

DATE : SEP.21.2006

CUSTOMER: Uniwill Computer, INC

APPROVAL SHEET

MODEL	L41-RIGHT ANTENNA
DESCRIPTION	PIFA For Wireless LAN Antenna 2.4~2.5GHZ /4.9~5.875GHZ
SUPPLIER P/N	K05008004351
CUSTOMER P/N	22G600530-00
FILE P/N	

FAVORTRON			Customer	
Manager	Supervisor	Engineer		
Nick	Vincent	Kristy		

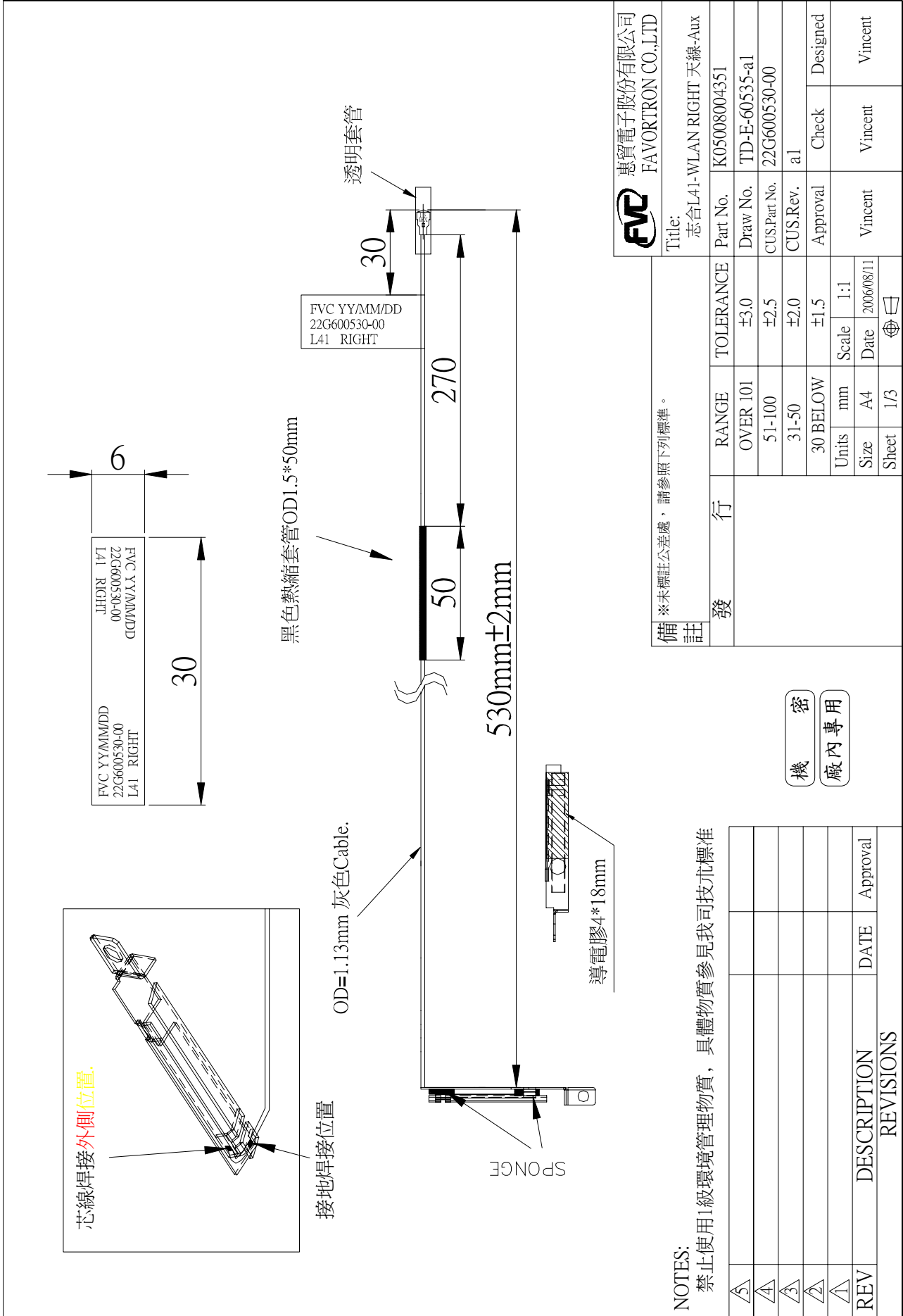


惠寶電子股份有限公司
FAVORTRON CO., LTD

台北縣新店市 231 民權路 108-1 號 4F TEL: (02) 2218-2189

CUSTOMER PN		22G600530-00 (L41-RIGHT)		材料具體型號 or 系列型號
項次	類別	內容	UL / SGS	
1	DRAWING			
		ASSEMBLY		
		BOM		
		鐵件圖面&測試方法		
2	WLAN Ant./In Notebook (LCD-RIGHT ANT.)			
		2.4~2.5GHz / Return Loss & VSWR……		
		5.15~5.85 GHz / Return Loss & VSWR		
		2.4~2.5 & 5.15~5.85 GHz / Return Loss & VSWR		
3	Gain&PATT			
4	SPECIFICATIONS			
		1. Electrical Properties		
		2. Coaxial Cable Specification	SPH-3-0805A	
		3. Coaxial Cable UL	E81015	UL 1354 RF 1.13
		4. I-PEX Connector		
		5. I-PEX Connector UL	E213445	
		6. I-PEX Connector 拉力測試報告		
		7. Sponge Specification	3G-1672	
		8. Sponge UL	E66114(S)	
		9. G9000-SY UL	MH15431	
		10. 導電鋁箔 UL	E233905	EC-1057
		11. 熱縮套管 Specification		
		12. 熱縮套管 UL	E48762(S) & 84766	F32 φ 2.5
		13. PIFA Specification	283383	
		14. IN HOUSE TEST		
5	天線材料名稱內容	SGS REPORT NO		
	IPEX 端子 (接頭 MHF PLUG)	CONTACT	CE/2005/96053	1845-011
		HOUSING	CE/2005/96055	1844-011
	CABLE (灰色) OD = 1.13	導體	2070181/EC	
		絕緣層	SH6044950/CHEM	
		線材外被色母	2070606/EC NT06080073-4	
	無鉛錫		SH546665-1/CHEM	
	鐵件		CE/2005/95879A	
	SPONGE		CE/2004/93871	
	G9000-SY		CE/2005/90196	
	透明套管 (TUBE)		GZ0602016707/CHEM	
	導電鋁箔	鋁箔	SH562578/CHEM	
		導電膠	SH6019816/CHEM	型號: 83
	熱縮套管 (白色油墨)		SH6004687/CHEM	
	熱縮套管		2027239/EC	
	白色標籤		SH6013297/CHEM	型號: AW3209
	白色標籤 (碳帶)		CE/2005/B2096B	型號: RA6902

1. DRAWING ASSEMBLY



NOTES:

禁止使用1級環境管理物質，具體物質參見我司技術標準

BOM

BOM					
ITEM	COMPONENT	QTY	DESCRIPTION	FAVORTRON P/N	VENDER
1	PIFA ANTENNA	1	志合 L41-PIFA-Right (馬口鐵)	M02007032001	品欣
2	同軸線	1	φ 1.13 灰色* 538mm 單邊加I-PEX Connector	M04007148001	FVC
3	透明套管	1	OD2.5*20mm(透明)內徑3.1±0.2壁厚0.25±0.1	B02009714999	三聯
4	SPONGE	1	4mm*3mm*±2.5mm	M01009022002	東鋒
5	SPONGE	1	6mm*3mm*±2.5mm	M01009023002	東鋒
6	鋁箔	1	4mm*18mm T=0.1(不含離型紙)雙面背膠 離型紙多預留5mm	M01005030002	強宇
7	熱縮套管	1	OD2.0*15mm(黑色)內徑 φ 2.6±0.2壁厚0.2±0.1	B02020004121	三聯
8	Lable	1	LABLE 6*30mm	G01013018002	亞識
9					
10					
11					
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15					
16					

SUB BOM (M04007148001)

ITEM	COMPONENT	QTY	DESCRIPTION	FVC P/N	VENDER
1	Connector	1	接頭MHF PLUG(I-PEX) OD=φ 1.13	L07001001001	I-PEX
2	同軸線	1	同軸線 φ 1.13*537鍍錫線 灰色/藍捲	M04005008001	日立信電



Title:

志合L41-WLAN RIGHT 天線-Aux

Part No.	K05008004351
Draw No.	TD-E-60535-a1
CUS.Part No.	22G600530-00
CUS.Rev.	a1

Approval	Check	Designed
Vincent	Vincent	Vincent

發	行	備	註
Date	2006/08/11	Sheet	2/3

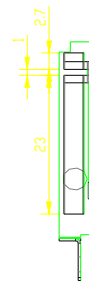
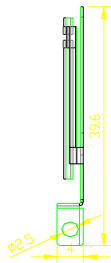
機密
廠內專用

NOTES:

禁止使用1級環境管理物質，具體物質參見我司技術標準

1 2 3 4 5 6

A A B C D



Remark:
 1. MATERIAL : 馬口鐵
 2. t = 0.4mm ± 0.05
 3. 表面不得有毛邊
 4. 外觀不得有壓傷油污刮傷手紋
 5. 未標示公差範圍者請詳公差欄標示值。

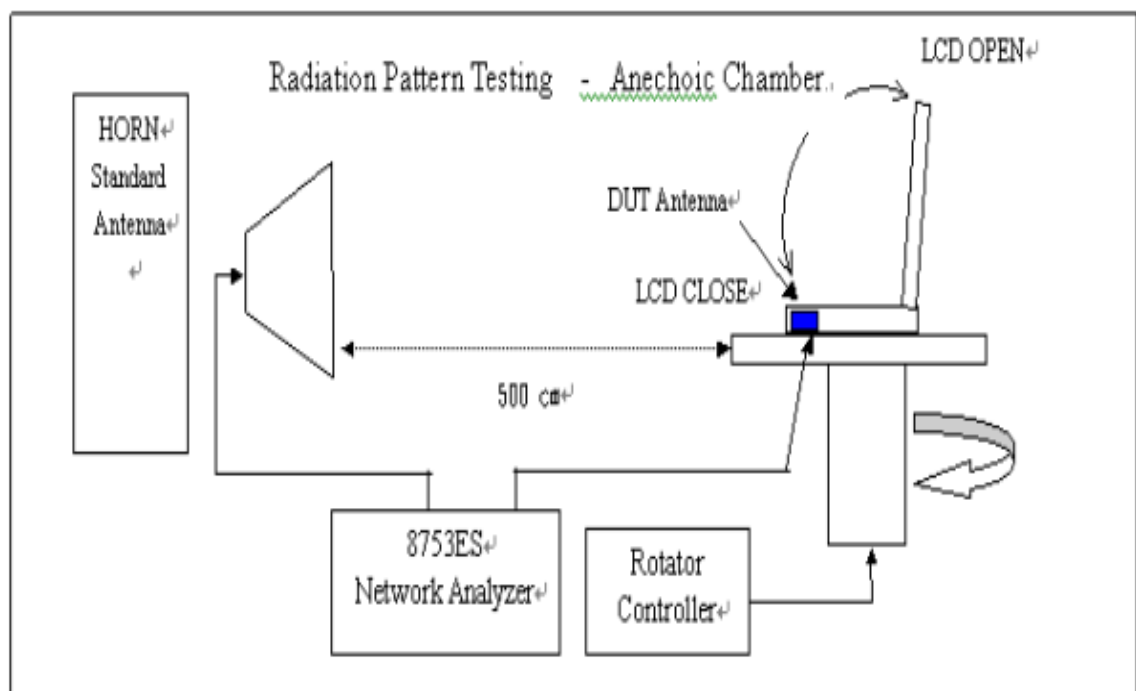


ITEM	DISCRIPION
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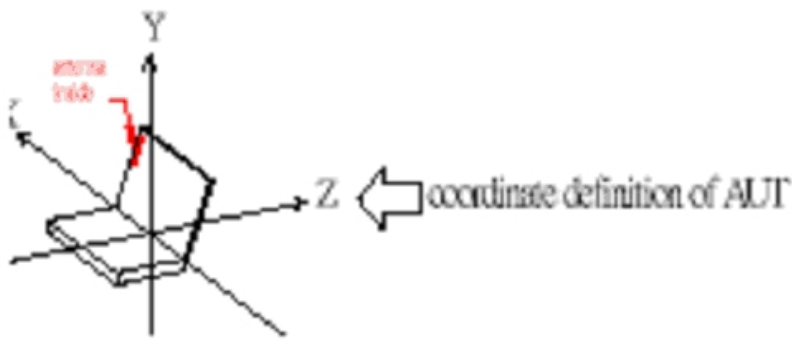
機密
廠內專用

備註		※未標註公差處，請參照下列標準。		惠賢電子股份有限公司 FAVORTRON CO.,LTD	
發行		RANGE	TOLERANCE	Title:	
		OVER 101	±0.20	志合L41-WLAN Right(AUX) Ant	
		51-100	±0.15	Part No	M02007032001
		31-50	±0.10	Draw No.	TD-E--
		30 BELOW	±0.05	Approval	Check
		Units mm	Scale 1:1	Designed	
		Size A4	Date--/--/--	Vincent	Vincent
			Sheet		

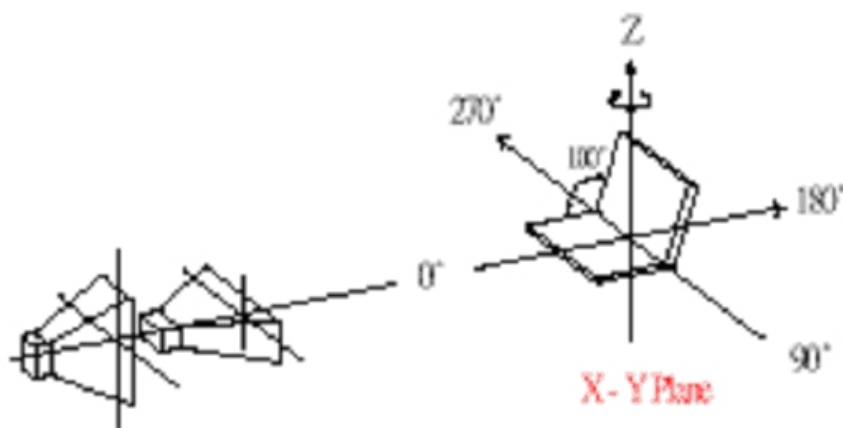
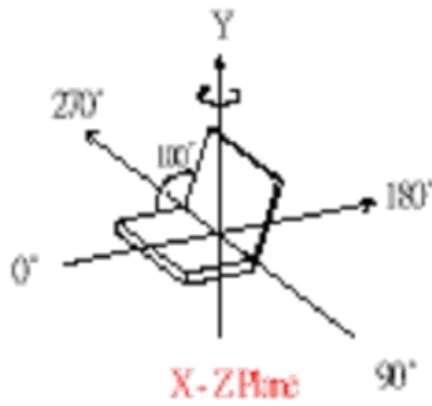
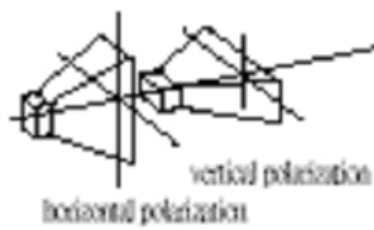
天線測試方法



Coordinate Definition

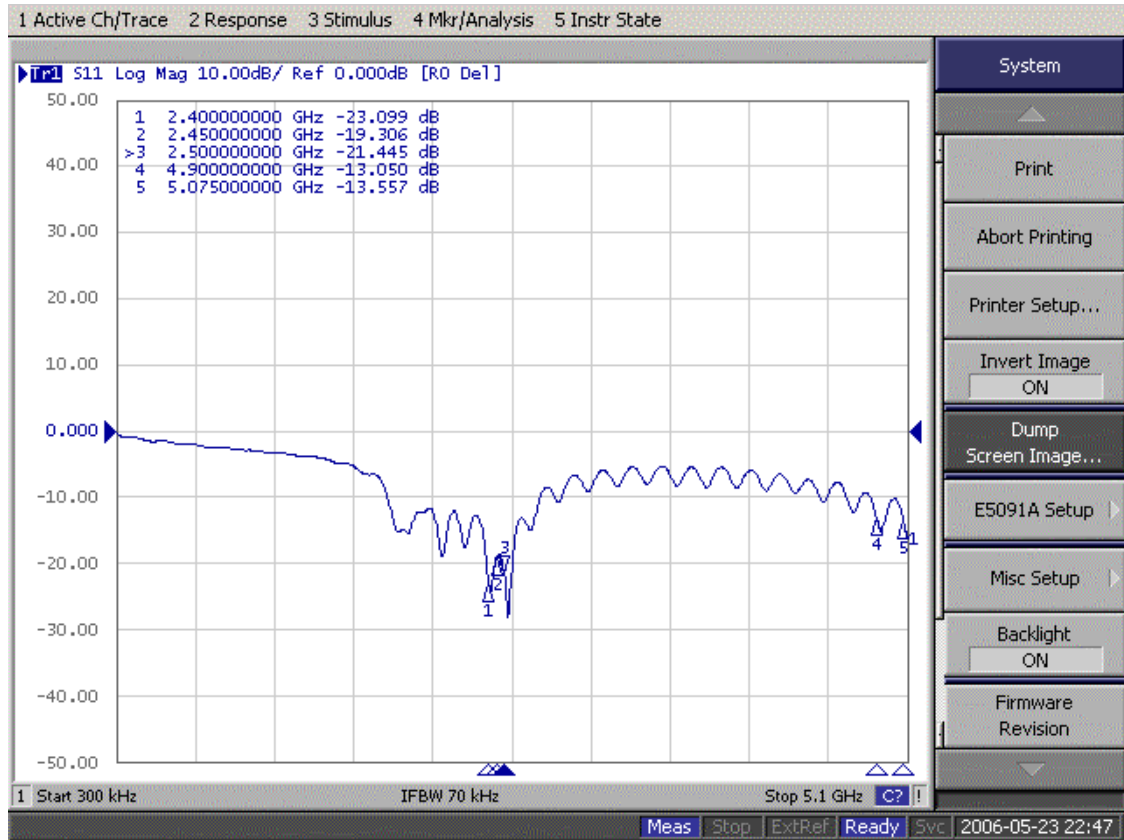


KORNANTENNA

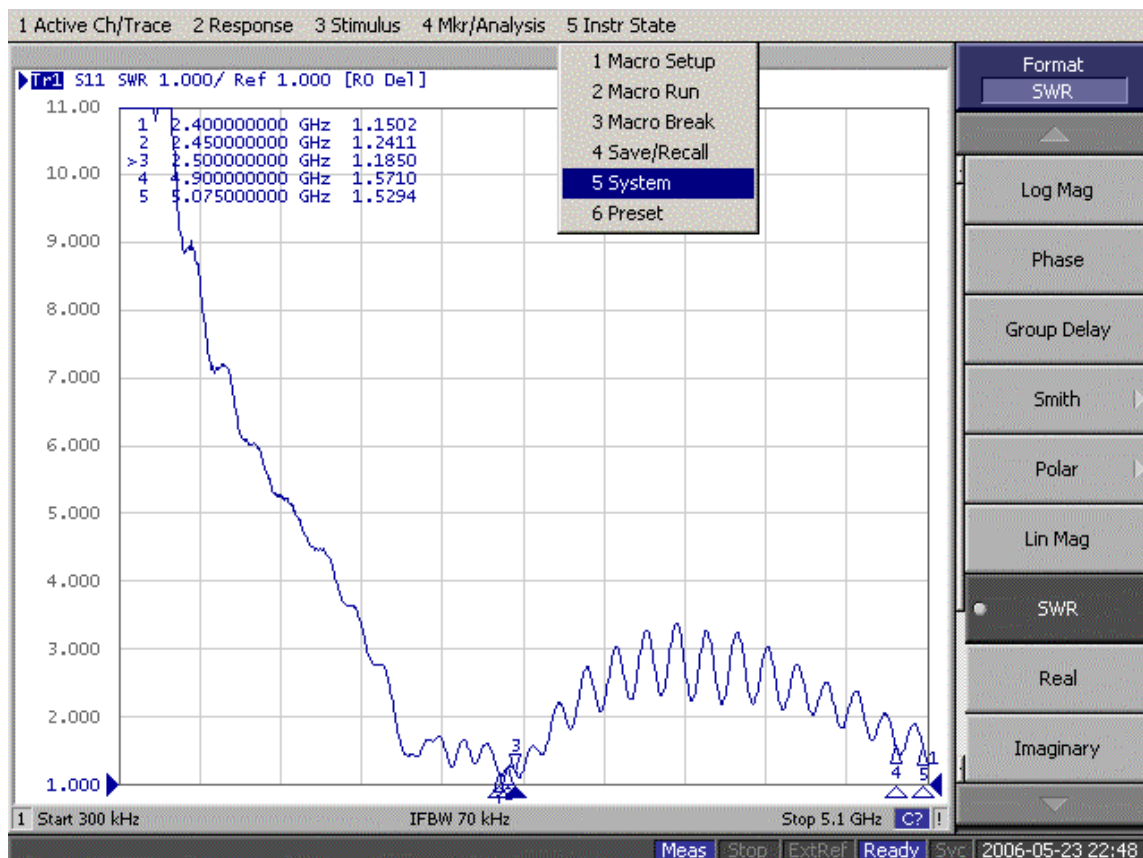


2. WLAN Ant./In Notebook (LCD-RIGHT ANT.)

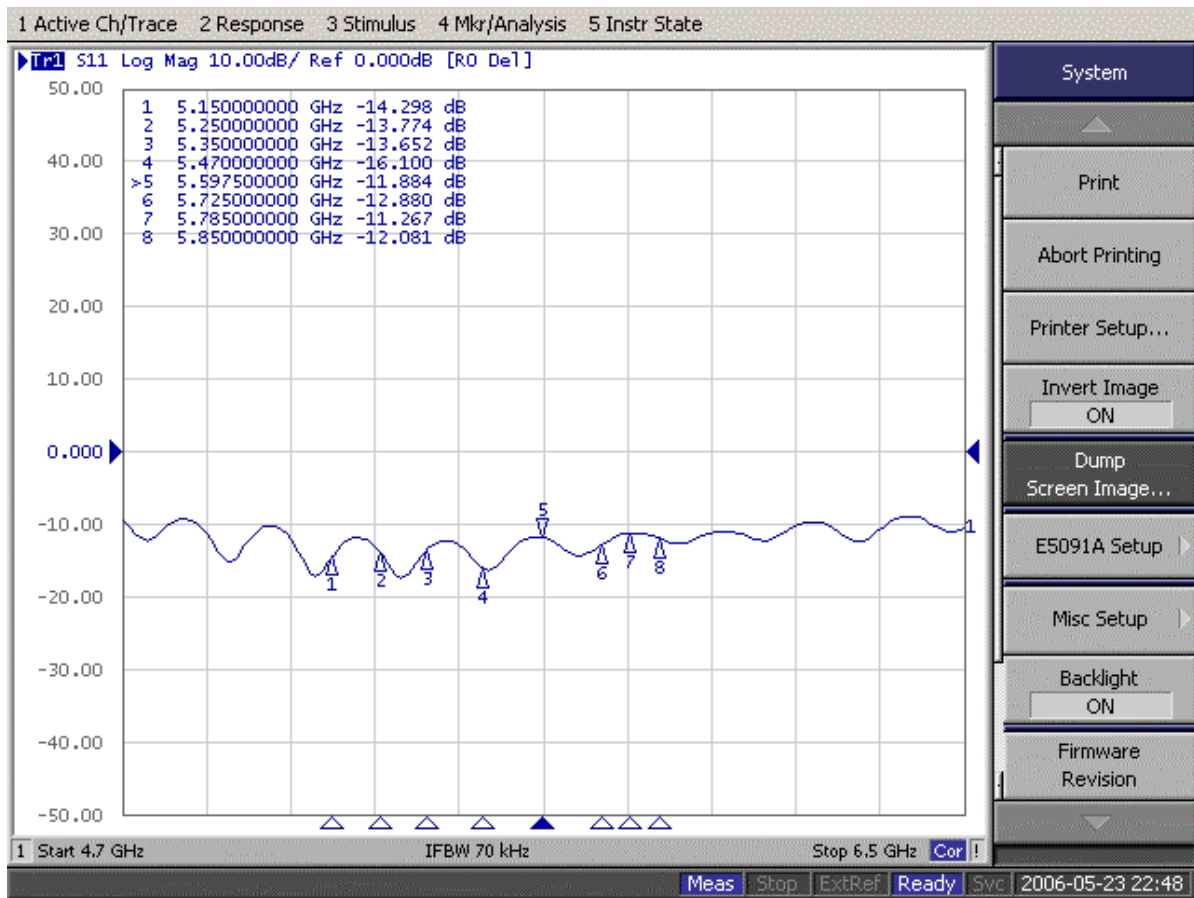
2.4~2.5GHZ / Return Loss



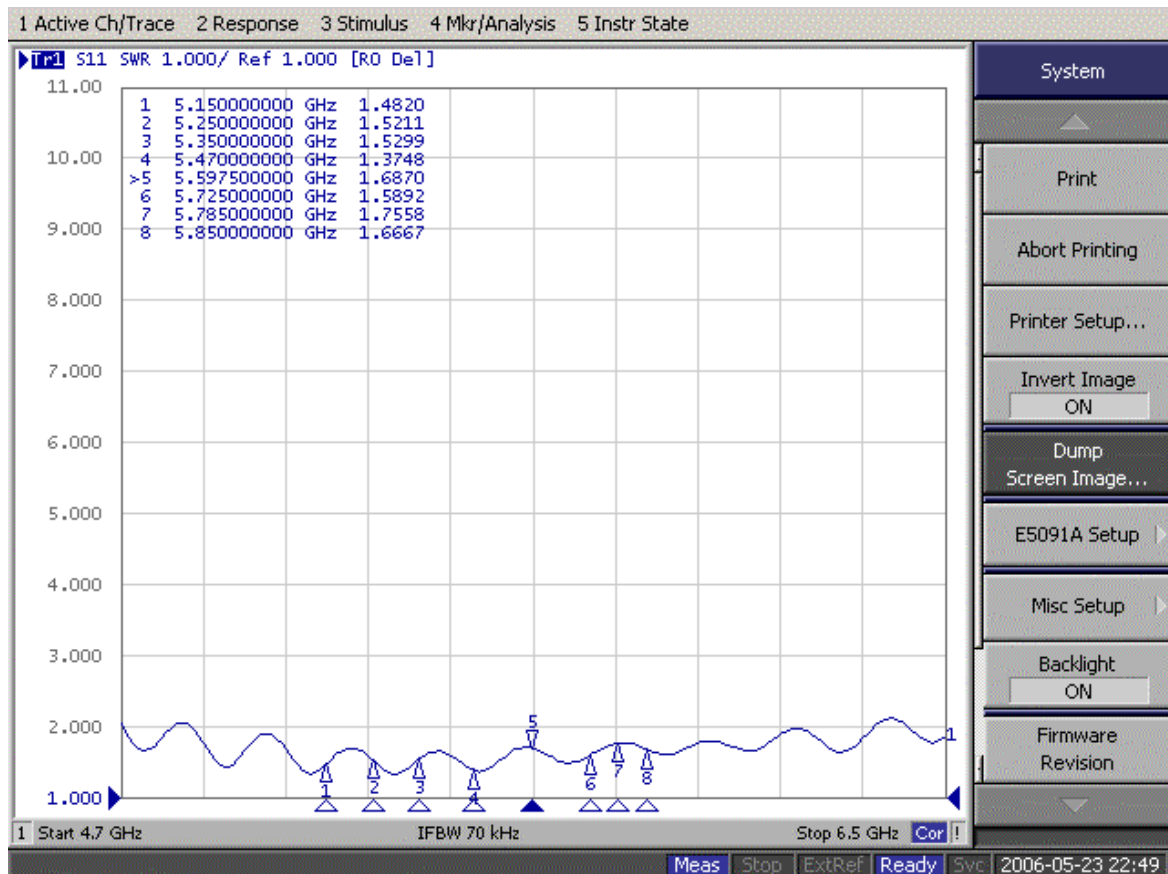
2.4~2.5GHZ / VSWR



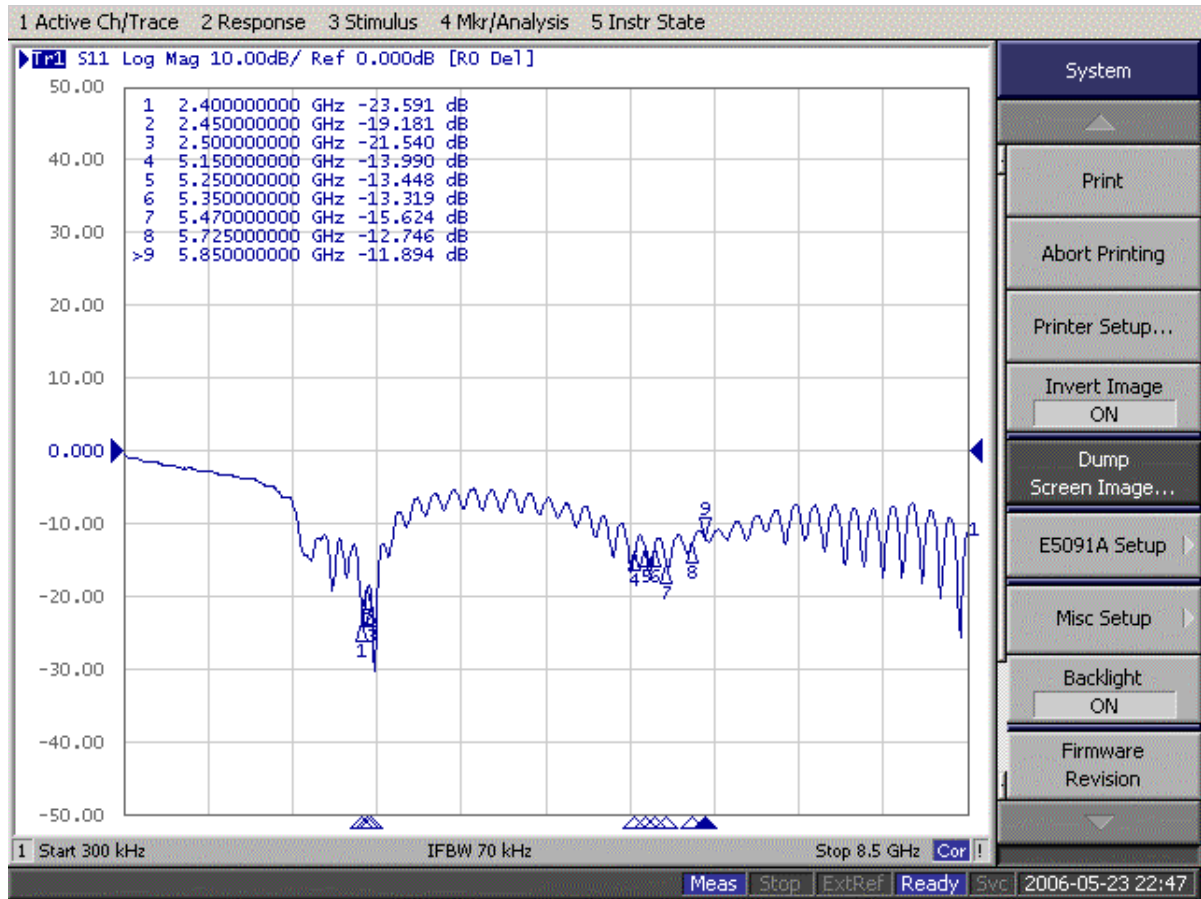
5.1~5.85GHz/Return Loss



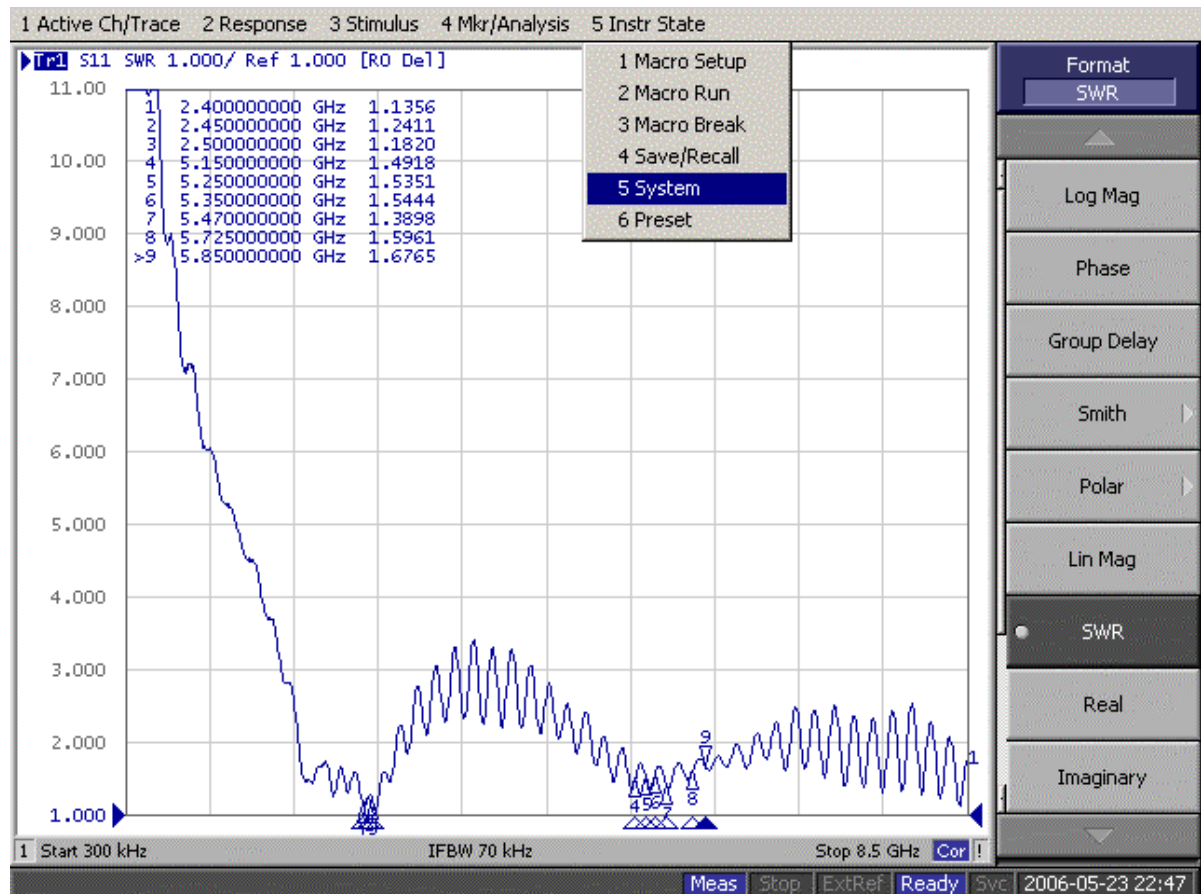
5.1~5.85GHz/VSWR



2.4~2.5GHZ & 5.15~5.85GHZ / Return Loss



2.4~2.5GHZ & 5.15~5.85GHZ / VSWR



3. Gain&PATTERN-WLAN ANT./In Notebook LCD- RIGHT ANT.

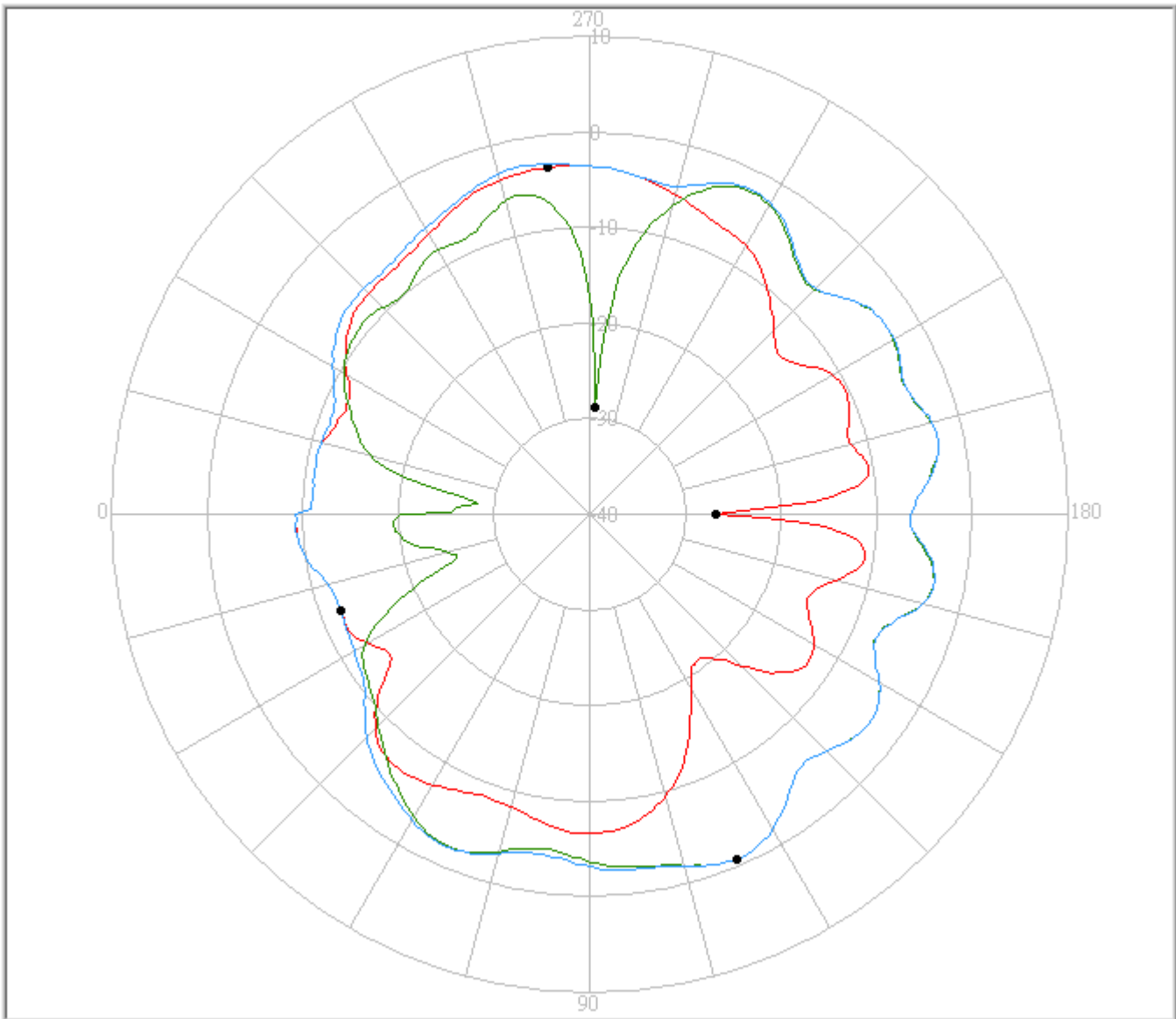
a. 2.4GHz



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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	L41	RIGHT-AU3	2400.00	-3.46 / 277.00	-26.76 / 180.00	-8.62	Ver.	2006/5/23
2	L41	RIGHT-AU3	2400.00	-0.80 / 113.00	-28.77 / 267.00	-5.58	Hor.	2006/5/23
3	L41	RIGHT-AU3	2400.00	-0.79 / 113.00	-12.14 / 21.00	-4.67	V+H	2006/5/23

b. 2.45GHz



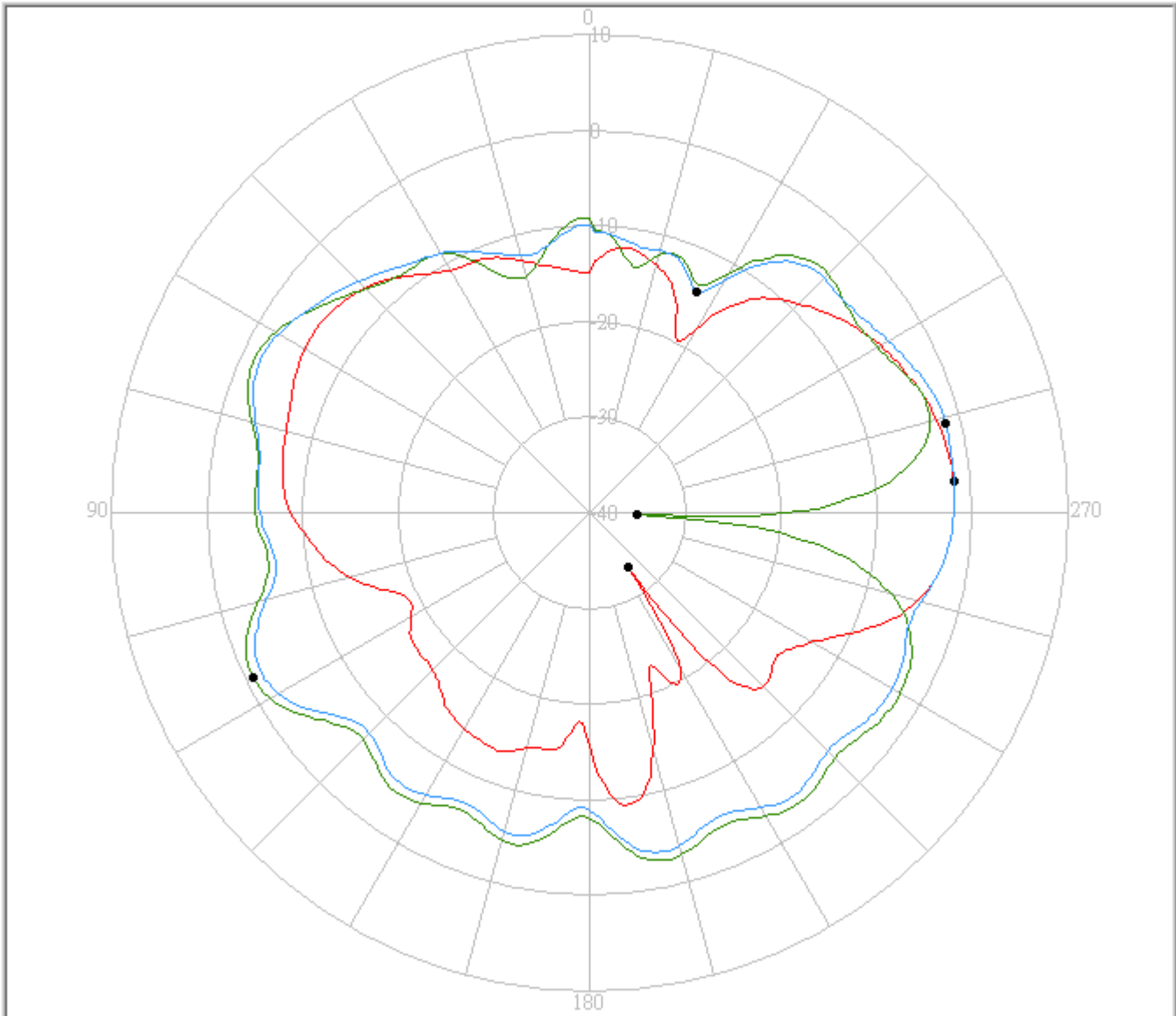
eService for Customer Satisfaction

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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	L41	RIGHT-AU	2450.00	-1.84 / 275.00	-33.12 / 215.00	-8.50	Ver.	2006/5/23
2	L41	RIGHT-AU	2450.00	-0.83 / 116.00	-35.03 / 267.00	-5.12	Hor.	2006/5/23
3	L41	RIGHT-AU	2450.00	-1.67 / 284.00	-14.35 / 334.00	-4.99	V+H	2006/5/23

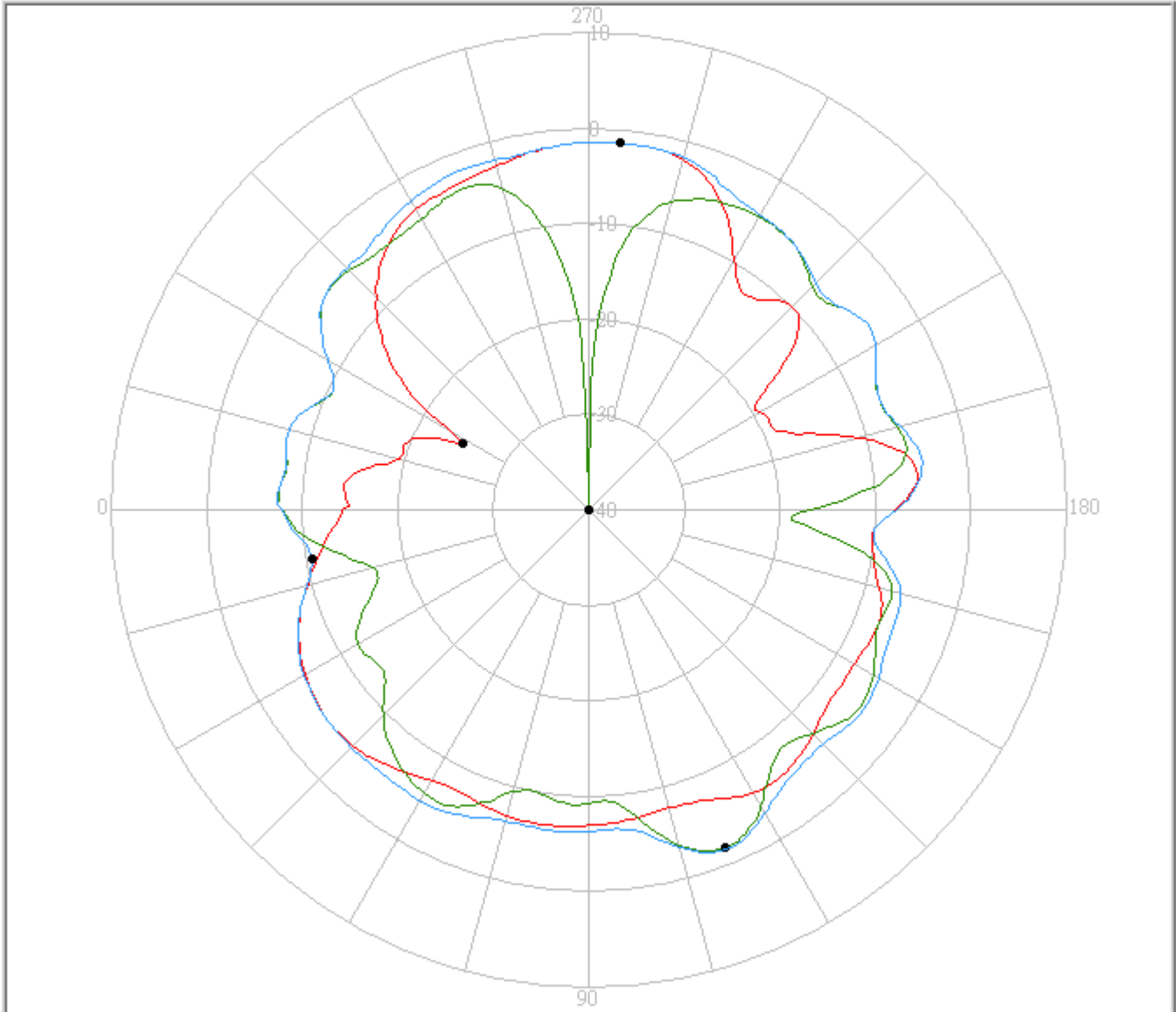
c. 2.5GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L41	RIGHT-AU	2500.00	-1.45 / 265.00	-25.02 / 332.00	-6.61	Ver.	2006/5/23
2	L41	RIGHT-AU	2500.00	-1.84 / 112.00	-46.57 / 270.00	-6.86	Hor.	2006/5/23
3	L41	RIGHT-AU	2500.00	-1.45 / 265.00	-10.56 / 10.00	-4.77	V+H	2006/5/23

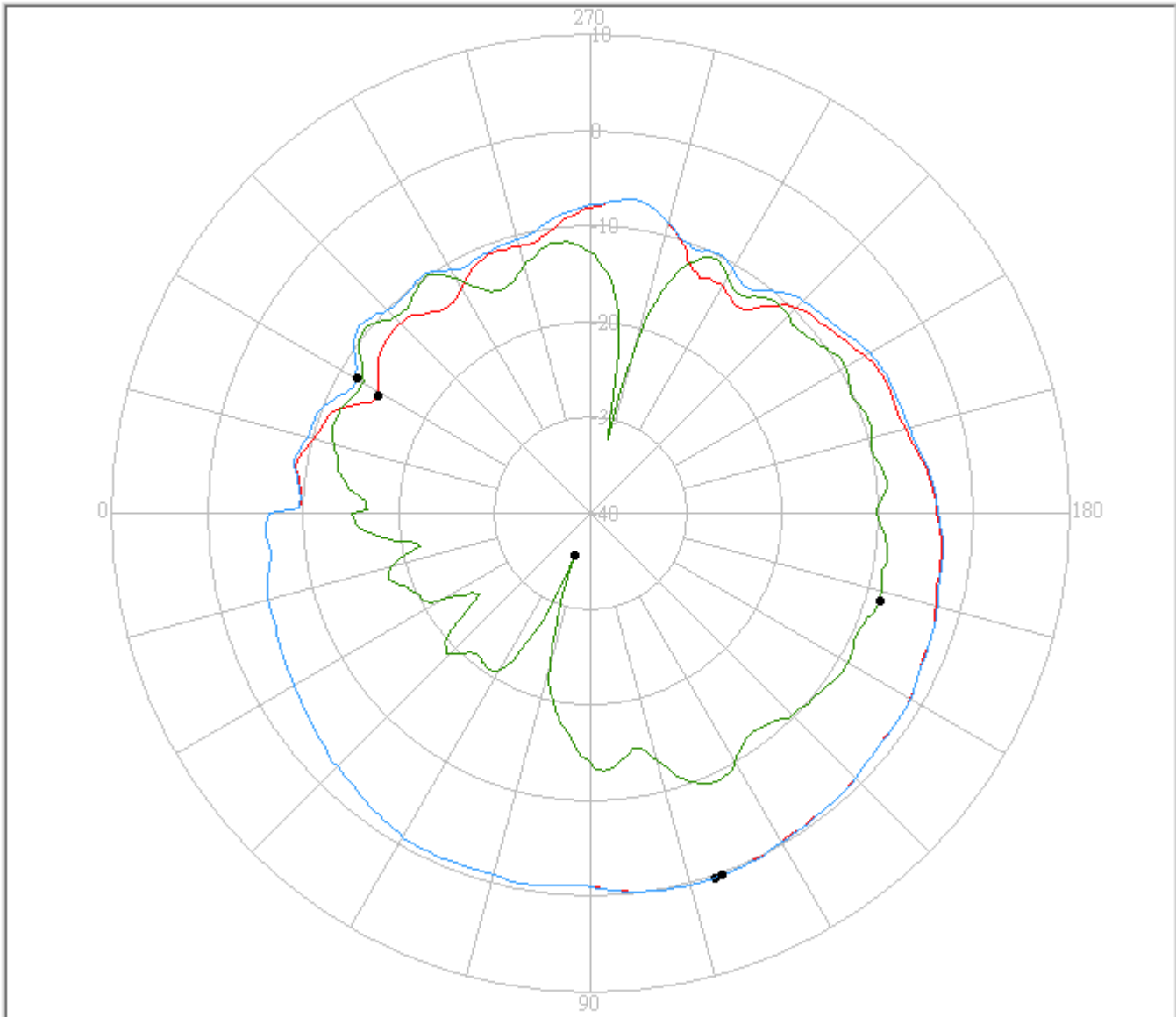
d. 4.9GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L41	RIGHT-AU	4900.00	0.20 / 109.00	-14.63 / 331.00	-4.02	Ver.	2006/5/23
2	L41	RIGHT-AU	4900.00	-8.44 / 163.00	-35.21 / 69.00	-12.06	Hor.	2006/5/23
3	L41	RIGHT-AU	4900.00	0.22 / 110.00	-11.90 / 330.00	-3.87	V+H	2006/5/23

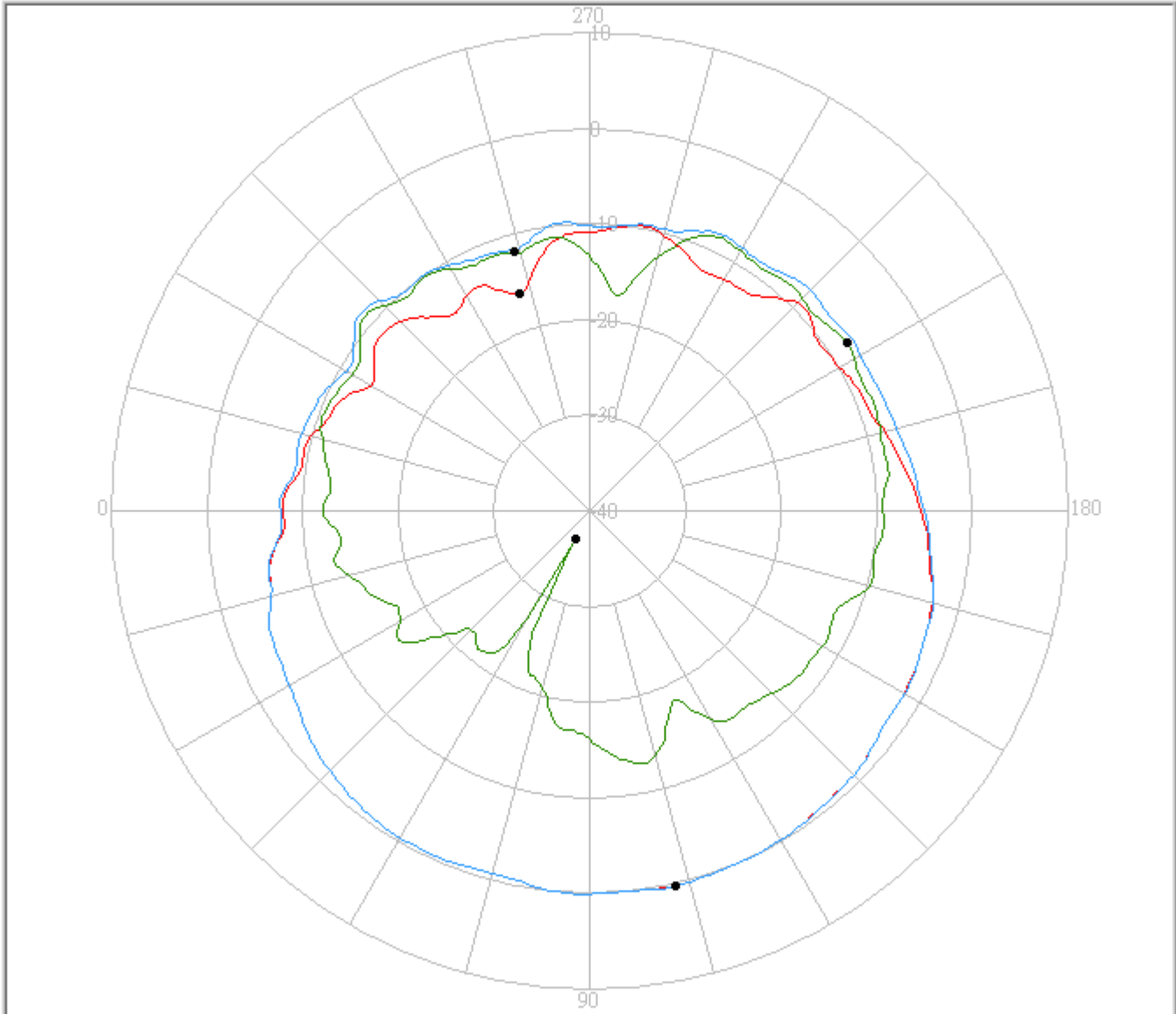
e. 5.075GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L41	RIGHT-AU3	5075.00	0.24 / 103.00	-16.16 / 288.00	-4.08	Ver.	2006/5/23
2	L41	RIGHT-AU3	5075.00	-7.88 / 213.00	-36.75 / 62.00	-11.62	Hor.	2006/5/23
3	L41	RIGHT-AU3	5075.00	0.25 / 103.00	-11.71 / 286.00	-3.81	V+H	2006/5/23

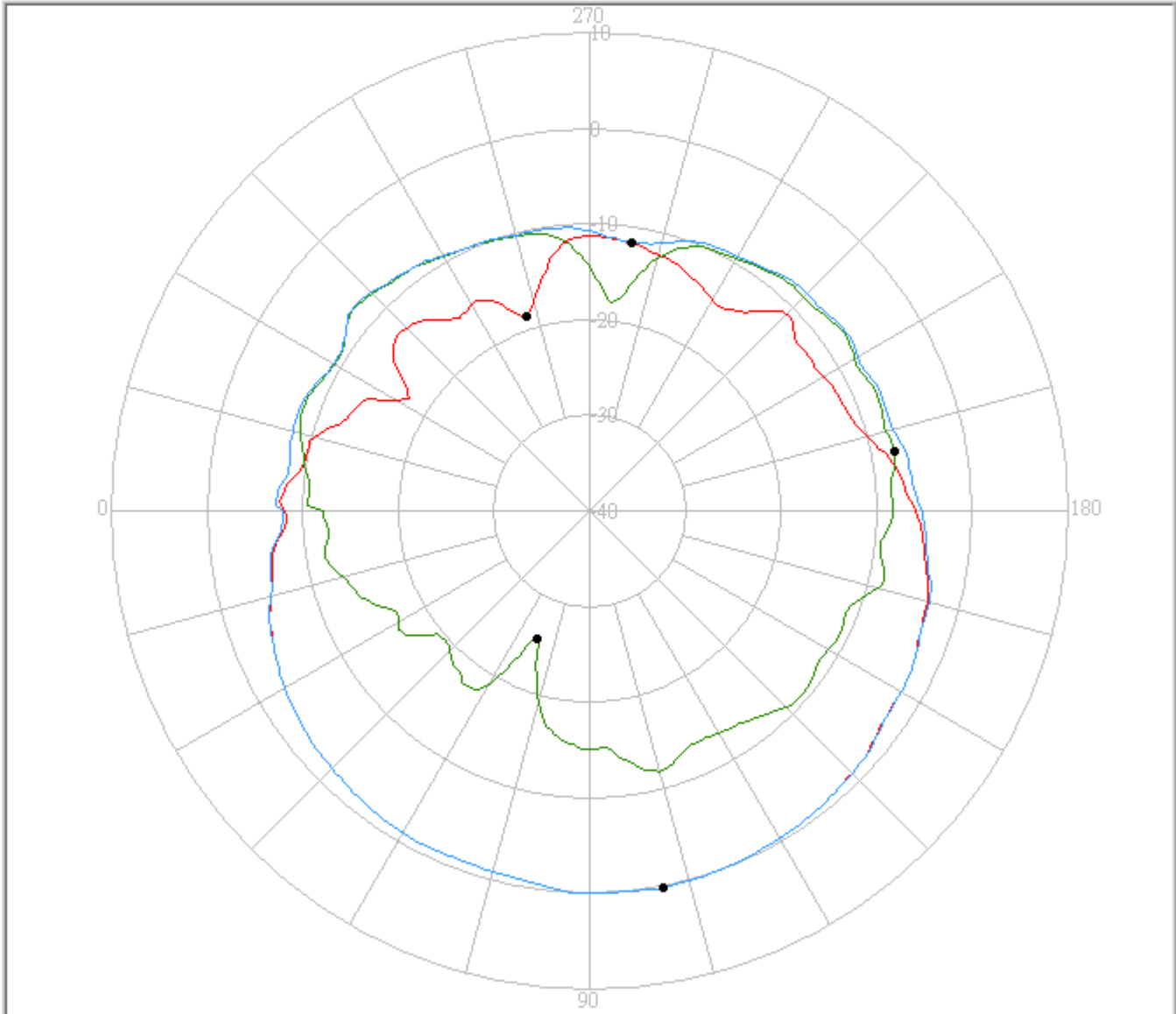
f. 5.15GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L41	RIGHT-AU	5150.00	0.10 / 101.00	-18.57 / 288.00	-4.41	Ver.	2006/5/23
2	L41	RIGHT-AU	5150.00	-7.51 / 191.00	-25.53 / 68.00	-10.70	Hor.	2006/5/23
3	L41	RIGHT-AU	5150.00	0.11 / 101.00	-11.57 / 261.00	-3.95	V+H	2006/5/23

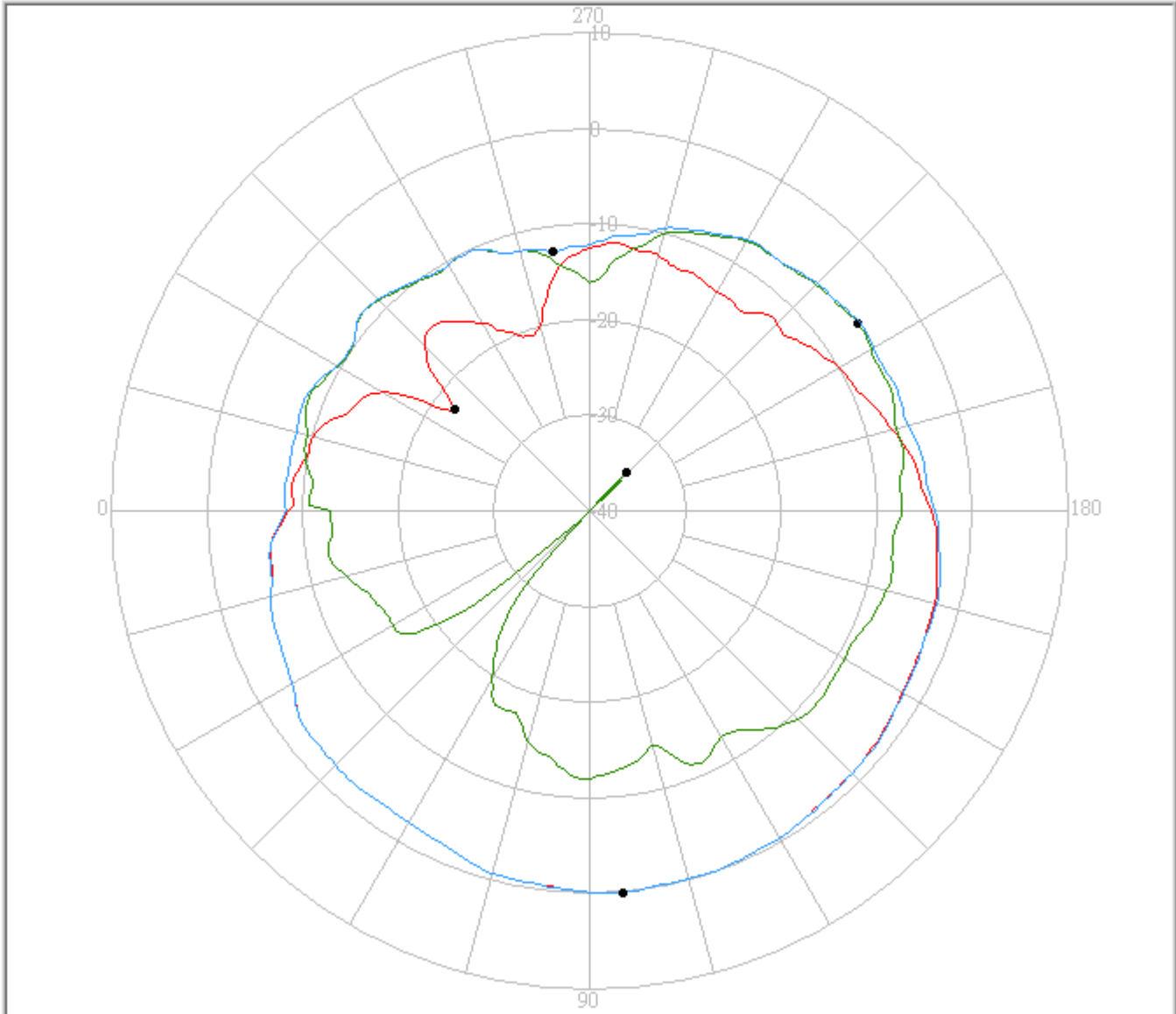
g. 5.25GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L41	RIGHT-AU3	5250.00	0.05 / 95.00	-22.36 / 323.00	-4.47	Ver.	2006/5/23
2	L41	RIGHT-AU3	5250.00	-5.77 / 215.00	-48.07 / 44.00	-9.97	Hor.	2006/5/23
3	L41	RIGHT-AU3	5250.00	0.06 / 95.00	-12.70 / 278.00	-3.93	V+H	2006/5/23

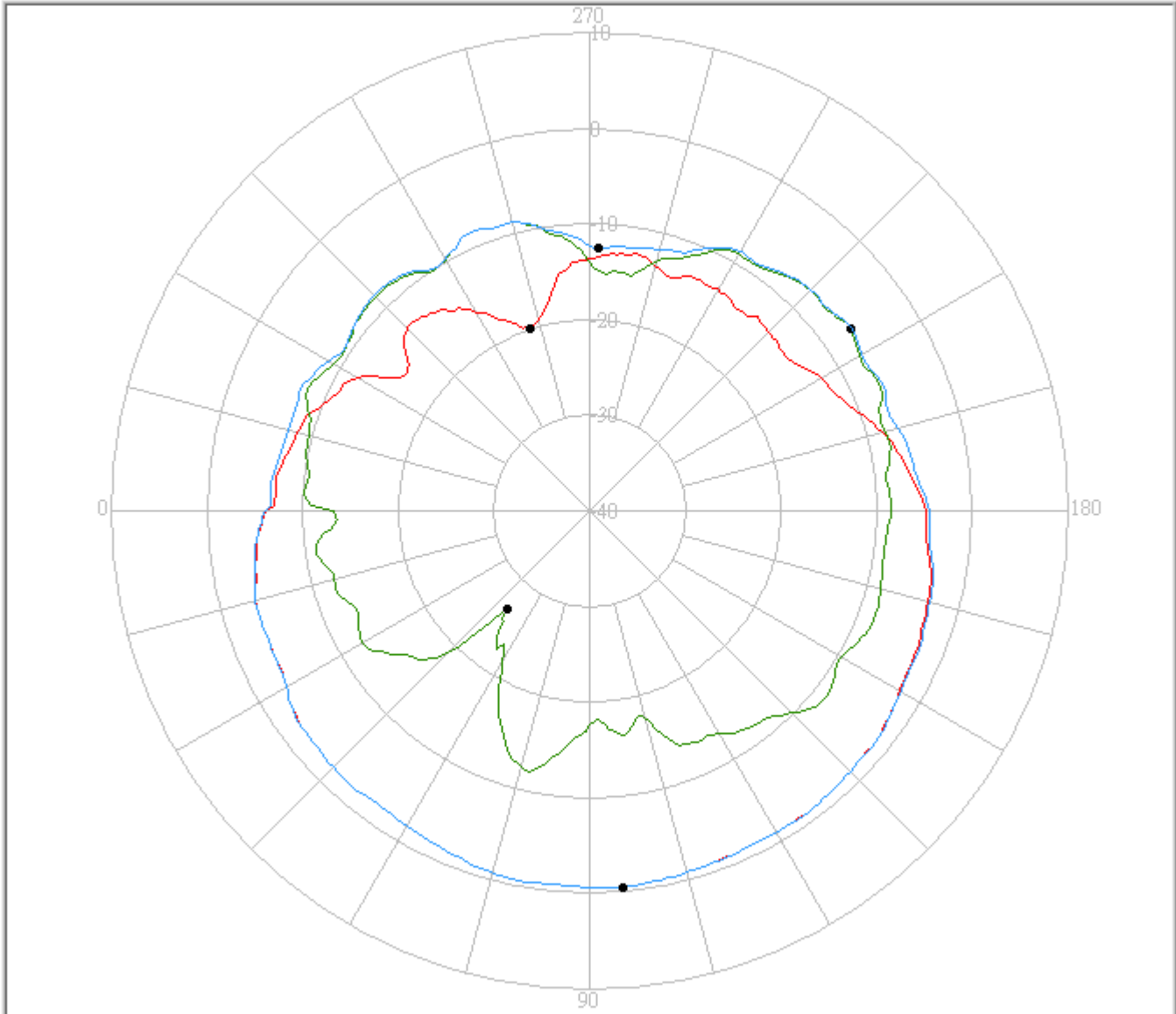
h. 5.35GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L41	RIGHT-AU	5350.00	-0.46 / 95.00	-19.90 / 288.00	-4.58	Ver.	2006/5/23
2	L41	RIGHT-AU	5350.00	-6.69 / 215.00	-26.57 / 50.00	-10.32	Hor.	2006/5/23
3	L41	RIGHT-AU	5350.00	-0.46 / 95.00	-12.58 / 268.00	-4.08	V+H	2006/5/23

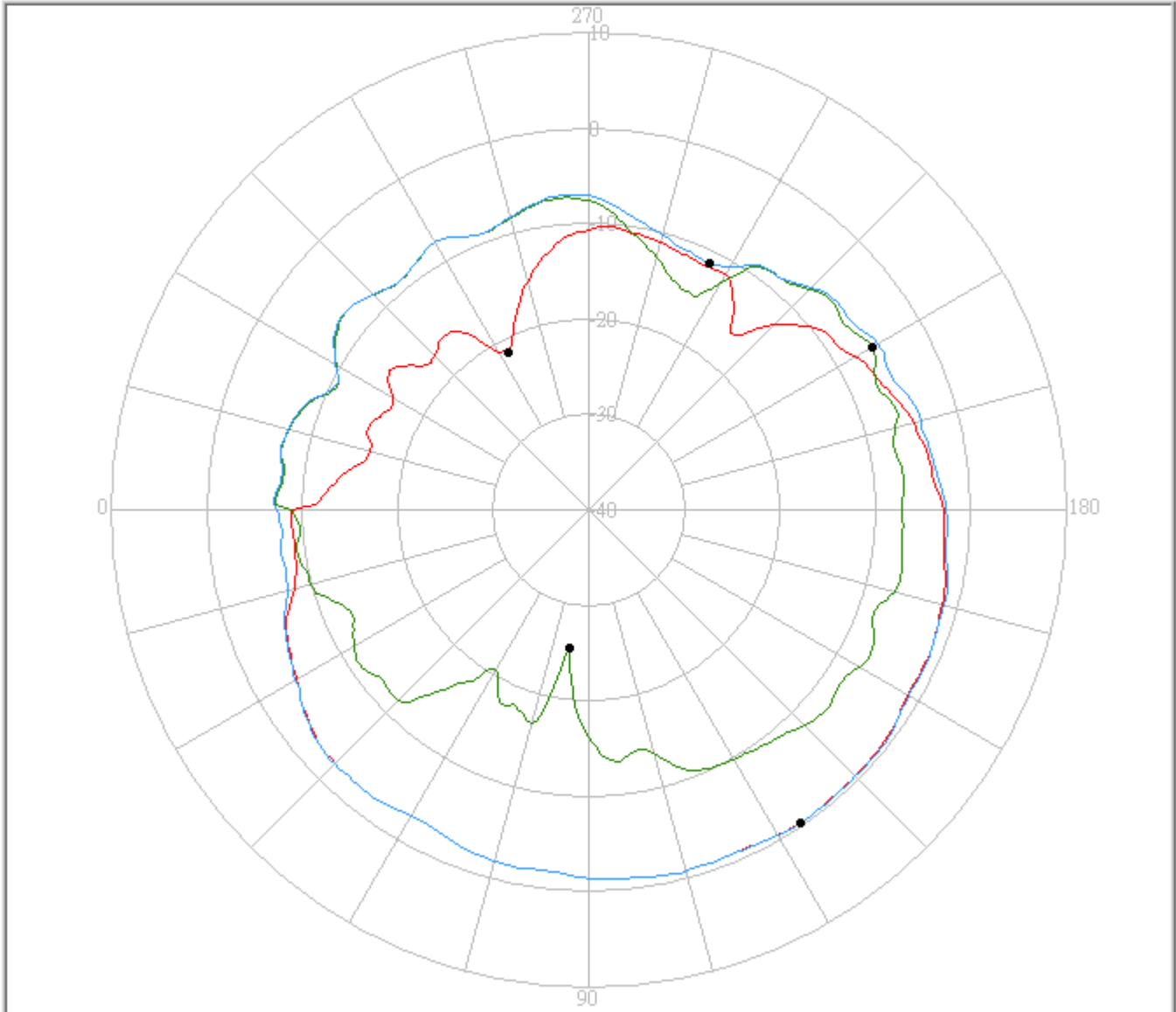
i. 5.47GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L41	RIGHT-AU	5470.00	-0.42 / 124.00	-21.45 / 297.00	-4.55	Ver.	2006/5/23
2	L41	RIGHT-AU	5470.00	-5.81 / 210.00	-25.42 / 82.00	-9.11	Hor.	2006/5/23
3	L41	RIGHT-AU	5470.00	-0.39 / 124.00	-11.33 / 244.00	-3.91	V+H	2006/5/23

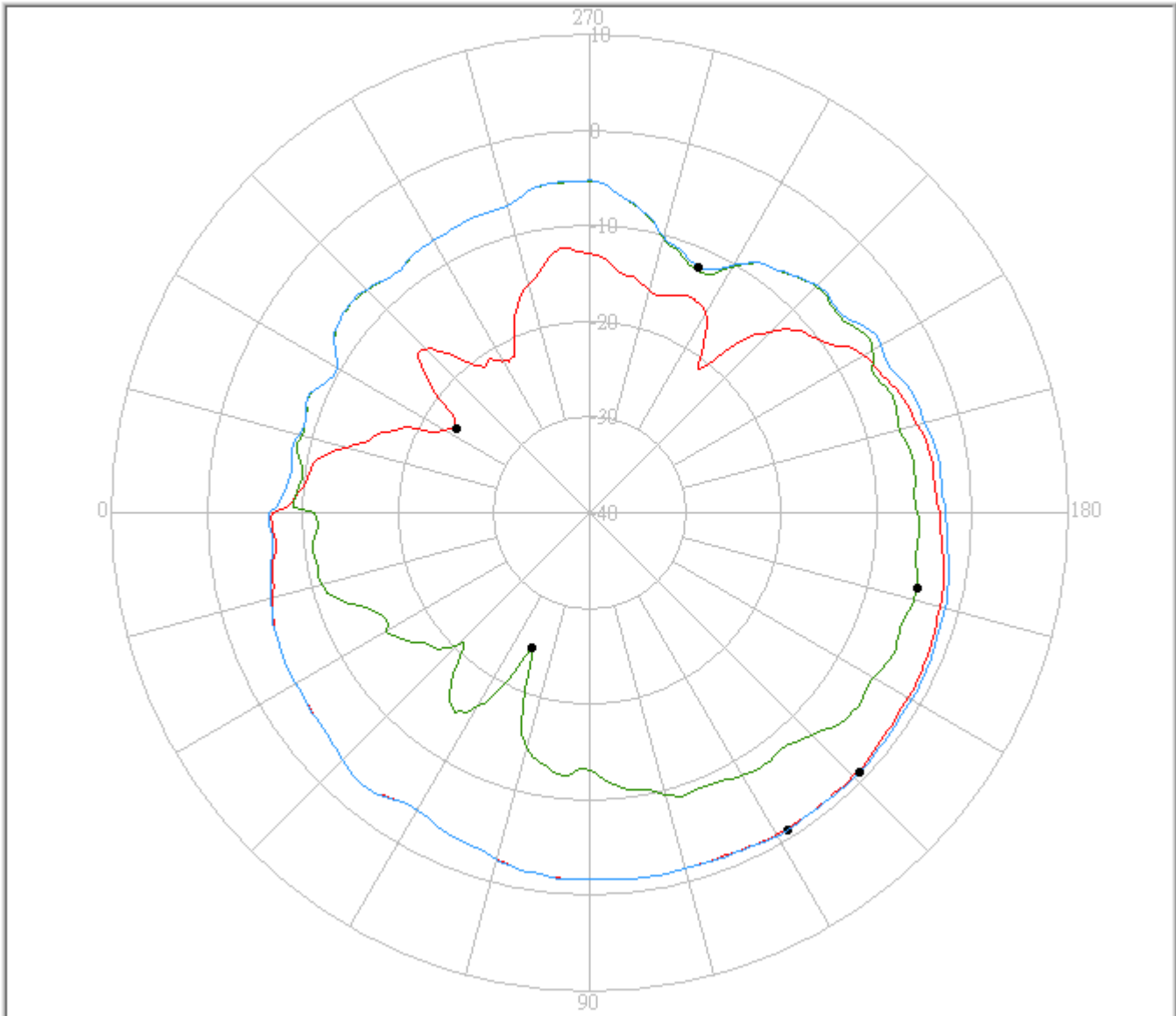
j. 5.597GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L41	RIGHT-AU	5597.50	-1.01 / 122.00	-23.50 / 328.00	-4.91	Ver.	2006/5/23
2	L41	RIGHT-AU	5597.50	-4.83 / 167.00	-24.66 / 67.00	-8.15	Hor.	2006/5/23
3	L41	RIGHT-AU	5597.50	-0.88 / 136.00	-11.88 / 246.00	-3.99	V+H	2006/5/23

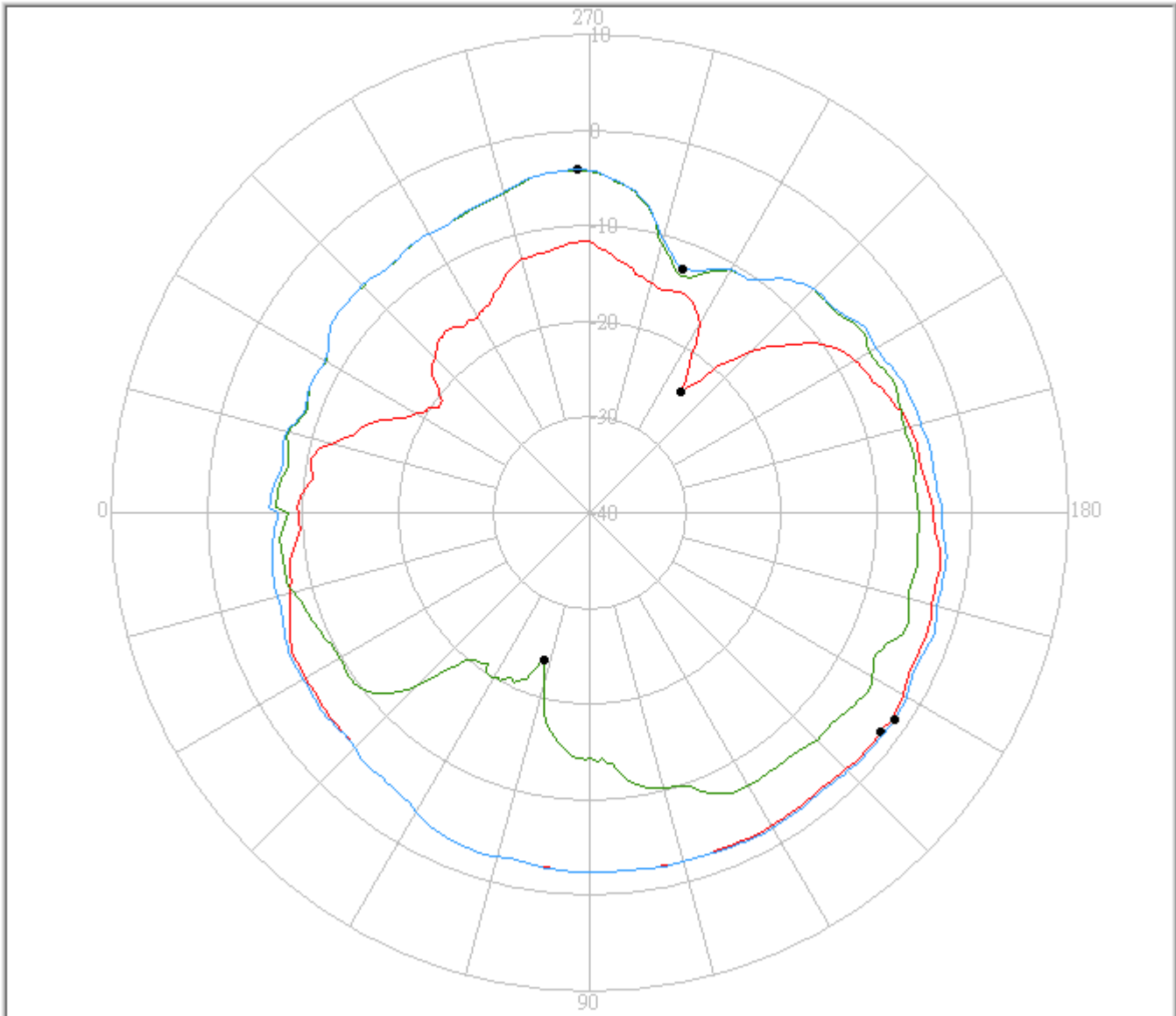
k. 5.725GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L41	RIGHT-AU3	5725.00	-1.82 / 143.00	-24.18 / 233.00	-5.70	Ver.	2006/5/23
2	L41	RIGHT-AU3	5725.00	-4.13 / 272.00	-23.93 / 73.00	-7.57	Hor.	2006/5/23
3	L41	RIGHT-AU3	5725.00	-1.47 / 146.00	-12.66 / 249.00	-4.40	V+H	2006/5/23

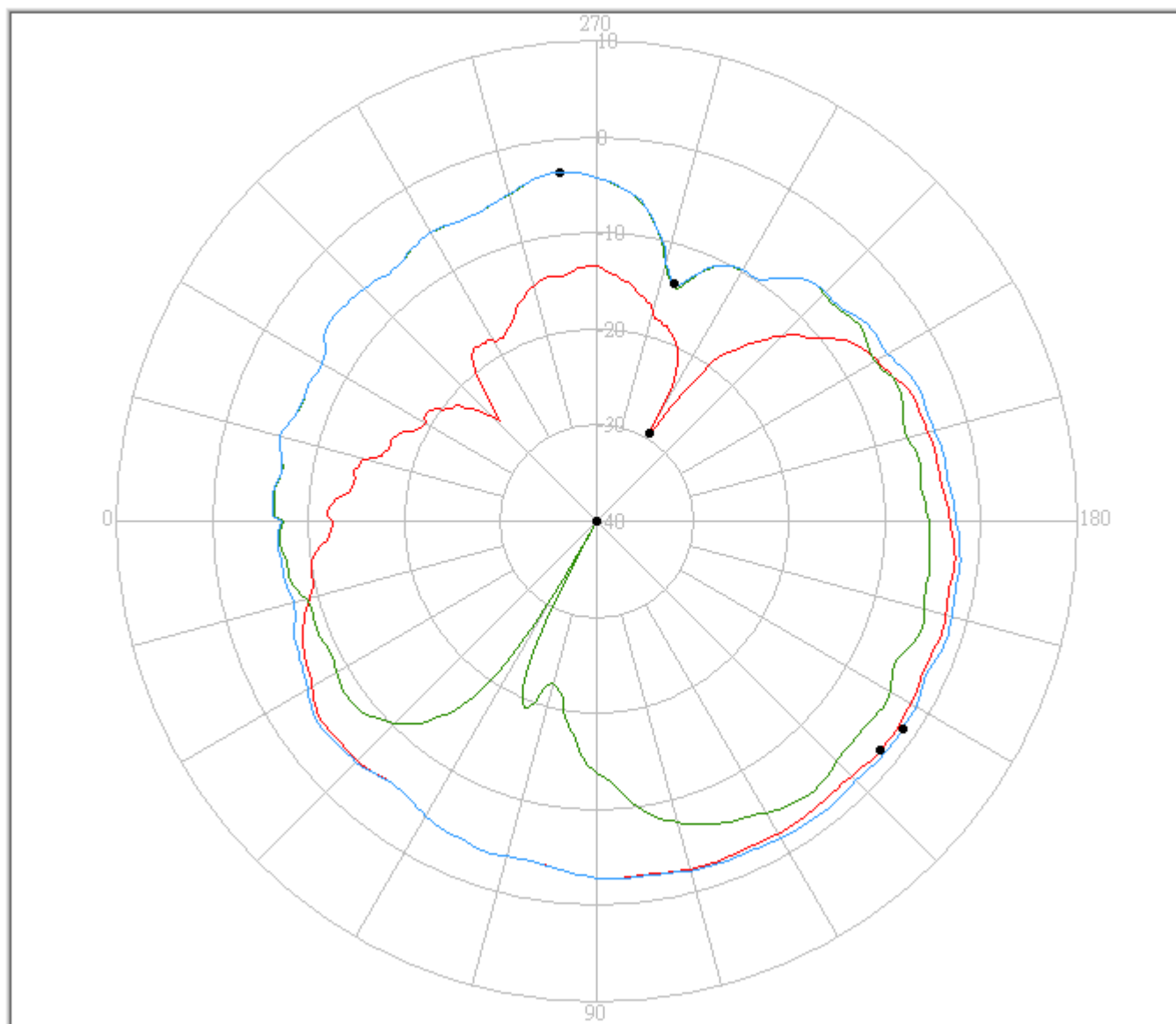
1. 5.785GHz



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Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	L41	RIGHT-AU	5785.00	-2.03 / 141.00	-29.31 / 239.00	-5.88	Ver.	2006/5/23
2	L41	RIGHT-AU	5785.00	-3.51 / 276.00	-44.44 / 61.00	-6.80	Hor.	2006/5/23
3	L41	RIGHT-AU	5785.00	-1.49 / 146.00	-14.06 / 252.00	-4.25	V+H	2006/5/23

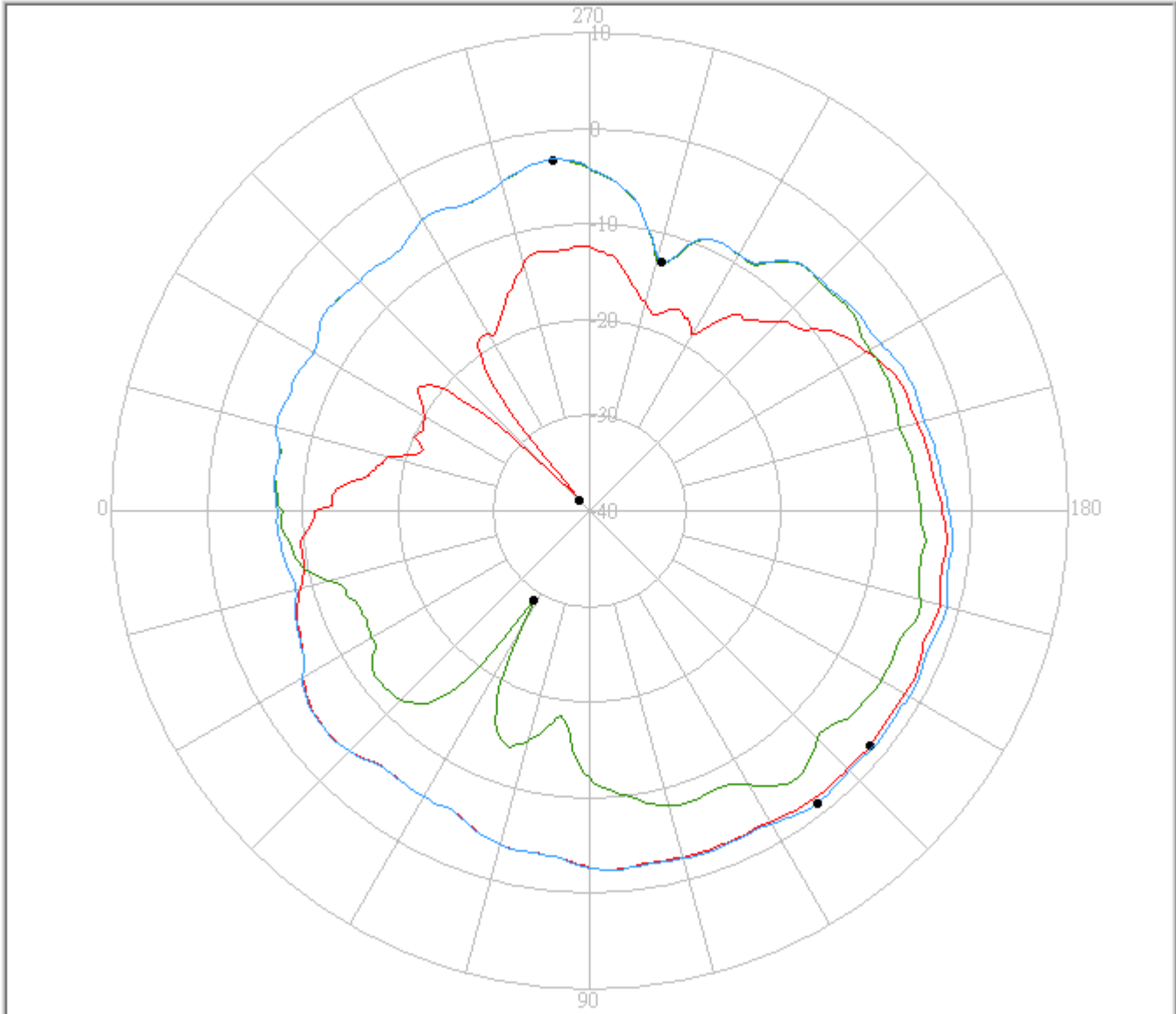
m. 5.85GHz



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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	L41	RIGHT-AU	5850.00	-1.71 / 140.00	-38.51 / 313.00	-5.77	Ver.	2006/5/23
2	L41	RIGHT-AU	5850.00	-3.09 / 276.00	-29.09 / 58.00	-6.99	Hor.	2006/5/23
3	L41	RIGHT-AU	5850.00	-1.26 / 128.00	-12.93 / 254.00	-4.22	V+H	2006/5/23

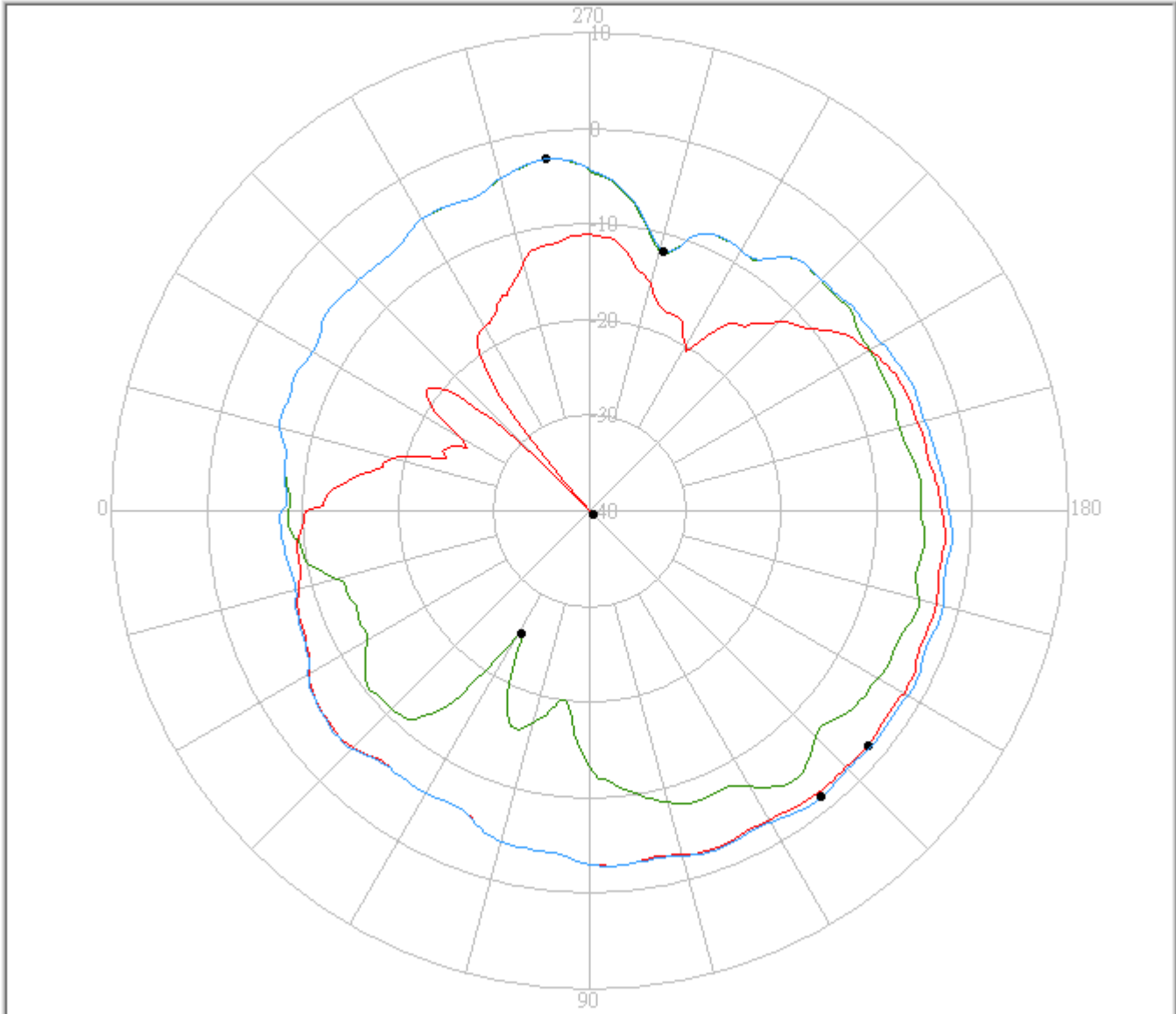
n. 5.875GHz



FAVORTRON Co. Ltd

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	L41	RIGHT-AU	5875.00	-1.95 / 140.00	-43.16 / 313.00	-5.99	Ver.	2006/5/23
2	L41	RIGHT-AU	5875.00	-2.97 / 277.00	-25.36 / 61.00	-7.03	Hor.	2006/5/23
3	L41	RIGHT-AU	5875.00	-1.49 / 129.00	-11.79 / 254.00	-4.37	V+H	2006/5/23

4. SPECIFICATIONS:

1. Electrical Properties

Frequency Range : 2.4~2.5GHz & 4.9~5.9GHz

Impedance : 50 ohm

VSWR(2.4~2.5GHZ) : ≤ 2.0

VSWR(5.15~5.85GHz) : < 2.5

Peak Gain : $\leq 3\text{dBi}$

Average Gain : $> -5\text{dB}$