SPECIFICATION

Daxian Communication Technology Limited

Shenzhen Daxian Technology Co., Ltd.

lchse 22261 Right ear

Bluetooth headset antenna

Material Recognition Letter

Guest households	lchse	frequency band	2400MHz～2500MHz
Project name	22261	version	V2.0
Material No.	22-2261X-010	color	Black
R F design	Peng.Hu	structure design	YeZhi.Bi
Quality Manager	Ziyin.Hu	R & D director	Lei.Zhang
Date	2023-07-10		

client confirmation：

Whether the assembly meets your requirements：☐OK ☐NG

Shenzhen Topant Technology Co., Ltd.

Shangshuijing Village, No. 513, ihua Road, BujiTown, Longgang District, Shenzhen (opposite to theNational Defense Training Base)reached the 7thfloor of the Industrial Park Complex
TEL:0755-28576002
FAX:0755-84276383

Shanghai Branch: Room 201, Building 8 No, 3000Longdong Avenue,Integrated Circuit IndustrialZone, Zhangjiang Hi-tech Park, Shanghai
TEL:021-61630552
FAX:755-84276383

Change resume

version number	Change content	Reason for change	Initiate change Party	date	Modifier
V1.0	create			2023.07.10	

Confidential requirement
Shenzhen Daxian limited company of science and technology has proprietary technology to provide information, which should be kept strictly confidential and proprietary information, without the prior written consent of Shenzhen Daxian Co. Ltd. are not allowed to disclose to any person or company.

Index

一、 Project description……4

二、BT antenna……4

1、 specifications……4

1.1 Electrical specification standard……4

1.2 Antenna composition……5

2、The Equipment of Active Test……5

3、test……6

3.1 The Test of standing Wave (VSWR)……6

3.1.1 test connection……6

3.2 Measurement of Efficiency, Power (TRP) and Sensitivity (TIS)……6

3.2.1 Test site……6

3.2.2 Test instrument……6

3.2.3 test data ……6

4、conclusion ……6

5、Attachment chart……7

5.1、VSWR parameter diagram……7

5.2、Matching circuit……8

6、Passive fielde pattern ……9

三、schedule drawing……10

Confidential requirement

Shenzhen Daxian limited company of science and technology has proprietary technology to provide information, which should be kept strictly confidential and proprietary information, without the prior written consent of Shenzhen Daxian Co. Ltd. are not allowed to disclose to any person or company.

一 Project description

Customer name:	lchse
Whole machine type:	Bluetooth headset
Antenna band:	2400 ～ 2500MHz
Antenna form:	FPC
Feed form:	welding
Number of feed feet:	2 left and right ears
Hardware version:	motherboard:

一、BT antenna

This report provides a variety of measurements of the electrical performance of the 22261 antenna. Figure 1 shows the antenna designed by the display.

antenna appearing diagram
Figure 1

1.1 Electrical specification standard

The frequency range of the antenna is 2400 ~ 2500 MHz. The following table indicates the electrical performance specifications of the antenna. The antenna is designed and manufactured by a large display.

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

Confidential requirement
Shenzhen Daxian limited company of science and technology has proprietary technology to provide information, which should be kept strictly confidential and proprietary information, without the prior written consent of Shenzhen Daxian Co. Ltd. are not allowed to disclose to any person or company.

1.2 Antenna composition

The antenna is mainly composed of FPC .

2、 The Equipment of Active Test

Satimo 3D Chamber 6×4×4(m)

Agilent 8960 E5515c

Network analyzer-R&S ZVL

Figure 2

Confidential requirement
Shenzhen Daxian limited company of science and technology has proprietary technology to provide information, which should be kept strictly confidential and proprietary information, without the prior written consent of Shenzhen Daxian Co. Ltd. are not allowed to disclose to any person or company.

3 test

3.1 The Test of standing Wave (VSWR)

3.1.1 The Test of standing Wave (VSWR)： In turn, the connection of the VSWR testing device is as follows: RES ZVL Network Analyzer / testing Line / testing tool

Actual measurement (with diagram)

3.2 Measurement of Efficiency, Power (TRP) and Sensitivity (TIS)

3.2.1 Test site：

Large-scale microwave darkroom. The test frequency range is 400MHz / 6GHz, the static range is 50cm circumferential and the reflectivity is less than-50 dB..

3.2.2 Test instrument：

Rs ZVL Network Analyzer, Agilent8960 E5515C, Standard Horn Antenna, French SATIMO-SG24SYSTEM system, Printer, etc.

3.2.3 test data ：In microwave anechoic chambers, the power and sensitivity values measured are shown in the following table:

OTA free space active test:

R-Free Space			
BAND	CH	TRP（dBm）	TIS（dBm）
BT	0	12.17	-92.31
	39	12.08	-92.03
	78	12.20	-92.54

OTA head mold active test:

R-Headfrom			
BAND	CH	TRP（dBm）	TIS（dBm）
BT	0	2.01	-83.21
	39	2.31	-83.66
	78	2.63	-83.51

4、conclusion：

This antenna is designed on the basis of the prototype provided by the customer, electrical parameters and structural performance have reached the technical requirements, please confirm!

Confidential requirement
Shenzhen Daxian limited company of science and technology has proprietary technology to provide information, which should be kept strictly confidential and proprietary information, without the prior written consent of Shenzhen Daxian Co. Ltd. are not allowed to disclose to any person or company.

5、Passive Efficiency&Gain

Free Space

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	51.07	-2.92	1.24
2410	51.47	-2.88	1.25
2420	51.71	-2.86	1.31
2430	54.09	-2.67	1.57
2440	53.53	-2.71	1.42
2450	52.49	-2.8	1.31
2460	51.67	-2.87	1.21
2470	50.35	-2.98	0.89
2480	50.93	-2.93	0.91
2490	50.48	-2.97	0.87
2500	48.06	-3.18	0.69

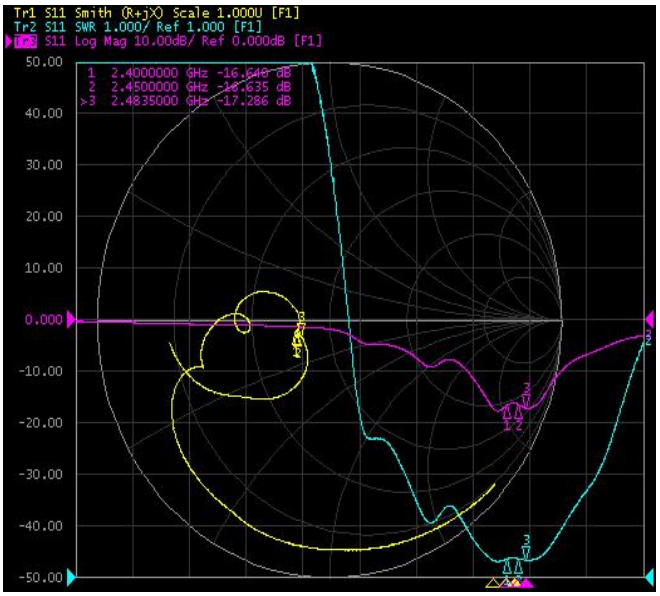
headform

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	8.85	-10.53	-6.51
2410	9.87	-10.06	-6.09
2420	10.35	-9.85	-5.67
2430	11.17	-9.52	-5.42
2440	12.66	-8.98	-4.25
2450	12.32	-9.1	-4.82
2460	11.19	-9.51	-4.15
2470	10.42	-9.82	-5.74
2480	9.03	-10.44	-6.2
2490	8.85	-10.53	-6.58
2500	7.19	-11.43	-7.07

6、Attachment chart

6.1 VSWR parameter diagram

Free Space



headform

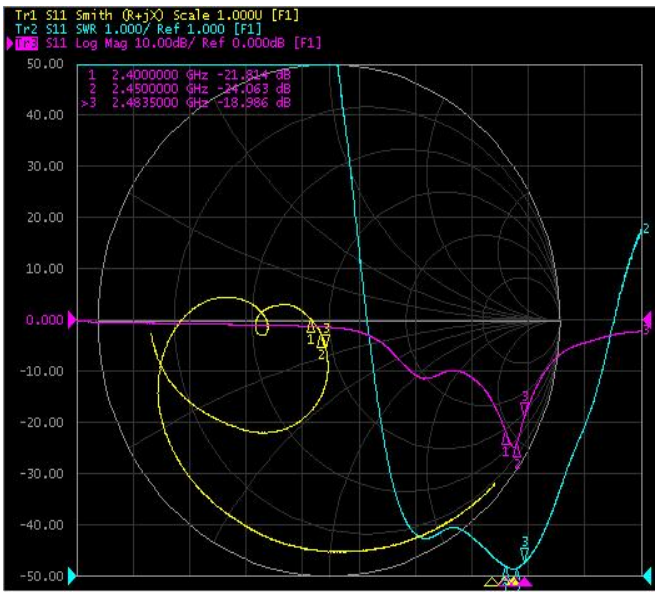
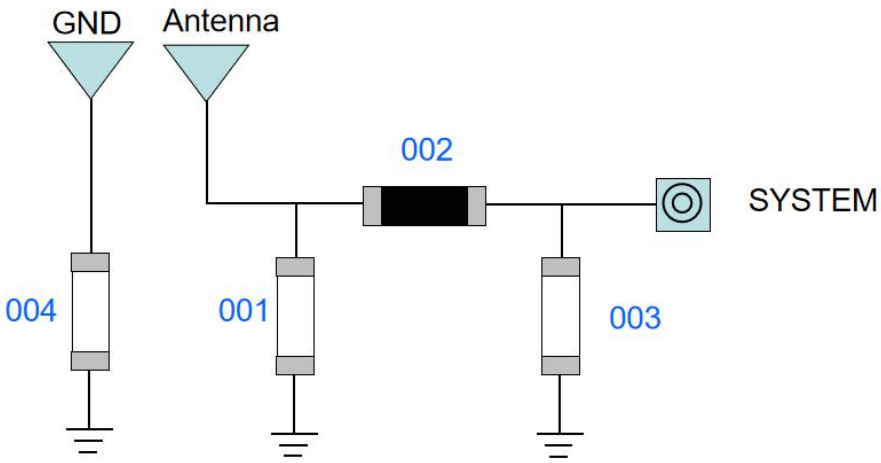


Figure 3

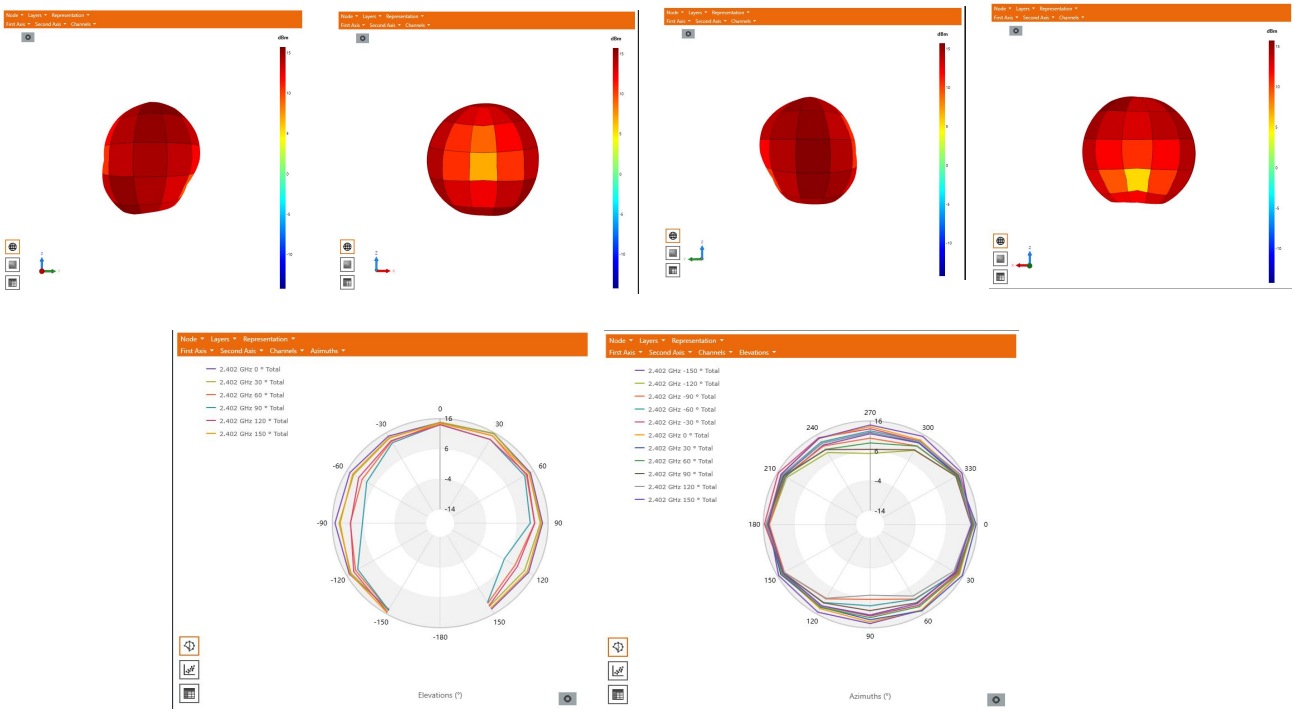
6.2 Matching circuit



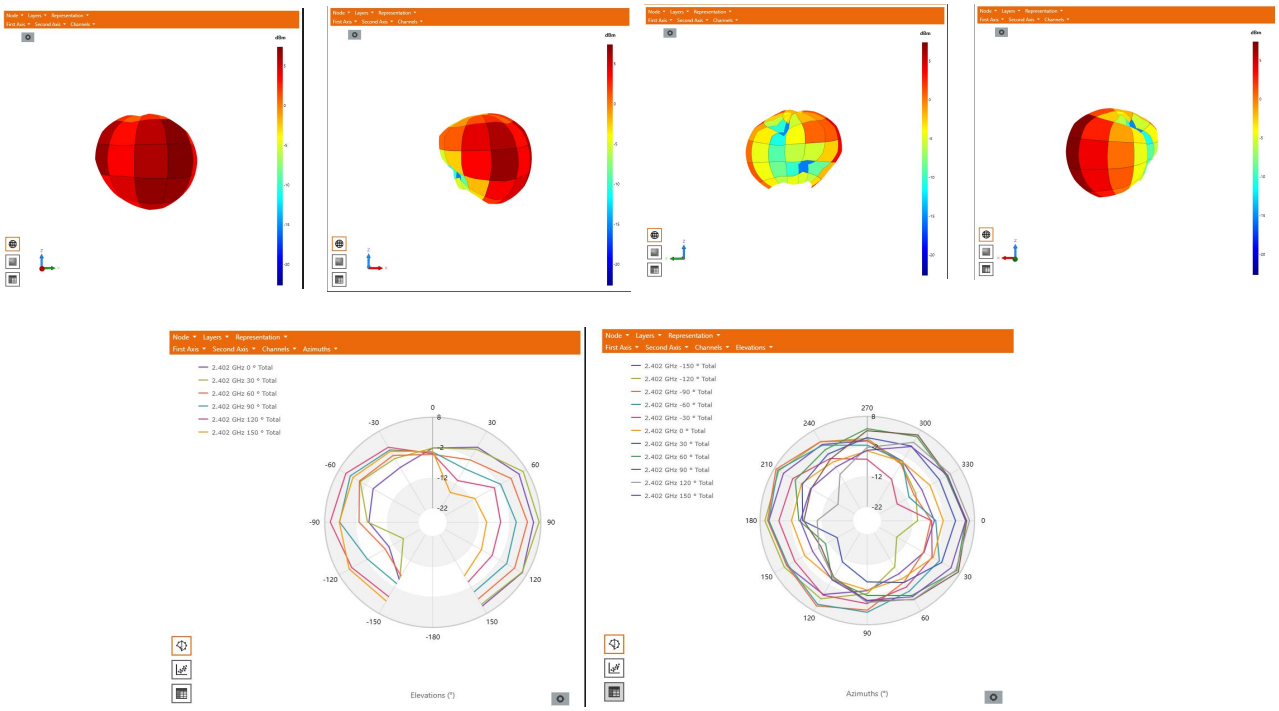
Element	Left	Right
001	N/C	N/C
002	0Ω	0Ω
003	N/C	N/C
004	0Ω	0Ω

Shenzhen Daxian limited company of science and technology has proprietary technology to provide information, which should be kept strictly confidential and proprietary information, without the prior written consent of Shenzhen Daxian Co. Ltd. are not allowed to disclose to any person or company.

7、Active Field Pattern Diagram - Free Space:

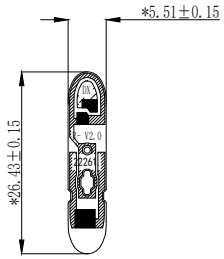


7.1、Active Field Pattern Diagram - Headform:



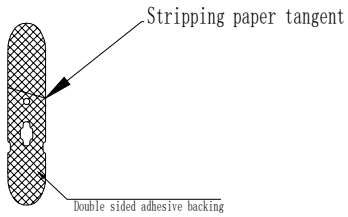
Confidential requirement
Shenzhen Daxian limited company of science and technology has proprietary technology to provide information, which should be kept strictly confidential and proprietary information, without the prior written consent of Shenzhen Daxian Co. Ltd. are not allowed to disclose to any person or company.

	0~10	10~30	30~50	50~	angle	○	◎	⊥	▱
	0.05	0.10	0.15	0.20	1°	0.02	0.02	0.03	0.05



Black ink
White silk screen printing

TOP



BOT

technical requirement:

1. "*" is the key dimension;
2. Please refer to the drawing for unspecified dimensions;
3. Meet RoHS requirements.

edition	describe	date	Note
A	Initial Issue	2023.07.08	

TOPANT

Shenzhen Topant Technology Co., Ltd.

Machine model	22261	Product Color	black			date	2023/07/08
Project Code	C2-2261X-010	Mold surface treatment	NA			MD	BI YE ZHI
Part Name	BT-R antenna	unit	mm	scale	1:1	RF	WANG QIANG
Part Number	22-2261X-010-1	Third perspective				check	ZHOU KANG
material	Electrolytic copper PI					ratify	ZHANG LEI
Save Path						current version	A