

## L1L2-S2GAD

### GPS Active DAGR Antenna

#### DESCRIPTION

The L1L2-S2GAD is a dual band active L1/L2 GPS antenna which is specifically designed for operation with the US DoD DAGR military grade receiver. The L1L2-S2GAD is available with a side or magnet mount and multiple colors (per FED-STD-595B).

#### FEATURES

- Designed Specifically for Operation with the Defense Advanced GPS Receiver (DAGR)
- L1/L2 Dual Band
- Specification Compliant Performance Over the Entire Environmental and Voltage Range
- Multiple Color Options

#### OPTIONS

The L1L2-S2GAD 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-S2GAD Specifications

Table 1-1. Electrical Specifications

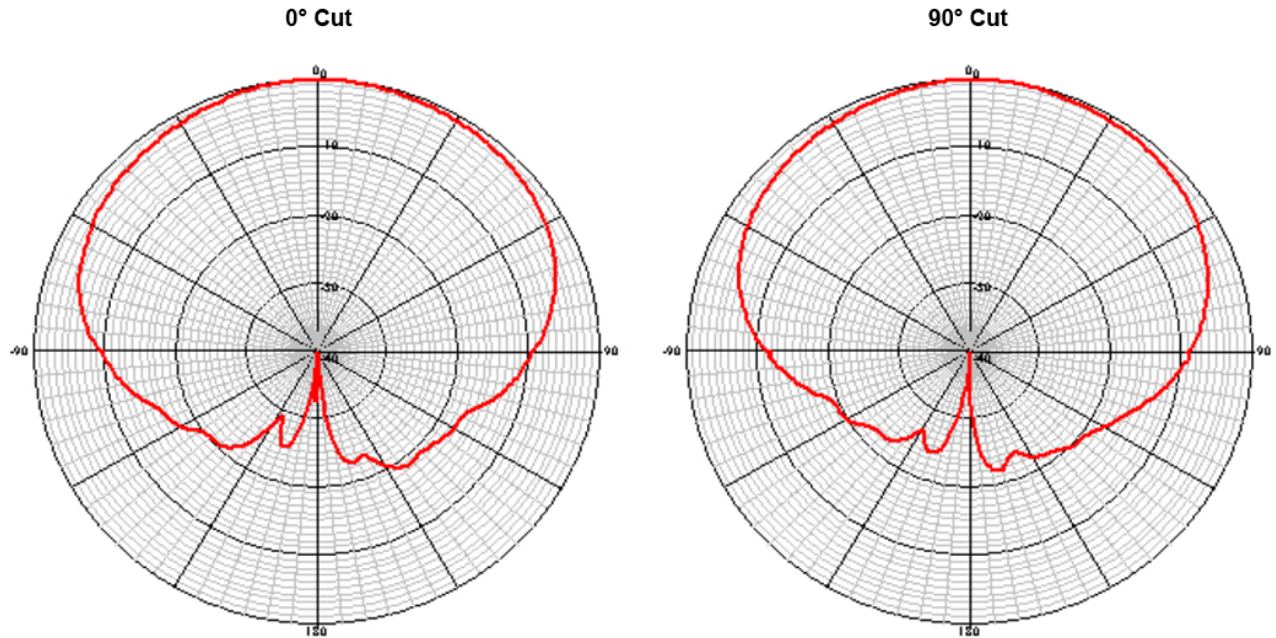
Operating Temperature -54°C to 71°C

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	
LNA Gain	L1	Output = 50Ω		30		dB
	L2			30		
Output SWR		Output = 50Ω			2:1	—
Required DC Input Voltage			3.30		16	VDC
LNA Current		Output = 50Ω, 3.3V		31	35	mA
LNA OP1dB Compression				8		dBm
LNA OIP3				20		dBm
Noise Figure		Output = 50Ω, 3.3V		3	3.50	dB
Rejection	+/-50MHz	> 12dB				
	+/-100MHz	> 42dB				
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

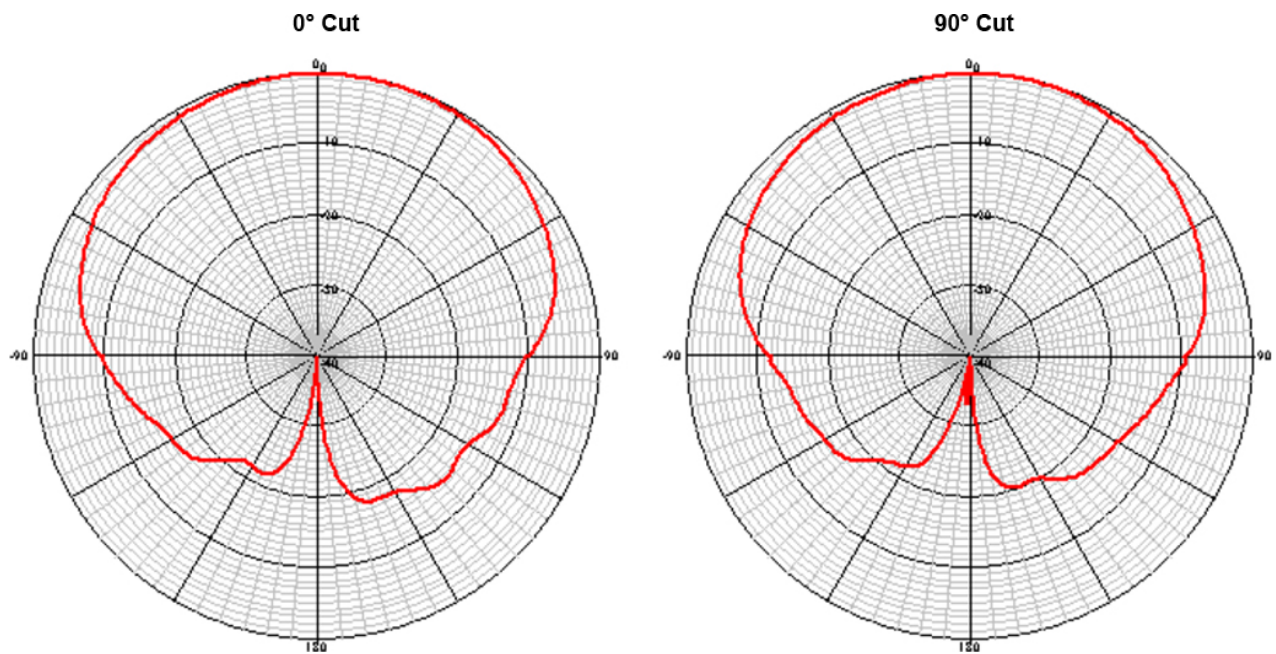
### 2.1 L1 Center Frequency

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-S2GAD has been designed to meet the MIL-STD-810 following requirements.

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

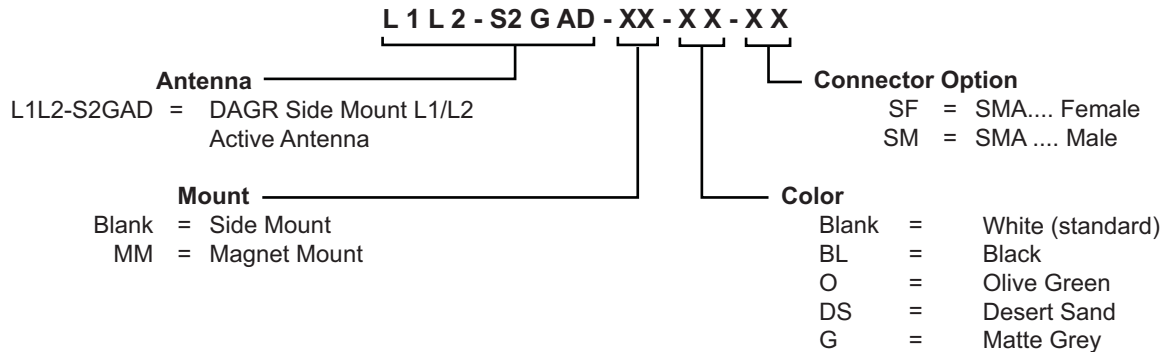
Environment	MIL-STD-810 Requirements	
Mechanical Vibration	810G	Mtd 514.6
Functional Shock	810G	Mtd 516.6
Crash Hazard	810G	Mtd 516.6
Temperature and Altitude	810D	Mtd 520.0, Proc. III
Temperature Shock	810D	Mtd 503.2, Proc. I
Humidity	810D	Mtd 507.2, Proc. III
Salt Fog	810D	Mtd 509.2, Proc. I
Fungus	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-S2GAD Available Options

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

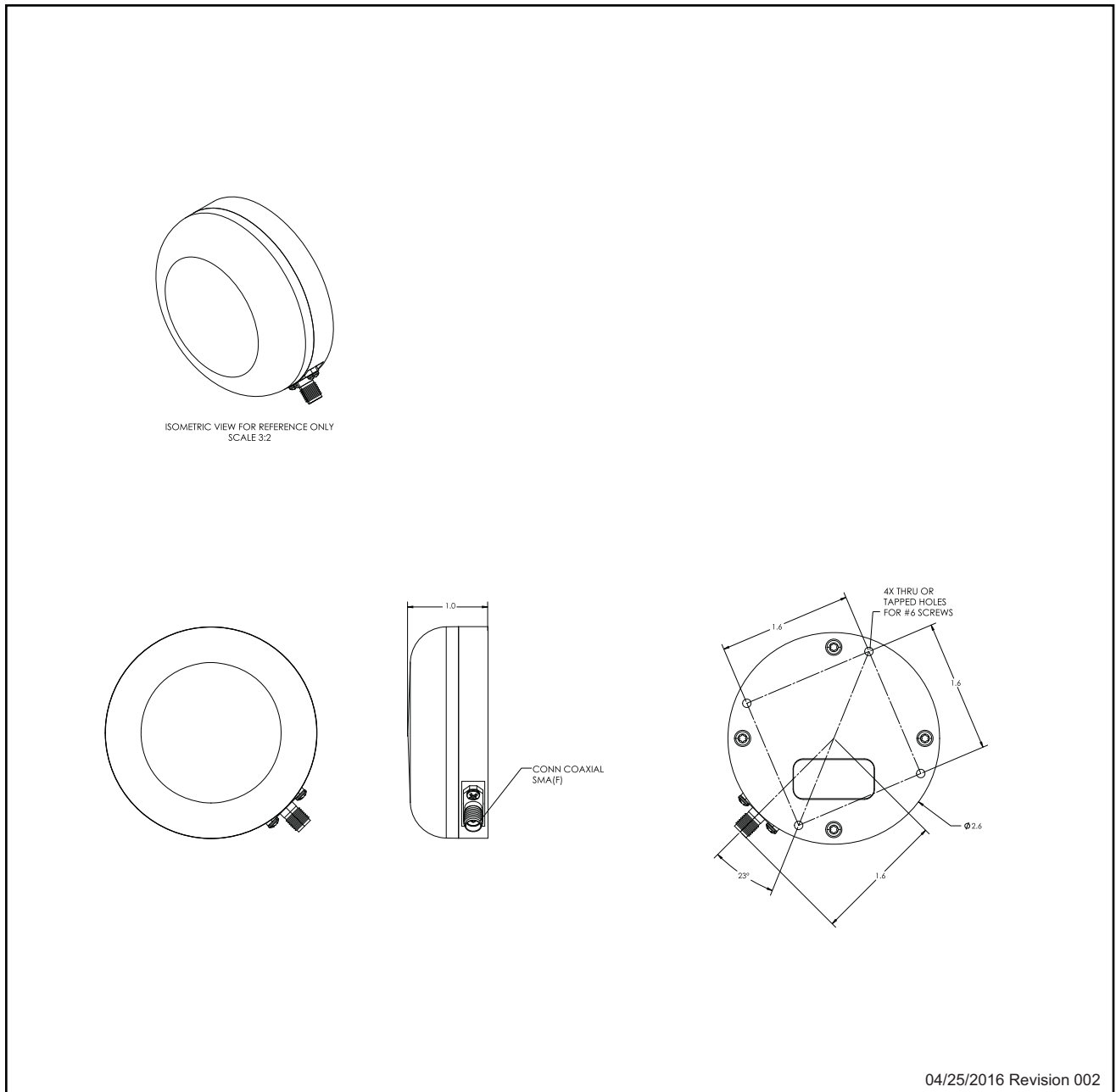
## 5 Product Code Decoder



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-S2GAD GPS Active DAGR Antenna Side Mount (SMA)



04/25/2016 Revision 002

GPS Source Part No. <b>L1L2-S2GAD</b>	Finish N/A	Size C	Mass 0.31 lbs	Tolerances	
Description FAN L1/L2 ACT 2.6" ANT MIL GRADE GPSS SMA(F) SIDE MOUNT DAGR	Material SEE BOM	3 <sup>rd</sup> Angle Projection		Linear	Angular
				.X = ±0.1000 .XX = ±0.0100 .XXX = ±0.0050 .XXXX = ±0.0005	±1° RADII See Linear

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## L1L2-S2GAD Data Sheet

059-FAN-ADD-CCY-PYZ-003

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