

SPECIFICATION



Daxian Communication Technology Limited

深圳市大显科技有限公司

Shenzhen Daxian Technology Co., Ltd.

佳禾 CI-G031T 左耳蓝牙耳机

Cosonic CI-G031T Left ear Bluetooth antenna

产 品 规 格 书

Product Specification

客 户 connection	佳禾 Cosonic	频 段 frequency range	2400 ~ 2500MHz
项目名称 entry name	CI-G031T	版 本 edition	V14
物料编号 Material No	1I-G031T-078	颜 色 Color	冷灰色 Cool Grey
客户料号 Customer Item Number	300116190126C00		
R F 设计 R F Design	陈习天 Xitian.Chen	结构设计 Structural Design	闭业智 YeZhi.Bi
品质经理 Quality Manager	杨 进 Jin.Yang	技术总监 Technical Director	张 磊 Lei.Zhang
日 期 Date	2023-09-13		

客户确认:

Customer confirmation:

装配是否符合贵司要求: ☐OK ☐NGWhether the assembly meets your company's requirements: ☐OK ☐NG

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一 项目说明 Project Description

客 户 名: Customer Name:	佳禾 cosonic
整机类型: Type of complete machine:	耳机 headset
天线频段: Antenna band:	2400 ~ 2500MHz
天线形式: Antenna form:	FPC
馈电形式: Feed form:	弹片 shrapnel
馈脚数量: Number of feed legs:	两个 Two

二 BT 天线 BT Antenna

1 规格 specifications

本报告主要提供 CI-G031T 项目天线的各项电气和结构性能参数的测试状况。下图为大显设计的天线图片。

This report mainly provides the testing status of various electrical and structural performance parameters of the antenna for the CI-G031T project. The following image shows an antenna with a large display design

天线外观图

antenna appearing diagram

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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

1.1.2 天线匹配 Antenna 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 FPC 组成。

The antenna is mainly composed of FPC.

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2、测试设备 The Equipment of Active Test

Satimo 3D Chamber $6 \times 4 \times 4$ (m)

Agilent 8960 E5515c

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、Agilent8960 E5515C、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:

L-Free space			
BAND	CH	TRP (dBm)	TIS (dBm)
BT	0	8.68	-89.58
	39	10.36	-91.05
	78	9.77	-89.81

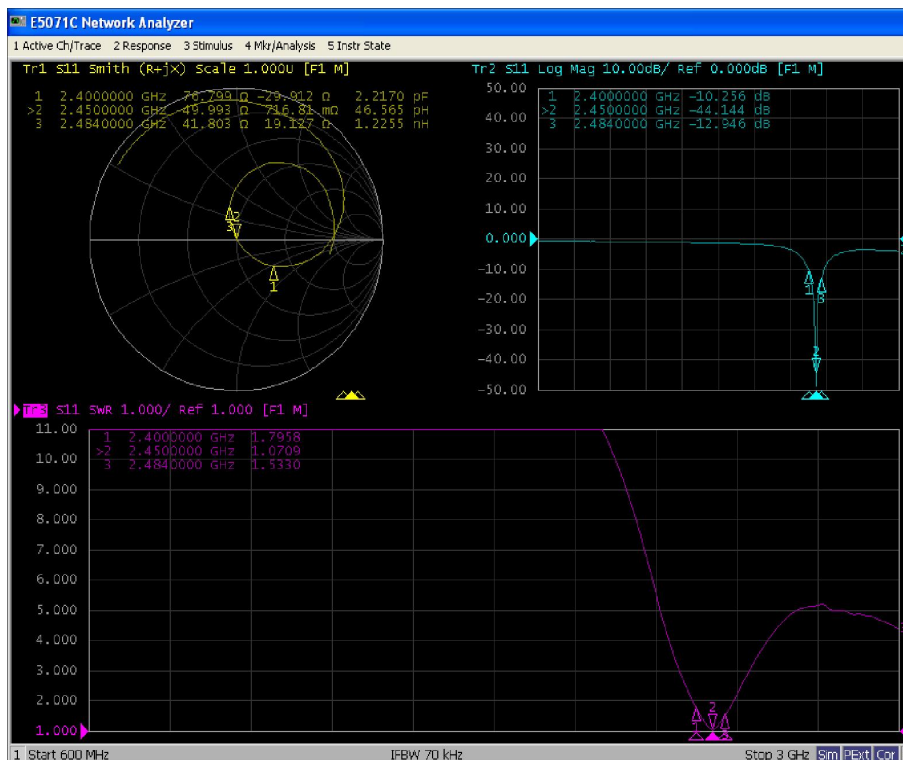
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无源效率&增益 Passive efficiency&gain:

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	20.65	-6.62	-3.36
2410	22.16	-6.3	-3.13
2420	23.47	-6.02	-2.6
2430	25.13	-5.75	-2.57
2440	23.87	-5.99	-2.61
2450	24.12	-5.97	-2.78
2460	22.58	-6.16	-3.1
2470	22.71	-6.5	-3.04
2480	22.44	-6.36	-2.85
2490	22.73	-6.12	-3
2500	22.48	-6.24	-2.88

4、VSWR 参数图 VSWR parameter diagram



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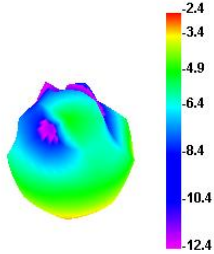
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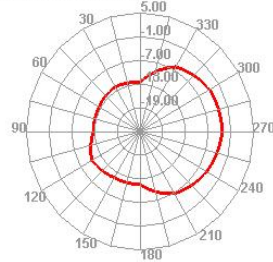
5、无源场型图

Passive field pattern diagram

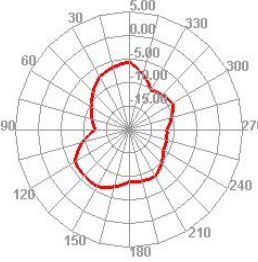
2400.000MHz



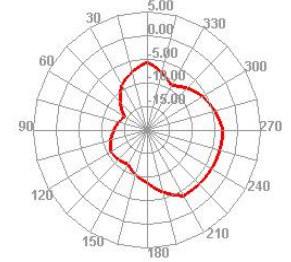
2400.000MHz H



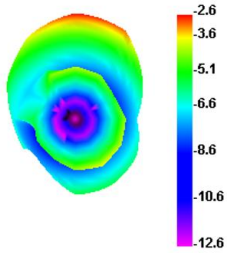
2400.000MHz E1



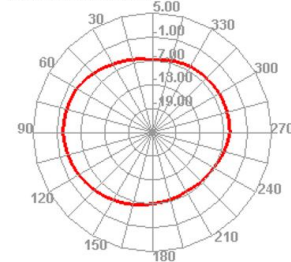
2400.000MHz E2



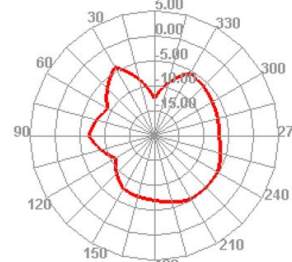
2430.000MHz



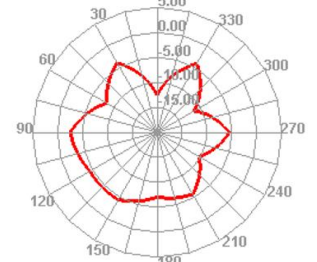
2430.000MHz H



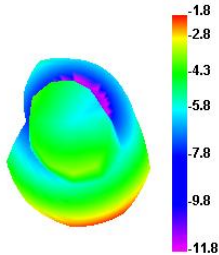
2430.000MHz E1



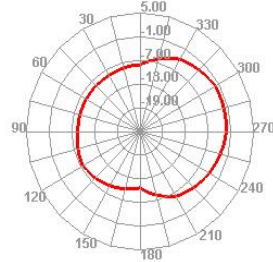
2430.000MHz E2



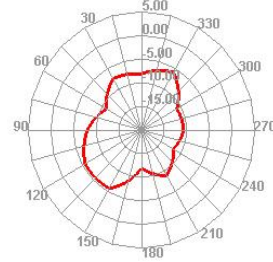
2450.000MHz



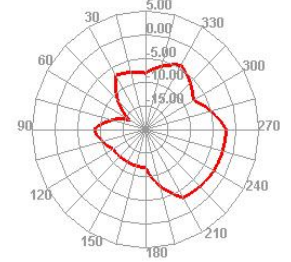
2450.000MHz H



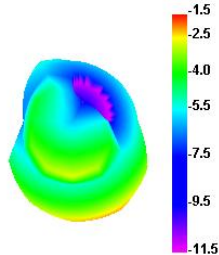
2450.000MHz E1



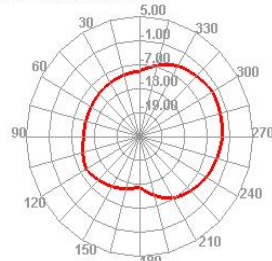
2450.000MHz E2



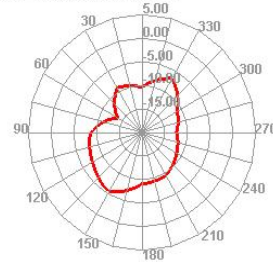
2500.000MHz



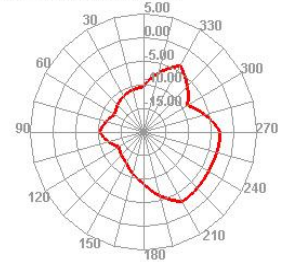
2500.000MHz H



2500.000MHz E1



2500.000MHz E2

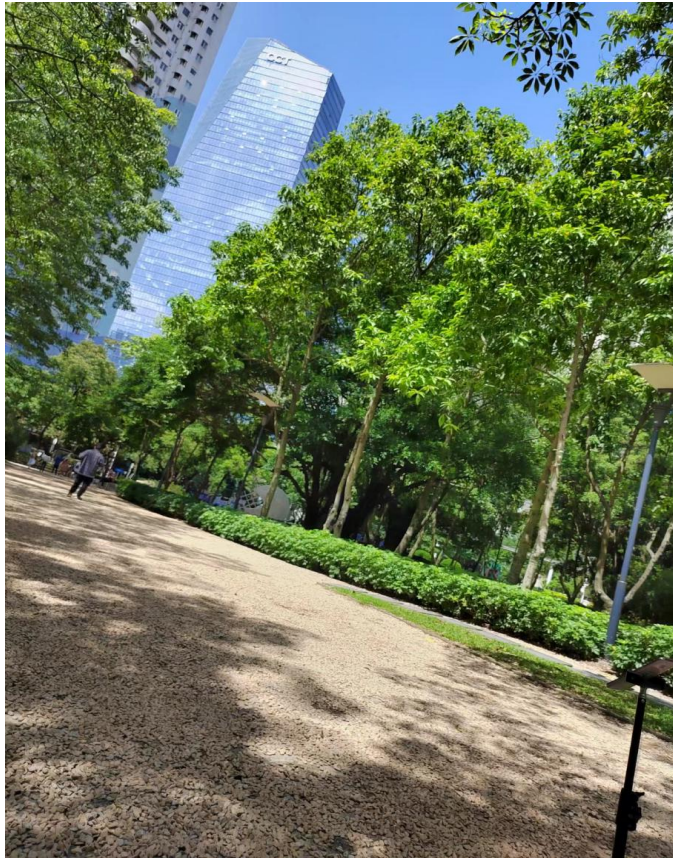


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6、场地实测结果 Site measurement results



拉距三星S8 : 17米, 对比机器 (230) 17-18米
哈曼场地测试 (测试人员BMI35.2) 测试时间14:30
蛇口老街: S8 (AAC) 测试机器 (卡1次) 对比机230 L:3次 R: 卡2次
海上世界: 小米poco(SBC) 测试机器 (卡0-1次); 对比机器230 L:卡10次 R:卡10次
Pulling distance from Samsung S8:17 meters, compared to machine (230) 17-18 meters.
Harman site testing (tester BMI 35.2) Test time 14:30
Shekou Old Street: S8 (AAC) testing machine (card once) comparison machine 230 L: 3 times R: card twice.
Sea World: Xiaomi Poco (SBC) testing machine (card 0-1 times); Compare machine 230 L: card 10 times R: card 10 times.

7、结论 conclusion

此天线是在客户提供样机基础上设计, 电参数和结构性能已达到技术要求, 请确认!

This antenna is designed based on the prototype provided by the customer. The electrical parameters and structural performance have met the technical requirements, please confirm!

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