

Shanghai Sunnyway Communication Technology Limited Company

Temporary antenna specification

Customer: SUNMI		The project: SP06
Operating frequency band: GNSS&WiFi&BT		
Motherboard version:		
Shangyuan material specifications		
Specifications and models	Shangyuan material number	Customer part number

The record of project changes			
Date of preparation/change	Changes	Change of person	version

Sunnyway counter-signature bar				
Research and development	ME:	Auditor:	QE:	Approver:
	RF:	Auditor:		
Client Counter-signature bar				
EE	PM	RF	QE	

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Shanghai Shangyuan Communication Technology Co., Ltd. antenna recognition

1. Project information

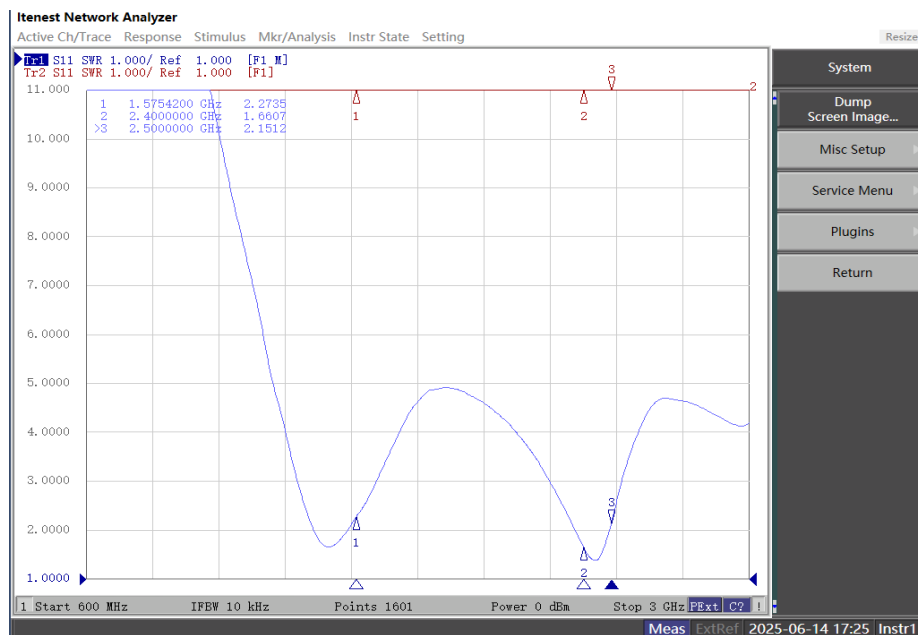
Machine information



Note: The customer finally verified that the antenna performance prototype was retained in our company for at least one year, which is convenient for analysis and solution to abnormal situations in antenna mass production.

S11 parameter

GPS+WiFi 2.4G antenna



	3 In 1 antenna
frequency (MHz)	VSWR
1575	2.27
2400	1.66
2500	2.15

5G WiFi antenna

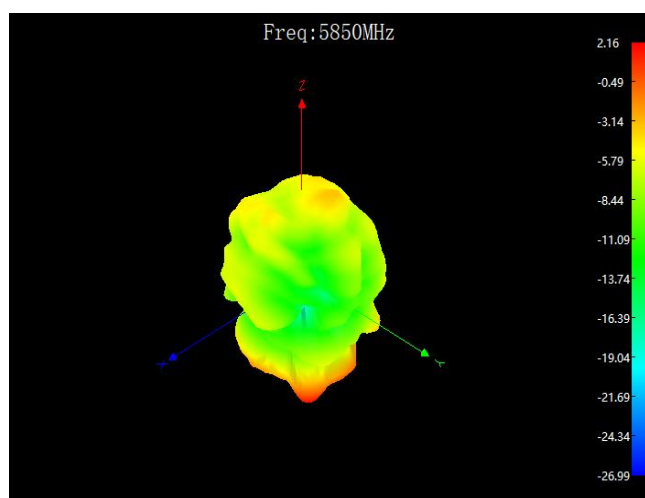
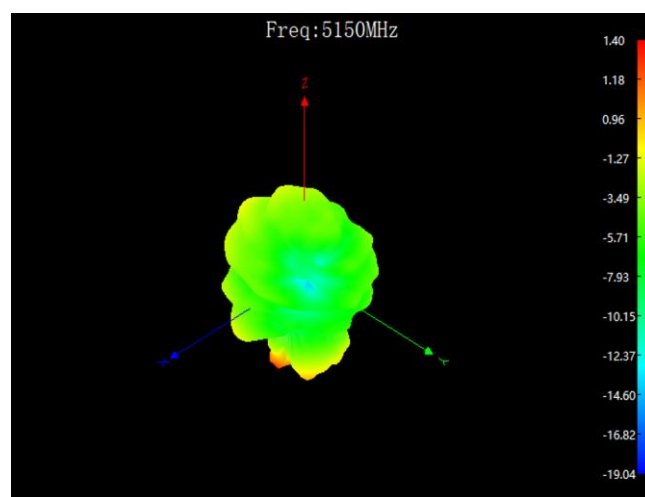
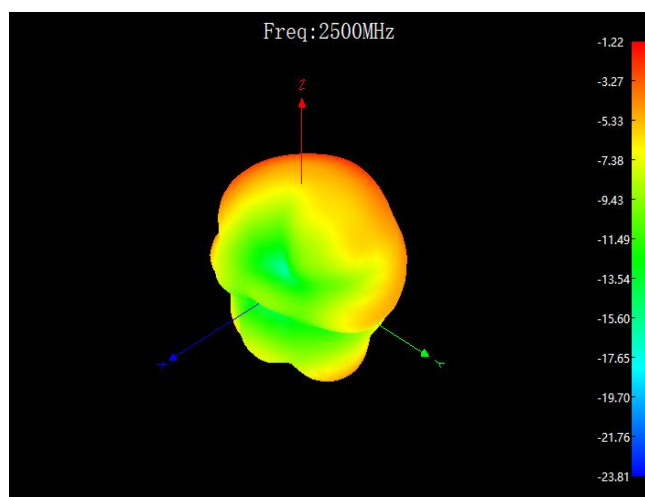
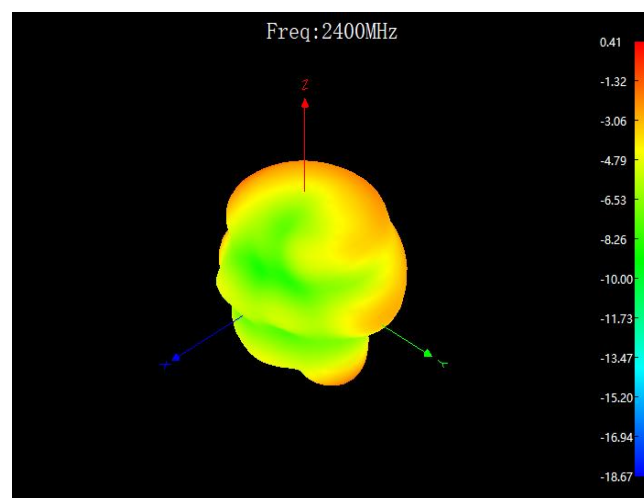
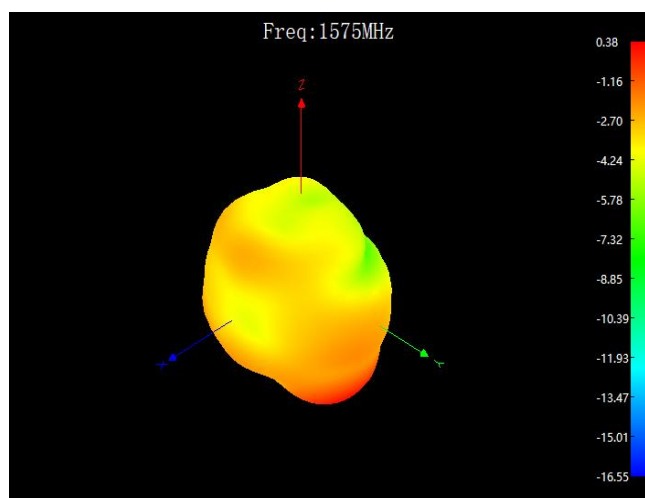


	Main antenna
frequency (MHz)	VSWR
5150	2.38
5850	1.87

3-in-1 antenna passive efficiency

frequency (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
1550	0.74	-5.10	30.93
1555	0.51	-5.22	30.04
1560	0.59	-5.23	29.98
1565	0.56	-5.30	29.49
1570	0.54	-5.34	29.24
1575	0.38	-5.37	29.06
1580	0.22	-5.44	28.55
1585	0.20	-5.65	27.21
1590	0.12	-5.77	26.50
1595	0.29	-5.79	26.39
1600	0.16	-5.91	25.65
1605	0.08	-6.04	24.88
1610	0.28	-6.07	24.73
2400	0.41	-5.42	28.71
2410	-0.21	-5.31	29.44
2420	-0.51	-5.32	29.38
2430	0.06	-5.18	30.34
2440	-1.22	-5.08	31.05
2450	-0.94	-5.09	30.97
2460	-0.11	-5.08	31.05
2470	-1.40	-5.18	30.34
2480	-1.43	-5.41	28.77
2490	-1.05	-5.48	28.31
2500	-1.22	-5.59	27.61
5150	1.40	-6.74	21.18
5200	1.76	-6.81	20.84
5250	2.09	-7.34	18.45
5300	1.58	-7.88	16.29
5350	1.79	-8.10	15.49
5400	1.99	-7.94	16.07
5450	1.76	-7.64	17.22
5500	1.24	-7.55	17.58
5550	0.98	-7.49	17.82
5600	0.84	-7.16	19.23
5650	0.58	-7.02	19.86
5700	0.92	-7.31	18.58
5750	1.39	-7.39	18.24
5800	1.37	-7.16	19.23
5850	2.16	-7.10	19.50

3-in-1 antenna pattern



3-in-1 Antenna Active test data(Free Space)

Standard	Band	Channel		frequency		test data(Free Space)2#Full version	
						Free Space	
		uplink	downlink	uplink	downlink	TRP	TIS
WiFi	802.11b (11Mbps)	1	1	2412	2412	12.89	
		6	6	2437	2337	12.96	
		11	11	2462	2462	13.11	-82.53
	802.11g (54Mbps)	1	1	2412	2412	14.58	
		6	6	2437	2337	14.11	
		11	11	2462	2462	14.6	-69.51
	802.11n (MCS7-65Mbps)	1	1	2412	2412	12.88	
		6	6	2437	2337	12.78	
		11	11	2462	2462	12.26	-64.41
	802.11a (54Mbps)	36	36	5180	5180	14.42	
		149	149	5745	5745	13.35	
		165	165	5825	5825	13.25	-71.03