深圳市昱晟通讯设备有限公司
Yusheng Communications-equipment Co.,LTD

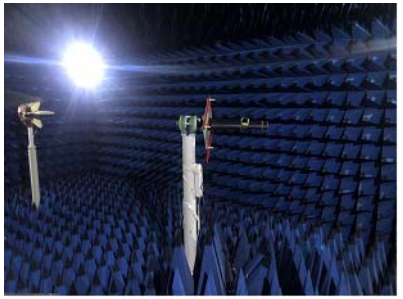
Complete Antenna specification of non-stop MAX project

Radio Frequency: He Lei

Date: 2022-11-25

Contact: 15767667652

Antenna model:MAX41WIFI
Antenna Manufacturer:Yusheng Communication-equipment Co.,LTD
Manufacturer address:407-411, Floor 4, Building 2, Nantaiyun Chuanggu Park, Southeast of the intersection of Guangming Avenue and Dongchang Road, Guangming District, Shenzhen



THOT 深圳市昱晟通讯设备有限公司
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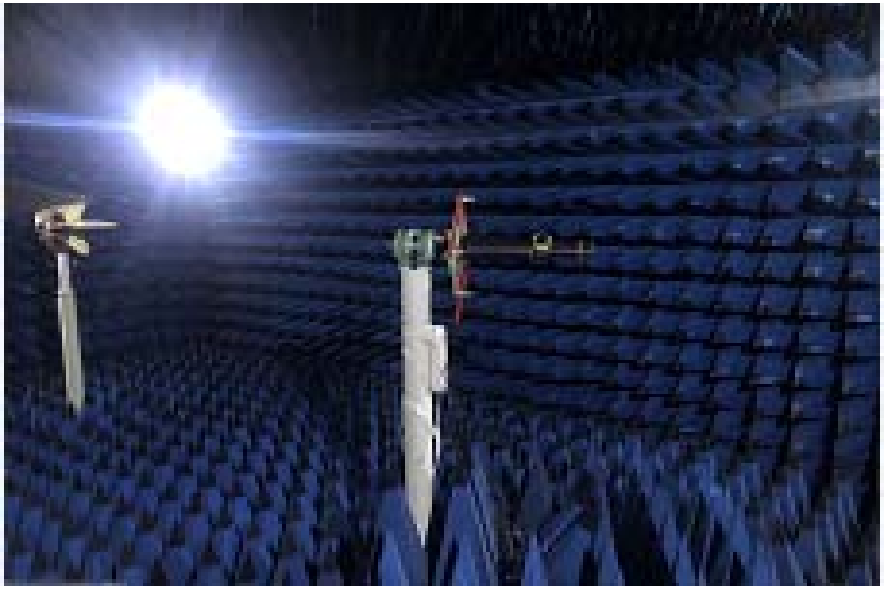
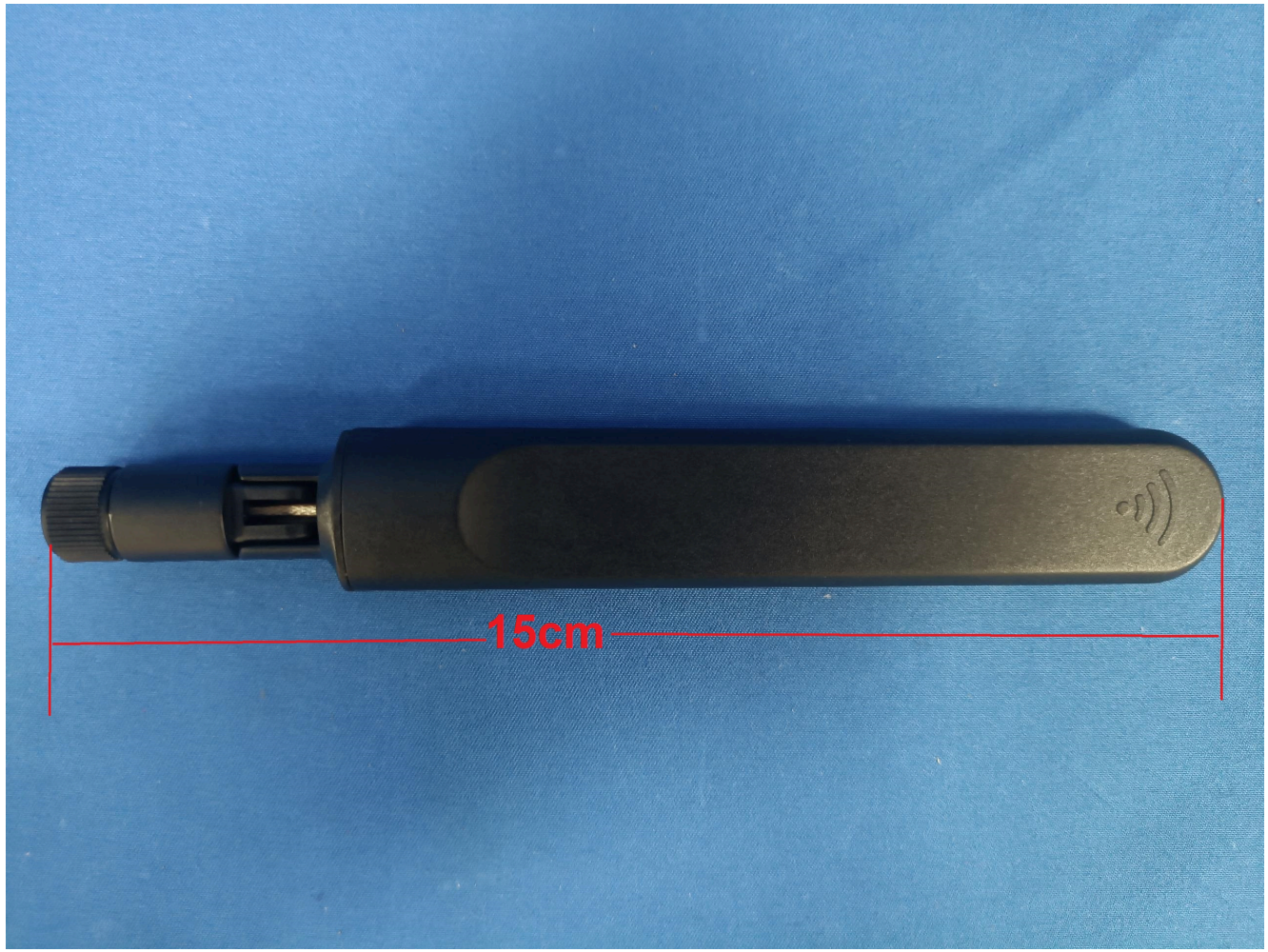
Project development environment

We are moving from the Internet era to the smart era, and the country is building a digital society and smart cities. In the next 5-10 years, both the consumer electronics market and the Internet of Things market have huge development potential. The field of wireless communication is very diversified. In the future, Yu Sheng will strive to provide customers with professional product solutions with market competitiveness by relying on the customer platform advantages of the main antenna industry and its own comprehensive strength.



Yusheng's products cover almost all antenna applications of wireless terminal equipment, including automobile antenna, high-precision surveying and mapping antenna, UAV ground and satellite data navigation, high-precision positioning antenna, wireless transmission of medical equipment, consumer antenna (mobile phone antenna, PAD antenna, laptop antenna), base station/indoor distribution antenna, etc. Smart wearable antenna (smart watch, TWS headset), security home antenna and a variety of wireless data transmission and wireless control of smart device antenna

Antenna design drawing



Introduction to project debugging

MVA	MAIN			
Frequency band and antenna material	main antenna	Band		IPS
		WIFI	2.4G-2.5G	Exteral
			5.1G-5.8G	
performance requirement	Execute according to customer requirements			

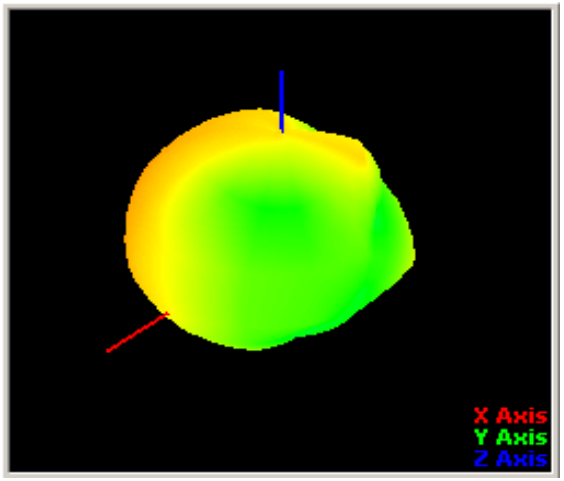
Report version outline

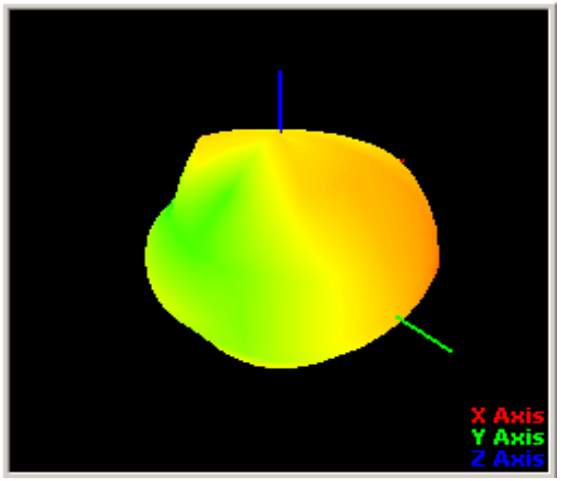
Report Version	report time	The antenna development to solve the problem
V1.0	2022-11-25	Complete test report of 2.4G/5.8GWIFI

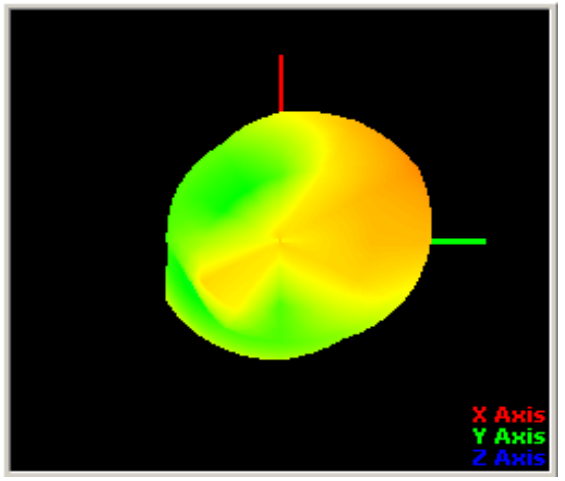
Antenna efficiency and gain

Passive Test For 2400MHz~2500MHz					Passive Test For 5150MHz~5850MHz				
Freq	Effi	Effi	Gain		Freq	Effi	Effi	Gain	
(MHz)	(%)	(dB)	(dBi)		(MHz)	(%)	(dB)	(dBi)	
2400	55.7	-2.54	2.14		5150	53.8	-2.69	2.67	
2410	57.6	-2.40	2.26		5200	54.7	-2.62	2.65	
2420	58.8	-2.31	2.28		5250	55.4	-2.56	2.86	
2430	59.5	-2.25	2.43		5300	56.1	-2.51	3.09	
2440	61.6	-2.10	2.39		5350	58.2	-2.35	3.38	
2450	63.8	-1.95	2.51		5400	60.3	-2.20	3.52	
2460	62.3	-2.06	2.44		5450	61.5	-2.11	3.66	
2470	61.4	-2.12	2.32		5500	61.9	-2.08	3.71	
2480	59.3	-2.27	2.35		5550	62.6	-2.03	4.14	
2490	57.7	-2.39	2.25		5600	60.9	-2.15	3.88	
2500	56.4	-2.49	2.18		5650	59.4	-2.26	3.56	
					5700	58.8	-2.31	3.42	
					5750	58.4	-2.34	3.07	
					5800	57.3	-2.42	2.77	
					5850	56.2	-2.50	2.64	

Radiation Pattern For Antenna（2450MHz

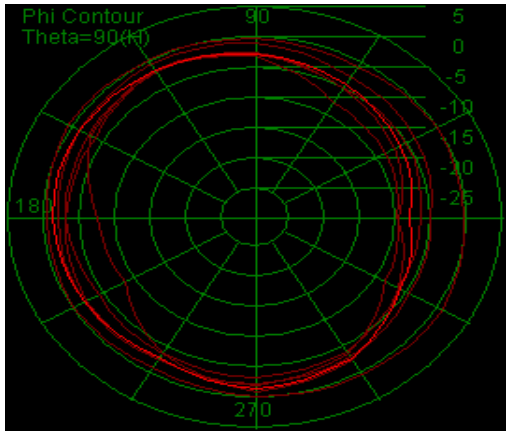




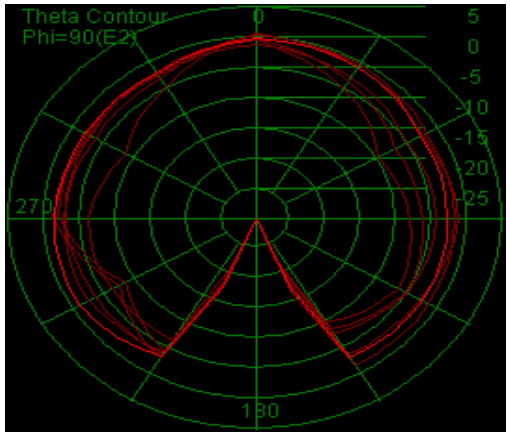


Antenna passive parameters -2.4G direction chart

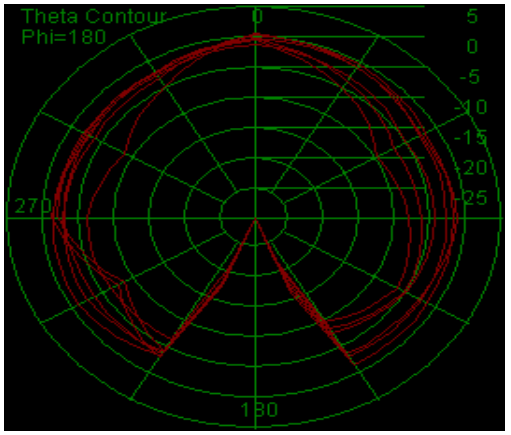
Thete=90（Phi=270° 为正前方）



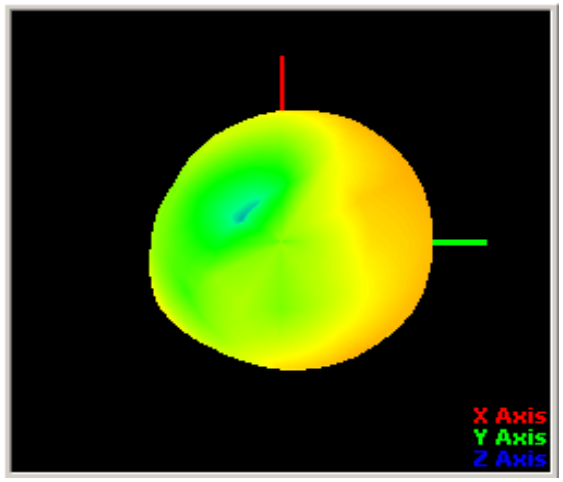
Phi=90°

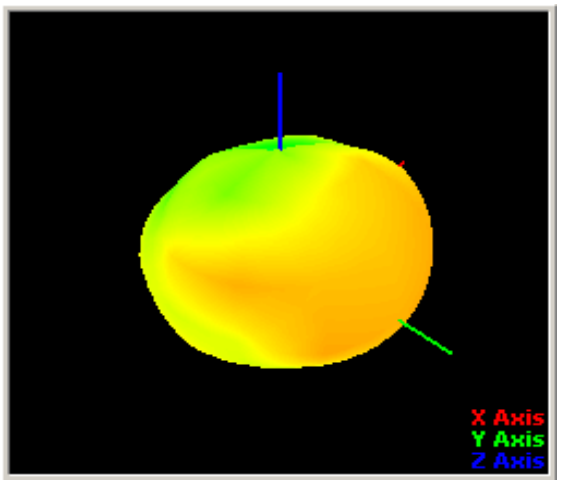


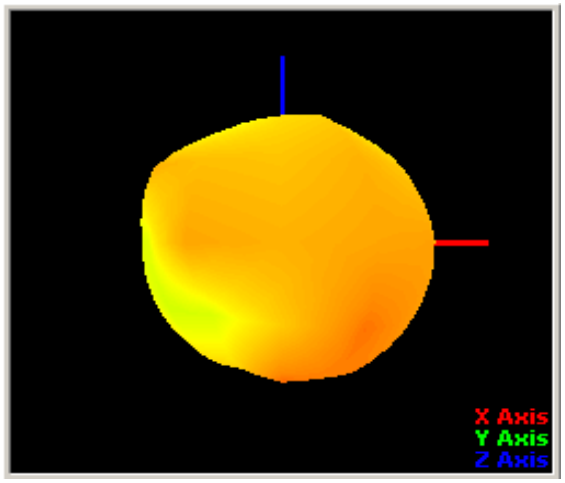
Phi=180°



Radiation Pattern For Antenna（5550MHz

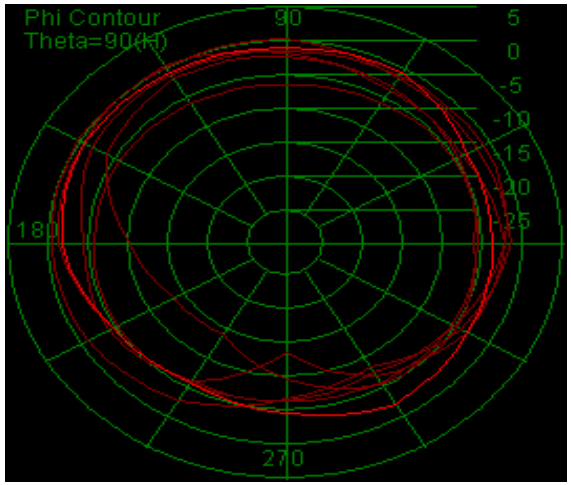




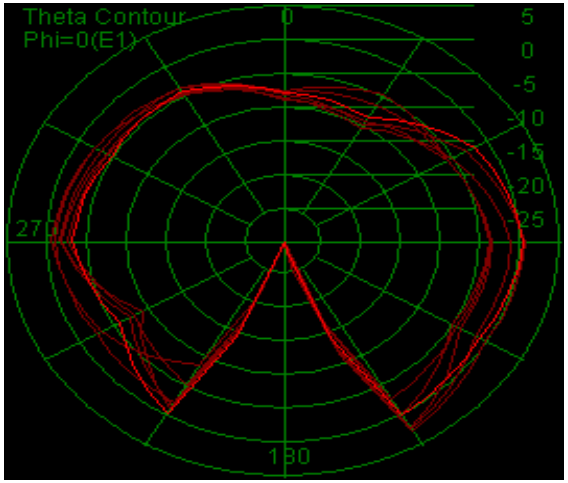


Antenna passive parameters -5G direction chart

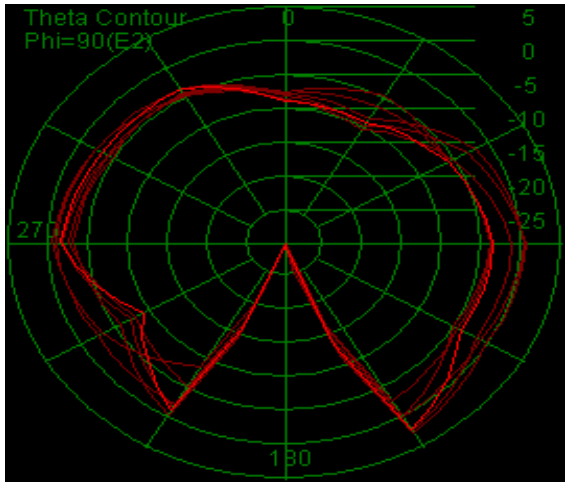
Thete=90（Phi=270° 为正前方）



Phi=90°



Phi=180°



OTA Test

Test	2.4WIFI-B（11M）			2.4WIFI-G（54M）		
Channel	1	6	11	1	6	11
TRP(dBm)	15.12	15.37	14.89	14.76	14.63	14.55
TIS(dBm)	-81.24	-80.78	-81.36	-70.22	-69.43	-69.18

Test	2.4WIFI-N（MCS7）			5GWIFI-A		
Channel	1	7	13	149	157	165
TRP(dBm)	11.14	11.56	11.28	10.24	10.17	10.64
TIS(dBm)	-64.45	-65.27	-65.36	-65.22	-64.67	-64.39

WIFI Conducted Test

Test	2.4WIFI-B (11M)			2.4WIFI-G (54M)		
Channel	1	6	11	1	6	11
TRP(dBm)	17.4	17.2	17.1	14.5	14.9	15.2
TIS(dBm)	-86	-86	-86	-73	-73	-73

Test	2.4WIFI-N (MCS7)			5GWIFI-A		
Channel	1	7	13	149	157	165
TRP(dBm)	13.5	13.2	13.4	12.4	12.8	13.1
TIS(dBm)	-70	-71	-70	-68	-68	-69

Thank you!

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