

产品规格承认书

Product specifications
acknowledgment

承认厂商: _____

(Recognized manufacturers)

制造厂商: _____ 深圳市蝙蝠无线技术有限公司

(Manufacturer)

产品名称: _____ 多星多频螺旋天线

(Description)

产品选型表:

(Product Type)

型号	说明	备注
BWL1L5GNX56-23SJ	SMA 内螺内针	可选配

供应商承认签栏

制表者	审核者	核准者

客户承认栏

审核者	核准者

产品描述

BWL1L5GNX56-23SJ GNSS 天线, 采用多臂耦合和四馈点馈电技术, 支持北斗二代、GPS、GLONASS 和 GALILEO 系统的 L1 和 L5 双频段卫星导航信号接收, 内置低噪声放大器, 采用两级滤波器, 带外抑制好, 抗干扰能力强, 保证在恶劣电磁环境下正常工作。满足目前多系统兼容和高精度测量的需求。

产品应用

适用于对体积和重量有要求的场合, 比如无人机、微型 RTK、亚米级手持机/平板等便携式设备。

技术特点

- 天线采用多臂螺旋技术, 保证了右旋圆极化和相位中心性能, 降低测量误差的影响;
- 天线单元具有增益高、增益滚降小特点, 对低仰角卫星信号接收效果好;
- 精巧的低噪声、高增益放大和出色的带外抑制;
- 静电防护: 15KV (空气放电);
- 体积小, 重量轻, 便于携带安装。

主要技术指标 (典型)

天线特性 ANTENNA	
天线结构 Patch Architecture	四臂螺旋结构 (Quadrifilar Helix)
支持卫星信号 Supported positioning signal bands	北斗: B1/B2a; GPS: L1/L5; Galileo: E1/E5a GLONASS: L1
最大增益 Peak Gain*	≥1.5 dBi
极化方式 Polarization	右旋圆极化 (RHCP)
天线轴比@天顶 Axial Ratio@zenith	≤1.5dB
水平面覆盖角度 Azimuth Coverage	360°
特性阻抗 Impedance	50 ohm
低噪声放大器特性 LNA	
工作频段 Frequency Range	1176.45±10.23MHz 1559MHz~1606MHz
低噪放增益 LNA Gain*	25±3.0dB (Typ. @25°C)
噪声系数 Noise Figure*	≤1.5 dB@25°C, Typ.
输出驻波比 Output VSWR	≤1.8:1 typ. 2.0:1max
工作电压 Operation Voltage	3.0~12V DC
工作电流 Operation Current	≤45mA
机械结构与环境特性 MECHANICALS & ENVIRONMENTAL	
天线尺寸 Dimension	见附图
射频输出接口 Connector	SMA-J (内螺纹内针)
天线外壳 Radome	ABS+PC
产品重量 Weight	≤16g
安装方式 Attachment Method	通过连接器
工作温度 Operating Temp	-40°C ~ +85°C
储存温度 Storage Temp	-55°C ~ +85°C

湿度 Humidity	95% No-condensing
防水性能 Waterproof	IP67

说明：密封圈需要与天线支撑平面良好压合，是达到 IP67 防护等级的首要条件。

1.2 Antenna Picture



上图型号：BWL1L5GNX56-23SJ

（可定制）

*注： 因天线功能较为敏感，主体周边机构有变更请通知我们评估。

2. Electrical Specification

2.1 Test Equipment

- A. VSWR and input impedance: Agilent 8753/E5071 Network Analyzer
- B. Antenna gain and efficiency: ETS three-dimensional anechoic chamber

2.2 Test Setup

2.2.1 Frequency Range

2.2.2 VSWR

Step 1: The antenna is arranged on the customer provided test fixture.

Step 2: The VSWR of the antenna is measured via Agilent 8720/8753 Network Analyzer (see figure. 1).



Figure.1

2.2.3 Radiation pattern and Gain

- A. The 3D chamber provides less than -40dB reflectivity from 800MHz to 6GHz and a 40cm diameter spherical quiet zone. The measurement results are calibrated using both dipoles and standard gain horns (see figure. 2).
- B. The antenna under tested is arranged in the turned table and a decoupling sleeve is used to reduce feed line radiation (see figure. 3).
- C. The measured results of the radiation patterns and antenna gain are obtained from the control system and showed on the monitor (see figure. 4 and 5).

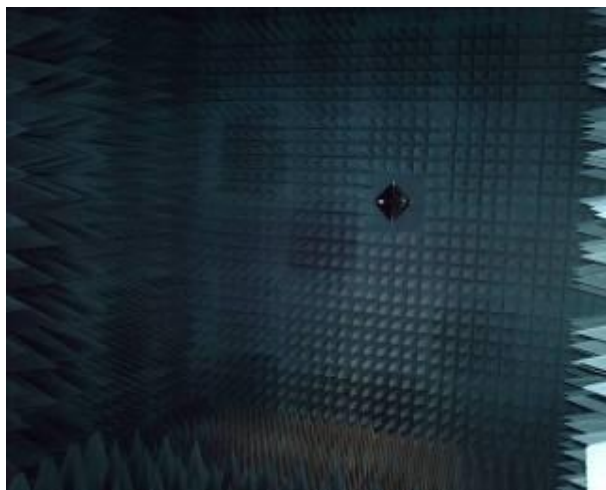


Figure.2

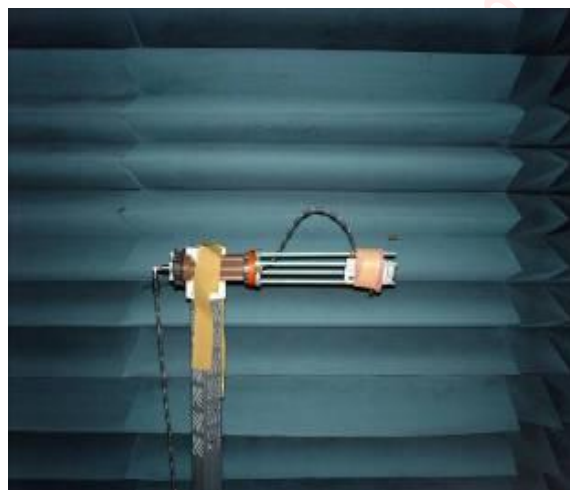


Figure.3

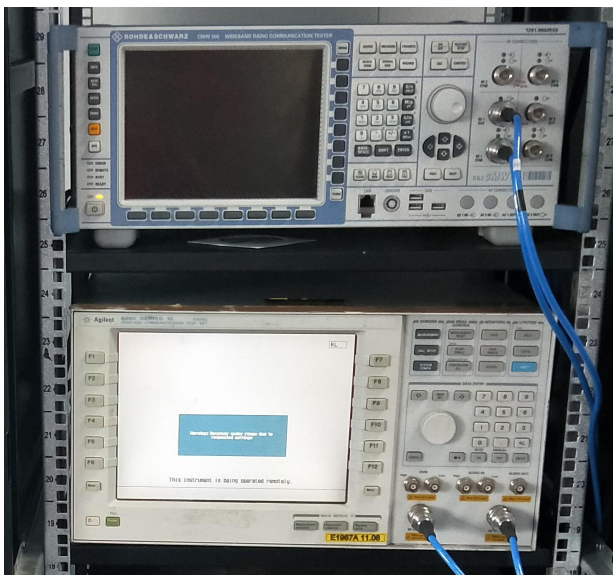


Figure.4

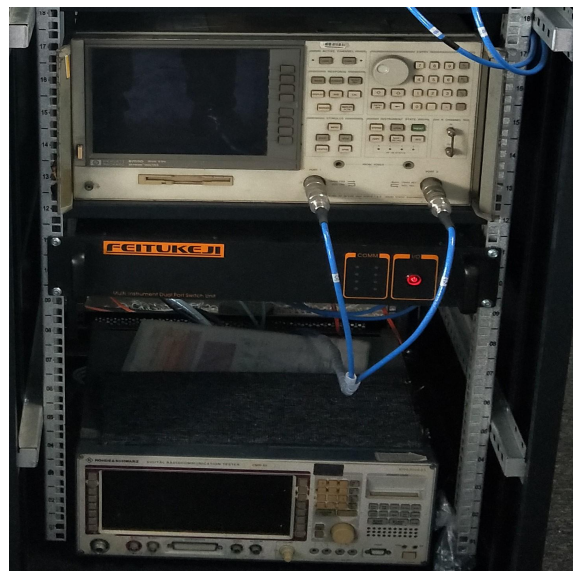
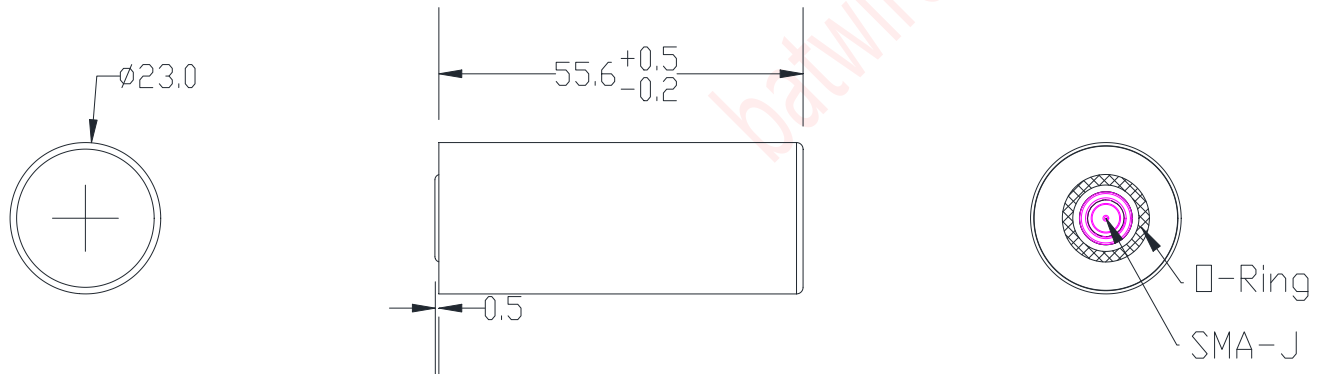


Figure.5

3.Mechanical Specification

3.1 Assembly Drawing



4.免责声明 (Disclaimer) :

本着为用户提供更好服务的原则，深圳市蝙蝠无线技术有限公司（下称“蝙蝠无线”）在本手册中将尽可能地为用户呈现详实、准确的产品信息。但鉴于本手册的内容具有一定的时效性，蝙蝠无线不能完全保证该文档在任何时段的时效性与适用性。蝙蝠无线有权在没有通知的情况下对本手册上的内容进行更新，恕不另行通知。为了得到最新版本的信息，请尊敬的用户定时访问蝙蝠无线官方网站或者与蝙蝠无线工作人员联系。感谢您的包容与支持！

In order to provide our users with better service, Shenzhen Bat Wireless Technology Co., Ltd (hereinafter referred to as Bat Wireless) will try to present as detailed and accurate product information as possible in this manual. However, due to the timeliness of the manual content, Bat Wireless shall not absolutely guarantee the unlimited timeliness and applicability of the file. Bat Wireless has the right to update the manual content without further notice. To get the latest edition information, pls visit the official website of Bat Wireless or contact our customer service staff. Thanks for your trust and support!