

TESTREPORT

Applicant: ShenzhenBoyilInnovation Technology Co.,Ltd
Address: North, 5 /F,Building 3, Tea West, ZoneA,Huafeng
First SciencePark, Hangcheng Street, Baoan
District, Shenzhen
Equipment Type: BYKC-OM6228A2
ModelName: BYKC-118
BrandName: Boyi scientific and technological innovation
Test Standard: IEEE Std149-2021
Sample ArrivalDate: May14, 2024
TestDate: May14, 2024
Date of Issue: May16, 2024

ISSUEDBY:

ShenzhenBALUN Technology Co.,Ltd.

**Testedby:** Mai Jintian**Checkedby:** XiaLong**Approvedby:** Tolan Tu
(TestingDirector)

RevisionHistory

Version	IssueDate	Revisions
<u>Rev.01</u>	<u>May16, 2024</u>	<u>InitialIssue</u>

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1GENERALINFORMATION

1.1TestLaboratory

Name	ShenzhenBALUN Technology Co.,Ltd.
Address	BlockB,1/F,Baisha Science and TechnologyPark, Shahe XiRoad,NanshanDistrict, Shenzhen, GuangdongProvince,P.R. China
PhoneNumber	+86 75566850100

1.2TestLocation

Name	S henzhenBALUN Technology Co.,Ltd.
Location	☒ BlockB,1/F,Baisha Science and TechnologyPark, Shahe Xi Road,NanshanDistrict, Shenzhen, GuangdongProvince,P.R. China
	☐ 1/F,BuildingB, GanghongjiHigh-techIntelligentIndustrialPark, No .1008, SongbaiRoad, Yangguang Community, Xili Sub-Ndistrict,anshanDistrict, Shenzhen, GuangdongProvince,P.R. China

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Shenzhen Boyi Innovation Technology Co., Ltd
Address	North, 5 /F, Building 3, Tea West, Zone A, Huafeng First Science Park, Hangcheng Street, Baoan District, Shenzhen
Contact Person	Wang Weiyuan
Telephone Number	18675575732
E-mail Address	sparkwang2008@126.com

2.2 Manufacturer Information

Manufacturer	Shenzhen Boyi Innovation Technology Co., Ltd
Address	North, 5 /F, Building 3, Tea West, Zone A, Huafeng First Science Park, Hangcheng Street, Baoan District, Shenzhen

2.3 General Description for Equipment under Test (EUT)

EUT Name	BYKC-OM6228A2
Model Name Under Test	BYKC-118
Antenna Type	PCB Antenna
Dimensions	23*4mm

2.4 Ancillary Equipment

Note: Not applicable.

2.5 Technical Information

Frequency Range	2402MHz ~ 2480MHz
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3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	IEEE Std149-2021	IEEE Standard Test Procedures for Antennas

3.2 Test Verdict

Report Section	Description	Remark
ANNEXA.1	Gain and Efficiency	--
ANNEXB	Radiation Pattern	--

3.3 Test Uncertainty

The uncertainty is calculated using the method suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

Item	Uncertainty
VSWR(S11)	± 0.61
Gain	$\pm 1.92\text{dB}$

4GENERAL TEST CONFIGURATIONS

4.1TestCondition

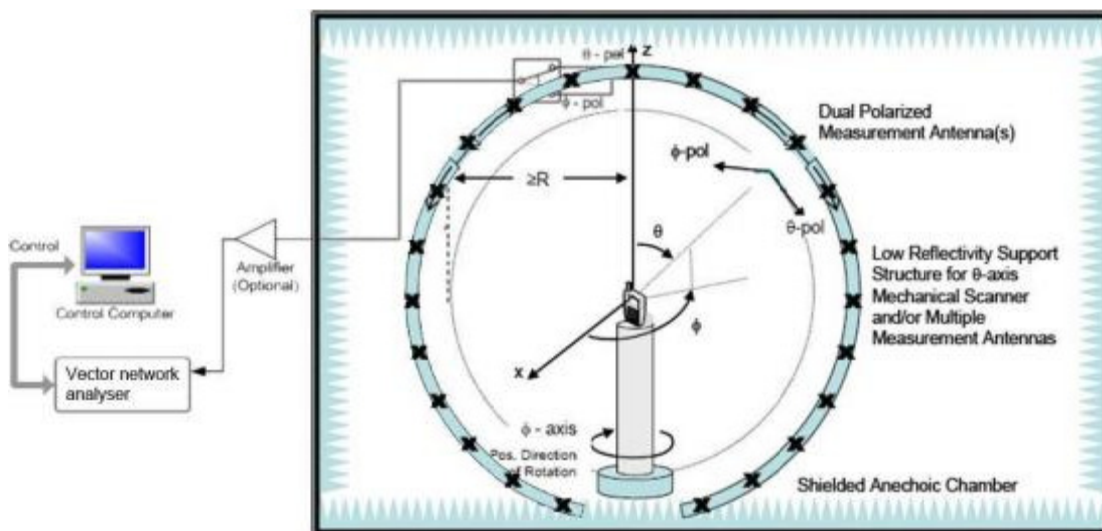
Environment Parameter	Selected ValuesDuring Tests			
	Ambient Pressure(KPa)	Temperature(°C)	Voltage	Relative Humidity(%)
Normal Temperature, Normal Voltage (NTNV)	100 to102	21.7	N/A	44

4.2 TestEquipmentList

Description	Manufacturer	Model	SerialNo.	Cal.Date	Cal.Due
SG24Multi-probe AntennaMeasurement System	SATIMO	SG24-L	1101855- 0001	2021.11.12	2024.11.11
VectorNetwork Analyzer	Agilent	E5071B	MY42404001	2024.01.16	2025.01.15
Description	Manufacturer	Name		Version	
Test Software	MVG	SPM		V1.8	

4.3 Test Setup

4.3.1 Antenna gain, efficiency and radiation pattern test setup



4.4 Test Frequencies

Test Frequencies	2402MHz, 2440MHz, 2480MHz
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ANNEX A TEST RESULTS

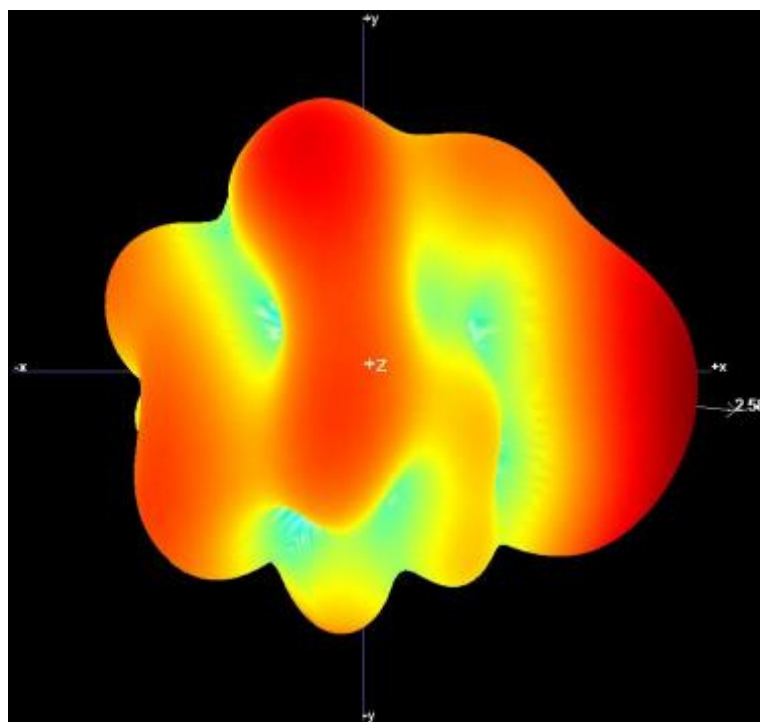
A.1 Gain and Efficiency

Frequency	Gain(dBi)	Efficiency(%)
2402MHz	2.58	33
2440MHz	2.17	31
2480MHz	1.23	27

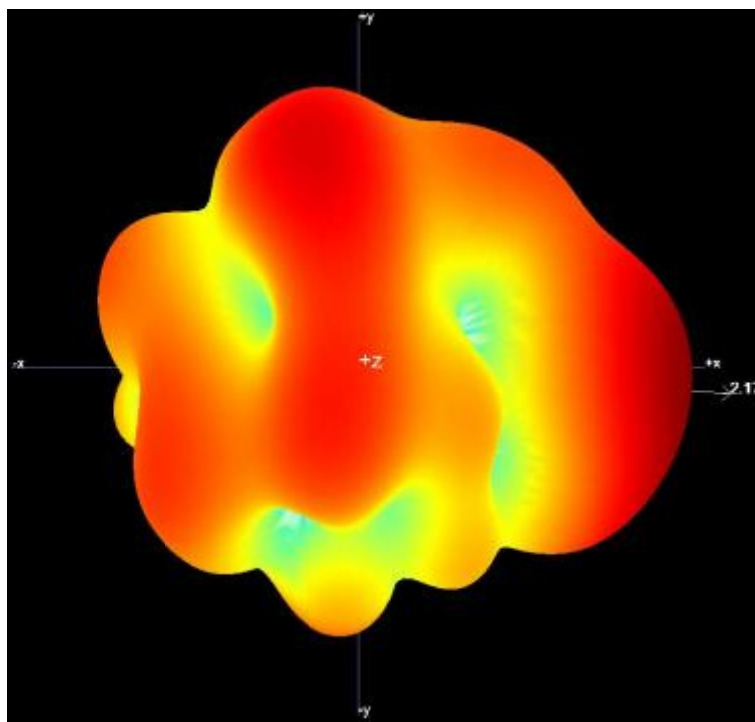
ANNEXBRADIATIONPATTERN

B.13DPattern

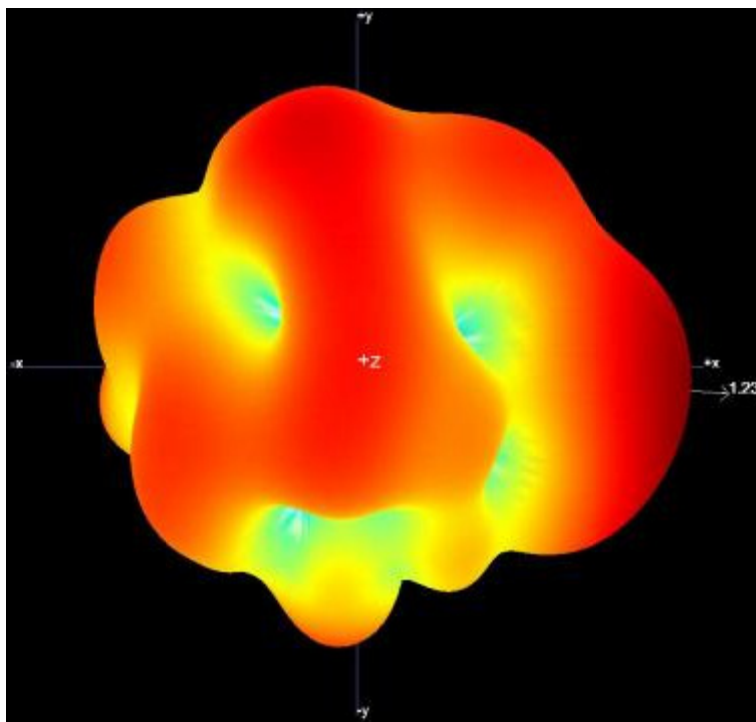
B1.1 3DPattern for 2402MHz



B1.2 3DPattern for 2440MHz

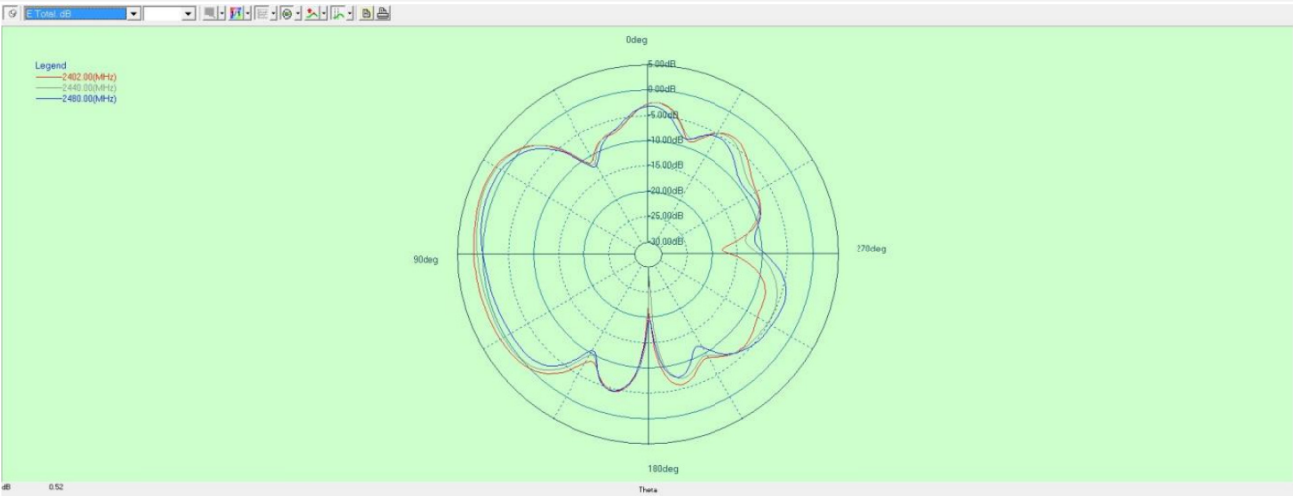


B1.3 3DPattern for 2480MHz

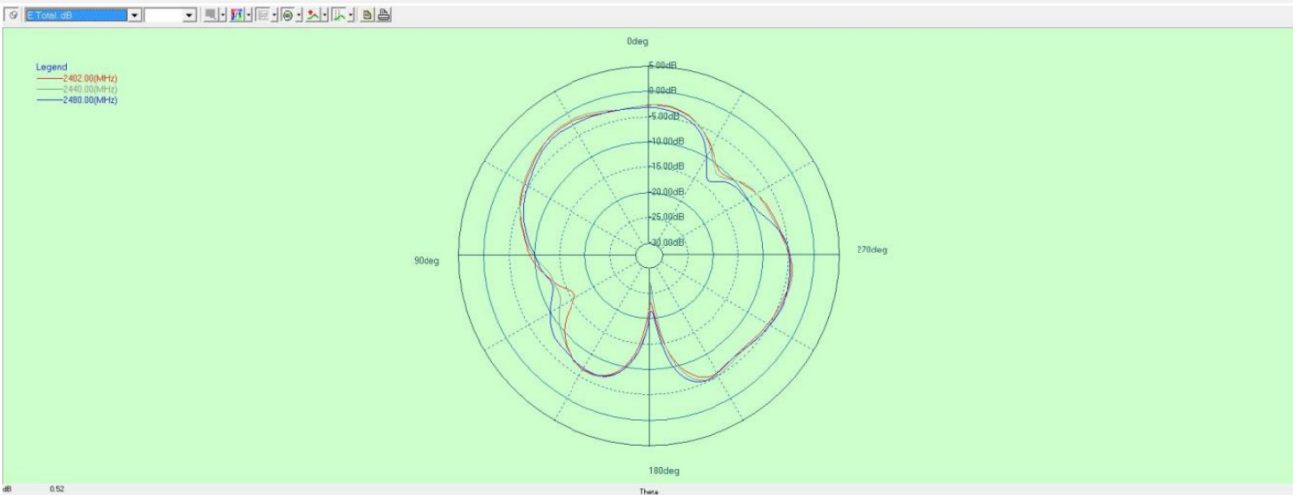


B.21DRadiationPattern

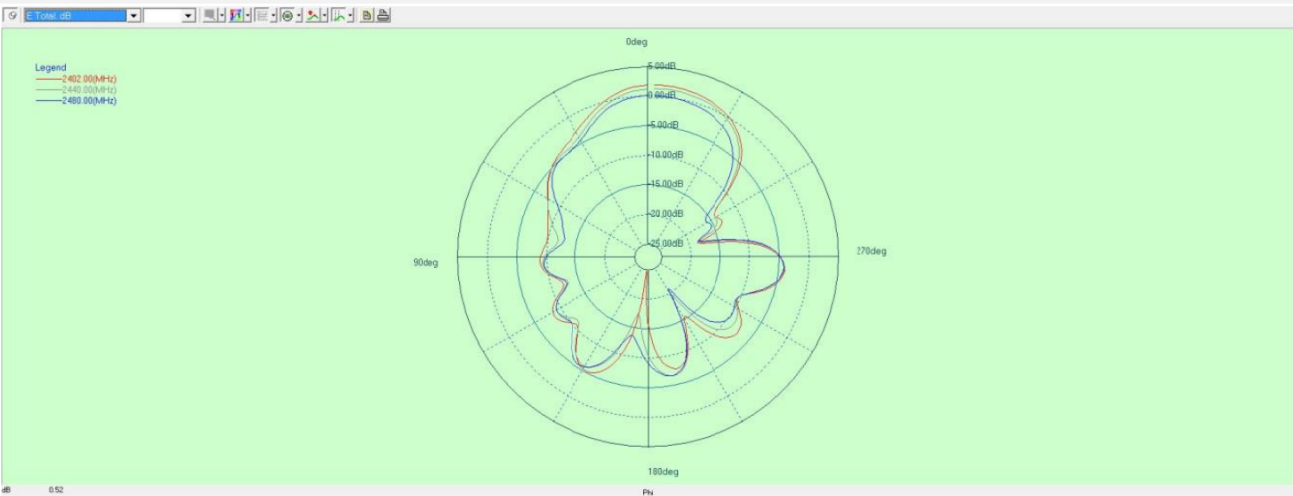
B2.1 PHI=0



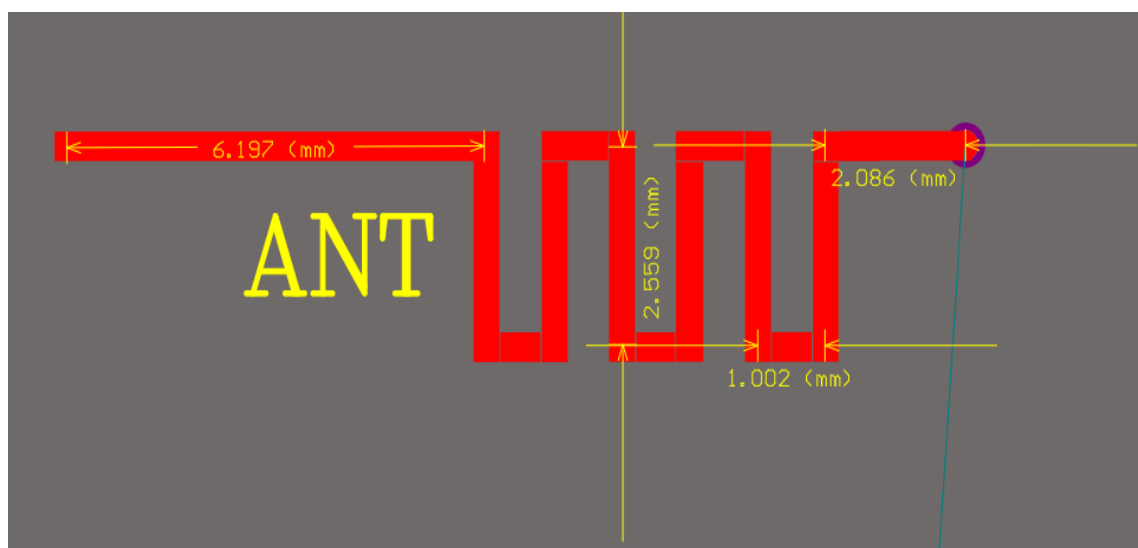
B2.2 PHI=90



B2.3 THETA=90



ANNEX CTEST SETUPPHOTO



Statement

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
2. The report without China inspection body and laboratory Mandatory Approval (CMA) mark has no effect of proving to the society.
3. For the report with CNAS mark or A2LA mark, the items marked with "☆" are not within the accredited scope.
4. This report is invalid if it is altered, without the signature of the testing and approval personnel, or without the "inspection and testing dedicated stamp" or test report stamp.
5. The test data and results are only valid for the tested samples provided by the customer.
6. This report shall not be partially reproduced without the written permission of the laboratory.
7. Any objection shall be raised to the laboratory within 30 days after receiving the report.

--END OF REPORT--