

L1L2-RA-1 DAGR

GPS Active Antenna

Technical Product Data

Features

- ❖ **Designed Specifically for Operation with The Defense Advanced GPS Receiver**
- ❖ **L1/L2 Dual Band**
- ❖ **Spec Compliant Performance Over the Entire Environmental and Voltage Range**
- ❖ **Multiple Color Options**



Description

The L1L2-RA-1 is a dual band active L1/L2 GPS antenna that is specifically designed for operation with the US DoD DAGR military grade receiver. The L1L2-RA-1 is available with a SMA side mount connector and multiple radome colors options (per FED-STD-595B).

Please call, fax, email (sales@gpssource.com), or visit our website (www.gpssource.com) for further information on product options, specifications, or to receive an easy to use order sheet.

Document Description: L1L2-RA-1 Data Sheet	Doc. Number: 1504-TS-DAGR-Antenna-RA1-03	Revision: 003
Author: Brandie Chenoweth	Department: Marketing	Date: 21 Jun 2012

Electrical Specifications, Operating Temperature -54⁰ to 71⁰C

Parameter		Conditions	Min	Typ	Max	Units
Frequency Range: (Passband)	L1	Ant – Output = 50Ω	1560.5	1575.5	1590.5	MHz
	L2	Ant – Output = 50Ω	1212.6	1227.6	1242.6	MHz
Out Imped.				50		Ω
Element Gain	L1	Output = 50Ω, 4 ft G.P.	3.0	3.4	4.0	dBiC
	L2	Output = 50Ω, 4 ft G.P.	3.0	6.7	7.0	
LNA Gain	L1	Output = 50Ω	24.0	26.0	28.0	dBm
	L2	Output = 50Ω	24.0	26.0	28.0	
Output SWR		Output = 50Ω			2.0:1	-
LNA Current		Output = 50Ω, Voltage=3.3V		23	25	mA
LNA OP1dB Compression				8		dBm
LNA OIP3				20		dBm
Noise Figure		Output = 50Ω, Voltage=3.3V			2.5	dB
Rejection @ +/- 50 MHz		>12dB				
@ +/- 100 MHz		>42dB				
Polarization		Right Hand Circular				
Axial Ratio @ Peak		2dB max				
Beam width		115 ⁰ +/-5 ⁰ at -3dB from peak				
Altitude		50,000ft				
Lightning Protection		DC ground on the antenna element				

Environmental:

The L1L2-RA-1 has been designed to meet the MIL-STD-810 and tested to meet the following requirements:

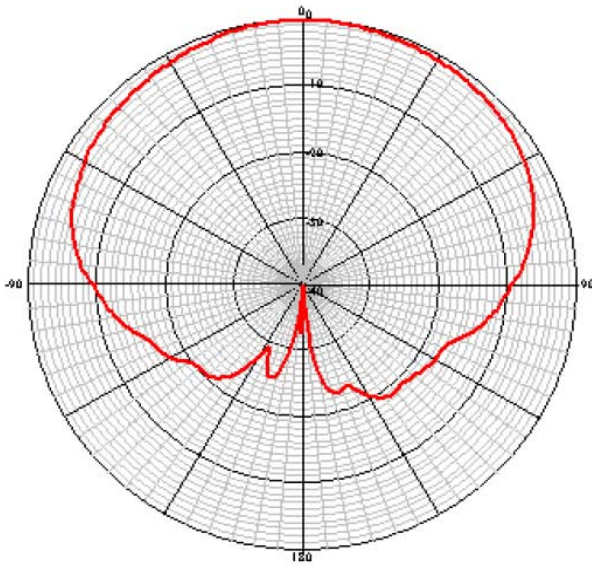
- Mechanical Vibration: 810G, Mtd 514.6
- Functional Shock: 810G, Mtd 516.6
- Crash Hazard: 810G, Mtd 516.6
- Temp & Altitude: 810D, Mtd 520.0, Proc. III
- Temperature Shock: 810D, Mtd 503.2, Proc. I
- Humidity: 810D, Mtd 507.2, Proc. III
- Salt Fog: 810D, Mtd 509.2, Proc. I
- Fungus: 810D, Mtd 508.3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

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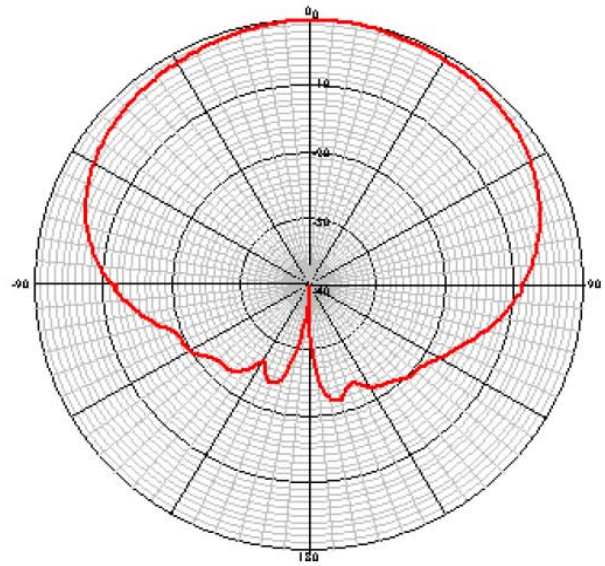
Performance Data:

Far-Field Plots - No Ground Plane, L1 Center Frequency

0-deg Cut

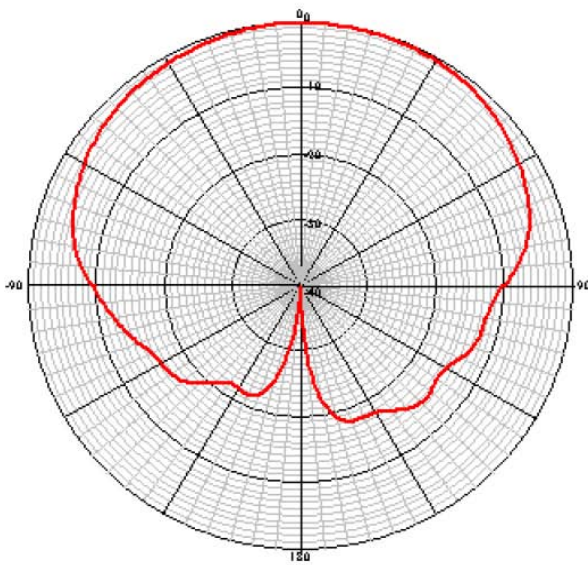


90-deg Cut



Far-Field Plots - No Ground Plane, L2 Center Frequency

0-deg Cut



90-deg Cut

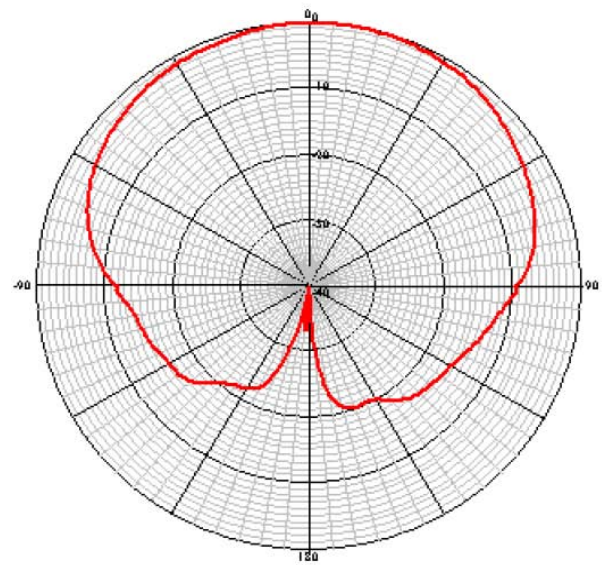


Figure 1. Antenna Far Field Pattern Data

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Mechanical:

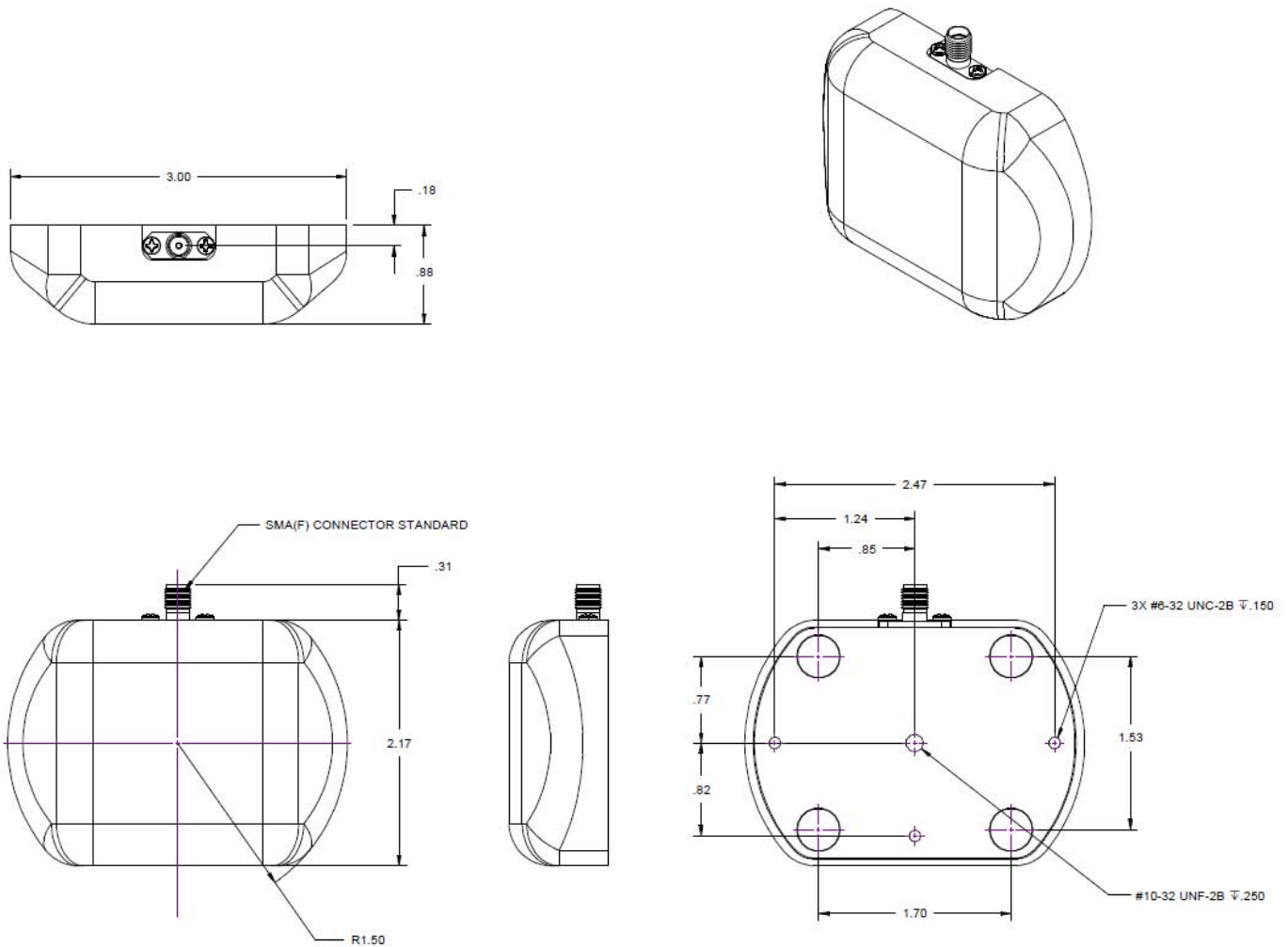


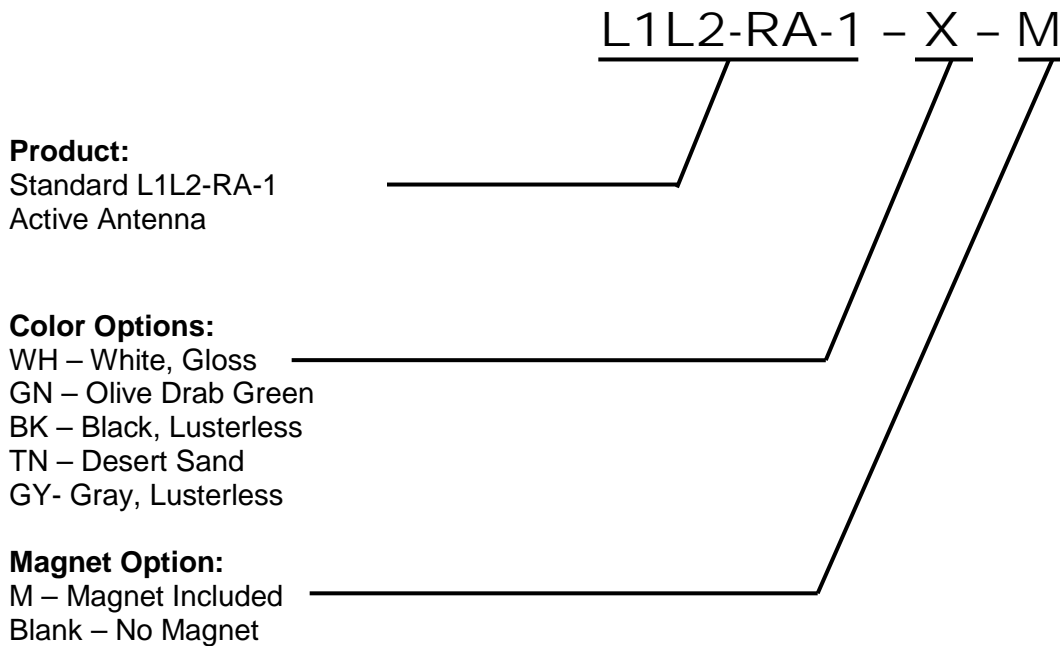
Figure 2. Antenna Mechanical Data

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Available Options:

Options:	
Color Options (FED-STD-595B)	Gloss White
	Black, Lusterless
	Desert Sand
	Gray, Lusterless
	Olive Drab Green, Lusterless
Magnet Options	Magnet Included
	No Magnet

Part Number:



For help in creating the part number to meet your exact needs, contact us at Sales@gpssource.com or visit our website at www.gpssource.com.