



# 深圳众城无线技术有限公司

Shenzhen unity wireless technology co., ltd

地址: 深圳市宝安区西乡街道南昌社区深圳前湾硬科技产业园 B 栋 601-603

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## Antenna test report

客户名称:云联

产品型号: 218UHD

芯片型号: SC218-EAU

天线频段:BT2.4G

制表: 欧阳映山 TEL :0755-23285621	射频工程师:欧阳映山 TEL: 13113628703	日期: 2024. 9. 5
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调试履历表:

修订日期	修 订 内 容	修订者	原版本
2024.9.5	BT 板载天线测试	欧阳映山	



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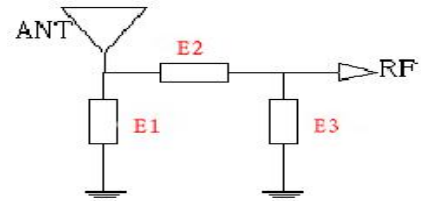
地址: 深圳市宝安区西乡街道南昌社区深圳前湾硬科技产业园 B 栋 601-603

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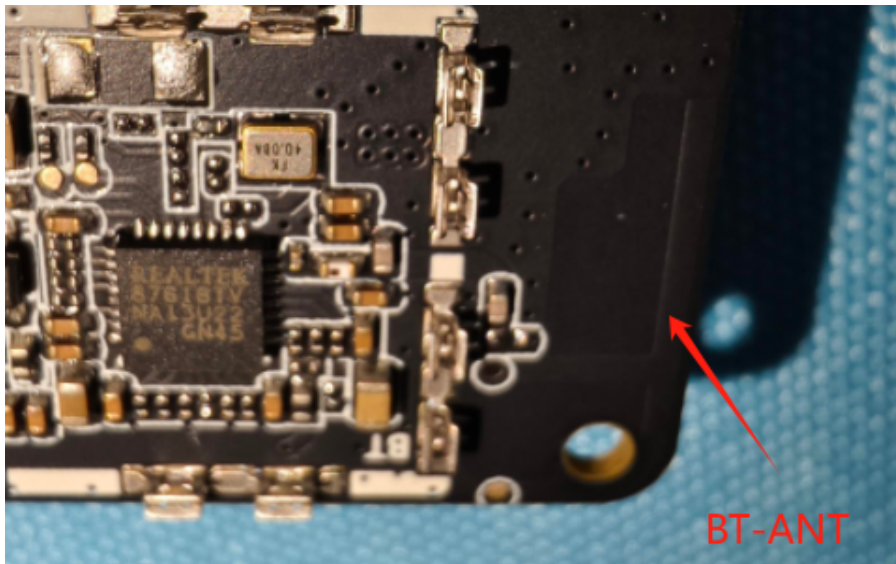
传真: 0755-23285621

一、Antenna matching (matching has not changed)  
according to the original motherboard matching

LTE	E1	E2	E3
	NC	0 欧	NC



二、Antenna installation location and environmental treatment:

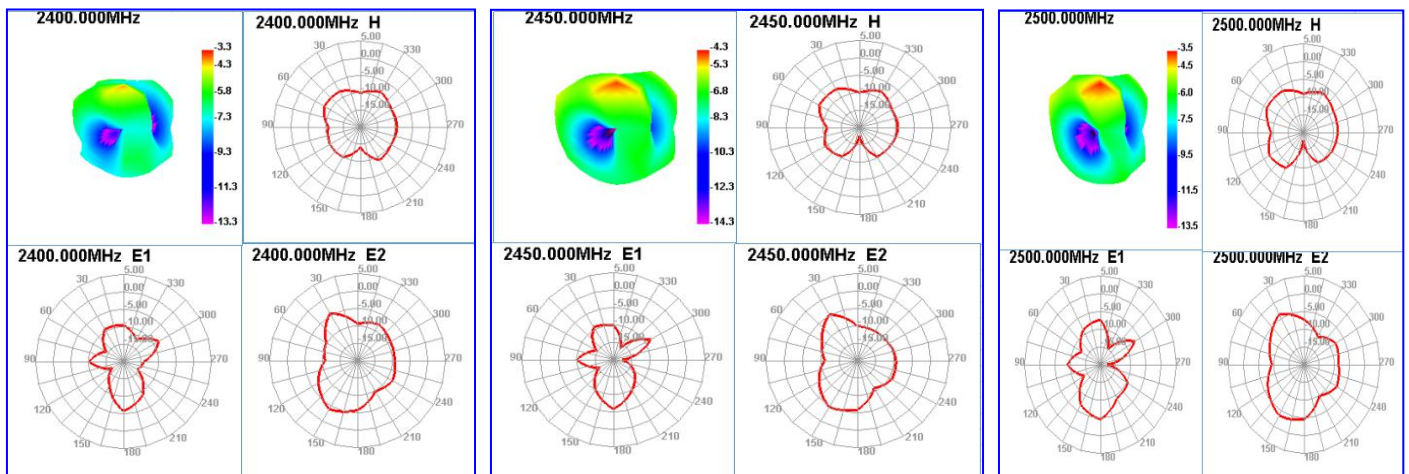


### 三、Antenna test data

BT Antenna passive efficiency and gain data

Freq (MHz)	Effi (%)	Gain (dBi)
2400	12.23	-3.26
2410	12.81	-3.12
2420	13.49	-3.03
2430	13.1	-3.37
2440	14.02	-3.35
2450	11.66	-4.35
2460	14.53	-3.63
2470	15.13	-3.51
2480	15.56	-3.55
2490	16.71	-3.36
2500	16.45	-3.55

Antenna Radiation Pattern:



## Test equipment

- Measuring instruments: microwave darkroom, network analyzer, standard antenna.
- Microwave darkroom description:  
This is the microwave darkroom set up by our company in Shenzhen. This microwave darkroom belongs to a far-field measurement system. The size of the darkroom is 7.0m x 4.0m x 3.0m, and the size of the quiet zone is 15cm x 15cm x 15cm.

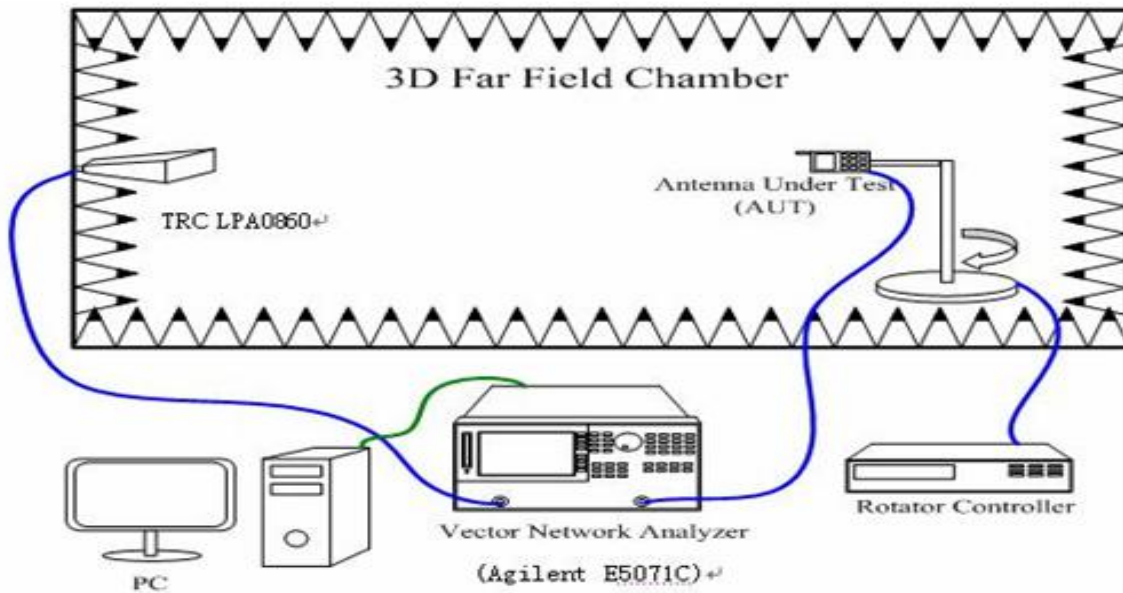


图. 1. 微波暗室内仪器设置 r.

Fig. 1 shows the instrument setup and network analyzer connection diagram in the microwave darkroom. The distance from the transmitting antenna (the transmitting antenna model used in this darkroom is TRCLPA0860 700MHZ~6GHZ) to the antenna under test (AUT) is 1.35 meters. The antenna under test is placed on a rotating platform. By controlling the rotation angle of the turntable, a rough and relatively accurate measurement can be made on the antenna under test.

Place the antenna to be tested on a rotating table and measure the 360-degree field strength data of each plane (ZY plane and ZX plane). Then replace the antenna to be tested with a standard dipole antenna (the standard dipole antenna model used in this darkroom is TRCAD series dipole antenna 800MHZ~2500MHZ) and measure its 360-degree field strength data to convert the gain standard value. The gain value and radiation pattern of the antenna to be tested can be obtained through the conversion of formula 1.

$$G_{AUT} = G_{stand} + P_{AUT} - P_{stand}$$

$G_{AUT}$ : Gain of AUT

$G_{stand}$ : Gain of Standard Gain Antenna

$P_{AUT}$ : Measured Power of AUT

$P_{stand}$ : Measured Power of Standard Gain Antenna