



**GPS LIVE INSIDE**

## L1L2-2GAD

### GPS Active DAGR Antenna

#### DESCRIPTION

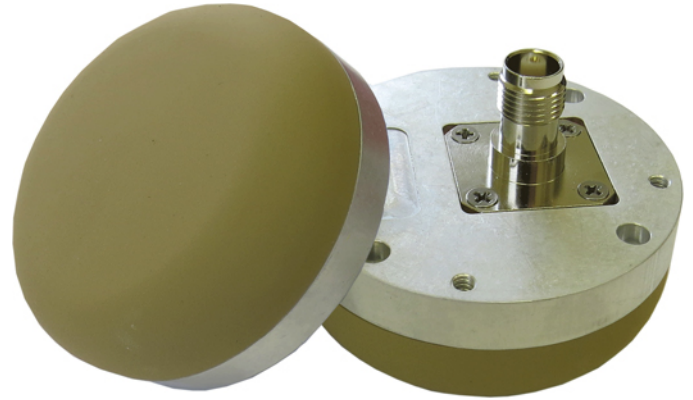
The L1L2-2GAD is a dual band active L1/L2 GPS antenna which is specifically designed for operation with the US DoD DAGR military grade receiver. The L1L2-2GAD is available with a bottom or a side mount connector and multiple colors (per FED-STD-595B).

#### 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
- Bottom Mount
- Multiple Color Options

#### OPTIONS

The L1L2-2GAD comes with many available options to meet specific needs. Please contact GPS Source via phone, fax, email, or visit the website for further information on product options and specifications.



# 1 L1L2-2GAD Specifications

**Table 1-1. Electrical Specifications**

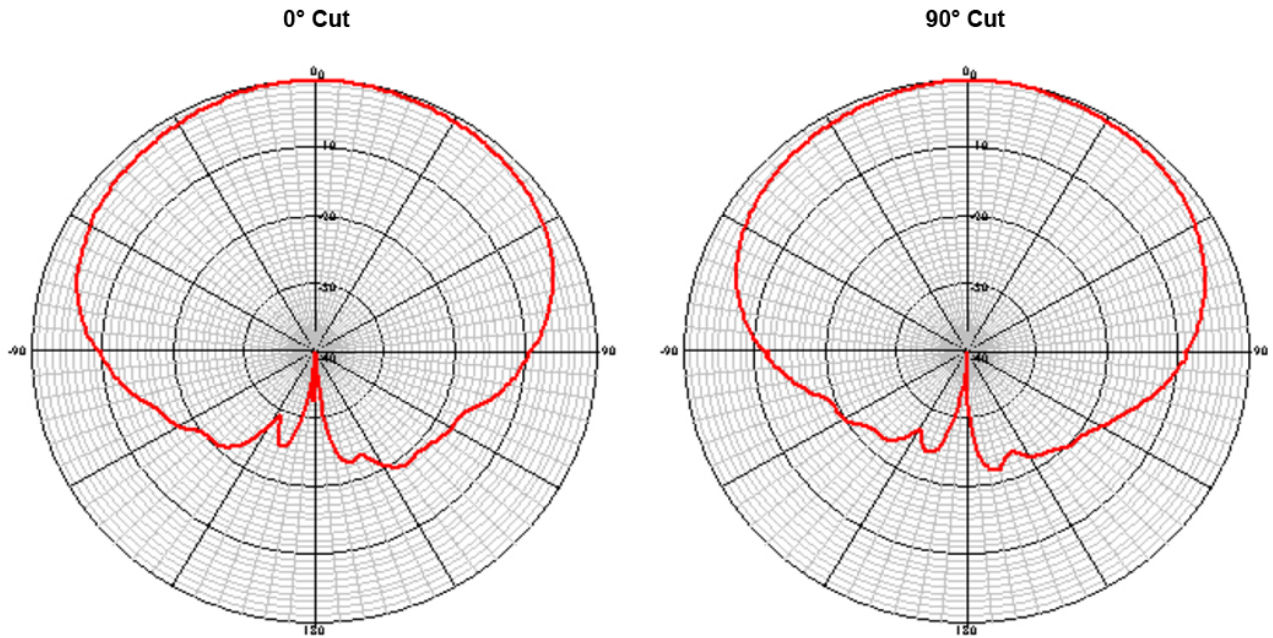
Operating Temperature -54°C to 71°C

Parameter		Conditions	Min	Typ	Max	Units
Frequency Range (Passband)	L1	Ant: Output = 50Ω	1560.42	1575.42	1590.42	MHz
	L2		1212.60	1227.60	1242.60	
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	31	33.50	dB
	L2		30	31	33.50	
Output SWR		Output = 50Ω			2:1	—
Required DC Input Voltage			3.30		16	VDC
LNA Current		Output = 50Ω, 3.3V		31	35	mA
LNAOP1db Compression				8		dBm
LNA OIP3				20		dBm
Noise Figure		Output = 50Ω, 3.3V		3	3.5	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

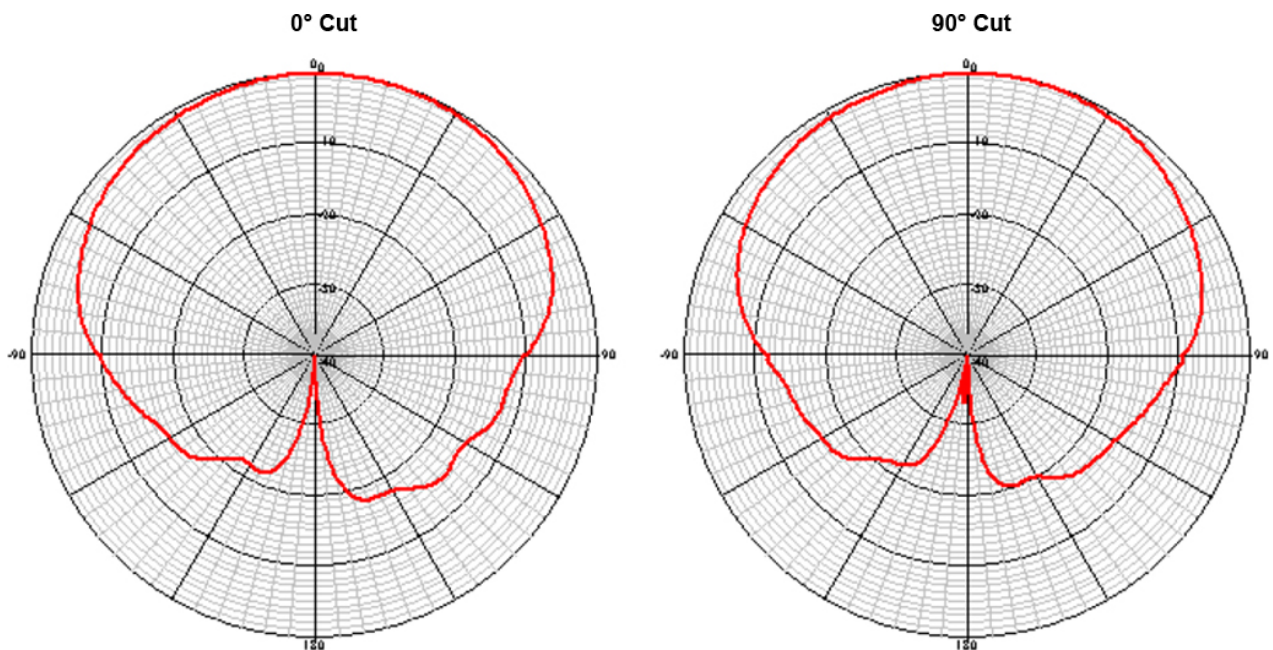
### 2.1 L1 Center Frequency

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 L1L2-2GAD has been designed to meet the MIL-STD-810 following requirements.

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

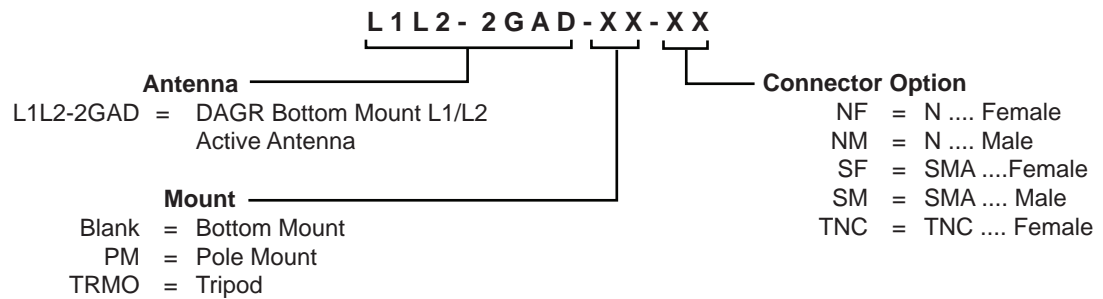
Environment	MIL-STD-810 Requirements	
Mechanical Vibration	810G	Mtd 514.6
Functional Shock	810G	Mtd 516.6
Crash Hazard	810G	Mtd 516.6
Temperature and Altitude	810D	Mtd 520.0, Proc. III
Temperature Shock	810D	Mtd 503.2, Proc. I
Humidity	810D	Mtd 507.2, Proc. III
Salt Fog	810D	Mtd 509.2, Proc. I
Fungus	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. L1L2-2GAD Available Options

Type	Options	
Connector	N	Male and Female
	SMA	Male and Female
	TNC	Female
Mounting	Bottom Mount	
	Pole	
	Tripod	
Color (FED-STD-595B)	White (Standard)	Gloss
	Black	Matte
	Olive Green	Matte
	Desert Sand	Matte
	Gray	Matte

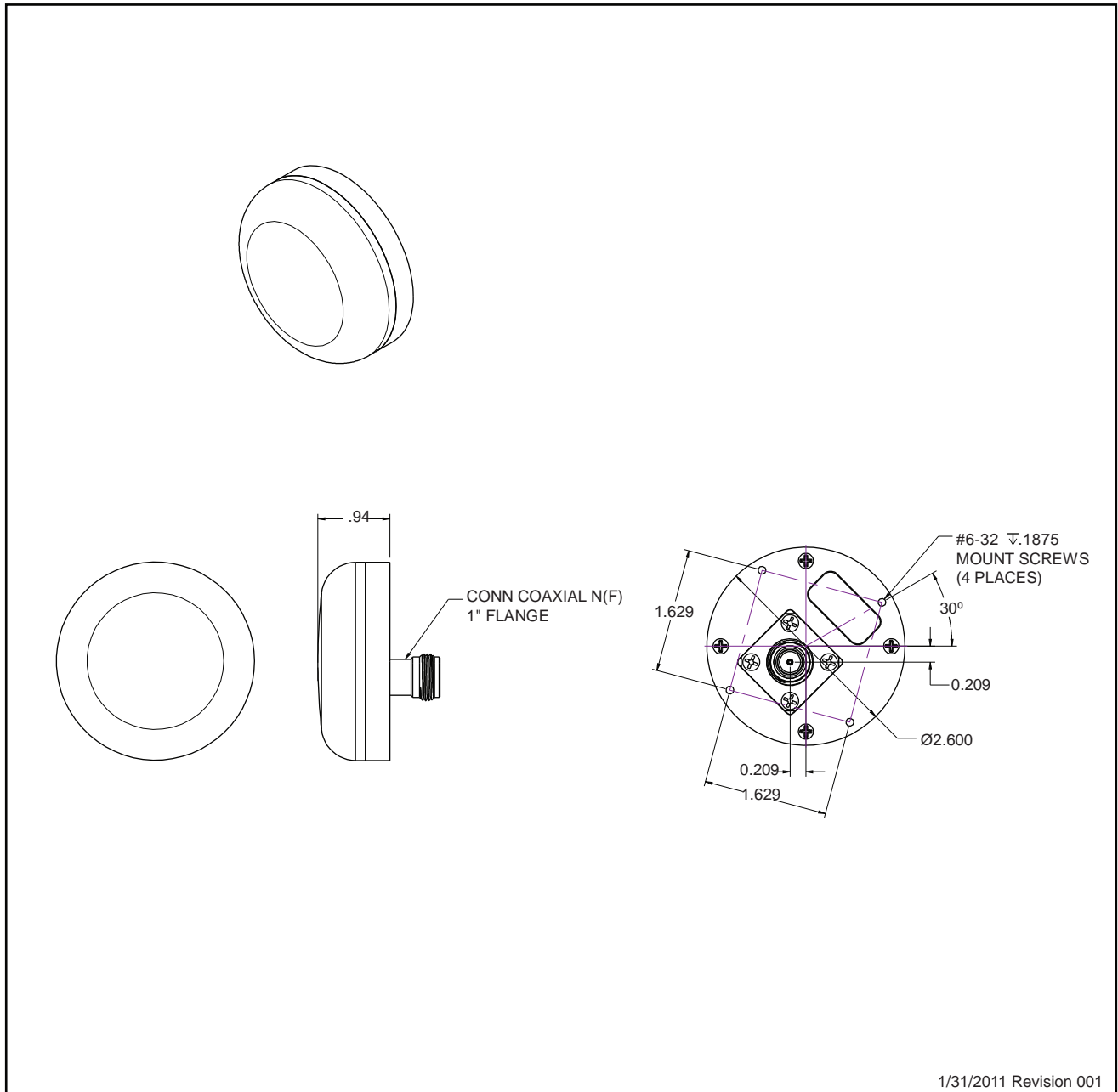
## 5 Product Code Decoder



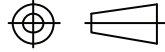
Note: To have product/part codes customized to meet exact needs, contact GPS Source at [techsales@gpssource.com](mailto:techsales@gpssource.com) or visit the website at [www.gpssource.com](http://www.gpssource.com).

## 6 Mechanical Drawing

### 6.1 L1L2-2GAD GPS Active DAGR Antenna Bottom Mount



1/31/2011 Revision 001

GPS Source Part No. <b>L1L2-2GAD</b>	Finish <b>N/A</b>	Size <b>C</b>	Mass <b>0.40lbs</b>	Tolerances	
Description <b>FAN L1/L2 ACT ANT MIL GRADE GPSS N (F) LV DAGR</b>	Material <b>N/A</b>	3 <sup>rd</sup> Angle Projection 		Linear .X = $\pm 0.1000$ .XX = $\pm 0.0100$ .XXX = $\pm 0.0050$ .XXXX = $\pm 0.0005$	Angular $\pm 1^\circ$ RADII See Linear
Dimensions are in inches unless otherwise specified. IAW ASME Y14.5M - 1994					



**GPS LIVE INSIDE**

**L1L2-2GAD Data Sheet**

059-FAN-ADD-CYY-PZZ-005

Page 7 of 7, 4/13/2015

64 N. Mission Drive  
Pueblo West, CO 81007  
Phone: (+1)(719) 561.9520  
Fax: (+1)(719) 565.0890  
[techsales@gpssource.com](mailto:techsales@gpssource.com)  
[www.gpssource.com](http://www.gpssource.com)

AS9100C:2009 and ISO 9001:2008 Compliant Company



© 2014 GPS Source, Inc. All rights reserved.

GPS Source, Inc., GPS Live Inside, GPS Source logo, and other GPS Source, Inc. products, brands, and trademarks mentioned in this document are property of GPS Source, Inc. and/or its affiliates in the United States and/or other countries. Other products, brands, and trademarks are property of their respective owners/companies. Any rights not expressly granted herein are reserved.

DISCLAIMER: The materials in this document could include inaccuracies or typographical errors and are subject to change at any time. The materials are provided "as is" without warranty of any kind. To the maximum extent permitted by applicable law, GPS Source, Inc. and its suppliers hereby disclaim all warranties, either expressed or implied, and conditions with respect to the materials, their quality, performance, suitability, merchantability, fitness for a particular purpose, title, and non-infringement. LIMITATION OF LIABILITY: IN NO EVENT WILL GPS SOURCE, INC. AND ITS SUPPLIERS BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER IN AN ACTION OF CONTRACT OR TORT, ARISING OUT OF THE USE OR INABILITY TO USE THE MATERIALS AVAILABLE IN THIS DOCUMENT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN PARTICULAR AND WITHOUT LIMITATION, GPS SOURCE, INC. SHALL HAVE NO LIABILITY FOR ANY LOSS OF USE, DATA, INCLUDING THE COSTS OF RECOVERING SUCH DATA, OR PROFITS.