



深圳市森茂微科技有限公司

Sunmore Technology(HK)Company Limited

Acknowledgment Form

Custome: _____

Product Name: 2.4G Spring antenna

part number: HX-B456D

Customer part number: _____

Datelanded: 2025.06.26

Client confirmation			Supplier	
Engineering Department	Quality Assurance Department	Purchasing Department	Approval	person sending the samples

地址：深圳市龍華區龍華街道三聯社區三聯創業路19號

弓村新城商業中心（匯海廣場）A座19層1901、1914室

TEL:0755-23498381

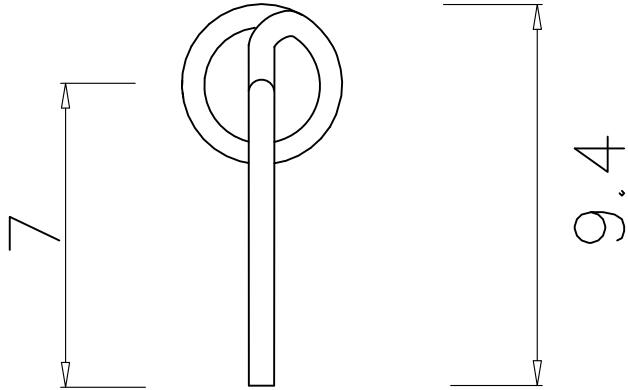
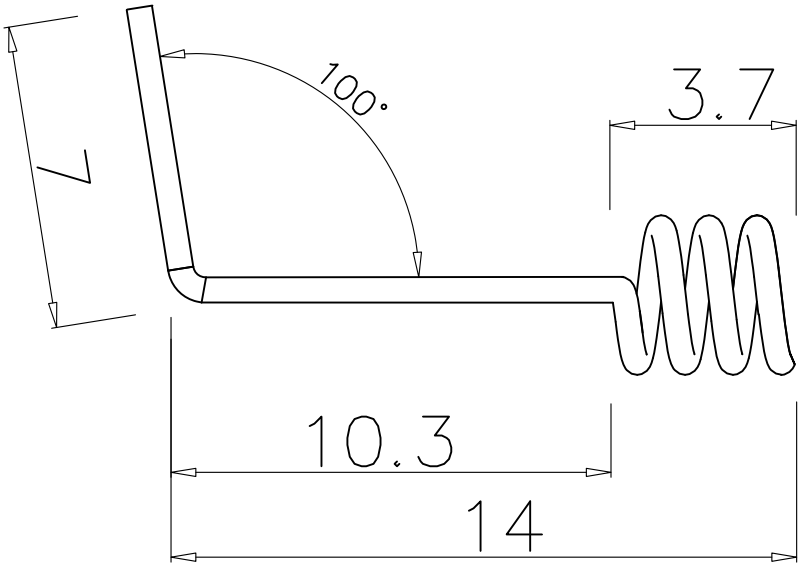
FAX:0755-23498380

<http://www.sunmore-etc.com>

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Serial number	Date	Reason	Confirmer
B			
C			
D			



Technical requirements for springs tolerance:0.5–1mm			
Spring Materials	Phosphor bronze	Wire diameter	0.6mm
Rotation direction	/	Number of effective rotations	3T
Footwork techniques	The middle line	Pore spacing	/
Dimensions of the upper part of the spring			
Dimensions of the lower part of the spring			
Spring height			

PART NAME: 2.4G Spring antenna			
PART NO.: HX-B456D			DATE: 2025-06-25
APPROVED BY	CHECKED BY	DESIDNED BY	
			Tolerance
			UNITS: mm
			SCALE: 1/1
			REVISION: A
			X.X ±0.50
			X.XX±0.15
			X° ±3°

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- 2. Specification
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- 4. Antenna Radiation Pattern

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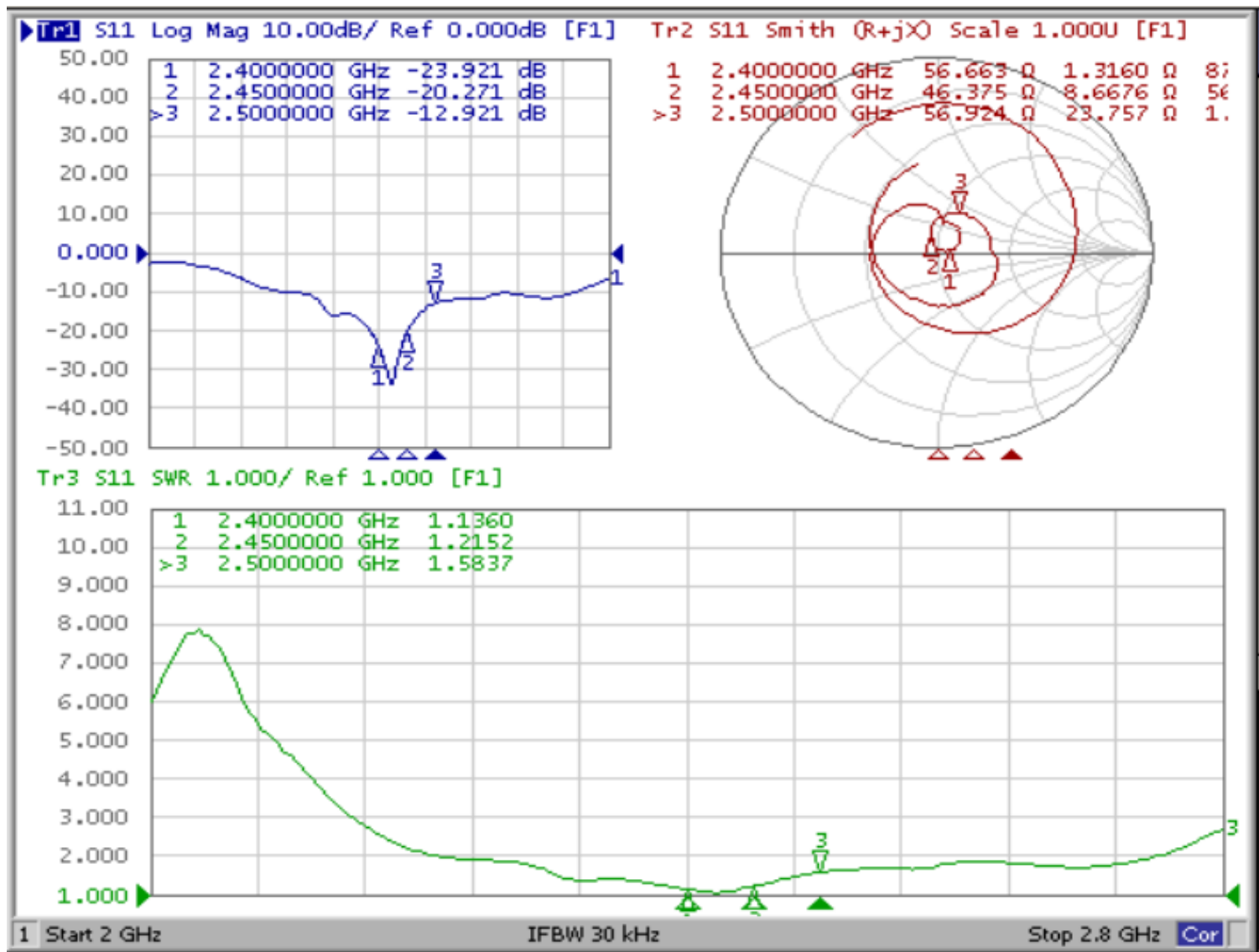
1. Reliability Testing

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	-0.16dBi Max.
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

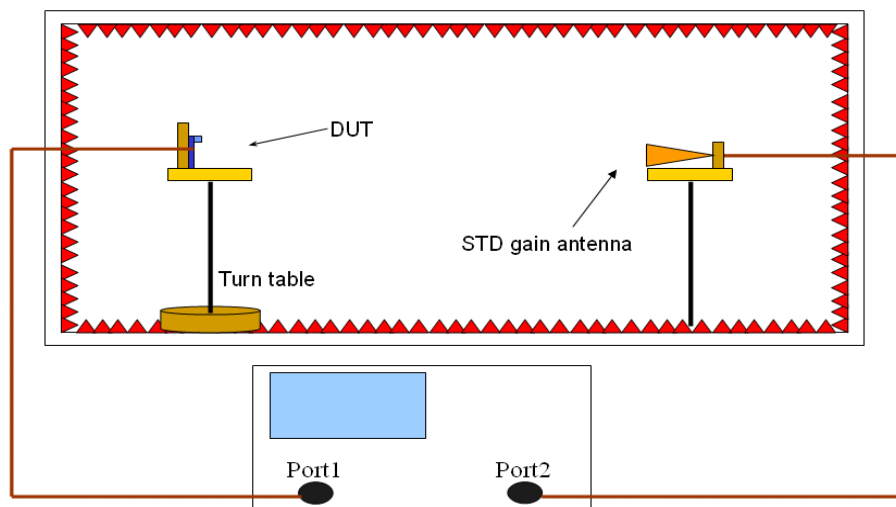
Quiet Zone: 600mm @ 1 GHz

Isolation: >100dB @ 1 MHz ~ 10 GHz

Testing Equipment: Agilent 5071B

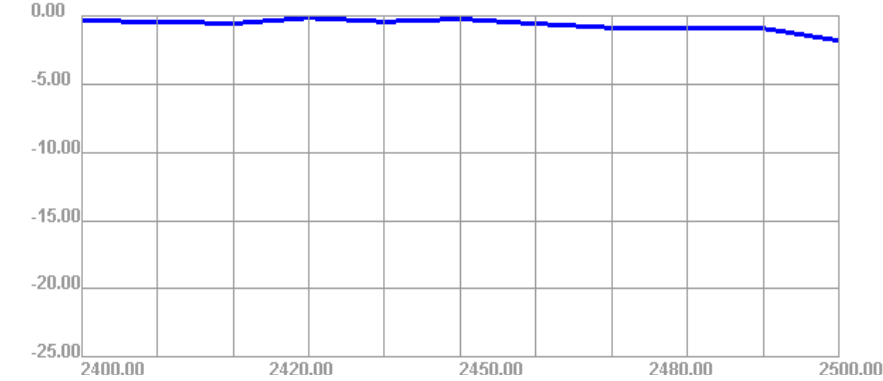
Received Antenna: 0.7 ~ 6.0 GHz for Gain Calibration

Double Ridged Horn Antenna

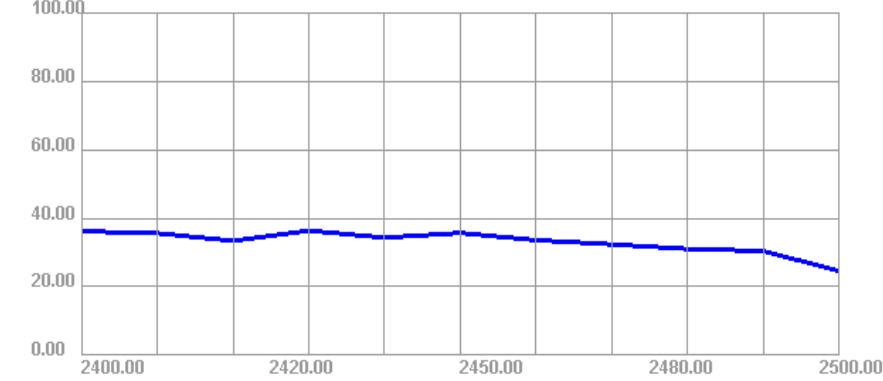


Passive Test For WIFI-2.4G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	36.2	-4.41	-0.38	-2.53	23.999	12.204	-0.38	-31.06	4.03	105	45.1	45.07
2410	35.63	-4.48	-0.43	-2.58	23.63	12	-0.43	-31.62	4.05	105	44.88	44.83
2420	33.44	-4.76	-0.57	-2.72	22.281	11.158	-0.57	-30.07	4.18	105	44.83	44.71
2430	36.39	-4.39	-0.16	-2.31	24.454	11.939	-0.16	-26.42	4.23	120	45.16	44.88
2440	34.35	-4.64	-0.44	-2.59	23.121	11.225	-0.44	-25.13	4.2	120	45.17	44.95
2450	35.72	-4.47	-0.25	-2.4	23.953	11.77	-0.25	-26.41	4.22	120	45.89	45.33
2460	33.6	-4.74	-0.59	-2.74	22.482	11.122	-0.59	-27.38	4.15	120	45.86	45.53
2470	32.39	-4.9	-0.88	-3.03	21.722	10.672	-0.88	-26.7	4.01	120	45.69	45.39
2480	31.05	-5.08	-0.95	-3.1	20.894	10.156	-0.95	-25.98	4.13	120	45.73	45.51
2490	30.45	-5.16	-0.93	-3.08	20.555	9.898	-0.93	-26.6	4.24	120	45.96	45.84
2500	24.59	-6.09	-1.83	-3.98	16.611	7.981	-1.83	-26.76	4.26	120	45.47	45.3

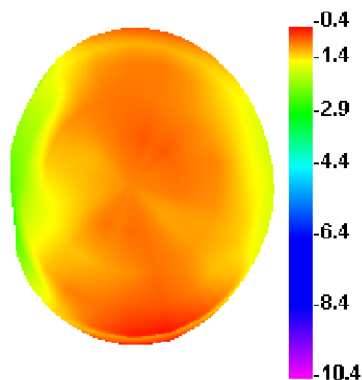
2400.00MHz - 2500.00MHz Gain



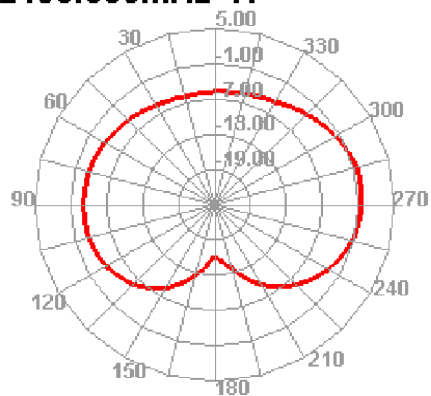
2400.00MHz - 2500.00MHz Efficiency



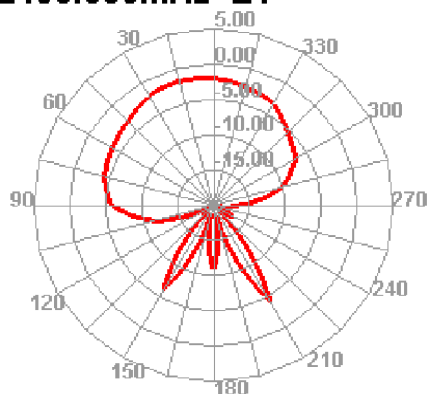
2400.000MHz



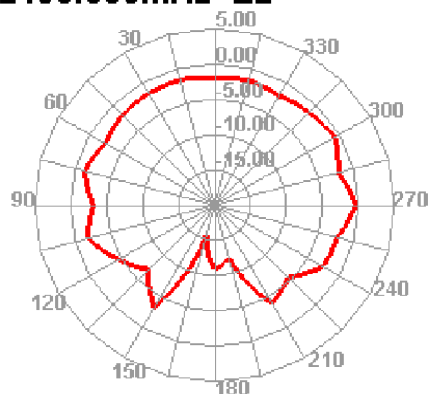
2400.000MHz H



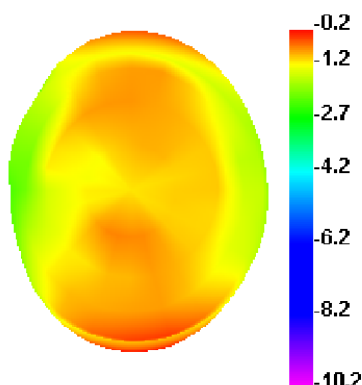
2400.000MHz E1



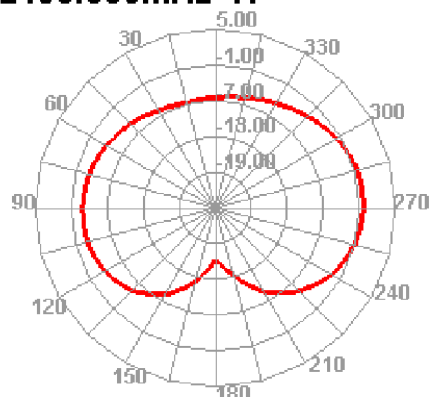
2400.000MHz E2



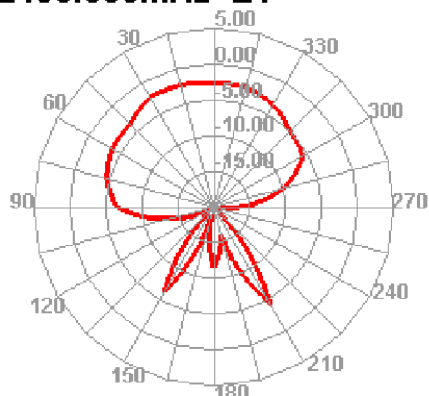
2450.000MHz



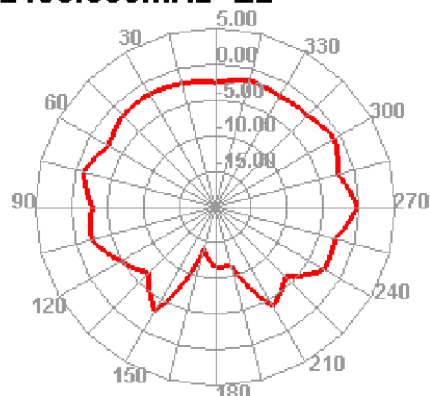
2450.000MHz H



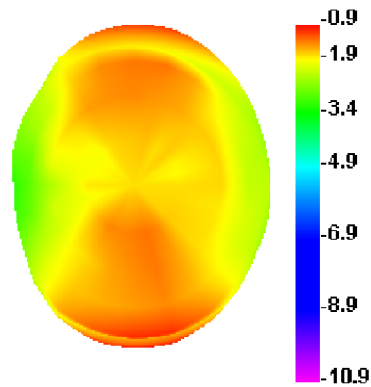
2450.000MHz E1



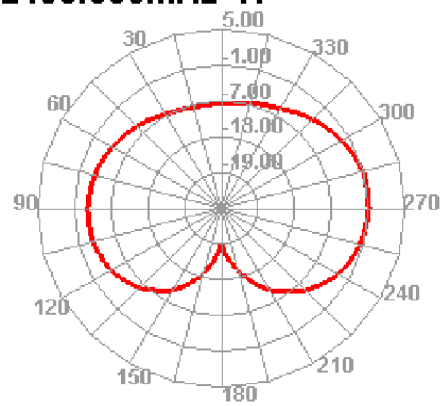
2450.000MHz E2



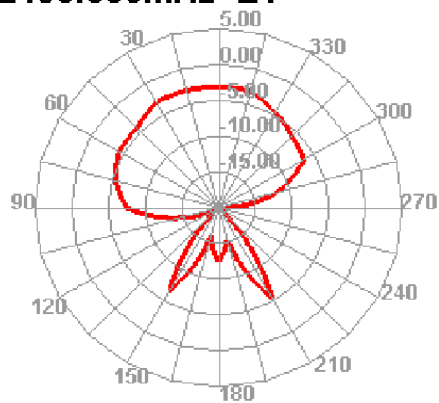
2480.000MHz



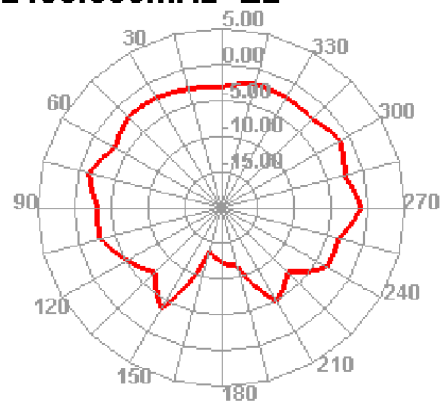
2480.000MHz H



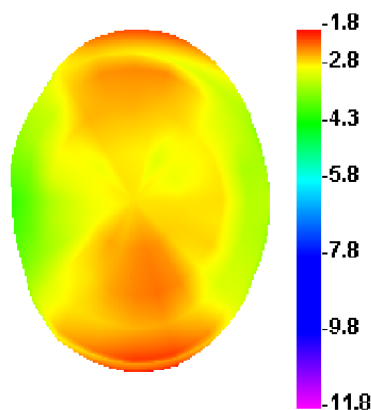
2480.000MHz E1



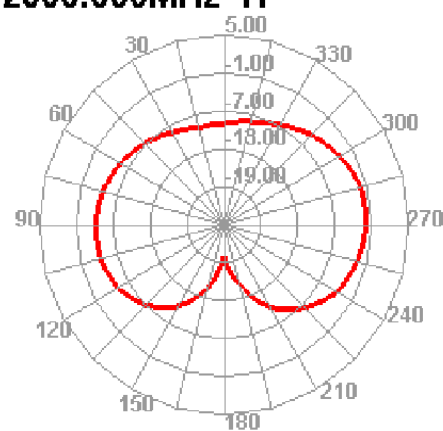
2480.000MHz E2



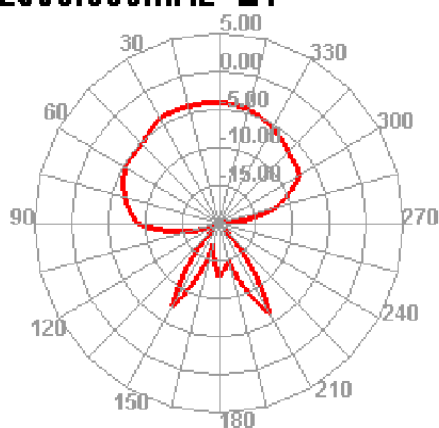
2500.000MHz



2500.000MHz H



2500.000MHz E1



2500.000MHz E2

