

Shenzhen 3good Wireless Technology Co., Ltd  
Room 501-508, Jinfulai Building, Dabao Road, Baoan District, Shenzhen

# Specification

客户 Customer		规格型号 Specs	X63B3
三好料号 Part Number		频 段 Frequency Band	BT&2.5G WIFI:2400~2483.5MHZ 5G WIFI:5100~5800MHZ GSM850/900/1800/1900 WCDMA 2/4/5 LTE B2/4/5/12/13/25/26/41/66/71
颜色 Color	black	版 本 Edition	
销售 Salesperson		设 计 Design	官炳坤
结构 Structure	李富伦	确 认 Confirm	周武
日期 Date		签字日期 Signing Date	
客户确认 Customer confirmation:			
Join hands to create the future			

/

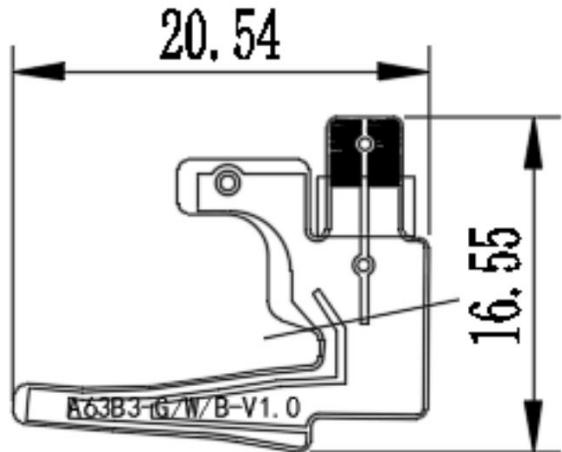
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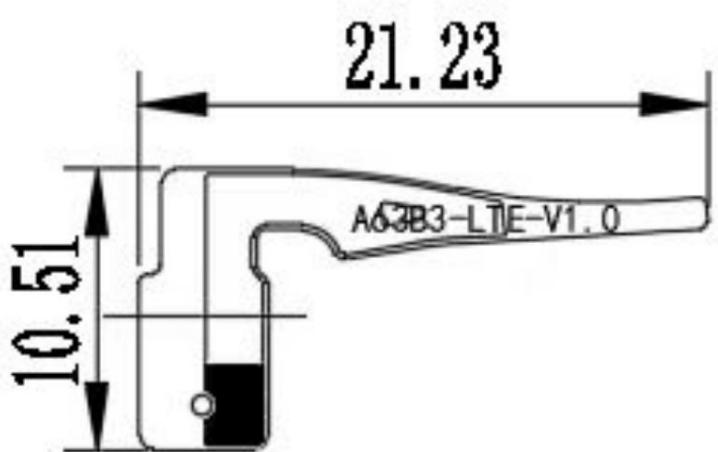
## 一、Product specifications

The report mainly provides parameter tests of X63B3 antenna performance. X63B3 antenna is 4G antenna. (As shown in the figure below)

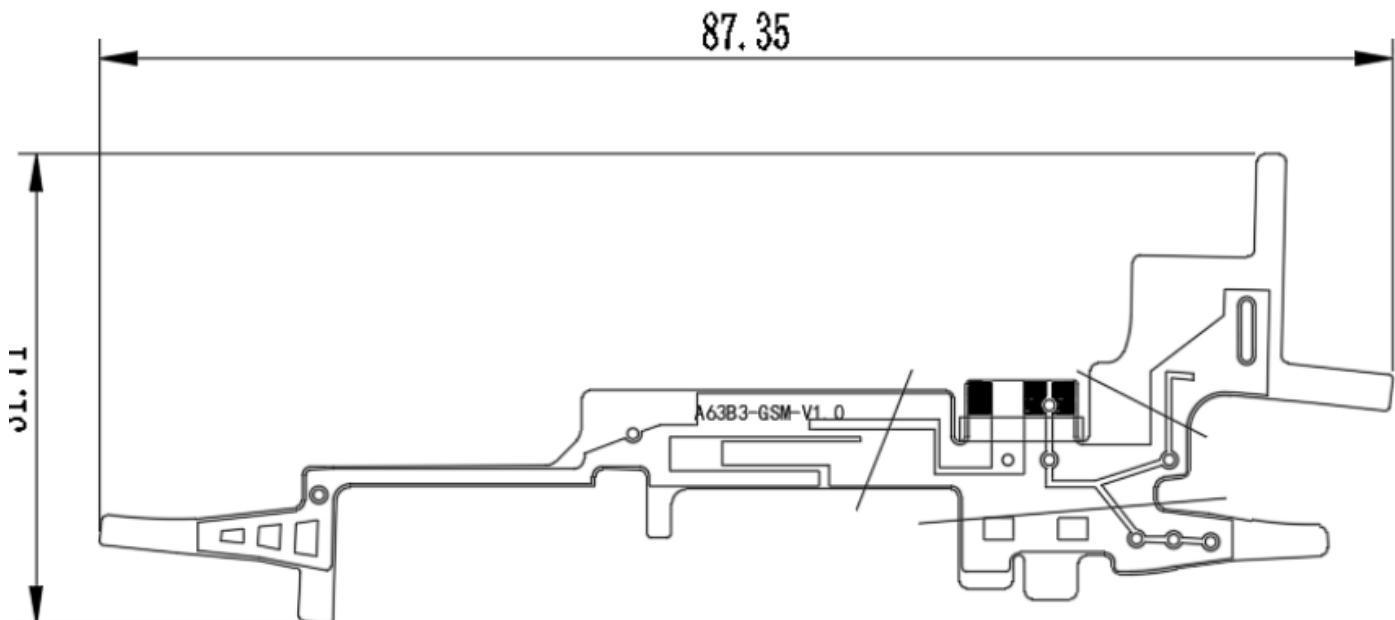
Three in one antenna



Diversity antenna



Main set antenna



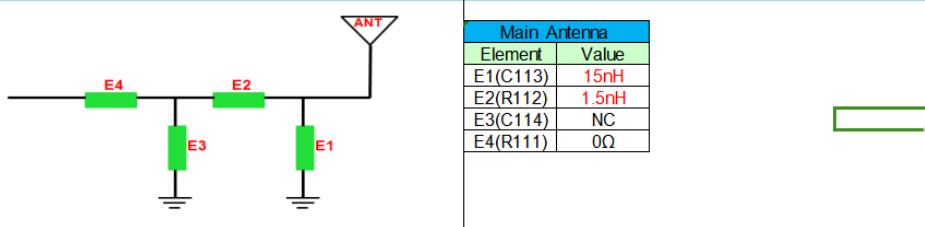
## 二、Electrical performance

### 1.Specifications

The operating frequency band of X63B3 antenna is 699~960MHZ and 1710~2700MHZ, in which resonance occurs.

## 2. Matching circuit of antenna

Matching circuits (匹配电路)



主天线开关逻辑  
 RF1(R1612): 0Ω,  
 频段是: GSM900/PCS1900+W2/4+LTE B2/4/7/25/41/66  
 RF2(R1613): 4.7nH,  
 频段是: GSM850/DCS1800+W5+LTE B5/26  
 RF3(R1616): 18nH  
 频段是: LTE B12/B13  
 RF4(R1614): 33nH,  
 频段是: LTE B71



Structure of antenna: FPC

## 三、Test of parameters

### 1. Test settings

The connection of VSWR test device is:

E5071B network analyzer → 50Ω Ohmic coaxial Cable → 110mm Long copper tube → Test fixture

Treatment of test fixture:

Use a hard cable to lead out the SMA-J connector from the 50 ohm test point of the antenna on the mobile phone PCB, connect it to the copper tube with a choke, and then connect other devices in turn.

## Passive parameters of main antenna:

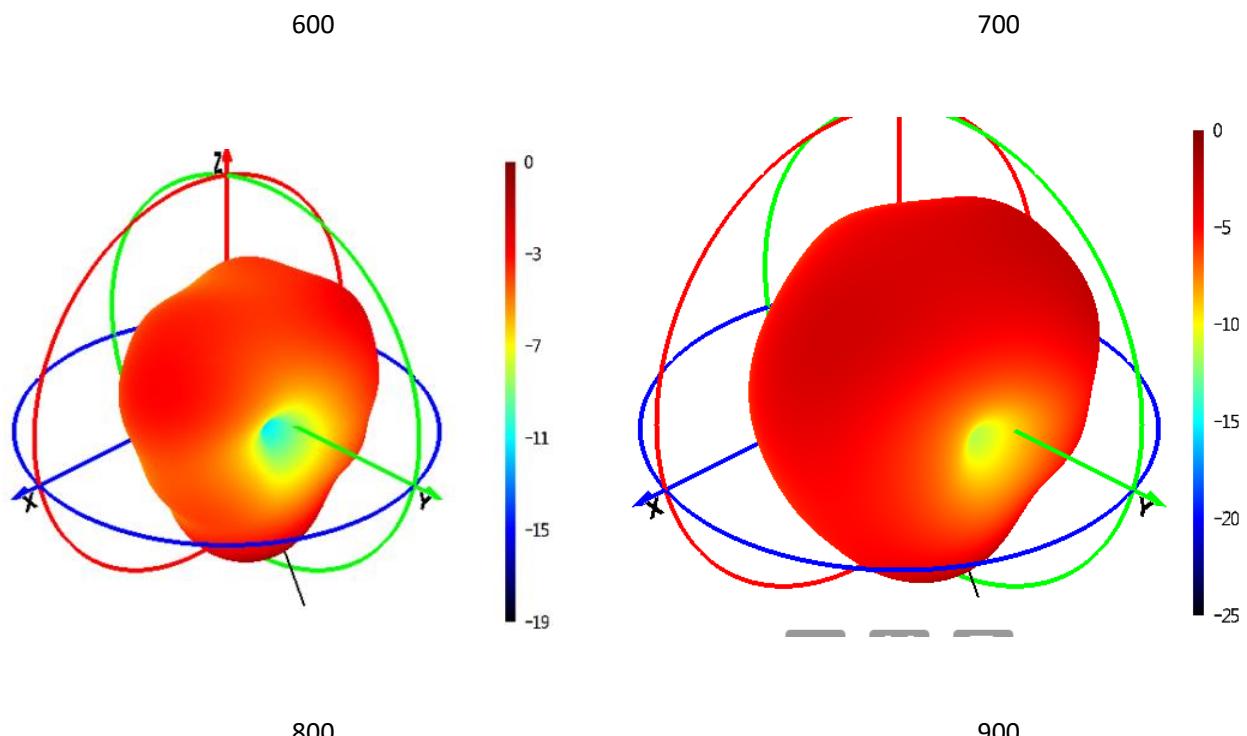
工作频段(Working frequency band): 699~960MHZ, 1710~2700MHZ

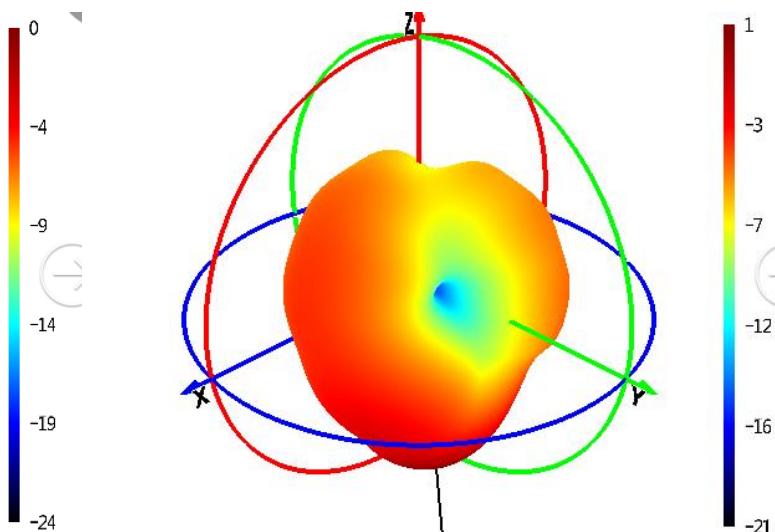
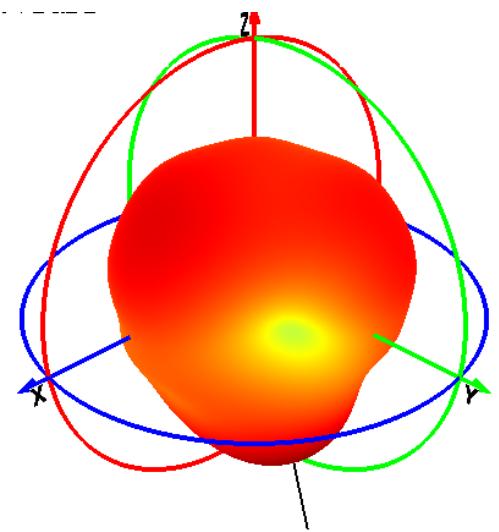
GSM850/900/1800/1900

WCDMA1/2/4/5

LTE B2/4/5/12/17/41/66/71

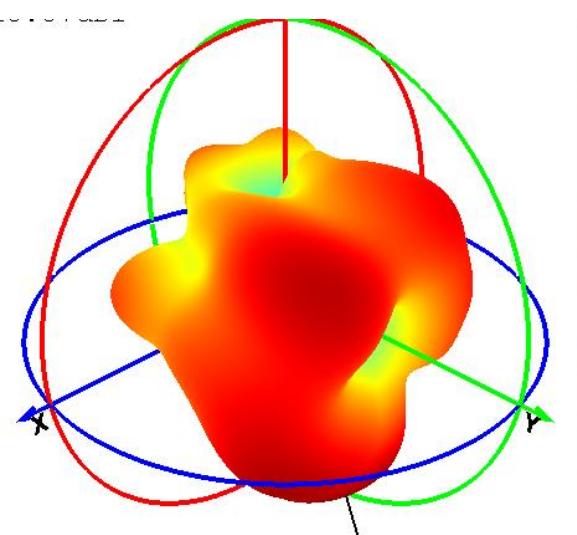
Gain			
频段 Band	gain 增益 (dBi)	频段 Band	gain 增益(dB)
GSM850,WCDMA-B5,LTE-B5	-3.08	PCS1900,WCDMA-B2,LTE-B1/B2	1.46
GSM900	-0.17	LTE-B41	-0.45
DCS1800,WCDMA-B4,LTE-B4	0.99	LTE-B66	1.24
LTE-B71	-3.46	LTE-B12/17	-2.23



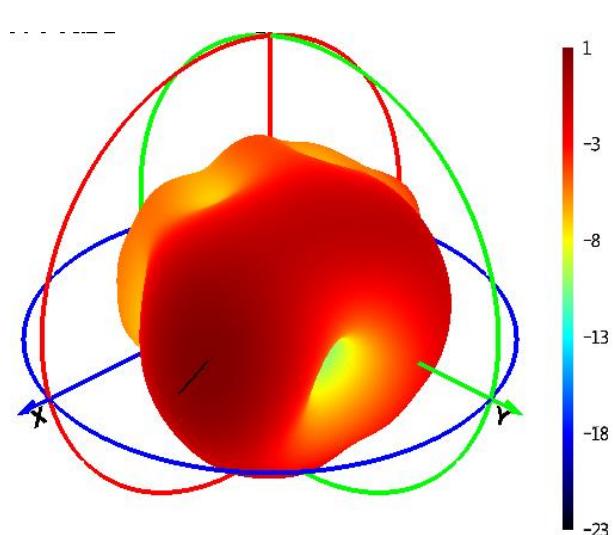


1700

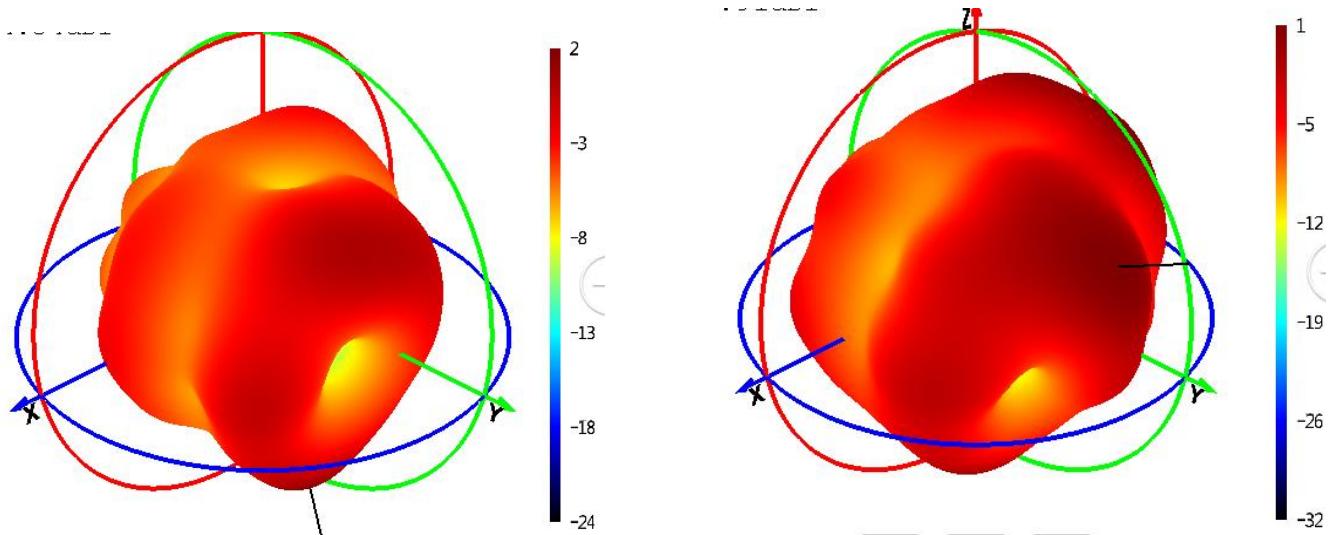
1900



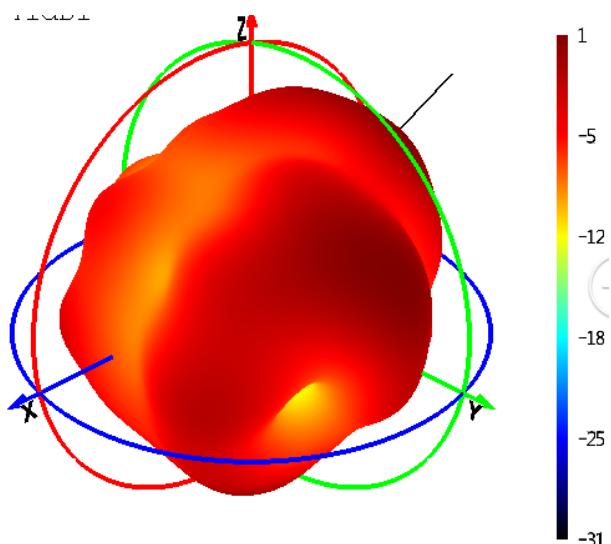
2300



2400



2700

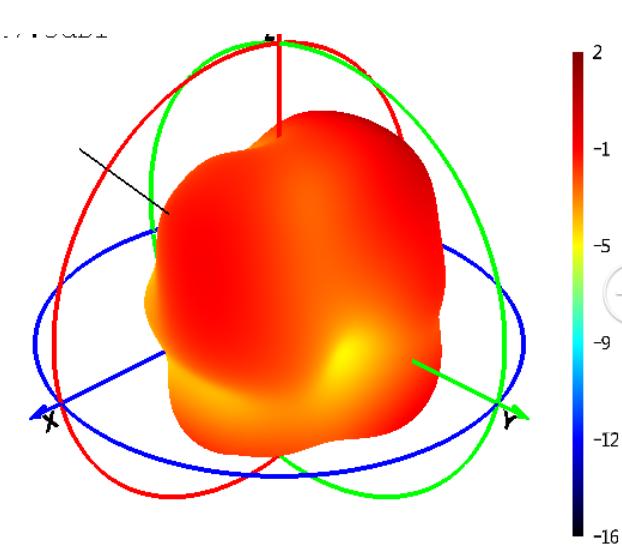


### GPS/WIFI/BTPassive parameters of antenna:

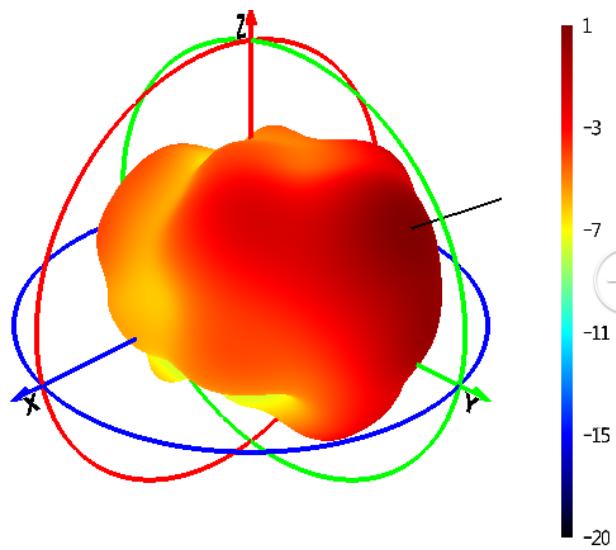
工作频段(Working frequency band): 1560~1580MHZ, 2400~2500MHZ, 5180~8525MHZ

Gain			
频段 Band	gain 增益 (dBi)	频段 Band	gain 增益(dB)
GPS	1.06	2.4G WIFI/BT	1.8
5G WIFI	-2.25		

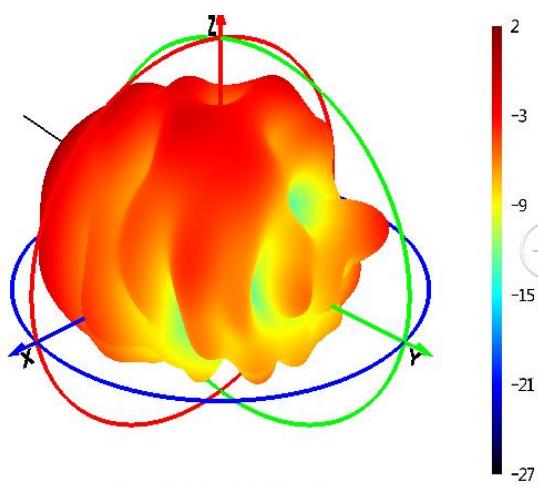
GPS



2.4G WIFI/BT



5G WIFI



## 2. test result

**business as usual.**

#### **四、Active test setup**

The active test devices are sequentially connected as follows:

Agilent8960 → 50Ohmic coaxialCable → Satimo system → Mobile phone to be tested

##### **1. Test site**

**microwave anechoic chamber: the test frequency range is 400MHz - 6GHz, the quiet zone range is 40cm circumference, and the reflectivity is less than - 90 dB.**

##### **2. test result**

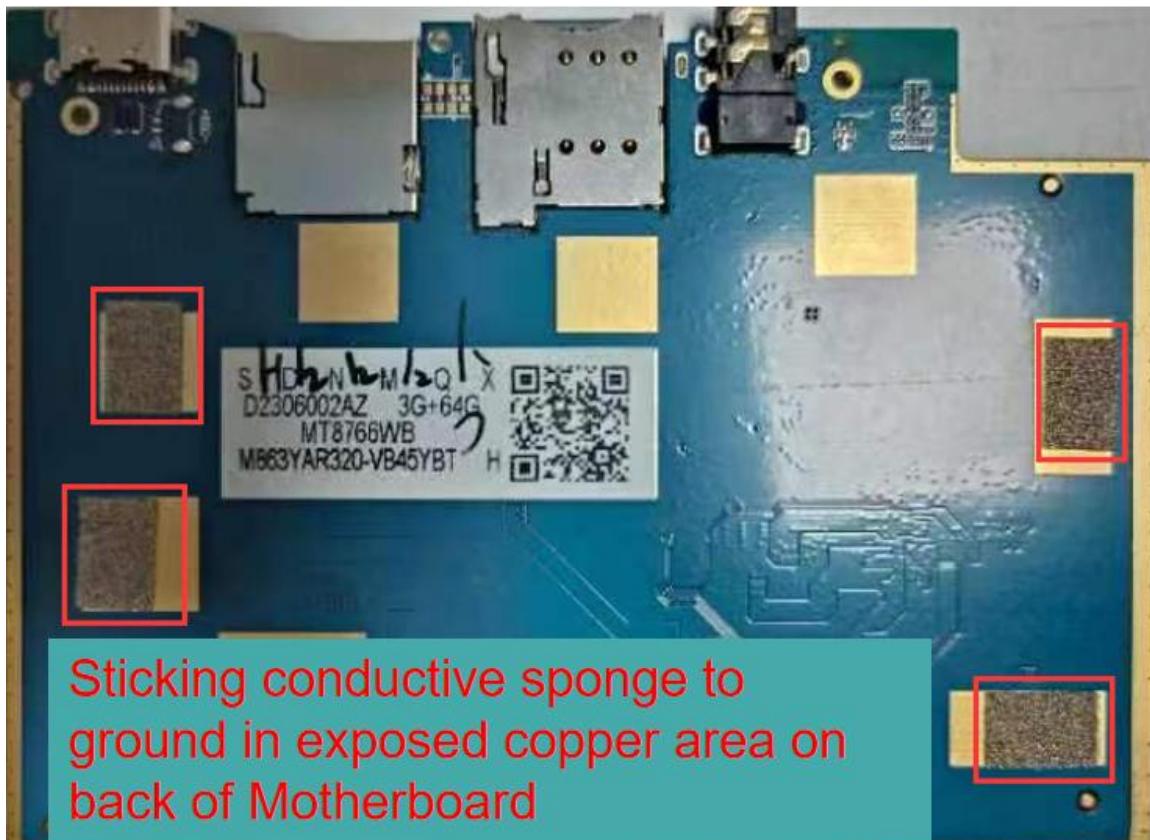
**The maximum radiation power and maximum receiving sensitivity reflect the maximum power radiation value and the optimal receiving performance of the antenna in the entire radiation space. TRP and TIS reflect the average radiation power and average receiving sensitivity of the antenna, that is, the overall receiving performance of the antenna.**

**The following is the active test result of X63B3 mobile phone main antenna:**

## Test data (测试数据)

	CH	TRP	TIS		CH	TRP	TIS
GSM850	128	21.33			18650	18.19	
	190	21.73			18900	18.45	
	251	22.36	-102.61		19150	19.09	-93.48
EGSM900	1	26.04			20000	15.37	
	62	26.28			20175	16.11	
	124	26.1	-100.33		20300	16.46	-91.39
DCS1800	512	22.39			20450	16.06	
	698	22.3			20525	16.1	
	885	22.75	-103.66		20600	15.15	-92.63
PCS1900	512	24.04			23035	14.57	
	661	24.09			23095	15.36	
	810	24.45	-102.52		23155	15.57	-94.9
W2	9626	18.47			23230	14.52	-91.87
	9400	18.59			26065	18.13	
	9538	18.48	-103.41		26365	18.43	
W4	1312	16.09			26665	19.04	-92.48
	1413	16.23			26715	16.5	
	1513	16.33	-103.4		26865	16.24	
W5	4132	16.5			27015	15.32	-93.94
	4183	16.01			132022	15.94	
	4233	15.7	-103.28		132322	16.41	
					132622	16.38	-91.14
					133172	15.24	
					133297	15.72	
					133422	16.09	-88.27
					40340	19.03	
					40620	20.99	
					41140	17.69	-89.36

## 2-1.Three in one test results



Sticking conductive sponge to ground in exposed copper area on back of Motherboard

## 2-2.蓝牙测试（Bluetooth Test）：

10 meters online listening to music, making calls smoothly without interruption

## 3. Environmental treatment

