

Test Report

Supplier Company Name:

Shenzhen Jizhichen Technology Co., Ltd.

Supplier Product Part Number: M331

Supplier Product Description: BT Antenna

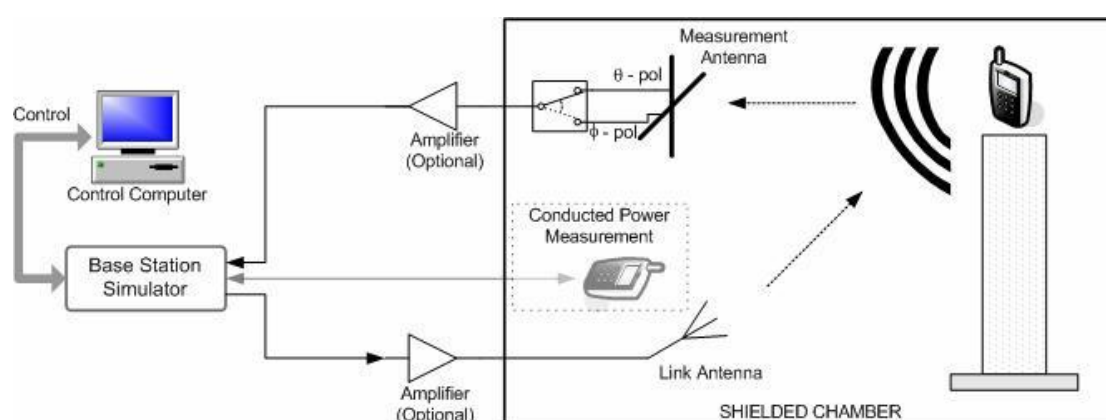
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Production:	date:	Address	No. 12, 2nd Industrial Zone, Xili, Nanqiao, Nan'an District, Shenzhen City, Shenzhen City, Guangdong Province
Fu Jianjun	2025.0821		
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Product model	Production date	Page number
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Production	Review	Approval
Fu Jianjun	Yang Kuo	Ye Xue

一、OTA Introduction to the Testing System



1、The test object DUT is placed on the 3D full-wave darkroom turntable. The turntable can rotate 360 degrees, enabling a 3D full-range measurement of the DUT. The test antenna Probe transmits the measured DUT signal through the RF coaxial cable to the comprehensive tester. The comprehensive tester then transmits the signal through the GPIB card to the computer for post-processing, and finally obtains the final RF test data.

2、Test indicators

2.1、TRP (Total Radiated Power): The total radiation power reflects the performance of the terminal emission section.

$$TRP \cong \frac{\pi}{2NM} \sum_{i=1}^{N-1} \sum_{j=0}^{M-1} [EiRP_{\theta}(\theta_i, \phi_j) + EiRP_{\phi}(\theta_i, \phi_j)] \sin(\theta_i).$$

2.2、TIS (Total Isotropic Sensitivity): The overall receiving sensitivity reflects the performance of the terminal receiving section.

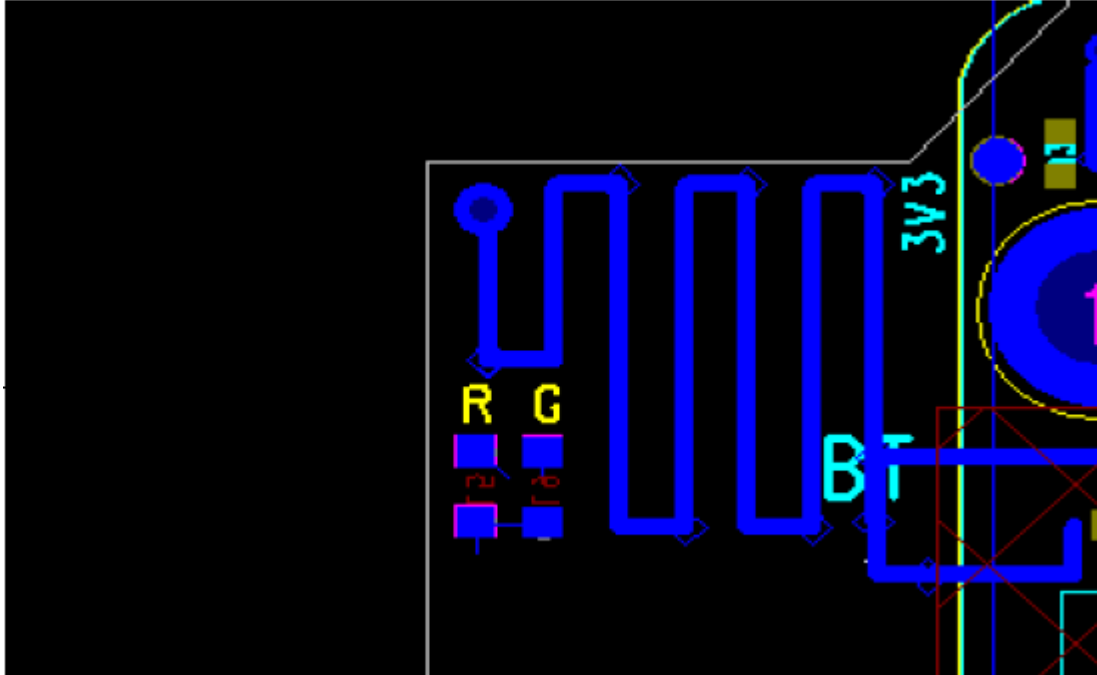
$$TIS \cong \frac{2NM}{\pi \sum_{i=1}^{N-1} \sum_{j=0}^{M-1} \left[\frac{1}{EIS_{\theta}(\theta_i, \phi_j)} + \frac{1}{EIS_{\phi}(\theta_i, \phi_j)} \right] \sin(\theta_i)}$$

3、Testing equipment

Equipment Name	Overall tester	Overall tester	Network analyzer	Network analyzer
Model	CMW500	8820C	E5071B	8753ES
Manufacturer	Rohde & Schwarz	Antitsu	Agilent	Agilent

二、Product image

1. Antenna picture



三、Antenna parameters

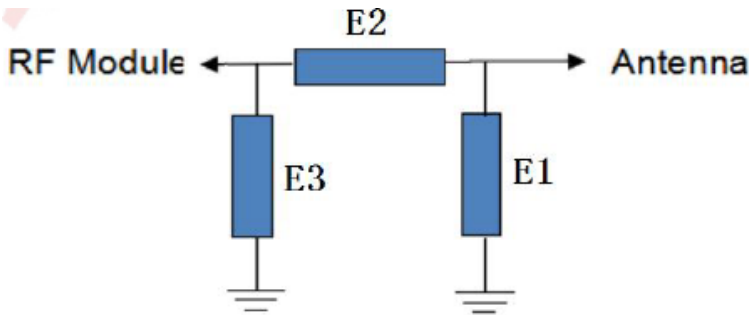
1、Physical properties

Antenna material	PCB	Antenna soldering layer	Black oil
Working temperature	-30℃~75℃	Work humidity	10%~95%
Storage temperature	-30℃~75℃	Storage humidity	10%~95%

2、Electrical parameters

四、Matching circuit

Working frequency (MHz)	2400~2500/5100~5850	Impedance	50 Ω
Gain (maximum direction)	2.6dBi	Standing wave ratio	≤3
Polarization	Linear polarization		



Element	WIFI 天线
	Value
E1(0402)	N/A
E2(0402)	原始匹配
E3(0402)	N/A

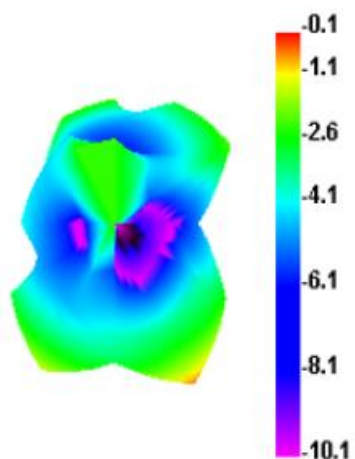
五、OTA Test data

2、BT

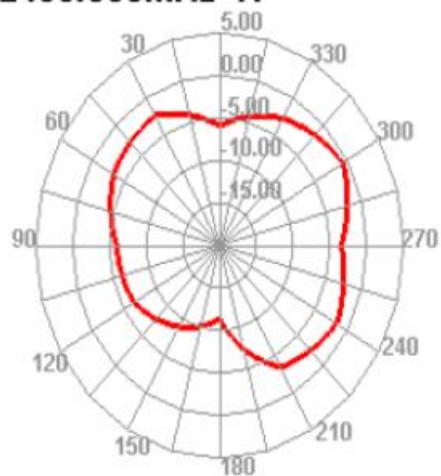
Frequency band (MHz)	Efficiency (%)	Gain(dBi)
2400	31.62	-0.1
2410	31.54	0.8
2420	32.78	1.2
2430	32.73	1.5
2440	32.24	1.3
2450	34.16	1.7
2460	34.68	1.6
2470	35.79	2.1
2480	36.37	2.3
2490	32.41	2.2
2500	35.28	2.6

Test patterns.

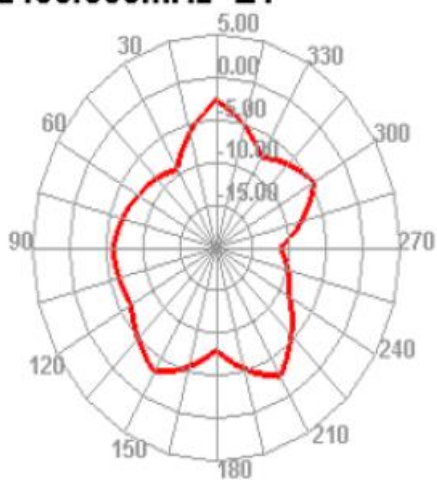
2400.000MHz



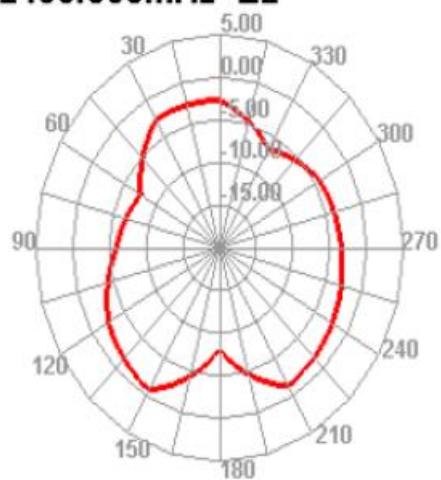
2400.000MHz H



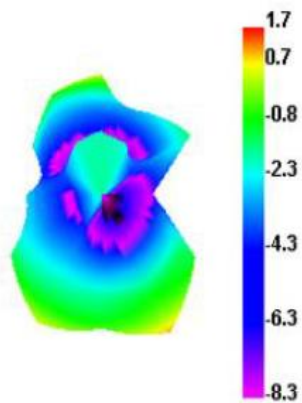
2400.000MHz E1



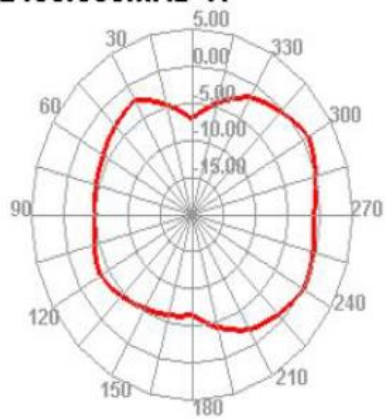
2400.000MHz E2



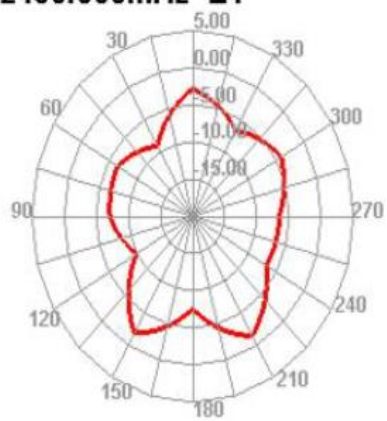
2450.000MHz



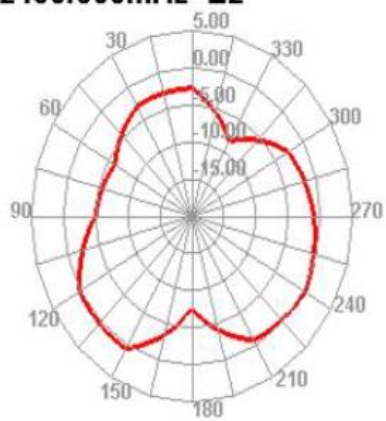
2450.000MHz H



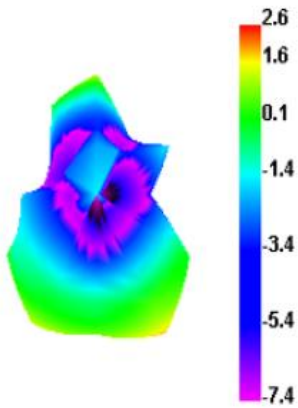
2450.000MHz E1



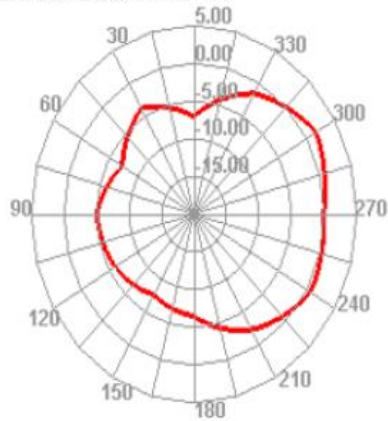
2450.000MHz E2



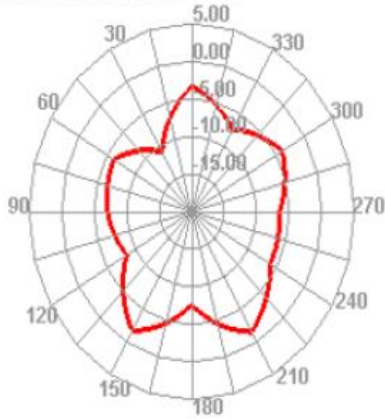
2500.000MHz



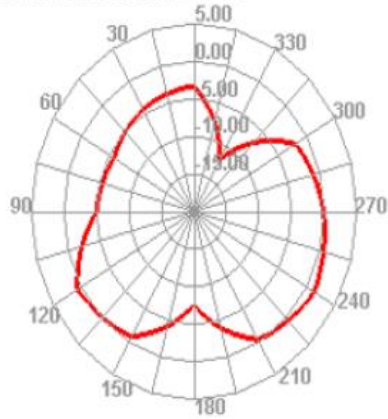
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



END