L1L2-2GP GPS Passive Antenna

Technical Product Data

Features

- **L1/L2 Dual Band**
- **Excellent Gain, 3dBiC typ.**
- **Design for Military & Civilian Aviation**
- **Integrated Resistor for Antenna/Coaxial Cable BIT**
- **Multiple Connector Options**

Description

The L1L2-2GP is a dual band passive L1/L2 GPS antenna that is ideally suited for any military or civilian aviation application. The L1L2-2GP is available with various common RF connector options in order to meet your specific needs.

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.

Your source for quality GNSS Networking Solutions and Design Services, Now!

Electrical Specifications, Operating Temperature -54° to 71°C

Parameter		Conditions	Min	Typ	Max	Units
Frequency Range: (Passband)	L1	Ant – Output = 50Ω	1565	1575.5	1586	MHz
	L2	Ant – Output = 50Ω	1217.5	1227.6	1237.8	MHz
Out Imped.				50		Ω
Gain	L1	Output = 50Ω	3.0		5	dBiC
	L2	Output = 50Ω	3.0		5	
Output SWR		Output = 50Ω			2.0:1	-
Polarization		Right Hand Circular				
Axial Ratio @ Peak		3dB max				
Beam width		110° +/-5° at -3dB from peak (Free Space)				
Altitude		50,000ft				

Environmental:

MIL-STD-810D/MIL-E-5400T

- Temp & Altitude: 810D, Mtd 520.0, Proc. III
- Temperature Shock: 810D, Method 503.2, Proc. I
- Humidity: 810D, Mtd 507.2, Procedure III
- Mechanical Vibration/Shock: 810D, Mtd 514.3/516.3
- 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

Automated Built In Test

The L1L2-2GP antenna includes an RF Bias-T with a 20KΩ resistor to ground, enabling an automated Built In Test (BIT) functionality in the GPS receiver application. By applying a DC voltage to the center conductor of the coaxial cable via a pull-up resistor, the application can simply monitor the DC voltage on the center conductor to determine the open/short status of the coaxial cable and antenna connection. See figure 1 below.

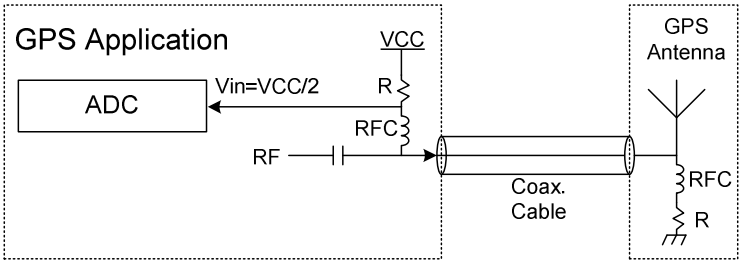
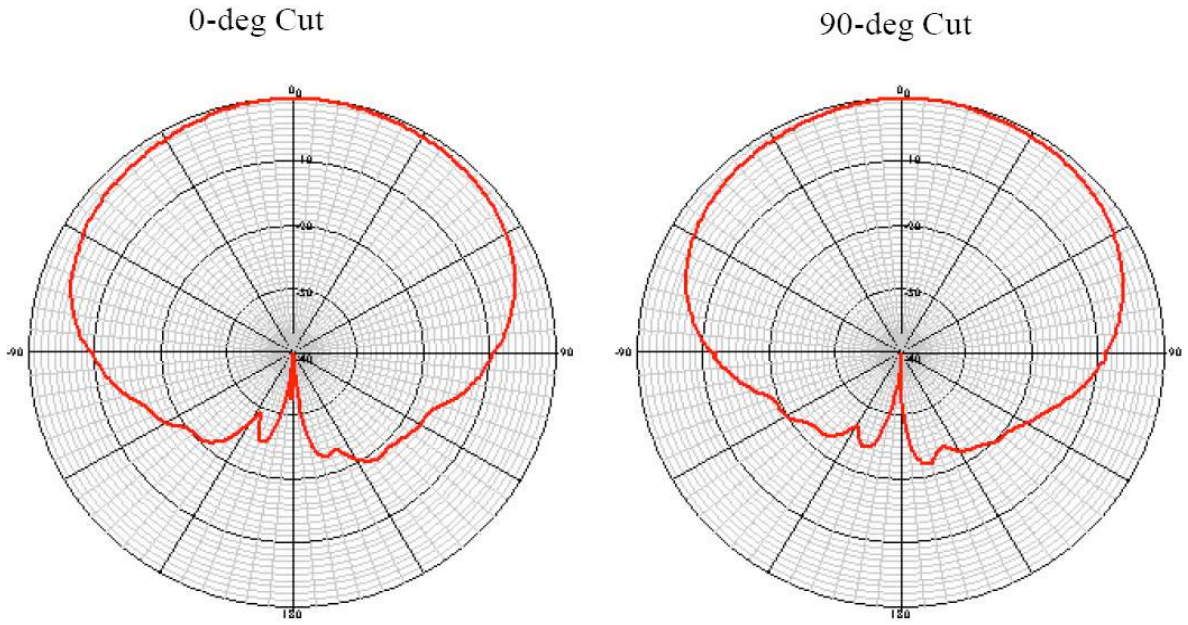


Figure 1. Automated Built In Test Application Circuit

Performance Data:

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



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

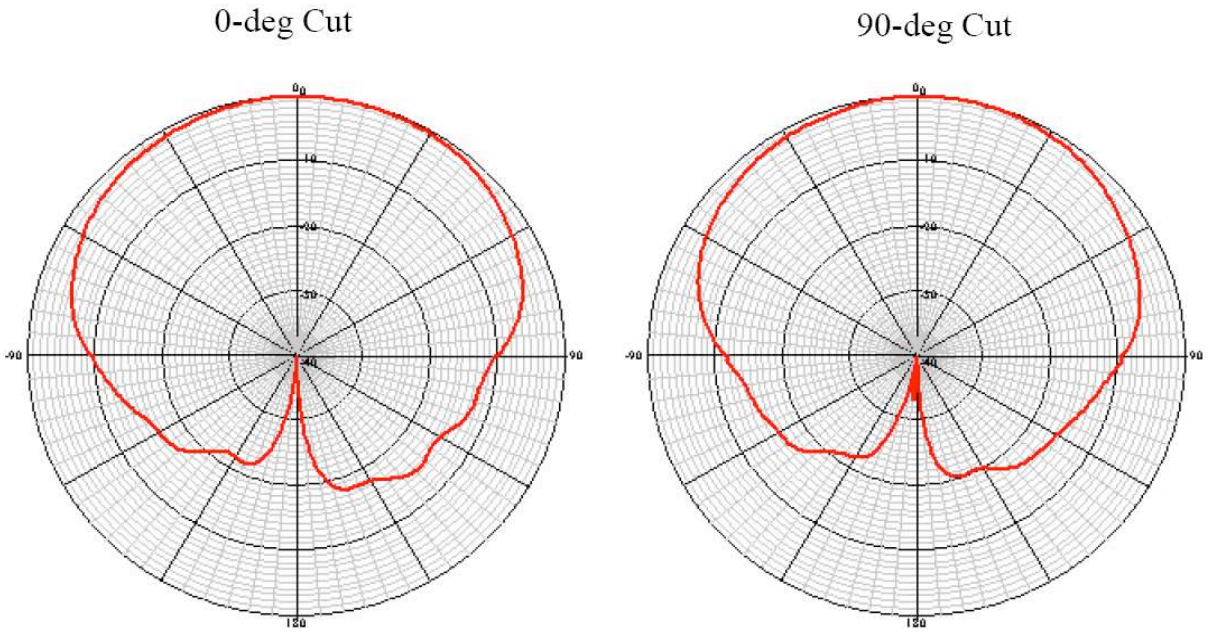


Figure 2. Antenna Far Field Pattern Data

Mechanical:

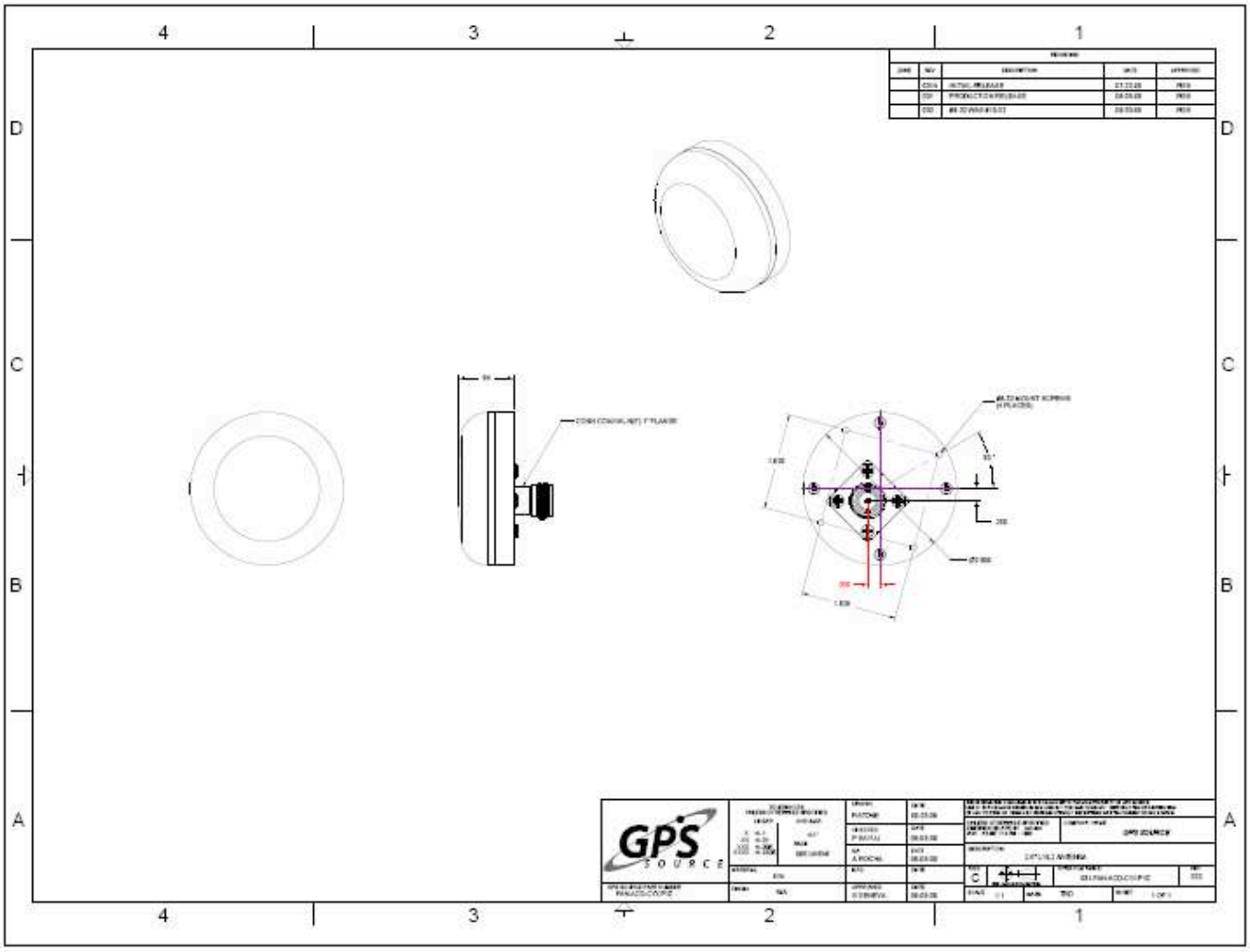


Figure 3. Antenna Mechanical Data