

SPECIFICATION



深圳市大显科技有限公司

Shenzhen Daxian Technology Co., Ltd.

敦拓 JBL Tune 730 BT 天线

Dotop JBL Tune 730 BT Antenna

产品规格书

Product Specification

客户 connection	敦拓 Dotop	频段 frequency range	2400 ~ 2500MHz
项目名称 entry name	JBL Tune730	版本 edition	V1.0
物料编号 Material No	/	颜色 Color	/
客户料号 Customer Item Number			
R F 设计 R F Design			
品质经理 Quality Manager	潘永杰 YongJie.Pan	技术总监 Technical Director	
日期 Date	2025-06-27		

客户确认:

Customer confirmation:

装配是否符合贵司要求: OK NG

Whether the assembly meets your company's requirements: OK NG

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I、项目说明 Project Description

客户名: Customer Name:	敦拓 Dotop
整机类型: Type of complete machine:	头戴式耳机 Headset
天线频段: Antenna band:	2400 ~ 2500MHz
天线形式: Antenna form:	PIFA 天线 PIFA Antenna
馈电形式: Feed form:	PCB 板板载 PCB on-board

II、BT 天线 BT Antenna

1 规格 specifications

本报告主要提供 JBL Tune730 项目天线的各项电气和结构性能参数的测试状况。

This report mainly provides the testing status of various electrical and structural performance parameters of the antenna for the JBL Tune730 project.

1.1 电气规格标准 Electrical specifications and standards

1.1.1 电性能指标 Electrical performance index

天线工作频段在 2400 ~ 2500 MHz。下表是大显设计和量产天线的电性能的指标。

The operating frequency band of the antenna is between 2400 and 2500 MHz. The following table shows the electrical performance indicators of large display design and mass production antennas.

Frequency Range	Frequency (MHz)	VSWR
BT	2400 ~ 2500	≤ 2

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1.1.2 电路匹配 Circuit Matching

1.2 结构规格标准 Structural specifications and standards

1.2.1 天线组成 Antenna composition

天线主要是由 PCB 板板载 组成。

The antenna is mainly composed of PCB On-Board .

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2、测试设备 The Equipment of Active Test

Satimo 3D Chamber 4×4×4(m)

CMW500 E5071C

Network analyzer-R&S ZVL

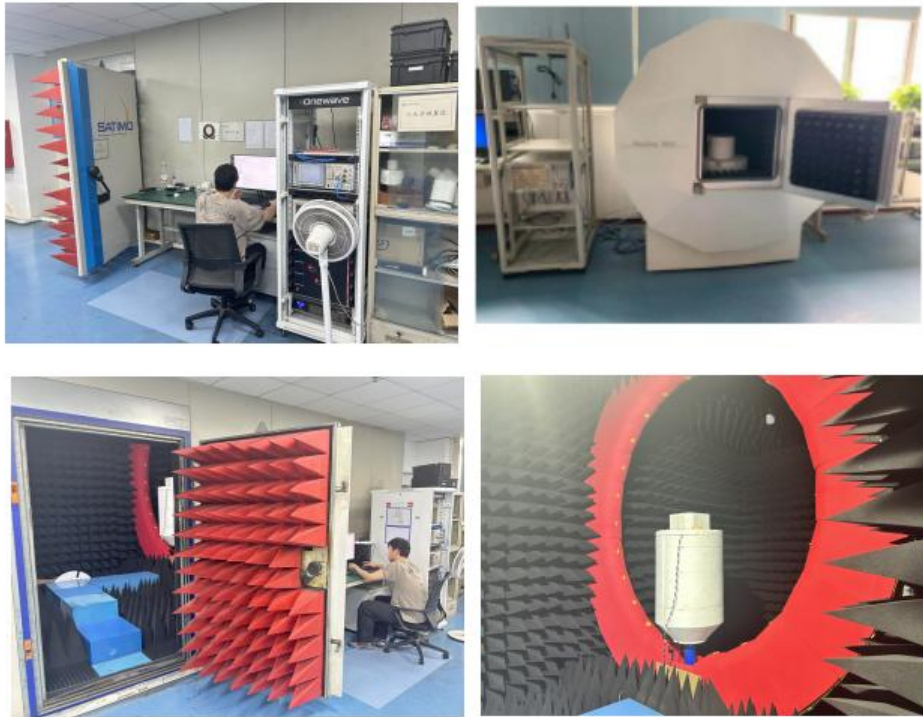


图 2

Figure 2

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3 测试 test

3.1 驻波(VSWR)的测试 Test of standing wave (VSWR)

3.1.1 测试连接: VSWR 测试装置依次连接为: R&S ZVL 网络分析仪 → 测试线 → 测试治

Test connection: The VSWR test device is sequentially connected as follows: R&S ZVL network analyzer → test line → test fixture

实测(附图)Actual measurement (attached drawing)

3.2 增益及效率、功率 (TRP)、灵敏度 (TIS) 的测试

Gain and efficiency, power (TRP), sensitivity (TIS) testing

3.2.1 测试的场地 Test site:

大显微波暗室。测试频率范围为 400MHz—6GHz, 静区范围为 50cm 圆周, 反射率小于-50 dB。

Large display microwave anechoic chamber. The test frequency range is 400MHz - 6GHz, the static zone range is 50cm circumferential, and the reflectivity is less than -50dB.

3.2.2 测试的仪表 Tested Instruments:

R&S ZVL 网络分析仪、CMW500 E5071C、标准喇叭天线、法国 SATIMO-SG24SYSTEM 系统、打印机等。

R&S ZVL network analyzer, Agilent 8960 E5515C, standard horn antenna, French SATIMO-SG24SYSTEM system, printer, etc.

3.2.3 测试数据 : 在微波暗室中, 测试的功率和灵敏度相关的数值如下表

Test data: In a microwave anechoic chamber, the values related to the power and sensitivity tested are shown in the table below

OTA 有源测试 OTA Active Test:

自由空间状态			
	CH	TRP (dBm)	TIS (dBm)
R	0	5.98	-93.76
	39	6.37	-92.76
	78	5.77	-92.37

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无源效率&增益 **Passive efficiency&gain:**

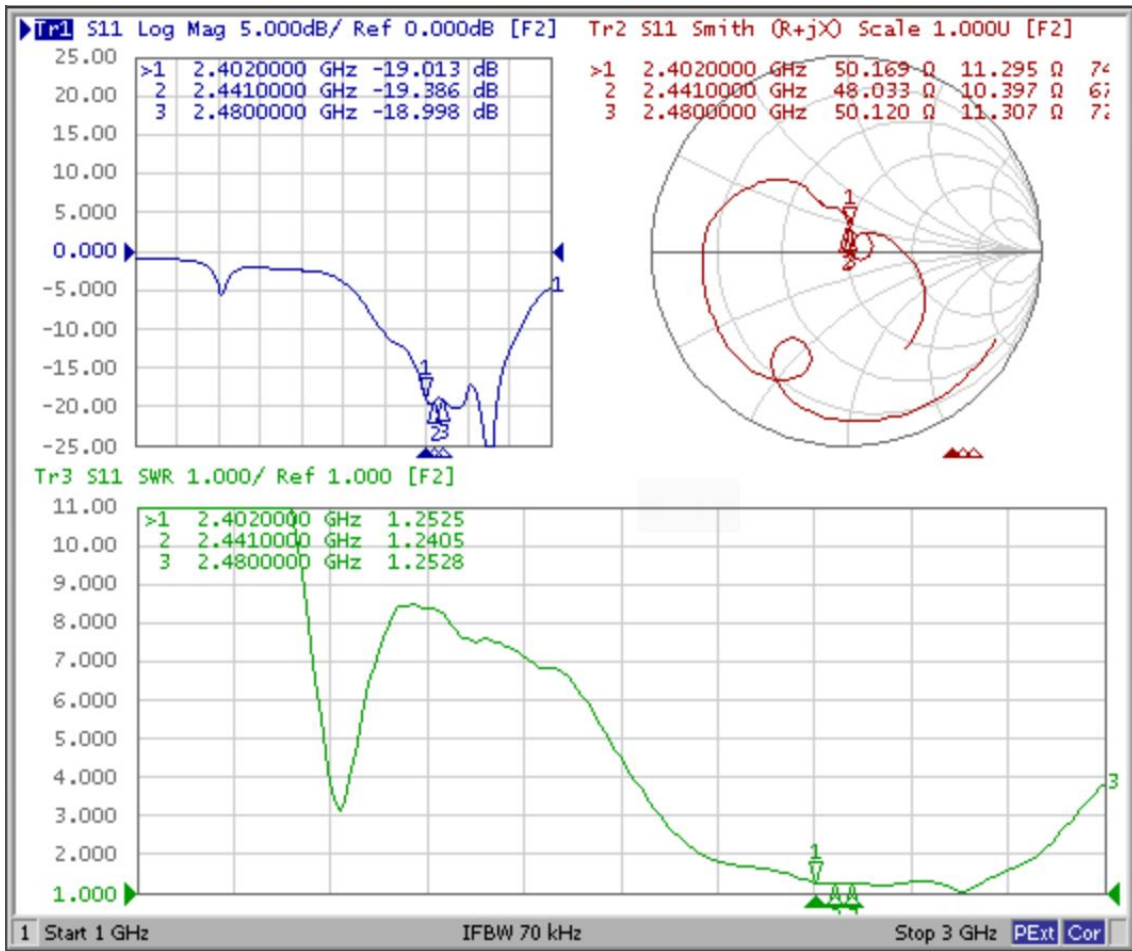
自由空间状态 : **free space state**

Frequency (MHz)	Efficiency (%)	Gain (dBi)
2400	46.51	1.35
2410	46.06	1.38
2420	45.98	1.4
2430	46.33	1.41
2440	46.2	1.38
2450	45.82	1.36
2460	45.44	1.34
2470	44.59	1.3
2480	43.54	1.26
2490	42.57	1.24
2500	41.41	0.88
AVG	44.95	1.3

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4、VSWR 参数图 VSWR parameter diagram



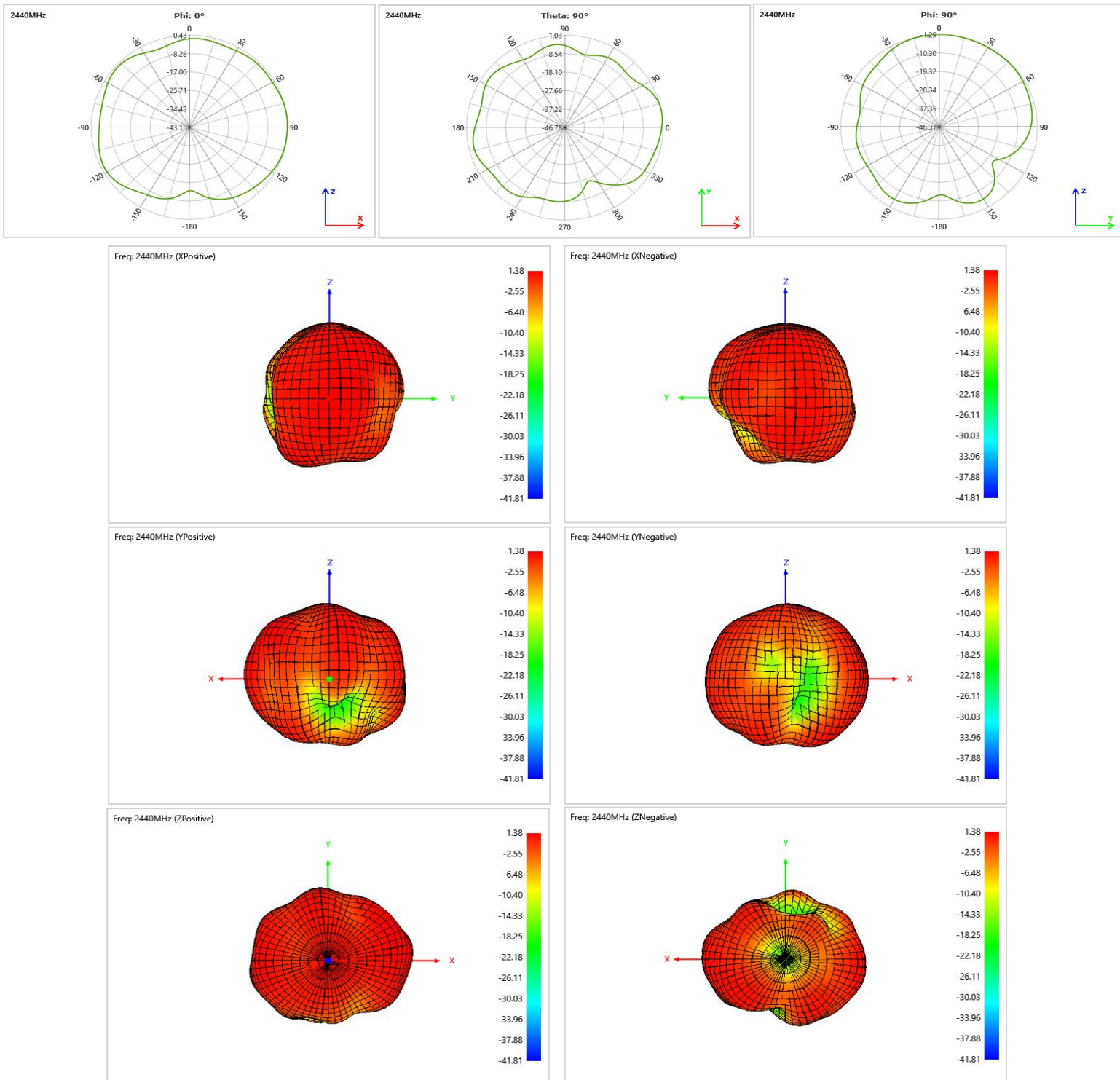
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5、无源场型图 Passive field pattern diagram:

自由空间状态 : free space state

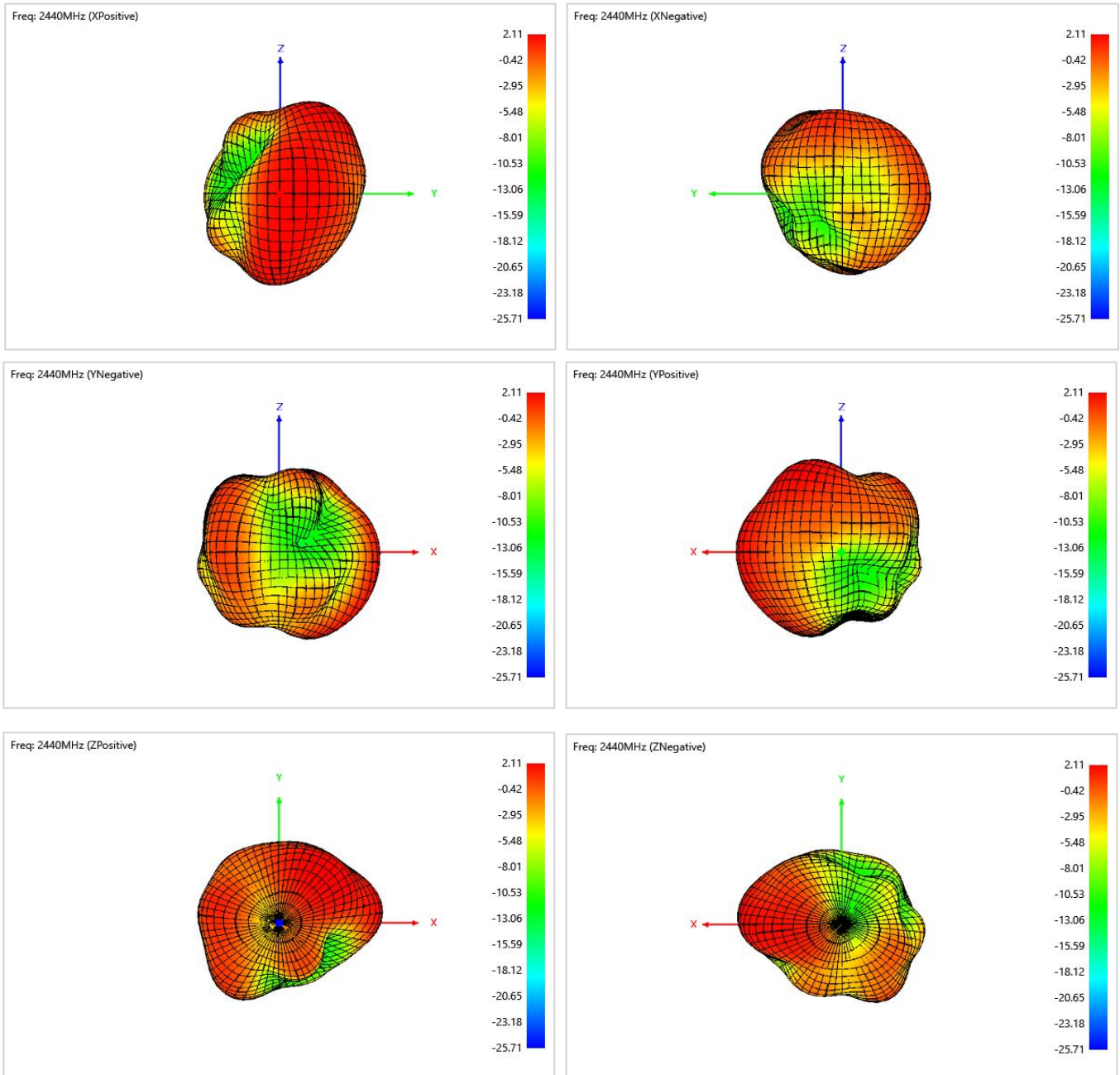


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6、有源 OTA 测试场型图：Active OTA Test Field Patterns:

自由空间状态：free space state



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