

Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: _____

Product Name: _____ Raptor

Part NO: _____ Raptor. Drone. ANT1. C113. 382B. 1

Write By: _____ Fangzhengfeng

Issued Date: _____ 2024-03-21

Edition: _____ V3.0

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	>50%
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

	1	2	3	4	5	6	7	8																																																								
A	RoHS Compliant G P																																																															
B																																																																
C																																																																
D	<table><tr><th>Rev</th><th>Description</th><th>Date</th><th>Remark</th></tr><tr><td>1</td><td>New drawing</td><td></td><td></td></tr></table>				Rev	Description	Date	Remark	1	New drawing			<table><tr><th colspan="6">SHEN ZHEN SKYL ink CO., LTD</th></tr><tr><th colspan="3">Third Angle</th><th colspan="3">Project</th></tr><tr><td>0~10</td><td>±0.05</td><td>○</td><td>0.02</td><td>Part Name</td><td></td></tr><tr><td>10~18</td><td>±0.10</td><td>◎</td><td>Ø0.03</td><td>Part No.</td><td>Raptor_Drone_AMTL.C113.382B.1</td></tr><tr><td>18~30</td><td>±0.12</td><td>⊥</td><td>0.02</td><td>Material</td><td></td></tr><tr><td>30~40</td><td>±0.15</td><td>∇</td><td>0.04</td><td></td><td></td></tr><tr><td>40~</td><td>±0.20</td><td>Angle</td><td>±0.5°</td><td>DWG No.</td><td></td></tr><tr><td colspan="3">Location</td><td></td><td></td><td></td></tr></table>				SHEN ZHEN SKYL ink CO., LTD						Third Angle			Project			0~10	±0.05	○	0.02	Part Name		10~18	±0.10	◎	Ø0.03	Part No.	Raptor_Drone_AMTL.C113.382B.1	18~30	±0.12	⊥	0.02	Material		30~40	±0.15	∇	0.04			40~	±0.20	Angle	±0.5°	DWG No.		Location					
Rev	Description	Date	Remark																																																													
1	New drawing																																																															
SHEN ZHEN SKYL ink CO., LTD																																																																
Third Angle			Project																																																													
0~10	±0.05	○	0.02	Part Name																																																												
10~18	±0.10	◎	Ø0.03	Part No.	Raptor_Drone_AMTL.C113.382B.1																																																											
18~30	±0.12	⊥	0.02	Material																																																												
30~40	±0.15	∇	0.04																																																													
40~	±0.20	Angle	±0.5°	DWG No.																																																												
Location																																																																

● Test Equipment & Conditions

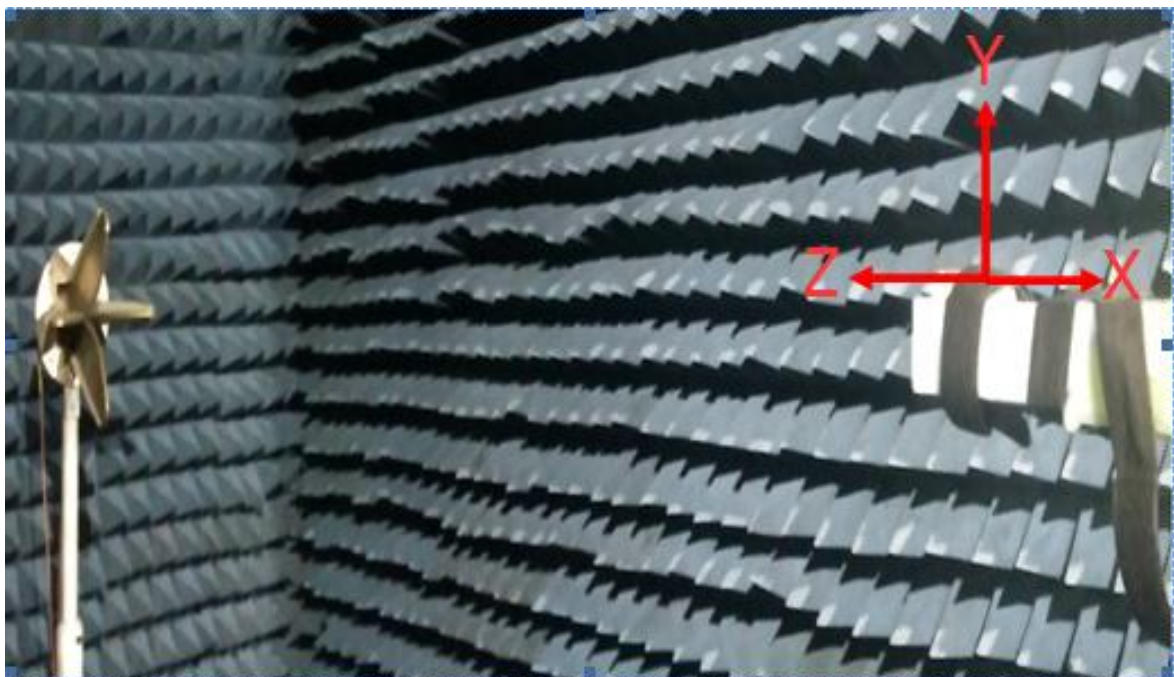
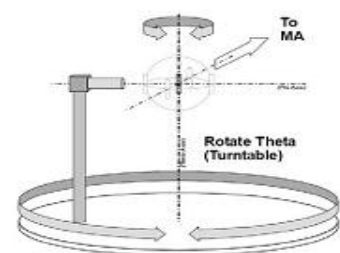
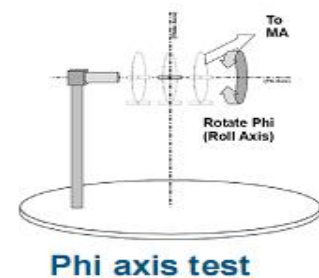
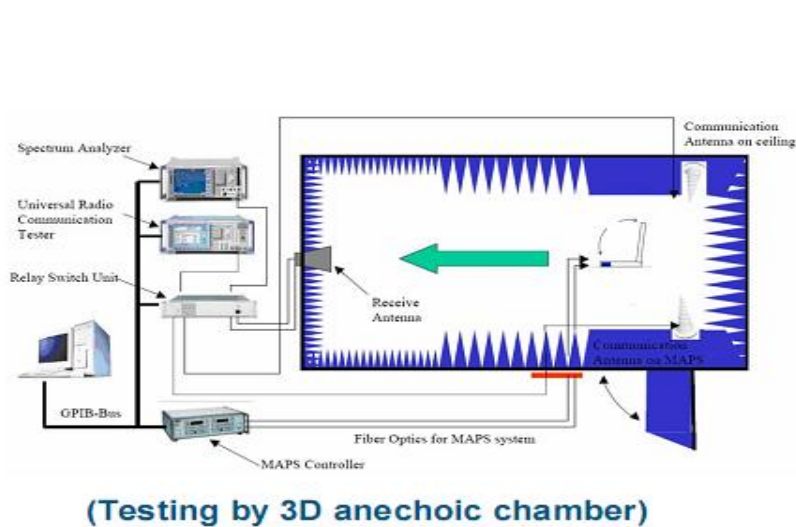
1. Network Analyzers :

Agilent 8753D 5071B

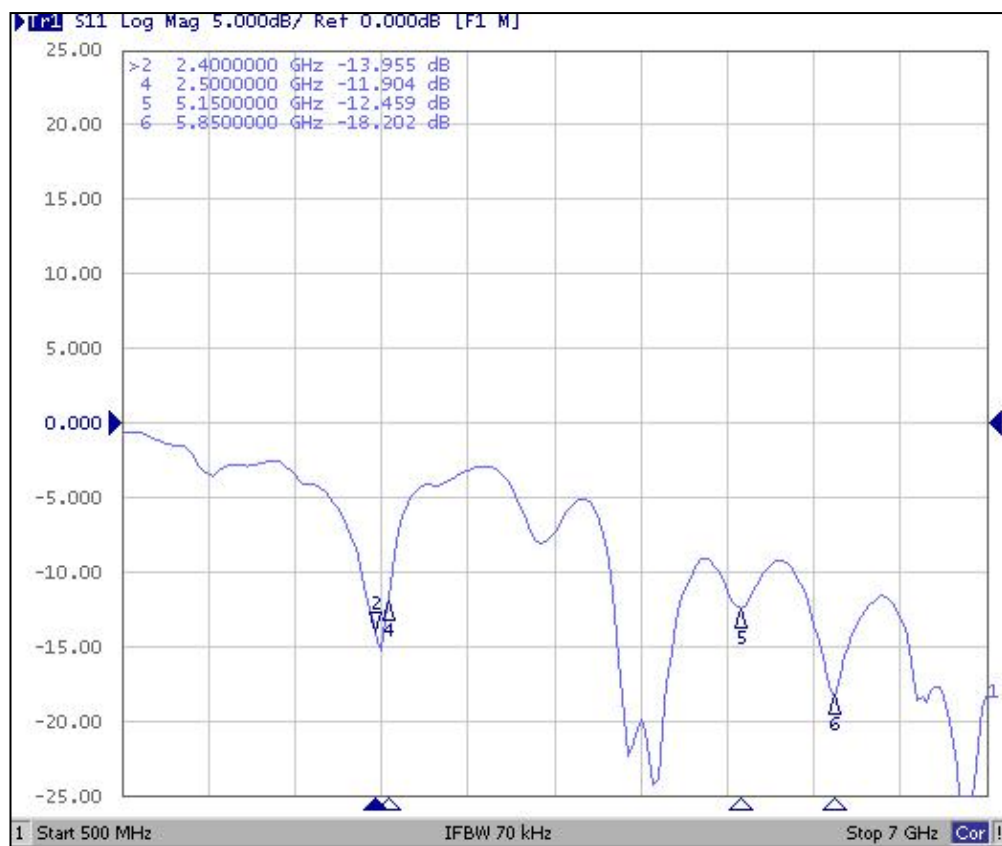
Communications Test Set:

Agilent E5515C CMW500

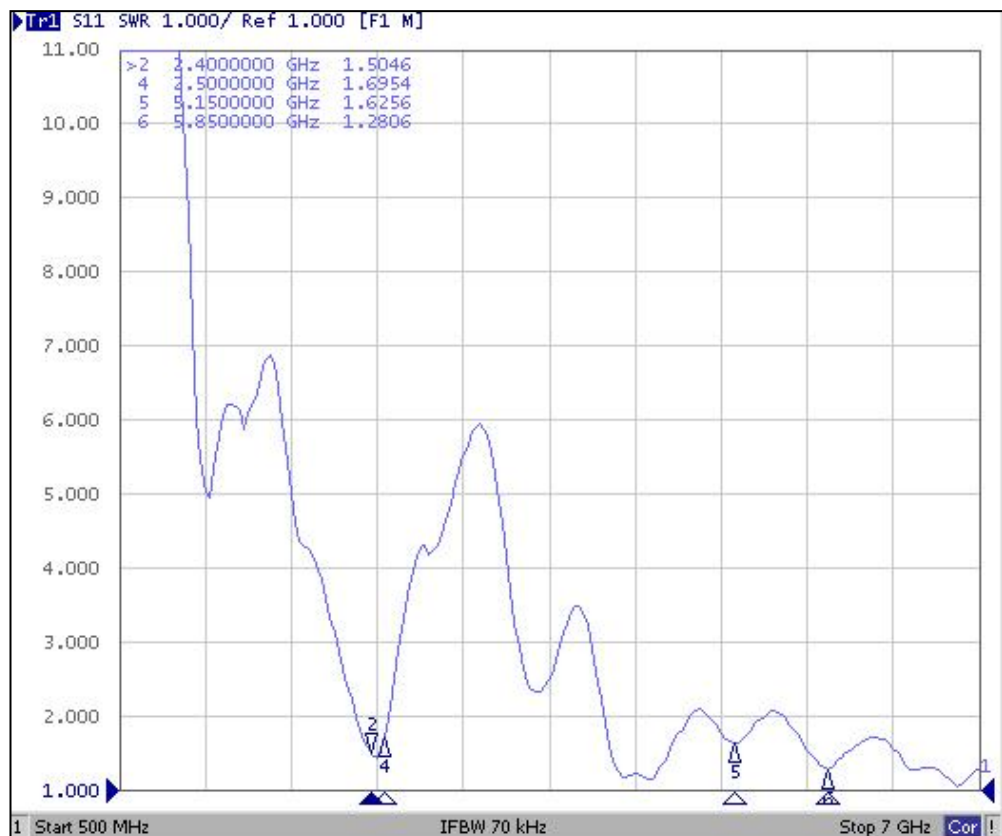
2. 3D Chamber Test System



◆ Return Loss



◆ VSWR



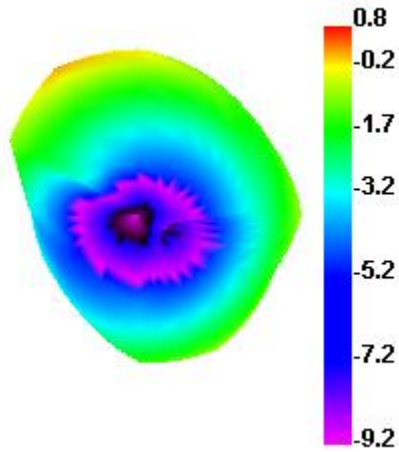
◆ Gain & Efficiency

Freq (MHz)	Effi (%)	Gain (dBi)
2400	60.44	0.79
2410	62.43	1.31
2420	69.41	1.94
2430	74.94	2.02
2440	73.39	2.04
2450	67.81	2.02
2460	67.23	1.97
2470	66.89	1.81
2480	66.32	1.65
2490	65.15	1.49
2500	62.74	1.23

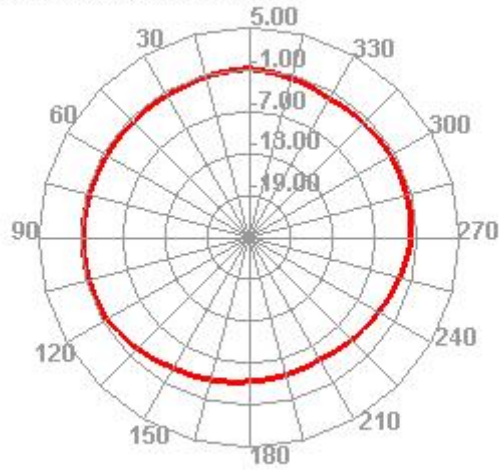
Freq (MHz)	Effi (%)	Gain (dBi)
5150	52.3	1.84
5200	51.04	1.71
5250	51.95	1.42
5300	51.64	2.08
5350	53.21	1.99
5400	52.91	2.01
5450	53.12	1.32
5500	53.66	1.46
5550	56.41	1.99
5600	56.96	2.03
5650	54.41	1.83
5700	57.18	1.96
5750	60.37	2.04
5800	61.69	2.01
5850	63.07	2.02

◆ Radiation Pattern

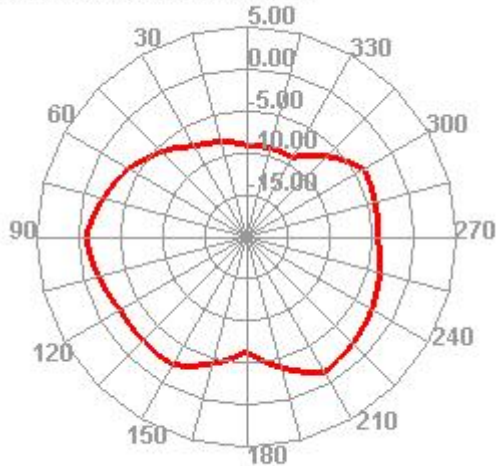
2400.000MHz



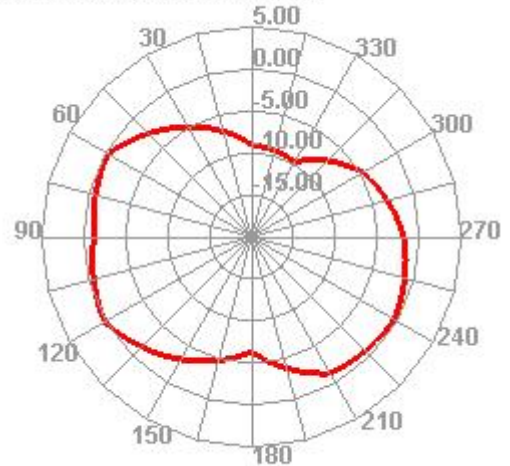
2400.000MHz H



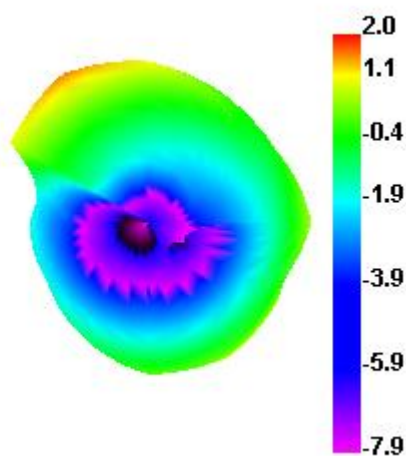
2400.000MHz E1



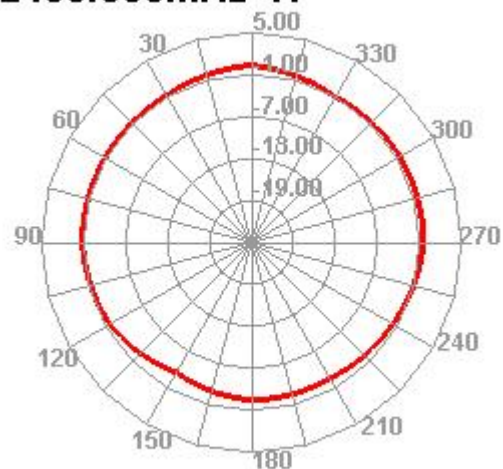
2400.000MHz E2



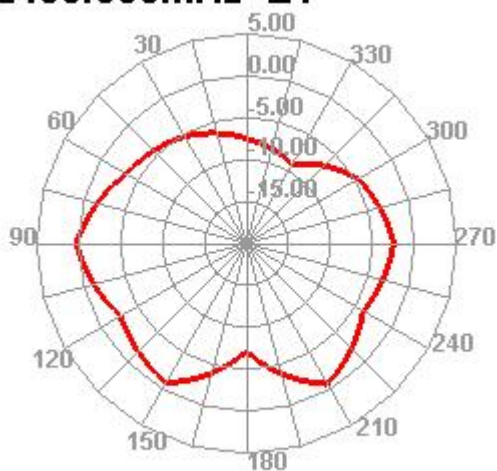
2450.000MHz



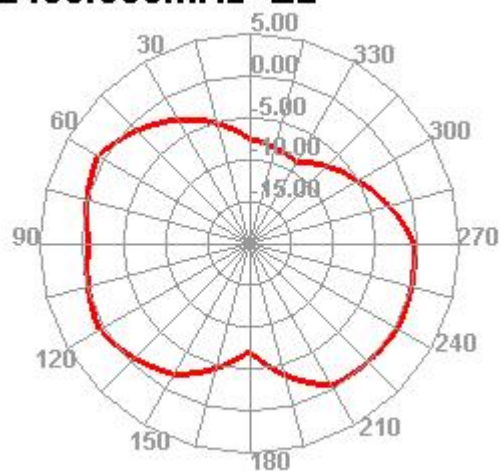
2450.000MHz H



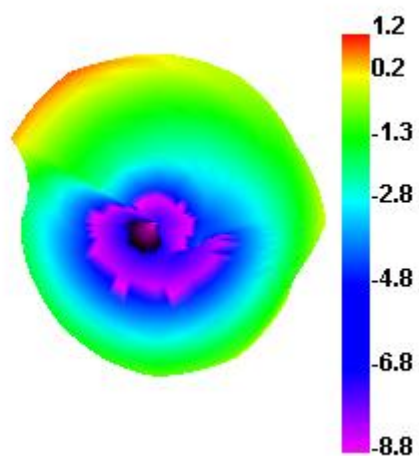
2450.000MHz E1



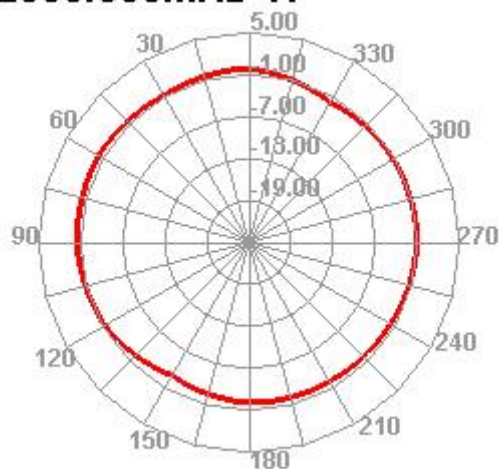
2450.000MHz E2



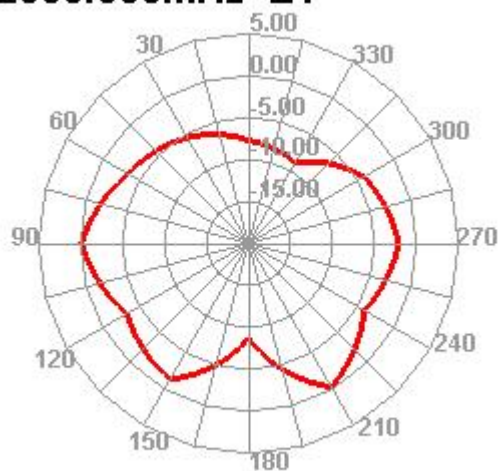
2500.000MHz



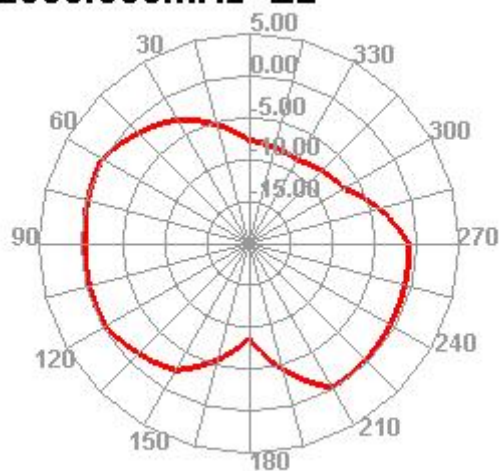
2500.000MHz H



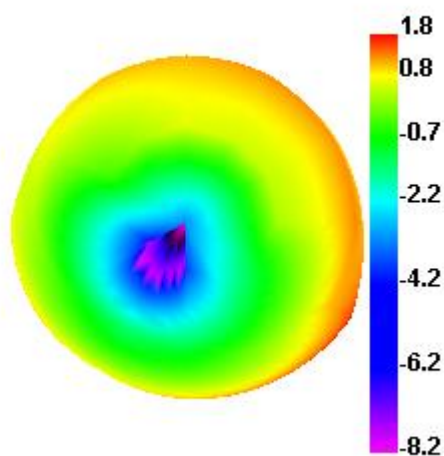
2500.000MHz E1



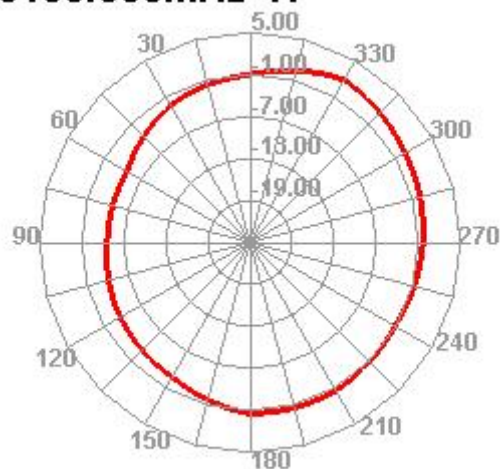
2500.000MHz E2



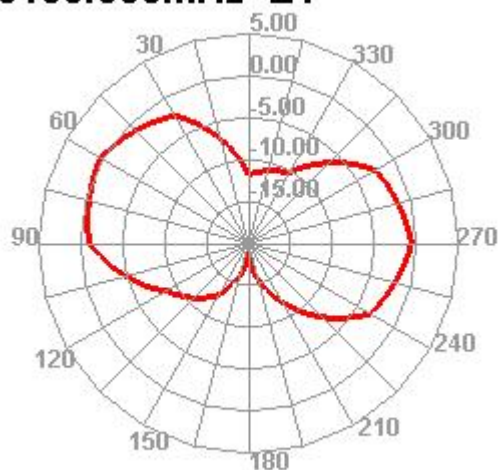
5150.000MHz



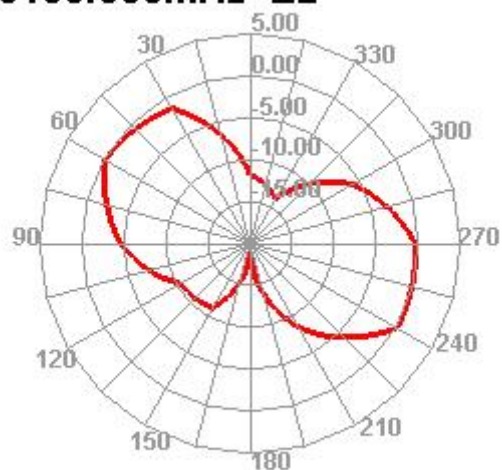
5150.000MHz H



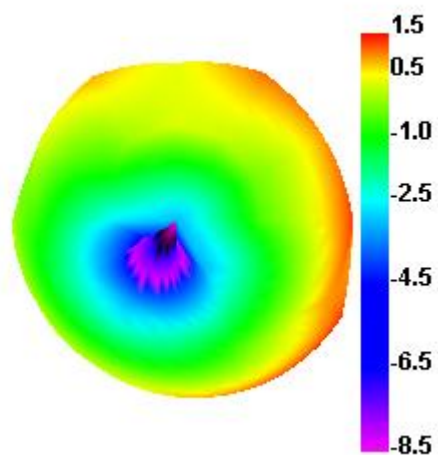
5150.000MHz E1



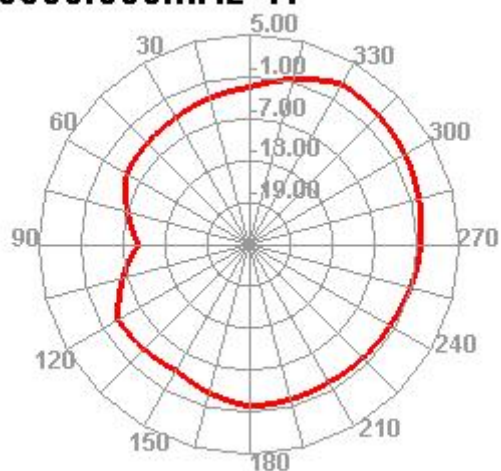
5150.000MHz E2



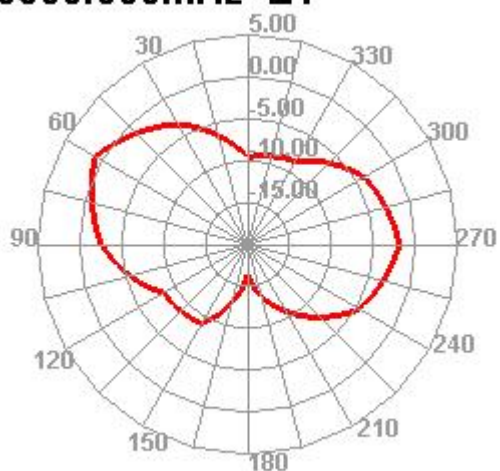
5500.000MHz



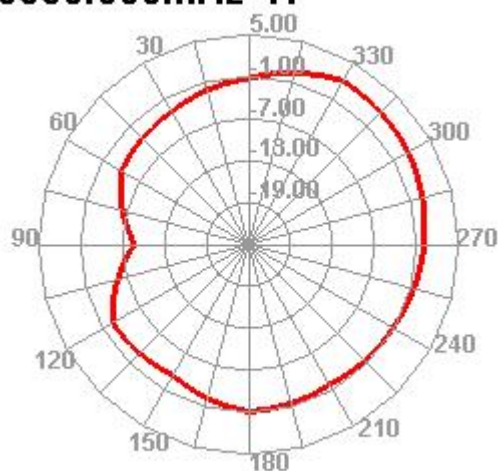
5500.000MHz H



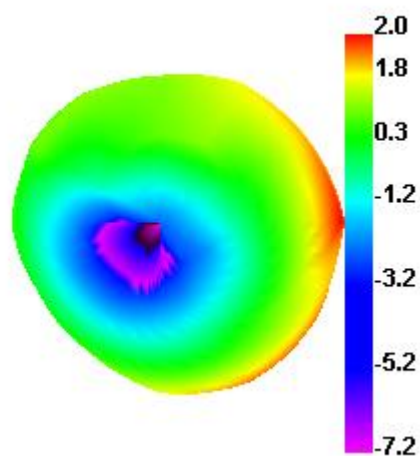
5500.000MHz E1



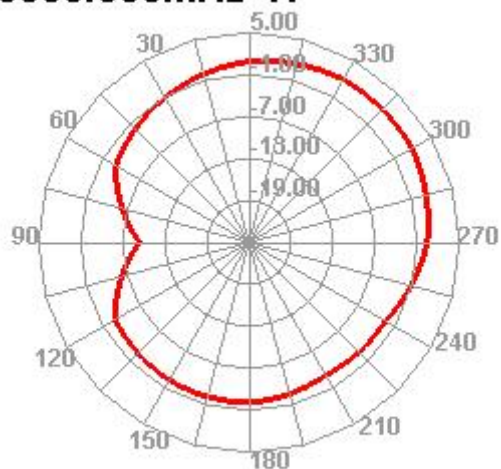
5550.000MHz H



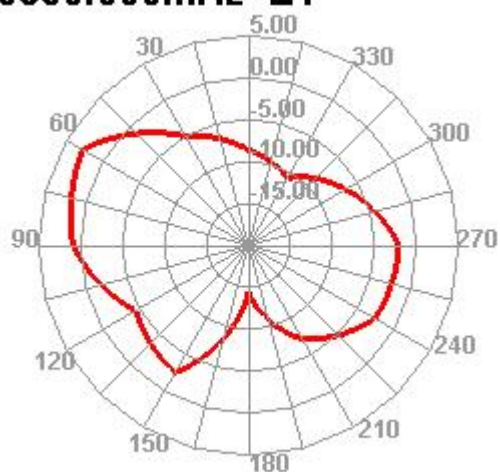
5850.000MHz



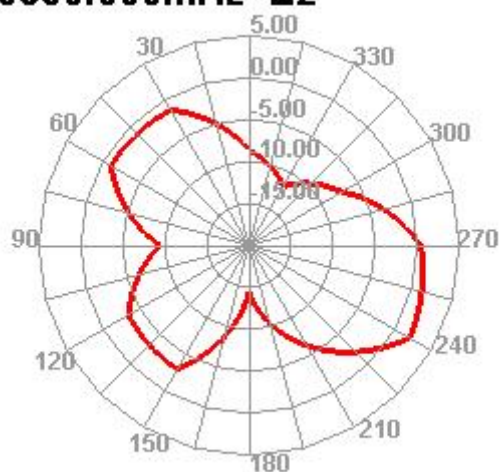
5850.000MHz H



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