

GNSS Passive Antenna, Side Mount

DESCRIPTION

The GNSS-3SP is a dual band passive GNSS antenna designed for long term reliability. It is small and lightweight, with exceptional protection against the elements.

Designed to support the Warfighter, the portable, yet precise GNSS antenna is built for tough applications. The radome is made of a high-grade polymer, with a design to protect from UV, rain, lightning, chemical and jet fuels. The GNSS-3SP is available with a side mount connector and multiple colors (per FED-STD-595B).



FEATURES

- Military and Civilian Aviation Applications
- GNSS Bands:
 - GPS L1, L2, L5
 - GLONASS L1, L2 and L3
 - GALILEO E1, E5b, E6
- Waterproof
- Excellent gain
- Small Form Factor
- SMA, Side Mount

OPTIONS

The GNSS-3SP comes with many available options to meet specific needs. Please contact GPS Source via phone, email, or visit the website for further information on product options and specifications.

1 GNSS-3SP Specifications

Table 1-1. Electrical Specifications

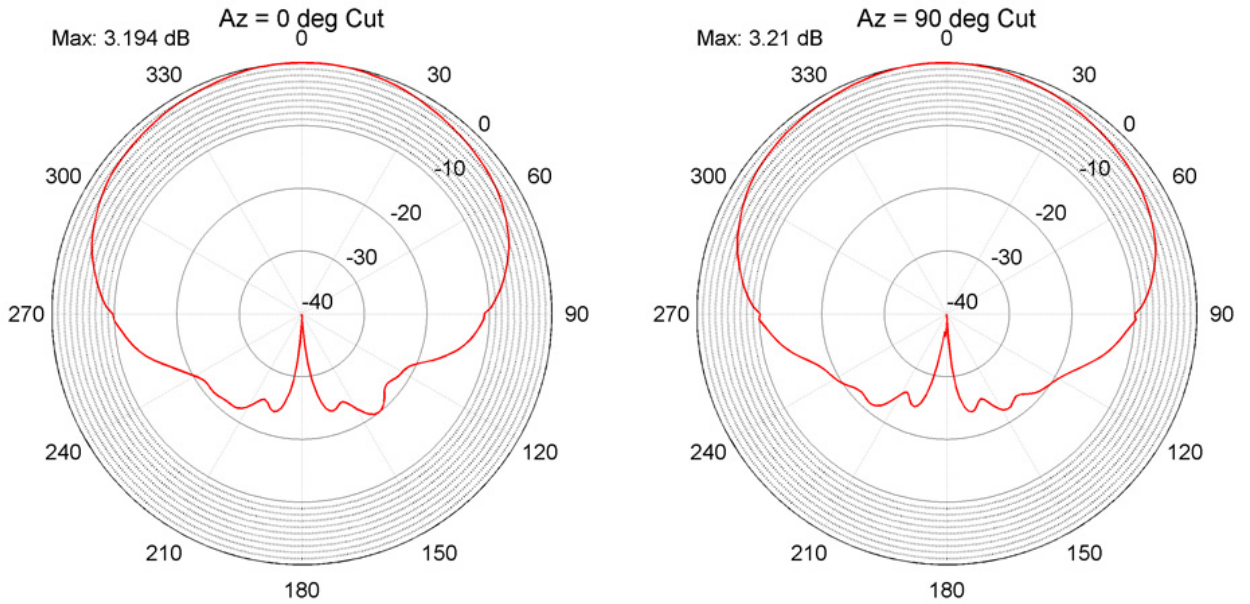
Operating Temperature -54°C to 71°C

Parameter		Conditions	Min	Typ	Max	Units
Frequency Range (Passband)	GNSS Upper Band	Ant: Output = 50Ω	1559	1575.42	1610	MHz
	GNSS Lower Band		1189	1227.60	1254	
Out Impedance				50		Ω
Element Gain	GPS L1	Output = 50Ω, 4 ft G.P.	> +3			dBIC
	GPS L2		> +0			
	GPS L5		> -5			
	GLONASS L1		> +3			
	GLONASS L2		> -3			
	GLONASS L3		> -5			
	Galileo E1		> +3			
	Galileo E5		> -3			
	Galileo E5b		> +5			
	Galileo E6		> -3			
Output SWR		Output = 50Ω			2:1	—
Polarization		Right Hand Circular				
Axial Ratio at Peak		< 2.8 dB Max				
Beam Width		110 +/-5° at -3dB from Peak (Free Space)				
Altitude		50,000ft				
Lightning Protection		DC to Ground on the Antenna Element				

2 Performance Data

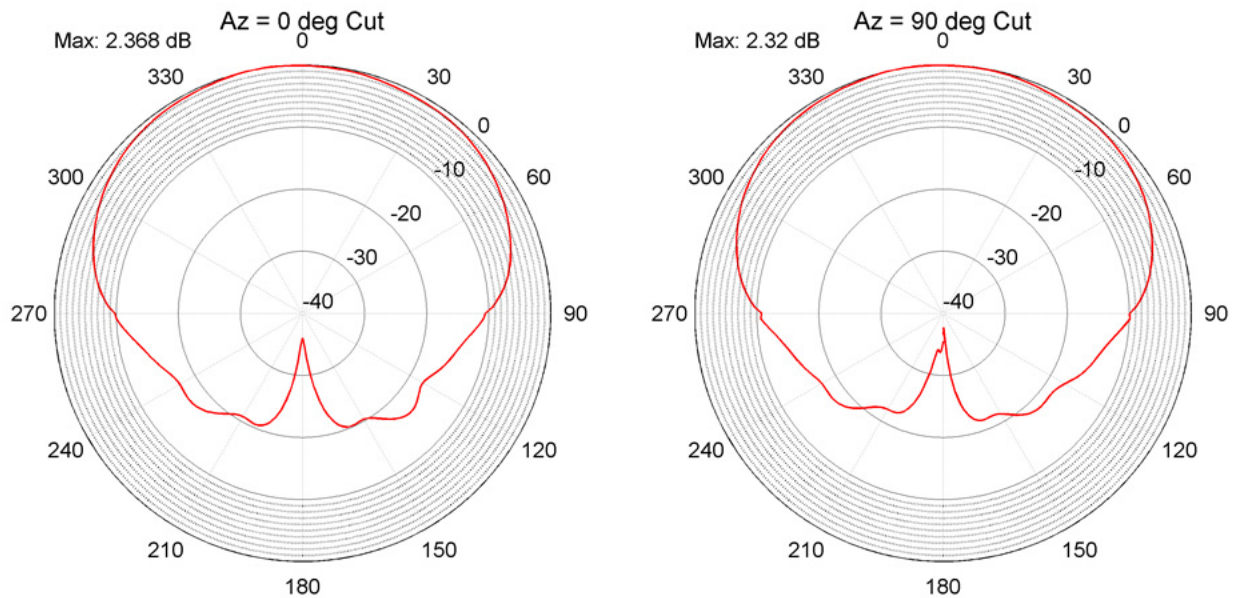
2.1 L1 Center Frequency

Figure 2-1. Far Field Plots No Ground Plane



2.2 L2 Center Frequency

Figure 2-2. Far Field Plots No Ground Plane



3 Environmental Requirements

The GNSS-3SP has been designed to meet the MIL-STD-810 following requirements.

Table 3-1. MIL-STD-810 Requirements

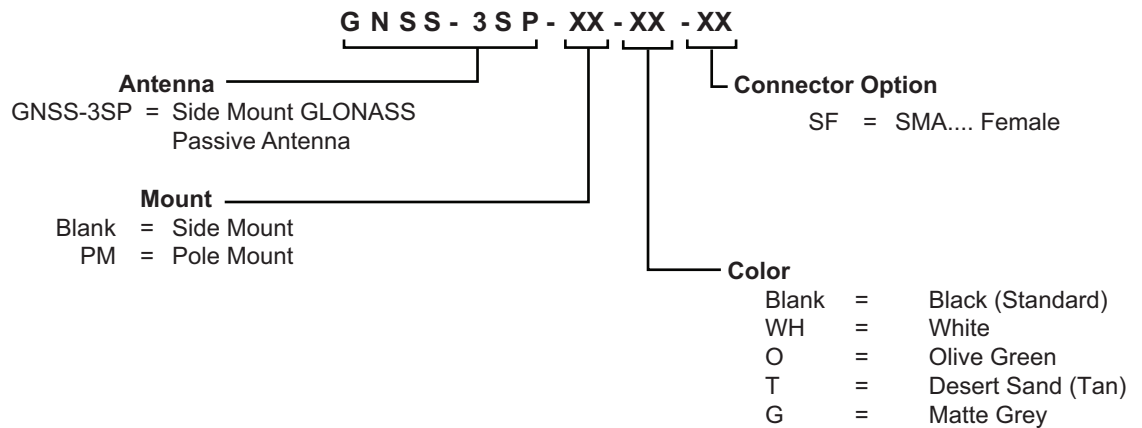
Environment	MIL-STD-810 Requirements	
Mechanical Vibration	810G	Mtd 514.6, Proc. I
Functional Shock	810G	Mtd 516.6, Proc. I
Crash Hazard	810G	Mtd 516.6, Proc. V
High Temperature	810G	Mtd 501.5, Proc. I & II
Low Temperature	810G	Mtd 502.5, Proc. I & II
Temperature Shock	810G	Mtd 503.5, Proc. I-C
Altitude	810G	Mtd. 500.5, Proc. II & III
Humidity	810G	Mtd 507.5, Proc. II
Salt Fog	810G	Mtd 509.5
Fungus	810G	Mtd 508.6
Sand and Dust:	810G	Mtd 510.5, Proc. I & II
Conducted Emissions	461F	CE106
Radiated Emissions	461F	RE102
Radiated Susceptibility	461F	RS103

4 Product Options

Table 4-1. GNSS-3SP Available Options

Type	Options	
Connector	SMA	Female
Mount	Side	
Color (FED-STD-595B)	White	Gloss
	Black (Standard)	Matte
	Olive Green	Matte
	Desert Sand	Matte
	Gray	Matte

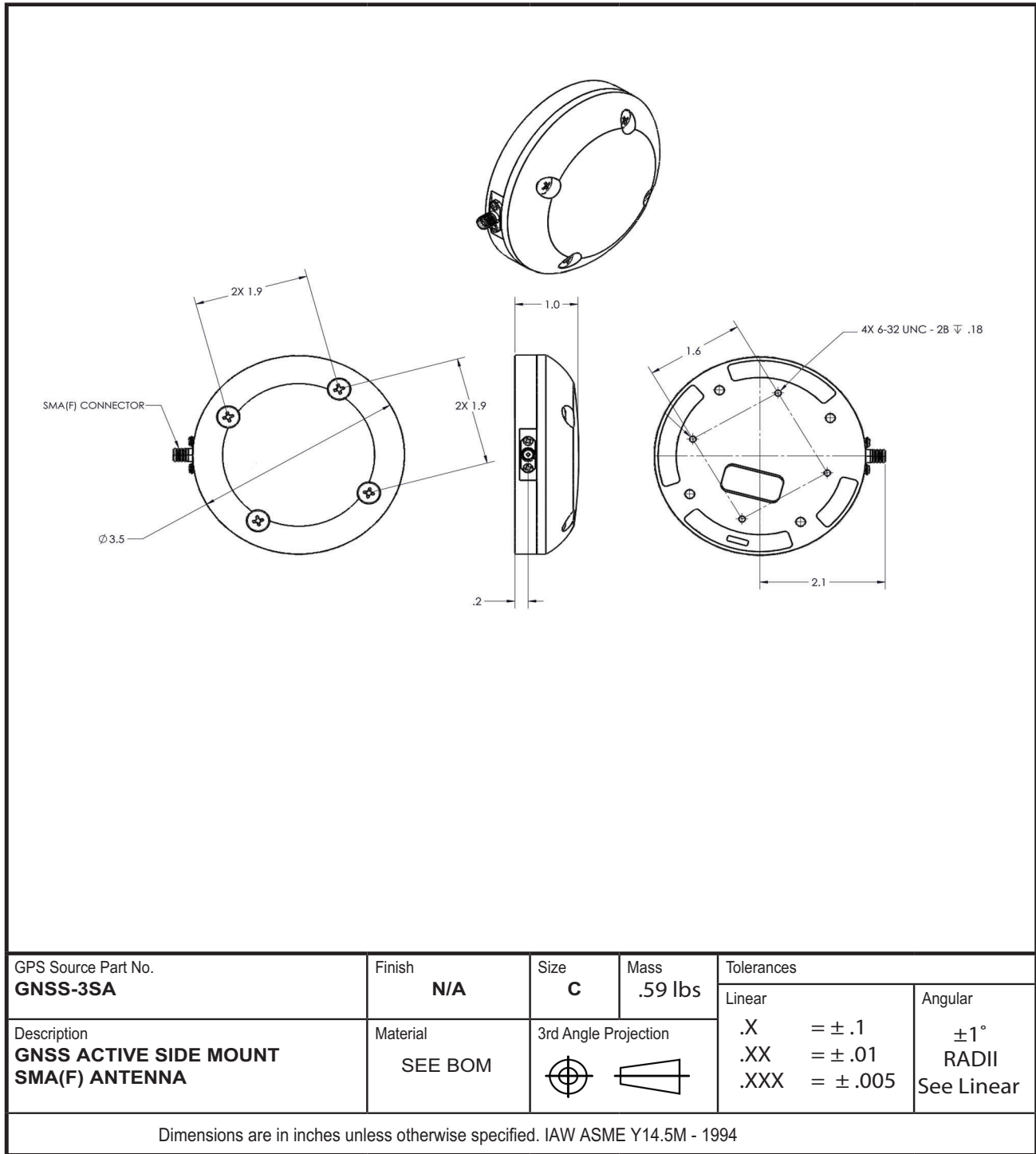
5 Product Code Decoder



Note: To have product/part codes customized to meet exact needs, contact GPS Source at GPSS-Sales@gd-ms.com or visit the website at www.gpssource.com.

6 Mechanical Drawing

6.1 GNSS-3SP GNSS Passive Antenna, Side Mount





GNSS-3SP Data Sheet

059-FAN-AHD-CCY-PYZ-004

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