

# SPECIFICATION



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

Risuntek TWS-2066 Left ear  
Bluetooth headset antenna

## Material Recognition Letter

Guest households	Risuntek	frequency band	2400MHz~2500MHz
Project name	TWS-2066	version	V22
Material No.	2W-2066-124	color	Black
R F design	Peng.Hu	structure design	RuiBin.Zhou
Quality Manager	Jin.Yang	R & D director	Lei.Zhang
Date	2024-05-06		

client confirmation:

Whether the assembly meets your requirements: OK NG

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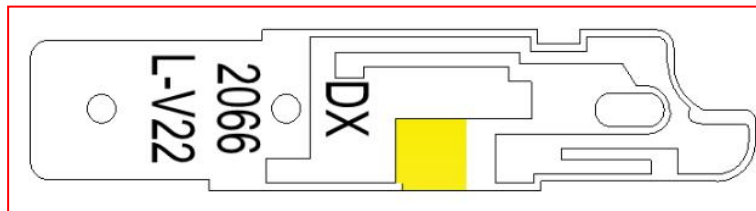
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## I、 Project description

<b>Customer name:</b>	Risuntek
<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>

## II、 BT antenna

This report provides a variety of measurements of the electrical performance of the TWS-2066 antenna. Figure 1 shows the antenna designed by the display.



antenna appearing diagram

Figure 1

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## 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	$\leq 3$

## 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:**

##### OTA Active Test:

L (left ear) free space			
BAND	CH	TRP	TIS
E543	0	4.33	-88.62
	39	4.62	-89.35
	78	5.11	-88.86
L (left ear) head mold			
BAND	CH	TRP	TIS
E543	0	-4.63	-80.15
	39	-4.16	-80.29
	78	-3.89	-80.11

##### Passive Test:

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	20.82	-6.81	-0.45
2410	21.67	-6.64	-0.49
2420	21.84	-6.61	-0.76
2430	22.29	-6.52	-0.89
2440	22.75	-6.43	-0.8
2450	23.39	-6.31	-1.01
2460	23.12	-6.36	-0.98
2470	23.77	-6.24	-0.97
2480	23.52	-6.29	-0.96
2490	21.77	-6.62	-1.01
2500	20.5	-6.88	-0.85

### 4、 conclusion:

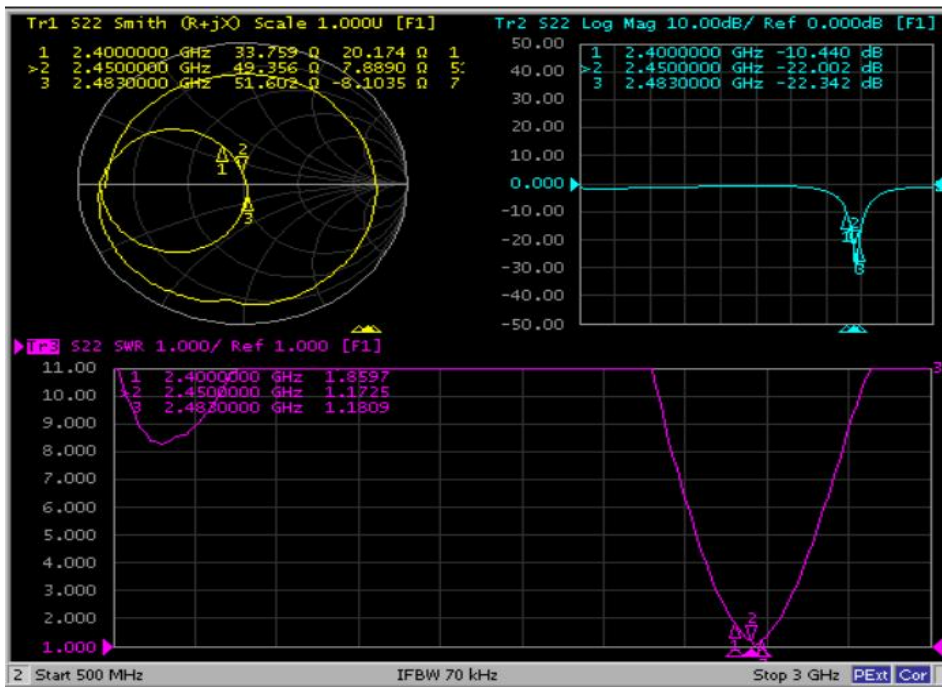
This antenna is designed on the basis of the prototype provided by the customer, electrical parameters and structural performance have reached the technical requirements, please confirm!

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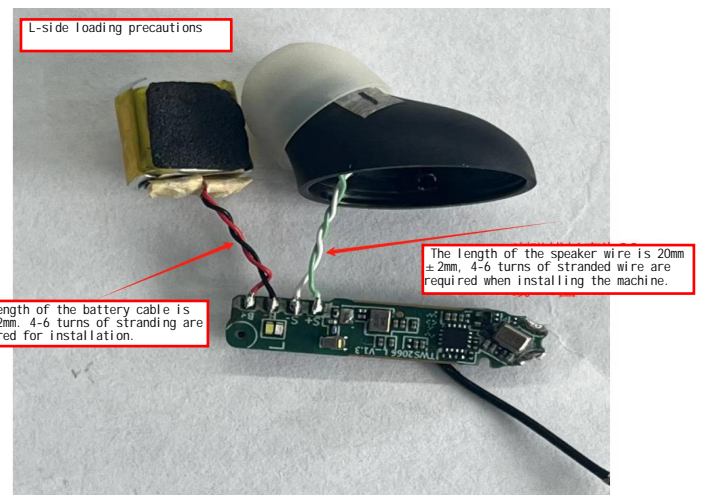
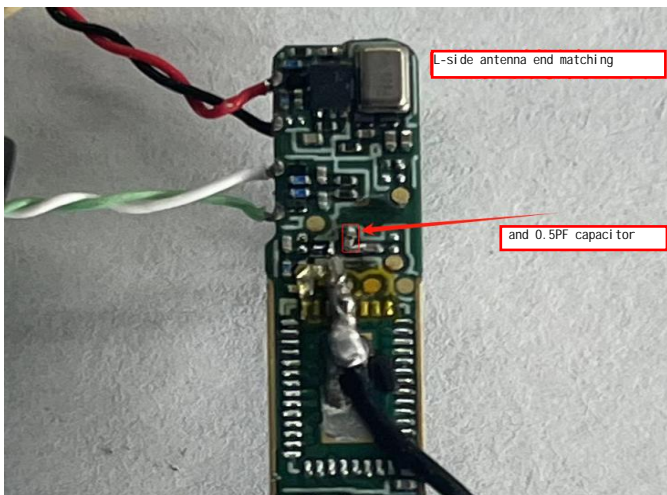
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## 5、 VSWR parameter diagram-left ear



## 6、 Loading Notes:



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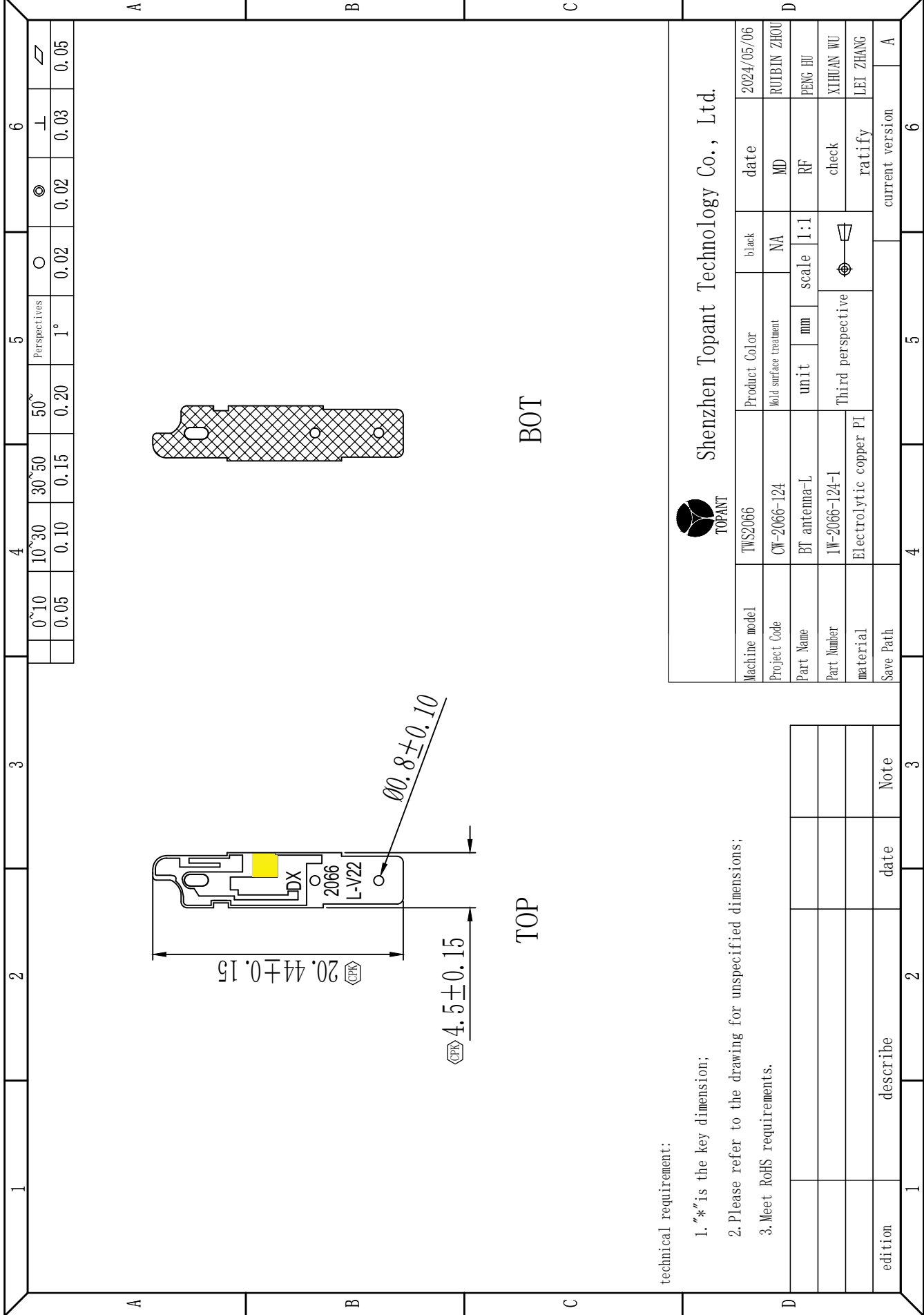
## Bill of materials

Client: Risuntek Model: TWS-2066 Project No.: CW-2066-124 Date: March 14, 2024 No.: QR/RD-P01-10 Version: A1

Serial Number	Material Number	Brand Name	Typology	Releases	Norm	Makings	Color	Work Unit	Dosage	Note
1	1W-2066-124	Bluetooth Antenna-L Finished Product	Z	A						
1	1W-2066-124-1	Bluetooth Antenna-L FPC	W	A	20.44*4.5*0.13mm	Single-sided pair of half-substrate copper foil, 3M9471 adhesive backing, surface printing black oil, gold plating $\geq 0.05\mu\text{m}$	Black	PCS	1	Half-cut shipment
2	2W-2066-124	Bluetooth Antenna-R Finished Product	Z	A						
1	2W-2066-124-1	Bluetooth Antenna-R FPC	W	A	20.44*4.5*0.13mm	Single-sided pair of half-substrate copper foil, 3M9471 adhesive backing, surface printing black oil, gold plating $\geq 0.05\mu\text{m}$	Black	PCS	1	Half-cut shipment
Note: 1. Packaging materials and components must comply with RoHS and REACH requirements.										
Type: W: Outsourced B: Homemade Z: Finished product										



Approved by: Lei.Zhang      Reviewed by: Xin. Xu      Scheduled by: Rujin. Zhou



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

		Shenzhen Topant Technology Co., Ltd.			
Machine model	TWS2066	Product Color	black	date	2024/05/06
Project Code	CW-2066-124	Mold surface treatment	NA	MD	RUBIN ZHOU
Part Name	BT antenna-L	unit	mm	scale	1:1
Part Number	IW-2066-124-1	Third perspective	RF	check	PENG HU
material	Electrolytic copper PI			ratify	XIHUAN WU
Save Path				current version	LEI ZHANG
					A