SPECIFICATION

Daxian Communication Technology Limited

Shenzhen Daxian Technology Co., Ltd.

lchse 22261 Left ear

Bluetooth headset antenna

Material Recognition Letter

Guest households	lchse	frequency band	2400MHz～2500MHz
Project name	22261	version	V2.0
Material No.	12-2261X-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

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Change resume

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

Confidential requirement
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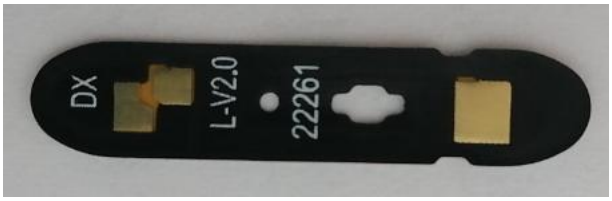
一 Project description

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
Left ear BT	**2400 ~ 2500**	**≤ 2**

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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

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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:

L-free space			
BAND	CH	TRP（dBm）	TIS（dBm）
BT	0	12.36	-92.94
	39	12.44	-92.71
	78	12.40	-93.1

OTA head mold active test:

L-headform			
BAND	CH	TRP（dBm）	TIS（dBm）
BT	0	2.15	-83.81
	39	2.70	-83.77
	78	2.73	-83.83

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!

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5、Passive Efficiency&Gain

Free Space

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	48.76	-3.12	0.79
2410	50.2	-2.99	1.33
2420	51.14	-2.91	1.51
2430	52.59	-2.79	1.57
2440	53.04	-2.75	1.59
2450	53.92	-2.68	1.56
2460	52.66	-2.79	1.45
2470	52.31	-2.81	1.36
2480	52.03	-2.84	1.27
2490	50.74	-2.95	0.83
2500	50	-3.01	0.53

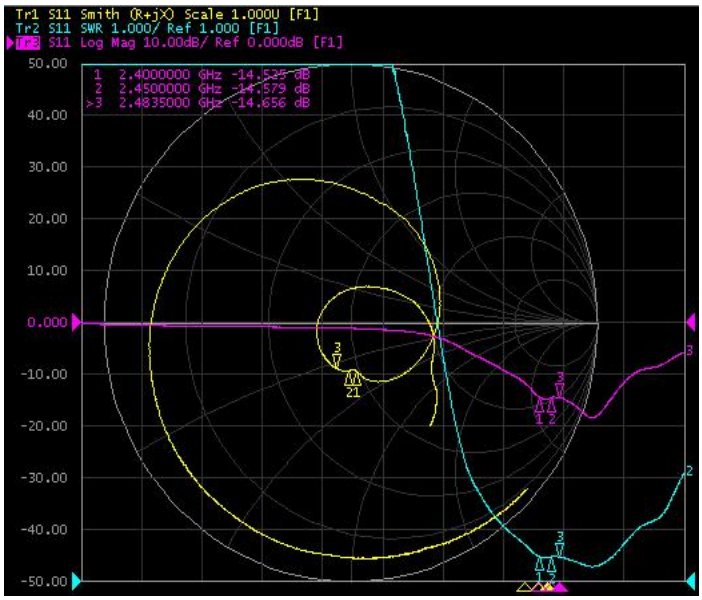
headform

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	7.2	-11.43	-7.69
2410	8.7	-10.61	-6.78
2420	9.59	-10.18	-6.38
2430	10.5	-9.79	-6
2440	10.93	-9.61	-5.8
2450	11.57	-9.37	-5.35
2460	12.18	-9.14	-5.23
2470	12.13	-9.16	-4.63
2480	11.84	-9.27	-4.99
2490	10.62	-9.74	-5.42
2500	9.95	-10.02	-6.38

6、Attachment chart

6.1 VSWR parameter diagram

Free Space



headform

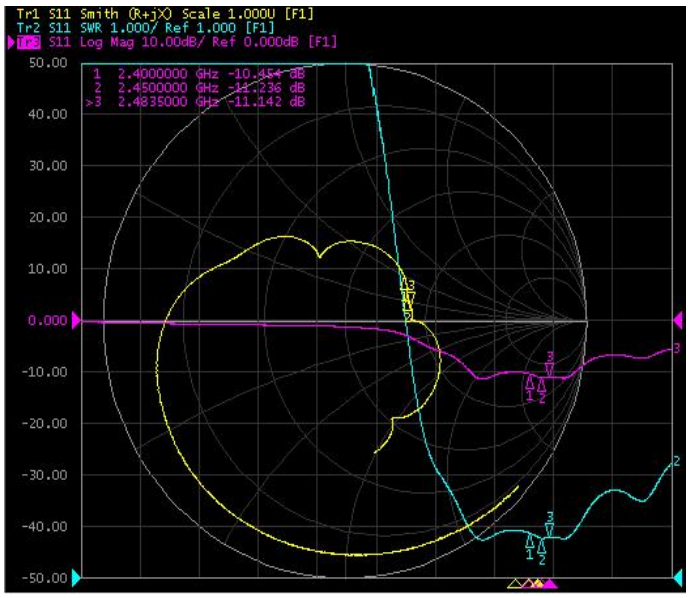


Figure 3

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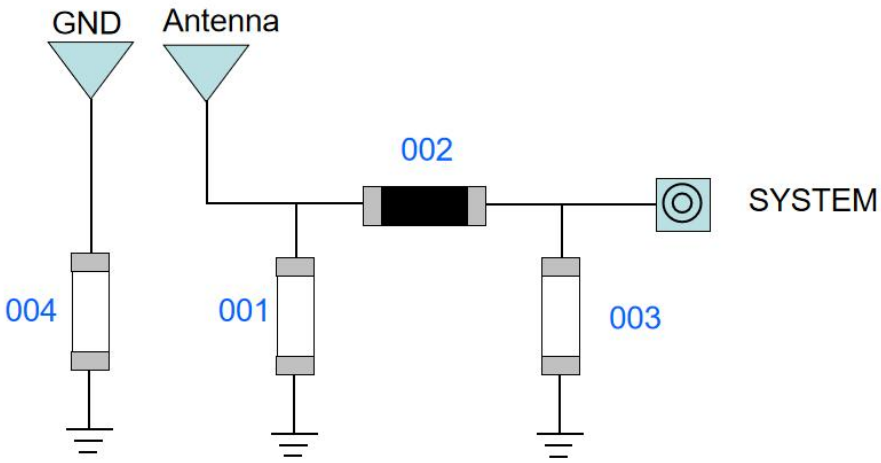
6.2 Matching circuit



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

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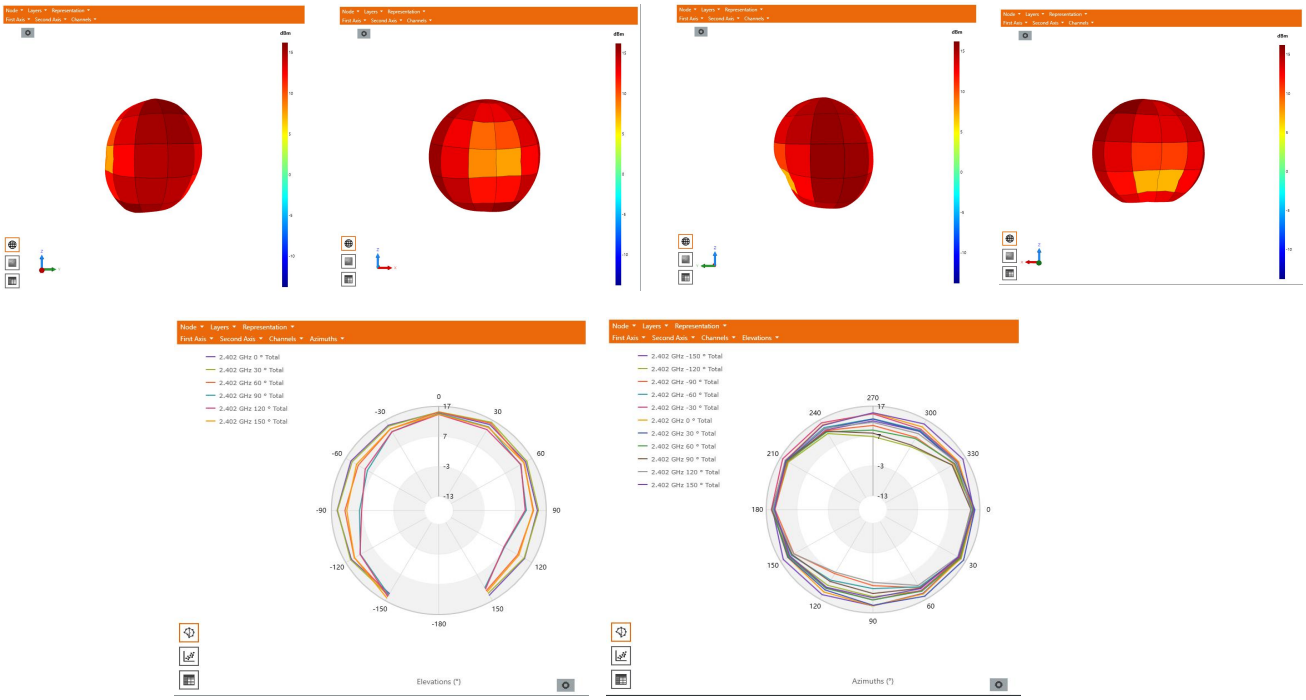
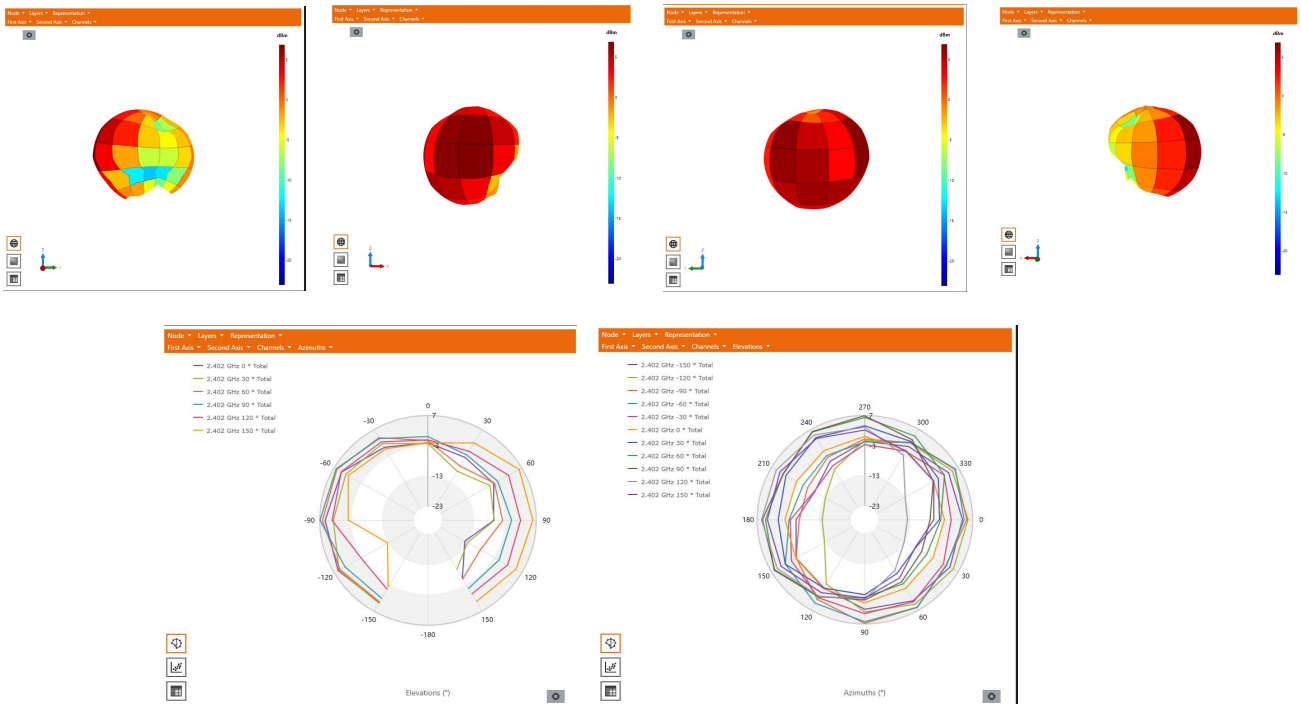
7、Active Field Pattern Diagram - Free Space:



7.1、Active Field Pattern Diagram - Headform:



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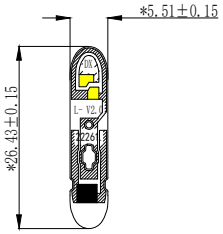
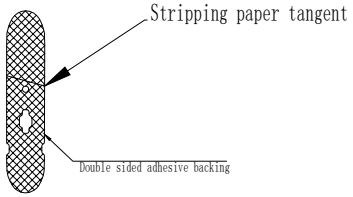
	0~10	10~30	30~50	50~	angle	○	◎	⊥	▱
	0.05	0.10	0.15	0.20	1°	0.02	0.02	0.03	0.05



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-L antenna	unit	mm	scale	1:1	RF	WANG QIANG
Part Number	12-2261X-010-1	Third perspective				check	ZHOU KANG
material	Electrolytic copper PI					ratify	ZHANG LEI
Save Path						current version	A