

SPECIFICATION

Daxian Communication Technology Limited

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

3nod B-1296 Bluetooth antenna

Product specification

Guest households	3nod	frequency band	2400MHz~2500MHz
Project name	B-1296	version	V03
Material No.	1L-ibrex-111	color	Black
R F design	Chuan.Shen	structure design	Yezhi.Bi
Quality Manager	Ziyin.Hu	R & D director	Lei Zhang
Date	2023-03-28		

client confirmation:

Whether the assembly meets your requirements: ☐OK ☐NG**Shenzhen Topant Technology Co., Ltd.**

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Confidential requirement

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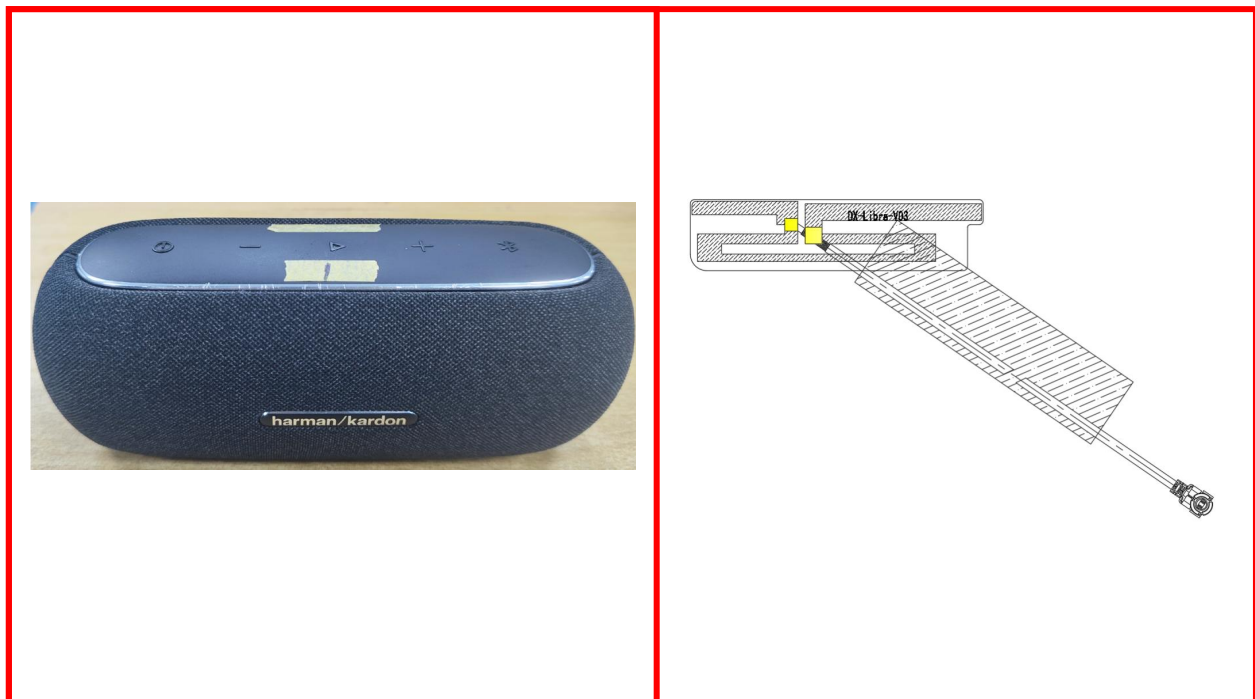
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— Project description

Customer name:	3nod
Whole machine type:	BT antenna
Antenna band:	2400 ~ 2500MHz
Antenna form:	FPC+Coaxial line+Wire sponge
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 B-1296 antenna. Figure 1 shows the antenna designed by the display.



Whole machine appearance chart

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
BT	2400 ~ 2500	≤ 2

1.2 Antenna position picture



1.3 Antenna composition

The antenna is mainly composed of FPC+Coaxial line+Wire sponge.

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2、 The Equipment of Active Test

Satimo 3D Chamber $6 \times 4 \times 4$ (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:

BAND	CH	TRP (dBm)	TIS (dBm)
BT	0	6.76	-88.78
	39	7.47	-88.65
	78	7.89	-88.54

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OTA Passive Efficiency&Gain Test:

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	55.36	-2.57	2.08
2410	55.89	-2.53	2.14
2420	56.01	-2.52	2.25
2430	56.17	-2.50	2.37
2440	57.09	-2.43	2.29
2450	57.39	-2.41	2.38
2460	57.32	-2.42	2.34
2470	56.41	-2.49	2.36
2480	56.79	-2.46	2.29
2490	55.58	-2.55	2.16
2500	55.46	-2.56	2.03

4、 Attachment chart

4.1 VSWR parameter diagram

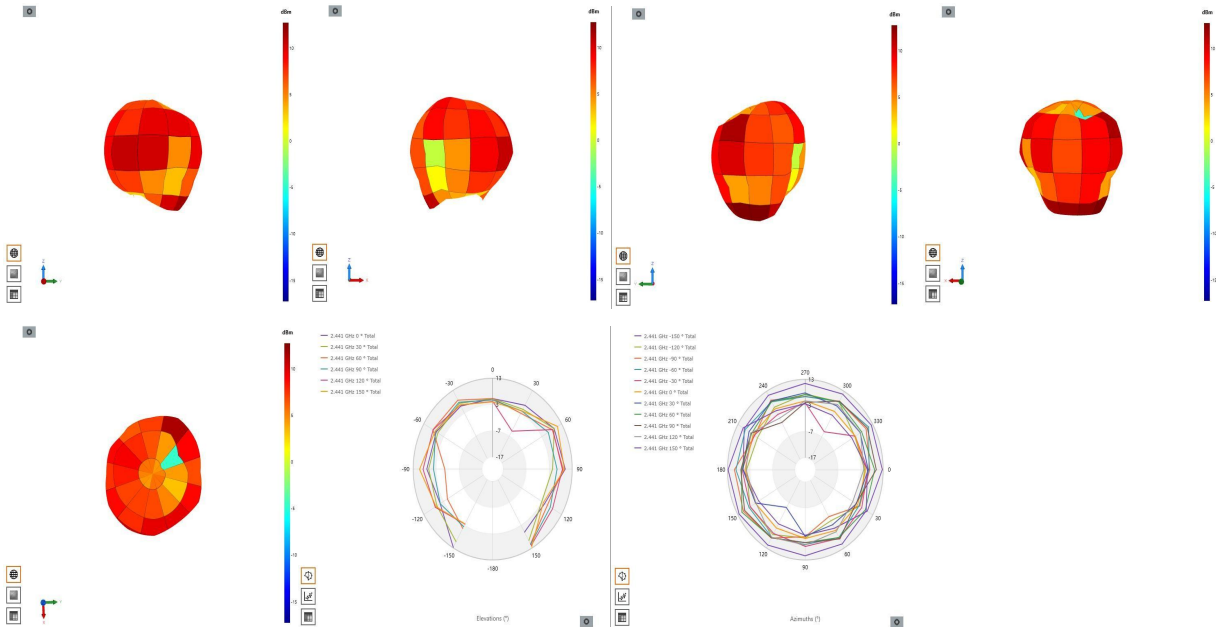


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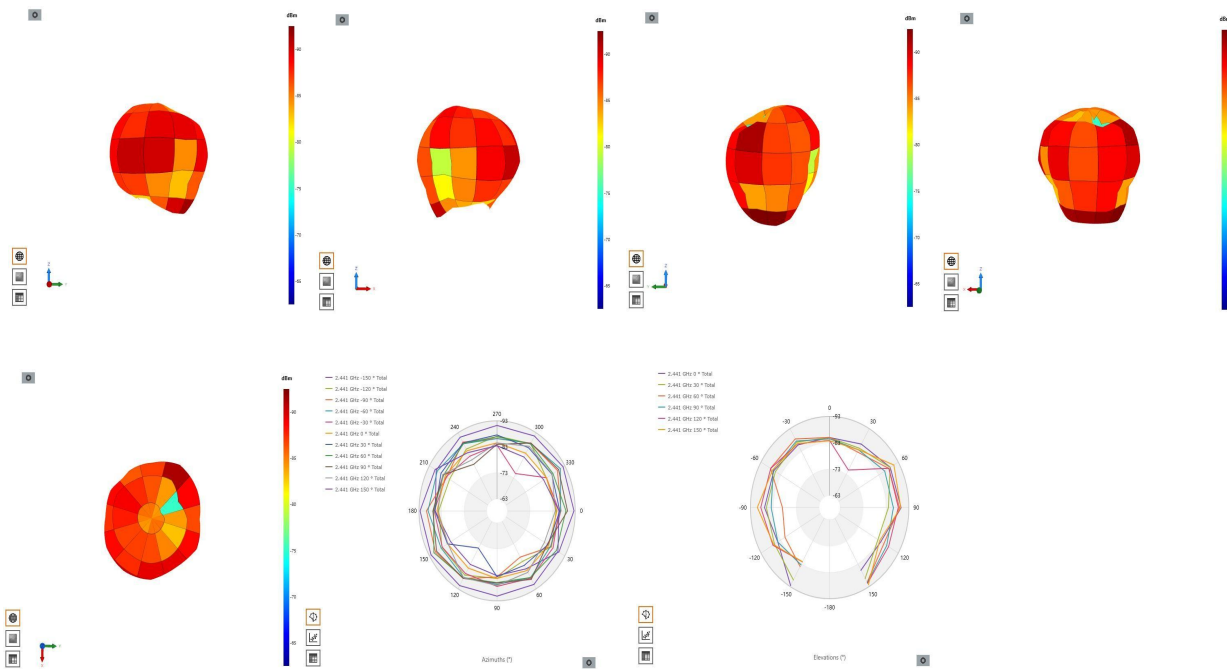
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5、Antenna active field pattern diagram--TRP



5.1 Antenna active field pattern diagram--TIS

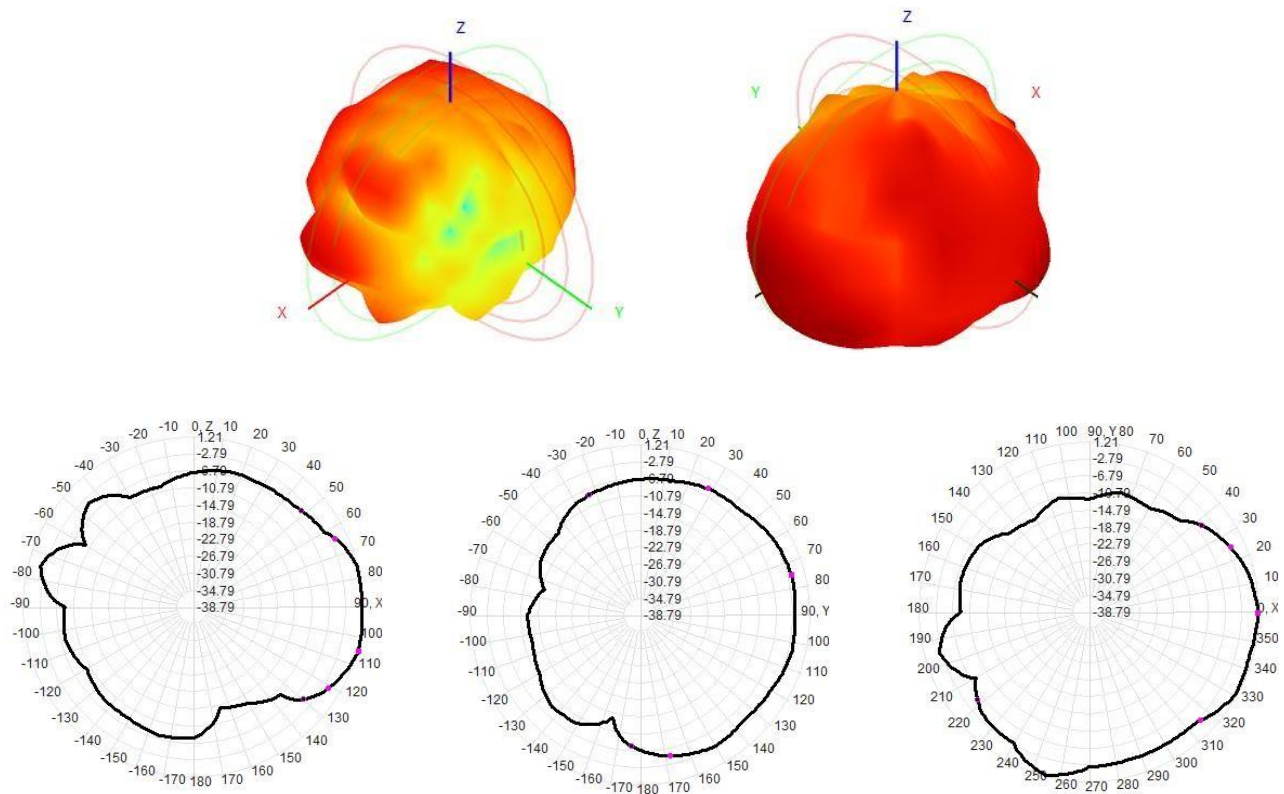


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6、Antenna passive field pattern diagram



7、conclusion:

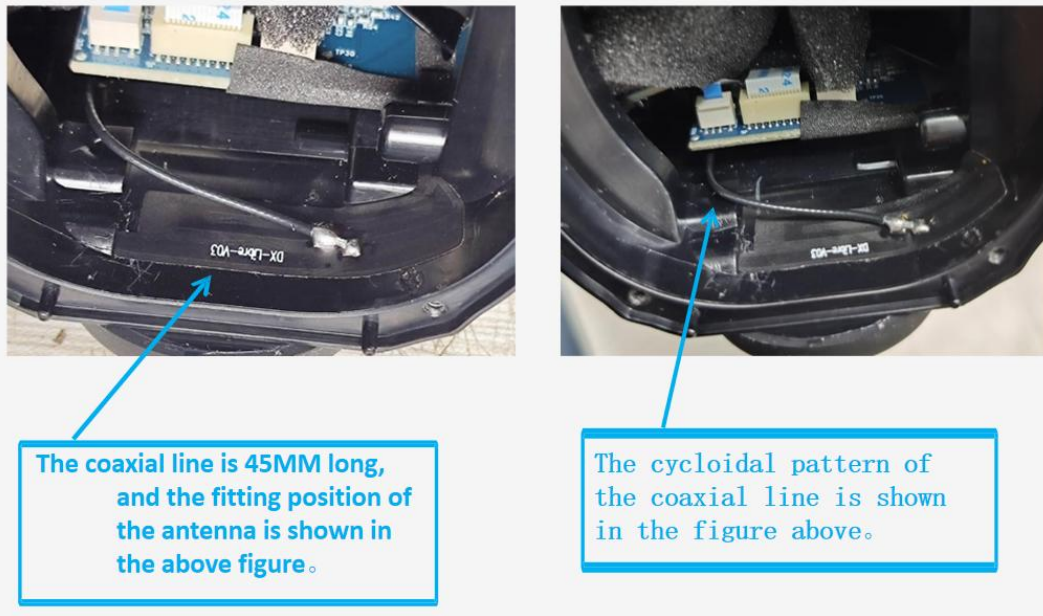
This antenna is designed on the basis of the prototype provided by the customer, electrical parameters and structural performance have reached the technical requirements, please confirm!

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8、Antenna assembly method



9、Pull distance test



Test site	Machine placement direction	BT (Iphone13)	BT (Iphone6s)
Crane Island 鹤洲	Front	100m	90m
	Behind	100m	90m
	Left	100m	90m
	Right	100m	90m

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10、Harman Attenuation Laboratory Test Data





Machine direction surface	Length of coaxial line 35MM	Length of coaxial line 40MM	Length of coaxial line 45MM
Front	21 db	24 db	27 db
Left	23 db	26 db	29 db
Behind	25 db	24 db	28 db
Right	24 db	25 db	29 db

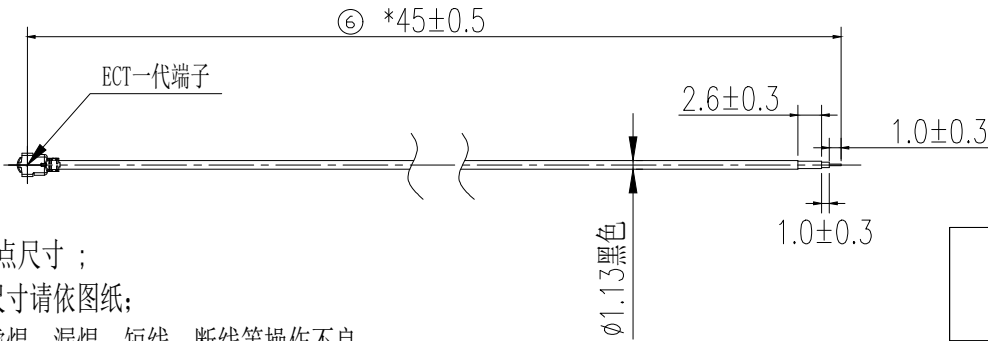
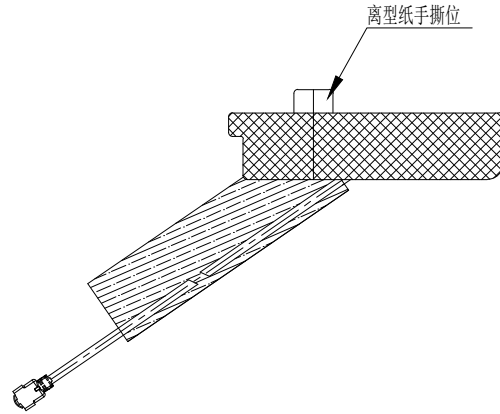
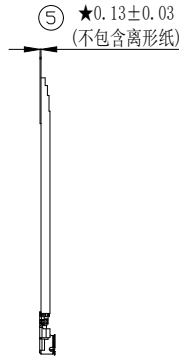
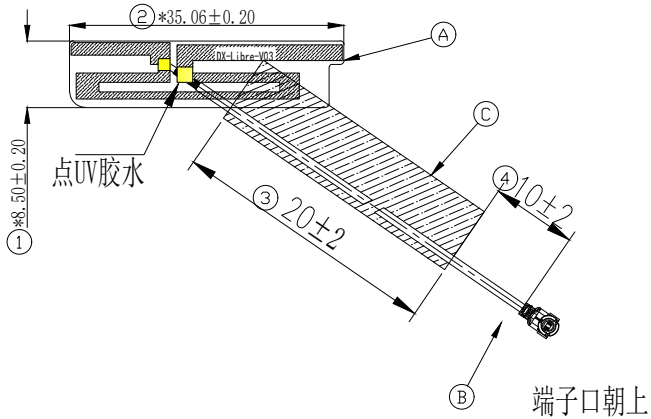
Harman BT's attenuation test standard, coupled with line loss, does not cause the machine to play music stuck, and each side cannot be lower than 25 db。

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1			2		3		4		5		6				
第三视角							0~10	10~30	30~50	50~	角度	○	◎	⊥	
单位	mm	比例				1:1		0.05	0.10	0.15	0.20	1°	0.02	0.02	0.03



- 注:
- 1."*"为重点尺寸；
 - 2.未标注尺寸请依图纸；
 - 3.不可有虚焊、漏焊、短线、断线等操作不良；
 - 4.符合 RoHS 要求。

C	线材海绵	PUF	黑色	
B	端子同轴线	Cable线	黑色	
A	FPC	电解铜 PI	黑色	
序号	零件名称	材质	颜色	备注



深圳大显科技有限公司

Shenzhen Topant Technology Co., Ltd.

机 型	B-1296	产品颜色	黑色	日 期	2023/2/26	
项目编码	CL-ibrex-111	模面处理		结构设计	闭业智	
零件名称	成品图纸			射频设计	沈川	
零件编码	1L-ibrex-111			审 核	胡俊	
材 质	FPC+线材海绵+同轴线			批 准	张磊	
保存路径					当前版本	A

A	首次发行	2023.2.26	
版 本	描述	日期	备注