

Introduction to applied laboratory testing equipment

The company introduced the highest configuration of comprehensive tester CMW500
Test 2G,3G,4G,WIFI,BT,NB-IOT



Antenna testing equipment



GTS 3Dlaboratory:

It belongs to the near field testing lab

ETS 3Dlaboratory:

It belongs to the far-field test

Network Analyzer 5071C/A338/8753E (Test passive)

**Comprehensive tester CWM500 (active test)
8852 (conduction test)**

**1 generation 2 generation head ear test
model**

GTS 3Dlaboratory





02

cellphone condition

Environmental treatment

Please refer to [Appendix antenna specifications - Photos](#)

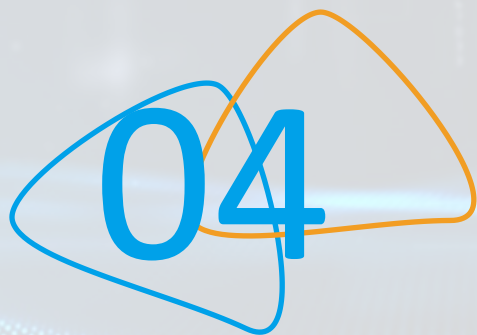


Antenna matching circuit

Matching Circuit

一. 天线匹配/开关逻辑

主天线匹配											
主天线匹配				分集天线匹配				WiFi天线匹配			
高频天线匹配				低频天线匹配				2.4G WIFI匹配			
L0125	NC	C0116	0 Ω	L0101	NC			L1201	1pF	C1207	0 Ω
C0129	0 Ω	C0125	0 Ω	C0101	0 Ω			L1202	1.8nH	C1203	0 Ω
L0114	NC			L0113	15nH			L1203	6.8nH		
开关逻辑及匹配				开关逻辑及匹配							
RF4	C0132	3.6nH	B71	RF4	C1702	NC	B71				
RF1	C0133	6.2pF	B5	RF1	C1703	6.8pF	B5				
RF3	C0134	9.1pF	B13	RF3	C1704	0 Ω	B13				
RF2	C0146	1.2nH	B12/B17	RF2	C1705	1.2nH	B12/B17				



Antenna numerical

BT/WIFI S11

Please refer to Appendix antenna specifications - Photos

WIFI-2.4G			
Freq (Mhz)	Effi (dB)	Effi (%)	Gain (dBi)
2400	-3.69	42.78	0.24
2410	-3.4	45.67	0.47
2420	-3.28	47.03	0.54
2430	-2.95	50.72	0.88
2440	-3.05	49.58	0.83
2450	-3.5	44.64	0.56
2460	-3.76	42.04	0.49
2470	-3.62	43.42	0.67
2480	-3.81	41.62	0.44
2490	-3.82	41.45	0.44
2500	-4.05	39.4	0.58

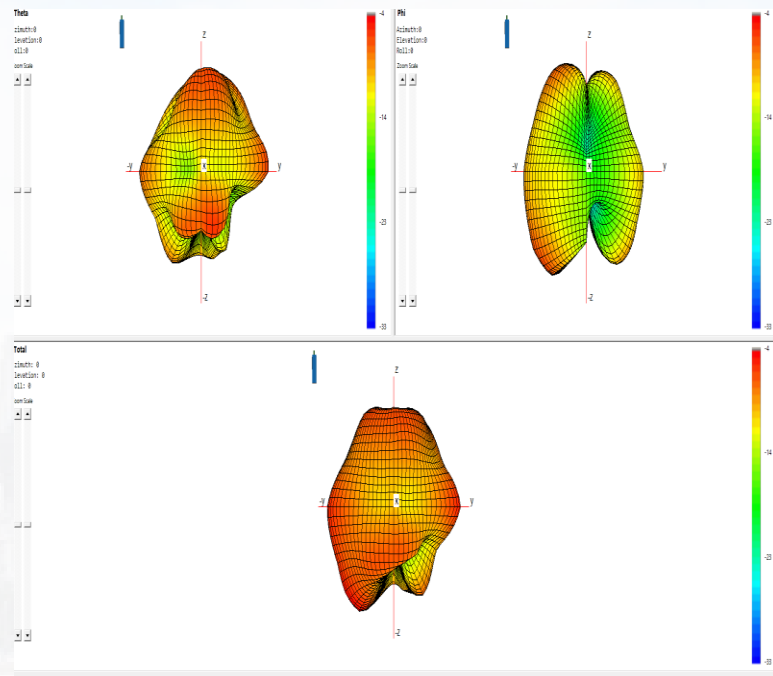
WIFI-5.8G							
Freq (Mhz)	Effi (dB)	Effi (%)	Gain (dBi)				
5000	-5.63	27.38	0.74	5500	-4.37	36.57	0.12
5020	-5.49	28.25	0.81	5520	-4.39	36.38	0.03
5040	-5.38	28.99	0.77	5540	-4.05	39.39	0.32
5060	-5.1	30.87	0.98	5560	-3.97	40.11	0.39
5080	-4.89	32.41	1.07	5580	-3.94	40.32	0.45
5100	-4.74	33.54	1.11	5600	-3.62	43.48	0.75
5120	-4.53	35.22	1.19	5620	-3.73	42.38	0.68
5140	-4.43	36.07	1.2	5640	-3.78	41.84	0.54
5160	-4.49	35.53	0.97	5660	-3.54	44.25	0.74
5180	-4.37	36.53	0.98	5680	-3.93	40.45	0.31
5200	-4.23	37.73	0.95	5700	-3.75	42.16	0.46
5220	-4.15	38.44	0.92	5720	-3.97	40.06	0.34
5240	-4.02	39.65	0.98	5740	-4.05	39.32	0.38
5260	-4.23	37.75	0.6	5760	-3.72	42.47	0.82
5280	-4.16	38.4	0.68	5780	-4.16	38.39	0.62
5300	-4.29	37.26	0.5	5800	-3.87	41.01	1.01
5320	-4.47	35.72	0.34	5820	-3.73	42.35	1.34
5340	-4.61	34.56	0.23	5840	-3.78	41.84	1.42
5360	-4.59	34.73	0.41	5860	-3.68	42.83	1.62
5380	-4.36	36.67	0.74	5880	-4.02	39.65	1.29
5400	-4.22	37.84	0.94	5900	-3.96	40.21	1.41
5420	-4.17	38.25	0.91	5920	-4.28	37.36	1
5440	-4.27	37.43	0.76	5940	-4.52	35.32	0.67
5460	-4.37	36.58	0.54	5960	-4.55	35.09	0.6
5480	-4.39	36.39	0.24	5980	-4.62	34.55	0.43
				6000	-4.87	32.59	0.1



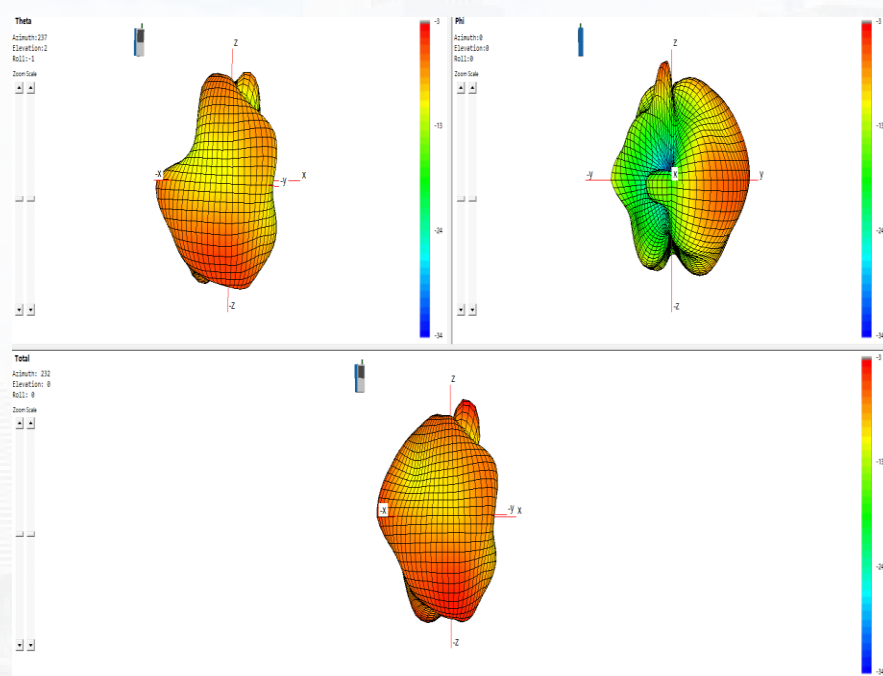
BT/WIFI Antenna Pattern



BT/2.4G WIFI



5G WIFI



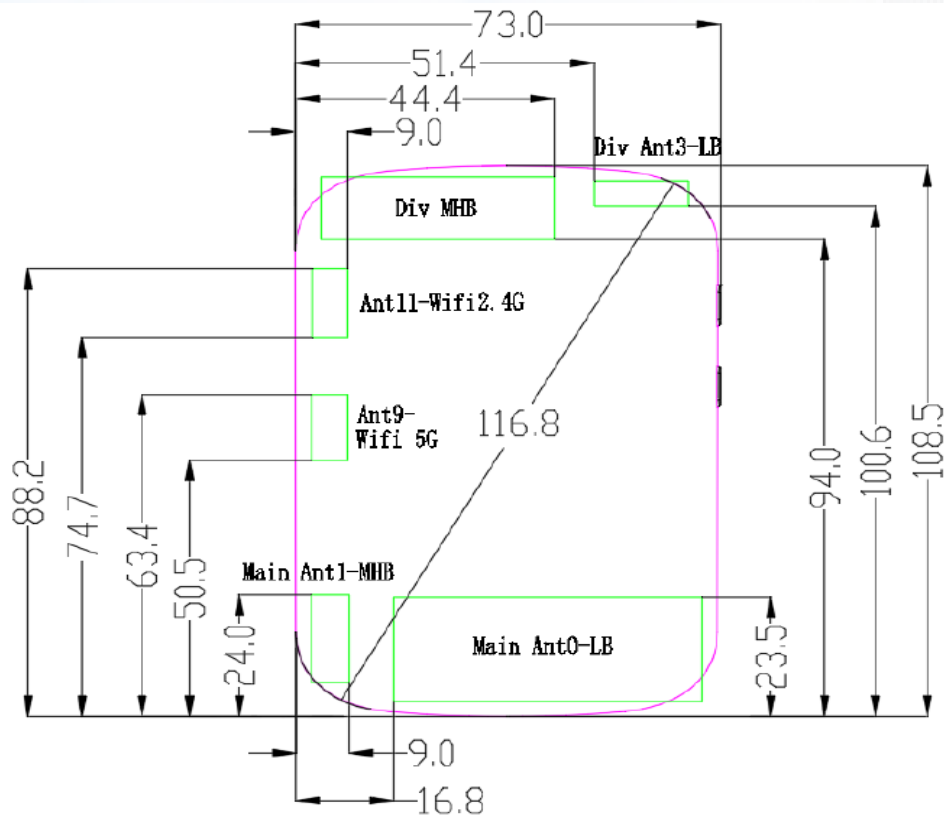
2.4G	Data Rate	Channel	TRP	TIS
11B	1M	1	14.67	
		6	15.4	
		11	15.06	
	11M	1		-83.15
		6		-84.22
		11		-83.35
11G	6M	1	12.79	
		6	13.32	
		11	13.08	
	11M	1		-82.86
		6		-83.86
		11		-83.92
11N	MCS0	1	12.53	-85.26
		6	13.04	-85.85
		11	12.72	-85.57
	MCS7	1	11.69	-66.57
		6	12.12	-67.94
		11	11.42	-67.19
5G	Data Rate	Channel	TRP	TIS
11A	6M	40	12.02	-91.6
		56	12.5	-91.5
		157	12.21	-88.09
11N	MCS0	40	11.97	-87.69
		56	12.09	-88.15
		157	11.97	-85.76



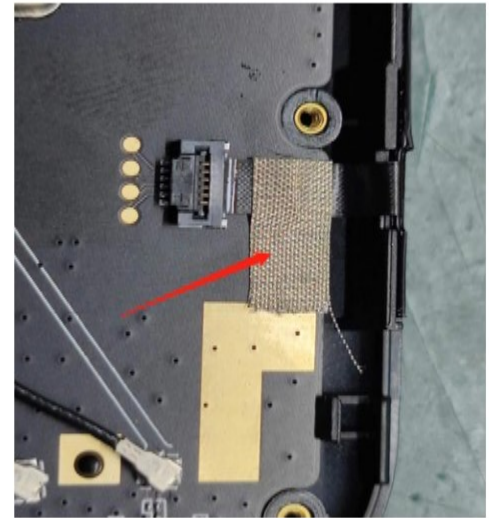
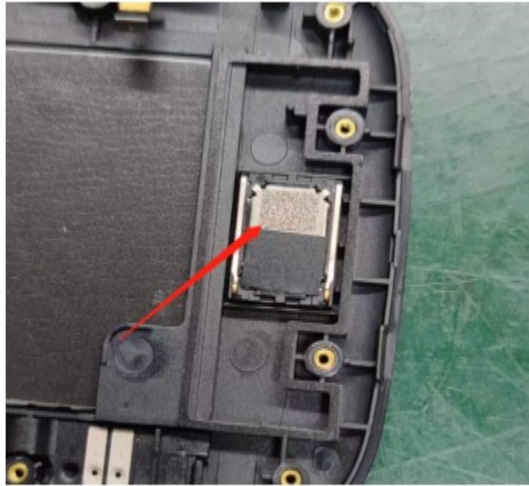
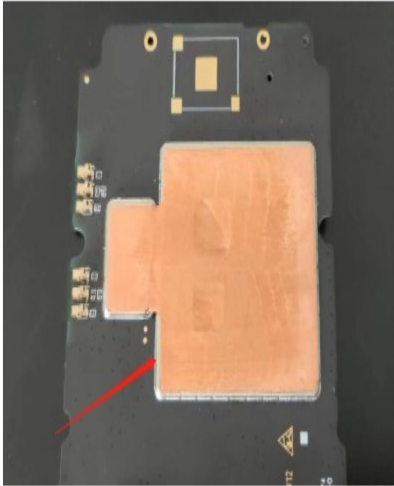
Antenna structural drawings



天线图档



Environmental treatment



BT/WIFI S11

