

SPECIFICATION

Daxian Communication Technology Limited



Shenzhen Daxian Technology Co., Ltd.

lchse TUL01 Left ear
Bluetooth headset antenna

Material Recognition Letter

Guest households	lchse	frequency band	2400MHz~2500MHz
Project name	TUL01	version	V2.0
Material No.	1T-U01XX-096	color	Black
R F design	Lei.Zhang	structure design	YeZhi.Bi
Quality Manager	Ziyin.Hu	R & D director	Lei.Zhang
Date	2022-12-22		

client confirmation:

Whether the assembly meets your requirements: OK NG

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Change resume

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– **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 TU01 antenna. Figure 1 shows the antenna designed by the display.



Whole machine appearance chart

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

1.2 Antenna composition

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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:

BAND	CH	TRP (dBm)	TIS (dBm)
BT	0	4.59	-88.05
	37	5.28	-88.18
	78	6.57	-88.29

Passive Test:

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	45.47	-3.42	1.63
2410	43.98	-3.57	1.36
2420	41.61	-3.81	1.26
2430	43.87	-3.58	0.31
2440	44.89	-3.48	0.65
2450	40.69	-3.9	1.08
2460	38.78	-4.11	0.98
2470	38.04	-4.2	1.07
2480	38.54	-4.14	0.96
2490	38.42	-4.15	1.37
2500	38.68	-4.13	1.54

OTA head mold active test

BAND	CH	TRP (dBm)	TIS (dBm)
BT	0	-2.74	-81.06
	37	-1.57	-81.24
	78	-1.32	-81.27

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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!

5、 Attachment chart

5.1 VSWR parameter diagram

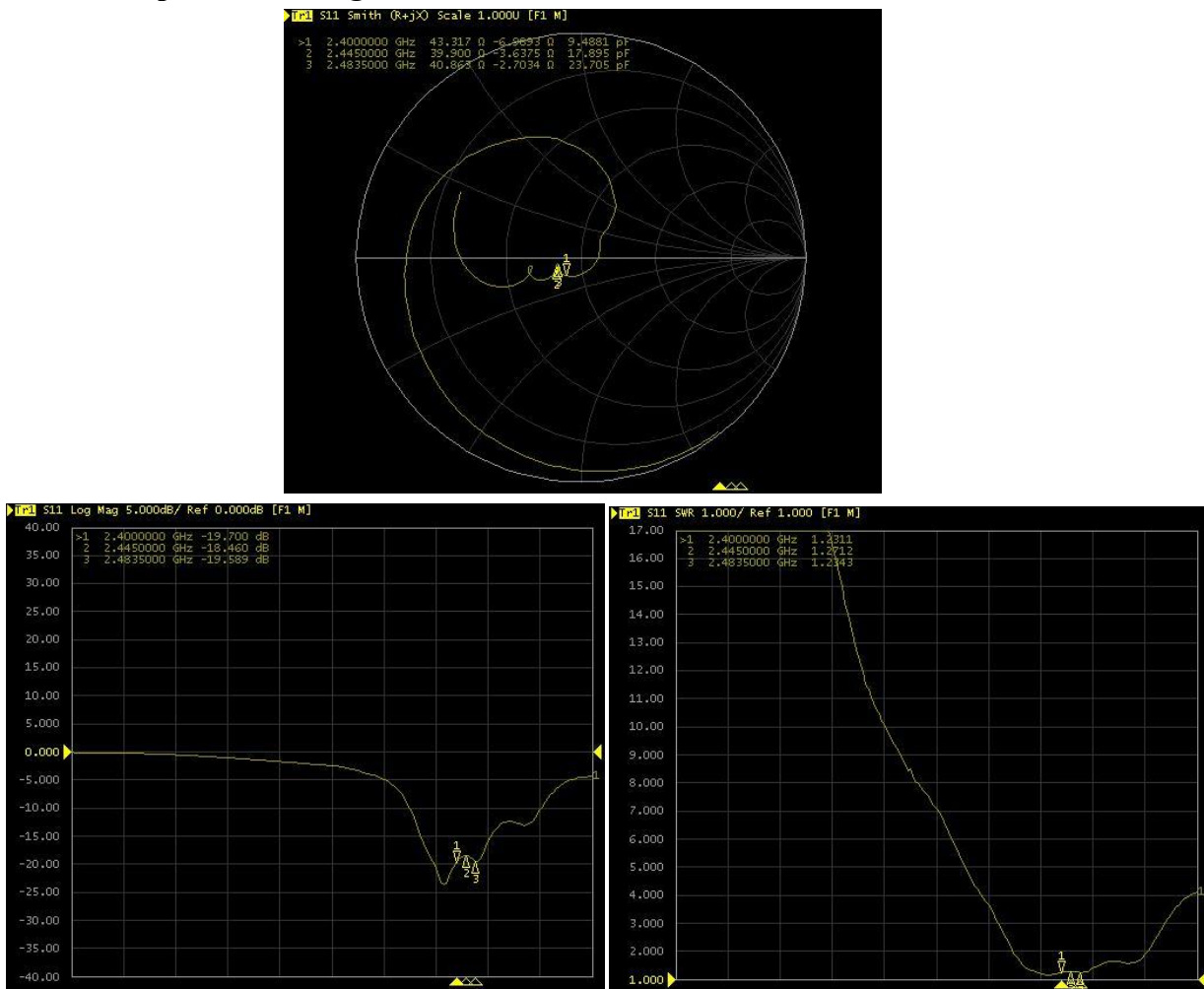


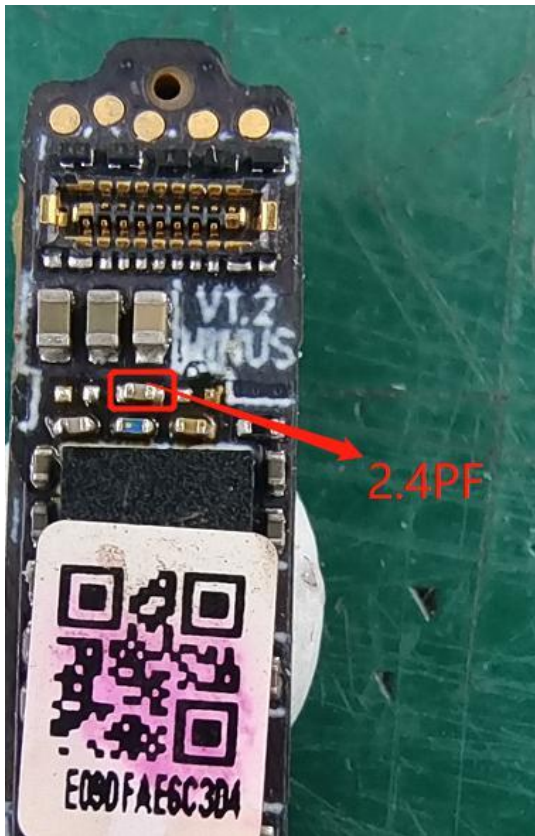
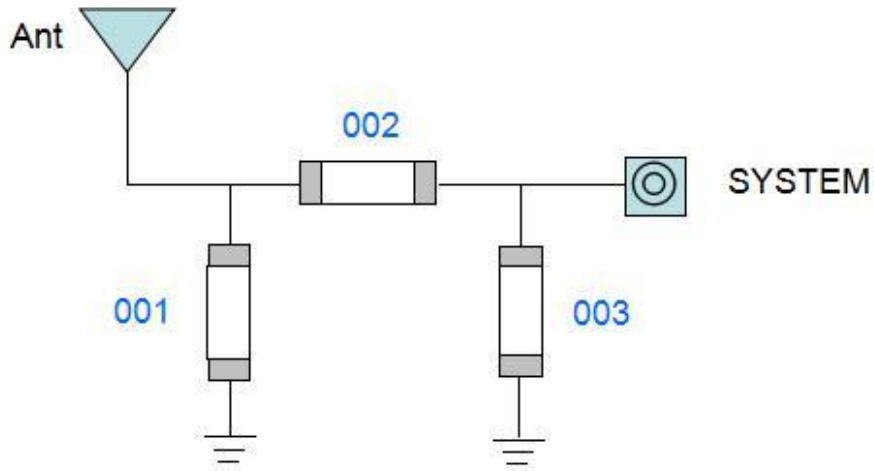
Figure 3

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5.2 Matching circuit



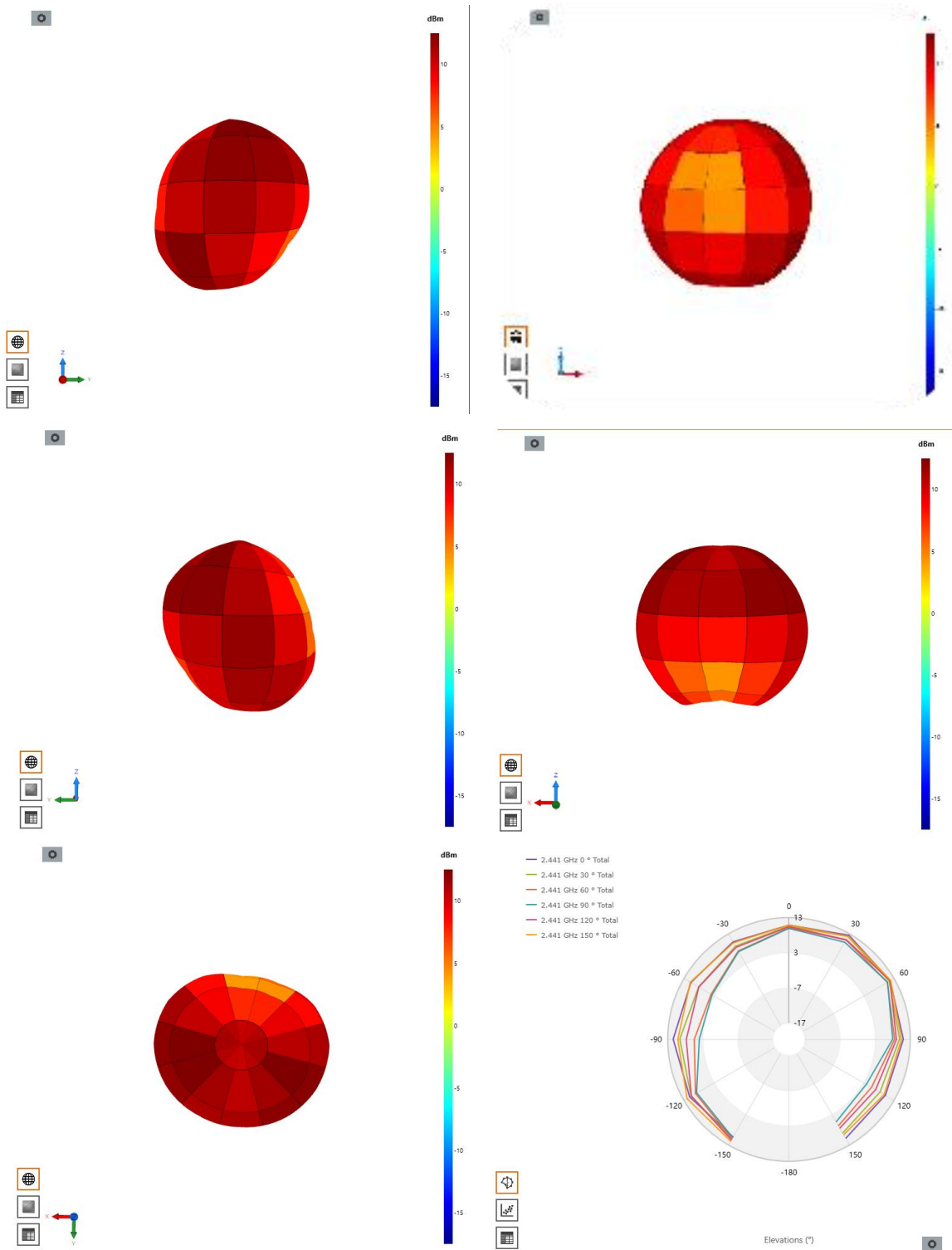
Element	Value	Value
E001	NC	NC
E002	2.4PF	2.4PF
E003	NC	NC

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6、Passive field pattern-L:



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7、 Environmental treatment



As shown on the left, the battery QR code direction toward the motherboard Put in, the battery line negative electrode is fixed around the battery Next to the bottom (the left and right ears are shared);
如左图示， 电池二维码方向朝主板摆放， 电池线负极固定环绕在电池底部旁边（左右耳共用）；



The positive and negative electrodes of the battery line go from bottom as shown on the left Welding, placing (left and right ears shared);
电池线正负极如左图所示 从下往上焊接、摆放（左右耳共用）；



The battery line is welded as shown in the left picture, with the positive ear of the battery facing the top of the front chamber, parallel to the nozzle of the earphone spout, 焊接好电池与喇叭后，使用双面胶将排线固定在电池侧面，
Battery positive wire 10mm
电池正极线 10mm
Battery negative wire 25mm
电池池负极线 25mm
The horn line is 10mm long.
(Left and right ears are shared)
喇叭线长 10mm。（左右耳共用）

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1	2	3	4	5	6	7	8
A	B	C	D	A	B	C	D

