

# SPECIFICATION

Daxian Communication Technology Limited



**Shenzhen Daxian Technology Co., Ltd.**

Eastech TW2110 Right ear  
Bluetooth headset antenna

## Material Recognition Letter

Guest households	Eastech	frequency band	2400MHz~2500MHz
Project name	TW2110	version	V2
Material No.	2T-W2110-101	color	Yellow
R F design	Qiang.Wang	structure design	Yezhi.Bi
Quality Manager	Ziyin.Hu	R & D director	Lei.Zhang
Date	2022-12-02		

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			2022. 12. 02	

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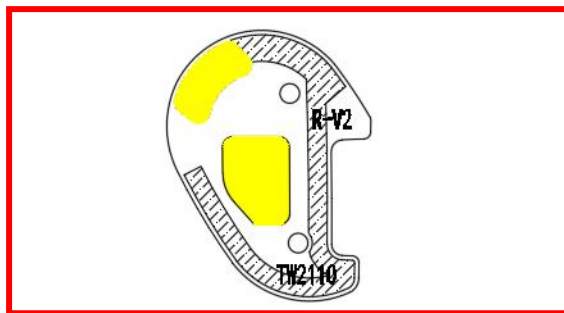
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## – Project description

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

## 一、 BT antenna

This report provides a variety of measurements of the electrical performance of the TW2110 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	$\leq 3$

### 1.2 Antenna composition

The antenna is mainly composed of FPC.

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## 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:**

Passive testing:

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	19.76	-7.04	-3.2
2410	22.63	-6.45	-2.75
2420	24.51	-6.11	-2.42
2430	25.93	-5.86	-2.33
2440	25.43	-5.95	-2.25
2450	25.63	-5.91	-2.13
2460	24.59	-6.09	-2.15
2470	23.97	-6.20	-2.18
2480	23.23	-6.34	-2.23
2490	23.41	-6.31	-2.09
2500	21.55	-6.67	-2.41

Active test:

Right ear			
BAND	CH	TRP (dBm)	TIS (dBm)
BT	0	1.08	-90.17
	39	2.70	-90.92
	78	2.91	-90.71

### 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、 Attachment chart

### 5.1 VSWR parameter diagram

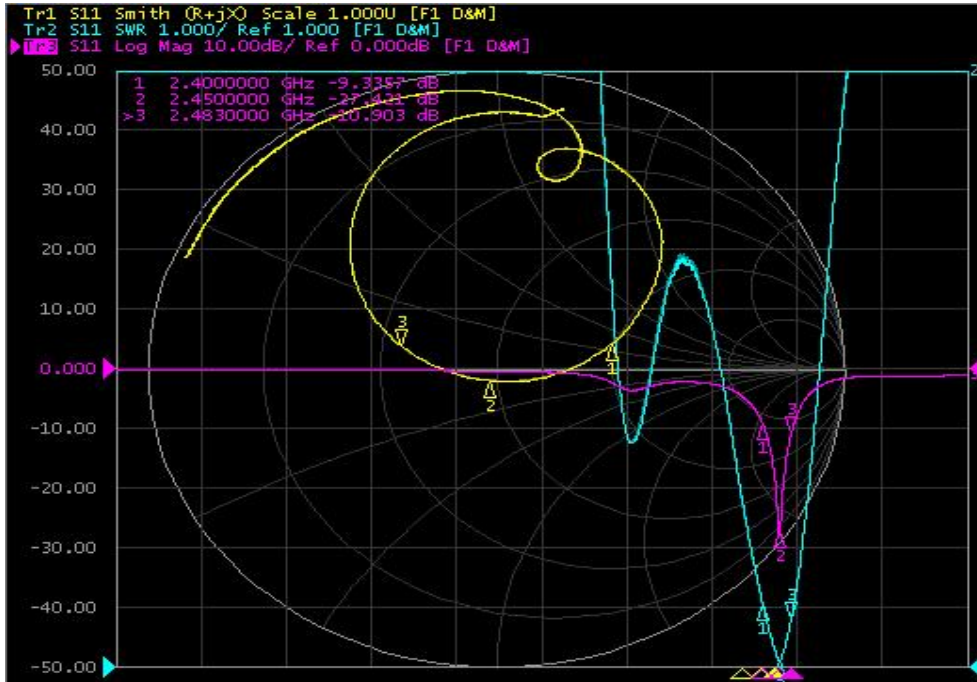
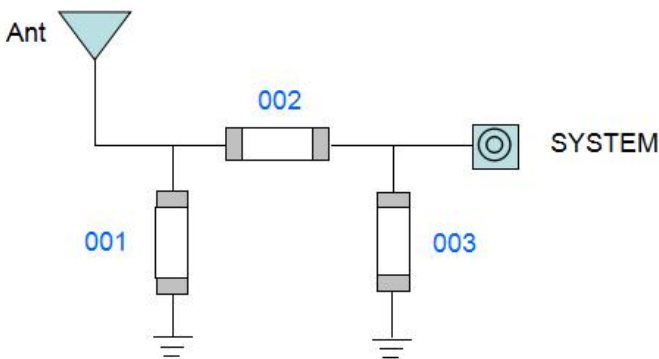


Figure 3

### 5.2 Matching circuit



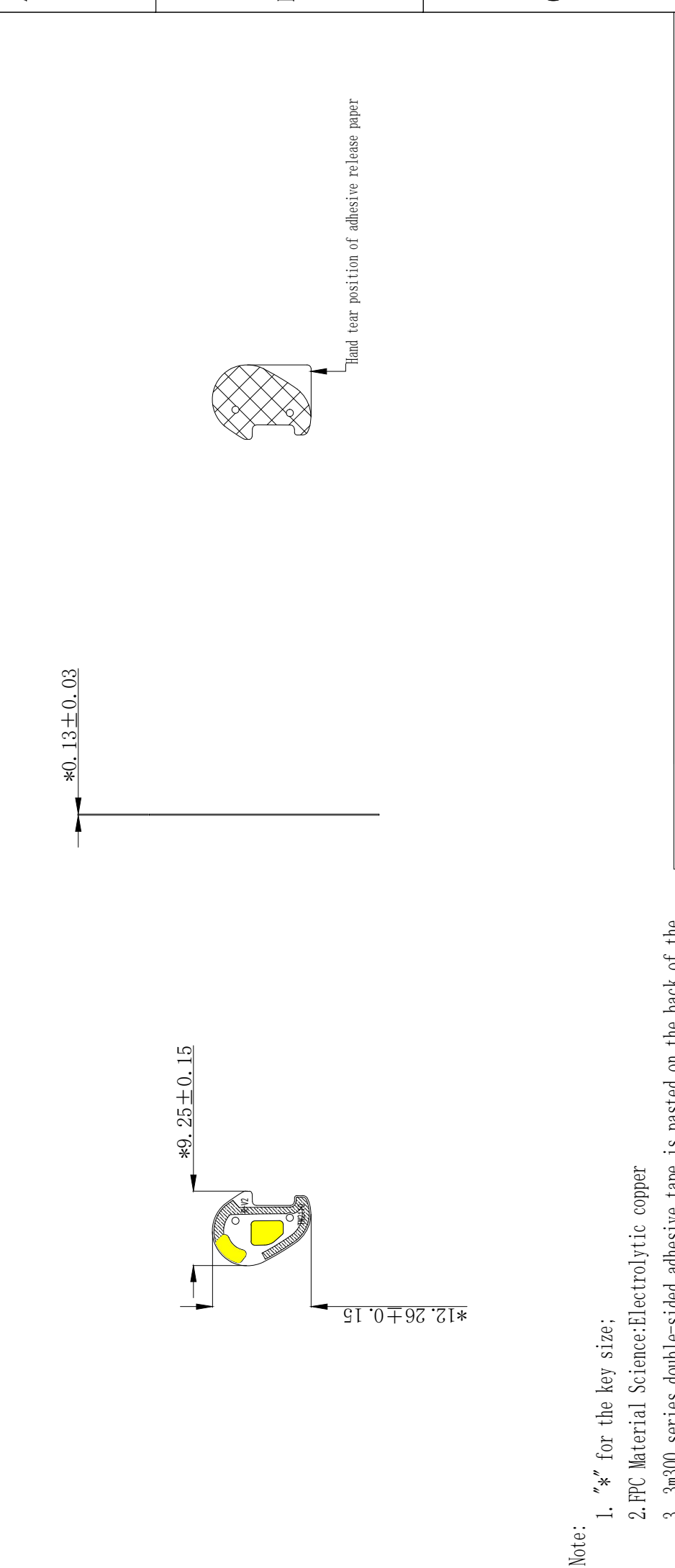
Element	Left	Right
001	N/C	N/C
002	0欧姆	1.8PF
003	N/C	N/C

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1		2		3		4		5		6	
The third perspective								Angle		⊥	
Unit	mm	Proportion		0~10		10~30		30~50		50~	
		1:1		0.05		0.10		0.15		0.20	
				0.02		0.02		0.02		0.03	
				0.02		0.02		0.02		0.05	



A		B		C		D	
Note:		1. "*" for the key size;		2. FPC Material Science: Electrolytic copper		3. 3m300 series double-sided adhesive tape is pasted on the back of the product	
4. No tolerance dimension is marked, and the tolerance of die stamping dimension is ± 0.1		5.  Gold plated area,  Copper foil area,  Gum;		Shenzhen Daxian Technology Co., Ltd.		2022/11/01	
A		New Figure		Description		Date	
version		1		2		3	
Model		TW2110		Product color		yellow	
Project Coding		CT-W2110-101		MoI dsurfacetreat ment		Structural Design	
Part Name		BT-R FPC				RF design	
Parts coding		2T-W2110-101-1				Check	
Material		PI Electrolytic copper				Approve	
Save Path						current version	
						A	
						6	