

Antenna Certification Certificate
Antenna specification for approval

Customer name Customer name	XND		
Type Model	BL029		
Antenna Frequency Band Antenna band	BT2. 4G		
Antenna Type Antenna type	FPC		
Antenna Material Antenna material	Electrolytic copper		
FPC pigment FPC color	Black (white silk print)		
P / N Material number	BL029-V5		
Manufacturer's acceptance signature: Baren has approved the signature.		Customer Confirmation Signature Client acknowledges signature	
Structure		Purchase	
Quality Control QC		Structure	
Radio frequency radio frequency		Engineering engineering	
Examine and verify To examine		Quality Control QC	
Date date	Seal Area	Date date	Seal Area

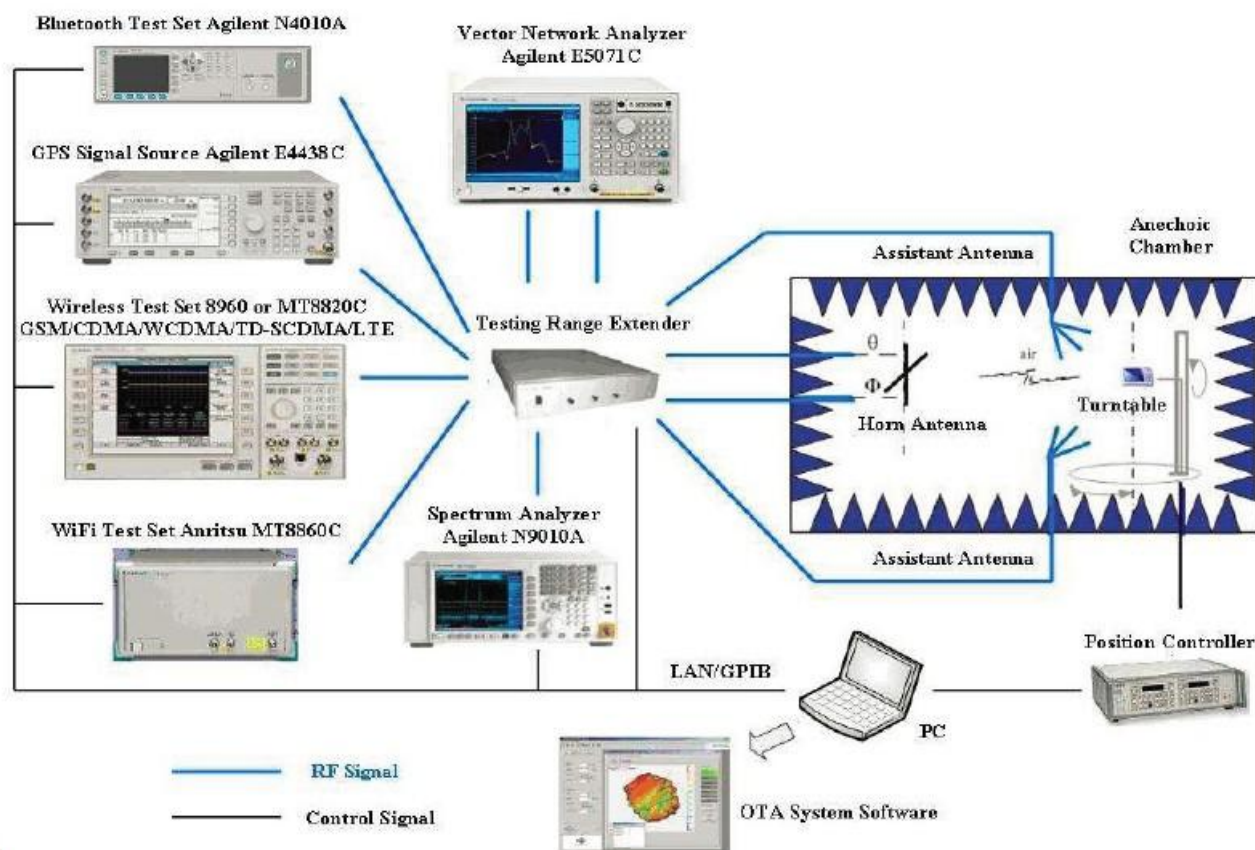
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Catalogue

1. Supported Equipment & Testable Antenna Types.	1
II: Overview.	2
3: Match the circuit diagram, machine image, and antenna image.	3
4: Antenna Standing Wave Ratio & Antenna Efficiency (VSWR).	4
V. Gain and Efficiency.	6
Six: Structural Drawings.....	8

1. Supported Equipment & Testable Antenna Types



天线功能	频率范围	测试仪器	测试方式	测试标准
2G天线 (GSM)	824MHz-960MHz, 1710MHz-1990MHz	5071B、8960、 OTA暗室	有源测试、无源测试	索沃德标准、客户要求
3G天线 (WCDMA/TDSCDMA/CDMA-EVDO/2000)	824MHz-960MHz, 1710MHz-2170MHz	5071B、8960、 OTA暗室	有源测试、无源测试	索沃德标准、客户要求
4G天线 (LTE-FDD/LTE-TDD)		5071B、CMW500、 SP8011、OTA暗室	有源测试、无源测试	索沃德标准、客户要求
WIFI天线	2.4GHz-2.48GHz, 5.15GHz-5.35GHz, 5.725GHz-5.825GHz	5071B、CMW500、 OTA暗室、路由器 、PC	有源测试、无源测试 、APK实测、吞吐量 测试	索沃德标准、客户要求
BT天线	2.4GHz-2.48GHz	5071B、OTA暗室 、蓝牙音箱	无源测试、实测	索沃德标准、客户要求
定位天线 (GPS、GLONASS、北斗、伽利略)	1575.42MHz±10MHz 1602MHz±0.5625MHz 1561MHz±2.046MHz	5071B、OTA暗室 、APK	无源测试、实测	索沃德标准、客户要求
NFC天线	13.56MHz	5071B、专用测试 治具、OTA暗室、 APK	无源测试、实测	索沃德标准、客户要求
遥控天线	433MHz	5071B、OTA暗室	无源测试、实测	索沃德标准、客户要求

II: Overview

(1) antenna performance

1. This approval form supports the MID item. The FPC antenna package is included within this item. This report is intended for performance evaluation of BT antennas.

2. Antenna shape and dimensions: comply with MID requirements.

3. Antenna Band: 2400 MHz to 2500 MHz

4. Antenna Material: The antenna material meets MID requirements.

5. Adhesion performance: Meets MID requirements.

6. The antenna performance meets the following specifications:

Summary	BT2. 4	Units
Standing Wave Ratio	≤ 2	
Average Antenna Gain	≥ -3	dB
Antenna efficiency	≥ 30	%
Feed impedance	50 ohms	
Working temperature	-40 to +85 deg C	
Polarization/Angle of Arrival	Linear/Omnidirectional	

(2) Mechanical Information

Mechanical Dimension	
Cable Length	NA
Description	BT2. 4
Material	FPC
Coax	NA
Environment	
Working temperature	-40 to +85 deg C
Storage Temperature	-40 to +85 deg C

3: Match the Circuit Diagram, Machine Image, and Antenna Image

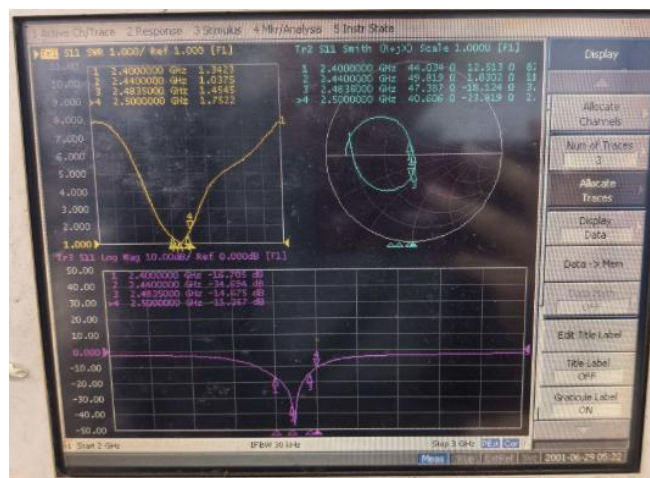
(1) R Matching Circuit

The left/right matching circuit remains unchanged and matches the original unit.

(2) Machine Image & Antenna Image

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1 : Gold Finger coating; 3: Surface coated with black matte ink; 4: Complies with latest environmental standards: RoHS & REACH;

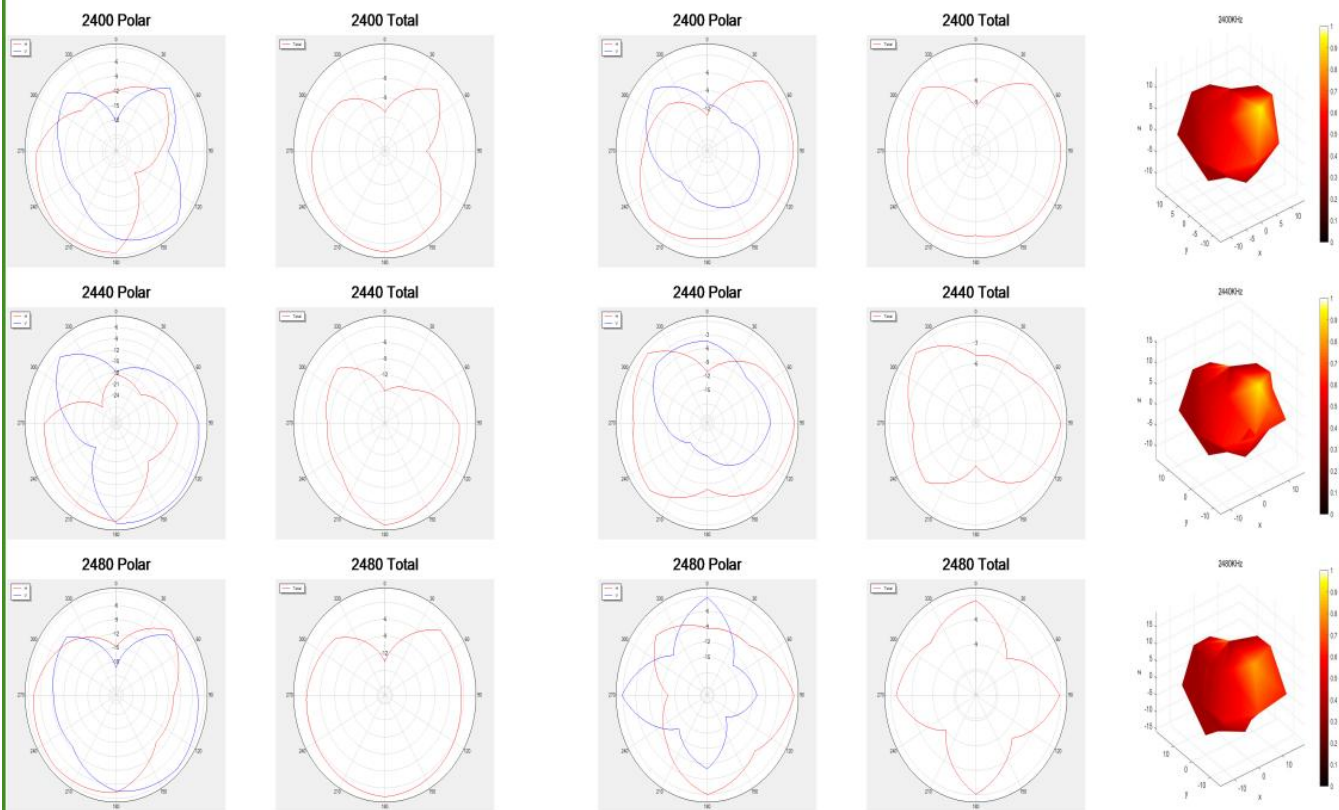
Four:BT 2.40G-2.48G(VSWR)

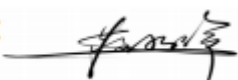


Fre.(MHz)	2400	2440	2480
L-S11 (db)	-15.1	-31.55	-14.61
R-S11 (db)	-14.67	-32.01	-15.01

五. 效率与增益

Frequency	Effic	Percen	Gain
2400	-6.36	23.12%	-2.24
2410	-6.79	20.96%	-3.25
2420	-6.83	20.74%	-3.26
2430	-6.93	20.3%	-2.89
2440	-6.59	21.93%	-1.97
2450	-6.26	23.63%	-1.04
2460	-6.08	24.64%	-0.82
2470	-6.03	24.95%	-0.3
2480	-6.21	23.91%	-0.28
2490	-6.95	20.19%	-1.06
2500	-6.43	22.77%	-2.31



Tester:  jiang shui ling

Six: Structural Drawings

