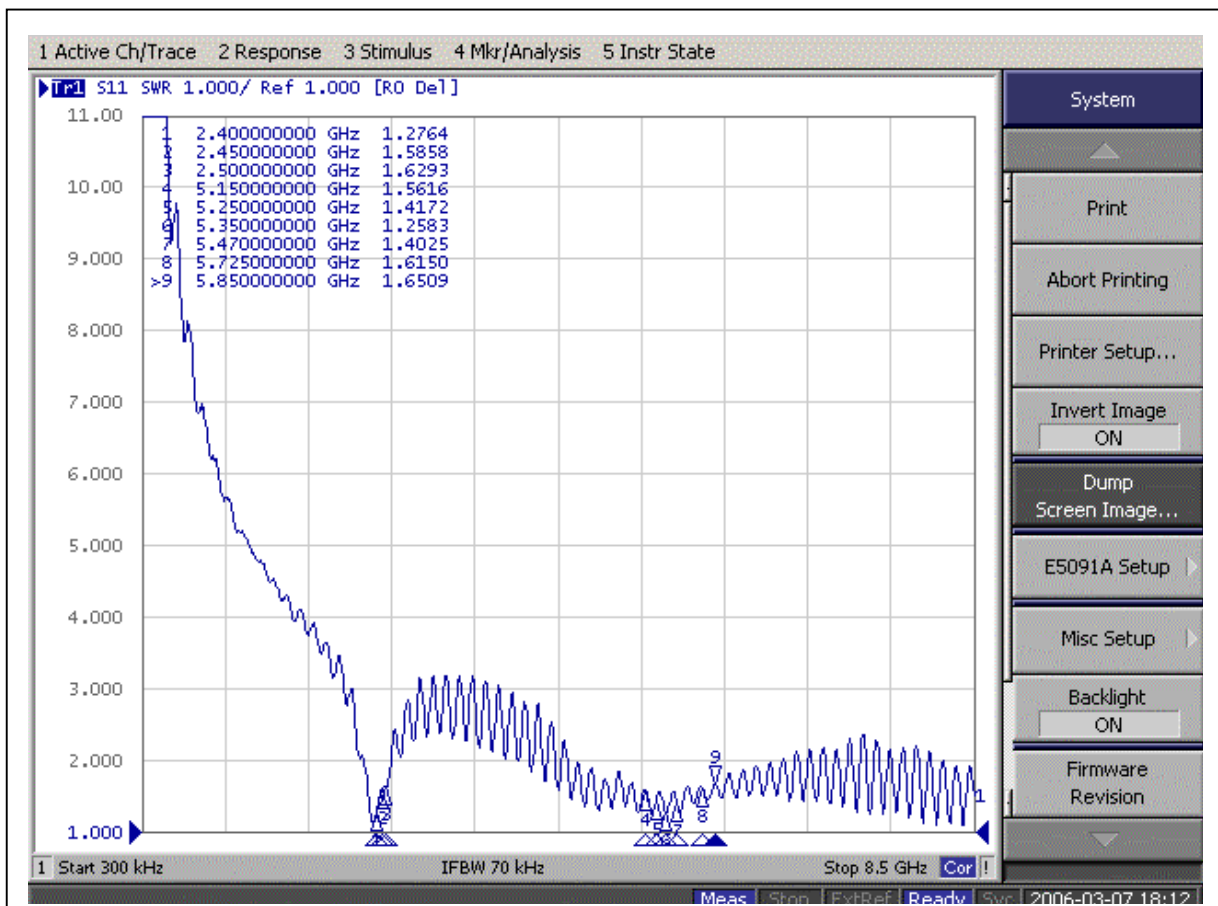


WLAN Ant./ (LEFT)

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



2.4~2.5GHZ & 5.15~5.875GHZ/VSWR



3. Gain & Pattern –LEFT

a. 2.4GHz



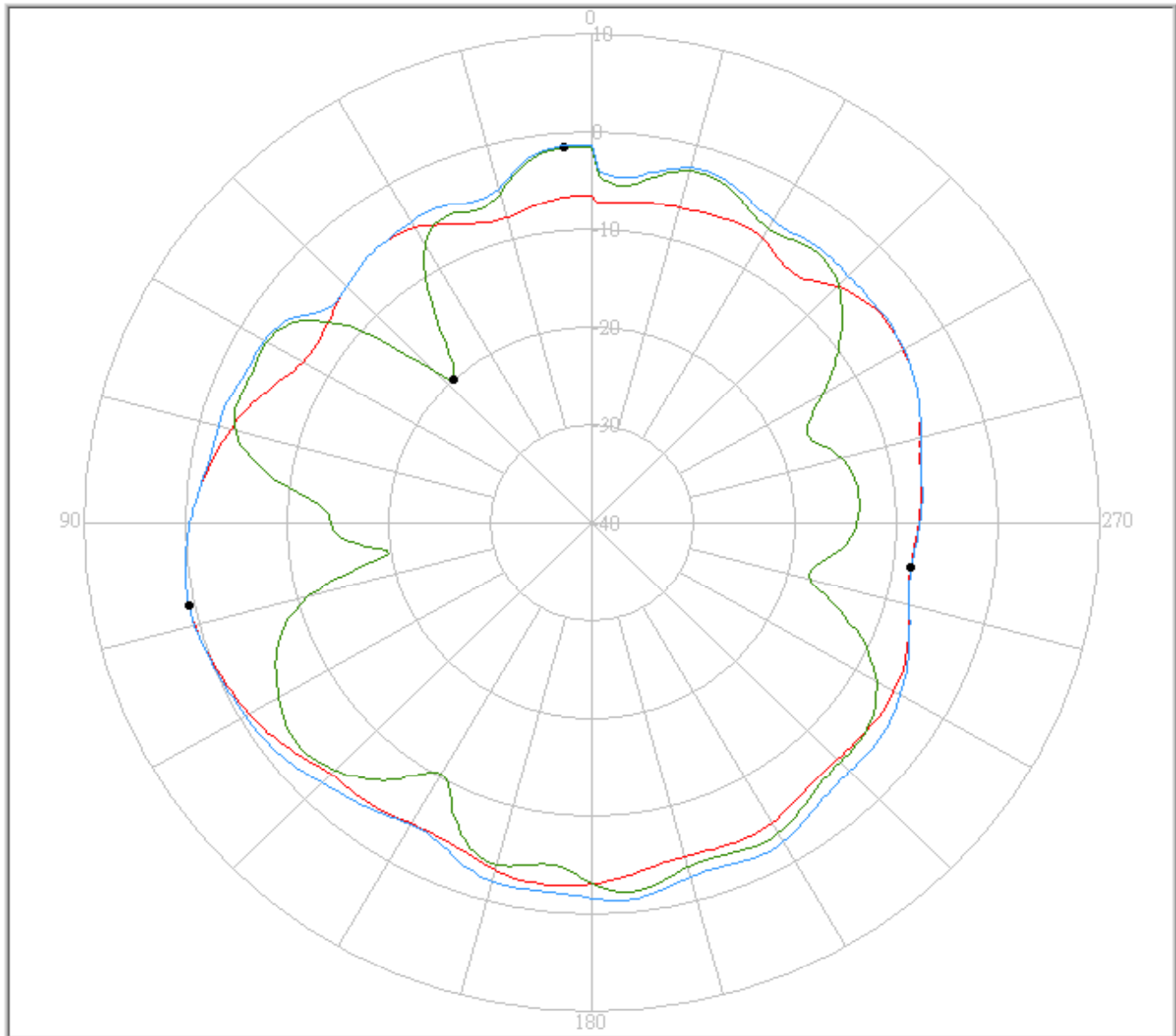
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Antenna Pattern Measurement

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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	L51	LEFT	2400.00	0.52 / 102.00	-8.29 / 262.00	-4.26	Ver.	2006/3/13
2	L51	LEFT	2400.00	-1.54 / 4.00	-19.99 / 43.00	-5.75	Hor.	2006/3/13
3	L51	LEFT	2400.00	0.52 / 102.00	-8.23 / 262.00	-3.03	V+H	2006/3/13

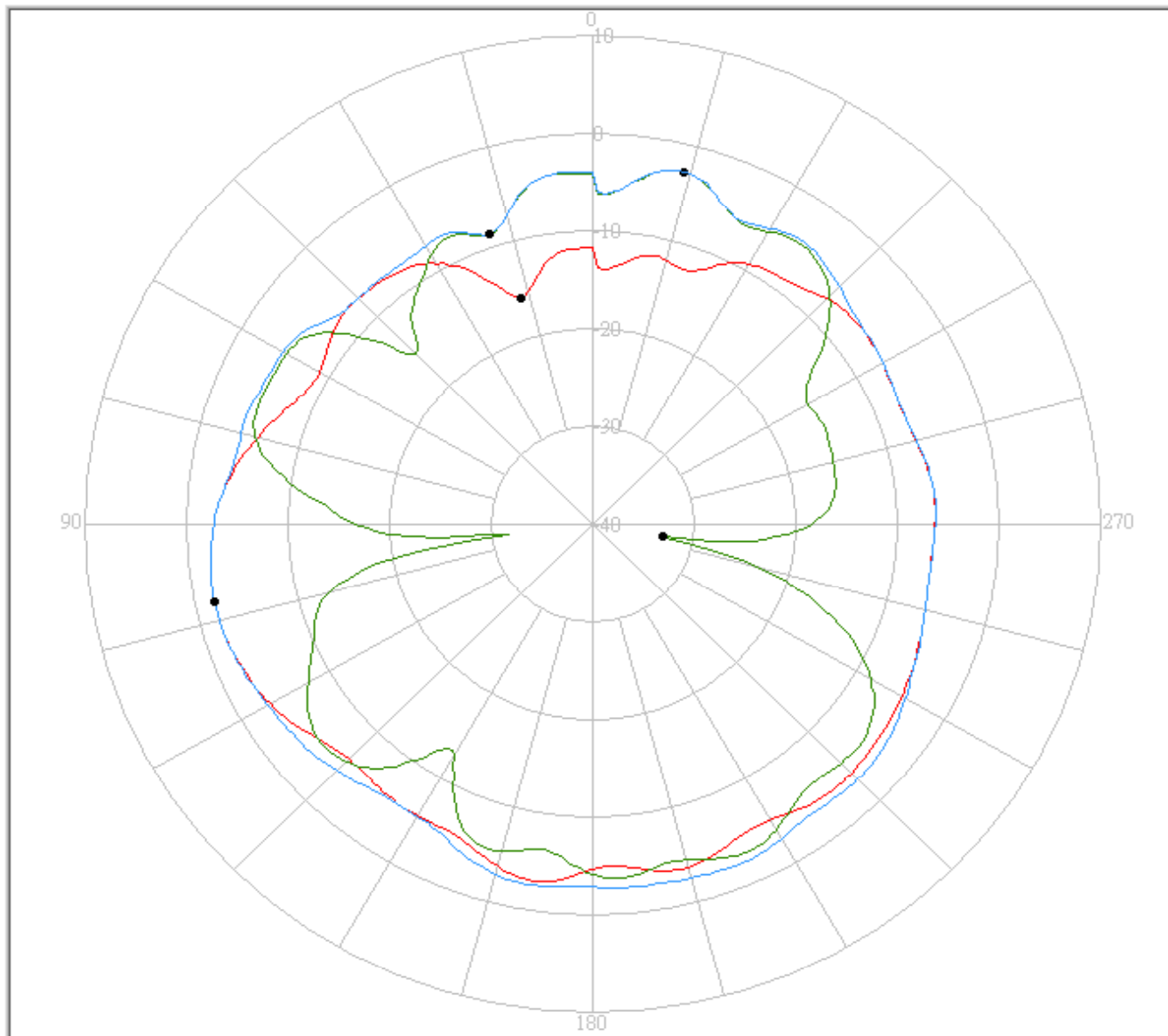
b. 2.45GHz





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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	 L51	LEFT	2450.00	-1.89 / 102.00	-15.79 / 17.00	-5.72	Ver.	2006/3/13
2	 L51	LEFT	2450.00	-2.83 / 346.00	-33.06 / 260.00	-7.02	Hor.	2006/3/13
3	 L51	LEFT	2450.00	-1.89 / 102.00	-8.63 / 19.00	-4.33	V+H	2006/3/13

c. 2.5GHz



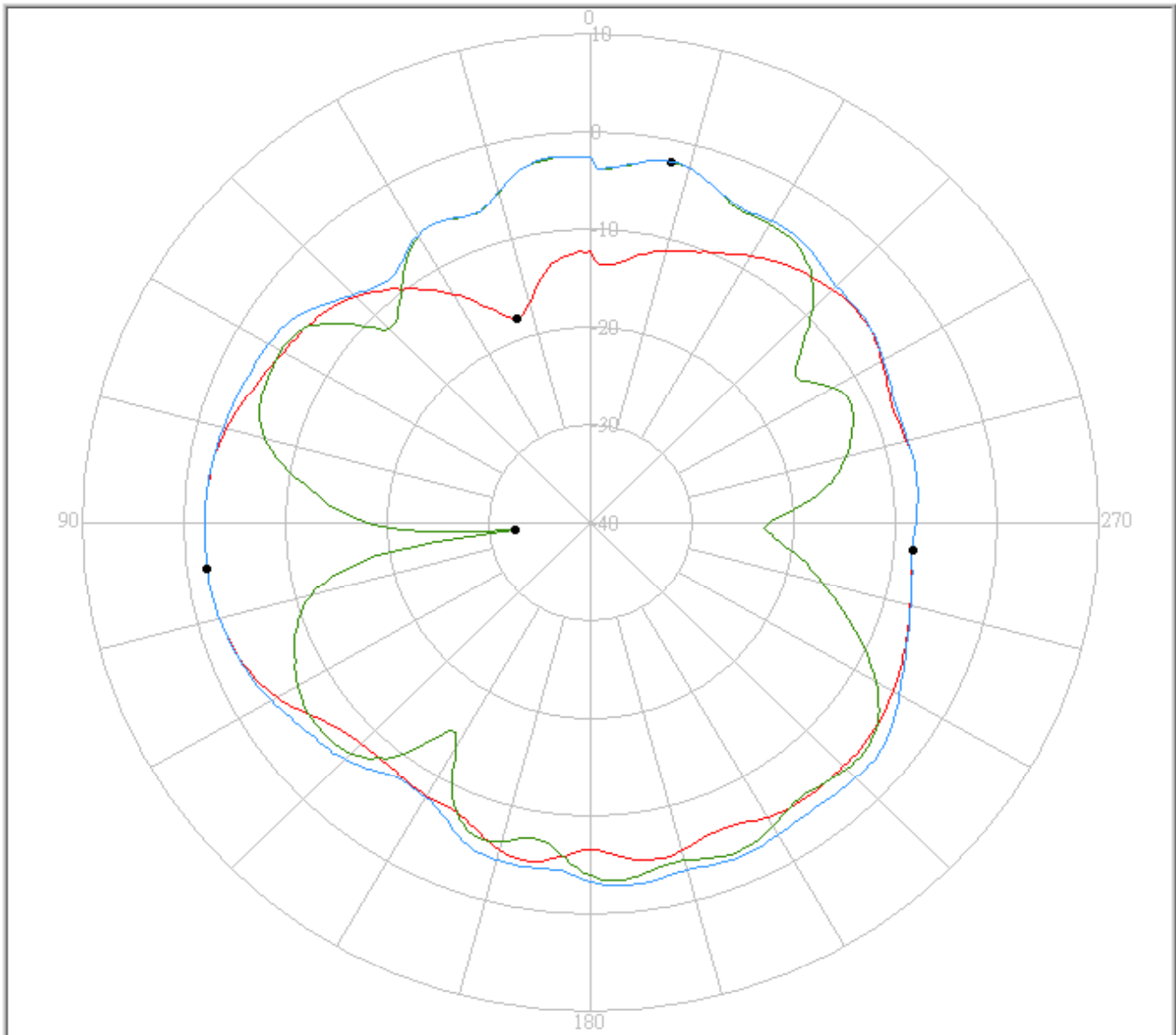
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	LEFT	2500.00	-2.00 / 97.00	-17.89 / 19.00	-6.08	Ver.	2006/3/13
2	L51	LEFT	2500.00	-2.24 / 348.00	-32.57 / 95.00	-6.57	Hor.	2006/3/13
3	L51	LEFT	2500.00	-2.00 / 97.00	-8.23 / 265.00	-4.32	V+H	2006/3/13

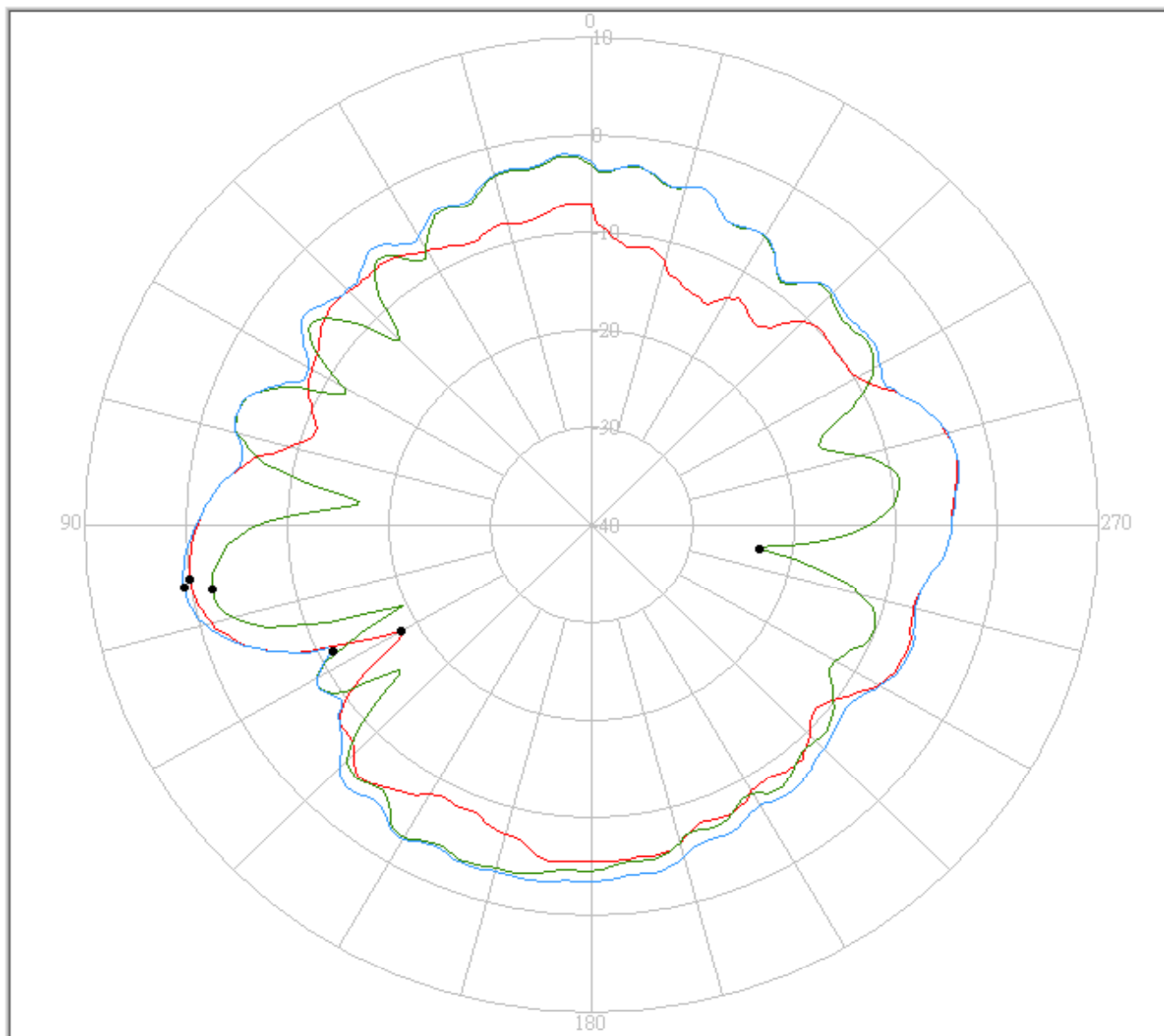
d. 4.9GHz






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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	 L51	LEFT	4900.00	0.01 / 98.00	-18.32 / 120.00	-6.48	Ver.	2006/3/7
2	 L51	LEFT	4900.00	-1.99 / 100.00	-23.22 / 262.00	-6.24	Hor.	2006/3/7
3	 L51	LEFT	4900.00	0.68 / 99.00	-11.45 / 117.00	-4.44	V+H	2006/3/7

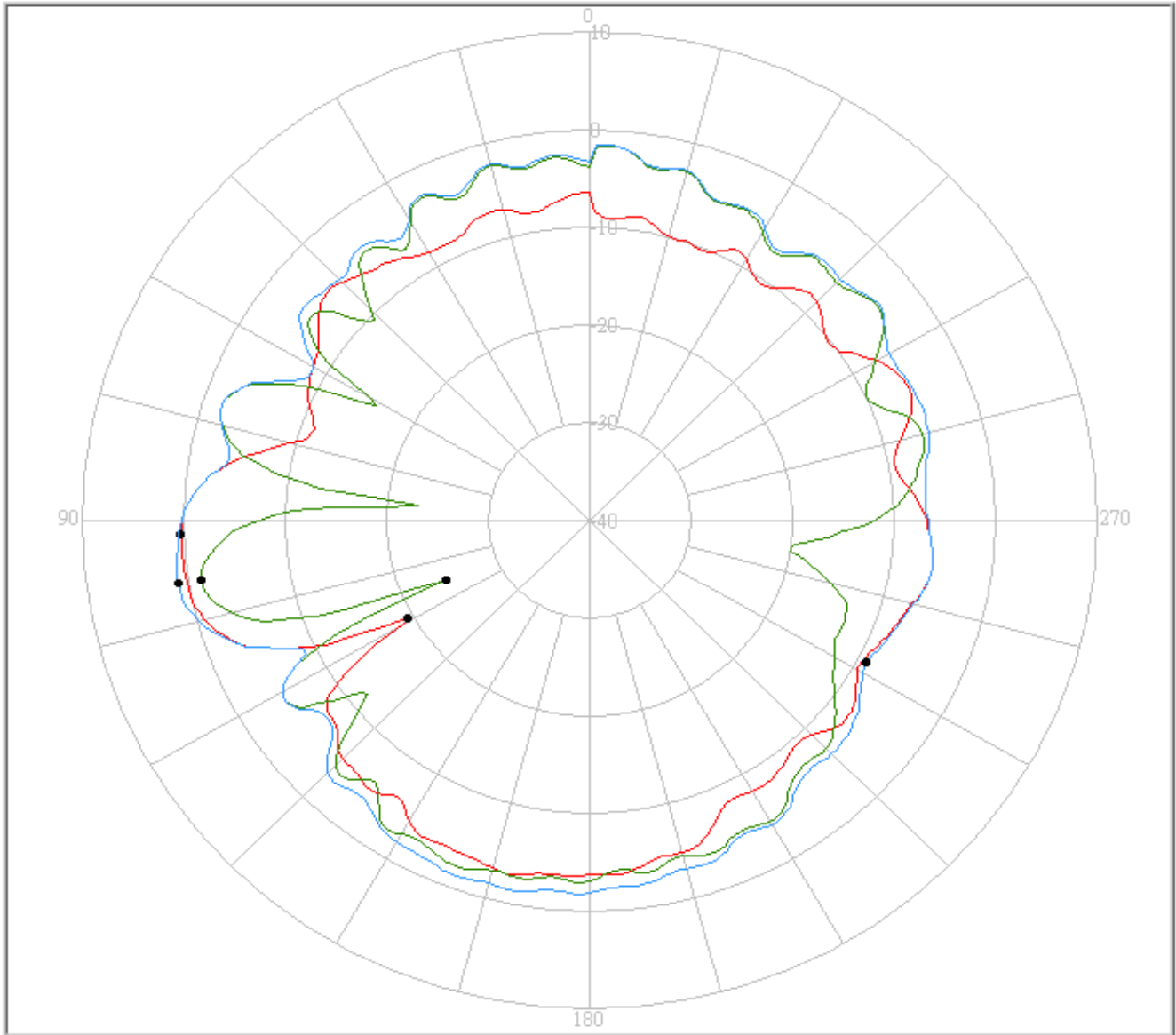
e. 5.075GHz






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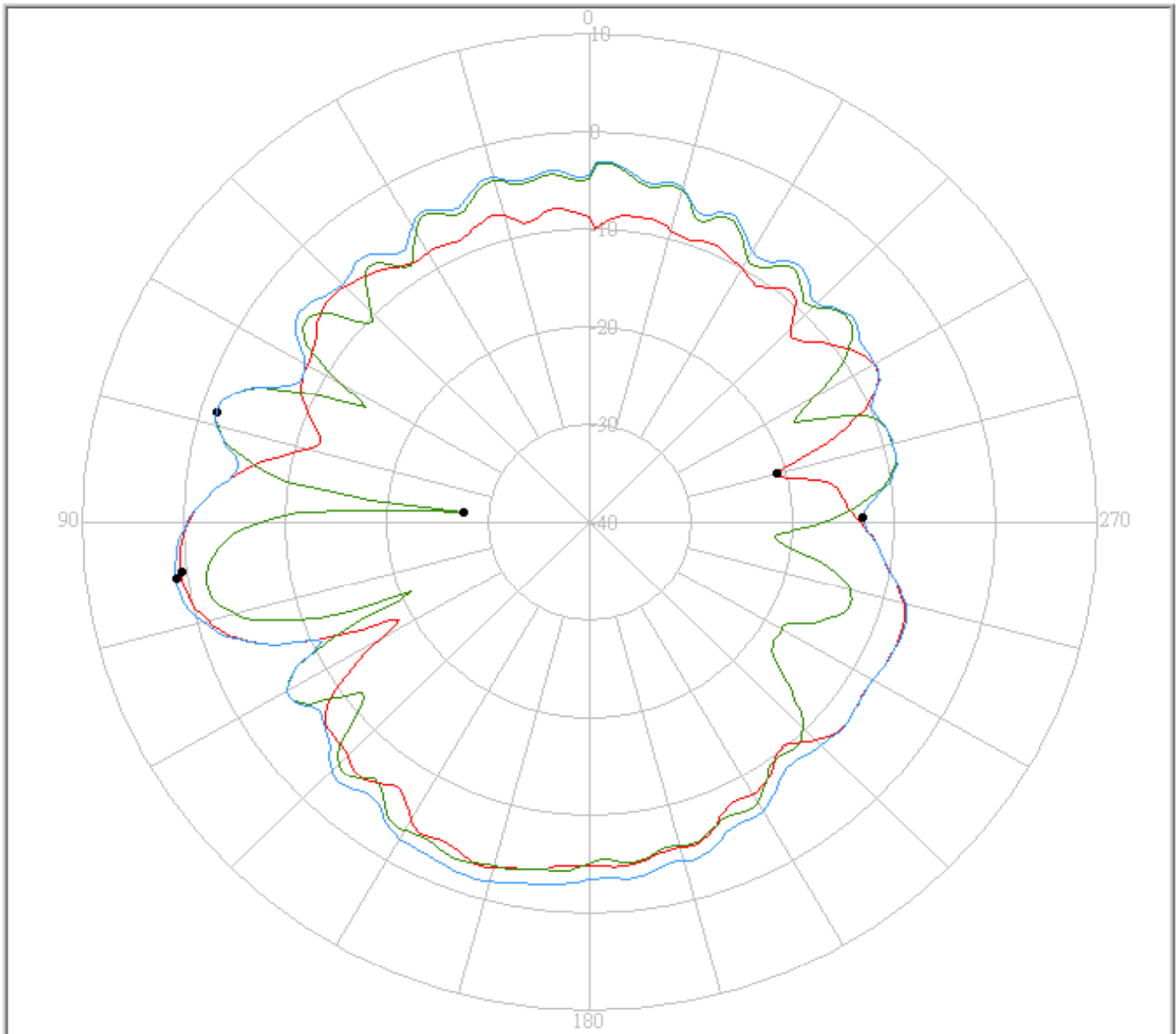
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	 L51	LEFT	5075.00	0.32 / 92.00	-19.54 / 119.00	-5.84	Ver.	2006/3/7
2	 L51	LEFT	5075.00	-1.27 / 99.00	-24.55 / 113.00	-5.19	Hor.	2006/3/7
3	 L51	LEFT	5075.00	1.09 / 99.00	-9.10 / 242.00	-3.67	V+H	2006/3/7




f. 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	 L51	LEFT	5150.00	0.55 / 97.00	-20.91 / 285.00	-6.48	Ver.	2006/3/7
2	 L51	LEFT	5150.00	-1.56 / 73.00	-27.50 / 85.00	-6.46	Hor.	2006/3/7
3	 L51	LEFT	5150.00	1.14 / 98.00	-13.08 / 271.00	-4.66	V+H	2006/3/7

g. 5.25GHz



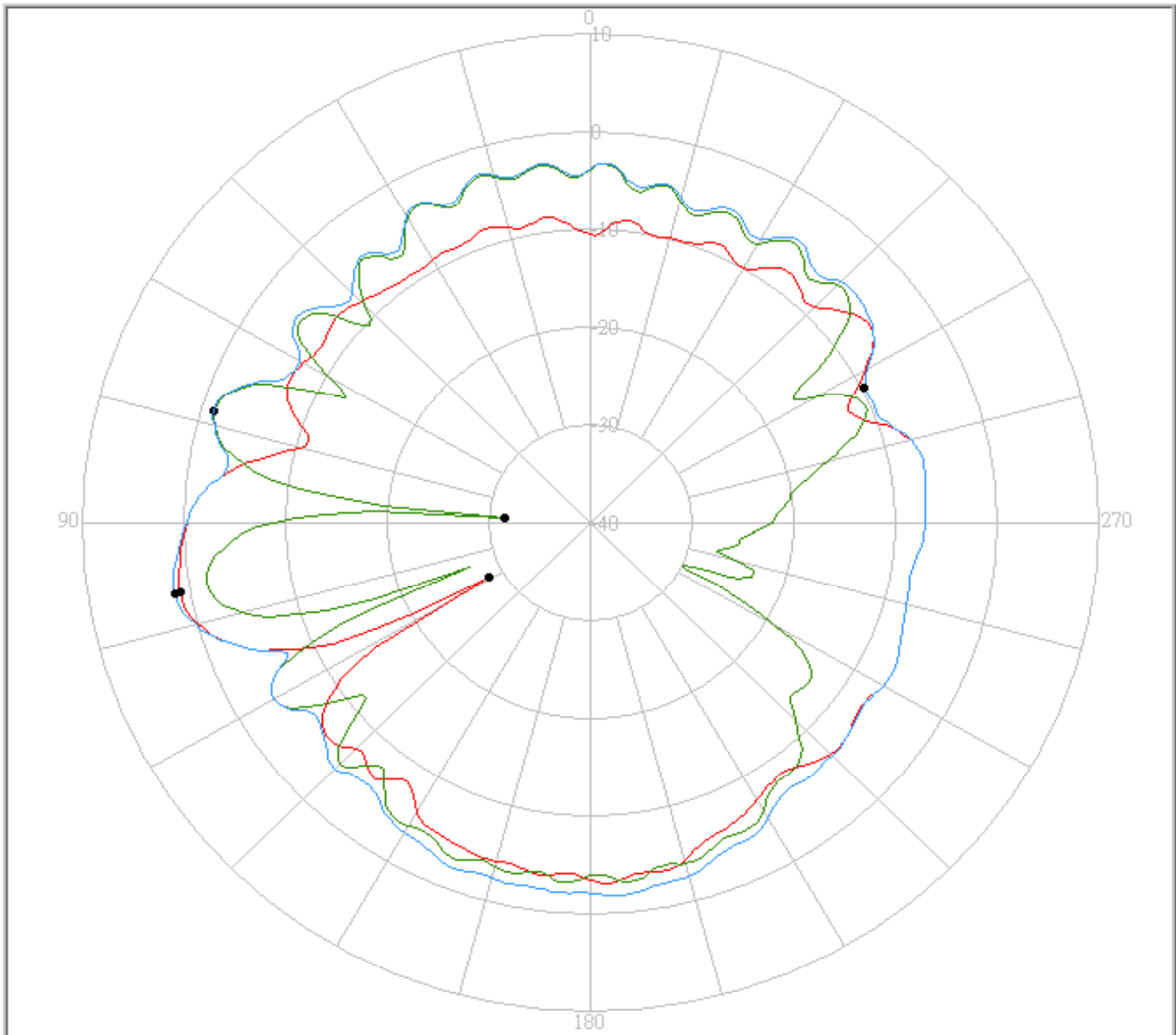
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	LEFT	5250.00	0.99 / 100.00	-28.56 / 119.00	-5.96	Ver.	2006/3/7
2	L51	LEFT	5250.00	-1.28 / 73.00	-31.58 / 86.00	-6.04	Hor.	2006/3/7
3	L51	LEFT	5250.00	1.51 / 100.00	-9.78 / 297.00	-4.09	V+H	2006/3/7

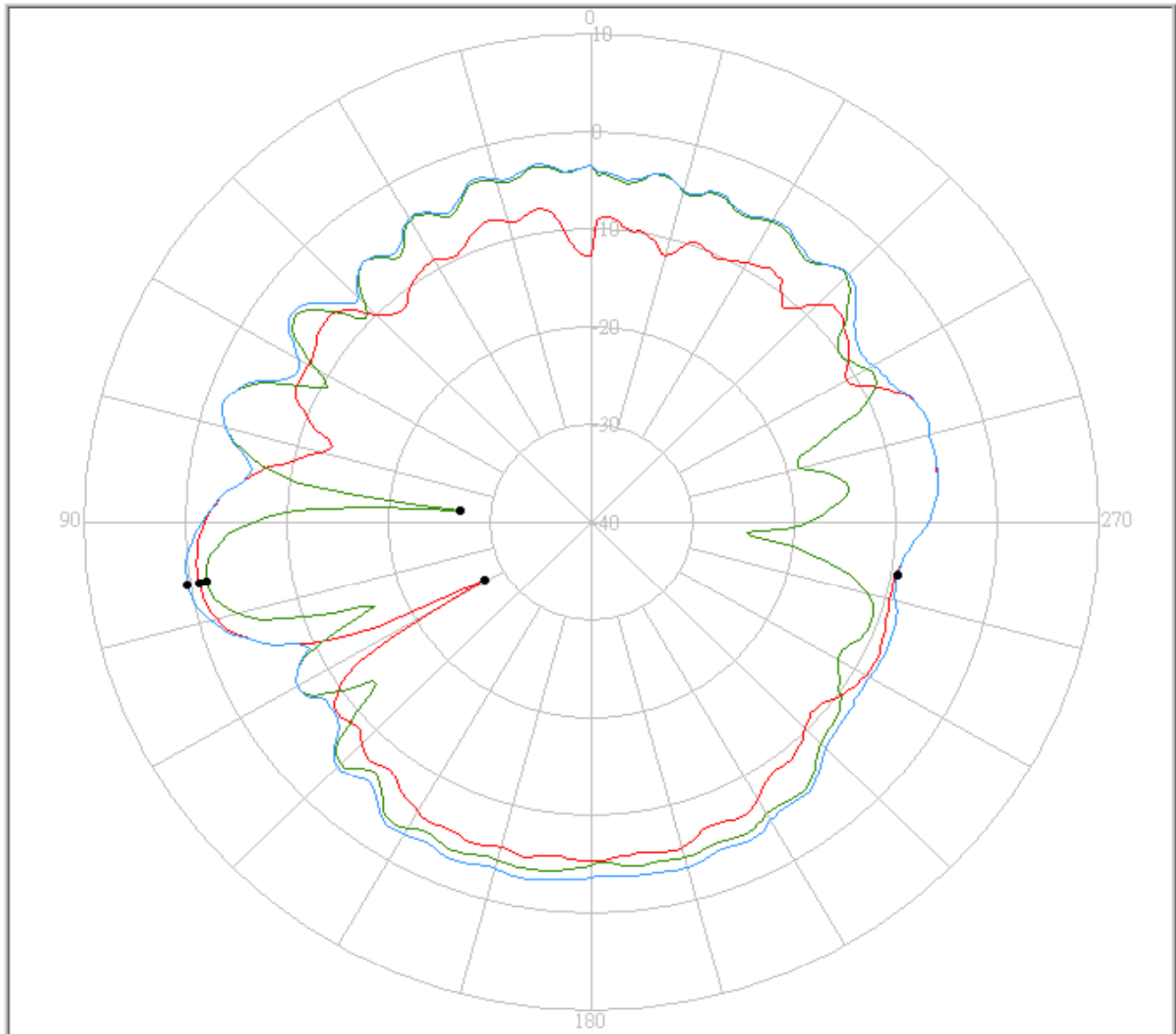
Hz. 5.35GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	LEFT	5350.00	-0.87 / 99.00	-27.89 / 119.00	-7.01	Ver.	2006/3/7
2	L51	LEFT	5350.00	-1.59 / 99.00	-27.04 / 85.00	-5.85	Hor.	2006/3/7
3	L51	LEFT	5350.00	0.31 / 99.00	-9.43 / 260.00	-4.54	V+H	2006/3/7

i. 5.47GHz



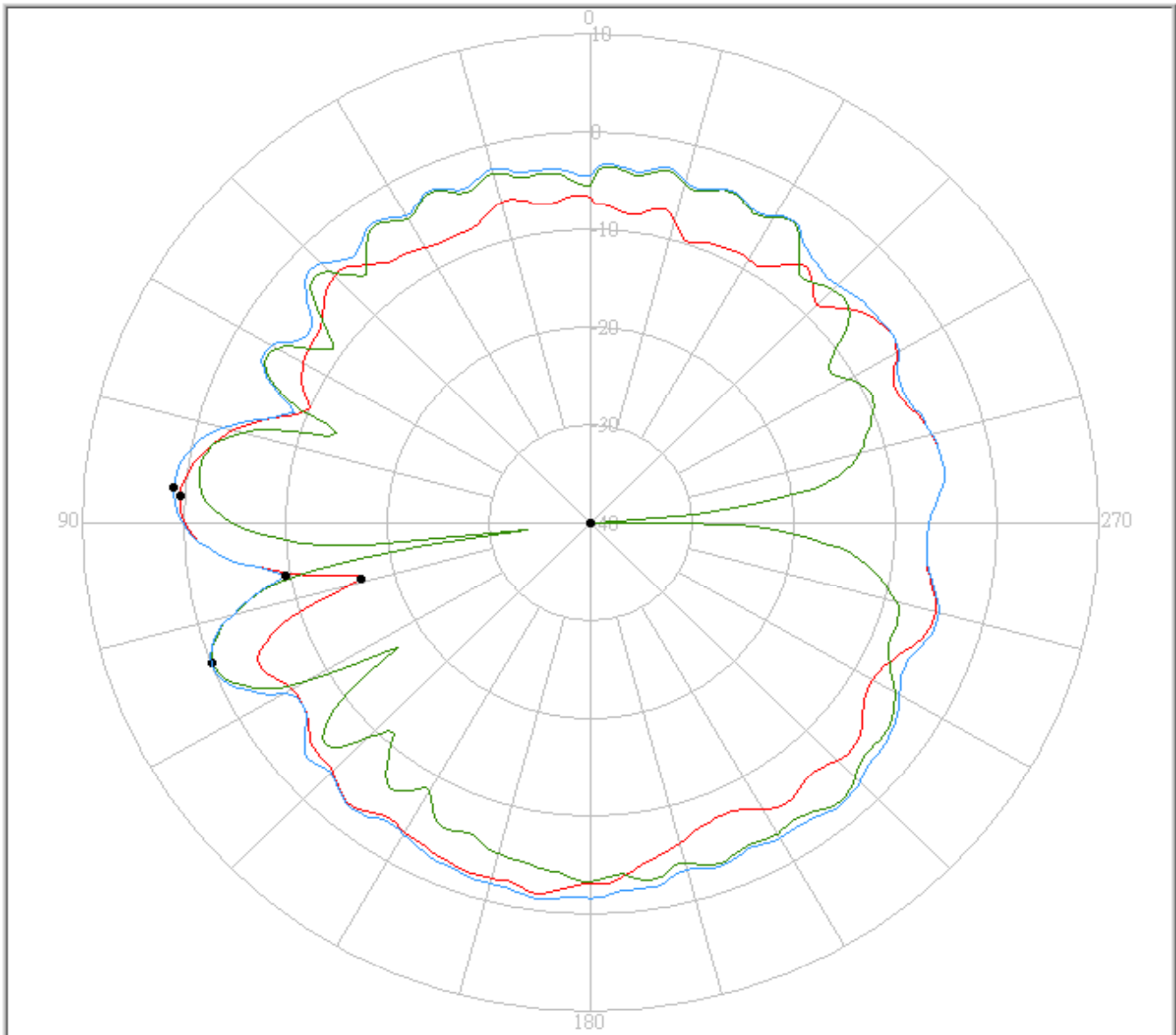
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	 L51	LEFT	5470.00	0.46 / 86.00	-16.73 / 104.00	-5.19	Ver.	2006/3/7
2	 L51	LEFT	5470.00	-0.19 / 111.00	-41.11 / 272.00	-5.03	Hor.	2006/3/7
3	 L51	LEFT	5470.00	1.16 / 85.00	-9.60 / 100.00	-3.29	V+H	2006/3/7

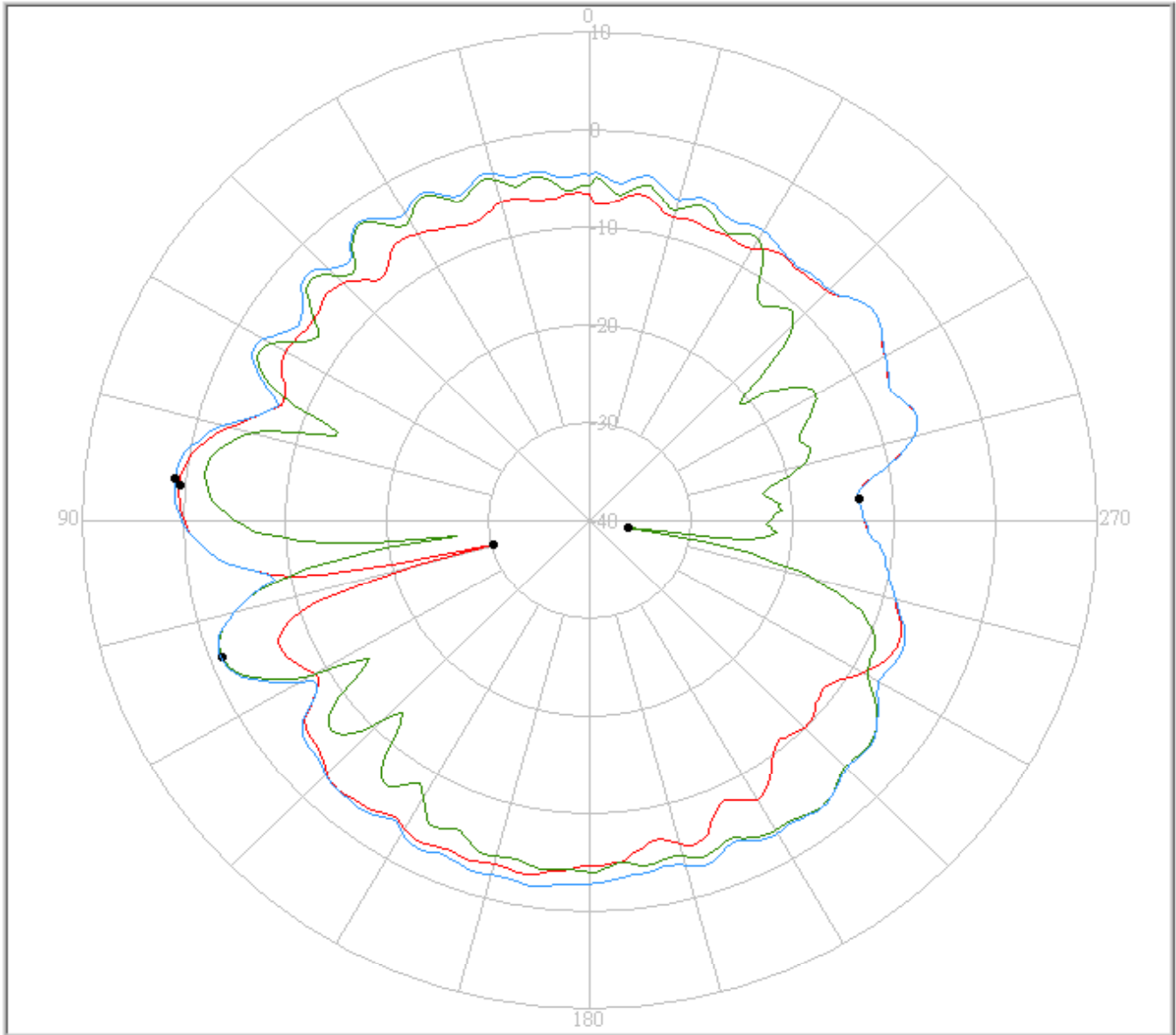
j. 5.597GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	LEFT	5597.50	0.57 / 85.00	-30.28 / 104.00	-5.76	Ver.	2006/3/7
2	L51	LEFT	5597.50	-1.19 / 111.00	-36.07 / 260.00	-5.91	Hor.	2006/3/7
3	L51	LEFT	5597.50	1.13 / 84.00	-13.42 / 275.00	-3.99	V+H	2006/3/7

k. 5.725GHz



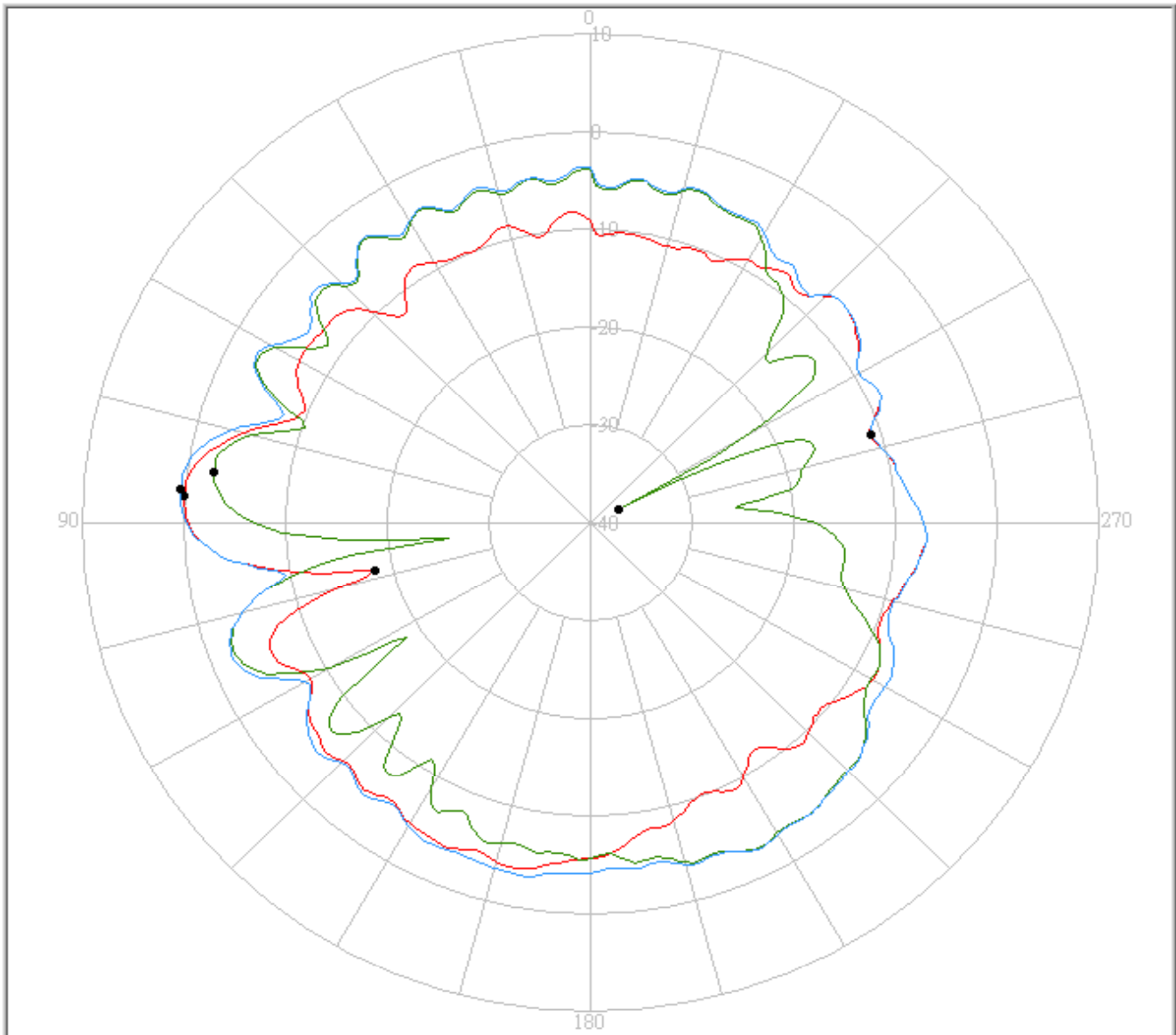
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	 L51	LEFT	5725.00	0.09 / 86.00	-18.31 / 103.00	-6.94	Ver.	2006/3/7
2	 L51	LEFT	5725.00	-2.56 / 82.00	-36.96 / 298.00	-6.36	Hor.	2006/3/7
3	 L51	LEFT	5725.00	0.47 / 85.00	-10.98 / 288.00	-4.70	V+H	2006/3/7

1. 5.785GHz



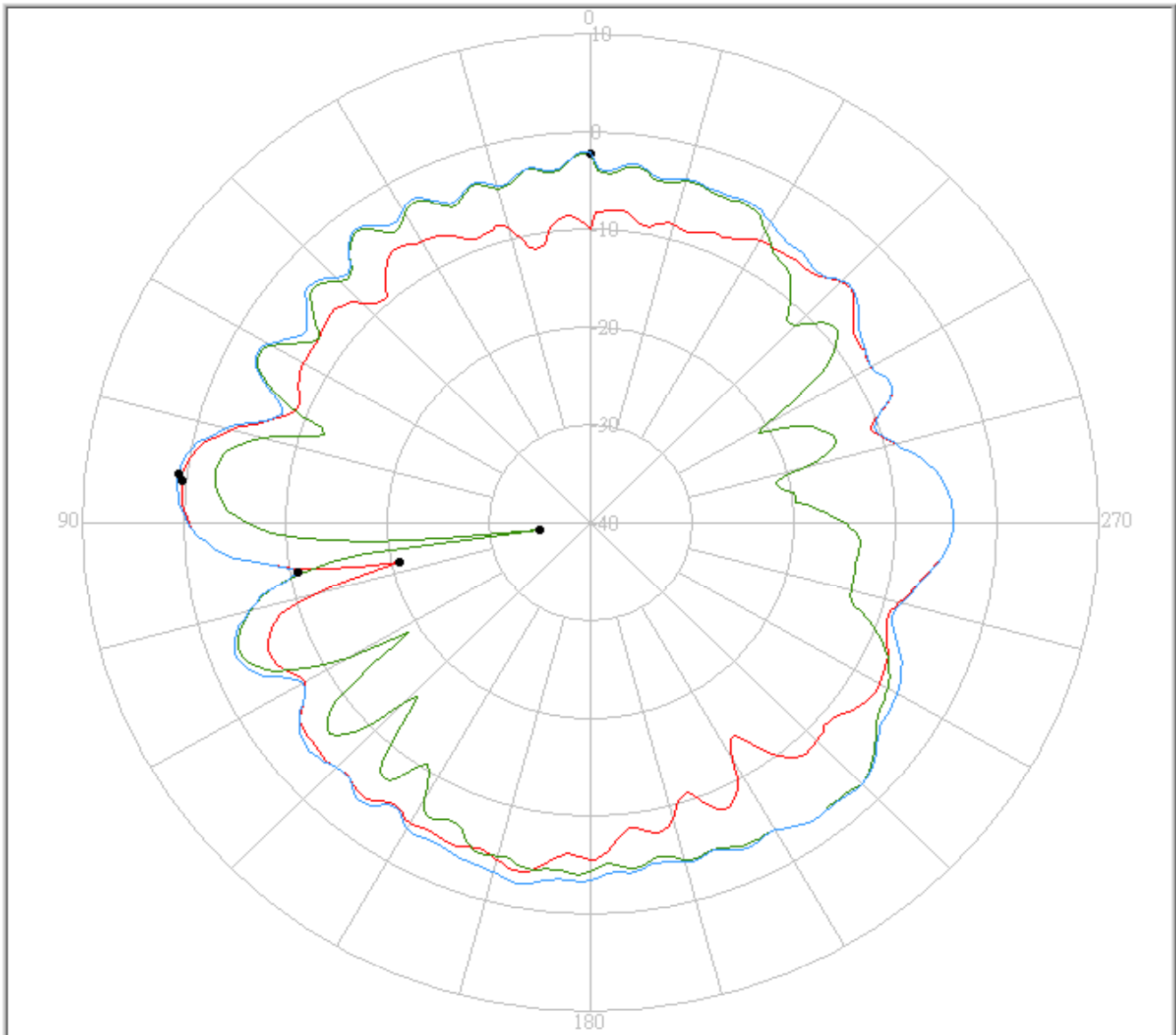
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	LEFT	5785.00	0.45 / 84.00	-20.74 / 102.00	-6.22	Ver.	2006/3/7
2	L51	LEFT	5785.00	-2.17 / 0.00	-34.90 / 97.00	-5.68	Hor.	2006/3/7
3	L51	LEFT	5785.00	0.86 / 83.00	-10.75 / 100.00	-4.01	V+H	2006/3/7

m. 5.85GHz



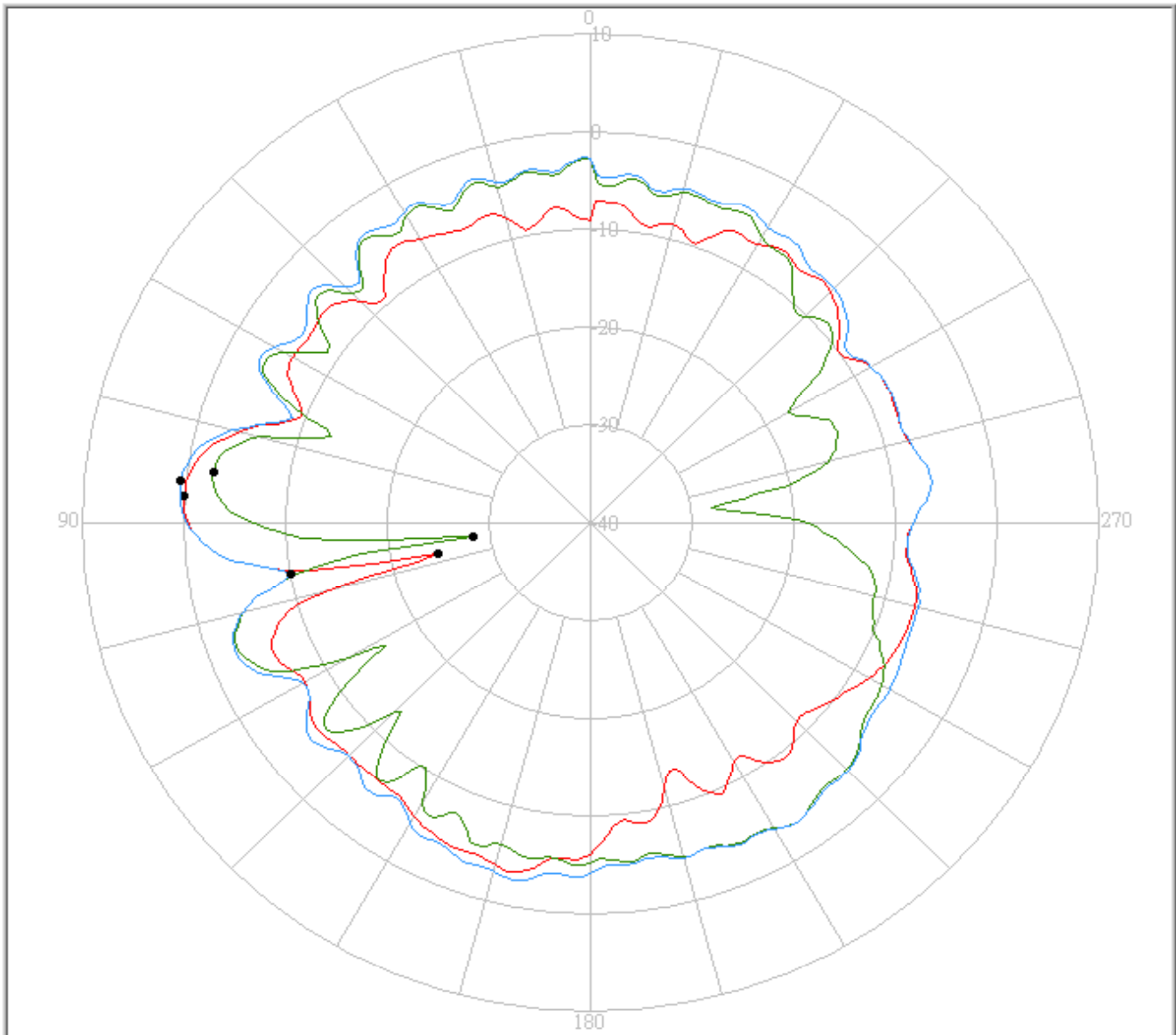
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	LEFT	5850.00	0.06 / 86.00	-24.75 / 102.00	-6.61	Ver.	2006/3/7
2	L51	LEFT	5850.00	-2.50 / 82.00	-28.40 / 97.00	-6.25	Hor.	2006/3/7
3	L51	LEFT	5850.00	0.51 / 84.00	-10.03 / 100.00	-4.57	V+H	2006/3/7

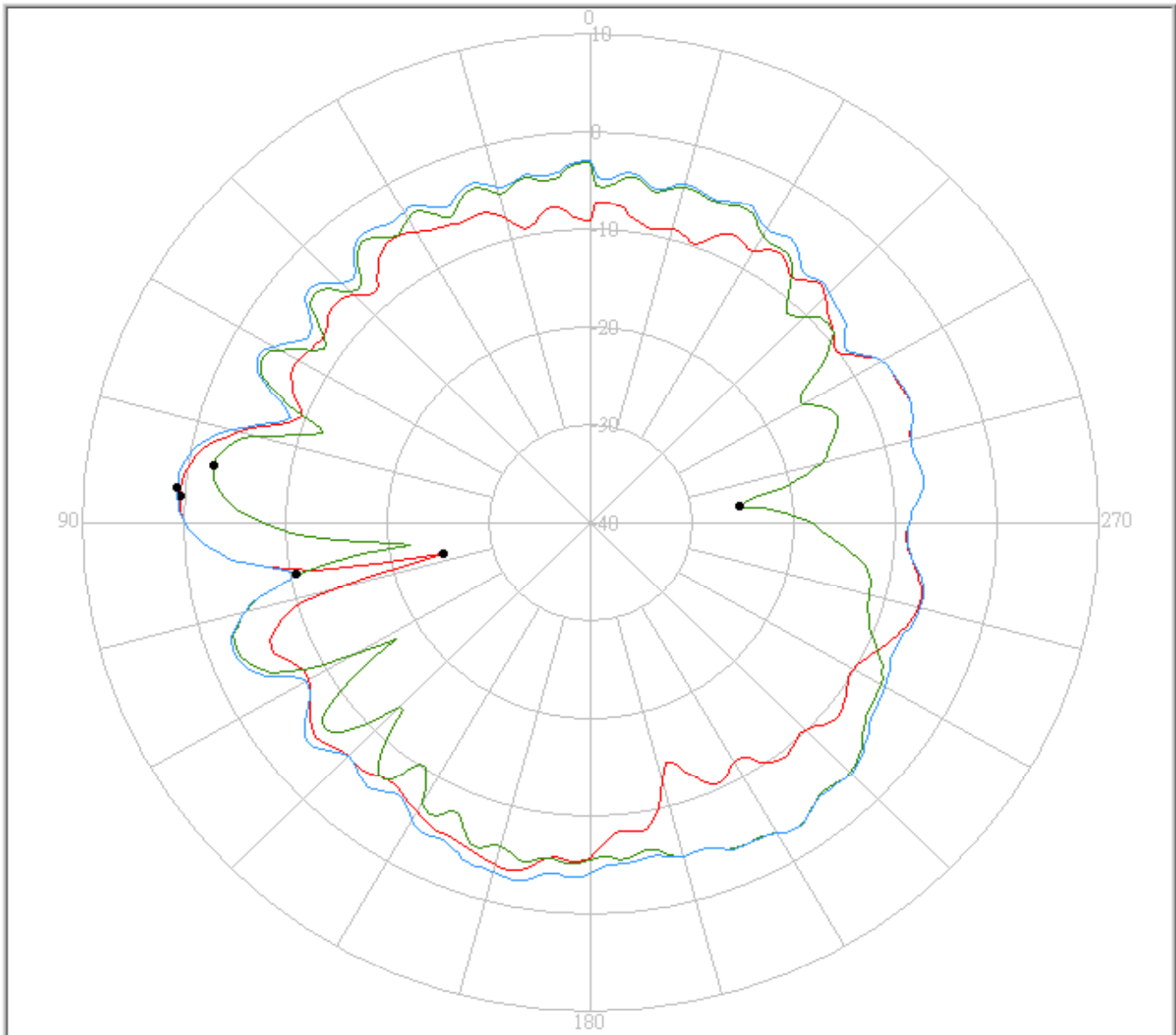
n. 5.875GHz



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Antenna Pattern Measurement

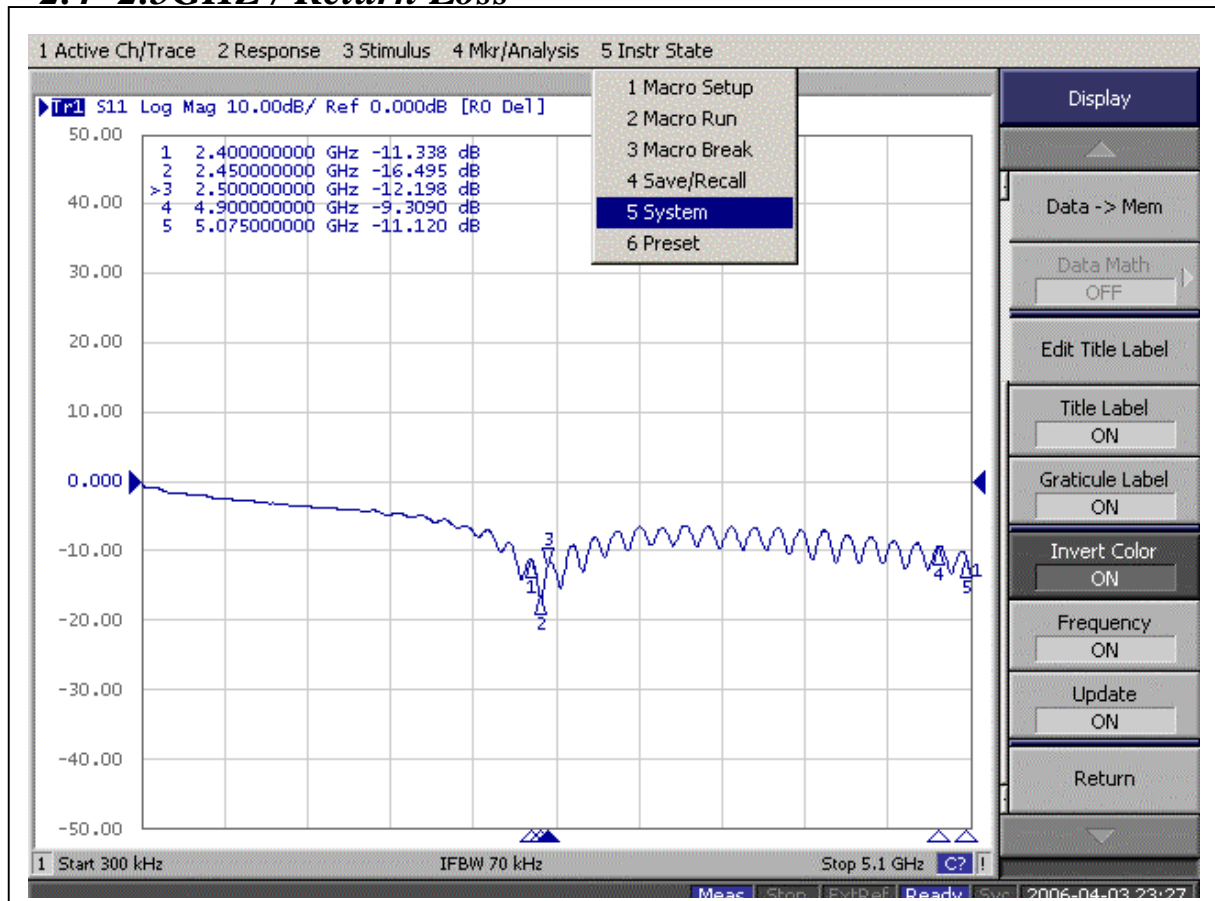
4F, No. 108-1, Min Chuan Rd., Hsin-Tien City, Taipei, Taiwan, R.O.C. Tel:886-2-2218-2189,
Fax:886-2-2218-5760



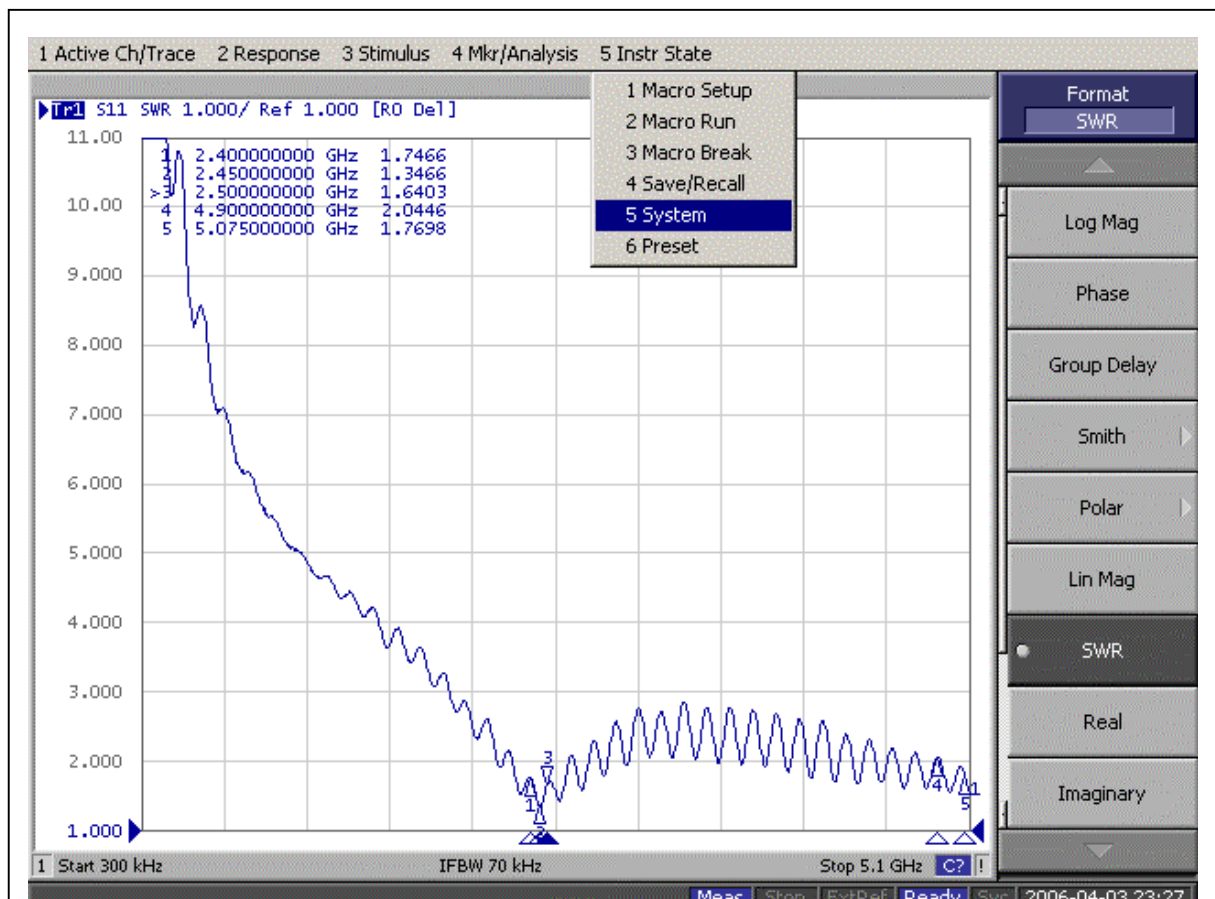
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	LEFT	5875.00	0.47 / 86.00	-25.15 / 102.00	-6.57	Ver.	2006/3/7
2	L51	LEFT	5875.00	-2.52 / 81.00	-25.18 / 277.00	-6.21	Hor.	2006/3/7
3	L51	LEFT	5875.00	0.78 / 85.00	-10.66 / 100.00	-4.52	V+H	2006/3/7

4. WLAN Ant./ (RIGHT)

2.4~2.5GHZ / Return Loss

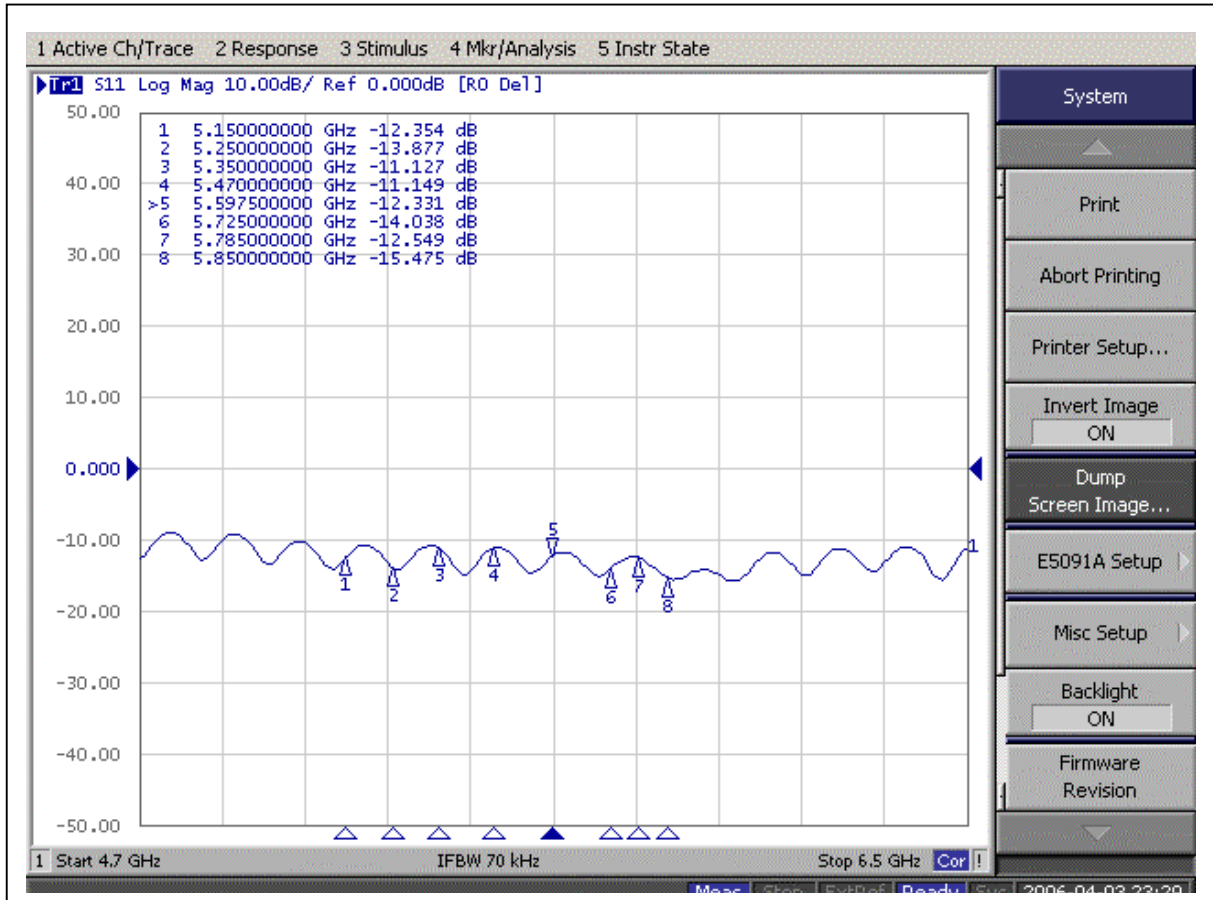


2.4~2.5GHZ / VSWR

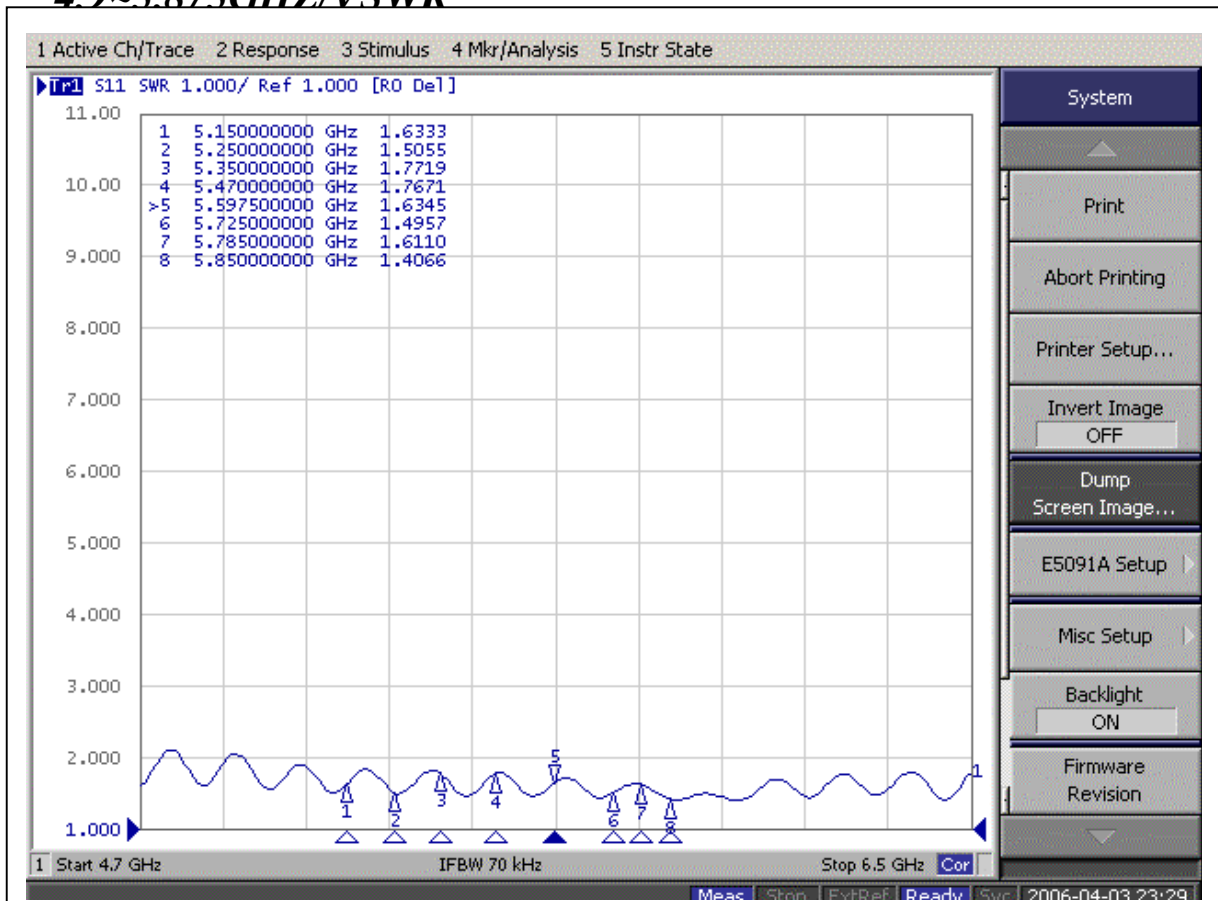


WLAN Ant./ (RIGHT)

4.9~5.875GHZ/Return Loss

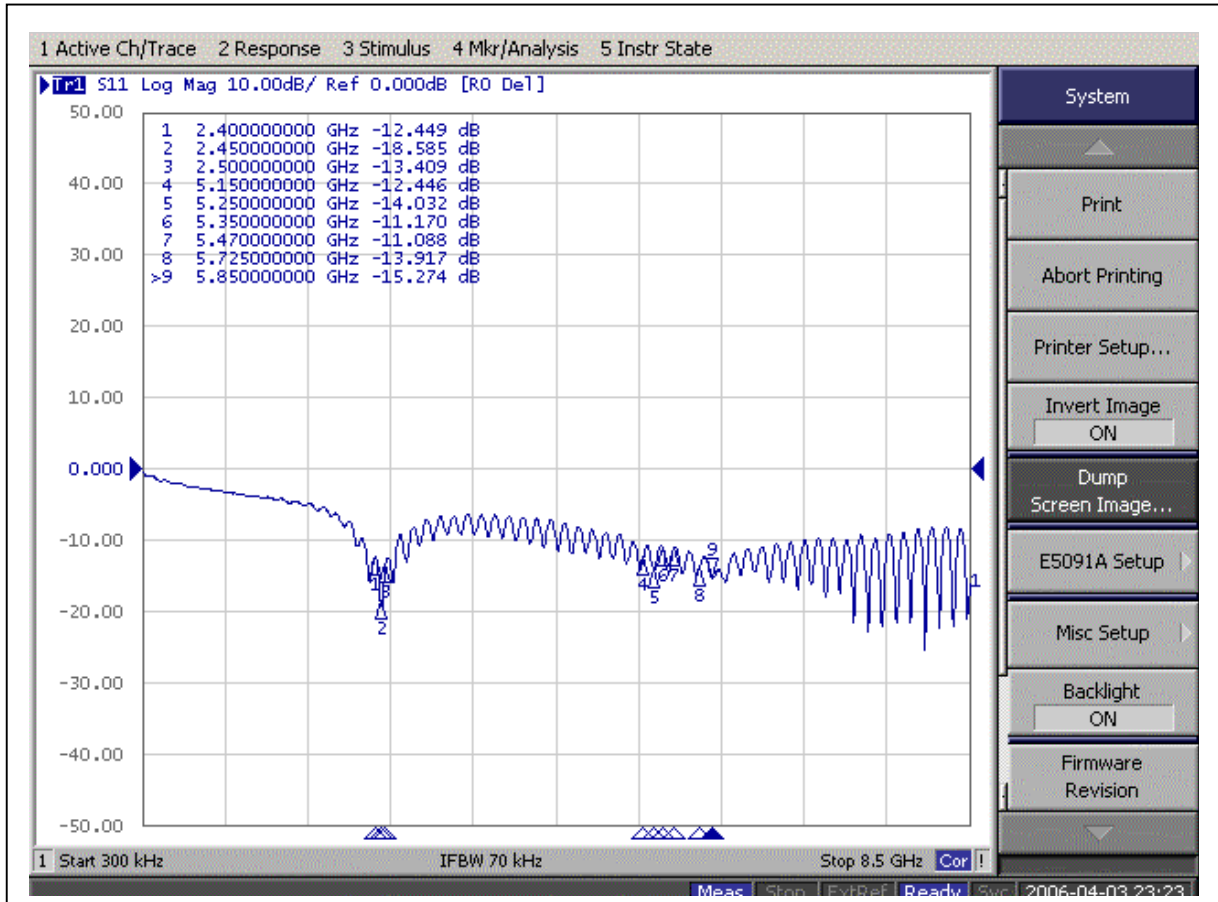


4.9~5.875GHZ/VSWR

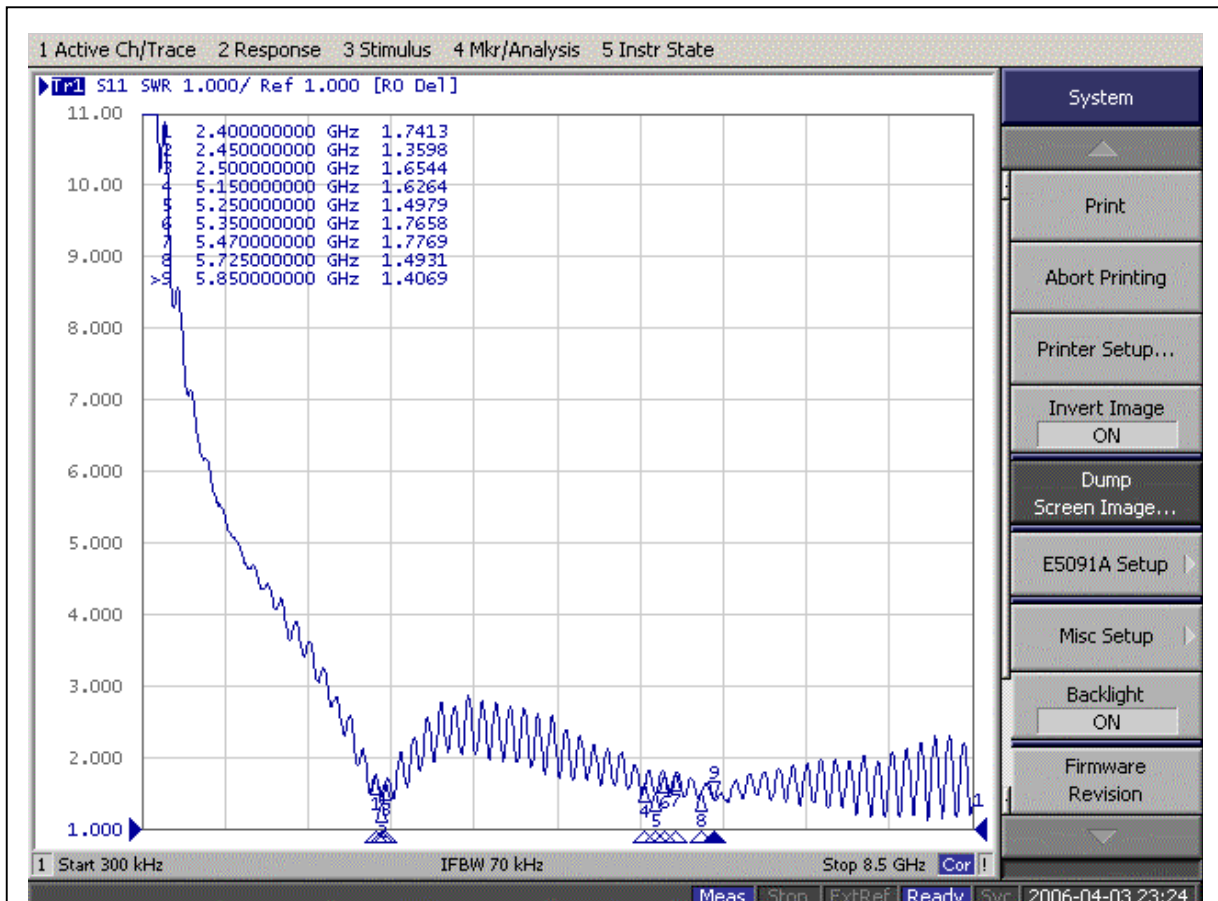


WLAN Ant./ (RIGHT)

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



2.4~2.5GHZ & 5.15~5.875GHZ/VSWR



5. Gain & Pattern –RIGHT

a. 2.4GHz



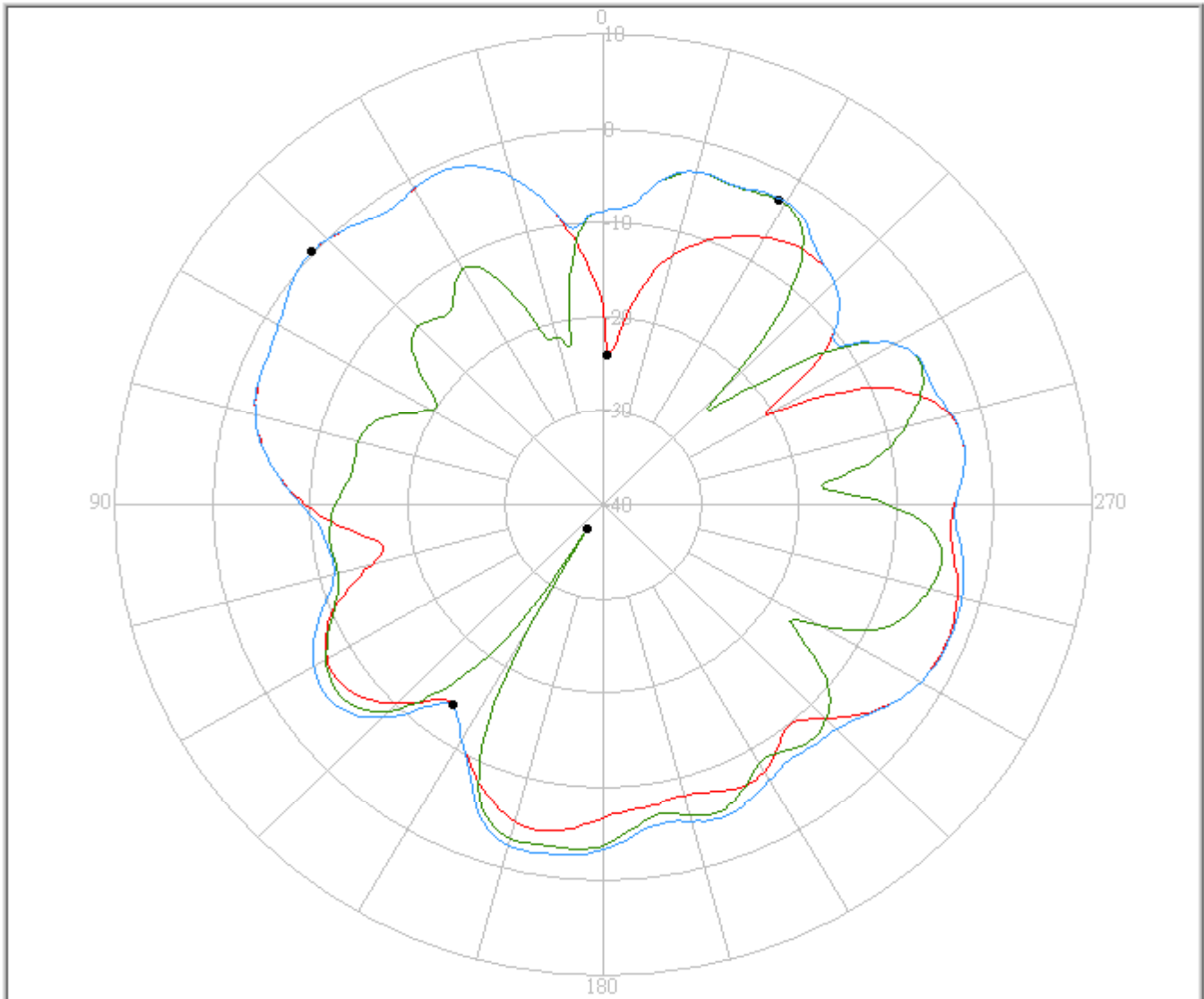
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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	Right	2400.00	0.15 / 48.00	-24.08 / 359.00	-5.16	Ver.	2006/4/3
2	L51	Right	2400.00	-2.97 / 331.00	-36.91 / 148.00	-7.88	Hor.	2006/4/3
3	L51	Right	2400.00	0.16 / 48.00	-13.73 / 144.00	-4.08	V+H	2006/4/3

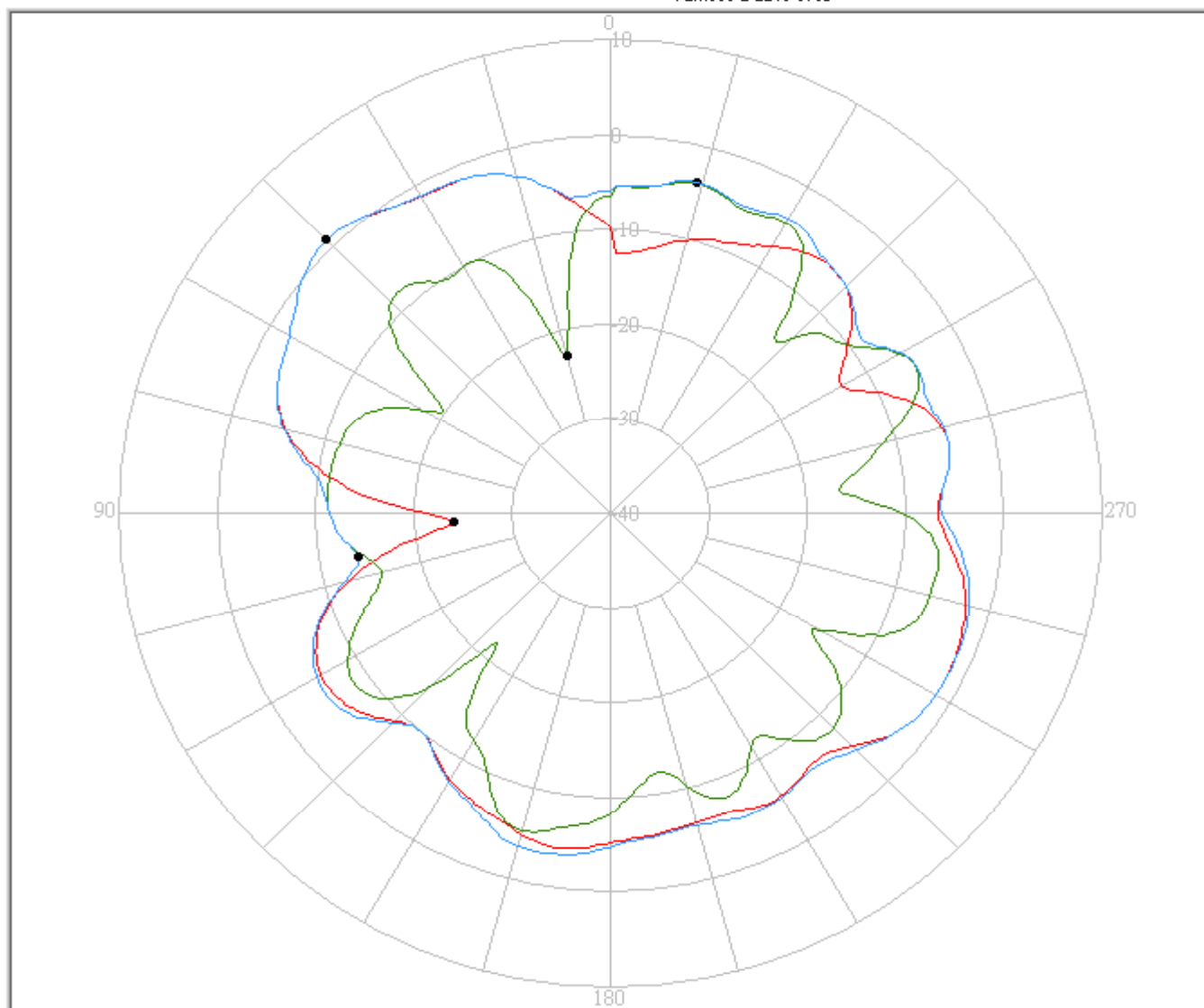
b. 2.45GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	Right	2450.00	0.84 / 45.00	-24.09 / 93.00	-4.90	Ver.	2006/4/3
2	L51	Right	2450.00	-4.00 / 346.00	-22.68 / 15.00	-8.96	Hor.	2006/4/3
3	L51	Right	2450.00	0.87 / 45.00	-14.02 / 100.00	-4.27	V+H	2006/4/3

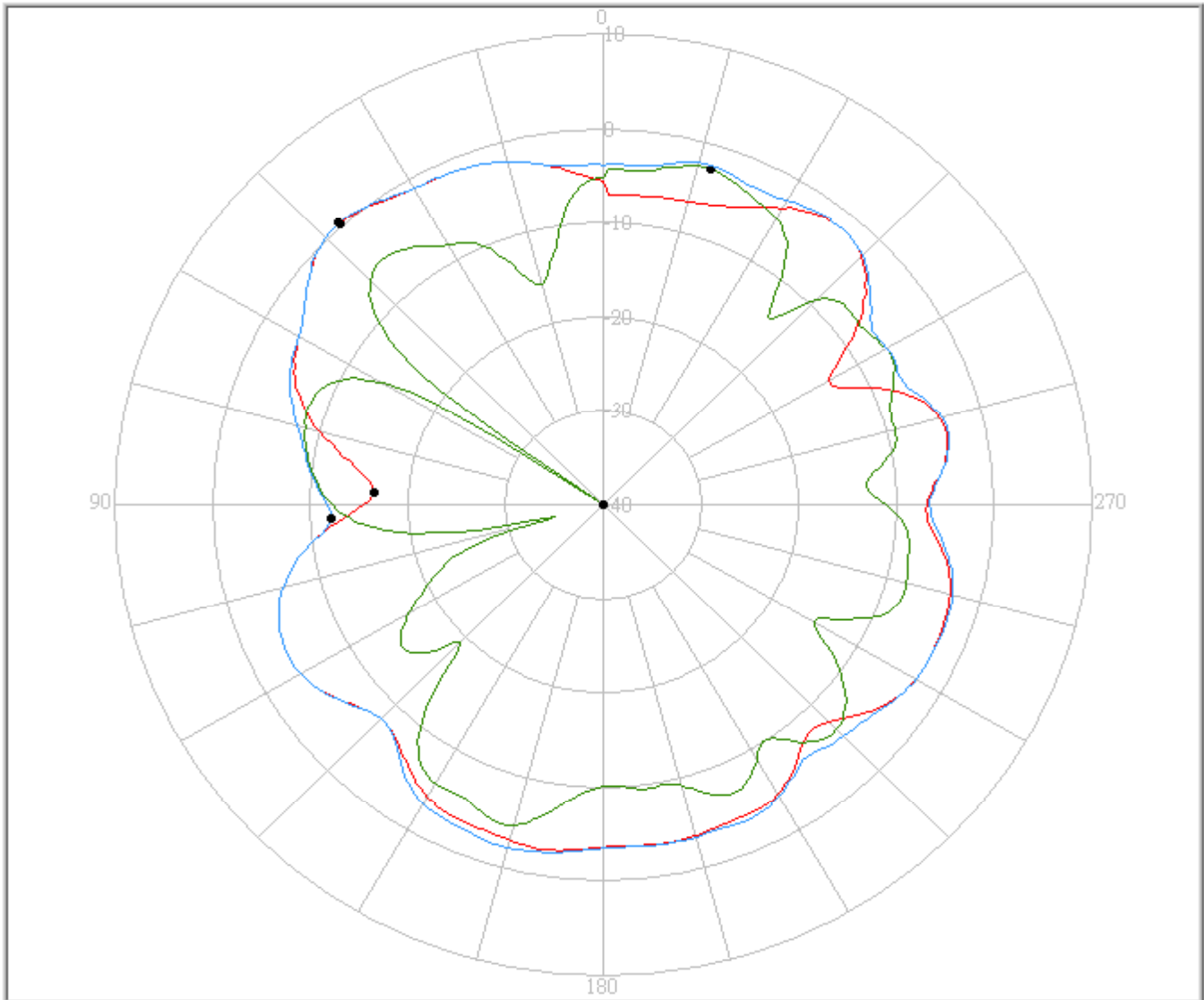
c. 2.5GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	Right	2500.00	0.25 / 42.00	-16.45 / 87.00	-4.25	Ver.	2006/4/3
2	L51	Right	2500.00	-2.62 / 343.00	-57.88 / 56.00	-8.13	Hor.	2006/4/3
3	L51	Right	2500.00	0.39 / 42.00	-12.15 / 93.00	-3.68	V+H	2006/4/3

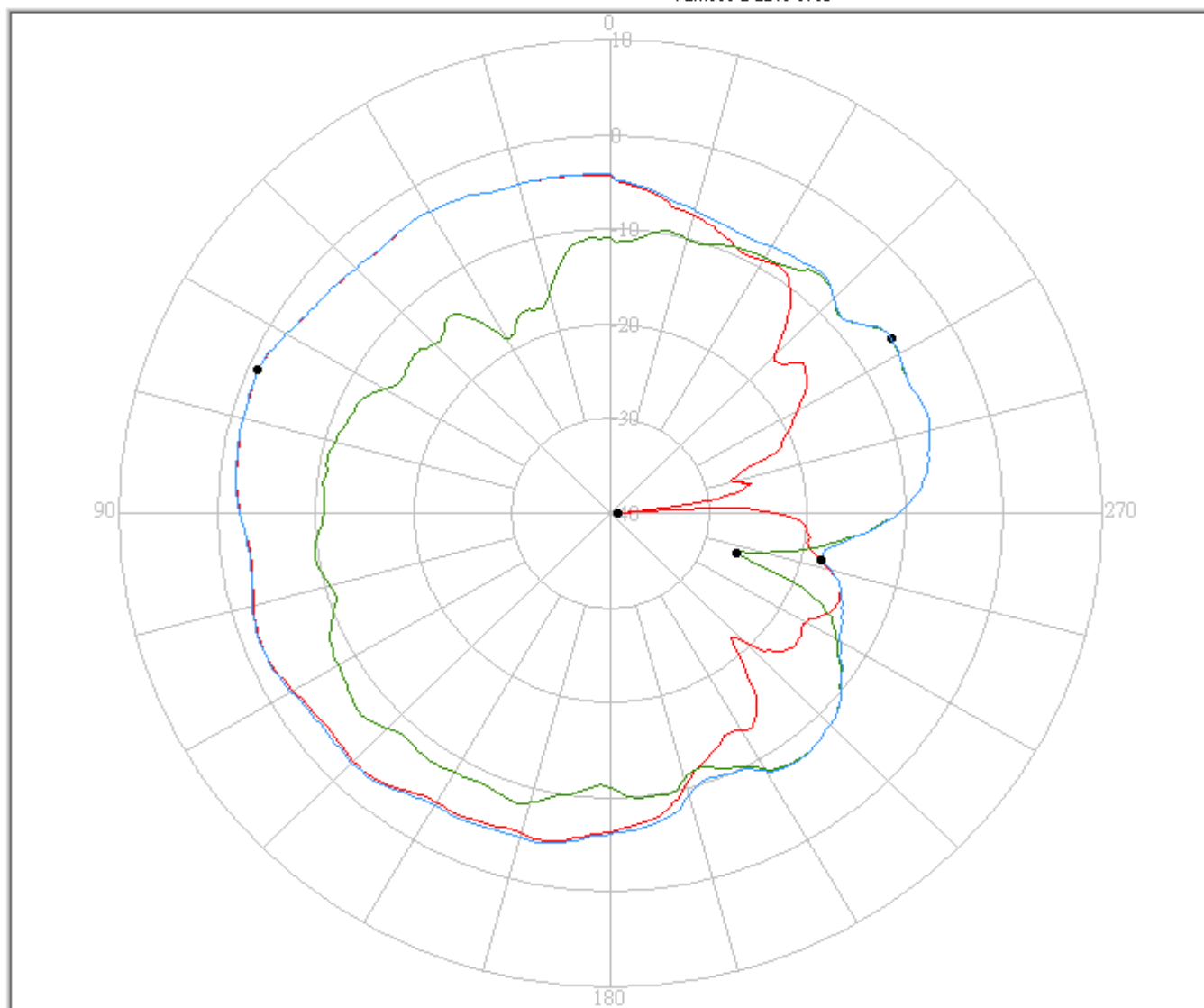
d. 4.9GHz



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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



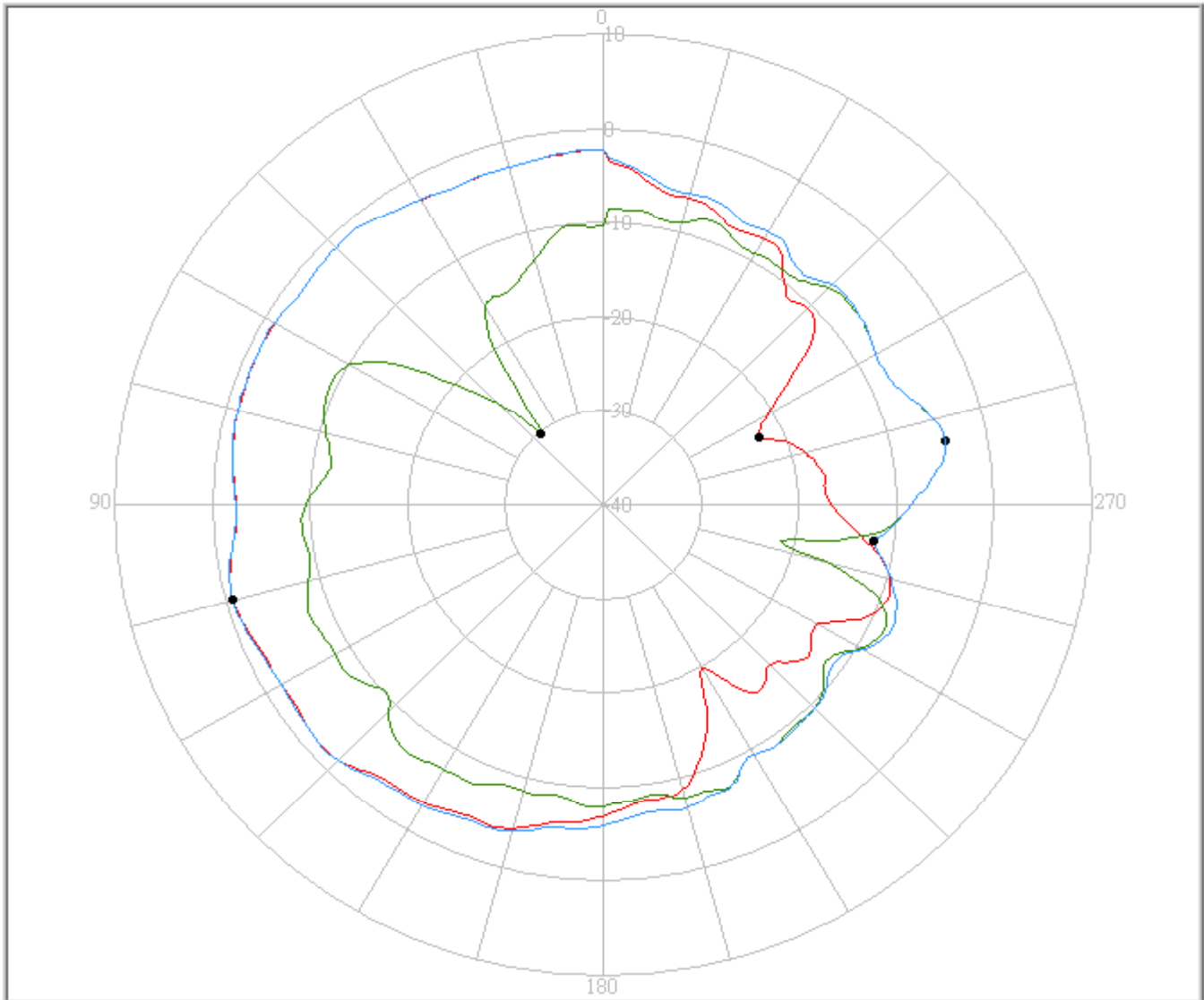
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	Right	4900.00	-1.10 / 67.00	-39.27 / 275.00	-5.53	Ver.	2006/4/3
2	L51	Right	4900.00	-5.98 / 303.00	-26.55 / 252.00	-9.75	Hor.	2006/4/3
3	L51	Right	4900.00	-1.09 / 67.00	-18.02 / 257.00	-4.82	V+H	2006/4/3

e. 5.075GHz



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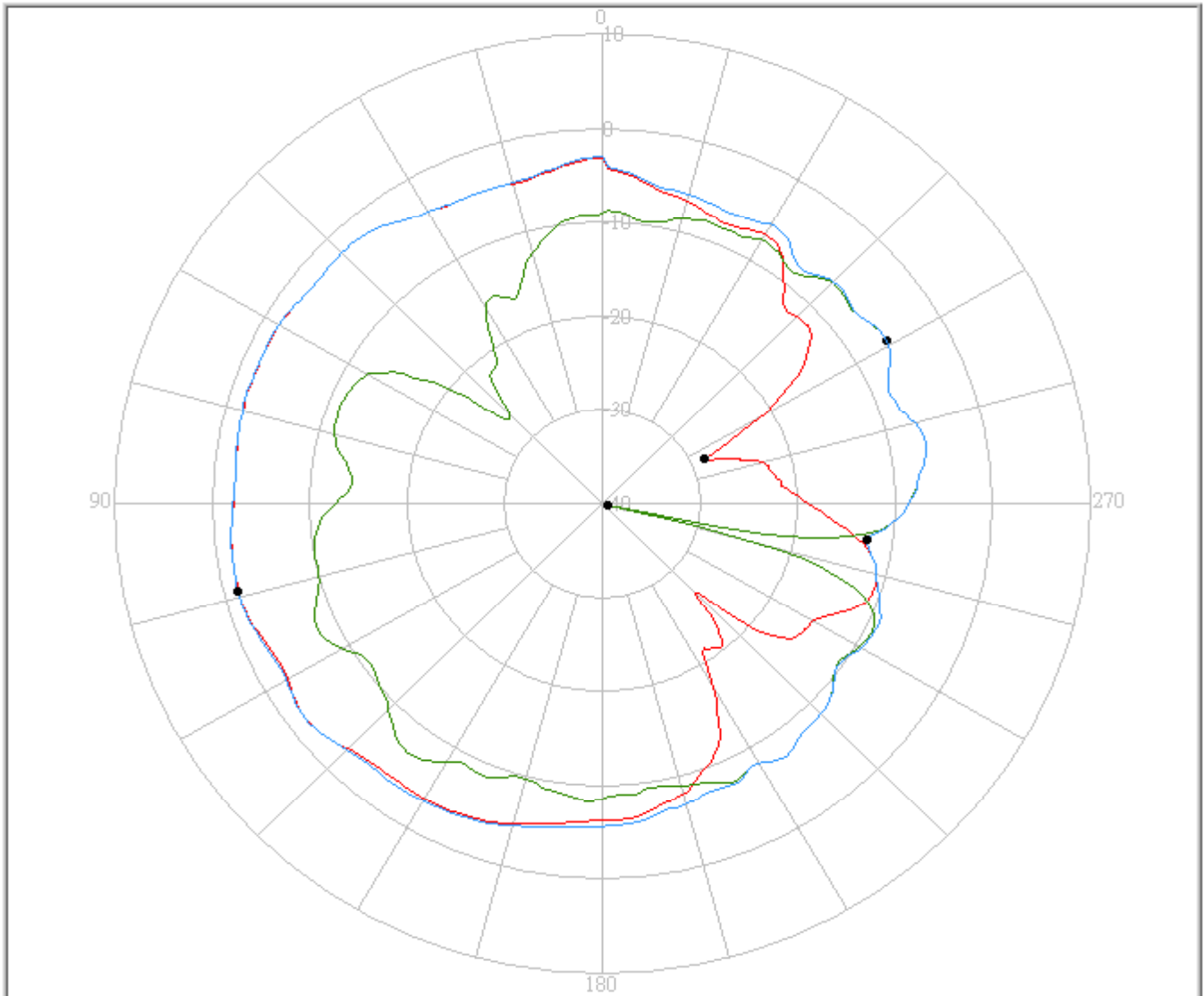
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	Right	5075.00	-0.82 / 105.00	-22.58 / 294.00	-4.61	Ver.	2006/4/3
2	L51	Right	5075.00	-4.39 / 281.00	-30.13 / 40.00	-9.04	Hor.	2006/4/3
3	L51	Right	5075.00	-0.76 / 105.00	-12.07 / 262.00	-3.97	V+H	2006/4/3

f. 5.15GHz



FAVORTRON Co. Ltd 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	L51	Right	5150.00	-1.53 / 104.00	-28.50 / 294.00	-5.23	Ver.	2006/4/3
2	L51	Right	5150.00	-6.08 / 301.00	-39.46 / 257.00	-9.39	Hor.	2006/4/3
3	L51	Right	5150.00	-1.49 / 104.00	-12.67 / 262.00	-4.50	V+H	2006/4/3

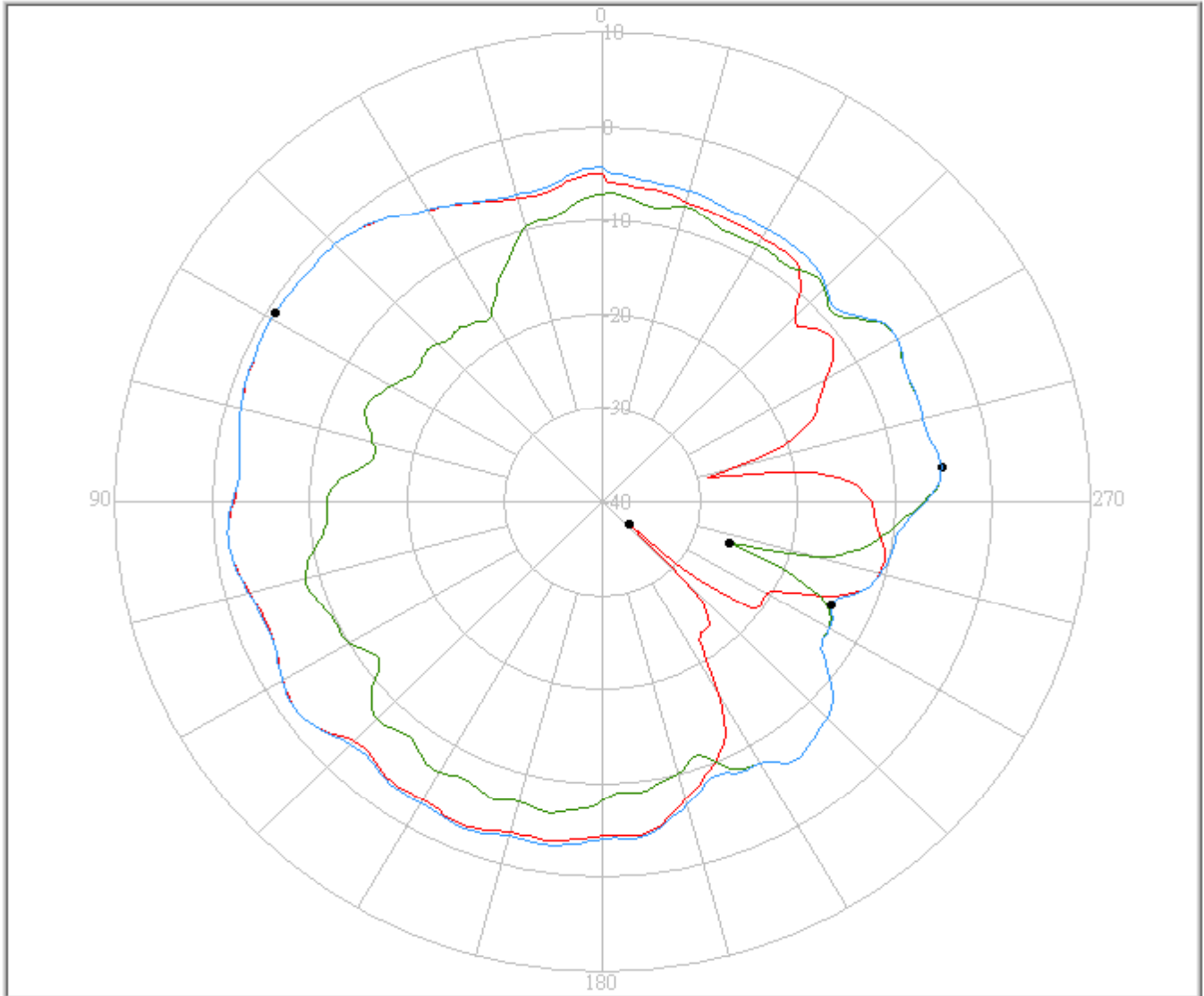
g. 5.25GHz



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Antenna Pattern Measurement

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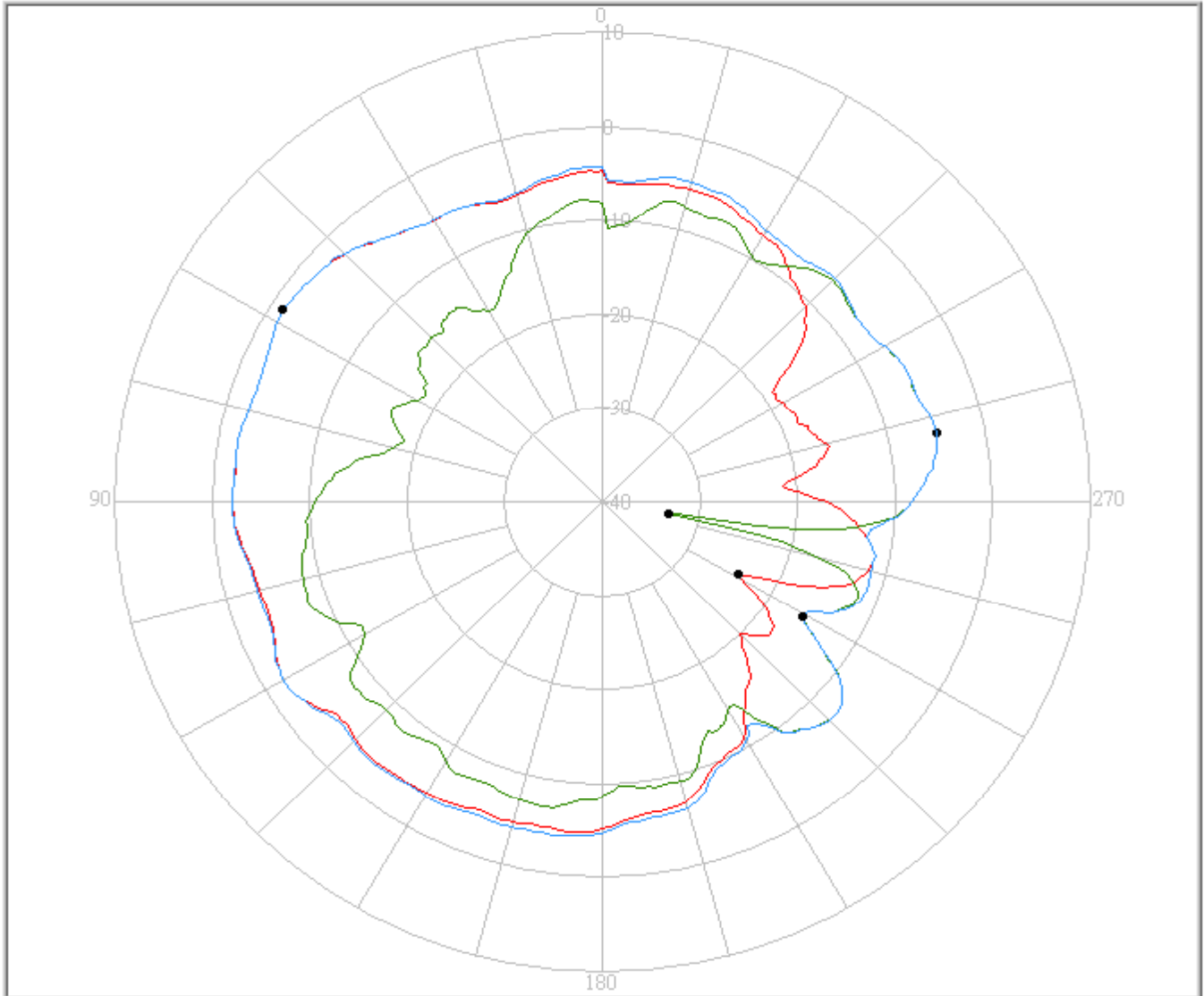
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	Right	5250.00	-0.81 / 59.00	-36.38 / 228.00	-4.98	Ver.	2006/4/3
2	L51	Right	5250.00	-5.09 / 276.00	-26.26 / 251.00	-8.92	Hor.	2006/4/3
3	L51	Right	5250.00	-0.81 / 59.00	-14.11 / 245.00	-4.22	V+H	2006/4/3

H. 5.35GHz



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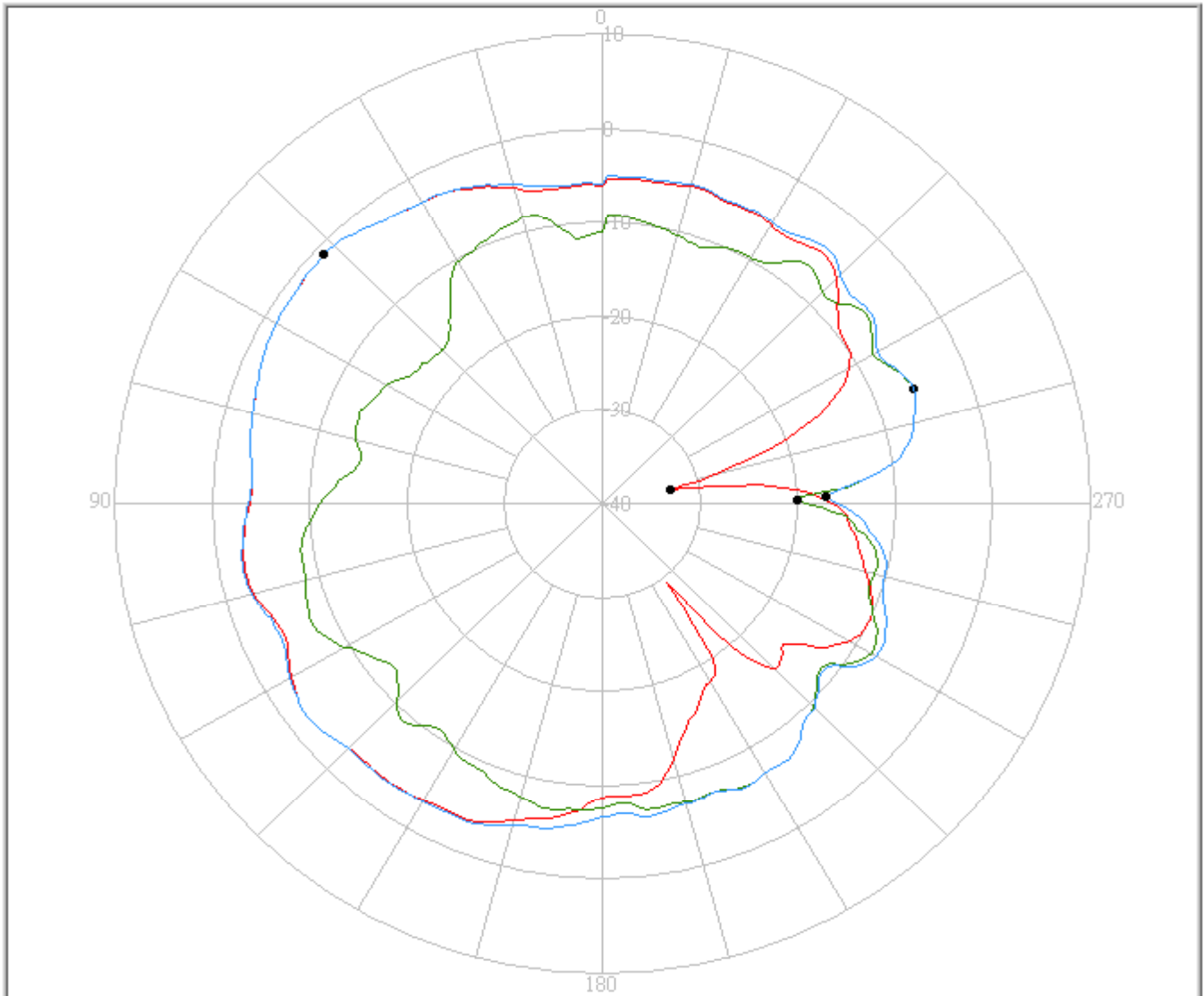
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	Right	5350.00	-1.44 / 58.00	-24.06 / 241.00	-5.66	Ver.	2006/4/3
2	L51	Right	5350.00	-5.03 / 282.00	-33.03 / 259.00	-9.30	Hor.	2006/4/3
3	L51	Right	5350.00	-1.44 / 58.00	-16.07 / 239.00	-4.87	V+H	2006/4/3

i. 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	L51	Right	5470.00	-1.04 / 47.00	-32.94 / 282.00	-5.33	Ver.	2006/4/3
2	L51	Right	5470.00	-5.92 / 291.00	-20.02 / 271.00	-9.30	Hor.	2006/4/3
3	L51	Right	5470.00	-1.04 / 47.00	-17.07 / 272.00	-4.63	V+H	2006/4/3

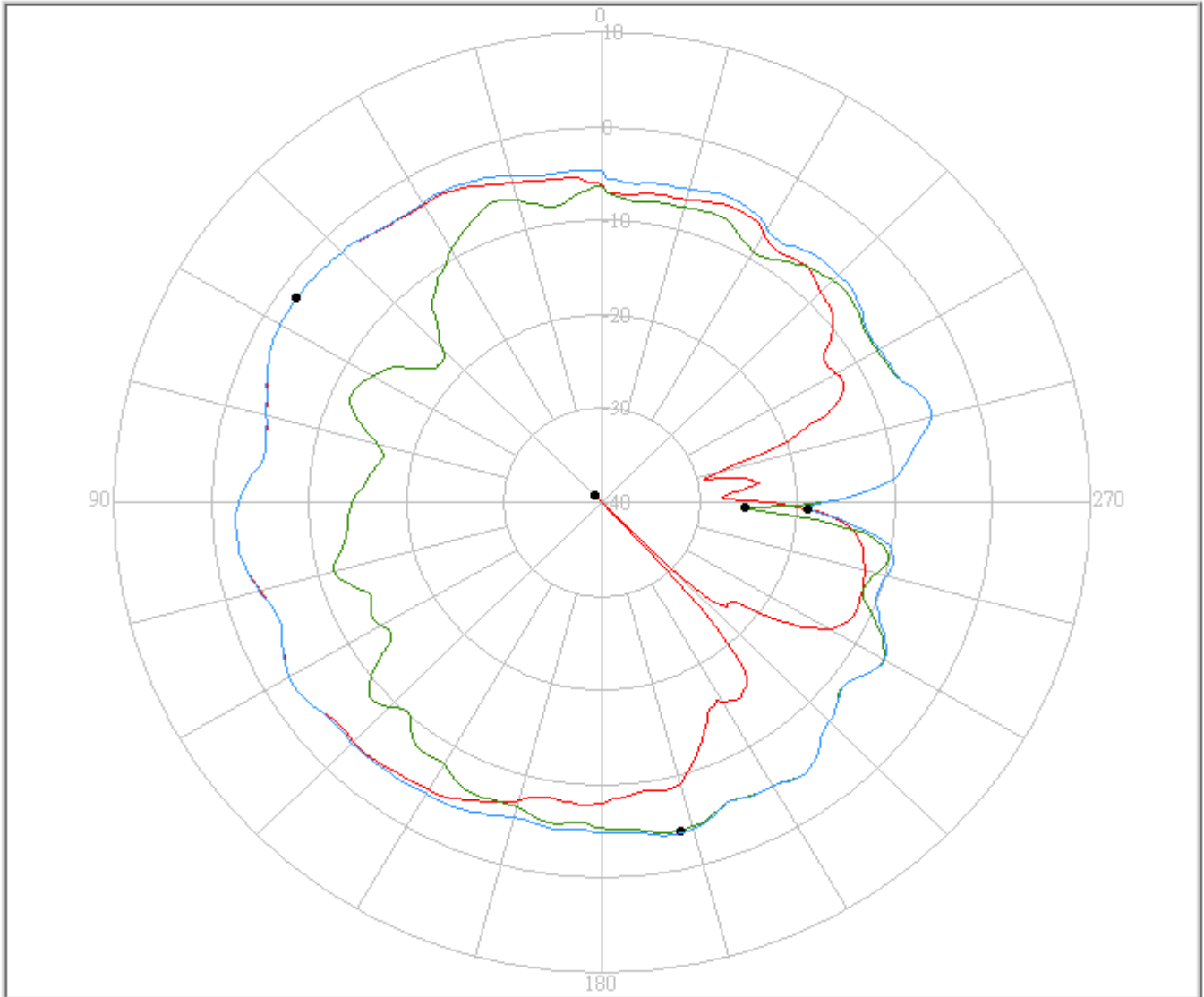
j. 5.597GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	Right	5597.50	-1.86 / 55.00	-40.99 / 224.00	-6.03	Ver.	2006/4/3
2	L51	Right	5597.50	-4.14 / 193.00	-25.33 / 268.00	-8.07	Hor.	2006/4/3
3	L51	Right	5597.50	-1.85 / 55.00	-19.02 / 268.00	-4.74	V+H	2006/4/3

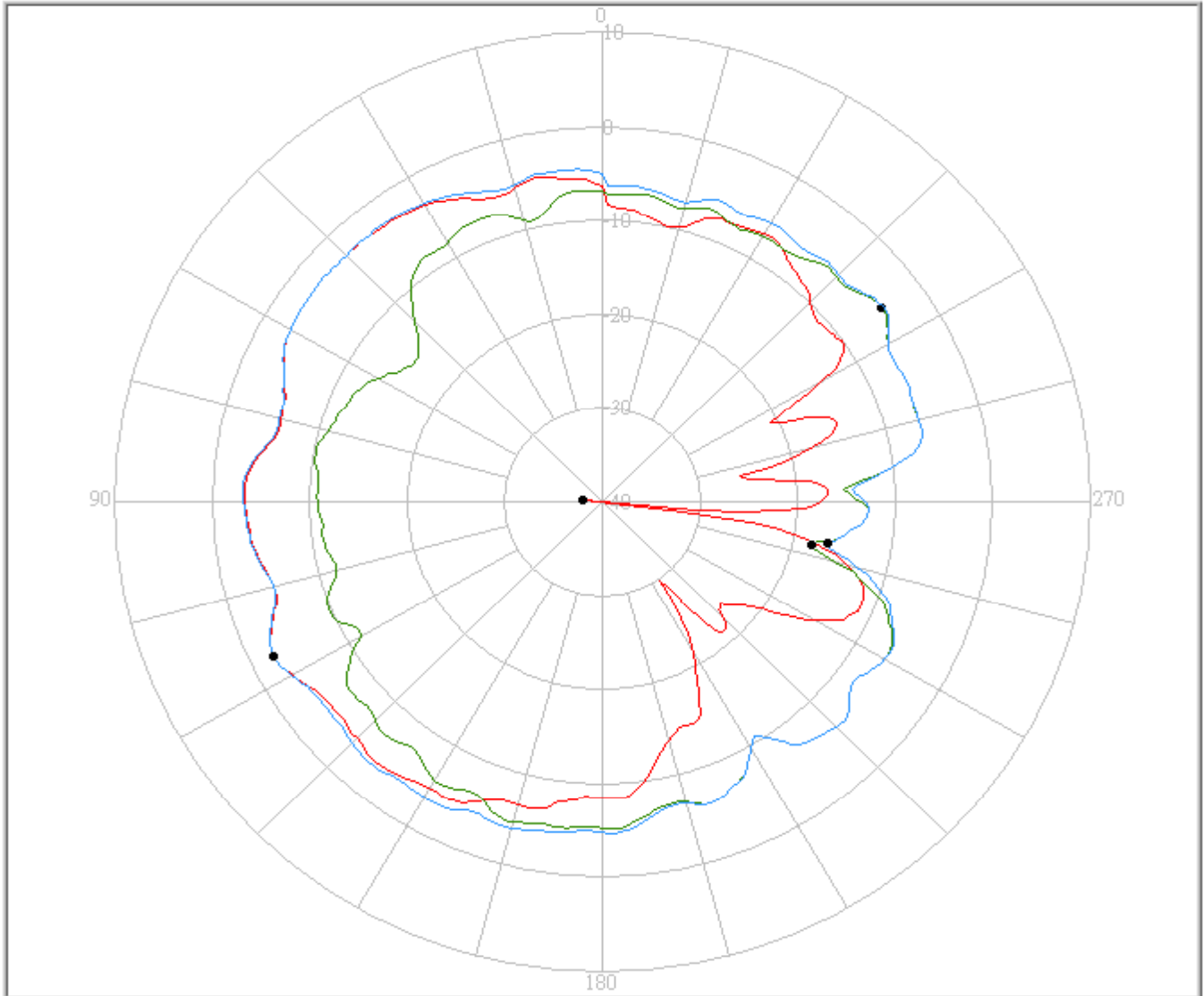
k. 5.725GHz



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Antenna Pattern Measurement

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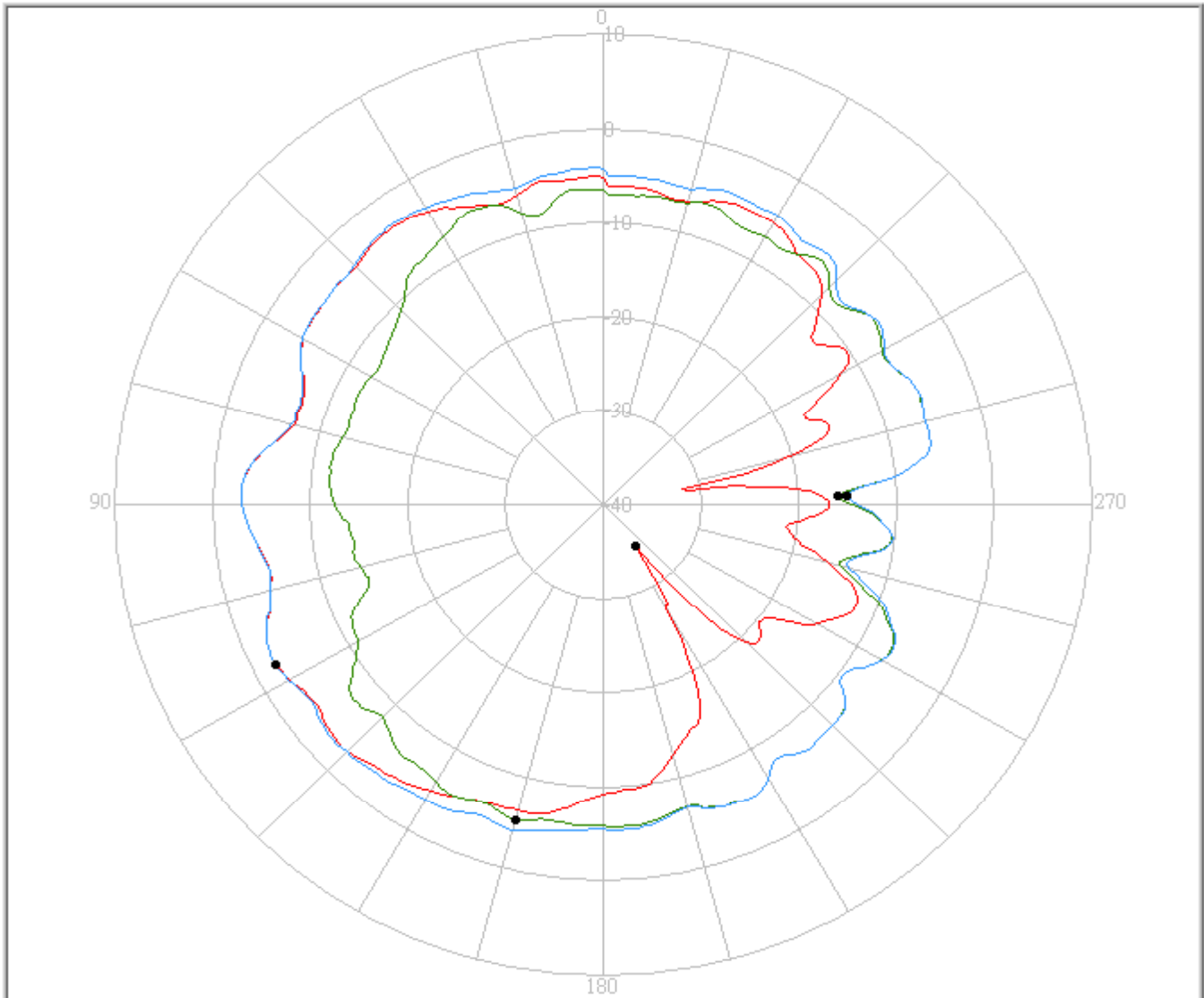
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	Right	5725.00	-2.55 / 116.00	-42.04 / 264.00	-6.66	Ver.	2006/4/3
2	L51	Right	5725.00	-4.64 / 306.00	-18.14 / 258.00	-7.80	Hor.	2006/4/3
3	L51	Right	5725.00	-2.49 / 116.00	-16.50 / 259.00	-5.13	V+H	2006/4/3

1. 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	L51	Right	5785.00	-2.39 / 117.00	-34.56 / 217.00	-6.60	Ver.	2006/4/3
2	L51	Right	5785.00	-5.26 / 165.00	-15.98 / 272.00	-7.76	Hor.	2006/4/3
3	L51	Right	5785.00	-2.35 / 117.00	-15.07 / 272.00	-5.11	V+H	2006/4/3

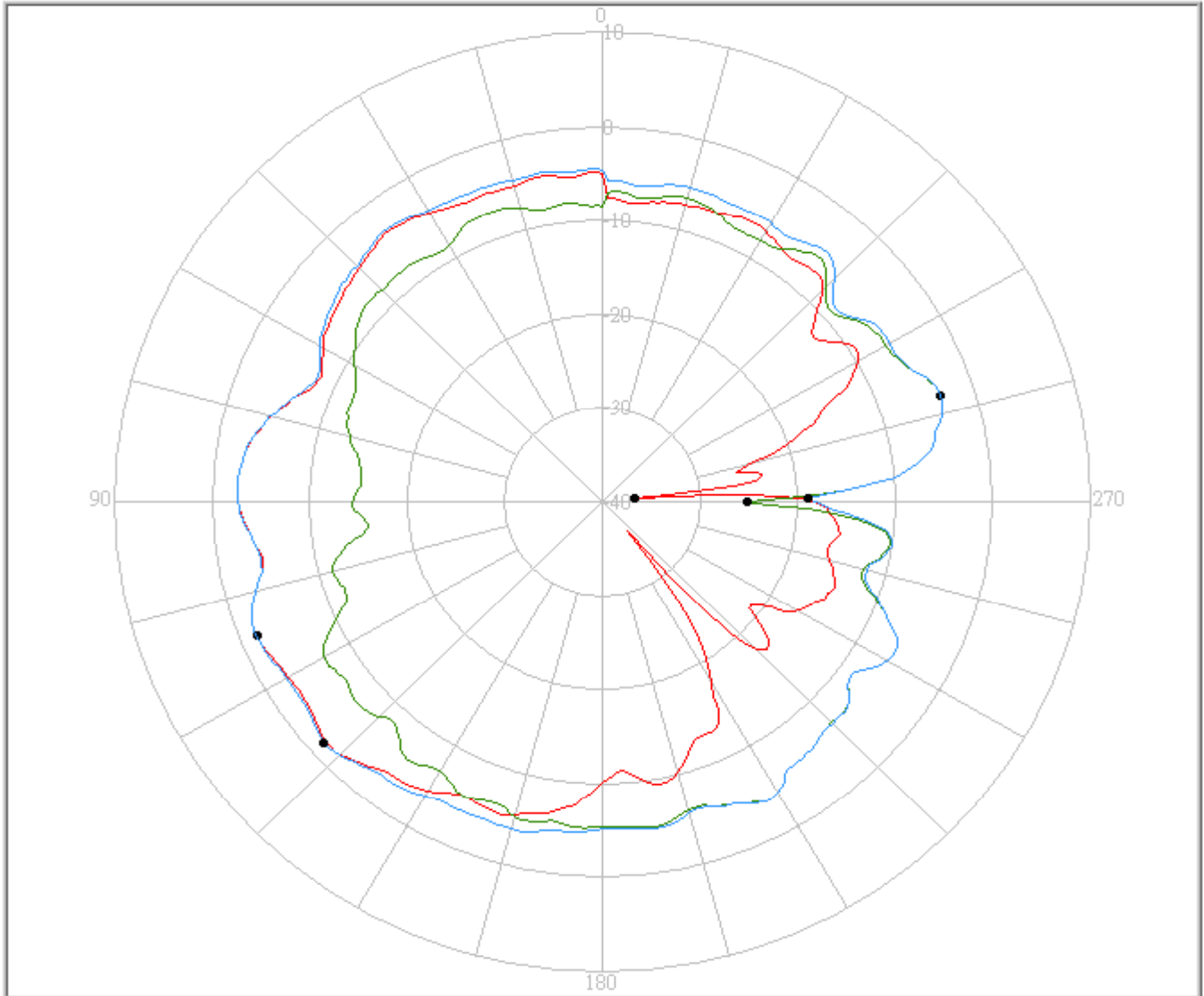
m. 5.85GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	Right	5850.00	-1.79 / 112.00	-36.64 / 275.00	-6.44	Ver.	2006/4/3
2	L51	Right	5850.00	-3.53 / 288.00	-25.17 / 270.00	-7.41	Hor.	2006/4/3
3	L51	Right	5850.00	-1.64 / 132.00	-18.94 / 271.00	-4.84	V+H	2006/4/3

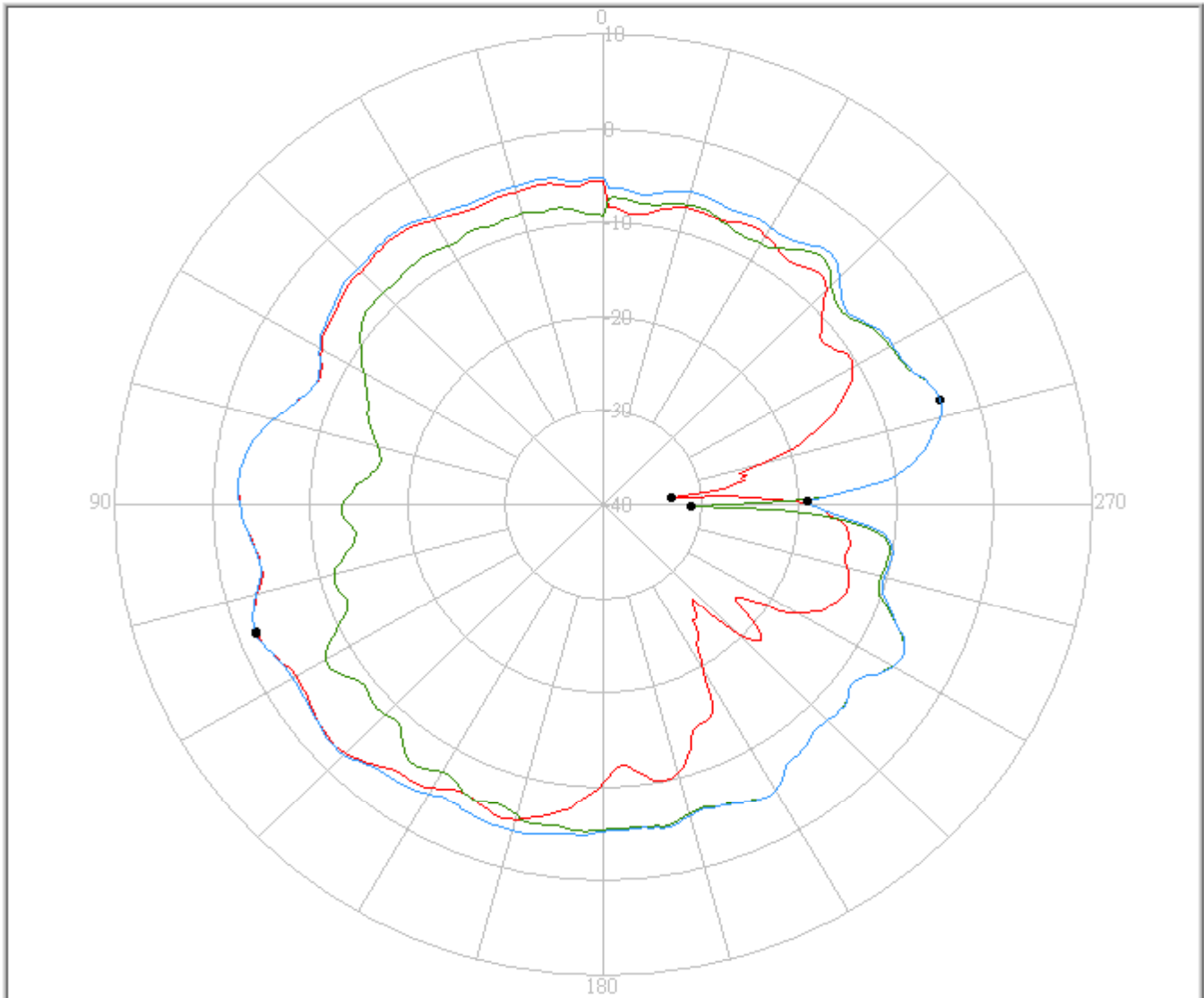
n. 5.875GHz



FAVORTRON Co. Ltd

Antenna Pattern Measurement

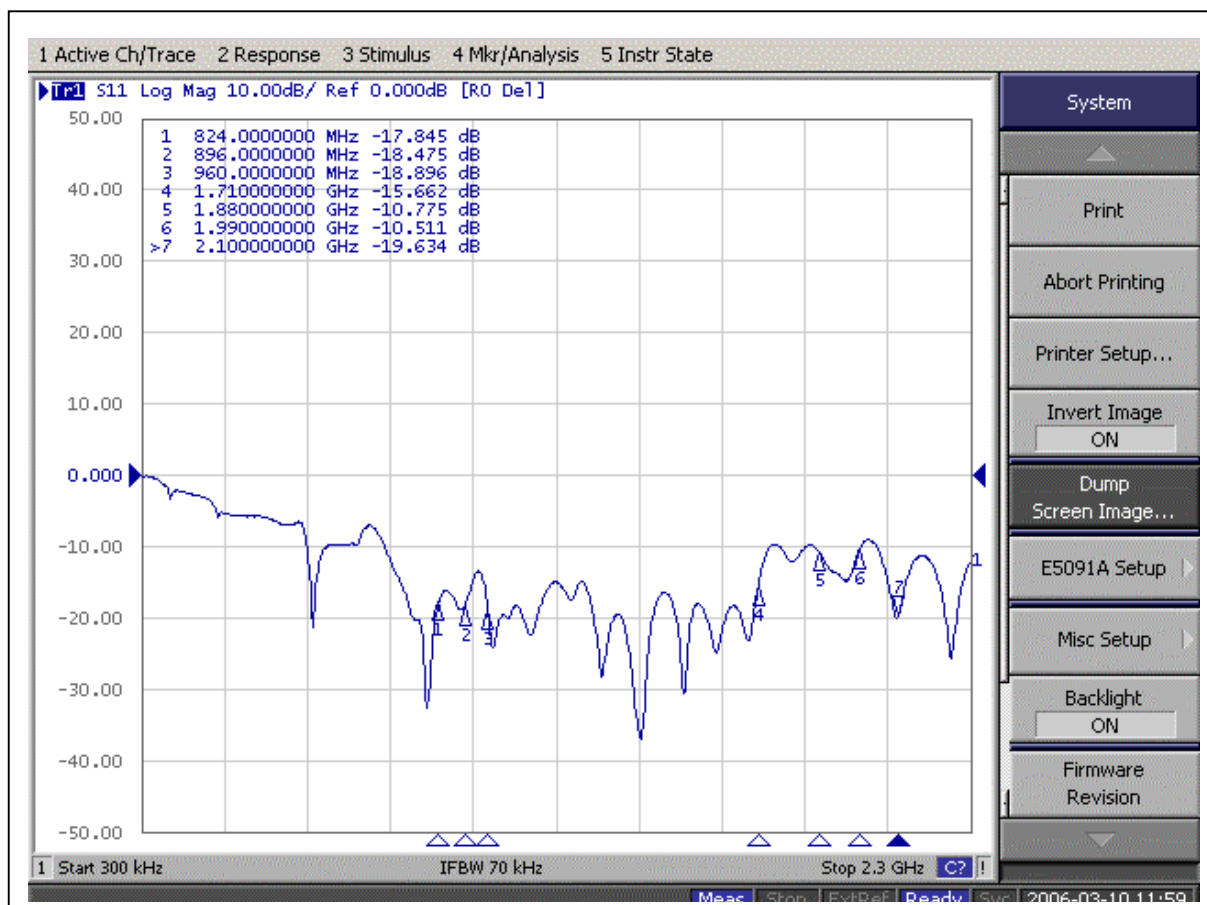
4F, No. 108-1, Min Chuan Rd., Hsin-Tien City, Taipei, Taiwan, R.O.C. Tel:886-2-2218-2189,
Fax:886-2-2218-5760



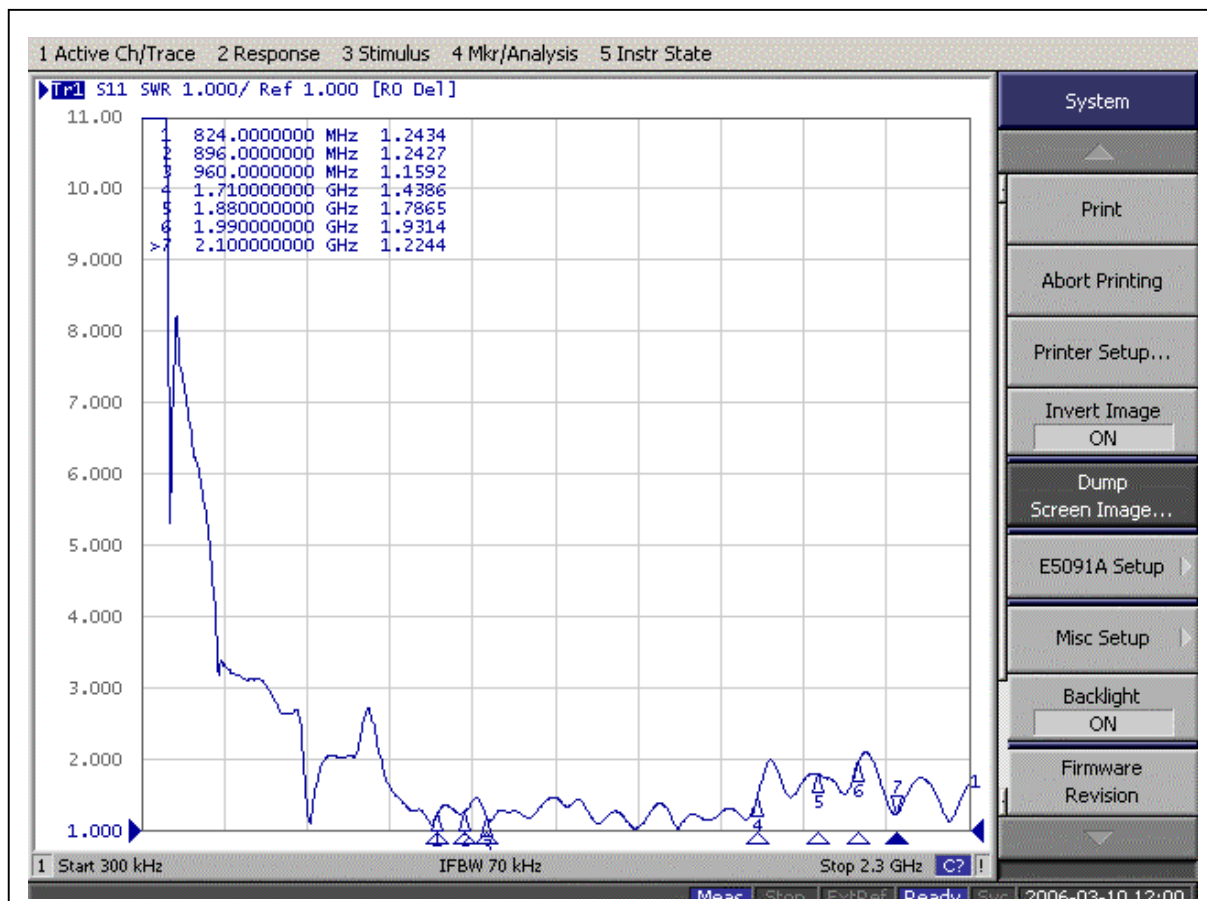
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	Right	5875.00	-1.93 / 111.00	-32.92 / 276.00	-6.77	Ver.	2006/4/3
2	L51	Right	5875.00	-3.77 / 288.00	-30.94 / 269.00	-7.66	Hor.	2006/4/3
3	L51	Right	5875.00	-1.91 / 111.00	-19.20 / 271.00	-5.12	V+H	2006/4/3

6. GPRS Ant.

800~900MHz/1.7~1.9GHz / Return Loss



800~900MHz/1.7~1.9GHz / VSWR



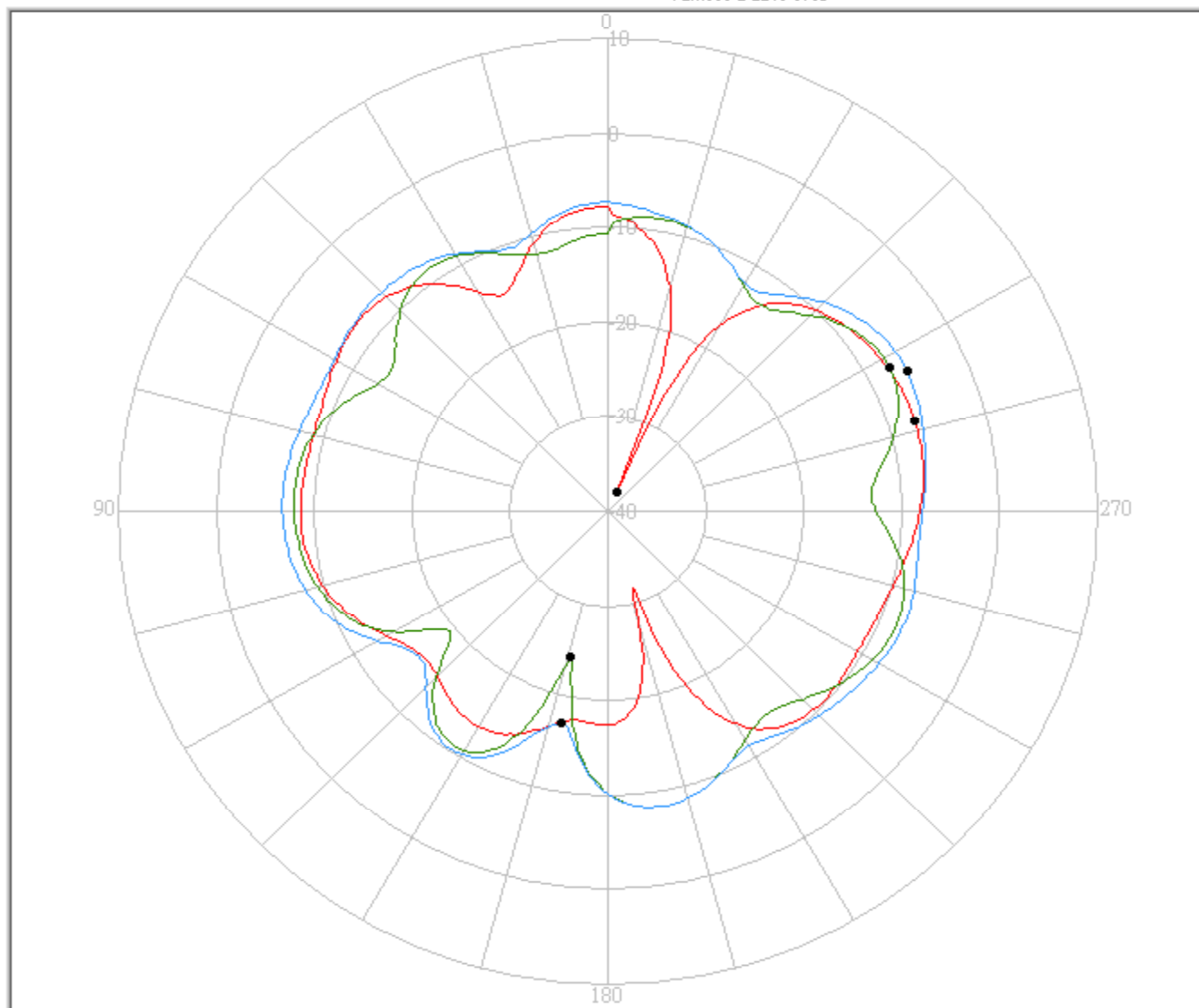
7. Gain & Pattern

a. 0.824GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	824.00	-7.22 / 287.00	-37.75 / 337.00	-10.57	Ver.	2006/3/10
2	L51	GPRS	824.00	-7.51 / 298.00	-24.05 / 166.00	-10.29	Hor.	2006/3/10
3	L51	GPRS	824.00	-6.04 / 296.00	-17.08 / 168.00	-8.69	V+H	2006/3/10

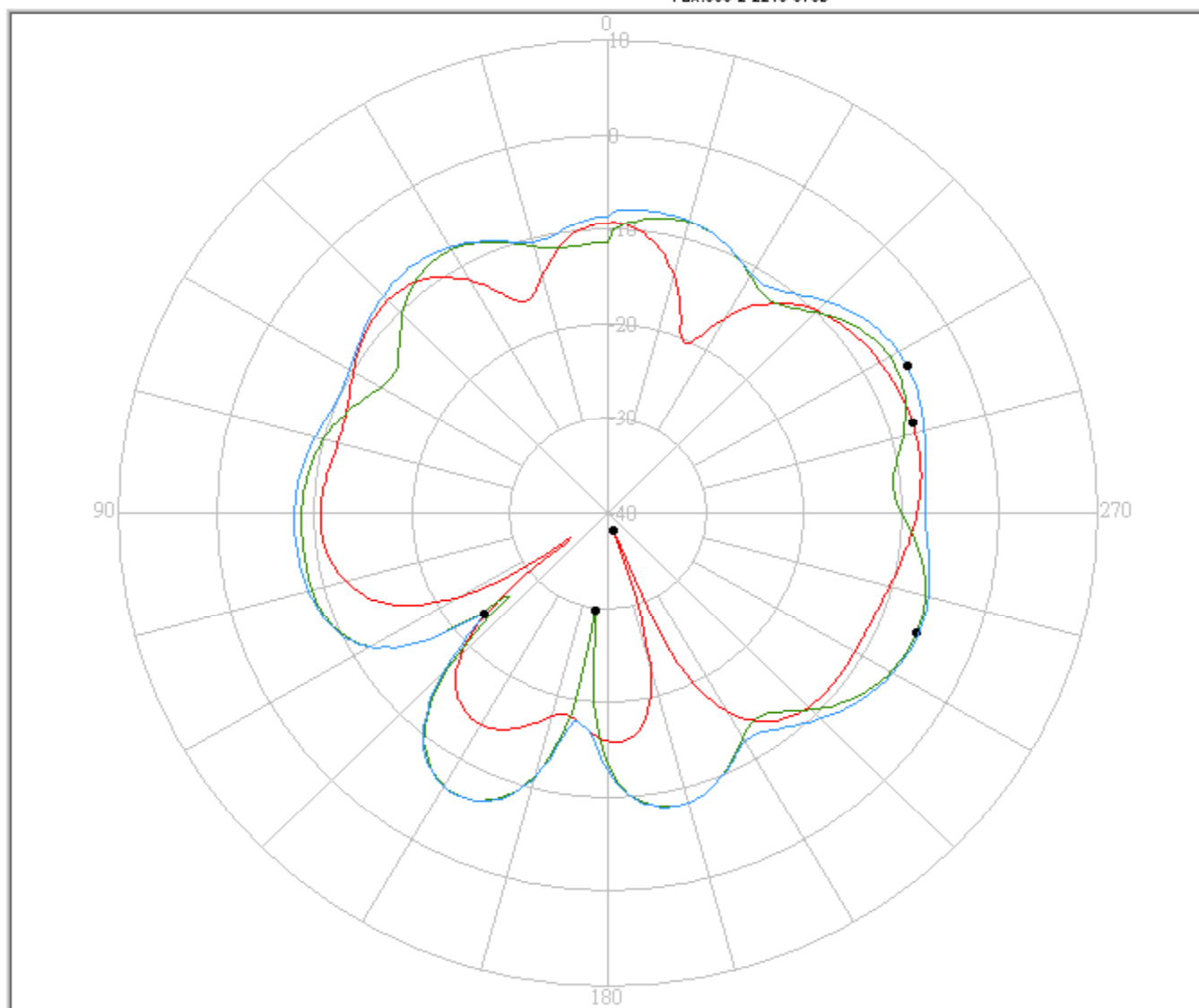
b. 0.844GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	844.00	-7.49 / 287.00	-38.10 / 199.00	-11.42	Ver.	2006/3/10
2	L51	GPRS	844.00	-6.04 / 248.00	-29.71 / 173.00	-9.38	Hor.	2006/3/10
3	L51	GPRS	844.00	-5.74 / 297.00	-23.61 / 130.00	-8.46	V+H	2006/3/10

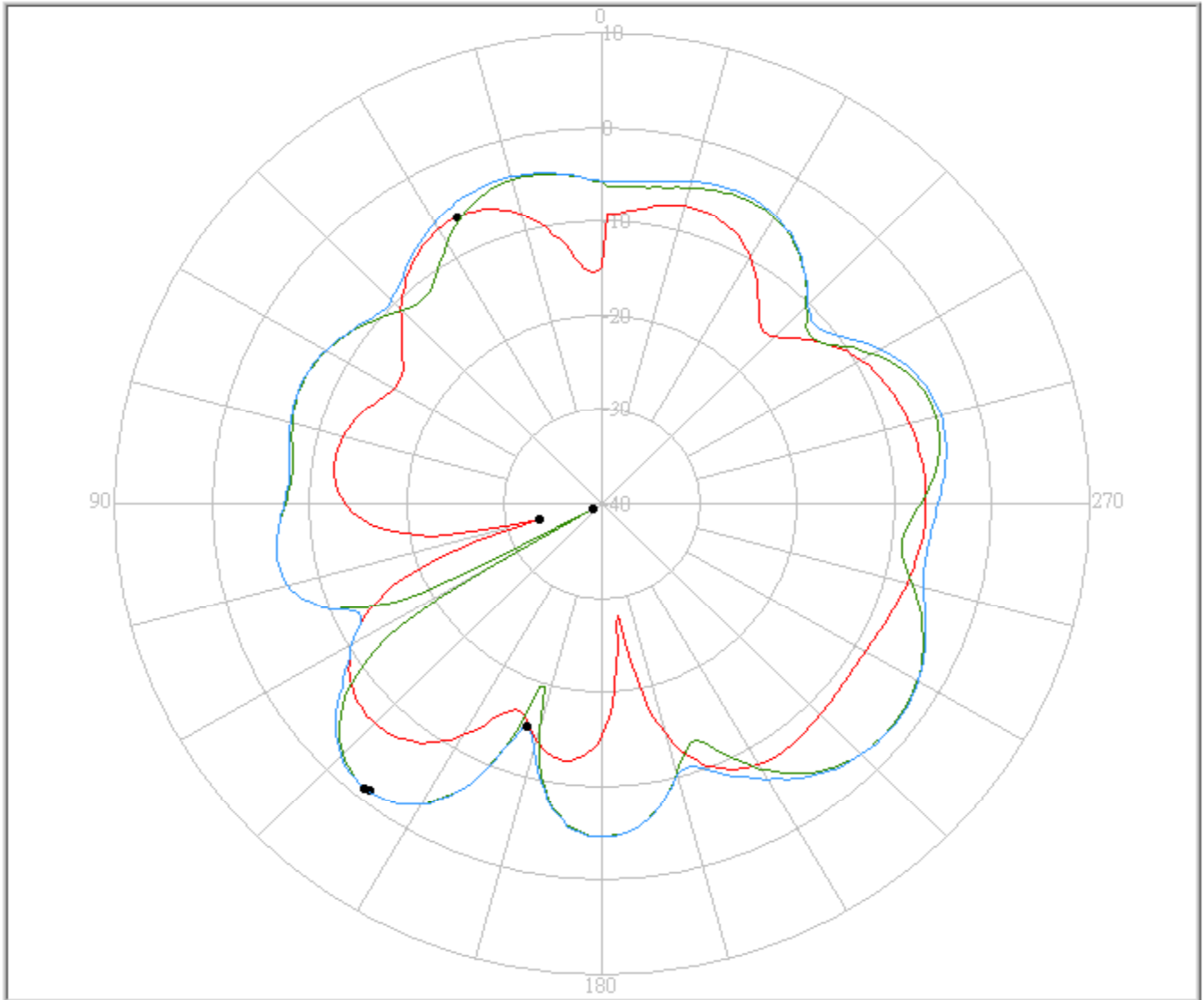
c. 0.864GHz



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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	L51	GPRS	864.00	-6.16 / 26.00	-33.41 / 105.00	-9.72	Ver.	2006/3/10
2	L51	GPRS	864.00	-1.31 / 142.00	-39.01 / 119.00	-6.00	Hor.	2006/3/10
3	L51	GPRS	864.00	-1.21 / 141.00	-15.23 / 162.00	-5.47	V+H	2006/3/10

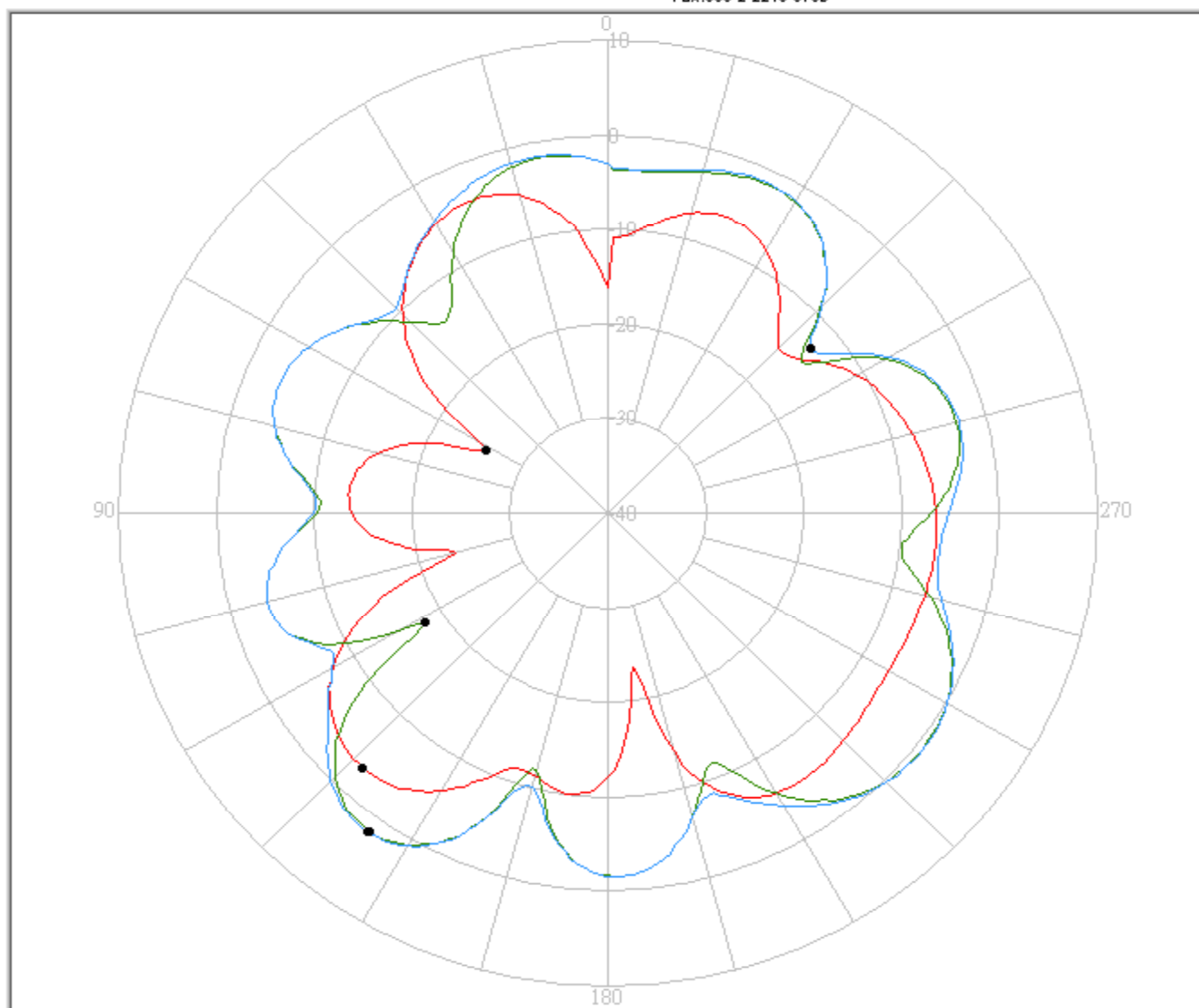
d. 0.884GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	884.00	-3.23 / 137.00	-25.93 / 62.00	-8.10	Ver.	2006/3/10
2	L51	GPRS	884.00	1.55 / 144.00	-18.06 / 122.00	-3.73	Hor.	2006/3/10
3	L51	GPRS	884.00	1.71 / 144.00	-12.94 / 310.00	-3.27	V+H	2006/3/10

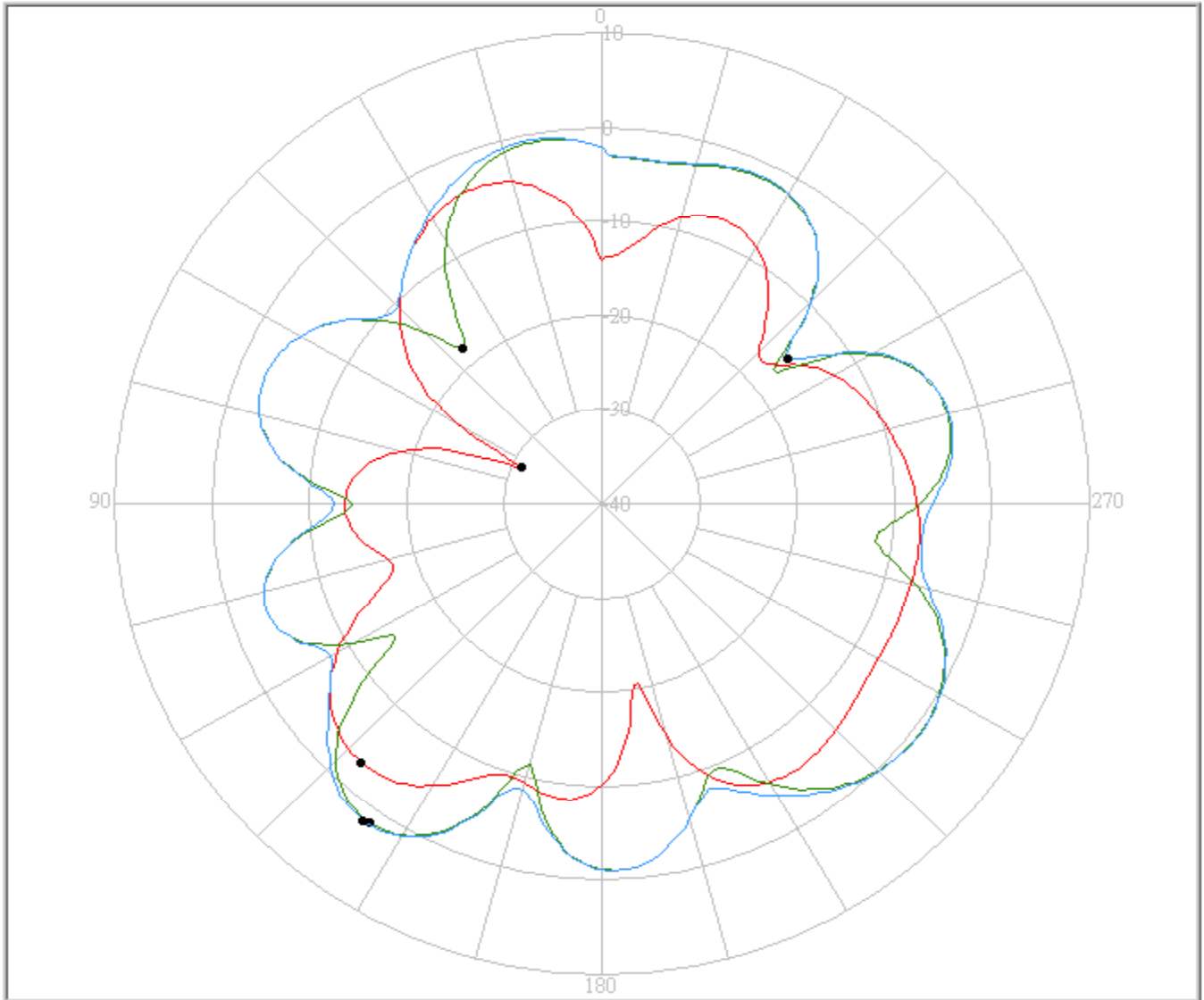
e. 0.896GHz



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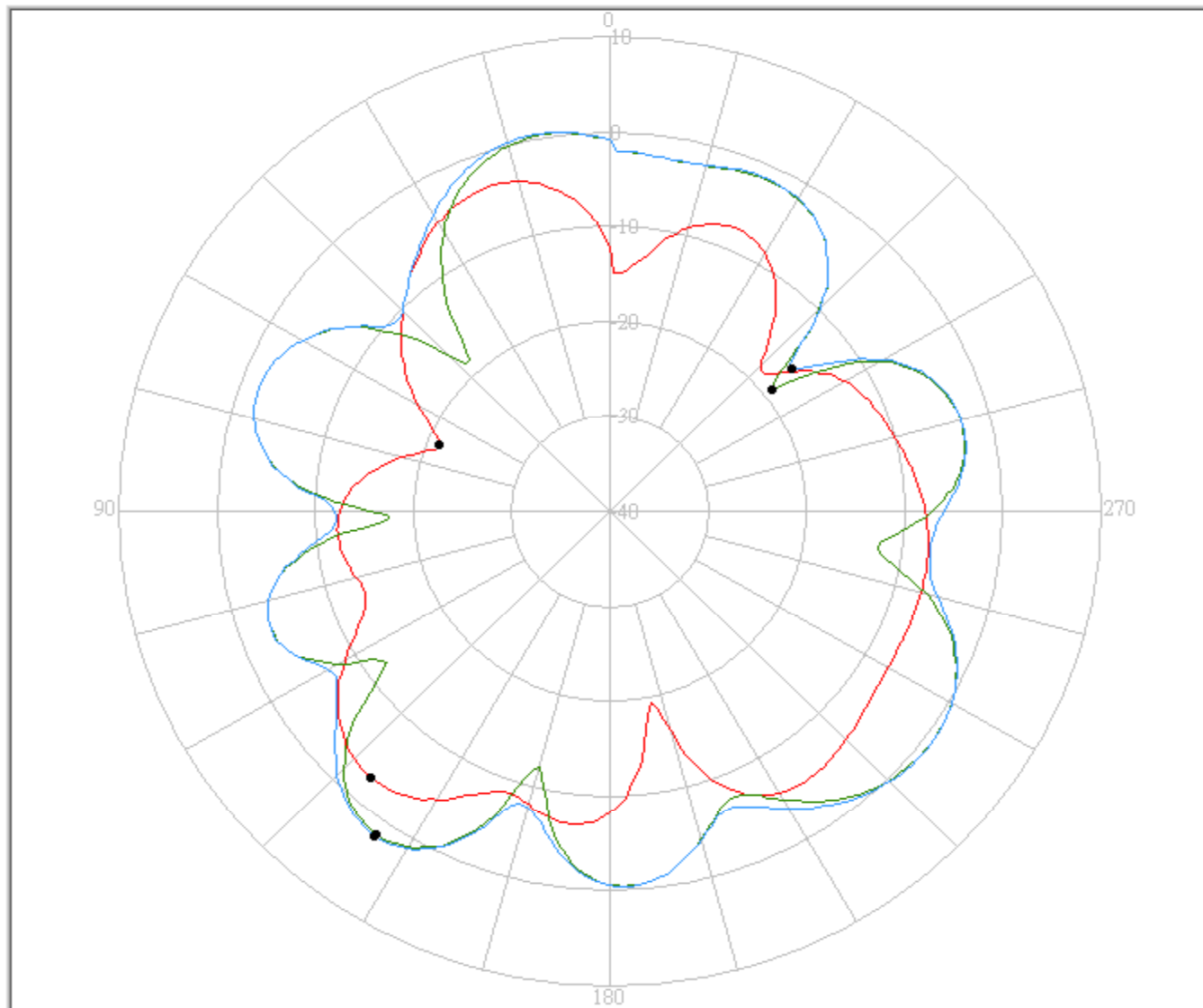
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	896.00	-3.10 / 138.00	-31.00 / 65.00	-8.32	Ver.	2006/3/10
2	L51	GPRS	896.00	1.40 / 145.00	-18.10 / 41.00	-3.61	Hor.	2006/3/10
3	L51	GPRS	896.00	1.60 / 144.00	-15.48 / 309.00	-3.20	V+H	2006/3/10

f. 0.904GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	904.00	-2.89 / 139.00	-21.28 / 68.00	-8.04	Ver.	2006/3/10
2	L51	GPRS	904.00	1.50 / 145.00	-19.18 / 308.00	-3.18	Hor.	2006/3/10
3	L51	GPRS	904.00	1.71 / 145.00	-16.08 / 309.00	-2.80	V+H	2006/3/10

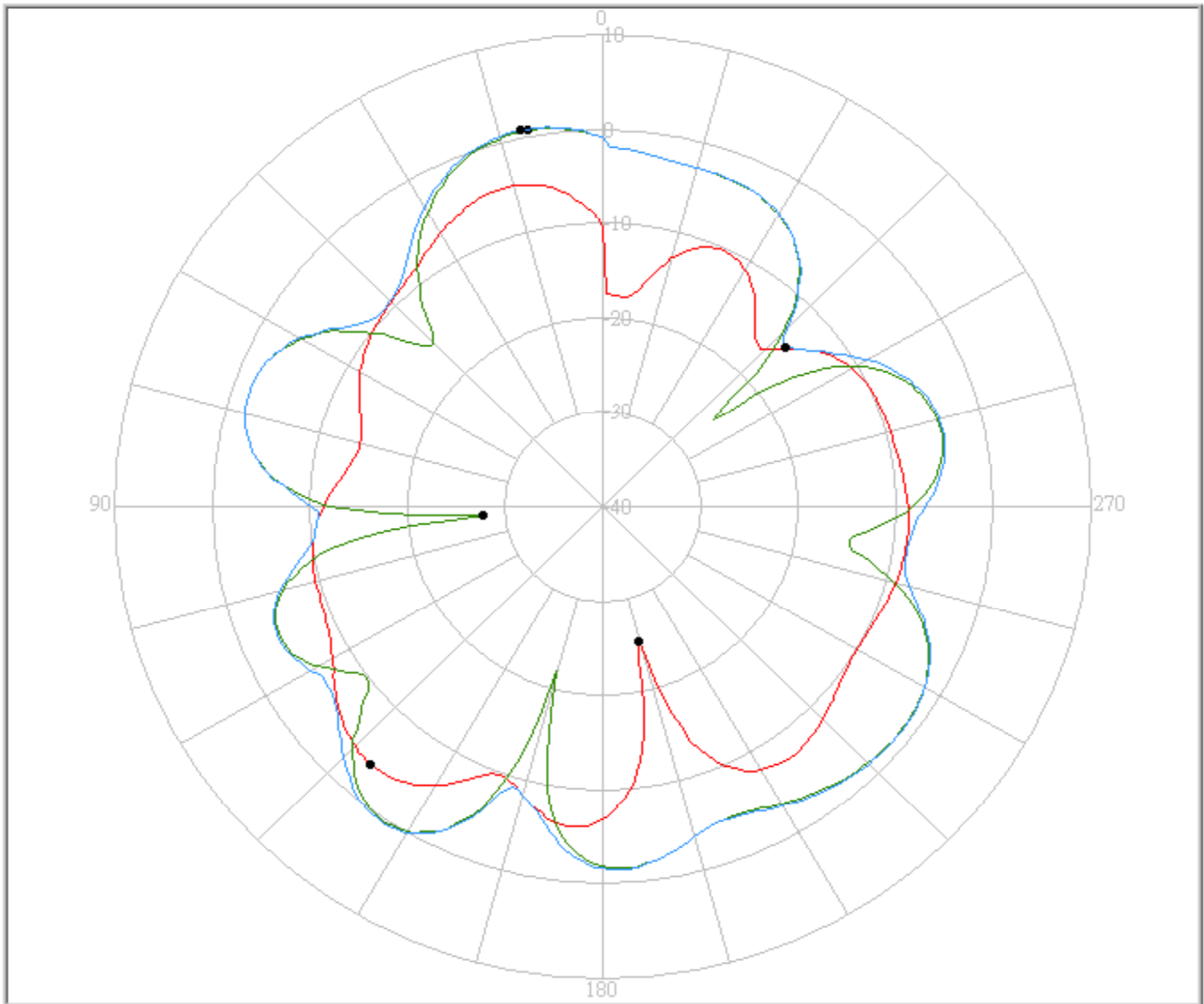
g. 0.924GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	924.00	-3.81 / 139.00	-25.19 / 194.00	-8.71	Ver.	2006/3/10
2	L51	GPRS	924.00	0.60 / 11.00	-27.62 / 94.00	-3.93	Hor.	2006/3/10
3	L51	GPRS	924.00	0.75 / 12.00	-14.85 / 312.00	-3.54	V+H	2006/3/10

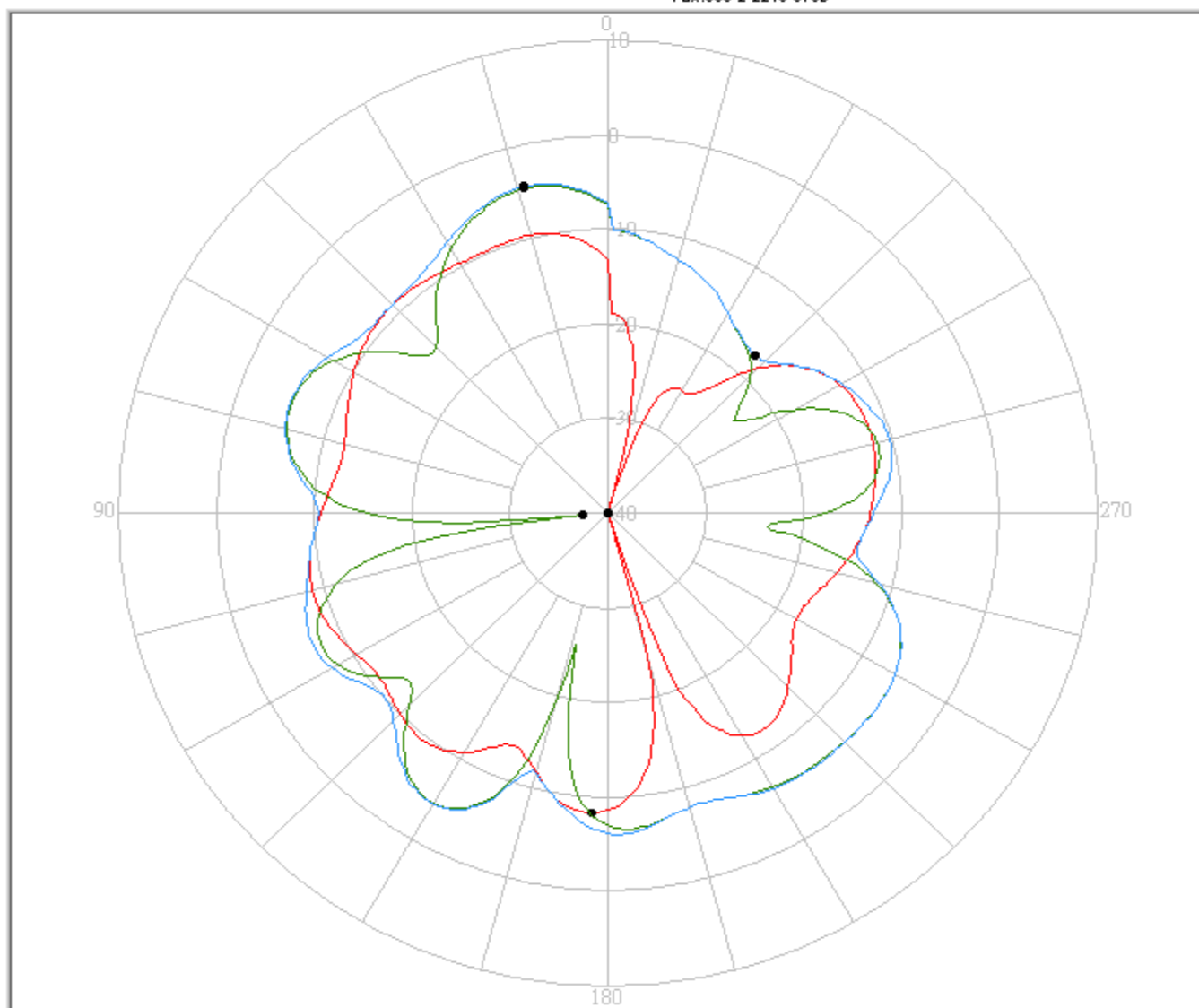
h. 0.960GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	960.00	-8.31 / 177.00	-53.96 / 197.00	-11.85	Ver.	2006/3/10
2	L51	GPRS	960.00	-4.58 / 14.00	-37.45 / 96.00	-8.77	Hor.	2006/3/10
3	L51	GPRS	960.00	-4.38 / 14.00	-17.60 / 318.00	-7.98	V+H	2006/3/10

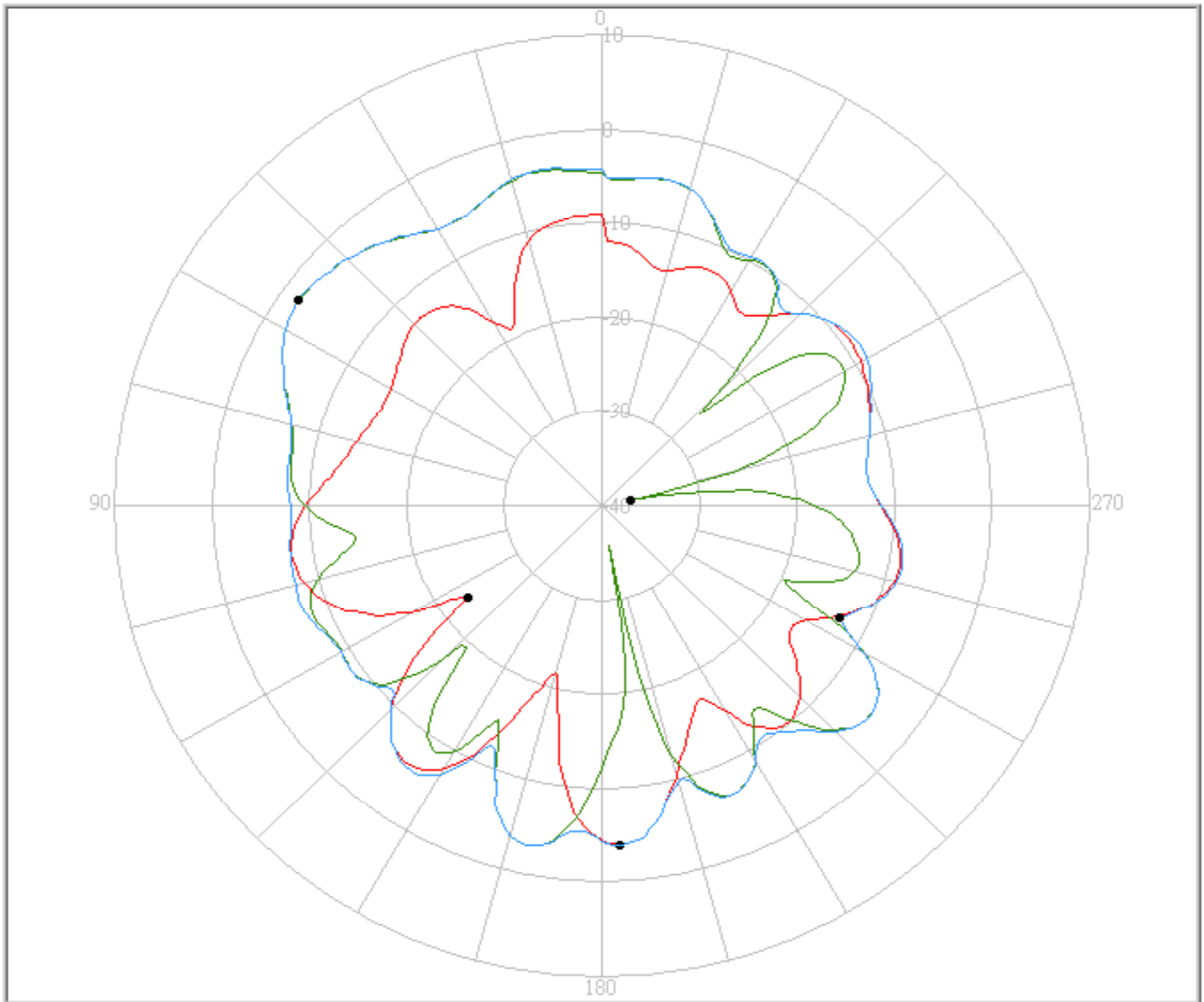
i.1.71GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	1710.00	-3.94 / 183.00	-23.14 / 125.00	-10.81	Ver.	2006/3/10
2	L51	GPRS	1710.00	-2.07 / 55.00	-37.05 / 281.00	-7.57	Hor.	2006/3/10
3	L51	GPRS	1710.00	-2.07 / 55.00	-12.82 / 244.00	-6.57	V+H	2006/3/10

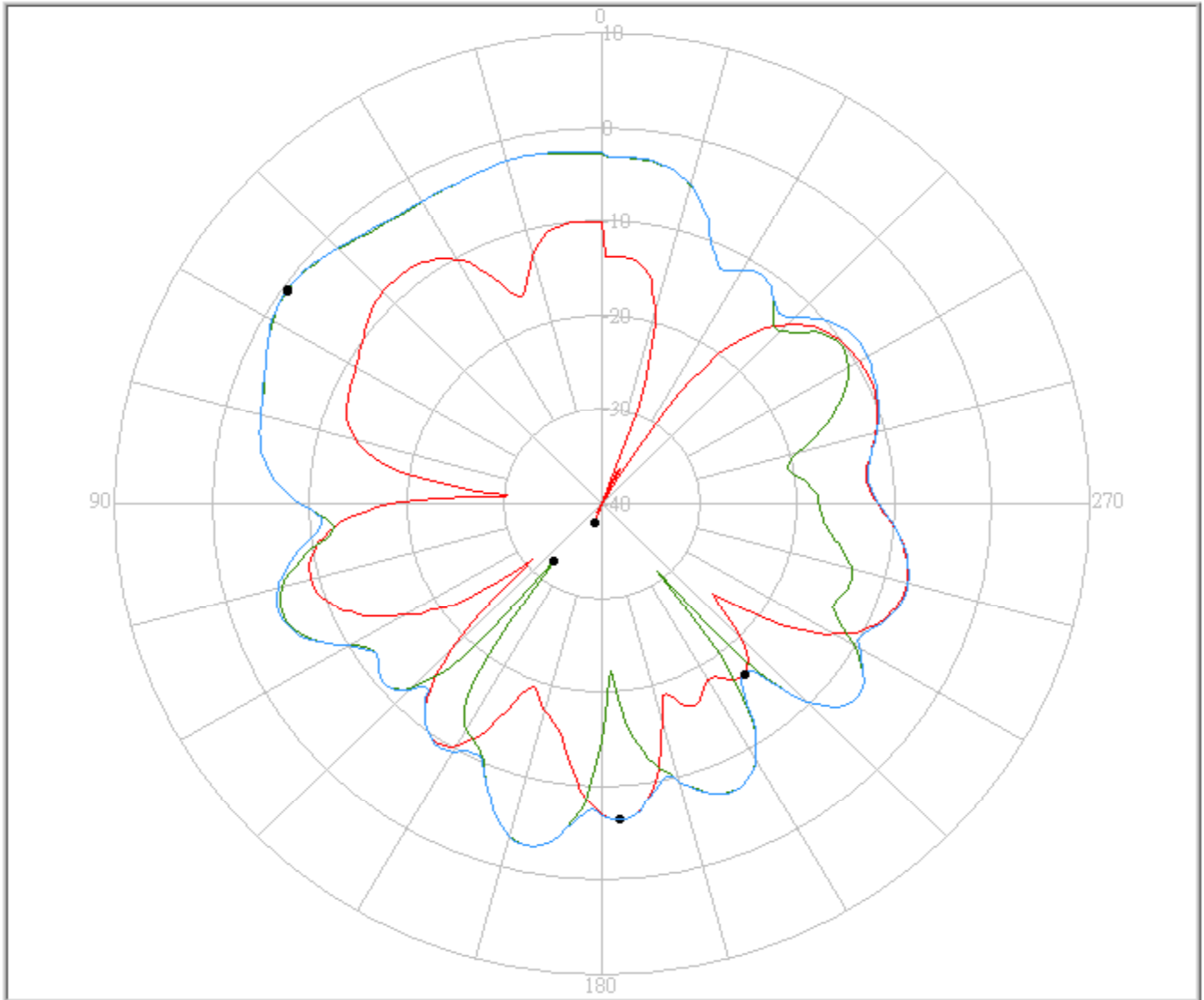
j. 1.75GHz



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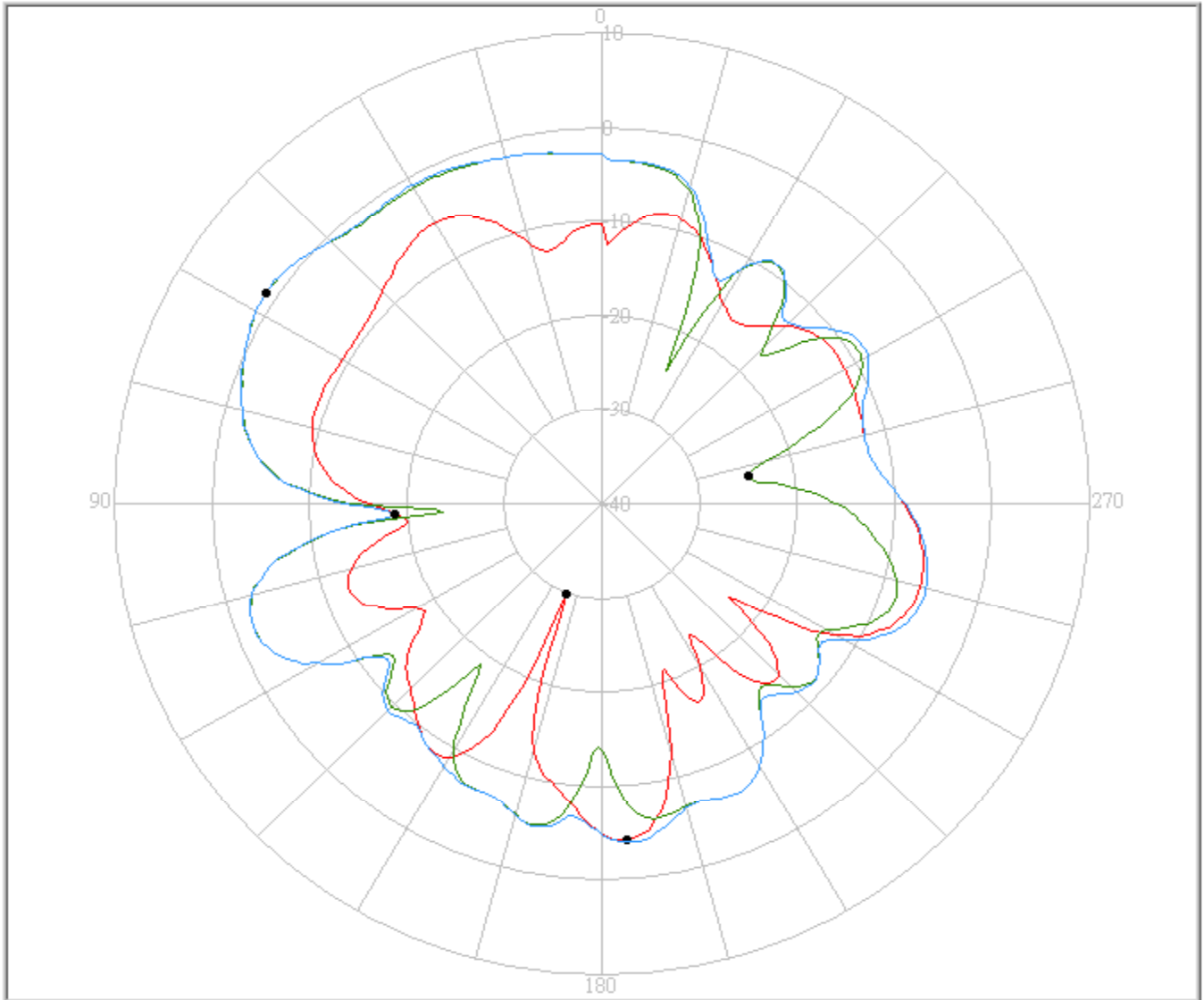
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	1750.00	-6.42 / 183.00	-42.10 / 338.00	-11.82	Ver.	2006/3/10
2	L51	GPRS	1750.00	-0.57 / 55.00	-32.25 / 141.00	-6.35	Hor.	2006/3/10
3	L51	GPRS	1750.00	-0.54 / 55.00	-16.75 / 219.00	-5.85	V+H	2006/3/10

k. 1.79GHz



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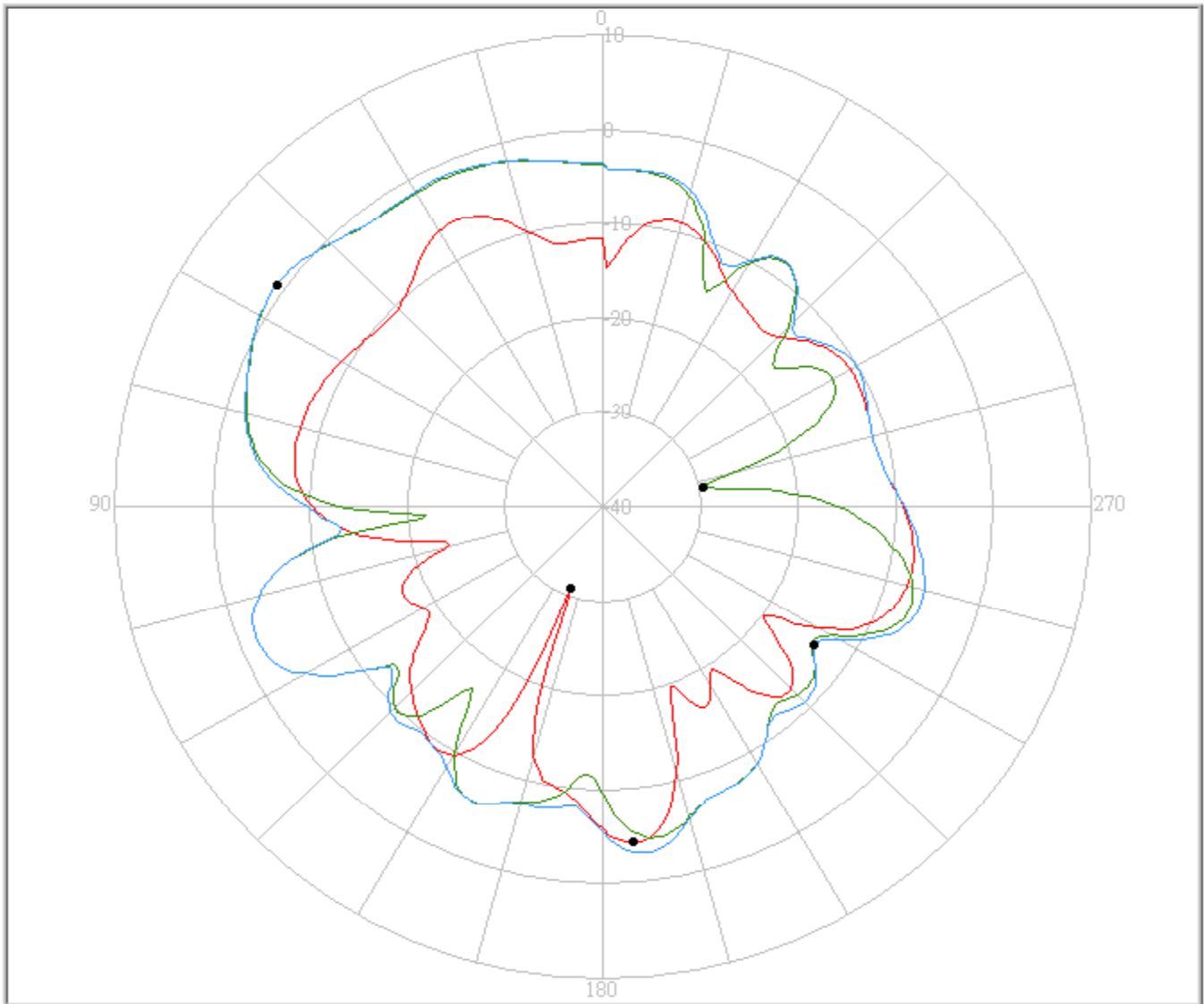
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	1790.00	-4.20 / 184.00	-29.88 / 159.00	-10.15	Ver.	2006/3/10
2	L51	GPRS	1790.00	1.07 / 57.00	-24.78 / 281.00	-5.28	Hor.	2006/3/10
3	L51	GPRS	1790.00	1.09 / 57.00	-18.64 / 93.00	-4.78	V+H	2006/3/10

1. 1.81GHz



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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	L51	GPRS	1810.00	-4.25 / 185.00	-30.72 / 159.00	-10.35	Ver.	2006/3/10
2	L51	GPRS	1810.00	0.78 / 55.00	-29.53 / 281.00	-5.44	Hor.	2006/3/10
3	L51	GPRS	1810.00	0.80 / 55.00	-13.94 / 236.00	-4.98	V+H	2006/3/10

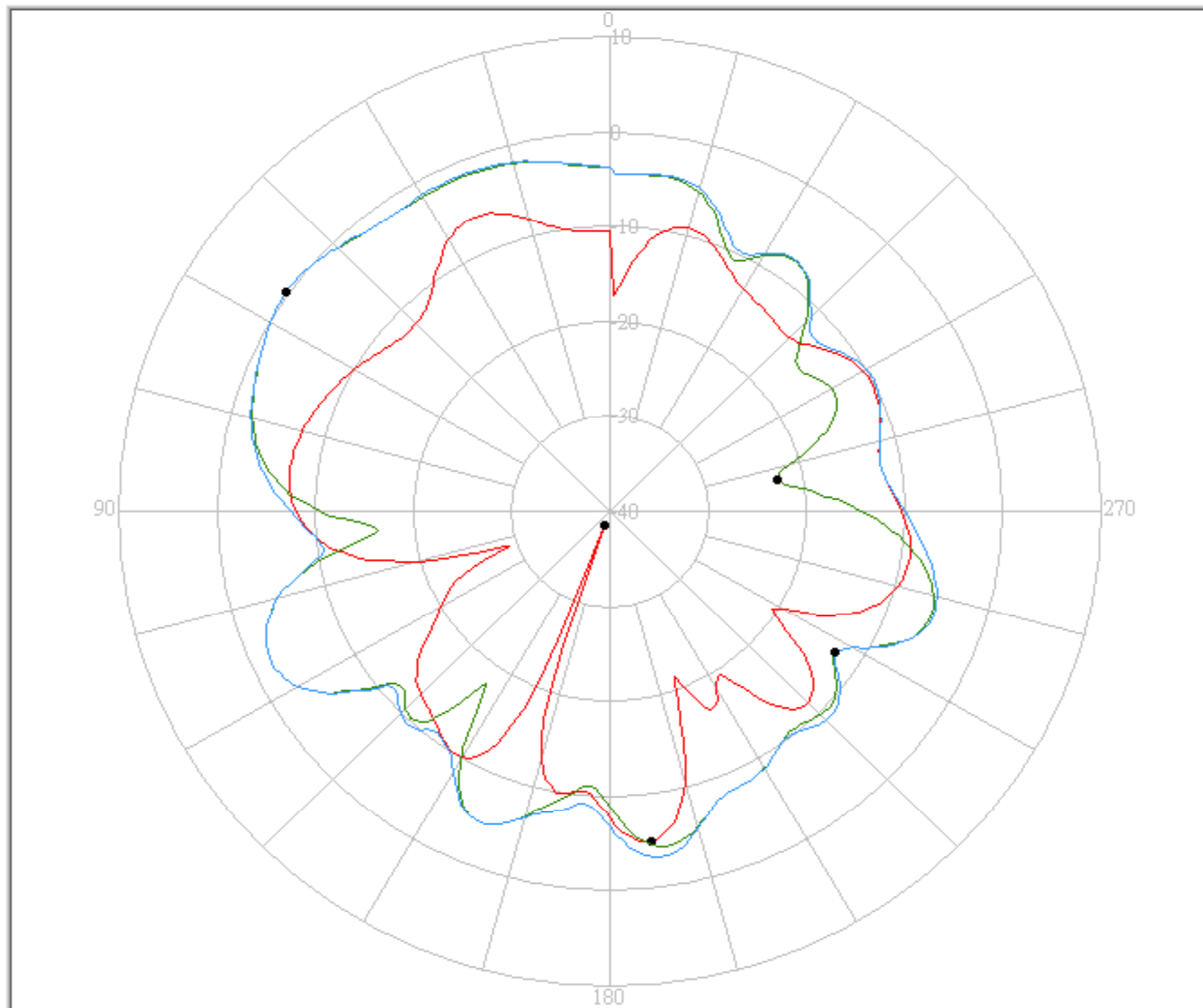
m. 1.83GHz



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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	L51	GPRS	1830.00	-5.03 / 187.00	-38.50 / 160.00	-10.65	Ver.	2006/3/10
2	L51	GPRS	1830.00	0.21 / 55.00	-22.68 / 281.00	-5.37	Hor.	2006/3/10
3	L51	GPRS	1830.00	0.22 / 55.00	-12.61 / 237.00	-5.00	V+H	2006/3/10

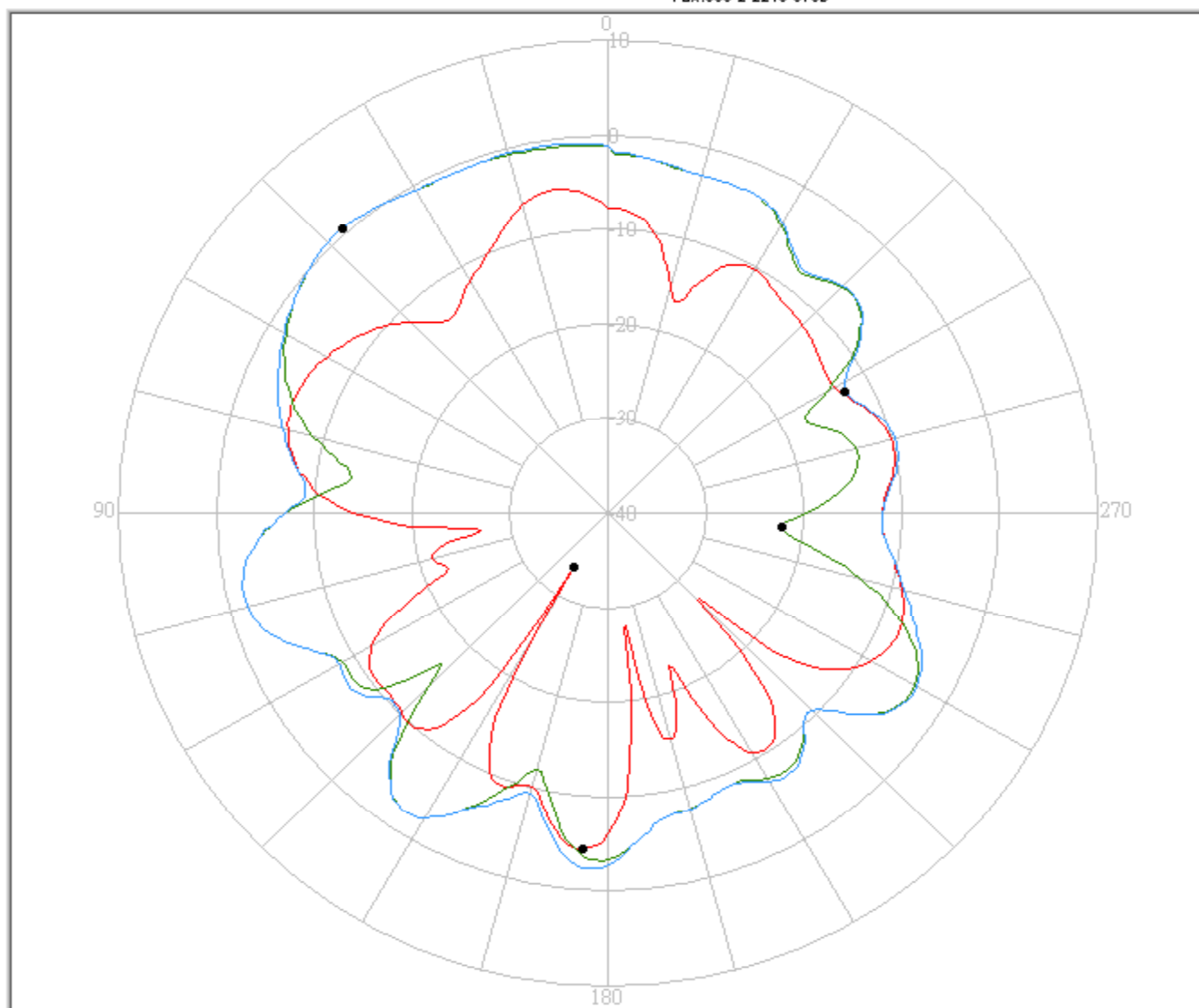
n. 1.85GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	1850.00	-4.39 / 176.00	-33.29 / 149.00	-10.08	Ver.	2006/3/10
2	L51	GPRS	1850.00	0.52 / 42.00	-22.25 / 265.00	-4.55	Hor.	2006/3/10
3	L51	GPRS	1850.00	0.53 / 42.00	-12.61 / 298.00	-4.18	V+H	2006/3/10

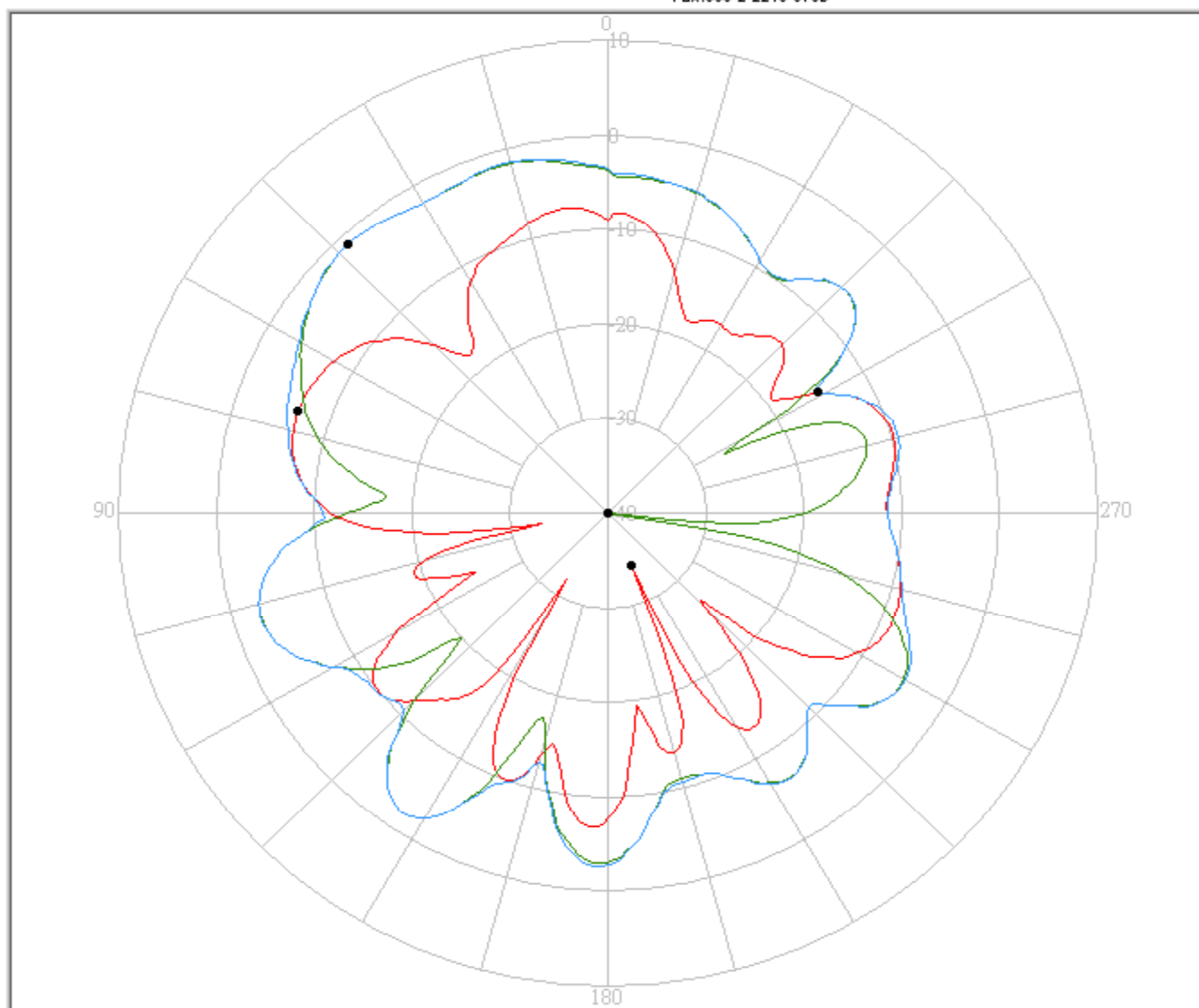
o. 1.88GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	1880.00	-6.55 / 71.00	-34.05 / 203.00	-11.34	Ver.	2006/3/10
2	L51	GPRS	1880.00	-1.13 / 43.00	-41.49 / 263.00	-5.87	Hor.	2006/3/10
3	L51	GPRS	1880.00	-1.13 / 43.00	-15.04 / 301.00	-5.45	V+H	2006/3/10

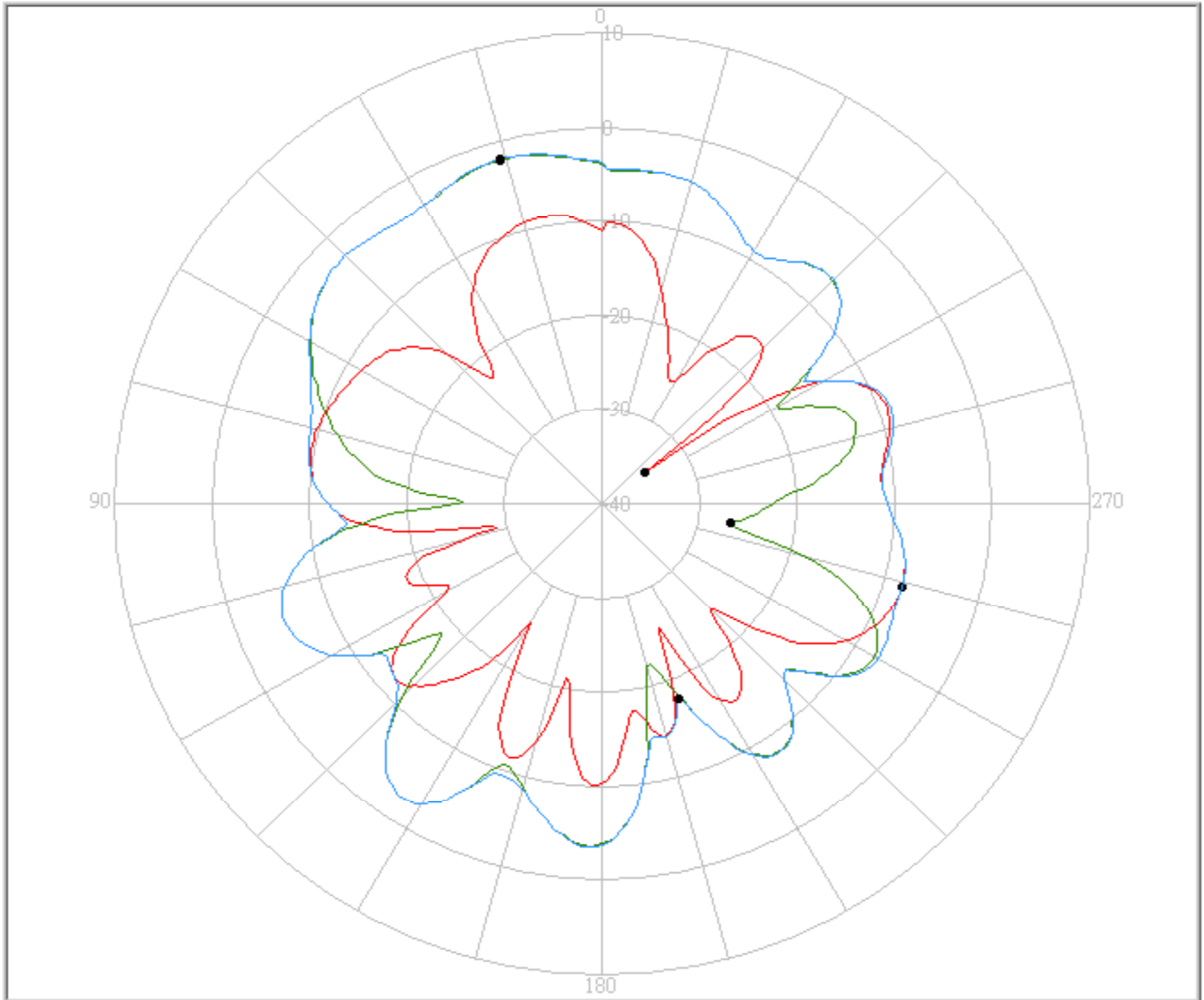
p. 1.91GHz



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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	L51	GPRS	1910.00	-8.02 / 254.00	-34.44 / 307.00	-12.74	Ver.	2006/3/10
2	L51	GPRS	1910.00	-2.00 / 16.00	-26.62 / 261.00	-6.91	Hor.	2006/3/10
3	L51	GPRS	1910.00	-1.92 / 16.00	-17.81 / 201.00	-6.45	V+H	2006/3/10

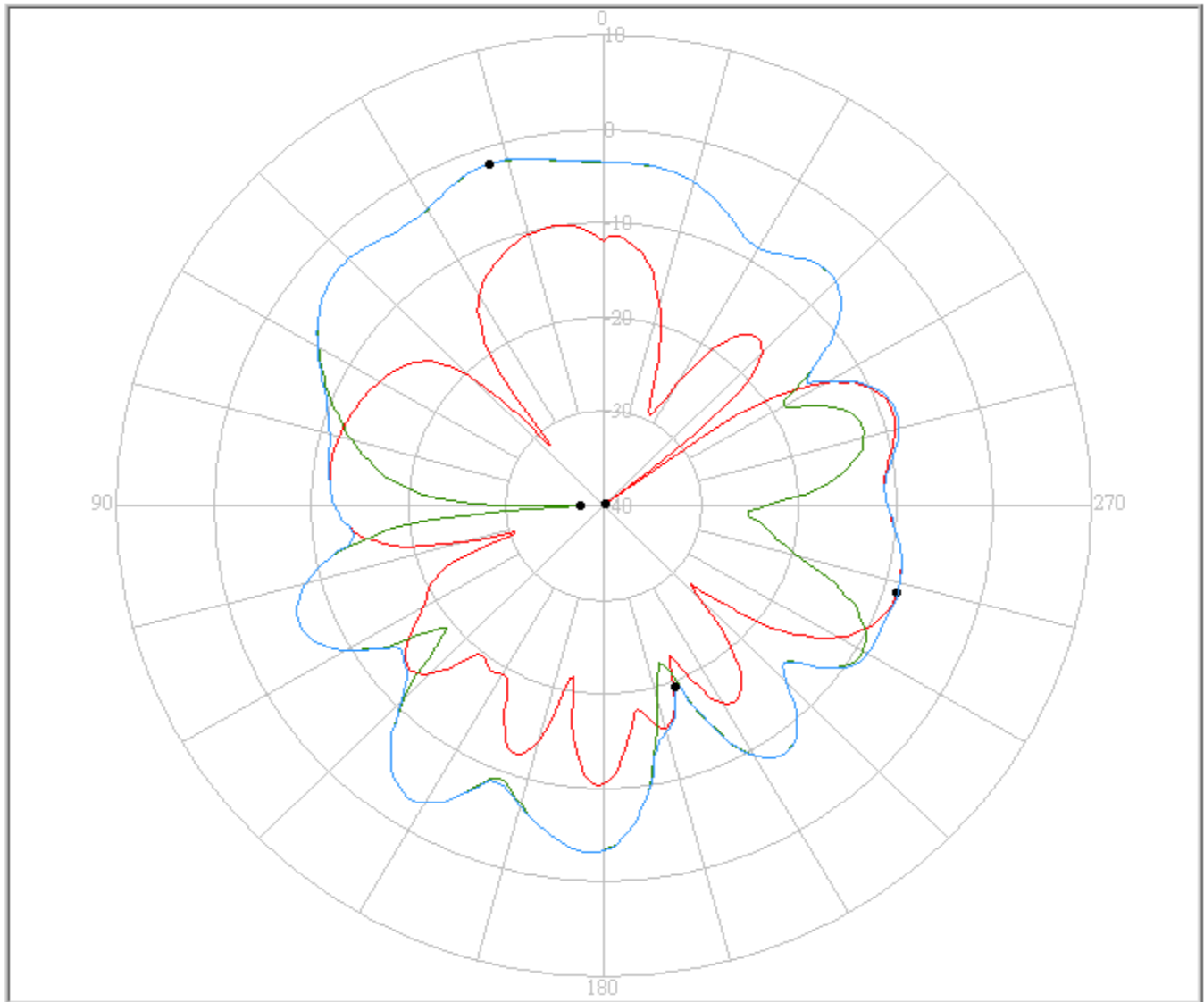
q. 1.93GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	1930.00	-8.51 / 253.00	-39.71 / 307.00	-13.48	Ver.	2006/3/10
2	L51	GPRS	1930.00	-1.86 / 18.00	-37.61 / 92.00	-7.02	Hor.	2006/3/10
3	L51	GPRS	1930.00	-1.82 / 18.00	-19.45 / 201.00	-6.61	V+H	2006/3/10

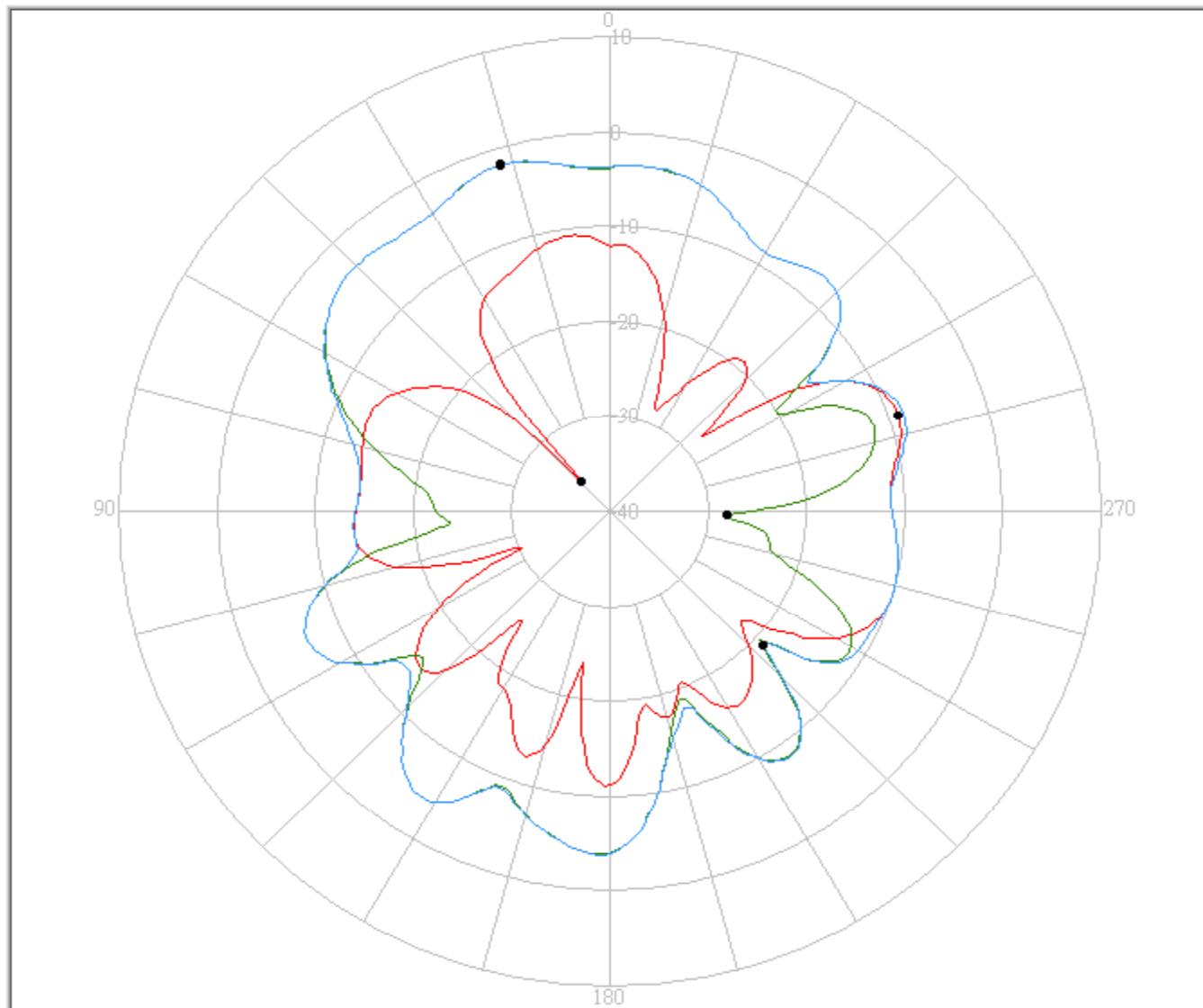
r. 1.95GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	1950.00	-8.95 / 289.00	-35.65 / 43.00	-14.27	Ver.	2006/3/10
2	L51	GPRS	1950.00	-1.81 / 17.00	-28.08 / 268.00	-7.38	Hor.	2006/3/10
3	L51	GPRS	1950.00	-1.78 / 17.00	-19.03 / 228.00	-7.02	V+H	2006/3/10

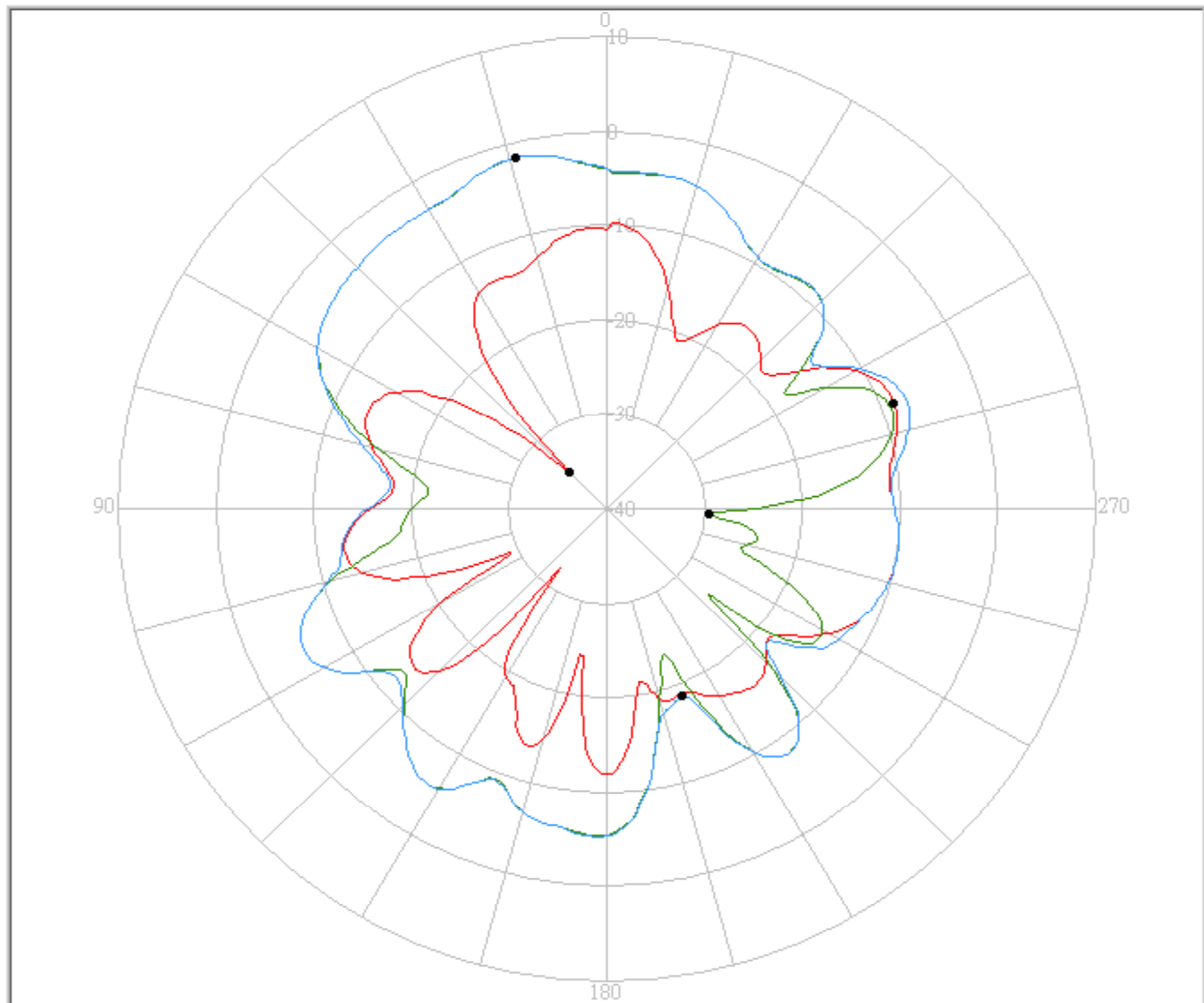
s. 1.97GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L51	GPRS	1970.00	-8.58 / 291.00	-34.49 / 45.00	-13.92	Ver.	2006/3/10
2	L51	GPRS	1970.00	-1.65 / 14.00	-29.60 / 267.00	-7.57	Hor.	2006/3/10
3	L51	GPRS	1970.00	-1.64 / 14.00	-18.73 / 201.00	-7.17	V+H	2006/3/10