

Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: _____

Product Name: _____ 4G+WIFI Antenna _____

Part NO. : _____ HJL. SKCA03C. RG174. 1500B. SMAMM _____

Write By: _____ Damon Cui _____

Issued Date: _____ 2025. 12. 23 _____

Customer

R&D Dept	Business Dept	Approved By

SKYLink

R&D Dept	Engineer Dept	Approval

Specification Summary

A. Electrical Characteristics	
Frequency	660MHz ~2700MHz 2400MHz ~2500MHz 5150MHz ~5850MHz
VSWR	<3
Efficiency	>10%
Peak Gain	4G:2.1 dbi WIFI:2.5 dbi
Impedance	50 Ohm
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	/
Cable Type	RG174 Black
Connector Type	SMA
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

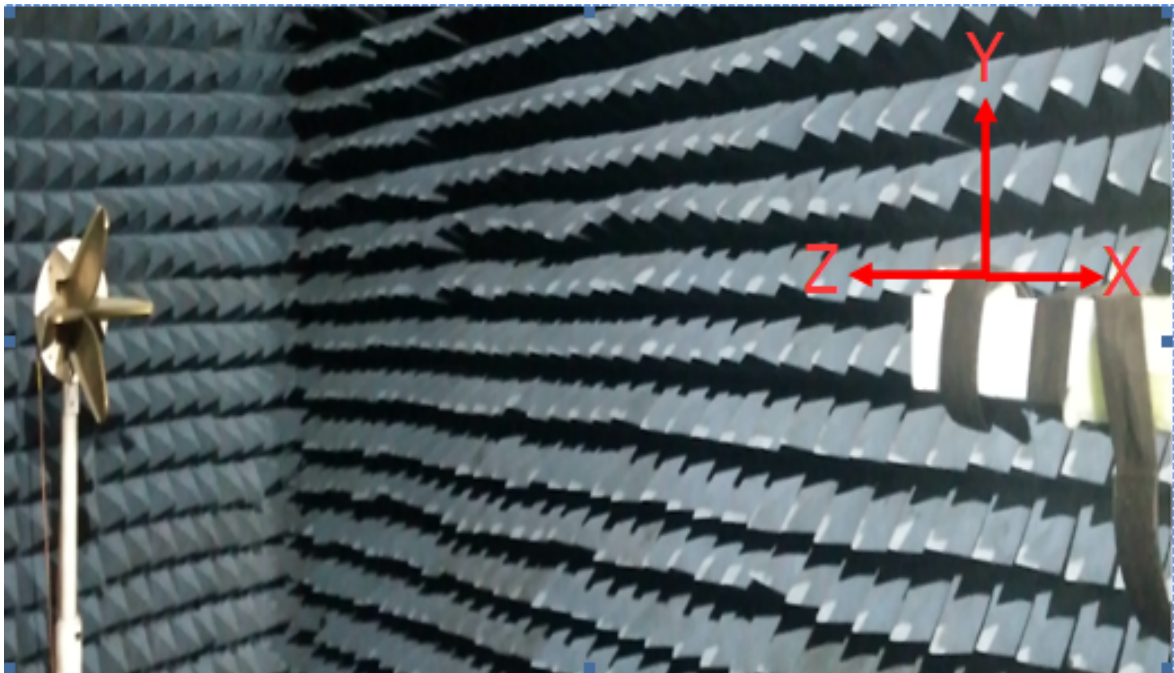
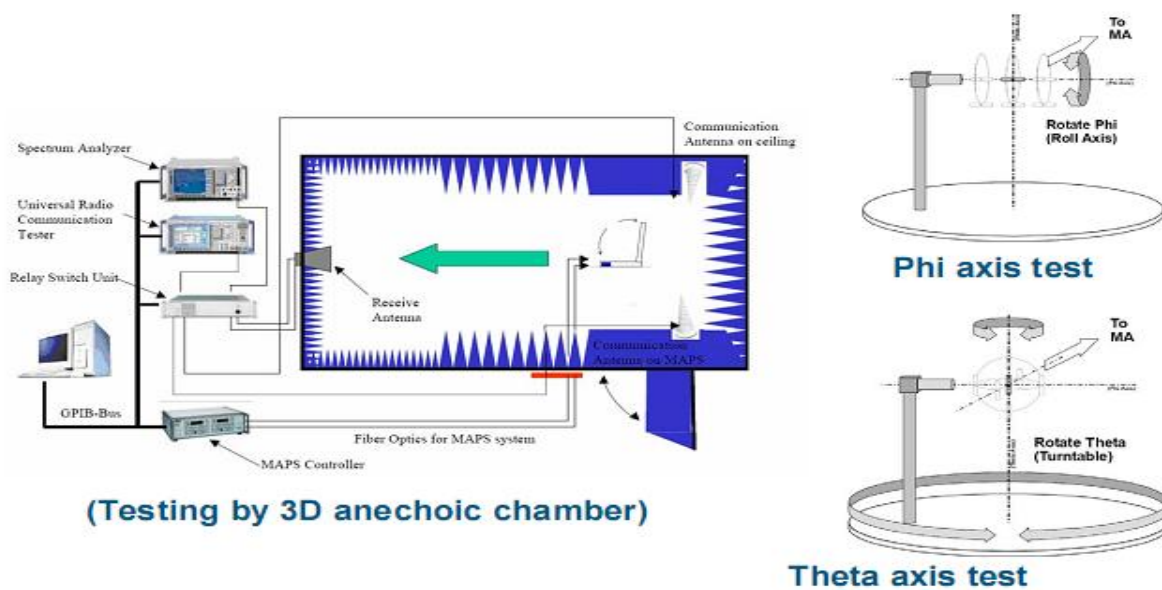
1. Network Analyzers :

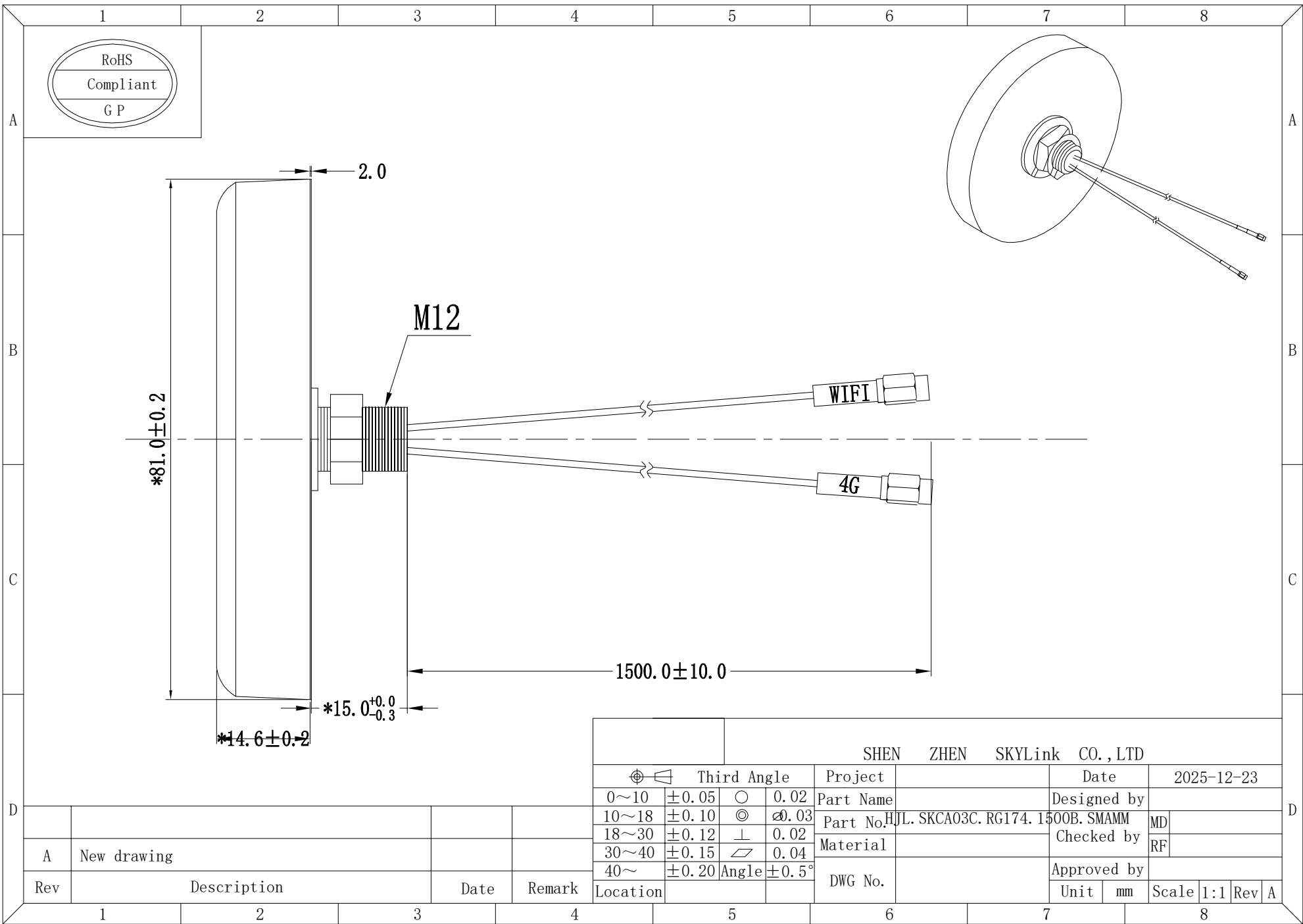
Agilent 8753D 5071B

Communications Test Set:

Agilent E5515C CMW500

2. 3D Chamber Test System

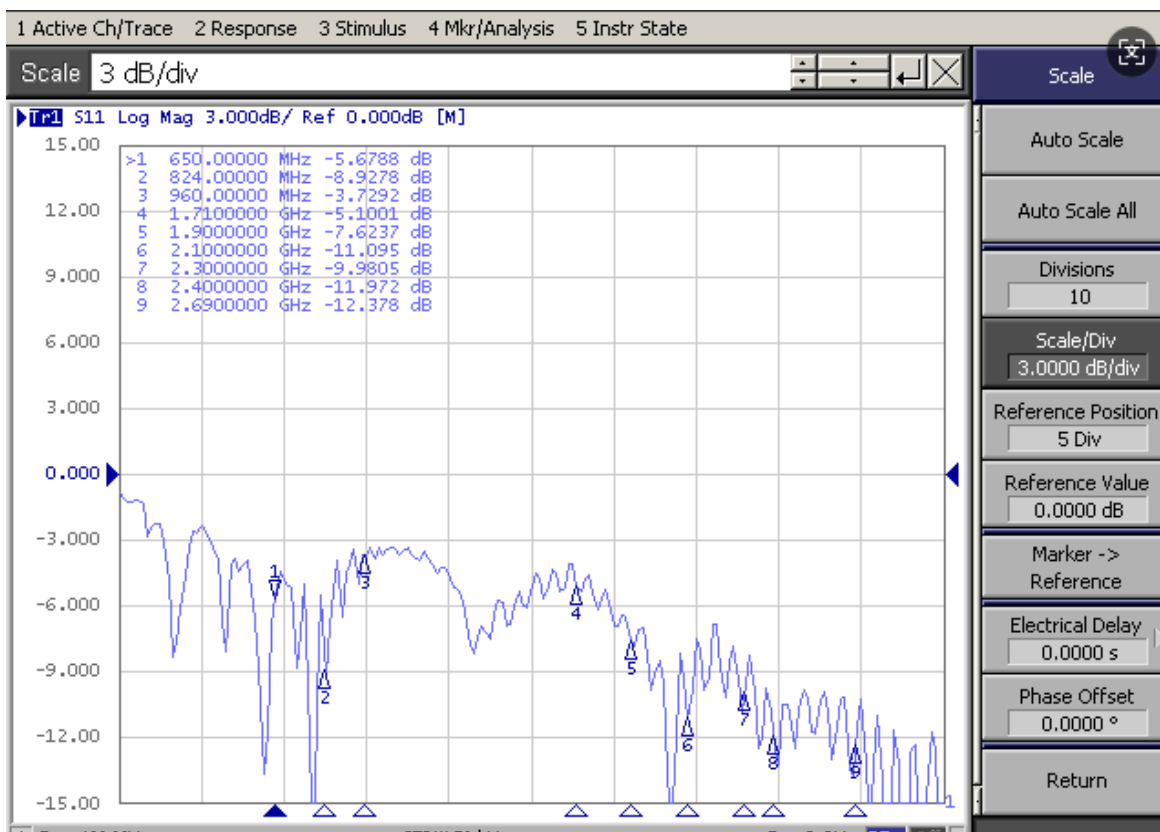




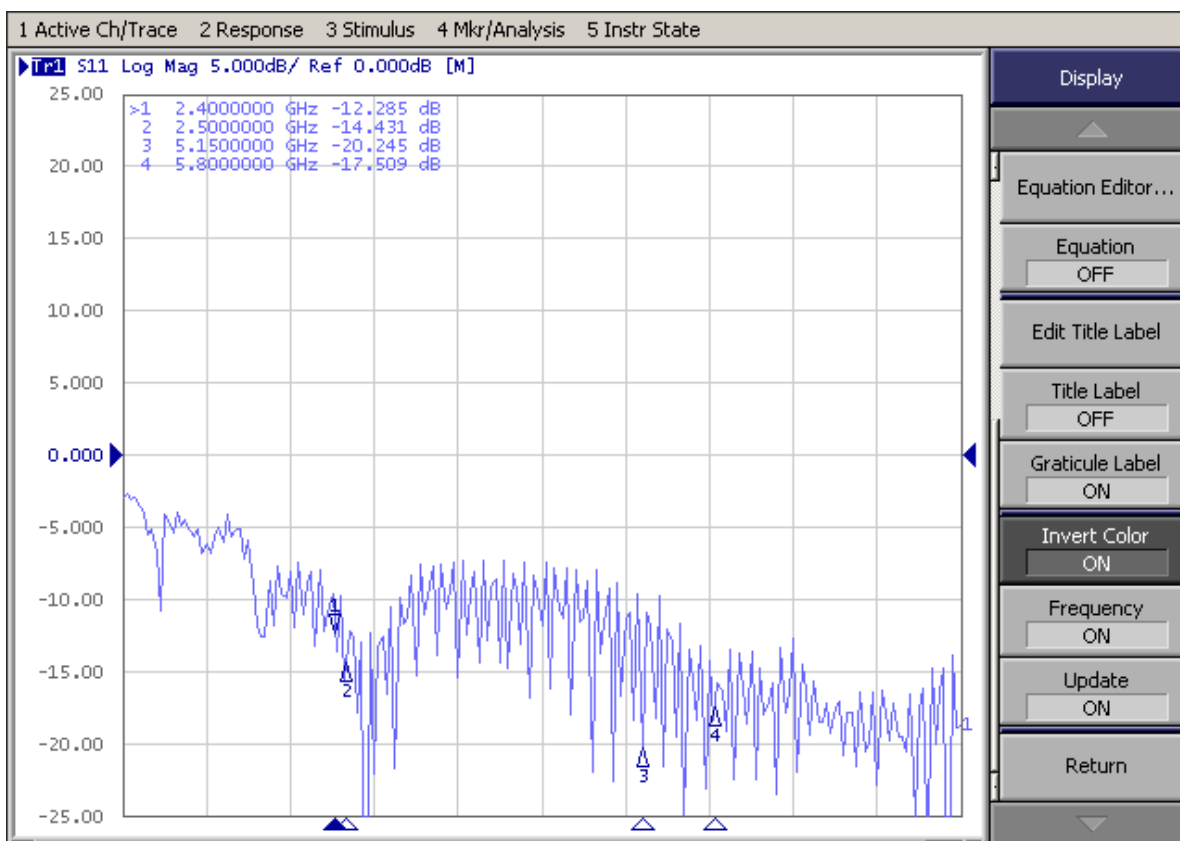
				SHEN ZHEN SKYLink CO.,LTD			
				Third Angle	Project	Date	2025-12-23
				0~10	±0.05	○	0.02
				10~18	±0.10	◎	0.03
				18~30	±0.12	⊥	0.02
				30~40	±0.15	▱	0.04
				40~	±0.20	Angle	±0.5°
				Location		DWG No.	
						Unit	mm
						Scale	1:1
						Rev	A

Part Name		Designed by	
Part No.		Checked by	
Material		Approved by	

◆ Return Loss (4G)



◆ Return Loss (WIFI)



◆ Gain & Efficiency

4G:

Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
660	13.08	-2.87	1710	32.51	-4.46
670	14.2	-2.81	1750	37.74	-2.88
680	14.83	-2.7	1800	37.91	-2.18
690	18.26	-1.48	1850	34.91	-0.67
700	29.69	-0.78	1900	34.9	0
710	30.03	0.01	1950	36.72	0.21
720	28.94	-0.45	2000	46.54	1.35
730	28.9	-2.08	2050	38.96	1.18
740	28.45	-2.27	2100	49.4	1.85
750	28.71	-4.49	2150	36.63	-0.2
760	29.7	-4.22	2200	34.15	-1.5
770	26.94	-3.18	2250	36.43	0.92
780	23.01	-3.12	2300	48.83	1.78
790	27.82	-2.2	2350	44.03	1.24
800	31.13	-0.11	2400	37.99	0.56
810	25.46	-2.41	2500	31.98	0.74
820	24.8	-3.91	2550	36.3	0.87
830	29.6	-1.4	2600	40.64	1.95
840	33.81	-0.04	2650	37.06	2.11
850	26.86	-1.36	2690	39.48	0.28
860	26.54	-2.45	2700	36.76	1.28
870	25.1	-5.21			
880	25.59	-2.08			
890	28.4	-1.79			
900	29.91	-4.5			
910	26.64	-5.35			
920	26.17	-5.41			
930	28.8	-5.72			
940	25.08	-3.86			
950	27.67	-4.74			
960	22.51	-6.22			

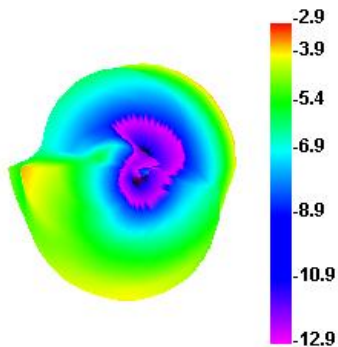
◆ **WIFI:**

Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
2400	36.2	1.05	5150	32.17	2.08
2410	37.15	0.77	5200	32.74	2.29
2420	37.13	0.59	5250	32.25	1.72
2430	38.96	-0.14	5300	32	1.4
2440	34.9	-0.53	5350	33.91	1.91
2450	35.17	0.58	5400	37.12	2.07
2460	36.6	1.33	5450	38.86	2.46
2470	37.72	1.52	5500	36.28	2.3
2480	38.32	1.7	5550	37.98	2.38
2490	38.08	1.43	5600	38.95	2.17
2500	37.38	1	5650	39.26	1.99
			5700	39.97	1.98
			5750	39.85	2.15
			5800	38.04	2.34
			5850	37.76	2.52

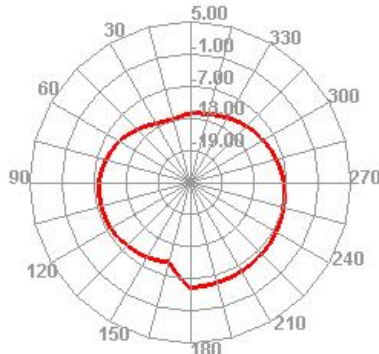
◆ Radiation Pattern

4G:

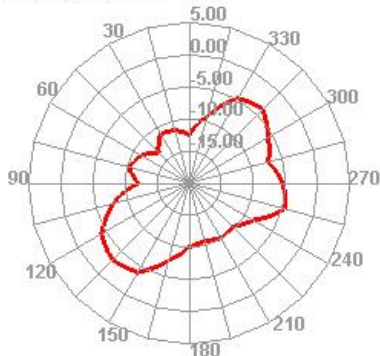
660.000MHz



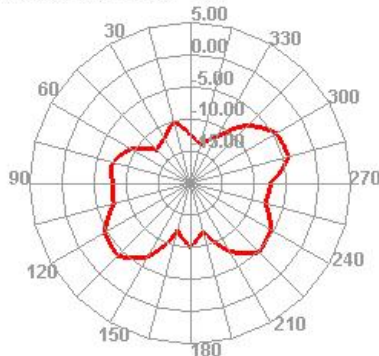
660.000MHz H



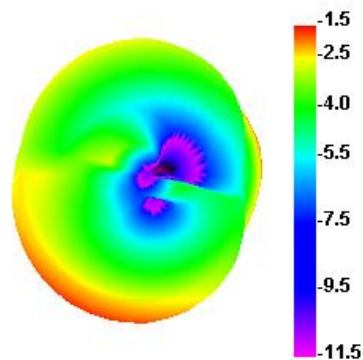
660.000MHz E1



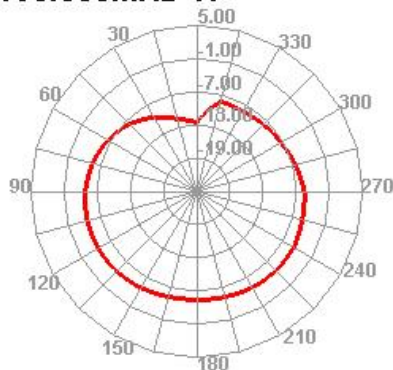
660.000MHz E2



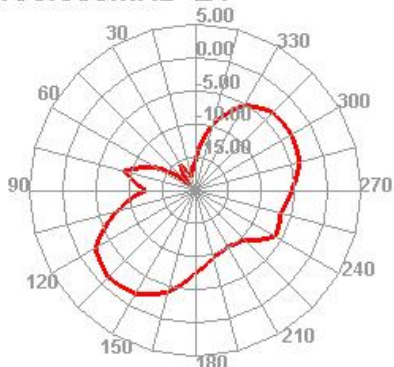
690.000MHz



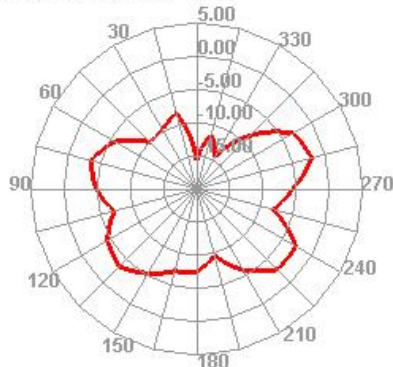
690.000MHz H



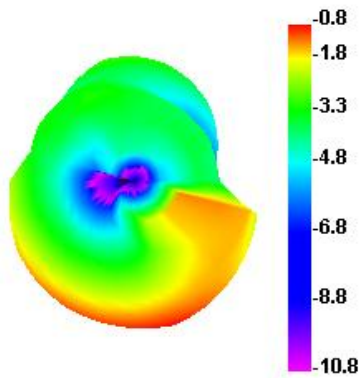
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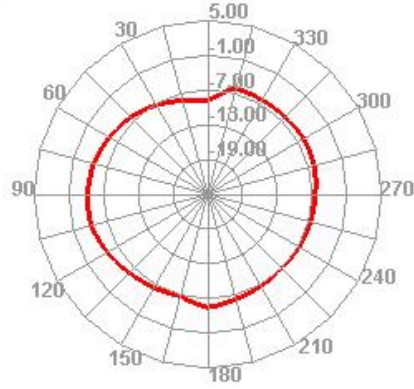
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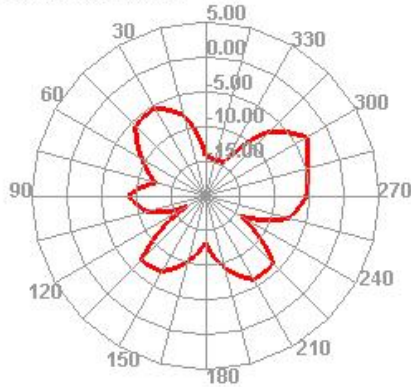
700.000MHz



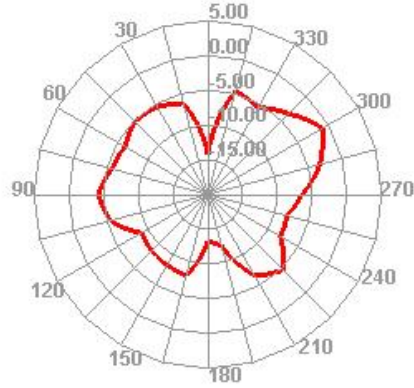
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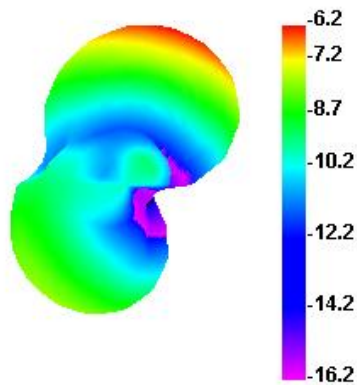
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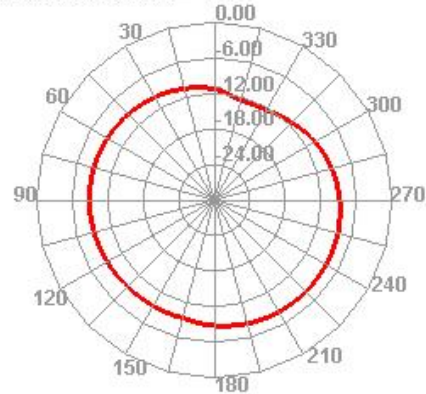
700.000MHz E2



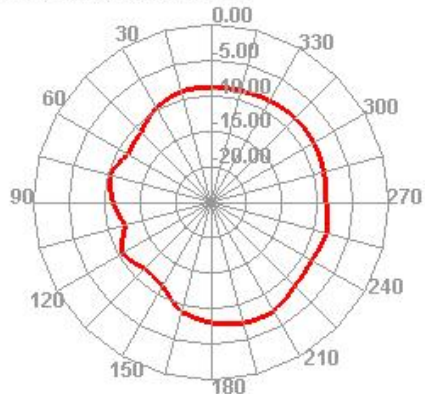
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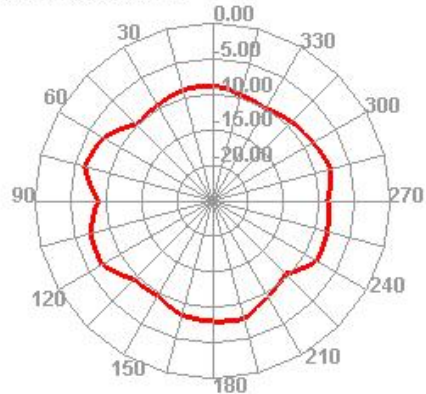
960.000MHz H



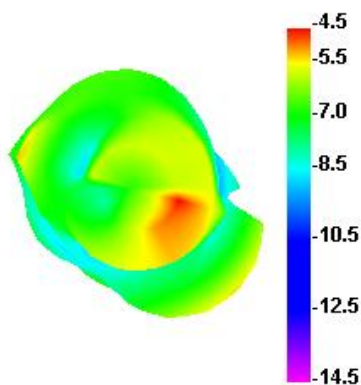
960.000MHz E1



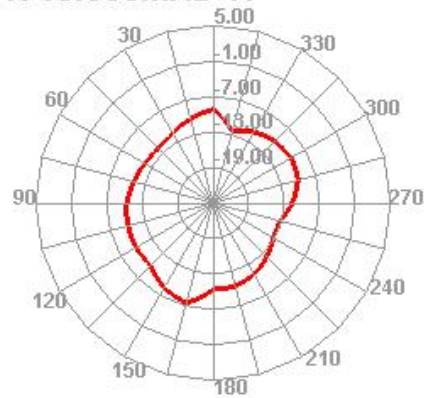
960.000MHz E2



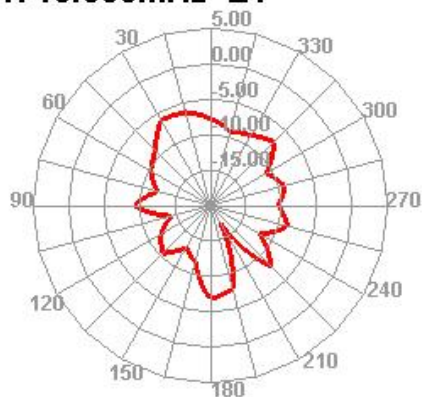
1710.000MHz



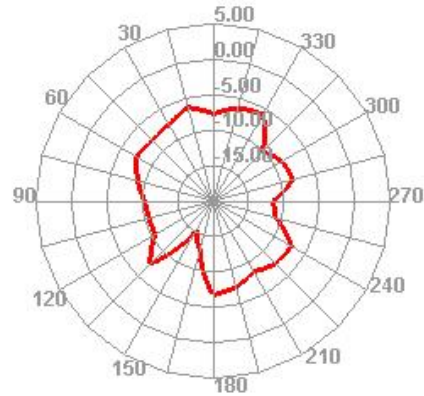
1710.000MHz H



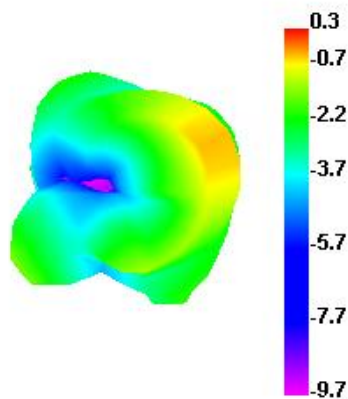
1710.000MHz E1



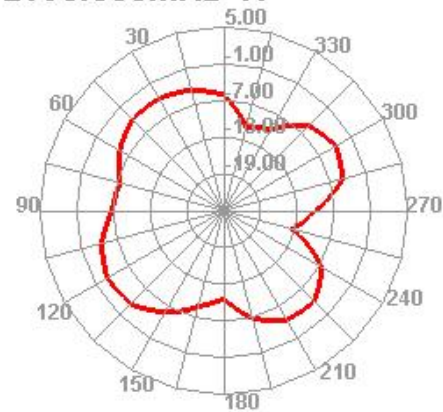
1710.000MHz E2



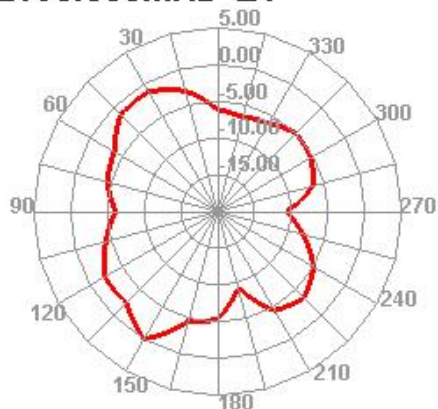
2690.000MHz



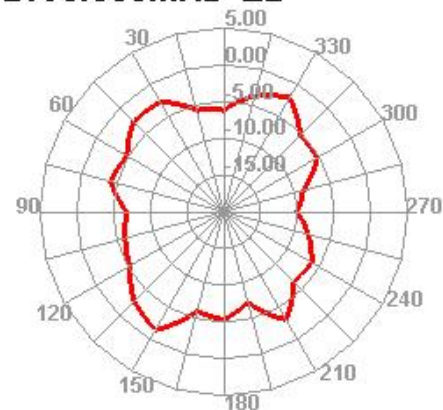
2690.000MHz H



2690.000MHz E1

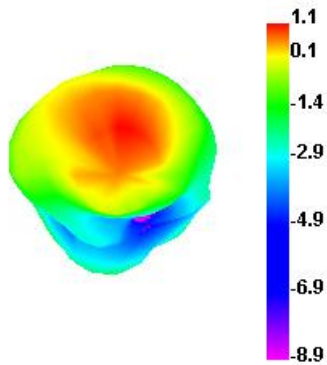


2690.000MHz E2

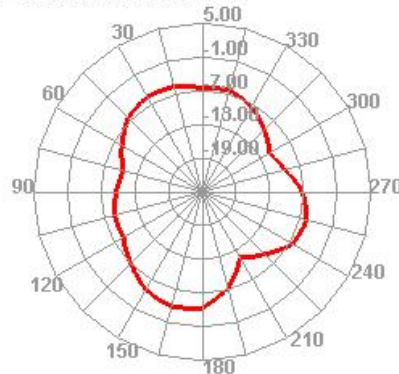


WIFI:

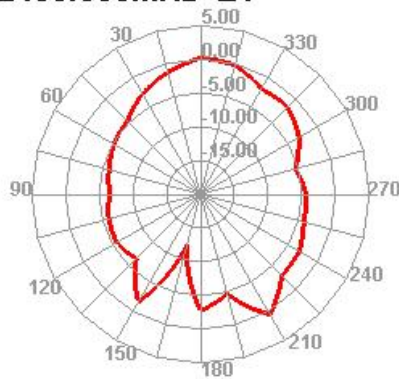
2400.000MHz



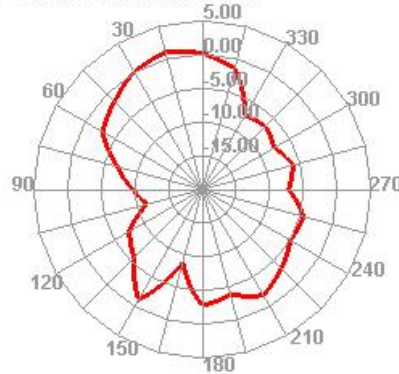
2400.000MHz H



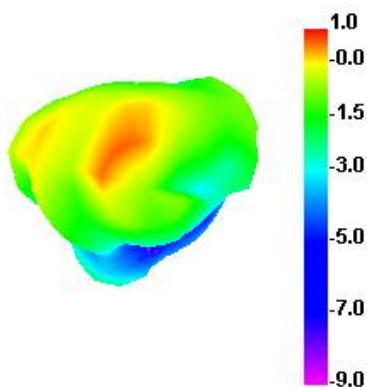
2400.000MHz E1



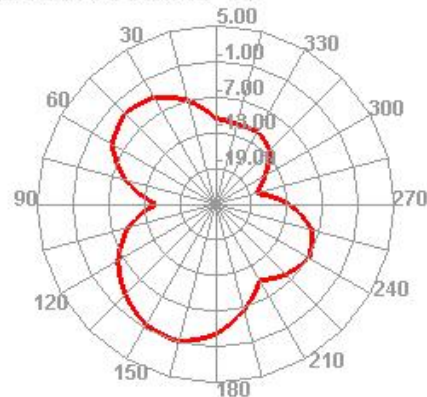
2400.000MHz E2



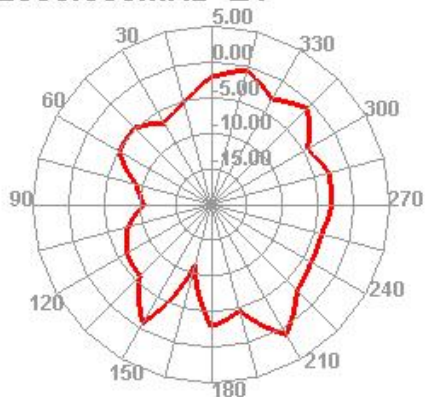
2500.000MHz



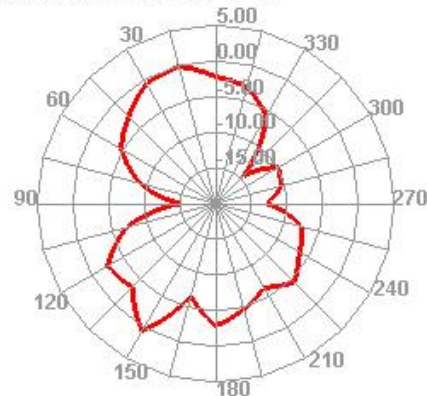
2500.000MHz H



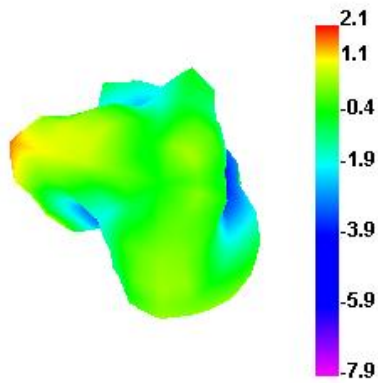
2500.000MHz E1



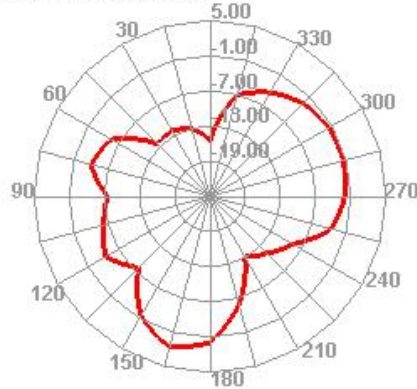
2500.000MHz E2



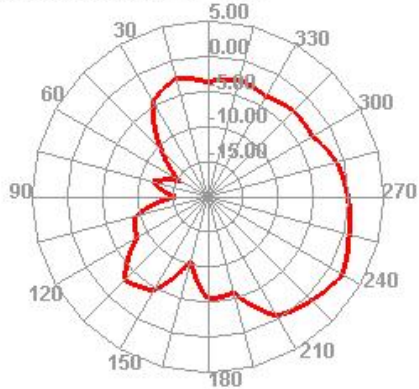
5150.000MHz



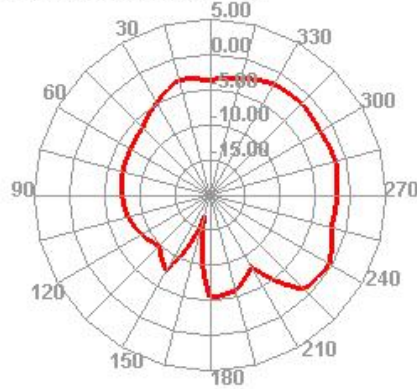
5150.000MHz H



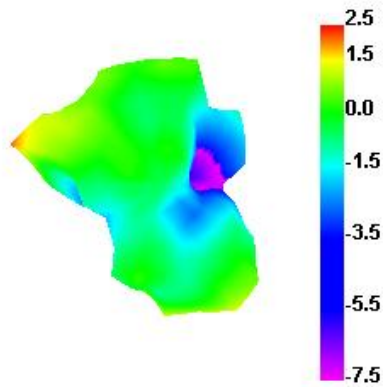
5150.000MHz E1



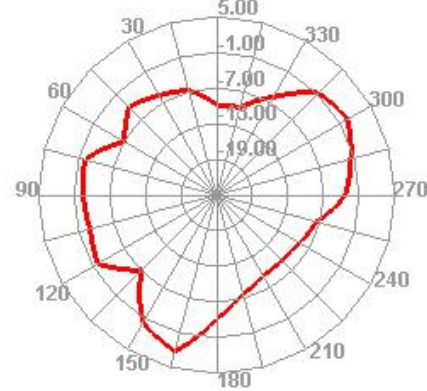
5150.000MHz E2



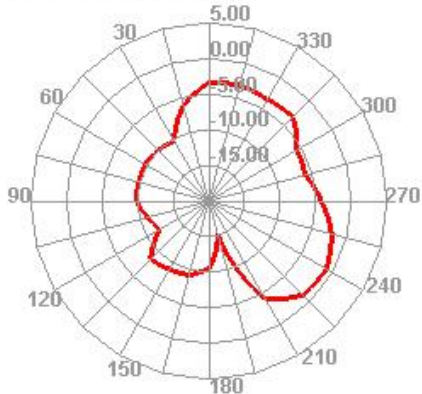
5850.000MHz



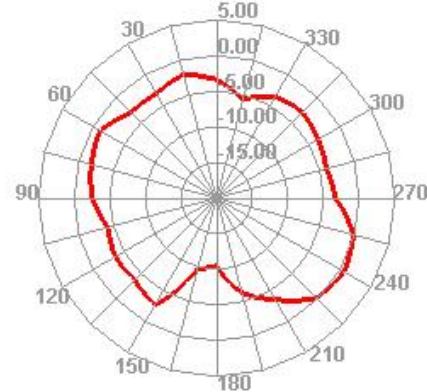
5850.000MHz H



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