

产品描述

BWGNSSGNX120-27T GNSS 天线, 采用双层多馈点设计, 支持北斗二代、GPS、GLONASS 和 GALILEO 系统卫星导航信号接收。内置低噪声放大器, 采用多级滤波器, 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 APPLICATIONS

广泛应用于航空航天、精准农业、车载定位、无人机等高精度导航定位场合。

关键特性 KEY FEATURES

- 采用多馈点技术设计, 保证了右旋圆极化和相位中心性能, 降低测量误差的影响;
- 天线单元无源增益高, 方向图波束宽, 确保低仰角信号的接收效果;
- 前置滤波, 噪声系数低, 抗干扰能力强;
- IP67 防护, 为天线长期在野外工作提供了保障。

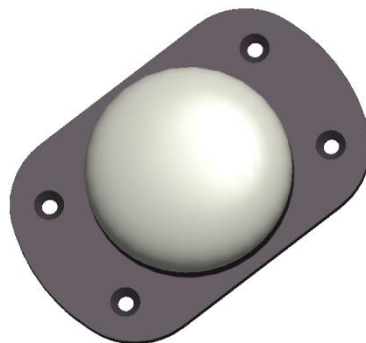
主要技术指标 SPECIFICATIONS

天线 ANTENNA		
天线结构 Patch Architecture	双馈点, 层叠结构 Dual Feed, Dual Stacked Patch	
支持卫星信号 Supported positioning signal bands	GPS: L1/L2/L5; BDS: B1/B2/B3; GLONASS: G1/G2/G3; Galileo: E1/E5a/E5b L-Band	
最大增益 Peak Gain*	≥4.0dBi@Fc, with 100mm ground plane	
极化方式 Polarization	RHCP	
轴比 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 LNA		
工作频段 Frequency Range	1164MHz~1286MHz, 1525MHz~1615MHz;	
低噪放增益 LNA Gain*	38±3.0dB (Typ. @25° C)	
噪声系数 Noise Figure*	≤2.0 dB@25° C, Typ. (Pre-filtered)	
输出驻波比 Output VSWR	≤1.5:1 typ. 1.8:1max	
工作电压 Operation Voltage	3.0~16V DC	
工作电流 Operation Current	≤45mA	
ESD 保护 ESD circuit protection	15KV air discharge	
带外抑制 Out-of-Band Rejection	L5/E5/L2/G 2/B2	<1050MHz: >55dB <1125MHz: >30dB >1350MHz: >45dB
	L1/E1/B1/G 1	<1450MHz: >40dB >1690MHz: >40dB >1730MHz: >45dB
机械和环境 MECHANICALS & ENVIRONMENTAL		

天线尺寸 Dimension	119.38mm*76.2mm*27.0mm
射频输出接口 Connector	TNC (Female) (接受定制)
天线罩材料 Radome	ABS+PC
基座材料 Base	Aluminum alloy 6061-T6
产品重量 Weight	≈185g
安装方式 Attachment Method	Four screw holes
工作温度 Operating Temp	-40℃~+85℃
储存温度 Storage Temp	-45℃~+85℃
湿度 Humidity	95% No-condensing
防水 Waterproof	Expected IP67
振动 Vibration	3 axis, sweep = 15 min, 10 to 200Hz sweep: 3G
冲击 Shock	Vertical axis:50G, other axes:30G

Remark:*1. Peak Gain and Freq with the ground plane size will change. *2. LNA gain does not include coaxial cable loss .

1.1 Antenna Picture



上图型号：BWGNSSGNX120-27T

(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).

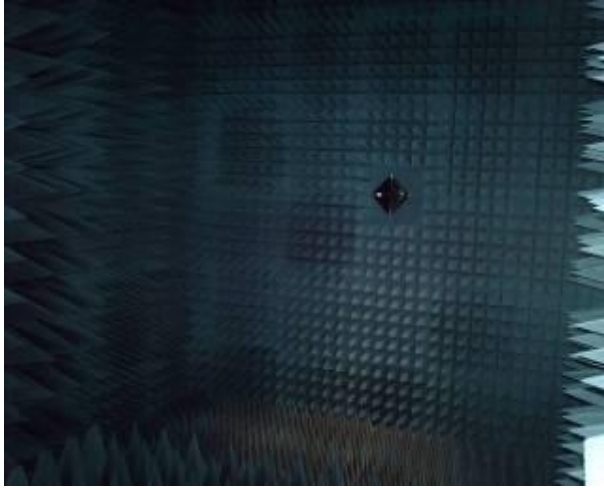


Figure.2



Figure.3

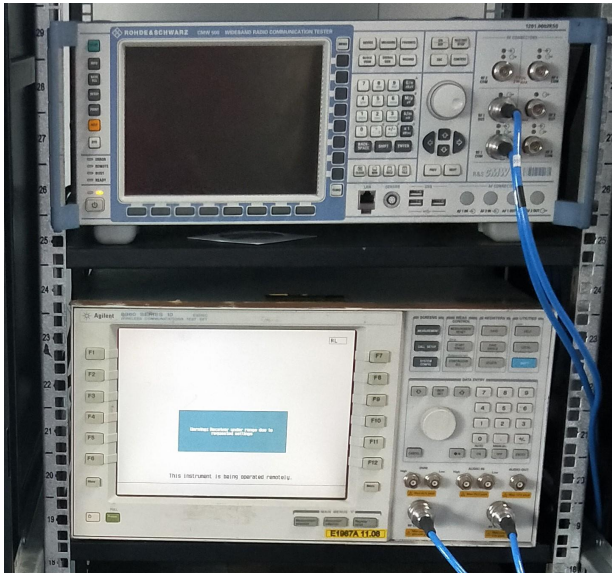


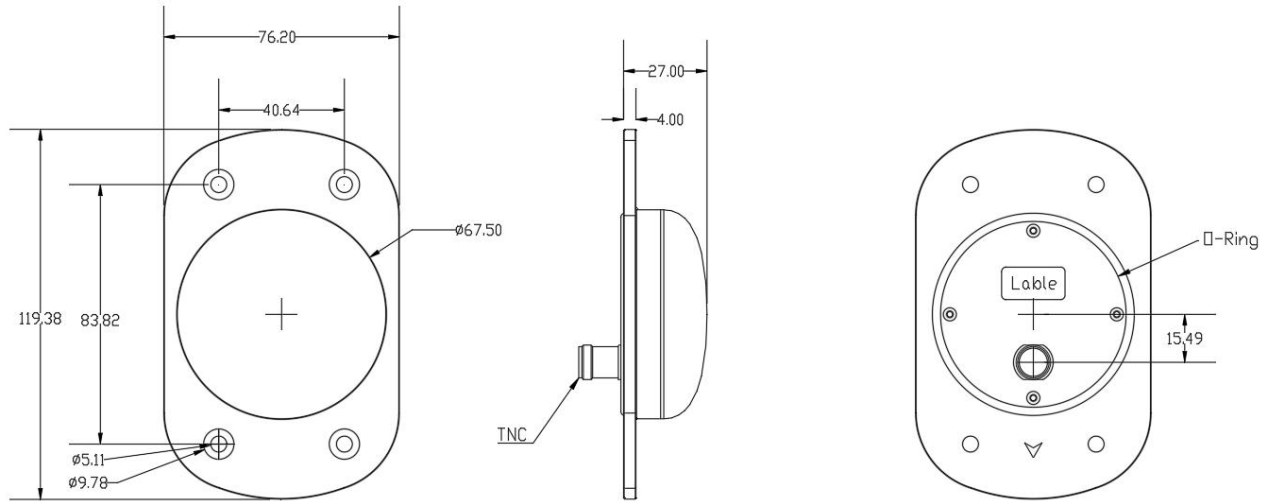
Figure.4



Figure.5

3. Mechanical Specification

3.1 Assembly Drawing



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