

Haitong Communication Electronics Co., Ltd

Customer: TCL Communication Ltd.

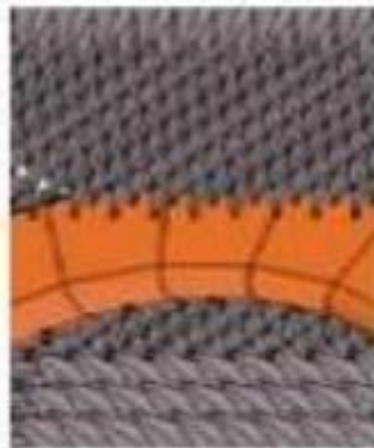
Project name: T517J

Product name: Vinca- 4in1 Antenna

Material: FPC

Date: 2025.03.17

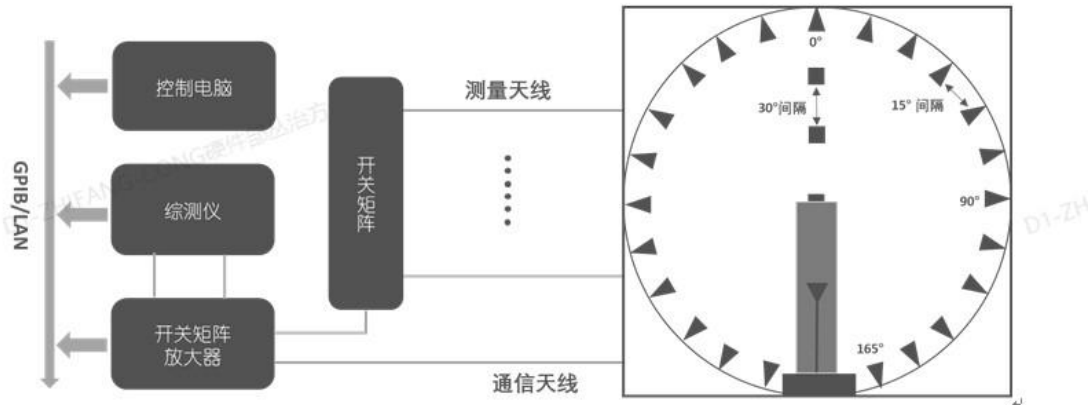
1: chamber room introduction and testing scope



Our company has a number of OTA test darkrooms, ranging from 400MHz to 8.5ghz, which can provide passive test and active test (including OTA overall 2G,3G,4G,5GFR test, WiFi multi-mode test, GPS active test, Bluetooth active test, which can provide antenna gain and efficiency. 2D orientation and apple chart analysis and upper and lower hemisphere efficiency values, mutual disturbance correlation coefficient test items

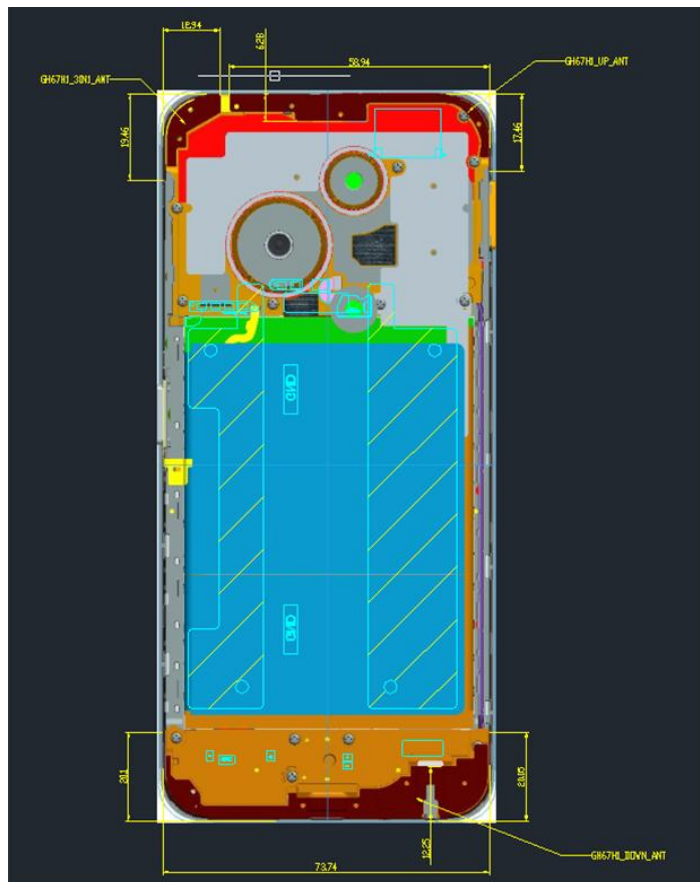
WIFI a/b/g/n

2: test system introduction:



The figure above shows the connection and control process between the darkroom of our company and the testing system and computer. The testing system has the characteristics of accurate, fast and simple testing. The operation interface is simple and humanized.

3: Test result

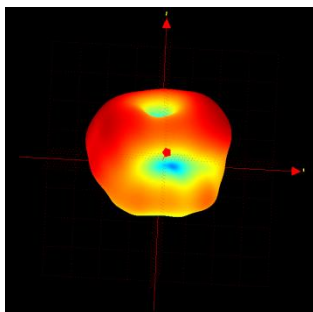


Antenna placement:

GPS ANT			
Frequency	Efficiency	Efficiency(Db)	Gain(dBi)
1550	26%	-5.78	-1.31
1555	27%	-5.74	-1.31
1560	27%	-5.68	-1.21
1565	28%	-5.58	-1.08
1570	29%	-5.45	-0.51
1575	29%	-5.35	-0.5
1580	29%	-5.36	-0.52
1585	30%	-5.27	0.17
1590	30%	-5.27	0.11
1595	30%	-5.26	0.12
1600	31%	-5.04	0.24

3D Pattern

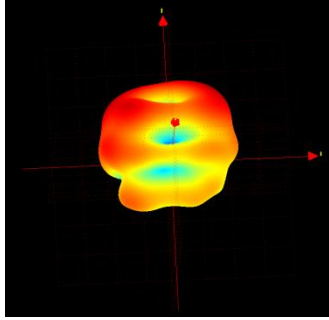
3IN1 ANT_ 1575Mhz (Frequency=1575MHz)



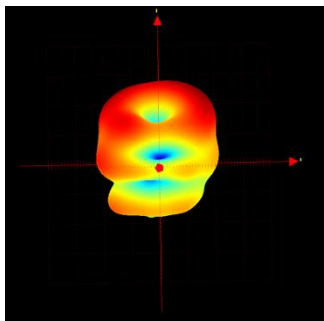
2.4GWIFI ANT			
Frequency	Efficiency	Efficiency(Db)	Gain(dBi)
2400	28%	-5.56	-1.34
2410	29%	-5.44	-1.39
2420	29%	-5.30	-0.50
2430	31%	-5.12	-0.30
2440	30%	-5.37	-0.82
2450	30%	-5.20	-0.69
2460	30%	-5.26	-0.61
2470	29%	-5.32	-0.49
2480	29%	-5.44	-0.62
2490	27%	-5.66	-0.75
2500	27%	-5.69	-0.74

3D Pattern

3IN1 ANT_2400Mhz(Frequency=2400MHz)



3IN1 ANT_2483Mhz(Frequency=2483MHz)

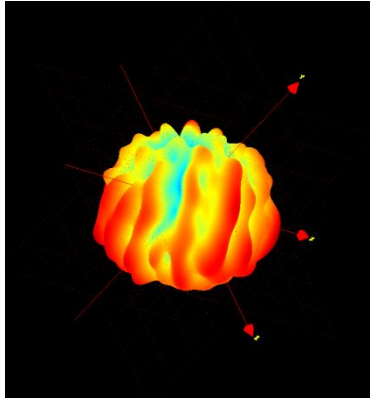


5G WiFi ANT			
Frequency	Efficiency	Efficiency(dB)	Gain(dBi)
5150	27%	-5.77	-1.19
5200	27%	-5.81	-1.22
5250	28%	-5.62	-1.2
5300	28%	-5.64	-0.91

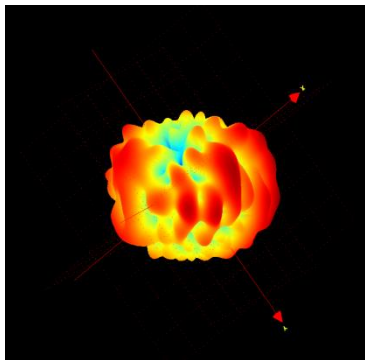
5350	29%	-5.36	-0.8
5400	28%	-5.48	-0.93
5450	28%	-5.54	-1.05
5500	27%	-5.71	-1.21
5550	26%	-5.79	-1.25
5600	26%	-5.83	-1.22
5650	25%	-6.03	-1.33
5700	24%	-5.71	-1.21
5750	23%	-5.79	-1.25
5800	23%	-5.83	-1.22
5850	22%	-6.03	-1.33

3D Pattern

5G WiFi ANT_5GMhz(Frequency=5150MHz)



5G WiFi ANT_5GMhz(Frequency=5825MHz)



NFC Antenna type:LOOP

FPC coil Ferrite sheet with dimension 34.18mm*31.45mm*0.25mm