

上海尚远通讯科技有限公司

Shanghai Shangyuan Communication Technology
Co., Ltd

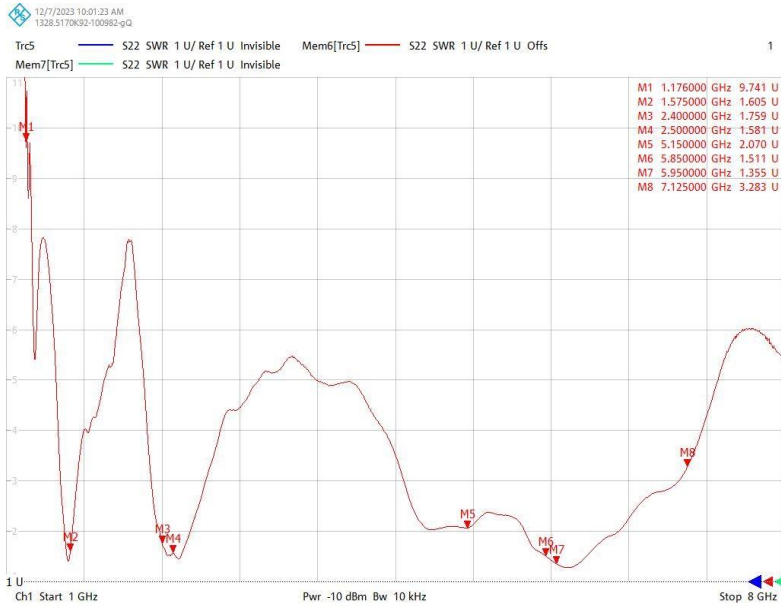
SUNNUWAY

Tel: + 86-021-60835368 (Shanghai); + 86-
0755-82504258 (Shenzhen) Shanghai R&D Center
Address: 1st Floor, Building 4, No. 99, Lane
215, Gaoguang Road, Qingpu District,

4. S11 test

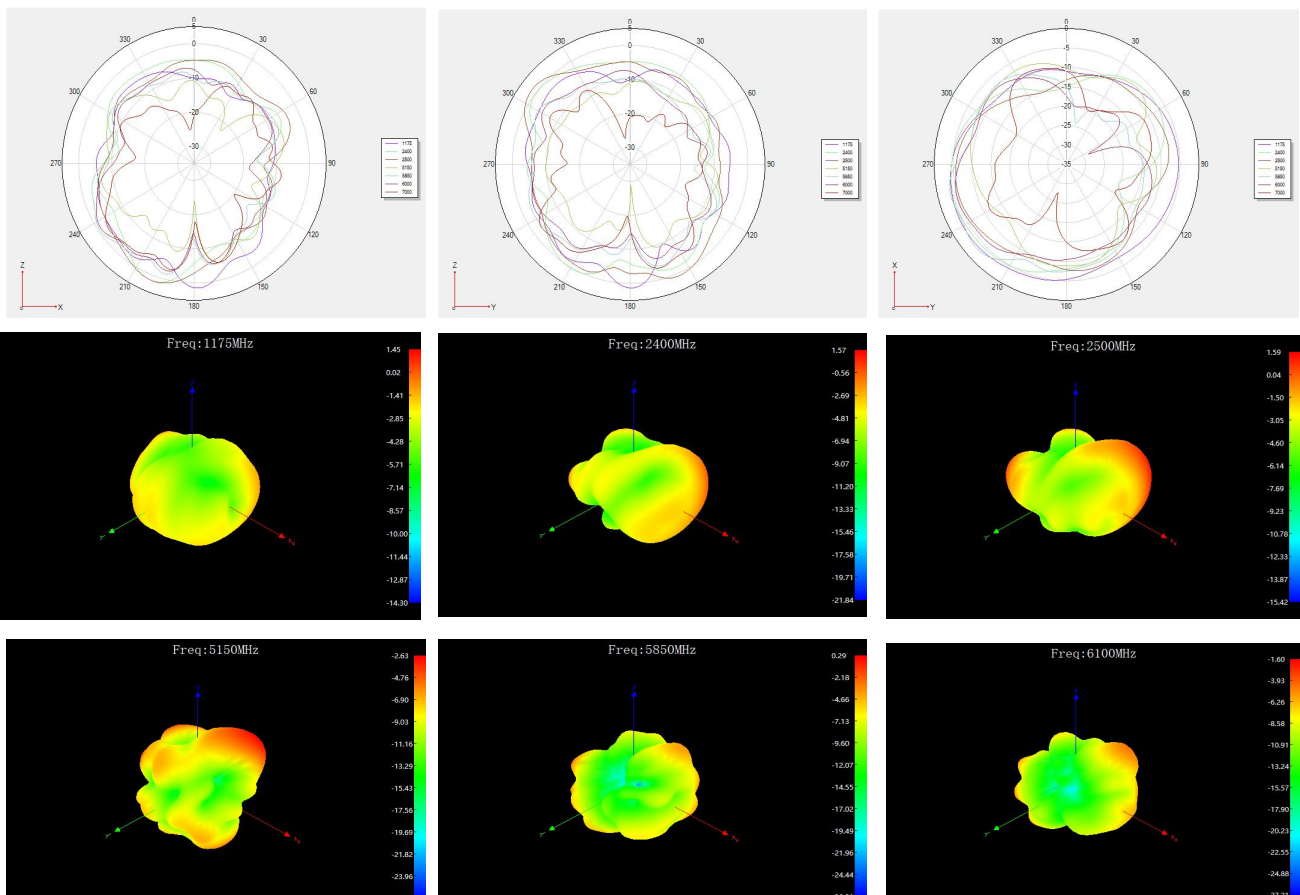
4.2 S11 parameter

ANT6



The antenna is FPC antenna.

ANTENNA PATTERN:



5 .darkroom test data

Test system: Shielded darkroom

Testing environment: temperature 22 °C± 3 °C, humidity 50% ± 15%

Testing equipment: When testing passive data, use the Agilent E5062C network analyzer to test active data, and use the Agilent

8960/CMW500/E4438C comprehensive testing instrument

5.1 Passive test data

ANT6 Passive efficiency

Freq. (MHz)	Effi (%)	Effi (dB)	MaxGain dBi	Freq. (MHz)	Effi (%)	Effi (dB)	MaxGain dBi
1150	13. 51	-8. 69	-0. 90	5150	22. 66	-6. 45	-2. 63
1155	14. 01	-8. 54	-1. 04	5200	22. 13	-6. 55	1. 32
1160	15. 31	-8. 15	-0. 77	5250	22. 11	-6. 55	0. 20
1165	15. 87	-7. 99	-0. 13	5300	24. 48	-6. 11	0. 48
1170	16. 26	-7. 89	0. 46	5350	25. 97	-5. 85	-0. 32
1175	17. 13	-7. 66	1. 45	5400	26. 68	-5. 74	-0. 04
1180	17. 37	-7. 60	1. 44	5450	25. 54	-5. 93	0. 59
1185	17. 18	-7. 65	1. 67	5500	24. 81	-6. 05	1. 16
1190	16. 68	-7. 78	1. 46	5550	24. 90	-6. 04	1. 76
1195	16. 49	-7. 83	1. 13	5600	24. 34	-6. 14	1. 11
1200	16. 11	-7. 93	1. 05	5650	24. 75	-6. 06	1. 57
				5700	24. 84	-6. 05	0. 73
2400	25. 52	-5. 93	1. 57	5750	23. 87	-6. 22	0. 82
2410	25. 92	-5. 86	0. 86	5800	25. 85	-5. 88	0. 69
2420	27. 54	-5. 60	0. 83	5850	24. 08	-6. 18	0. 29
2430	26. 58	-5. 75	0. 87	5900	26. 02	-5. 85	0. 10
2440	27. 03	-5. 68	0. 78	5950	29. 43	-5. 31	0. 22
2450	28. 31	-5. 48	0. 88	6000	28. 48	-5. 45	0. 33
2460	26. 86	-5. 71	0. 78	6050	28. 36	-5. 47	0. 59
2470	27. 72	-5. 57	0. 97	6100	29. 07	-5. 37	-1. 6
2480	27. 03	-5. 68	0. 99	6150	27. 77	-5. 56	-0. 15
2490	26. 97	-5. 69	1. 08	6200	28. 75	-5. 41	0. 14
2500	27. 54	-5. 60	1. 59	6250	27. 96	-5. 53	-0. 23
				6300	25. 25	-5. 98	-0. 47
				6350	25. 83	-5. 88	-0. 11

				6400	25.18	-5.99	-0.23
				6450	25.47	-5.94	0.73
				6500	24.78	-6.06	0.48
				6550	25.72	-5.90	0.68
				6600	25.27	-5.97	0.62
				6650	26.45	-5.78	0.46
				6700	26.28	-5.80	0.61
				6750	25.45	-5.94	0.16
				6800	25.83	-5.88	0.42
				6850	24.57	-6.10	0.51
				6900	23.48	-6.29	0.64
				6950	22.92	-6.40	0.52
				7000	23.21	-6.34	-0.20
				7050	23.40	-6.31	-0.28
				7100	23.69	-6.25	-0.49
				7150	23.72	-6.25	-0.55

5.2 Active Test Data

Antenna active test data (free space)

GSM			
Band	Channel	OTA	
		TRP	TIS
GSM-850	L	29.12	
	M	29.37	
	H	28.91	-102.3
GSM-900	L	28.79	
	M	28.23	
	H	27.41	-102.25
GSM-1800	L	26.91	
	M	26.77	
	H	26.92	-104.41
GSM-1900	L	26.88	
	M	27.16	
	H	26.22	-105.18
WCDMA B1	L	19.37	
	M	18.79	
	H	18.33	-111.85
WCDMA B2	L	18.46	
	M	18.7	
	H	18.33	-110.72
WCDMA B5	L	19.27	
	M	19.78	
	H	19.31	-110.37
WCDMA B8	L	19.59	
	M	18.43	
	H	17.51	-109.82

LTE			
Band	Channel	OTA	
		TRP	TIS
FDD_B1 (10M)	L	19.12	
	M	18.7	
	H	18.35	-94.47
FDD_B2 (10M)	L	19.67	
	M	19.96	
	H	19.76	-97.37
FDD_B3 (10M)	L	19.03	
	M	18.66	
	H	18.54	-97.9
FDD_B4 (10M)	L	19.01	
	M	18.71	
	H	18.45	-95.36
FDD_B5 (10M)	L	18.93	
	M	18.87	
	H	18.88	-96.52
FDD_B7 (10M)	L	17.27	
	M	17.39	
	H	17.99	-92.6
FDD_B8 (10M)	L	18.25	
	M	18.42	
	H	17.5	-94.26
FDD_B12 (10M)	L	18.36	
	M	18.53	
	H	18.17	-94.5
FDD_B13 (10M)	M	18.11	-94.39
FDD_B20 (10M)	L	18.71	
	M	18.24	
	H	18.5	-96.99
FDD_B26	L	18.81	

NR			
Band	Channel	OTA	
		TRP	TIS
N1 (10M)	L	19.64	
	M	18.86	
	H	18.97	-93.65
N2 (10M)	L	19.26	
	M	19.2	
	H	18.58	-92.03
N3 (10M)	L	18.49	
	M	18.63	
	H	19.14	-92.49
N5 (10M)	L	18.58	
	M	18.47	
	H	18.36	-90.26
N20 (10M)	L	18.03	
	M	18.26	
	H	18.39	-90.38
N28 (10M)	L	17.53	
	M	17.69	
	H	17.57	-92.42
N41 (100M)	L	19.13	
	M	19.26	
	H	19.65	-87.19
N48 (10M)	L	18.03	
	M	17.53	
	H	18.12	-91.76
N71 (10M)	L	16.36	
	M	16.18	
	H	16.56	-90.05
N77 (100M)	L	19.36	
	M	19.69	

(10M)	M	18.04	
	H	18.36	-98.24
FDD_B28 (10M)	L	18.36	
	M	18.19	
	H	19.18	-97.01
FDD_B48 (10M)	L	18.69	
	M	18.27	
	H	18.69	-93.14
TDD_B38 (20MHz)	L	17.18	
	M	17.64	
	H	17.99	-90.21
TDD_B39 (20MHz)	L	20.51	
	M	19.85	
	H	19.76	-93.93
TDD_B40 (20MHz)	L	18.21	
	M	17.43	
	H	18.05	-90.72
TDD_B41 (20MHz)	L	17.32	
	M	17.65	
	H	17.77	-90.95

	H	19.48	-87.67
N78 (100 M)	L	19.45	
	M	20.11	
	H	19.36	-87.49
N79 (100 M)	L	19.28	
	M	19.44	
	H	20.12	-87.56

WiFi			
Band	Channel	OTA	
		TRP	TIS
WiFi-B	L	13.27	
	M	14.41	
	H	13.56	-82.71
WiFi-A	L	16.56	
	M	16.44	
	H	16.68	-73.45

8. Engineering drawings

