東莞市亨松電子科技有限公司

Dongguan Hengxin Electronic Technology Co., Ltd.

承認書

客　　戶：

品　　名：2.4G 弹簧天线（Spring antenna）

料　　號：HX-B1008

客戶料號：

送樣日期：2025.07.29

客戶確認			供應廠商	
工程部	品保部	採購部	核准	送樣人
			赵 2025.07.29 守 刚	龚银明

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Http://www.nogps.com

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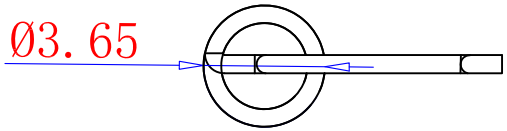
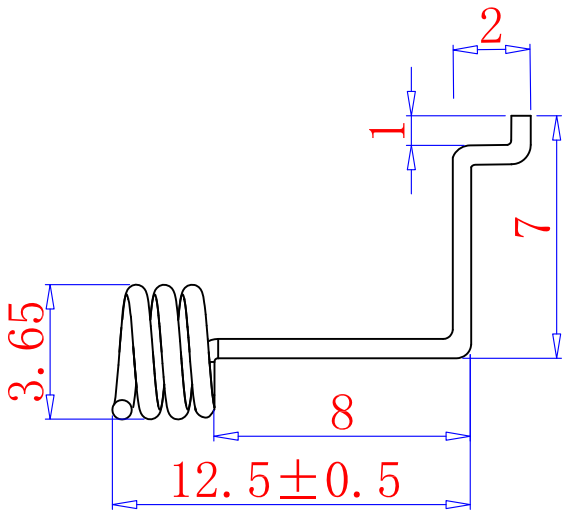
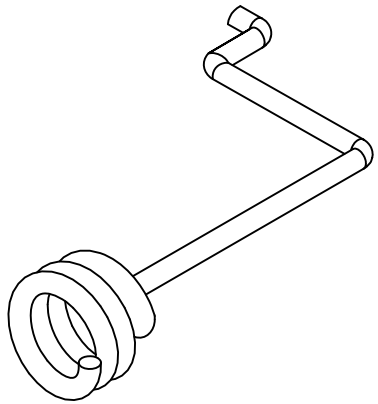
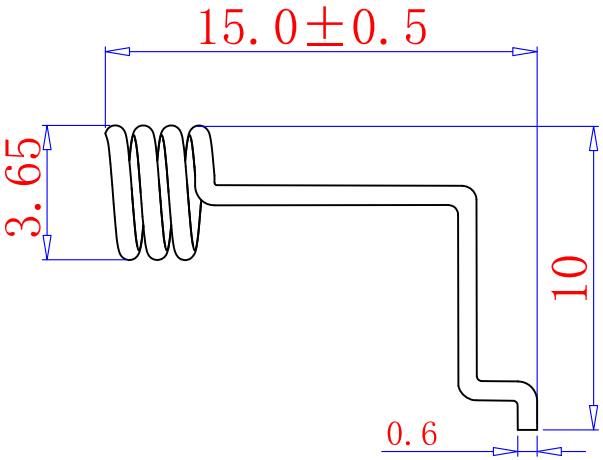
RoHS Compatible

序号	日期	原因	确认人
B			
C			
D			









unit:mm

弹簧技术要求 公差:			
弹簧材料	磷铜	直径	0.6mm
旋转方向	/	旋转有效圈数	3T
出脚方式	单边	孔距	/
弹簧上部尺寸			
弹簧下部尺寸			
弹簧高度			

东莞市亨松电子科技有限公司

PART NAME: 2.4G弹簧天线

PART NO.: HX-B1008 DATE: 2025-07-29

APPROVED BY	CHECKED BY	DESIDNED BY	
	赵 2025.07.29 守刚	卓蜻婷	UNITS: mm SCALE: 1/1 REVISION: A

Tolerance
X.X ±0.50
X.XX±0.15
X° ±3°

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1. Reliability Testing
2. Specification
3. S Parameter Test Data
4. Antenna Radiation Pattern

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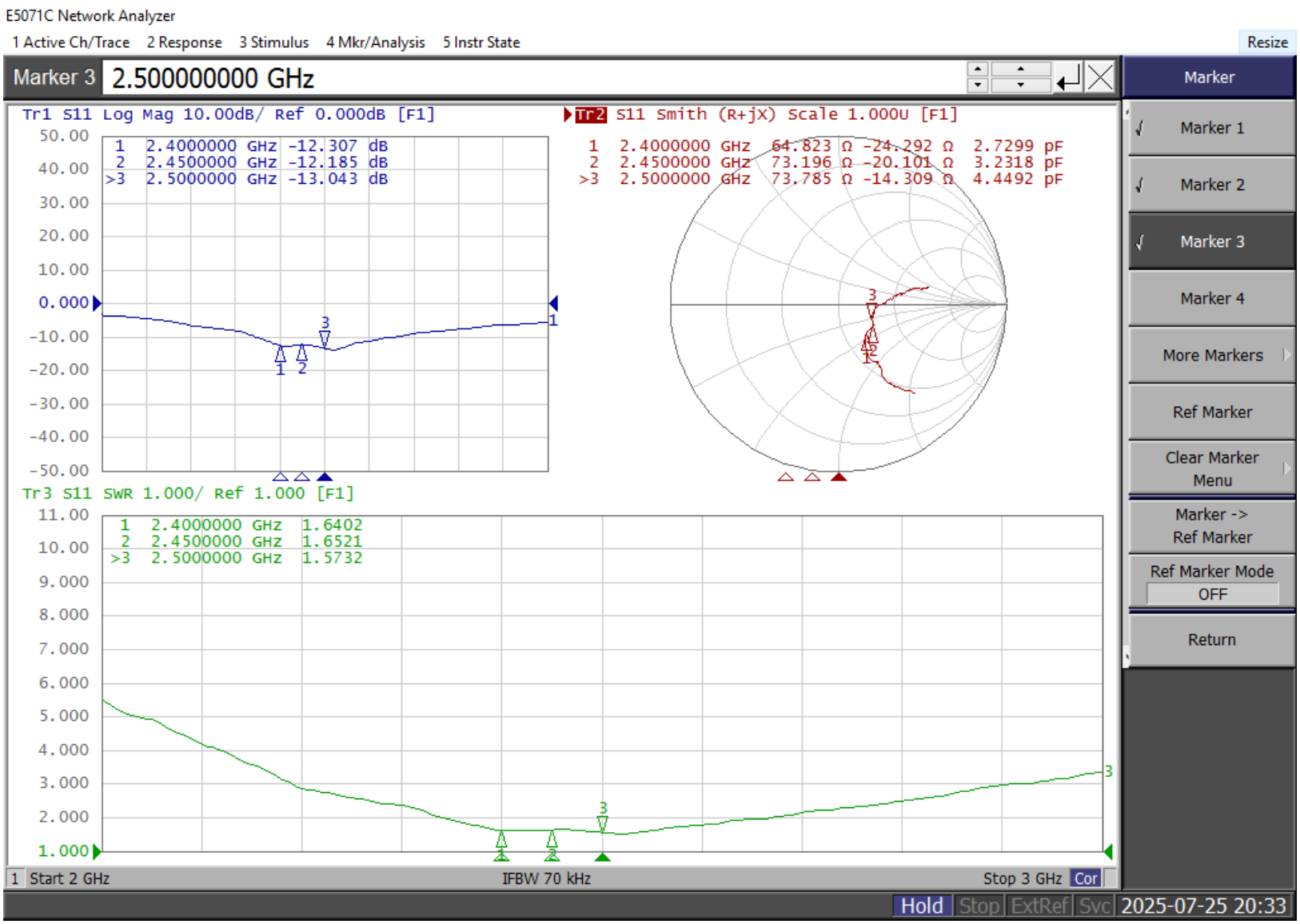
1. Reliability Testing

Test Item	Procedure	Requirement
1. Visual inspection and Dimension Check	Applicable methods using x5 magnification	follow specification
2. Rapid Changing of Temperature	-40˚C (30minutes) to 80˚C (30minutes); 24 cycles	After 2 hours recovery: 1. no visible damage 2. bandwidth tolerance < ±5%
3. Damp Heat	24 hours at 60˚C; 90 ~ 95% RH	After 2 hours recovery: 1. no visible damage 2. bandwidth tolerance < ±5%
4. Endurance	24 hours at 80˚C	After 2 hours recovery: 1. no visible damage 2. bandwidth tolerance < ±5%
5. Connector Pull Strength Test	>= 1.0 Kg	Hold 2~3S: 1. no visible damage 2. bandwidth tolerance < ±5%

2. Specification

A. Electrical Characteristics	
S.W.R.(Tested in PC)	<= 2.0 @ 2.4G
Typical Antenna Gain	+1.5 ± 0.5
Impedance	50 Ohm
B. Material	
Material of Radiator	CU
Connector Type	N/A
C. Environmental	
Operation Temperature	- 30 ˚C ~ + 85 ˚C
Storage Temperature	- 30 ˚C ~ + 85 ˚C

3. S.W.R. Testing Result



4. Antenna Radiation Pattern

Testing Equipment Specification:

Antenna Anechoic Chamber Dimension: 8 x 4 x 4 m

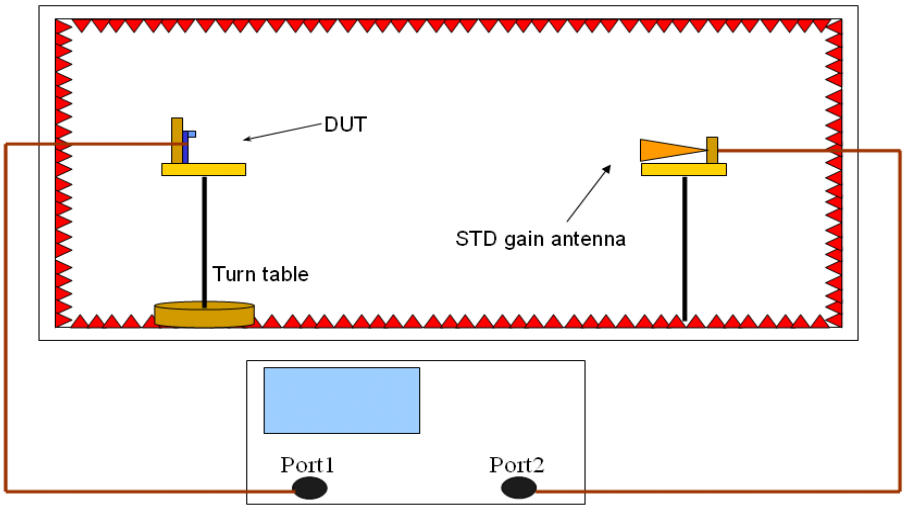
Quite Zone: 600mm @1 GHz

Isolation: >100dB @ 1 MHz ~ 10 GHz

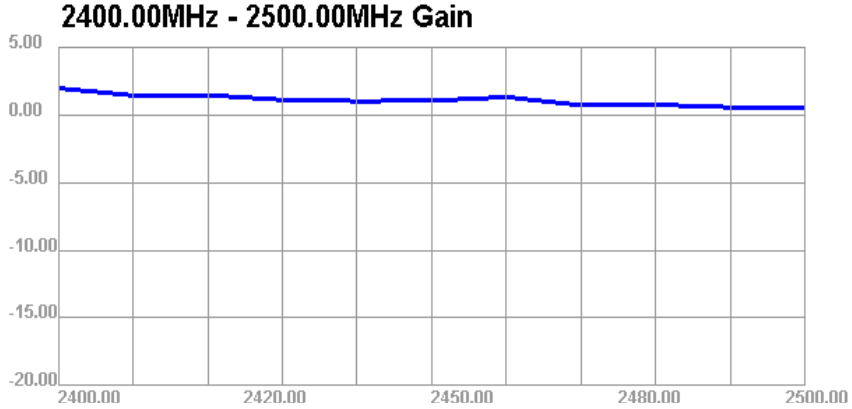
Testing Equipment: Agilent 5071B

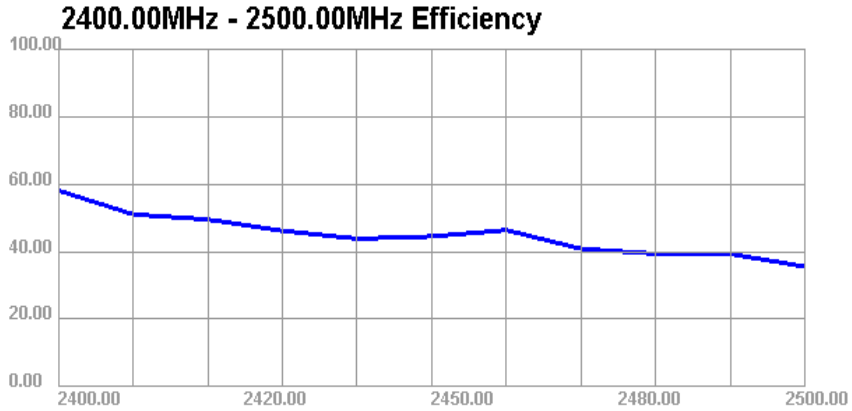
Received Antenna: 0.7 ~ 6.0 GHz for Gain Calibration

Double Ridged Horn Antenna



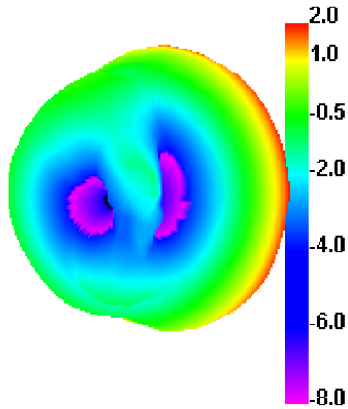
Passive Test For WIFI-2.4G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	58.14	-2.36	1.97	-0.18	21.985	36.153	1.97	-14.07	4.33	30	45.1	45.07
2410	51.05	-2.92	1.43	-0.72	18.952	32.094	1.43	-14.62	4.35	30	44.88	44.83
2420	49.53	-3.05	1.46	-0.69	17.903	31.632	1.46	-15.64	4.51	30	44.83	44.71
2430	46.19	-3.35	1.11	-1.04	16.291	29.894	1.11	-17.75	4.47	30	45.16	44.88
2440	43.85	-3.58	1.02	-1.13	14.97	28.879	1.02	-20.12	4.6	30	45.17	44.95
2450	44.52	-3.51	1.05	-1.1	14.746	29.773	1.05	-19.21	4.56	30	45.89	45.33
2460	46.39	-3.34	1.32	-0.83	14.837	31.55	1.32	-18.38	4.65	30	45.86	45.53
2470	40.85	-3.89	0.71	-1.44	12.534	28.316	0.71	-21.74	4.6	30	45.69	45.39
2480	39.39	-4.05	0.75	-1.4	11.59	27.8	0.75	-21.58	4.8	30	45.73	45.51
2490	39.32	-4.05	0.57	-1.58	11.059	28.259	0.57	-19.63	4.62	30	45.96	45.84
2500	35.58	-4.49	0.58	-1.57	9.659	25.916	0.58	-19.94	5.07	30	45.47	45.3



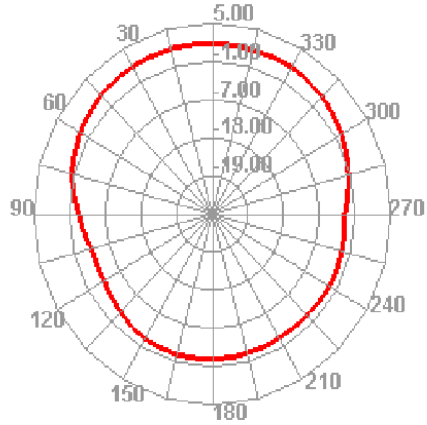


(2400MHZ)最大增益值Gain:**1.97dBi**

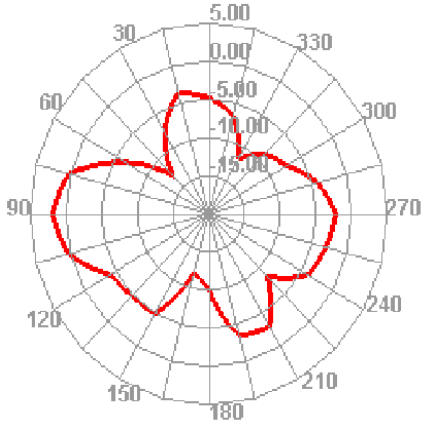
2400.000MHz



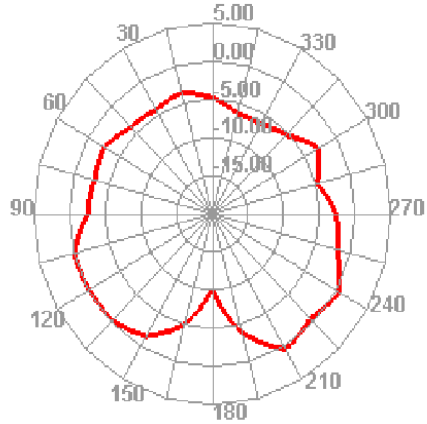
2400.000MHz H



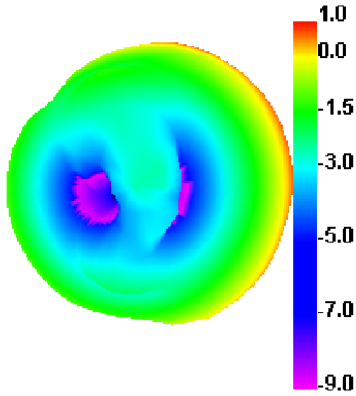
2400.000MHz E1



2400.000MHz E2



2450.000MHz



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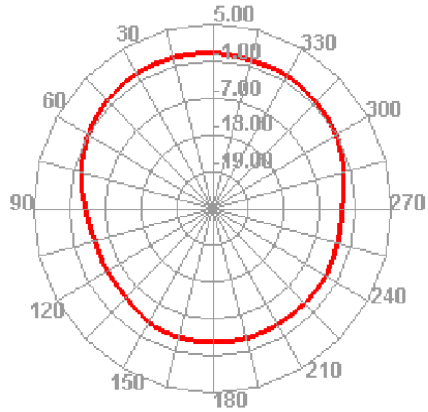
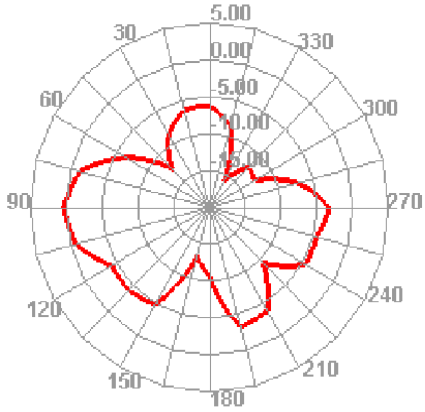
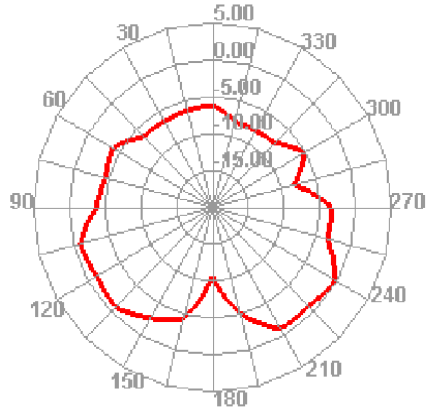


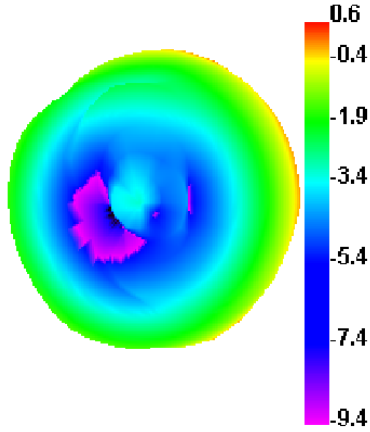
2450.000MHz E1



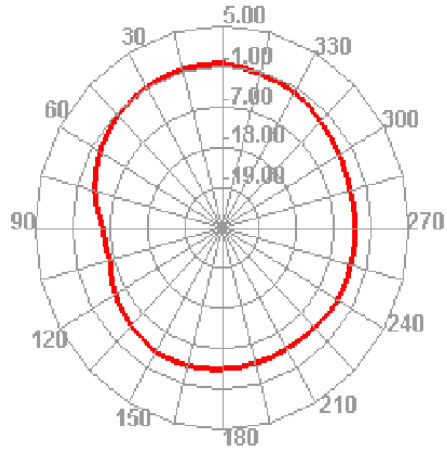
2450.000MHz E2



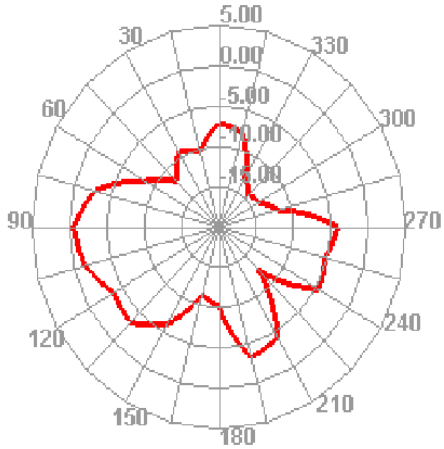
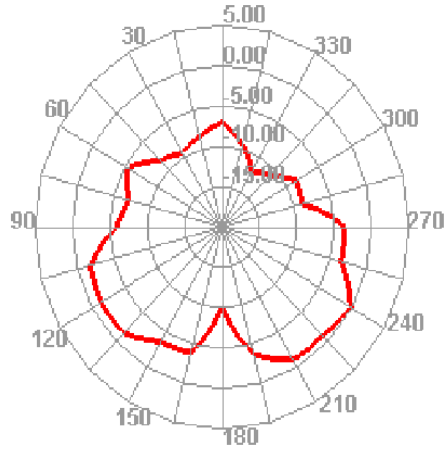
2500.000MHz



2500.000MHz H



2500.000MHz E1



2500.000MHz E2