

Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: _____

Product Name: _____ D5810 WIFI antenna _____

Part NO. : _____ TY03 _____

Write By: _____ YAN PEI HAI _____

Issued Date: _____ 2023-03-15 _____

Customer

R&D Dept	Business Dept	Approved By

SKYLink

R&D Dept	Engineer Dept	Approval

□ Specification Summary

A. Electrical Characteristics	
Frequency	2400MHz ~2500MHz
VSWR	<2.0
Efficiency	>40%
Peak Gain	2.46dbi
Impedance	50 Ohm
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	NA
Cable Type	NA
Connector Type	NA
Dimension	At Attachment
Heat-durability	280±5°C, 10sec.
C. Environmental Characteristics	
Operation Temperature	- 20 °C ~ + 80 °C
Storage Temperature	- 30 °C ~ + 85 °C

□ Test Equipment & Conditions

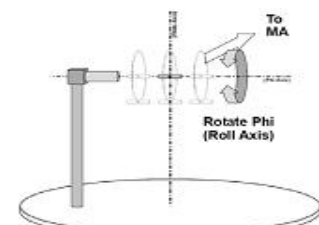
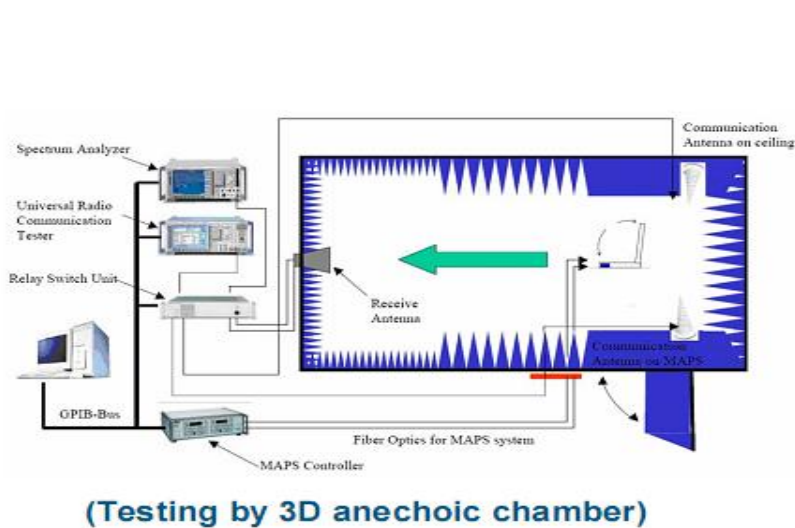
1. Network Analyzers :

Agilent 8753D 5071B

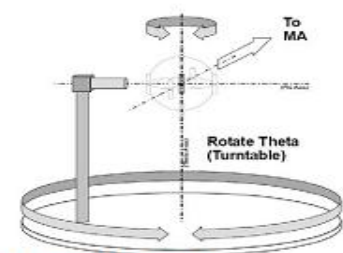
Communications Test Set:

Agilent E5515C CMW500

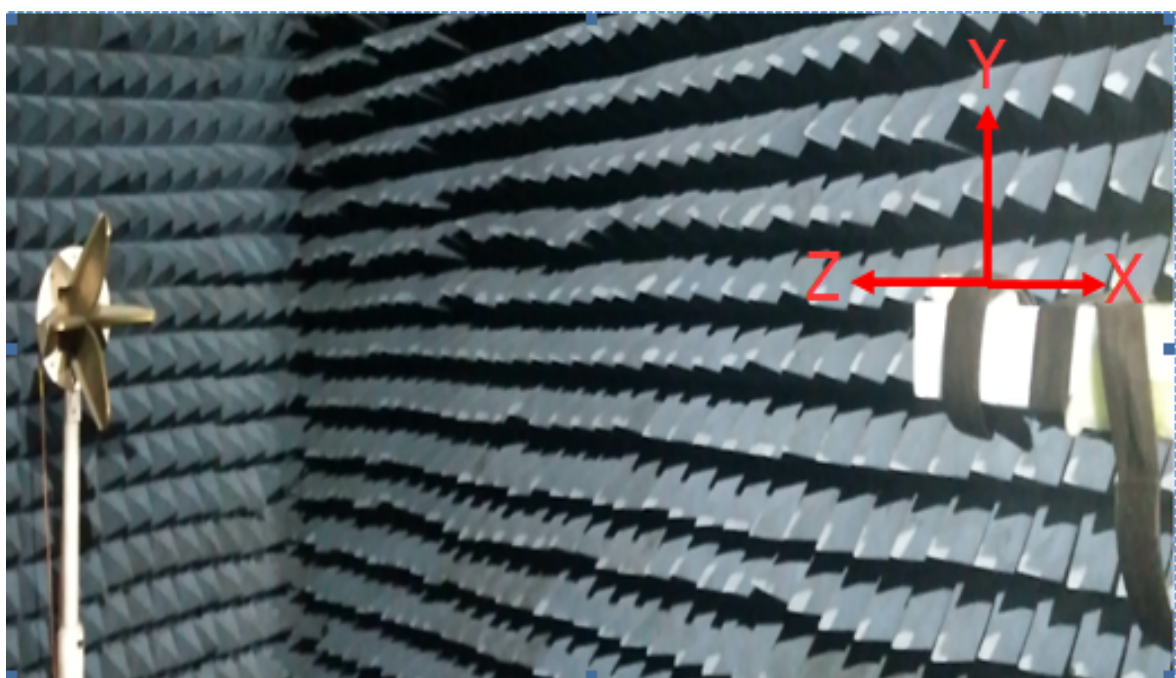
2. 3D Chamber Test System



Phi axis test

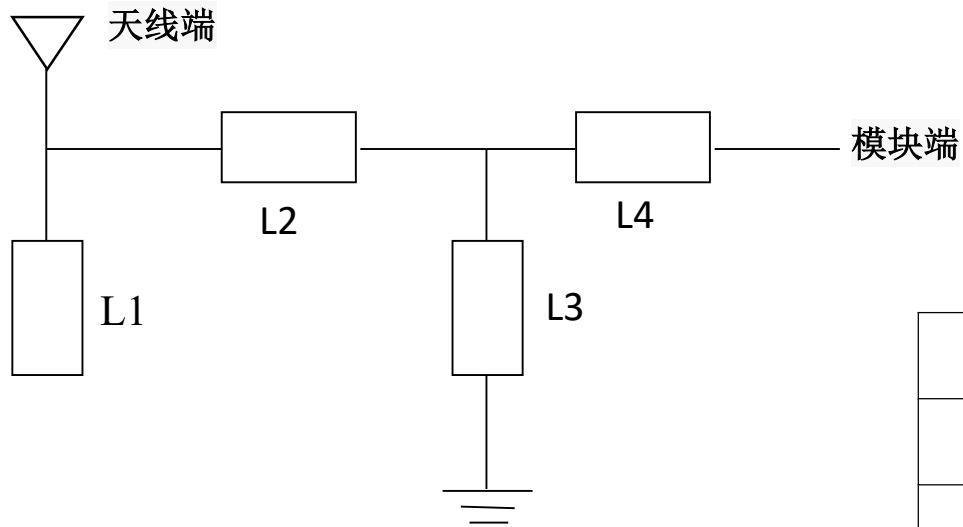


Theta axis test



111444 *ANALYTICAL CHEMISTRY. H.*

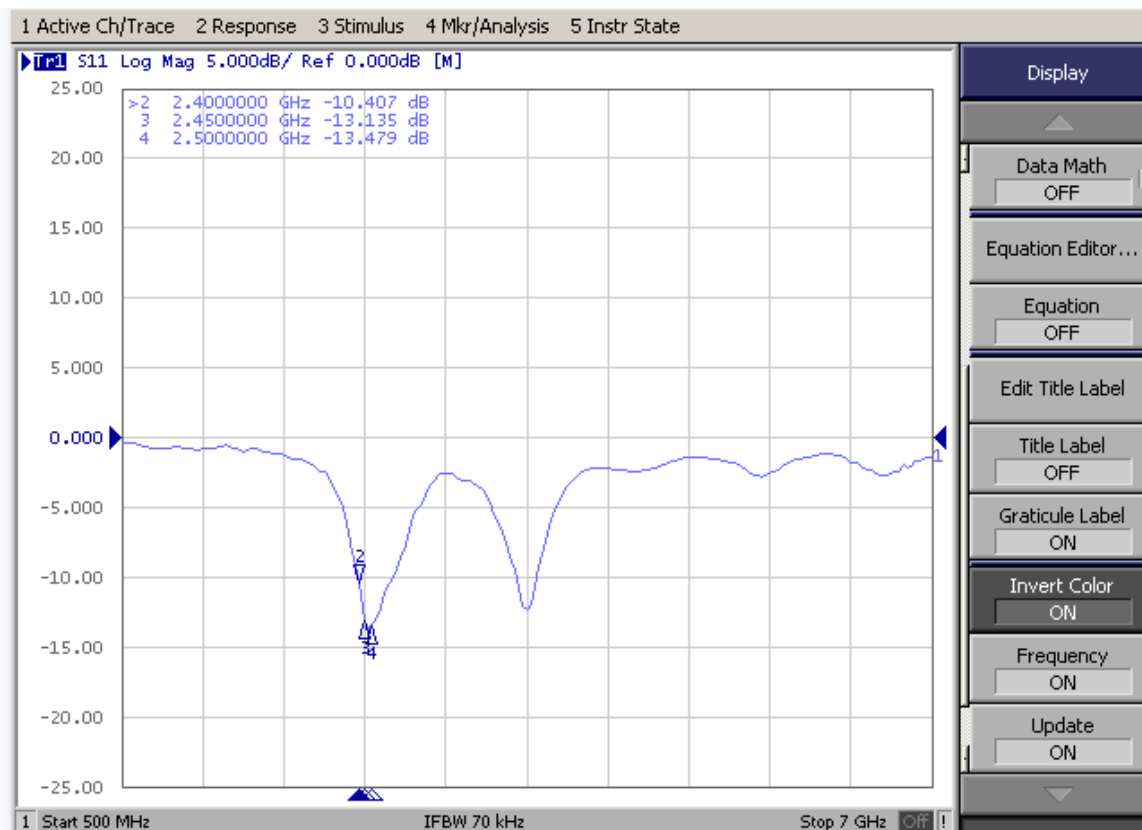
□ 匹配电路（matching circuit）



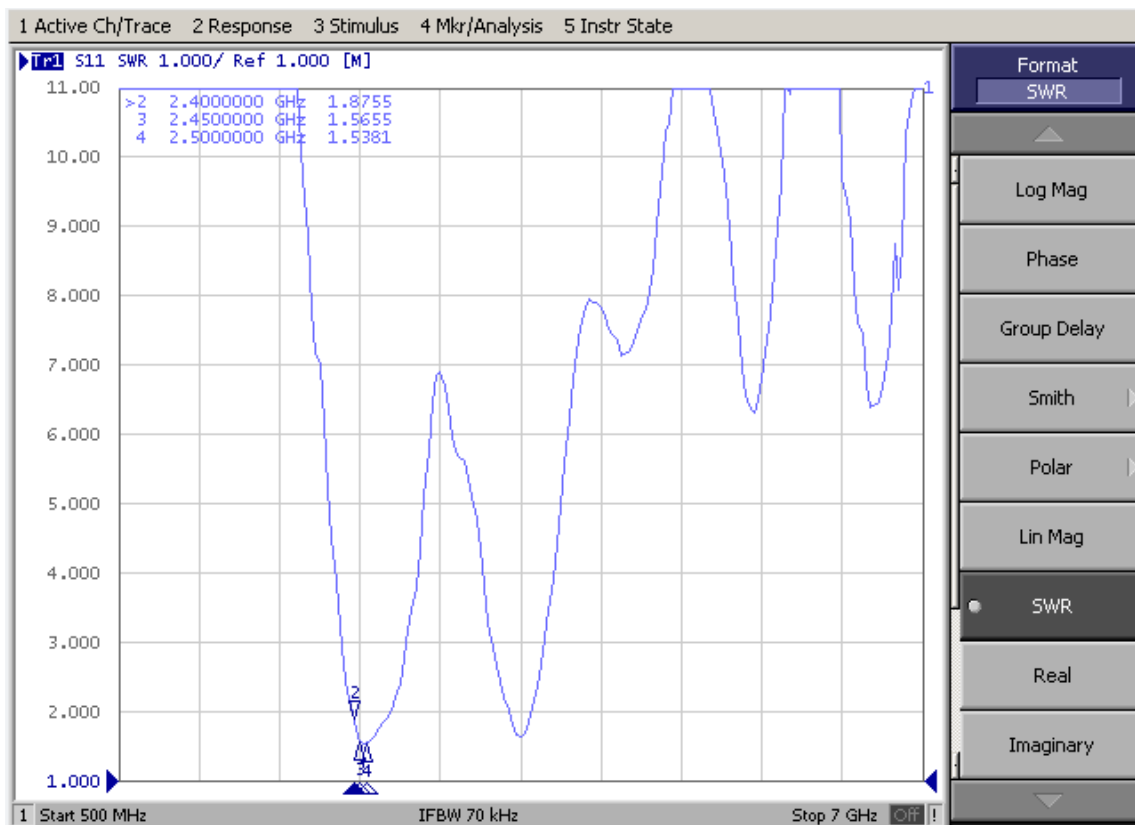
L1	1.2PF
L2	3.9NH
L3	/
L4	0欧

Note: This is the current antenna matching, which may change after receiving the final machine. Please be aware.

Return Loss



VSWR

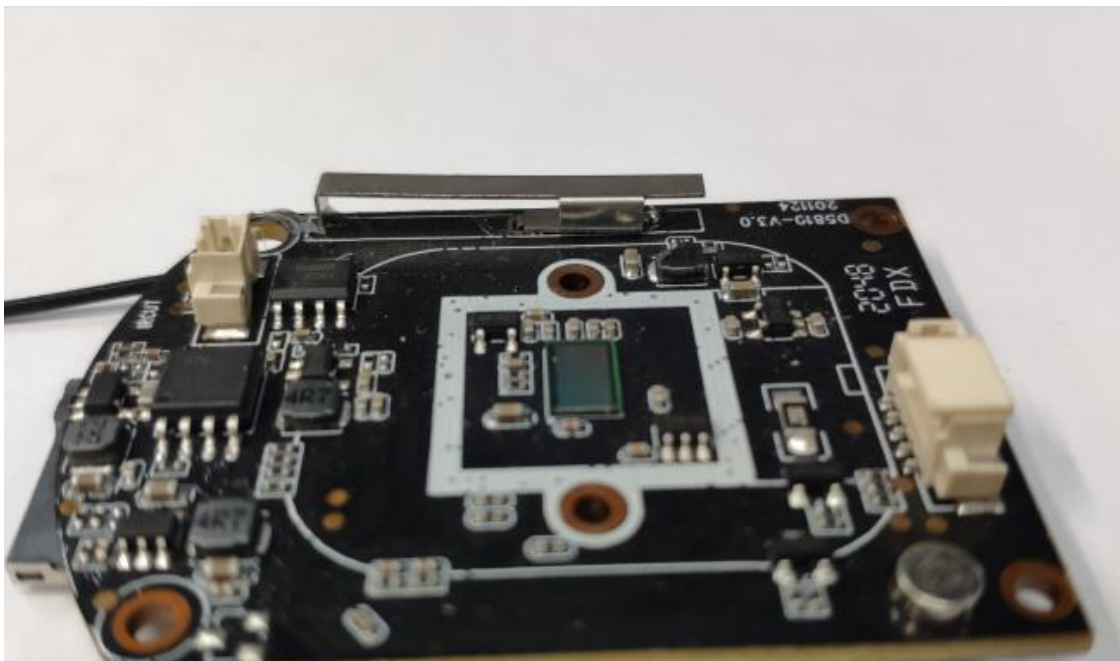
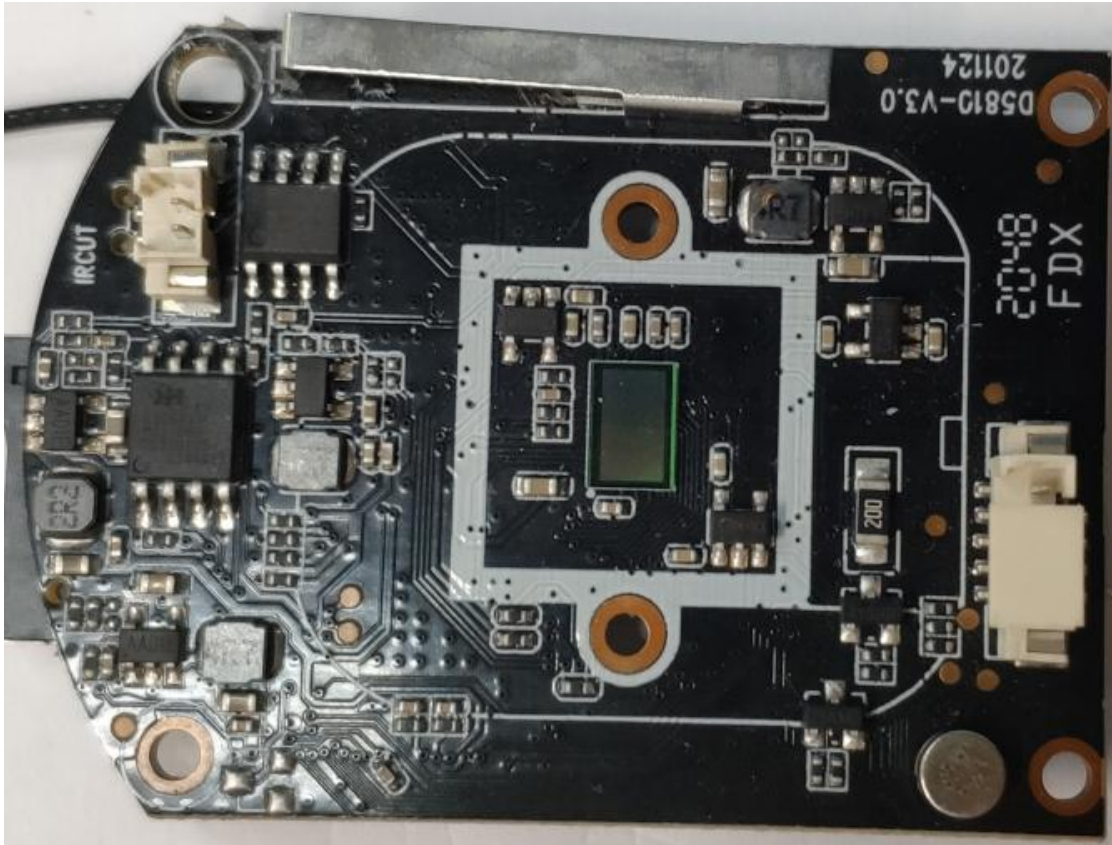


□ Gain & Efficiency

Freq (MHz)	Effi (%)	Gain (dBi)
2400	42.66	1.42
2410	42.21	1.48
2420	42.06	1.54
2430	42.75	1.75
2440	44	1.86
2450	45.4	2.05
2460	46.25	2.26
2470	46.39	2.46
2480	47.23	2.36
2490	48.99	2.21
2500	49.95	2.12

□ Line assembly mode

The antenna is attached to the motherboard by SMT.

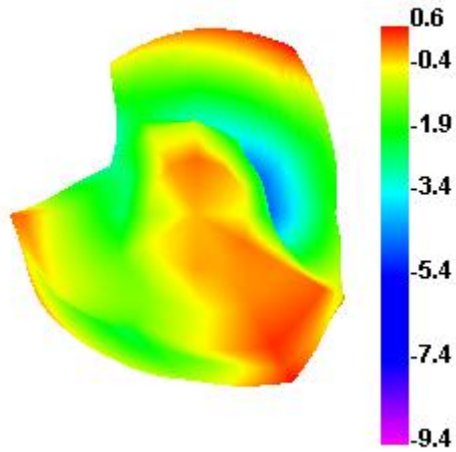


□ Reliability Test

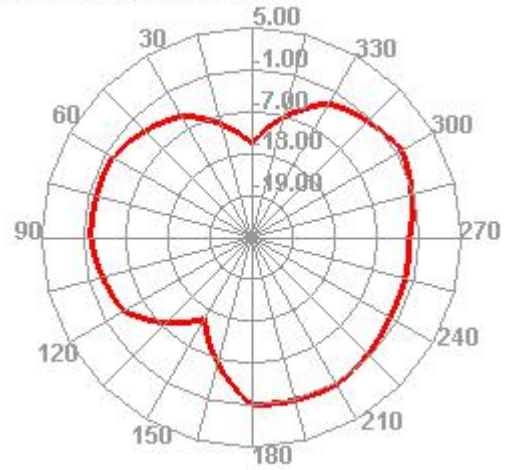
Test Item		Test condition	Equipment	Specification	Result
1	Low Temp. Storage Test	Temperature: -30℃, Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna for 44 hours; step-up temp to 25℃,test antenna after 2 hours.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
2	High Temp./High Humid Storage Test	Temperature: 85℃ Humidity: 85% RH Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-up the temp. to 80℃ and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25℃,test antenna after 2 hours.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
3	Salt-Spray 6 pray Test	Placing antenna in the Salt-Spray Tester ,set the test condition , Temp: $35\pm 2^{\circ}\text{C}$ Humidity: 85% NaCl salt spray :$5\pm 1\%$.PH value :6.5~7.2 Test time:24hours	Salt-Spray Tester	No color change No appear rusting	PASS

◆ Radiation Pattern

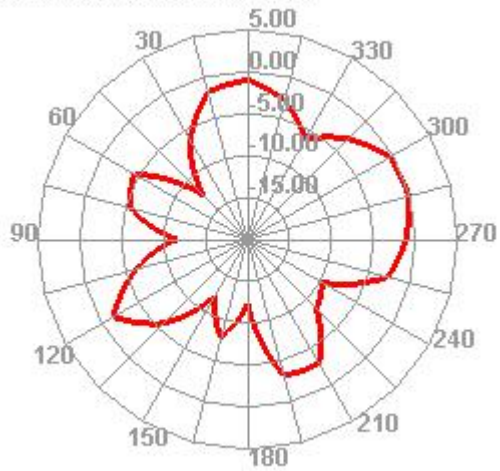
2400.000MHz



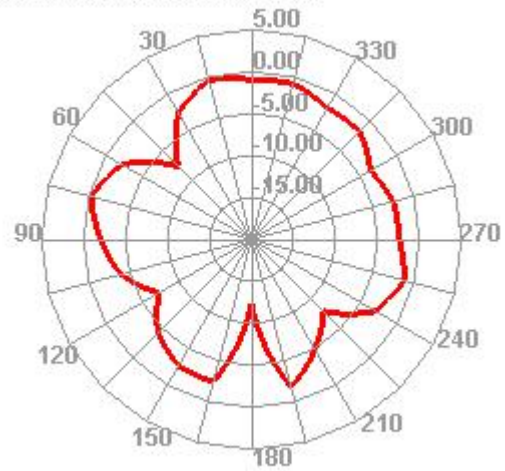
2400.000MHz H



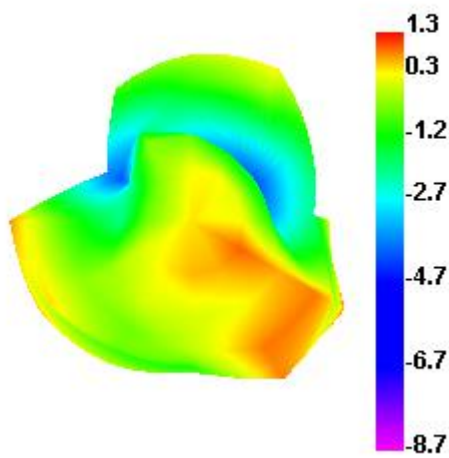
2400.000MHz E1



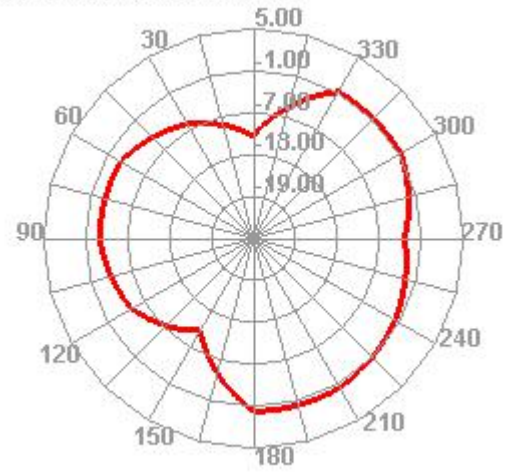
2400.000MHz E2



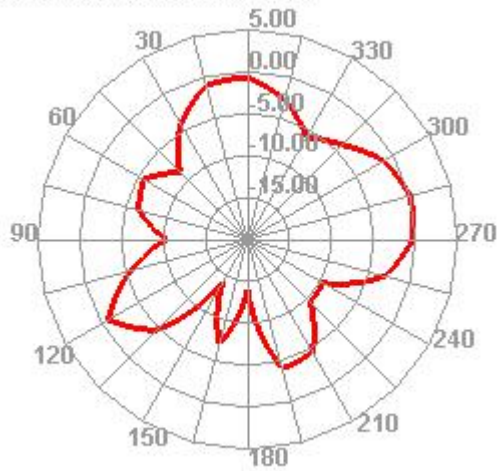
2450.000MHz



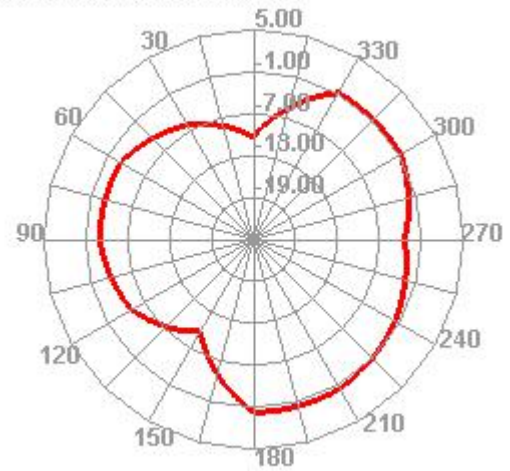
2450.000MHz H



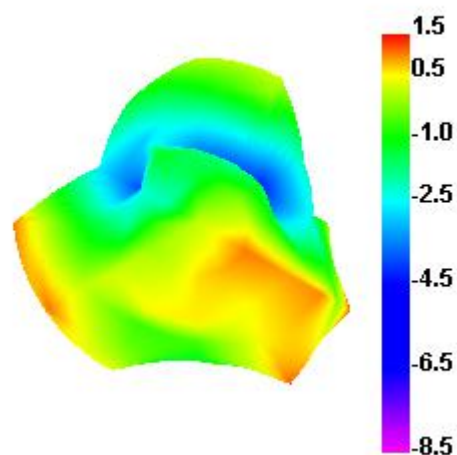
2450.000MHz E1



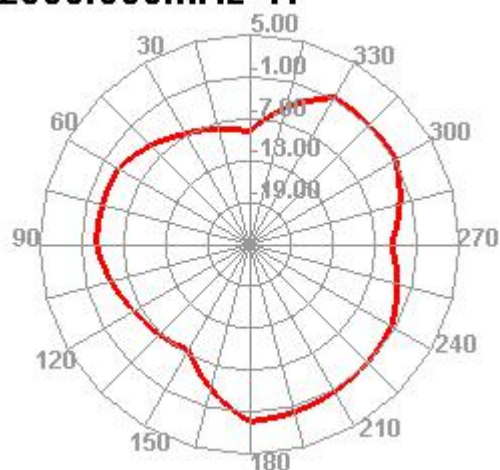
2450.000MHz H



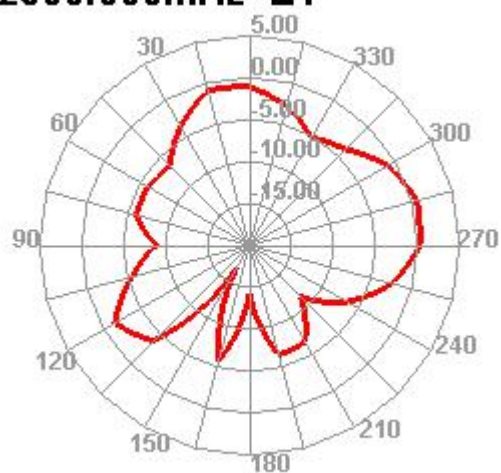
2500.000MHz



2500.000MHz H



2500.000MHz E1



2500.000MHz E2

