

环保:	
版本:	

承认书

SPECIFICATION FOR APPROVAL

客户名称 佳禾
Customer _____
品名 _____
Product: Bluetooth Antenna-R
客户料号 _____
Part No.: 300116190161C00

客户（业务）确认回复： Customer (Business) Approval Status:	
签 核： Signature	
合格 PASSED	拒收 REJECTED

产品资料 PRODUCT INFORMATION

产品名称 Bluetooth Antenna-R
Product: _____
产品型号 CE-2159N
Part No.: _____
样品编号 _____
Samples No.: _____
图纸编号 1E-2159N-081-1
Drawing No.: _____
日期 2023/3/6
Date: _____

Prepared By	Proofed By	Checked By
DATE:	DATE:	DATE:

INNOVATION RELIABILITY SATISFACTION

Shenzhen Daxian Technology Co., Ltd

Address (Headquarters): Buji Town, Longgang District, Shenzhen, China Jihua Road 513, Shangshuijing Village (opposite the national defense training base) Dacheng Industrial Park, Building 7

TEL: 0755-28576002 FAX: 0755-84276383 E-mail: wuxh@topant.com.cn

Address (branch): Room201, Building8, LongDongRoad3000#, Semiconductor Industry Park, ZhangJiang Hitech Zone, ShangHai

TEL: 021-61630552 FAX: 755-84276383

<http://www.topant.com.cn>

Form number: CO-ENG-031A

—DESCRIPTION

Manufacturer :	Shenzhen Quanzhi Information Technology Co., Ltd.
Machine type:	Bluetooth headset
Antenna frequency band:	2400 ~ 2500MHz
Antenna form:	FPC
Feed form:	welding
Number of feed legs:	2
Hardware version:	motherboard

一、BT antenna

This report mainly provides various test results of the electrical performance of the CE-2159N project antenna. Figure 1 shows the antenna designed by the large display.



Overall appearance diagram

Right antenna appearance diagram

图 1

www.Topant.com.cn

Confidentiality requirements

Shenzhen Daxian Technology Co., Ltd. already possesses the information provided by proprietary technology, which should be strictly confidential and not allowed to be disclosed to anyone or company without the prior written consent of Shenzhen Daxian Technology Co., Ltd.

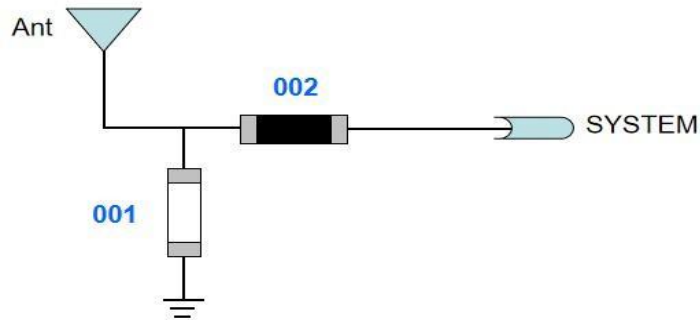
1.1.1 Electrical performance description

Electrical performance specifications

The frequency range of the antenna is 2400–2500MHz. The table below indicates the electrical performance specifications of the antenna. This antenna is designed and produced by Da Xian.

Frequency Range	Frequency (MHz)	VSWR
Right ear BT	2400 ~ 2500	≤ 2

1.1.2 Matching circuit



Element	左边	右边
001	0.3PF	0.5PF
002	0Ω	0Ω

当前版本天线主板匹配有更改，如上

1.2 Structural specification standards

1.2.1 Antenna composition

The antenna is mainly composed of FPC.

www.Topant.com.cn

Confidentiality requirements

Shenzhen Daxian Technology Co., Ltd. already possesses the information provided by proprietary technology, which should be strictly confidential and not allowed to be disclosed to anyone or company without the prior written consent of Shenzhen Daxian Technology Co., Ltd.

2. The Equipment of Active Test

Satimo 3D Chamber 6x4x4(m)

Agilent 8960 E5515c

Network analyzer-R&S

ZVL



图 2

www.Topant.com.cn

保密要求

深圳市大显科技有限公司已拥有专有技术所提供的资料，这些专有资料应严加保密，在未经深圳市大显科技有限公司事先书面同意的时不允许透露给任何人或公司。

3 Testing

3.1 Testing of Standing Wave (VSWR)

3.1.1 Test connection: the connection of VSWR test device in sequence is: R&S ZVL network analyzer → test line → test fixture measurement (attached figure)

3.2 Testing of Efficiency, Power (TRP), Sensitivity (TIS)

3.2.1 Testing site:

Large display microwave darkroom. The testing frequency range is 400MHz -6GHz, the quiet zone range is 50cm circumference, and the reflectivity is less than -50 dB.

3.2.2 Tested instruments:

R&S CMW500, Agilent 8960, network analyzer E5071C, standard horn antenna, France

SATIMO-SG24SYSTEM system, printer, etc.

3.2.3 Test data: In the microwave anechoic chamber, the values related to the power and sensitivity tested are shown in the table below:

Free space active testing:

R-自由空间			
BAND	CH	TRP (dBm)	TIS (dBm)
BT	0	4.22	-87.23
	37	4.58	-88.37
	78	5.22	-87.25

Head mold active testing:

R-头模			
BAND	CH	TRP (dBm)	TIS (dBm)
BT	0	0.61	-82.26
	37	0.93	-82.59
	78	1.44	-82.18

Passive efficiency testing:

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	22.8	-7.03	-3.25
2410	23.47	-6.89	-3.11
2420	24.03	-6.77	-3.11
2430	24.8	-6.61	-3.16
2440	25.71	-6.44	-3.33
2450	26.39	-6.31	-3.22
2460	27.71	-6.07	-3.14
2470	27.6	-5.92	-3.25
2480	25.68	-5.9	-3.25
2490	24.97	-6.03	-3.29
2500	23.52	-5.93	-3.18

4. Conclusion:

This antenna is designed based on the prototype provided by the customer, and the electrical parameters and structural performance have met the technical requirements. Please confirm!

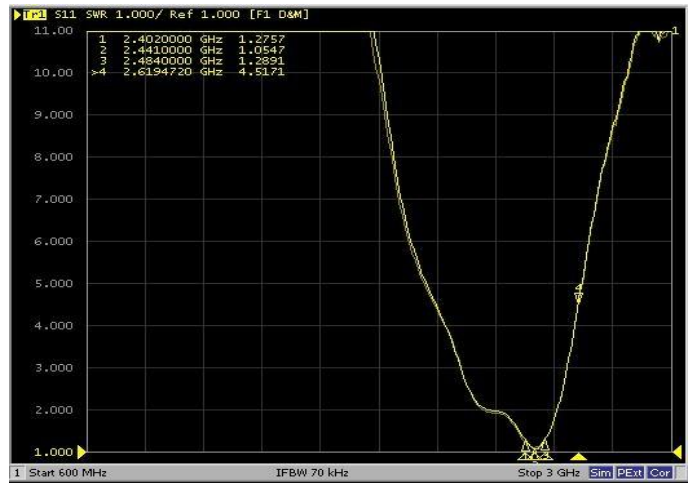
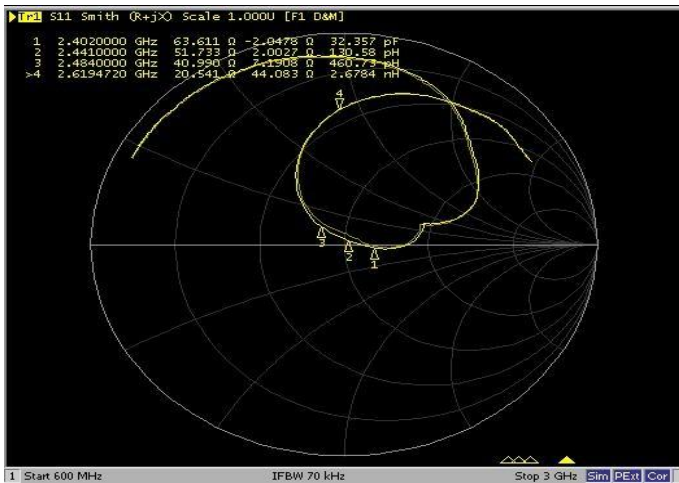
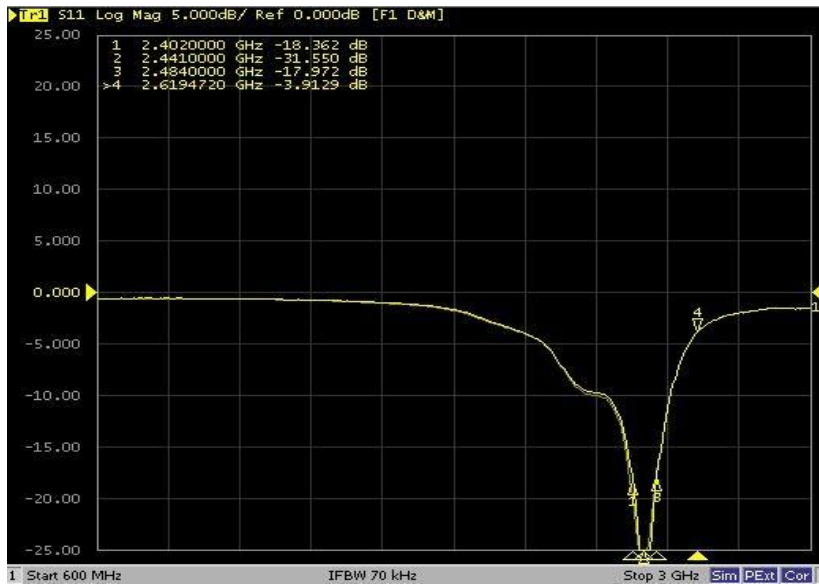
www.Topant.com.cn

保密要求

深圳市大显科技有限公司已拥有专有技术所提供的资料，这些专有资料应严加保密，在未经深圳市大显科技有限公司事先书面同意的时不允许透露给任何人或公司。

5、Attachment Chart

5.1 VSWR Parameter Map - Right Ear

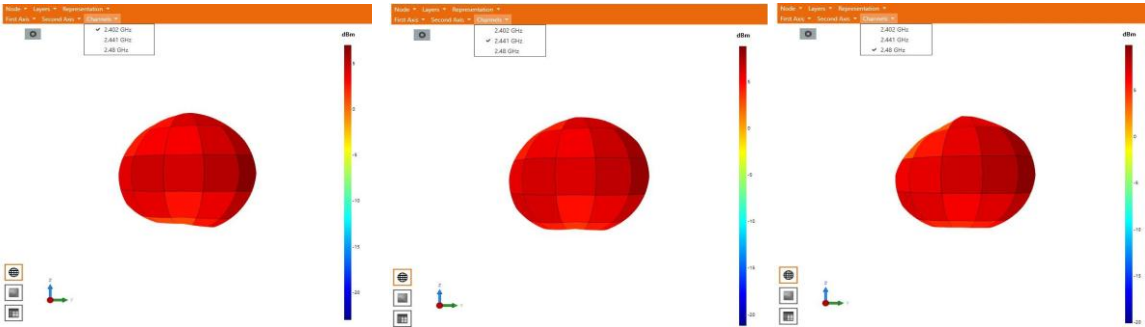
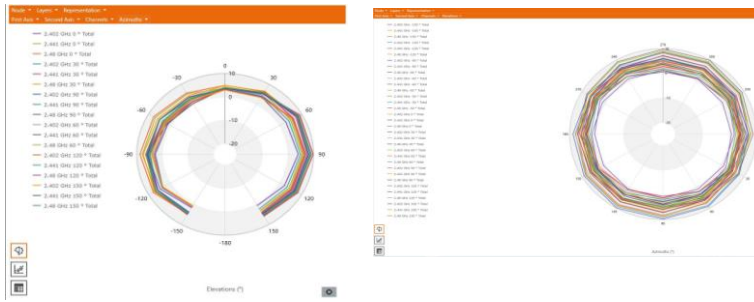


www.Topant.com.cn

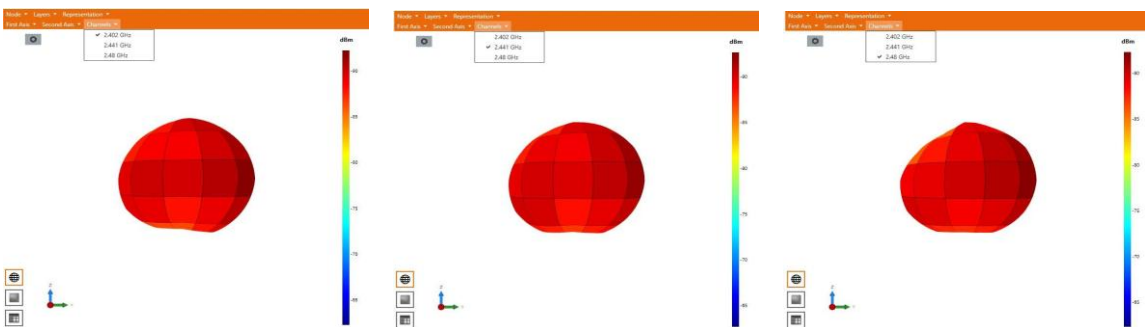
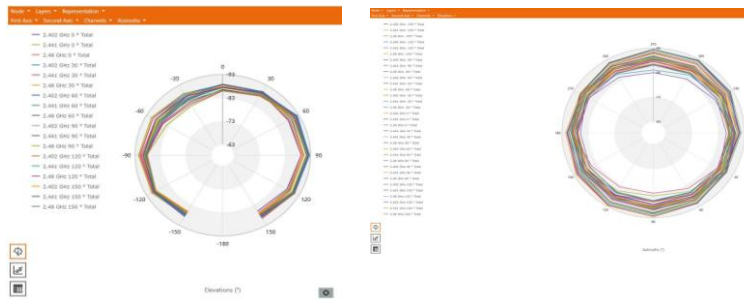
保密要求

深圳市大显科技有限公司已拥有专有技术所提供的资料，这些专有资料应严加保密，在未经深圳市大显科技有限公司事先书面同意的时不允许透露给任何人或公司。

6、Free Space - Directional Map - TRP:



6.1、Free Space - Directional Map - TIS:

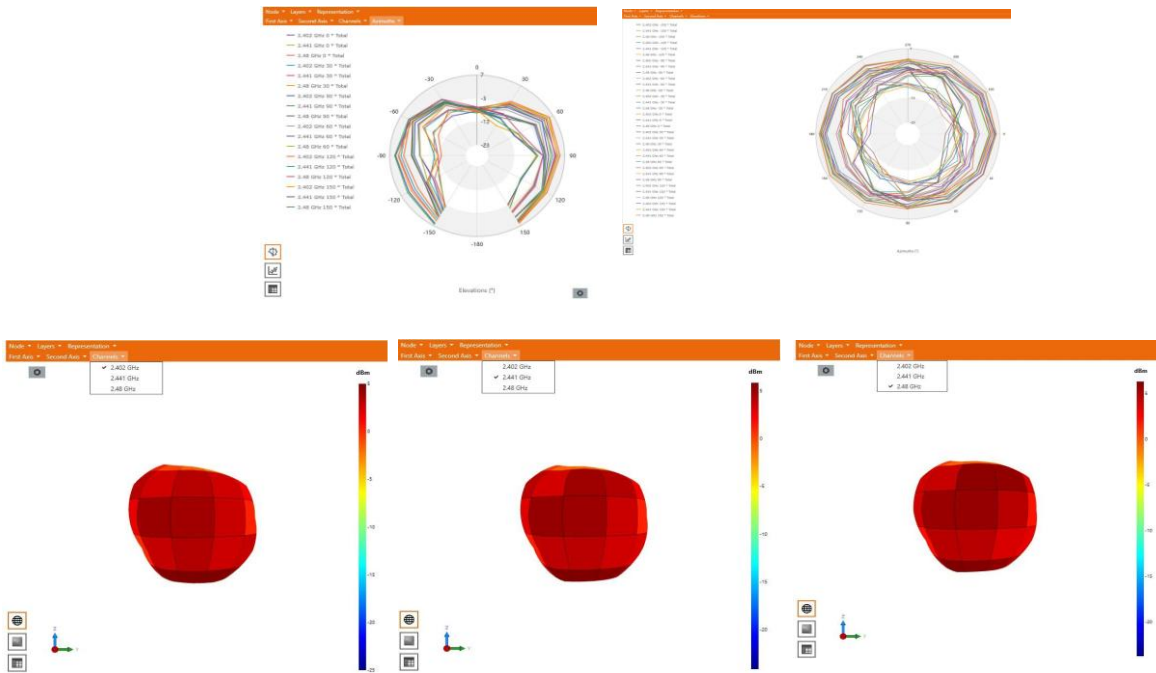


www.Topant.com.cn

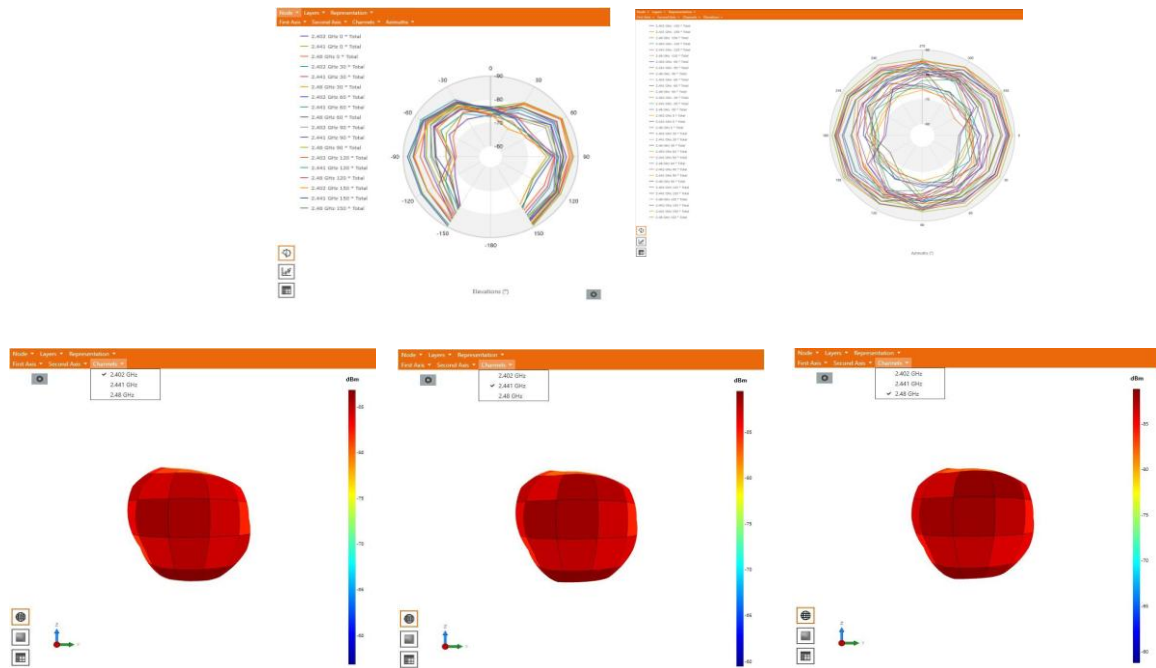
保 密 要 求

深圳市大显科技有限公司已拥有专有技术所提供的资料，这些专有资料应严加保密，在未经深圳市大显科技有限公司事先书面同意的时不允许透露给任何人或公司。

7、Head mold - directional diagram - TRP:



7.1、Head mold - directional diagram - TIS:



www.Topant.com.cn

保密要求

深圳市大显科技有限公司已拥有专有技术所提供的资料，这些专有资料应严加保密，在未经深圳市大显科技有限公司事先书面同意的时不允许透露给任何人或公司。

