

SPECIFICATION



深圳市大显科技有限公司

Shenzhen Daxian Technology Co., Ltd.

国光 PB-120WG 天线组件

GGEC PB-120 WG Antenna assembly

产 品 规 格 书

Product Specification

客 户 connection	国光 GGEC	频 段 frequency range	2400 ~ 2500MHz
项目名称 entry name	PB-120WG	版 本 edition	V03
物料编号 Material No	1P-B120WG-058	颜 色 Color	黑色 Black
客户料号 Customer Item Number	EAN00417		
R F 设计 R F Design	胡 鹏 Peng.Hu	结构设计 Structural Design	周锐斌 Ruibin.Zhou
品质经理 Quality Manager	杨 进 Jin.Yang	技术总监 Technical Director	张 磊 Lei.Zhang
日 期 Date	2024-6-7		

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

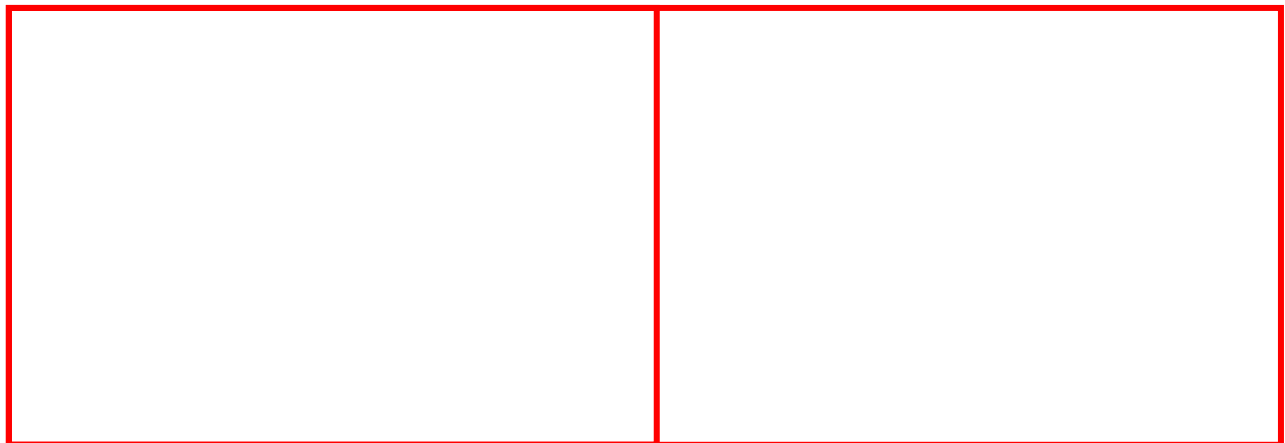
客 户 名: Customer Name:	国光 GGEC
整机类型: Type of complete machine:	音箱 loudspeaker box
天线频段: Antenna band:	2400 ~ 2500MHz
天线形式: Antenna form:	FPC+同轴线+线材海绵 FPC+coaxial line+wire sponge
馈电形式: Feed form:	焊接 weld
馈脚数量: Number of feed legs:	两个 Two
硬件版本: Hardware version:	/

二 BT 天线组件 Antenna assembly

1 规格 specifications

本报告主要提供 PB-120 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 PB-120 project. The following image shows an antenna with a large display design.



整机外观图

Whole machine appearance chart

天线外观图

antenna appearing diagram

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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+同轴线+线材海绵 组成。

The antenna is mainly composed of FPC+coaxial line+wire sponge.

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 testing

BAND	CH	TRP	TIS
BT	0	9.53	-91.2
	39	9.7	-91.39
	78	9.65	-91.18

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无源效率&增益 Passive efficiency&gain:

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	50.84	-2.94	1.78
2410	50.36	-2.98	1.6
2420	50.46	-2.97	2
2430	50.25	-2.99	1.52
2440	51.3	-2.9	1.56
2450	51.65	-2.87	2.16
2460	52.93	-2.76	1.43
2470	52.69	-2.78	1.82
2480	52.52	-2.8	2.02
2490	51.48	-2.88	1.69
2500	51.89	-2.85	1.58

4、VSWR 参数图 VSWR parameter diagram



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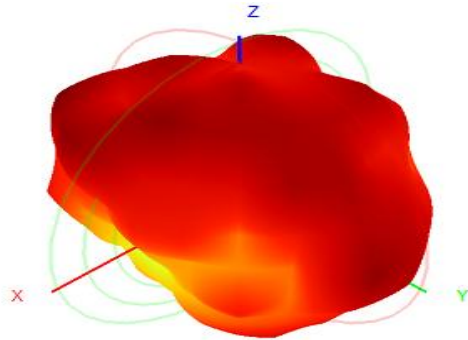
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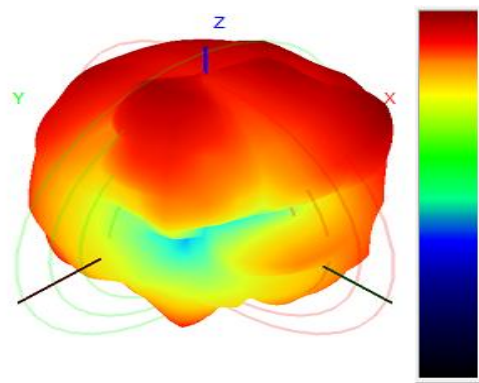
5、无源效率场型图-2450MHz

Passive efficiency field pattern diagram - 2450MHz

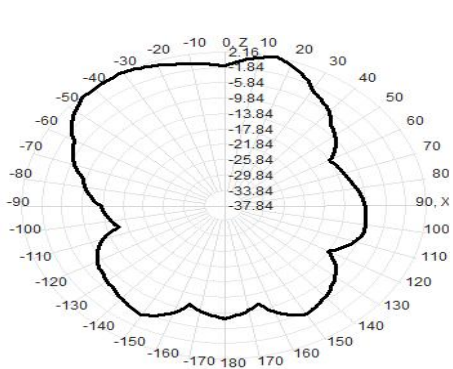
2450.0MHz H+V, Eff:51.6%



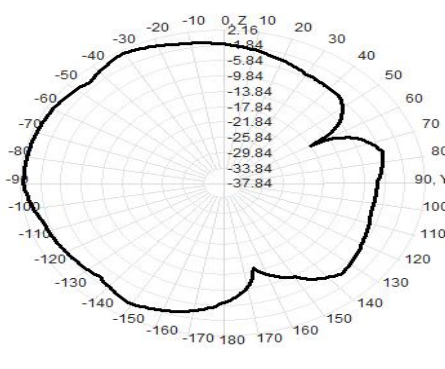
Back View



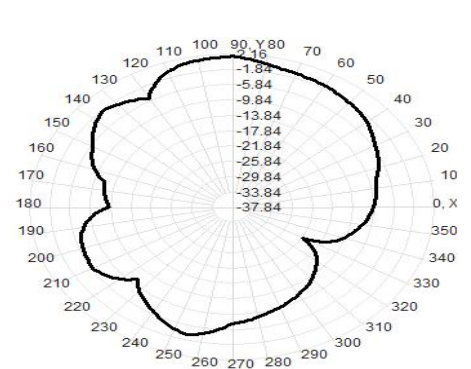
2450.0MHz Total(E1-XZ), Max= 2.16dBi



2450.0MHz Total(E2-YZ), Max= 1.52dBi



Total(H-XY), Max= 1.52dBi, CirD=23.26

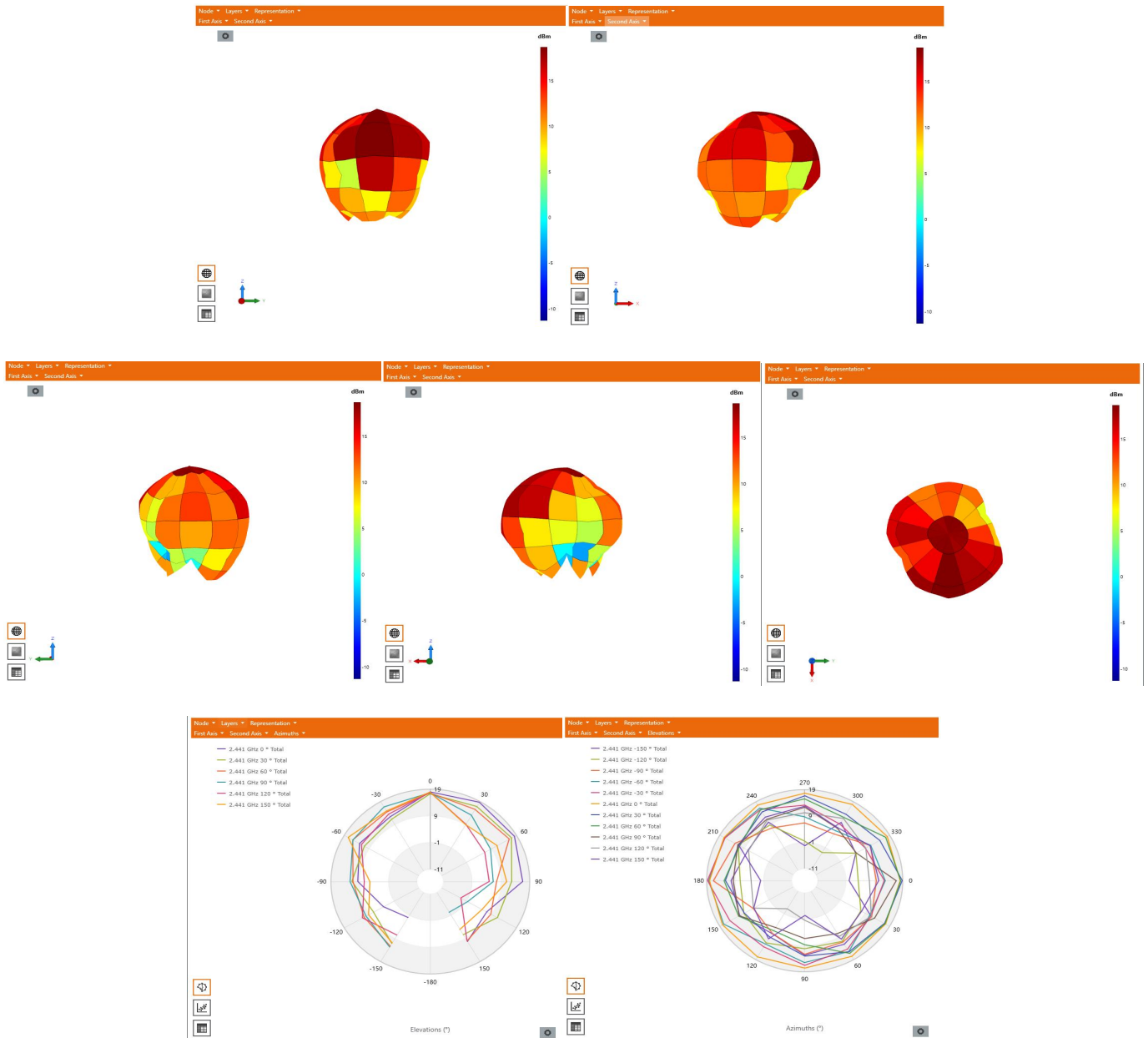


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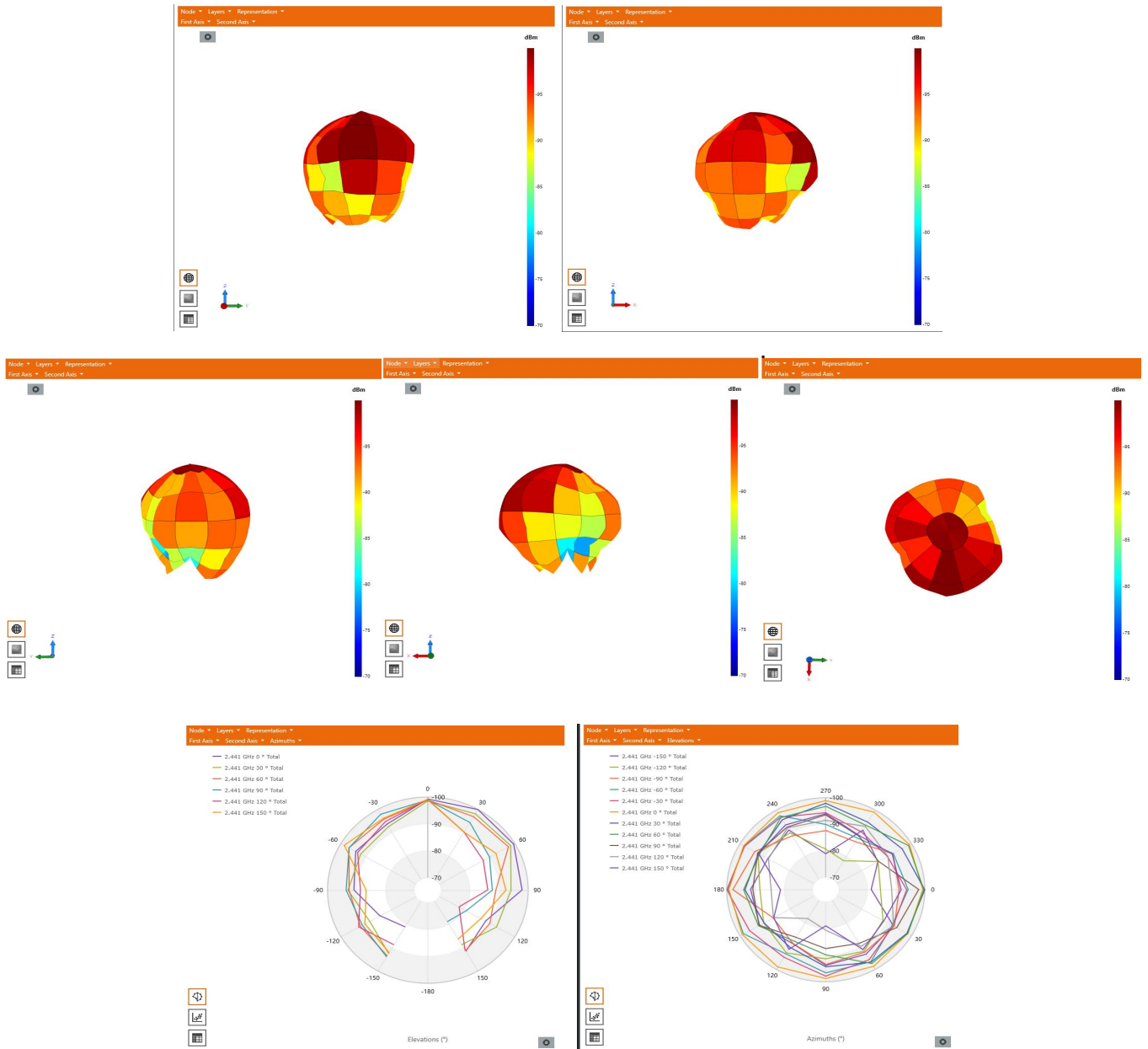
6、有源场型图-2450MHz Active field pattern diagram-2450MHz TRP:



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TIS:



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8、户外拉距测试 Outdoor pull distance test

单机测试-V1.7.0 软件				
白色 1#	米		黑色 1#	米
0°	100+		0°	100+
45°	100+		45°	100+
90°	100+		90°	100+
180°	100+		180°	100+
270°	100+		270°	100+
315°	100+		315°	100+

TWS 组队测试-V1.7.0 软件

白色 1#主机/白色 2#副机											
主机 0°	米	主机 45°	米	主机 90°	米	主机 180°	米	主机 270°	米	主机 315°	米
副机 0°	80+	副机 0°	80+	副机 0°	80+	副机 0°	80+	副机 0°	80+	副机 0°	80+
副机 45°	80+	副机 45°	80+	副机 45°	80+	副机 45°	80+	副机 45°	80+	副机 45°	80+
副机 90°	80+	副机 90°	80+	副机 90°	80+	副机 90°	80+	副机 90°	80+	副机 90°	80+
副机 180°	80+	副机 180°	80+	副机 180°	80+	副机 180°	80+	副机 180°	80+	副机 180°	80+
副机 270°	80+	副机 270°	80+	副机 270°	80+	副机 270°	80+	副机 270°	80+	副机 270°	80+
副机 315°	80+	副机 315°	80+	副机 315°	80+	副机 315°	80+	副机 315°	80+	副机 315°	80+

白色机器-Auracast 测试-V1.7.0 软件

白色 1#主机/白色 2#副机											
主机 0°	米	主机 45°	米	主机 90°	米	主机 180°	米	主机 270°	米	主机 315°	米
副机 0°	44	副机 0°	46	副机 0°	50	副机 0°	40	副机 0°	50	副机 0°	40
副机 45°	48	副机 45°	49	副机 45°	51	副机 45°	46	副机 45°	53	副机 45°	46
副机 90°	67	副机 90°	68	副机 90°	70	副机 90°	65	副机 90°	69	副机 90°	65
副机 180°	45	副机 180°	43	副机 180°	53	副机 180°	44	副机 180°	51	副机 180°	44
副机 270°	65	副机 270°	66	副机 270°	70	副机 270°	63	副机 270°	68	副机 270°	56
副机 315°	42	副机 315°	48	副机 315°	46	副机 315°	39	副机 315°	45	副机 315°	39

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