

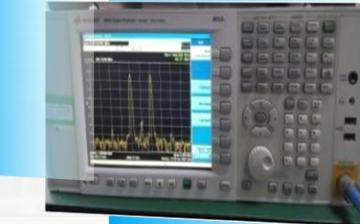
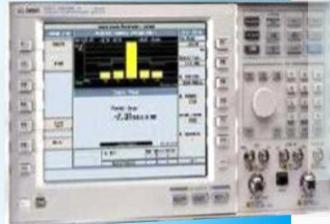
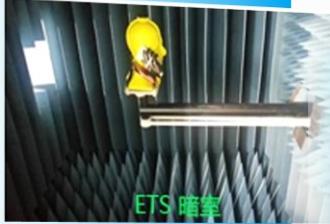


TECHNICAL SERVICE



## Introduction to applied laboratory testing equipment

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



## 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**



TECHNICAL SERVICE



## GTS 3Dlaboratory





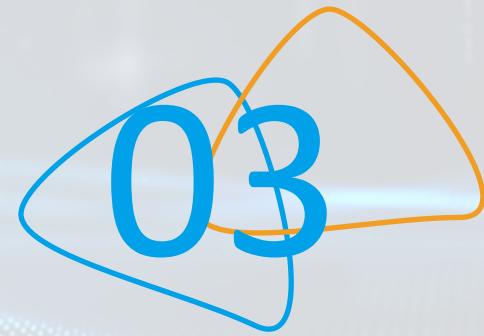
02

cellphone condition



## Environmental treatment

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

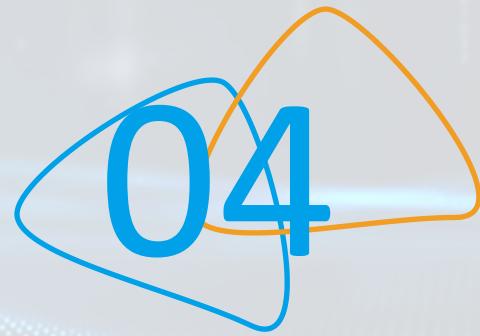


Antenna matching circuit

# Matching Circuit

## 一. 天线匹配/开关逻辑

主天线匹配				分集天线匹配				WiFi天线匹配			
高频天线匹配		低频天线匹配		高频天线匹配		低频天线匹配		2.4G WIFI匹配		低频天线匹配	
L0125	NC	C0116	0Ω	L0101	NC			L1705	NC	C1708	0Ω
C0129	0Ω	C0125	0Ω	C0101	0Ω			C1709	0Ω	C1707	0Ω
L0114	NC			L0113	15nH			L1706	NC		
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
								RF3	C0134	9.1pF	B13
								RF2	C0146	1.2nH	B12/B17
开关逻辑及匹配				开关逻辑及匹配				RF3	C1704	0Ω	B13
								RF2	C1705	1.2nH	B12/B17
								L1708	NC		
								L1709	0Ω		
								C1710	0Ω		
开关逻辑及匹配				开关逻辑及匹配				L1706	NC		
								L1707	NC		
								L1708	NC		
								L1709	0Ω		
								C1710	0Ω		
开关逻辑及匹配				开关逻辑及匹配				L1707	NC		
								L1708	NC		
								L1709	0Ω		
								C1710	0Ω		
								L1707	NC		
开关逻辑及匹配				开关逻辑及匹配				L1201	1pF	C1207	0Ω
								L1202	1.8nH	C1203	0Ω
								L1203	6.8nH		
								L1209	NC	C1217	0Ω
								L1210	0Ω	C1211	0Ω
开关逻辑及匹配				开关逻辑及匹配				L1201	1pF	C1207	0Ω
								L1202	1.8nH	C1203	0Ω
								L1203	6.8nH		
								L1211	NC		
								L1209	NC	C1217	0Ω



Antenna numerical



## BT/WIFI S11



Please refer to Appendix antenna specifications - Photos



# BT/WIFI Efficiency



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

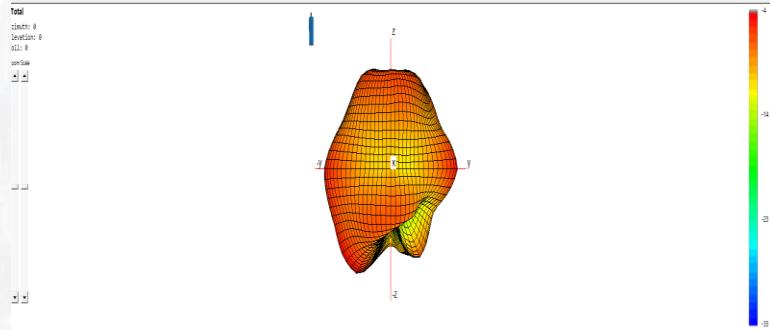
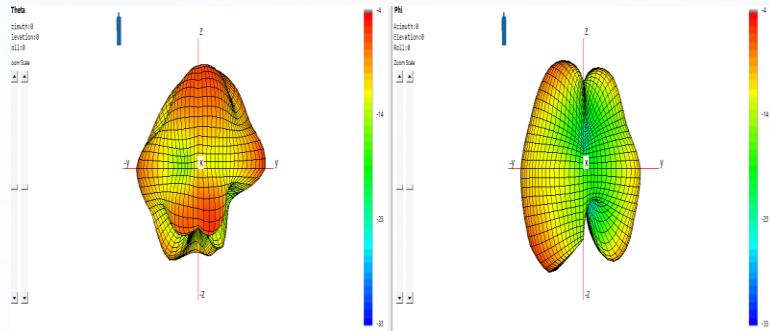
WIFI-5.8G							
Freq (Mhz)	Effi (dB)	Effi (%)	Gain (dBi)	5500	-4.37	36.57	0.12
5000	-5.63	27.38	0.74	5520	-4.39	36.38	0.03
5020	-5.49	28.25	0.81	5540	-4.05	39.39	0.32
5040	-5.38	28.99	0.77	5560	-3.97	40.11	0.39
5060	-5.1	30.87	0.98	5580	-3.94	40.32	0.45
5080	-4.89	32.41	1.07	5600	-3.62	43.48	0.75
5100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



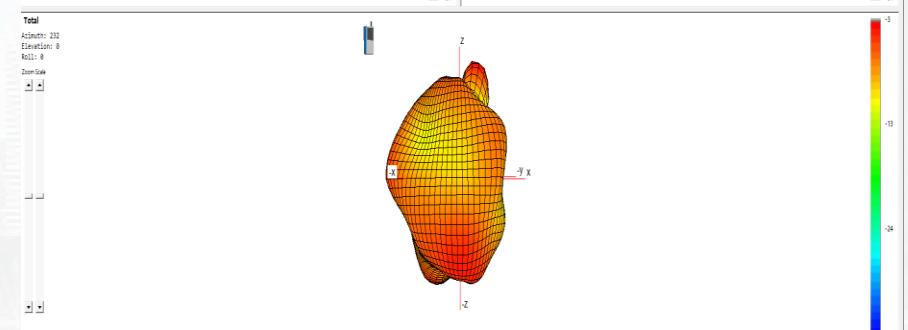
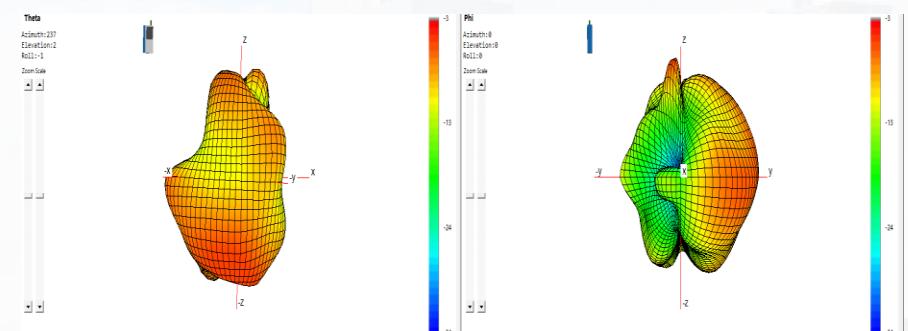
# BT/WIFI Antenna Pattern



## BT/2.4G WIFI



## 5G WIFI





## Antenna active data

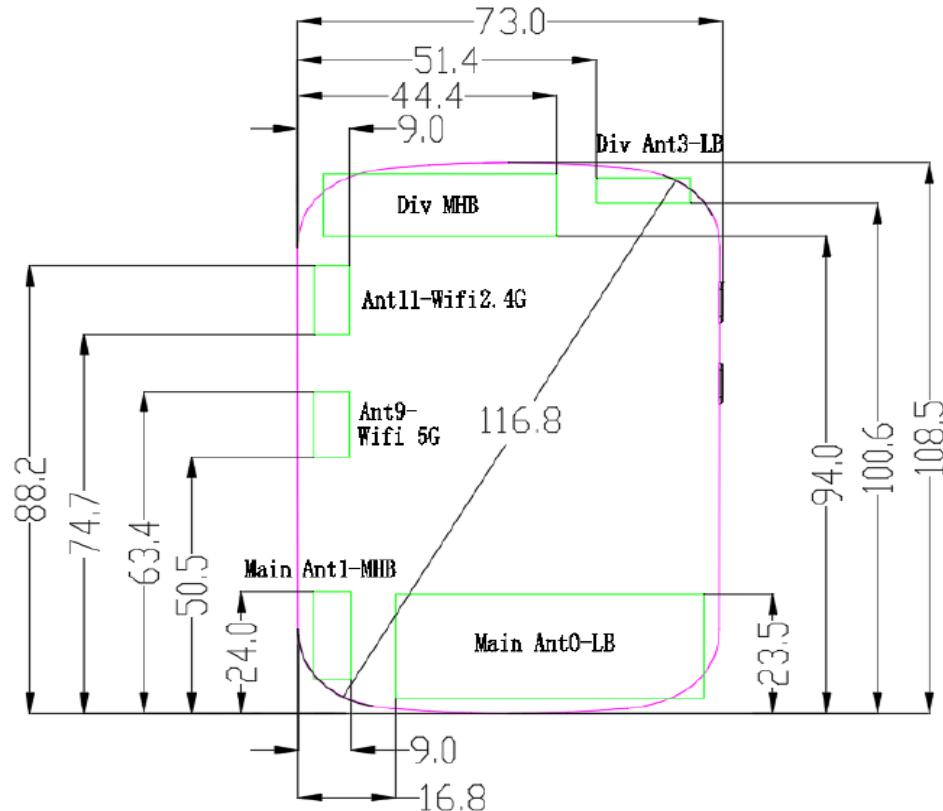


2. 4G	Data Rate	Channel	TRP	TIS
11B	1M	1	14. 67	
		6	15. 4	
		11	15. 06	
	11M	1		-83. 15
		6		-84. 22
		11		-83. 35
11G	6M	1	12. 79	
		6	13. 32	
		11	13. 08	
	11M	1		-82. 86
		6		-83. 86
		11		-83. 92
11N	MCS0	1	12. 53	-85. 26
		6	13. 04	-85. 85
		11	12. 72	-85. 57
	MCS7	1	11. 69	-66. 57
		6	12. 12	-67. 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
	MCS0	40	11. 97	-87. 69
11N	MCS0	56	12. 09	-88. 15
		157	11. 97	-85. 76

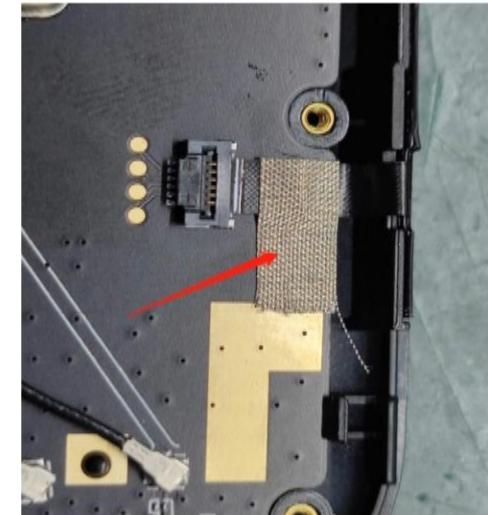
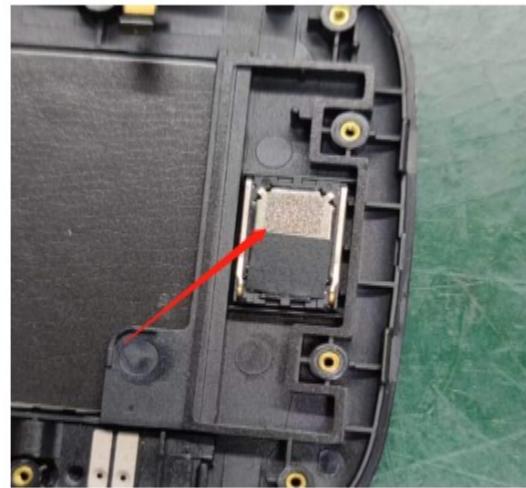
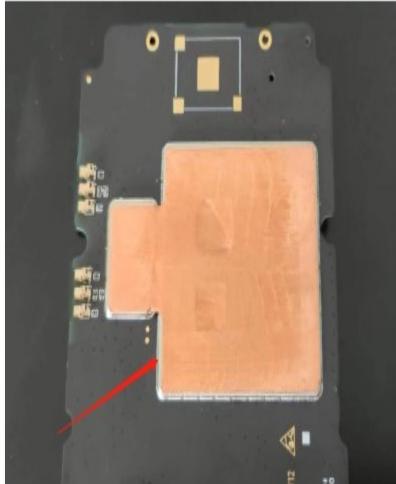
05

Antenna structural drawings

# 天线图档



## Environmental treatment



## BT/WIFI S11

