

Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: _____

Product Name: _____ Raptor

Part NO: _____ Raptor. YK. C113. 187B. 1

Write By: _____ Fangzhengfeng

Issued Date: _____ 2024-03-22

Edition: _____ V2.0

Customer

R&D Dept	Business Dept	Approved By

SKYLink

R&D Dept	Engineer Dept	Approval

● Specification Summary

A. Electrical Characteristics	
Frequency	2400MHz ~2500MHz 5150MHz ~5850MHz
VSWR	<2.0
Efficiency	>40%
Peak Gain	2.0dbi
Impedance	50 Ohm
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Cable Type	1.13 Black
Connector Type	I
Dimension	At Attachment
Heat-durability	280±5°C, 10sec.
C. Environmental Characteristics	
Operation Temperature	- 20 °C ~ + 80 °C
Storage Temperature	- 30 °C ~ + 85 °C

由 Autodesk 教育版产品制作

● Test Equipment & Conditions

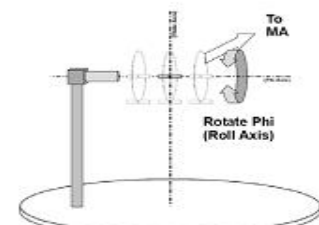
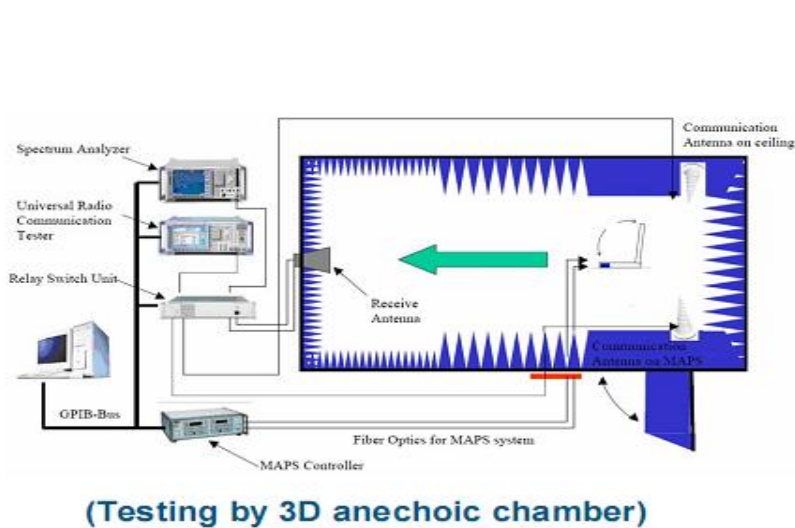
1. Network Analyzers :

Agilent 8753D 5071B

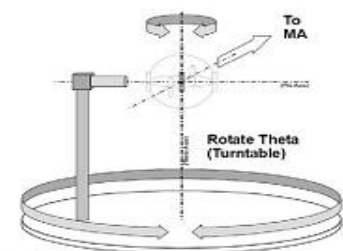
Communications Test Set:

Agilent E5515C CMW500

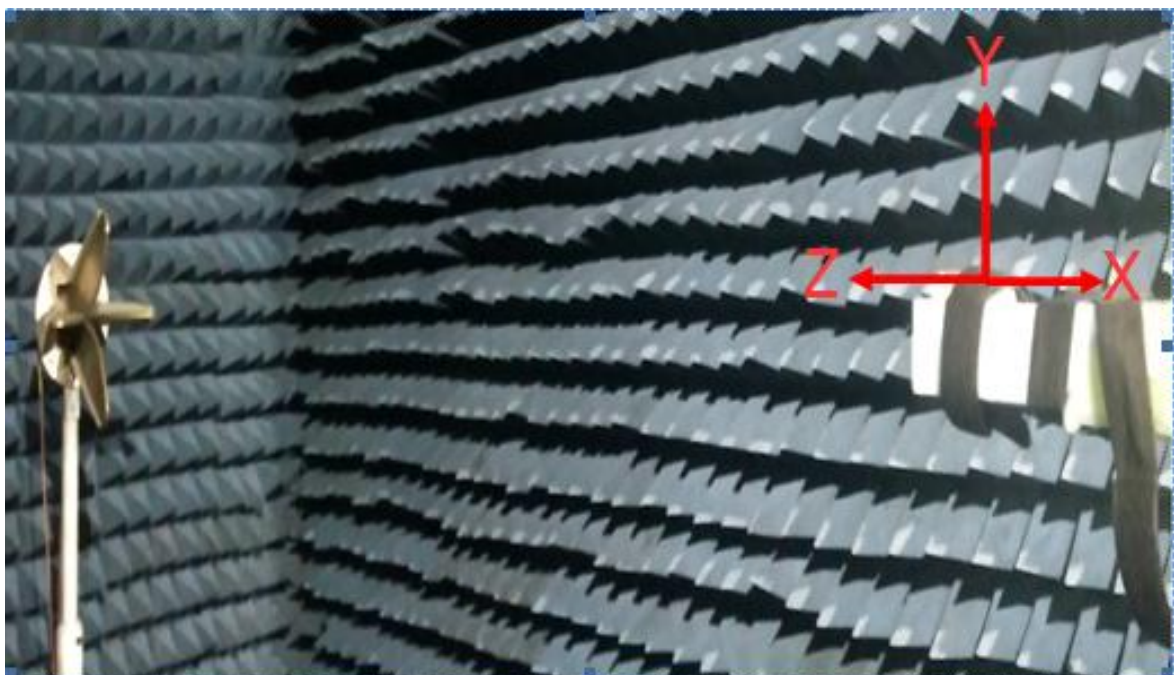
2. 3D Chamber Test System



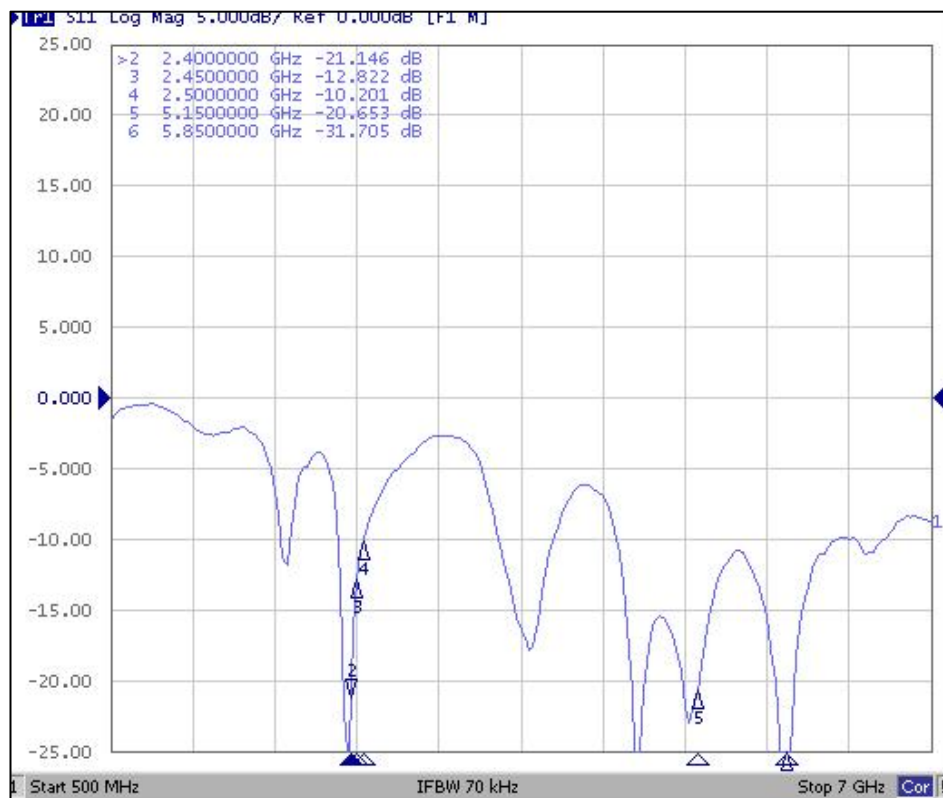
Phi axis test



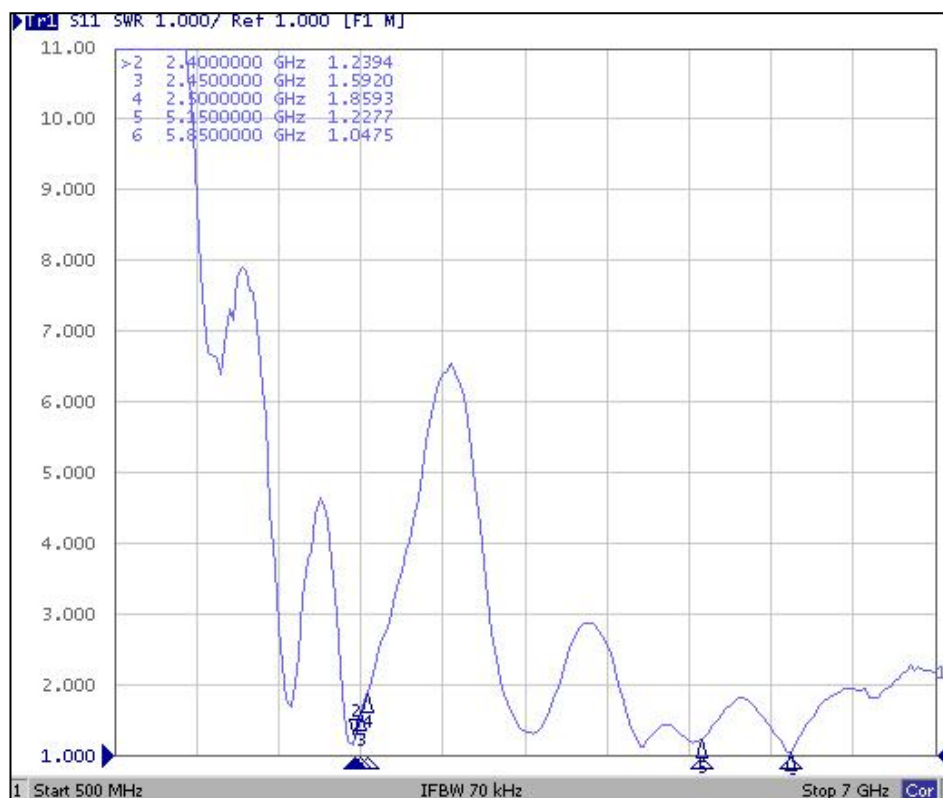
Theta axis test



◆ Return Loss



◆ VSWR



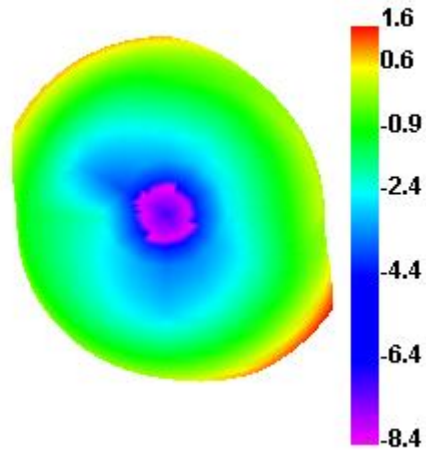
◆ Gain & Efficiency

Freq (MHz)	Effi (%)	Gain (dBi)
2400	58.84	1.65
2410	56.95	1.29
2420	57.62	1.14
2430	57.53	1
2440	60.64	1.15
2450	58.99	1.08
2460	59.52	1.13
2470	56.43	0.83
2480	58.94	0.88
2490	62.47	1.28
2500	65.73	1.7

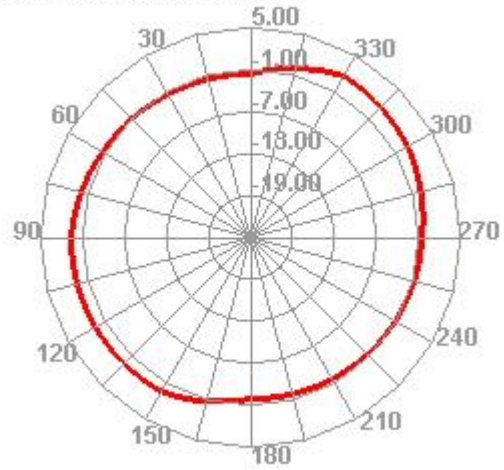
Freq (MHz)	Effi (%)	Gain (dBi)
5150	42.73	-1.38
5200	43.52	-1.08
5250	44.62	-0.71
5300	46.76	-0.41
5350	45.19	0.61
5400	50.15	1.18
5450	45.02	0.51
5500	45.81	0.55
5550	51.77	1.14
5600	55.44	1.76
5650	56.61	2.02
5700	50.25	2.01
5750	58.17	2.03
5800	57.12	2.01
5850	57.75	2.04

◆ Radiation Pattern

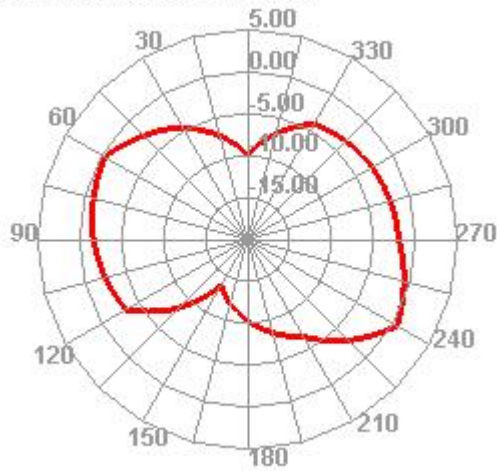
2400.000MHz



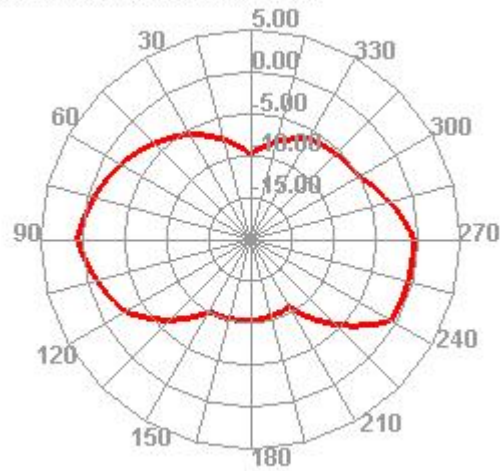
2400.000MHz H



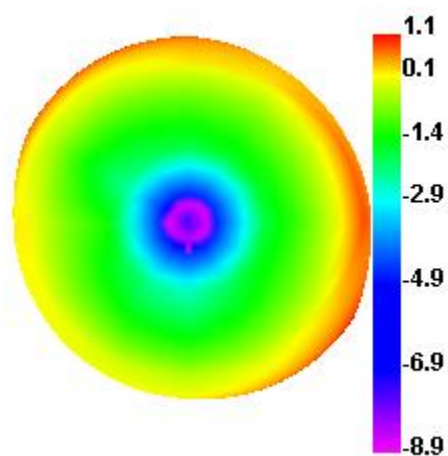
2400.000MHz E1



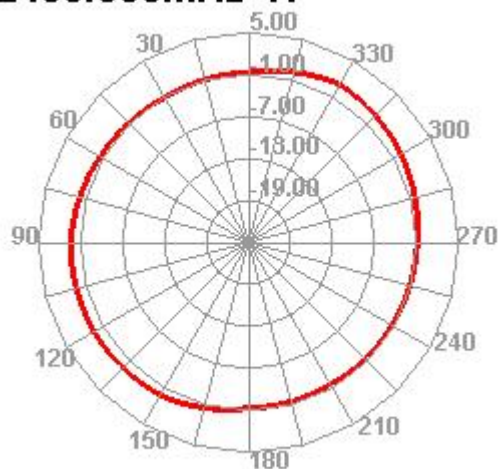
2400.000MHz E2



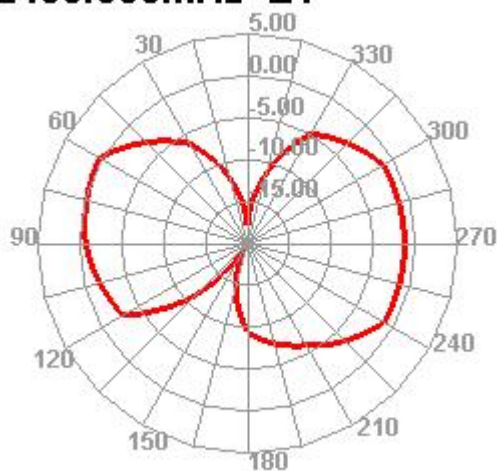
2450.000MHz



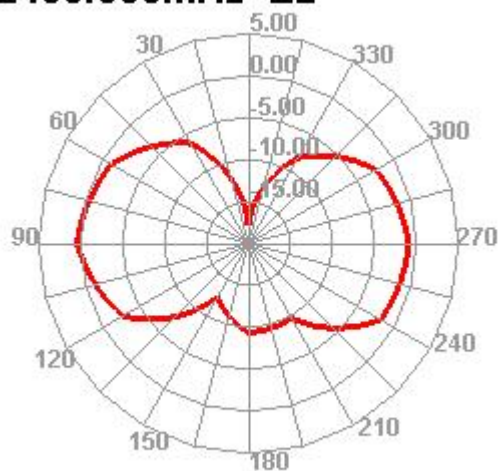
2450.000MHz H



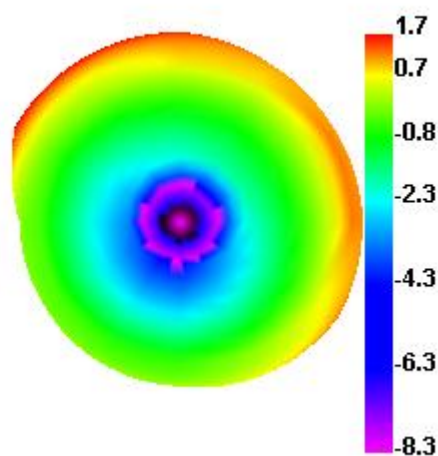
2450.000MHz E1



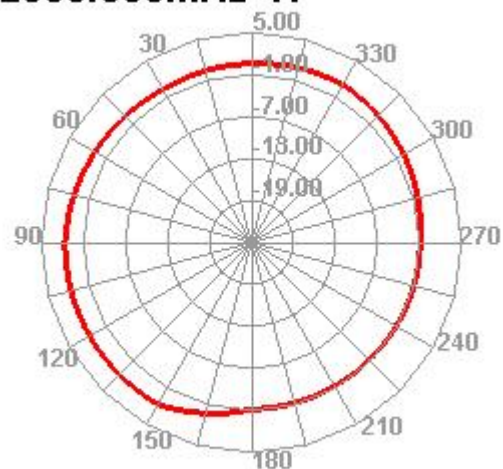
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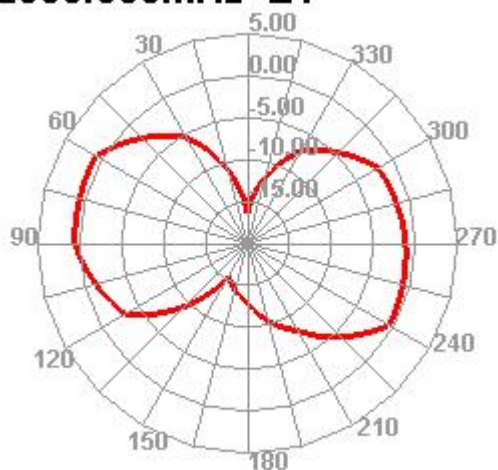
2500.000MHz



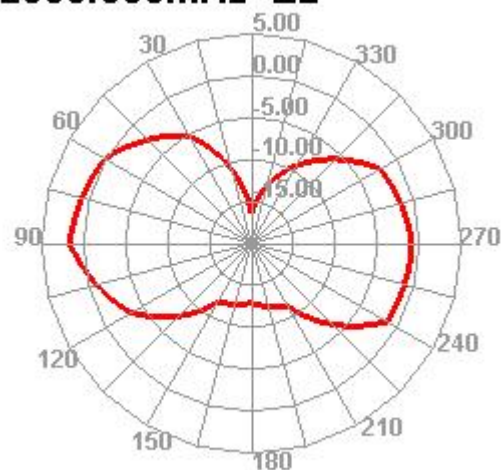
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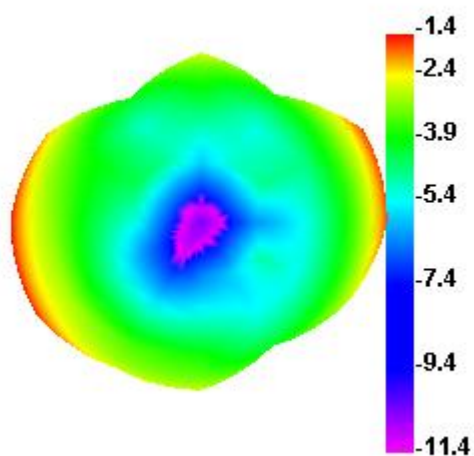
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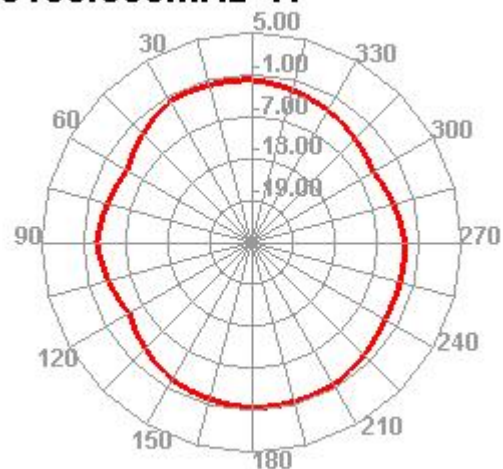
2500.000MHz E2



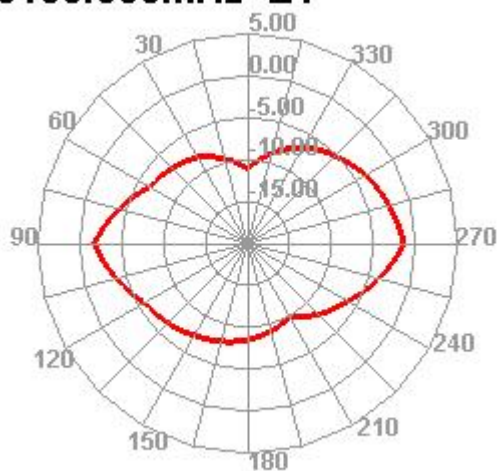
5150.000MHz



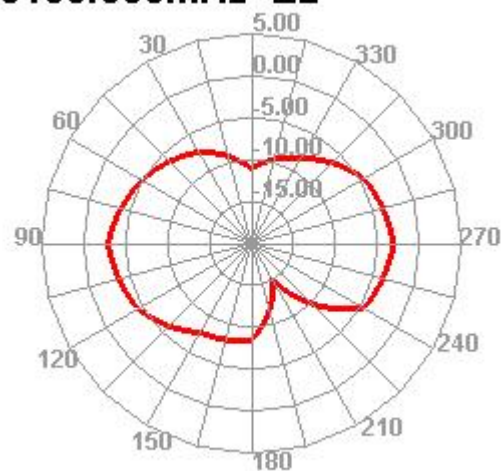
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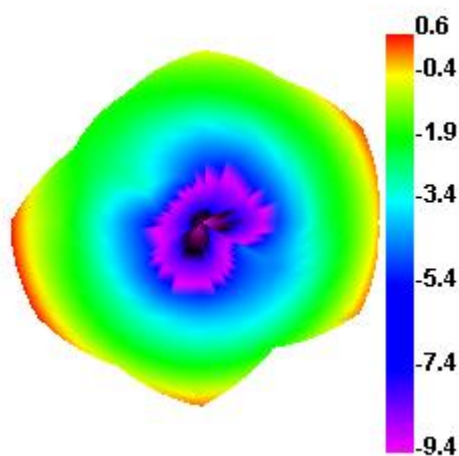
5150.000MHz E1



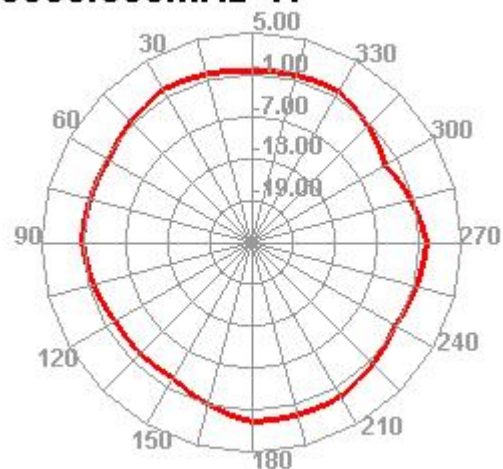
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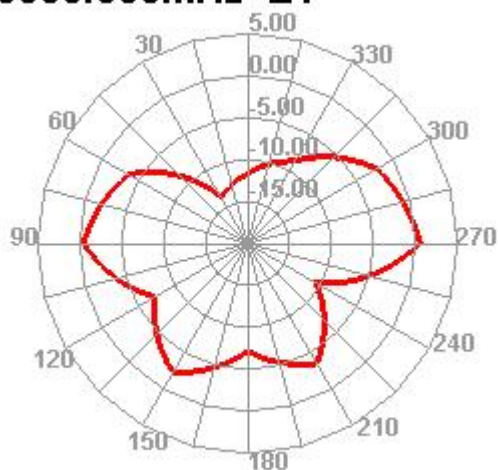
5500.000MHz



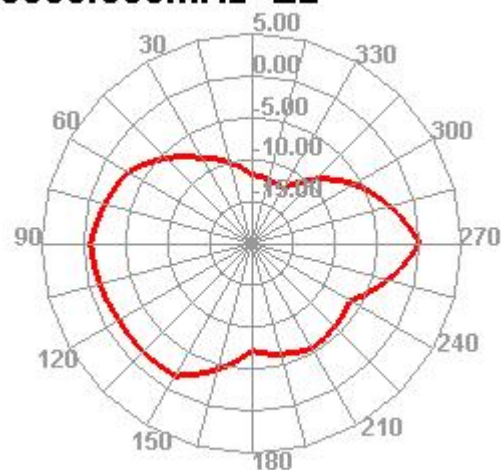
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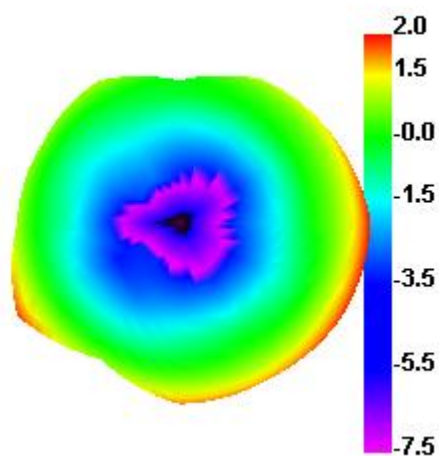
5500.000MHz E1



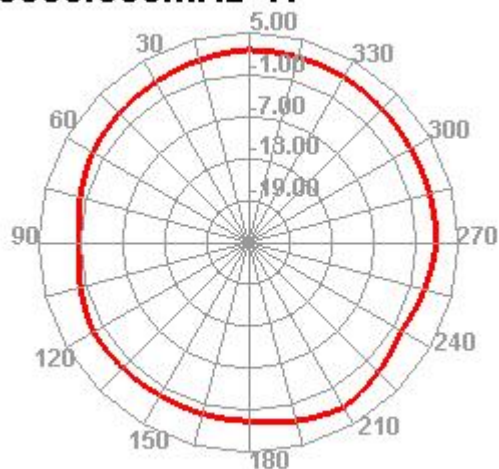
5500.000MHz E2



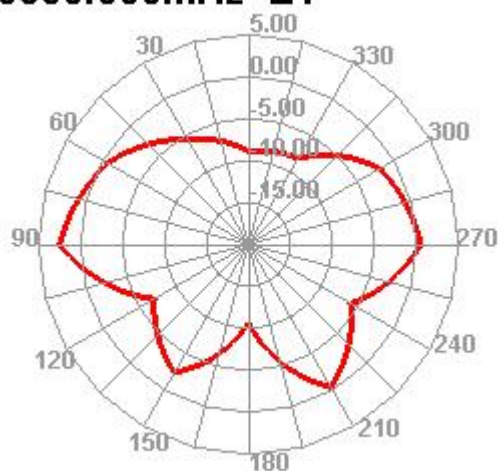
5850.000MHz



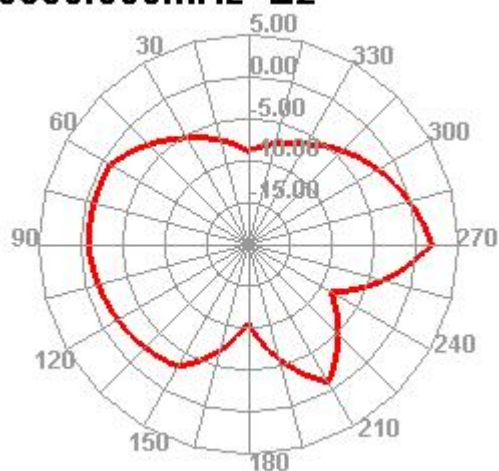
5850.000MHz H



5850.000MHz E1



5850.000MHz E2



◆ Antenna Picture



◆ 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