

产品描述

BWL1L2GNX56-23SJ 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 L2 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/L2; Galileo: E1/E5a GLONASS: G1/G2
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	1197MHz~1278MHz 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。

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1.2 Antenna Picture



上图型号：BWL1L2GNX56-23SJ

（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).

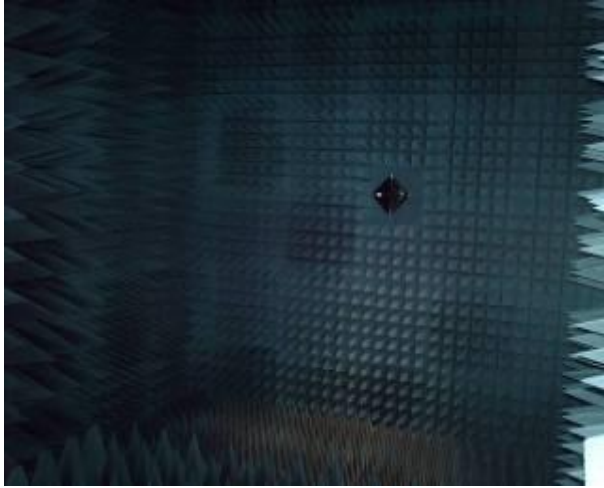


Figure.2



Figure.3

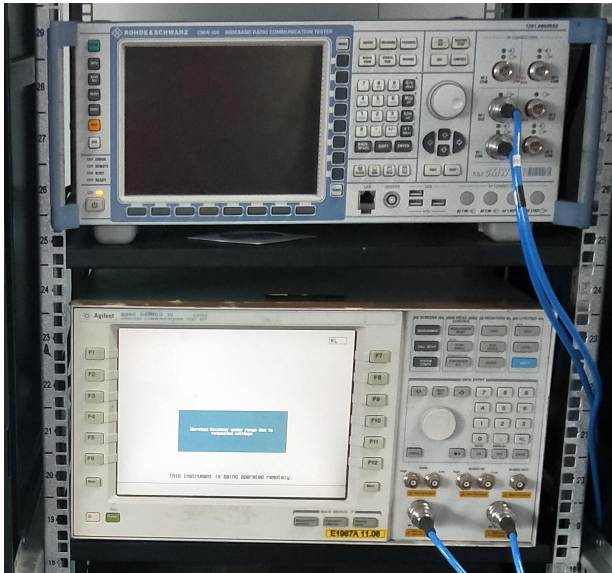


Figure.4

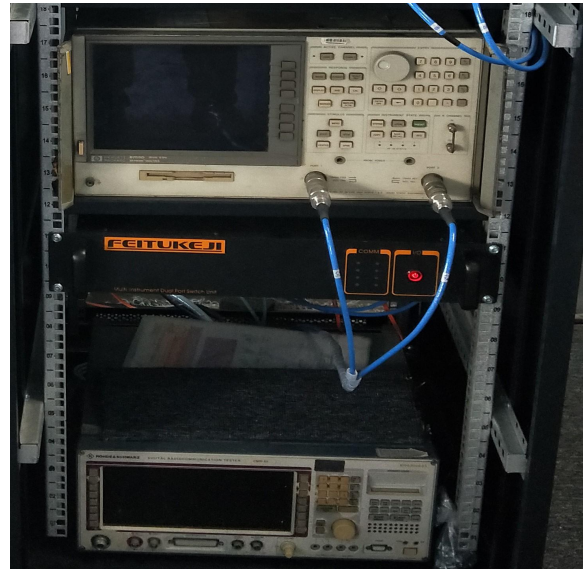
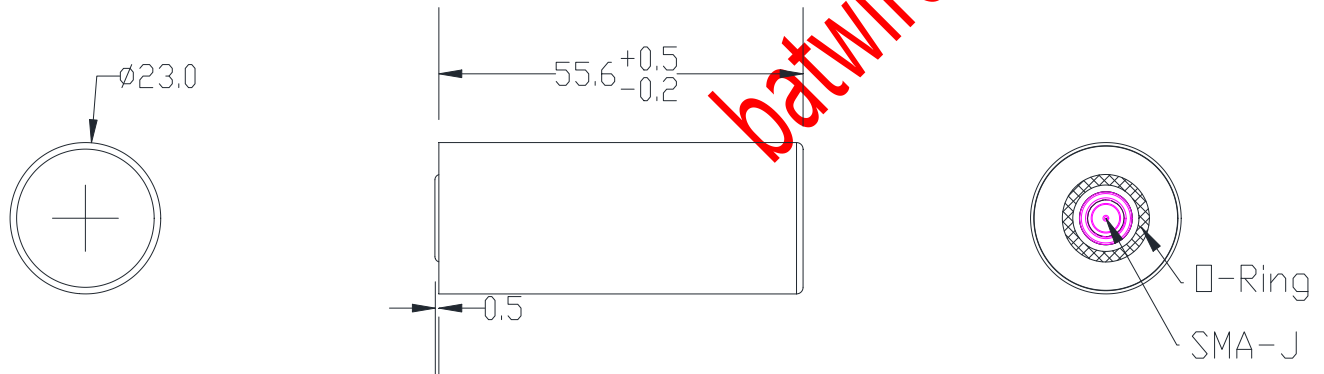


Figure.5

3. Mechanical Specification

3.1 Assembly Drawing



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