

## L1L2-S2GP

### L1/L2 Passive Antenna

#### DESCRIPTION

The L1L2-S2GP is a dual band passive L1/L2 GPS 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 GPS L1/L2 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 L1L2-S2GP is available with a side or magnet mount and multiple colors (per FED-STD-595B).



#### FEATURES

- Military and Civilian Aviation Applications
- L1/L2 Dual Band
- Waterproof
- Typical gain of 3dBiC
- Small Form Factor
- Side Mount

#### OPTIONS

The L1L2-S2GP 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 L1L2-S2GP Specifications

Table 1-1. Electrical Specifications

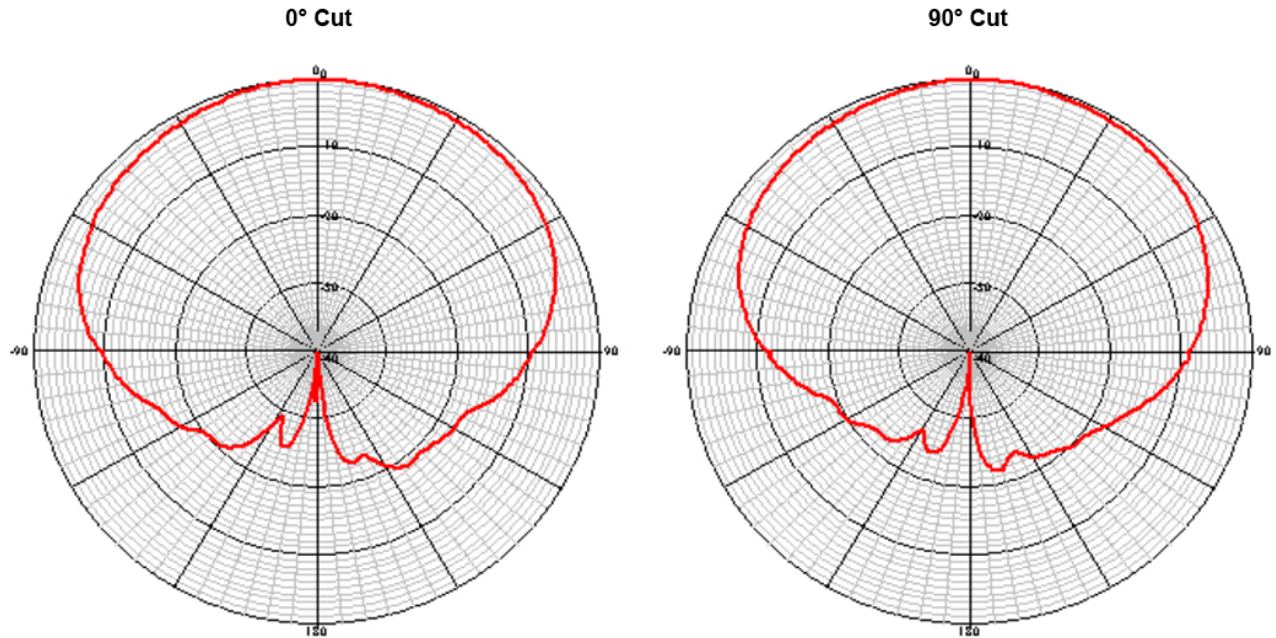
Operating Temperature -54°C to 71°C

Parameter		Conditions	Min	Typ	Max	Units
Frequency Range (Passband)	L1	Ant: Output = 50Ω	1560	1575.42	1590	MHz
	L2		1212	1227.60	1242	
Out Impedance				50		Ω
Element Gain	L1	Output = 50Ω, 4ft G.P.	3	3.40	4	dBiC
	L2		3	6.70	7	
Output SWR		Output = 50Ω			2:1	—
Polarization		Right Hand Circular				
Axial Ratio at Peak		2dB Max				
Beam Width		115° +/-5° at -3dB from Peak				
Altitude		50,000ft				
Lightning Protection		DC Ground on the Antenna Element				

## 2 Performance Data

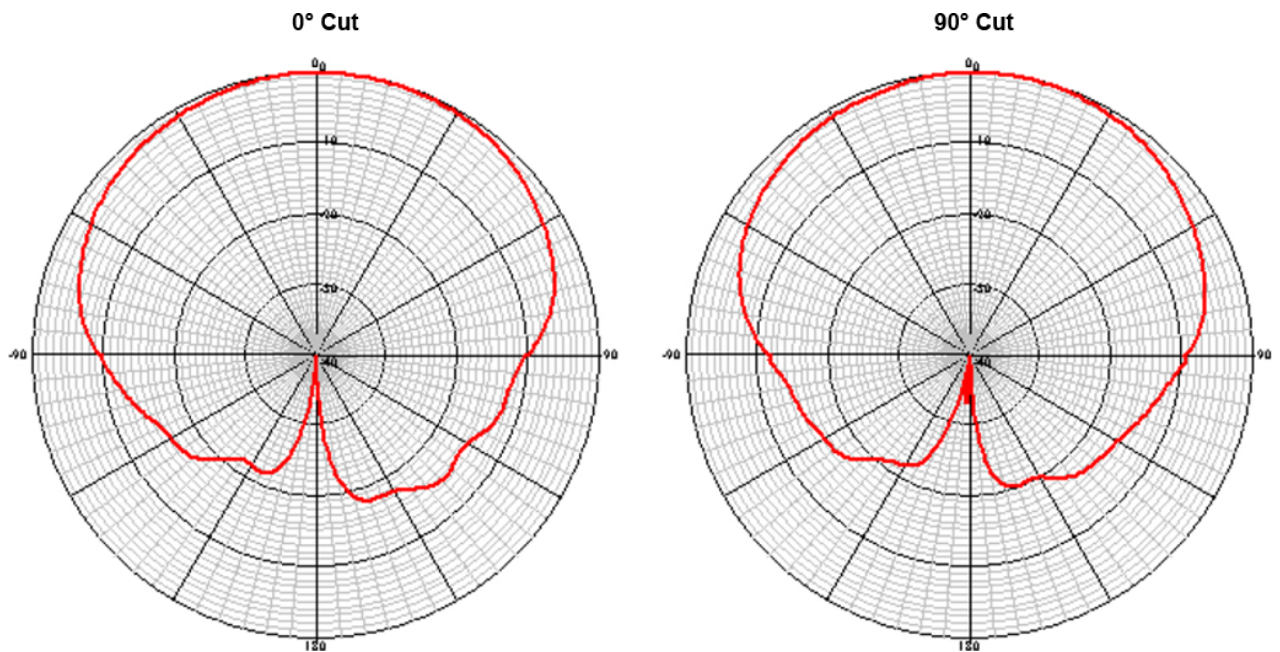
### 2.1 L1 Center Frequency

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 L1L2-S2GP has been designed to meet the MIL-STD-810 following requirements.

**Table 3-1. MIL-STD-810 Requirements**

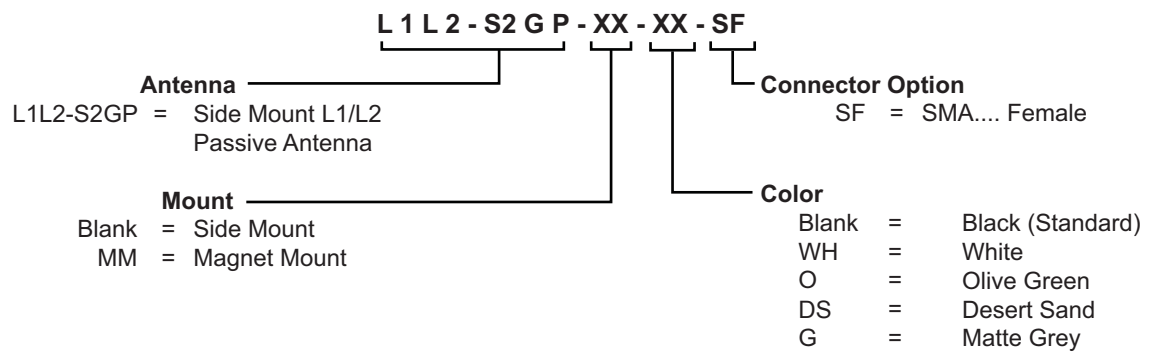
Environment	MIL-STD-810 Requirements	
Mechanical Vibration	810G	Mtd 514.6
Functional Shock	810G	Mtd 516.6
Crash Hazard	810G	Mtd 516.6
Temperature and Altitude	810D	Mtd 520.0, Proc. III
Temperature Shock	810D	Mtd 503.2, Proc. I
Humidity	810D	Mtd 507.2, Proc. III
Salt Fog	810D	Mtd 509.2, Proc. I
Fungus	810D	Mtd 508.3
Sand and Dust:	810D	Mtd 510.2, Proc. I
Explosive Atmosphere	810D	Mtd 511.2, Proc. I

## 4 Product Options

Table 4-1. L1L2-S2GP Available Options

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

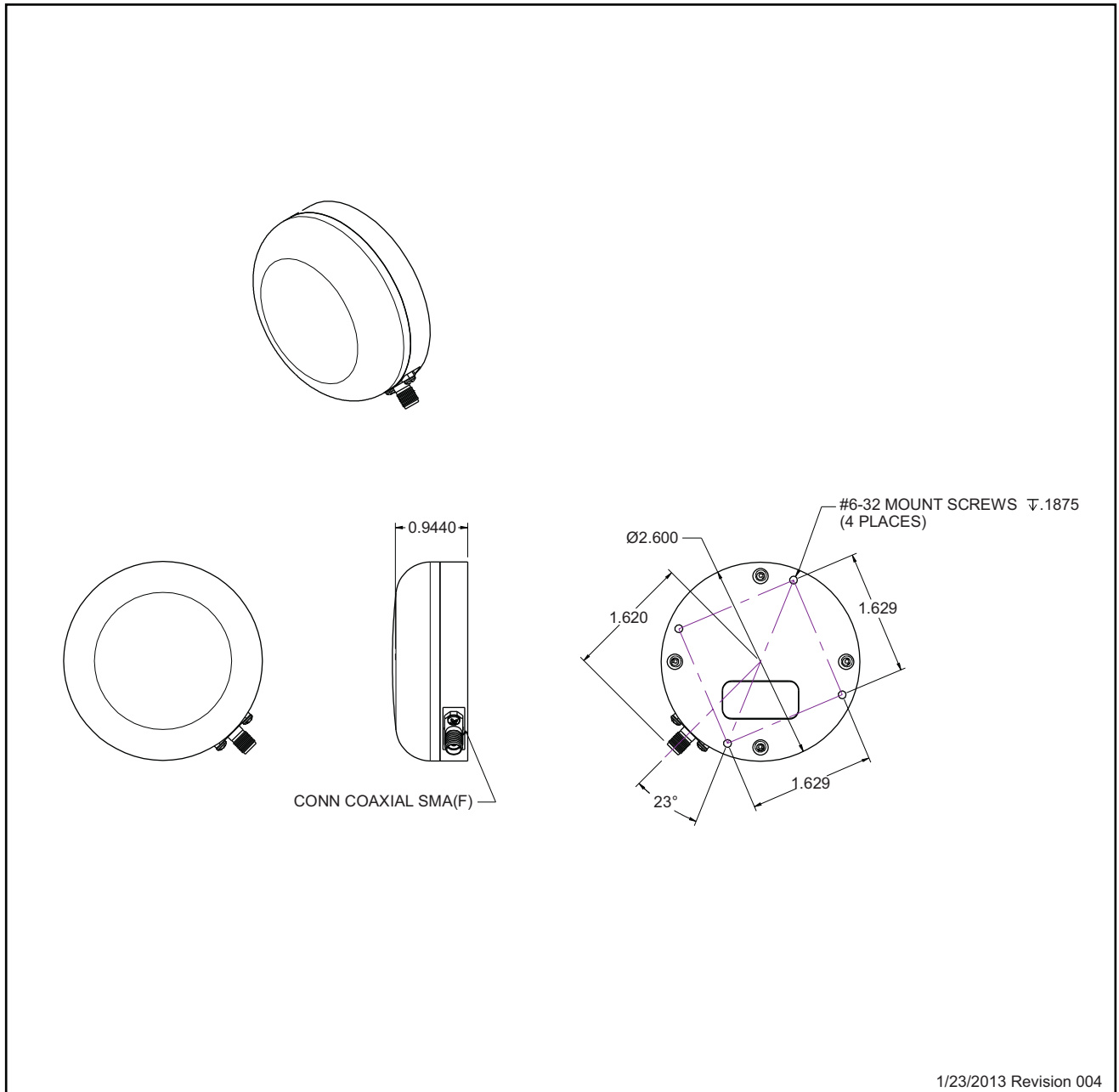
## 5 Product Code Decoder




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

## 6 Mechanical Drawing

### 6.1 L1L2-S2GP L1/L2 Passive Antenna Side Mount (SMA)



1/23/2013 Revision 004

GPS Source Part No. <b>L1L2-S2GP</b>	Finish <b>N/A</b>	Size <b>C</b>	Mass <b>0.40 lbs</b>	Tolerances	
Description <b>FAN L1/L2 PASSIVE 2.6" ANT MIL GRADE GPSS SMA(F)</b>	Material <b>SEE BOM</b>	3 <sup>rd</sup> Angle Projection 		Linear .X = $\pm 0.100$ .XX = $\pm 0.010$ .XXX = $\pm 0.005$ .XXXX = $\pm 0.0005$	Angular $\pm 1^\circ$ RADII See Linear
Dimensions are in inches unless otherwise specified. IAW ASME Y14.5M - 1994					

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## L1L2-S2GP Data Sheet

059-FAN-AAD-CCY-PYZ-002

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