

**GPS LIVE INSIDE****GPS Active Antenna****DESCRIPTION**

The L1AW is a high performance L1 Band active antenna suited for applications requiring low noise and excellent gain. The product functions to specifications over the entire operational voltage and temperature range at a minimal current draw. It includes high frequency selectivity to avoid interference with other nearby transmitters.

Built to support the wireless market, the precise L1 Band Active antenna features low noise and high gain to provide optimum signal quality.

FEATURES

- Outstanding Noise Figure < 1dB
- Excellent Typical Gain of 33dB
- Wide Voltage Range of 3VDC to 16VDC
- Tiny Current Draw < 20mA
- Multiple Connector Options

OPTIONS

The L1AW 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.

**L1AW Data Sheet**

059-FAN-AAQ-XWX-RXZ-002
02/18/2016

www.gpssource.com

1 L1AW Specifications

Table 1-1. Electrical Specifications

Operating Temperature -40°C to 85°C

Parameter		Conditions	Min	Typ	Max	Units
Frequency Range (Passband)		Ant: Output, VDC = 3V to 16V, Output = 50Ω	1570	1575	1580	MHz
Out Impedance				50		Ω
Gain	Element	Ant Element		3	3.5	dBiC
	LNA	LNA, VDC = 3V to 16V, Output = 50Ω	32	33	35	dB
Output SWR		VDC = 3V to 16V, Output = 50Ω			2.5:1	—
Noise Figure		VDC = 3V to 16V, Output = 50Ω		0.8	1	dB
Required DC Input Voltage		DC Input on RF Output Center Conductor	3		16	VDC
LNA Current		Output = 50Ω, 5V		17	20	mA
Rejection	+/-50MHz > 24dB	Ant: Output, VDC = 3V to 16V, Output = 50Ω	-22	-24	-25	dB
	+/-100MHz > 35dB		-34	-35	-37	
Polarization		Right Hand Circular				

2 Performance Data

2.1 Far Field Patterns — 1575MHz

Figure 2-1. Far Field Plots Rotating Linear

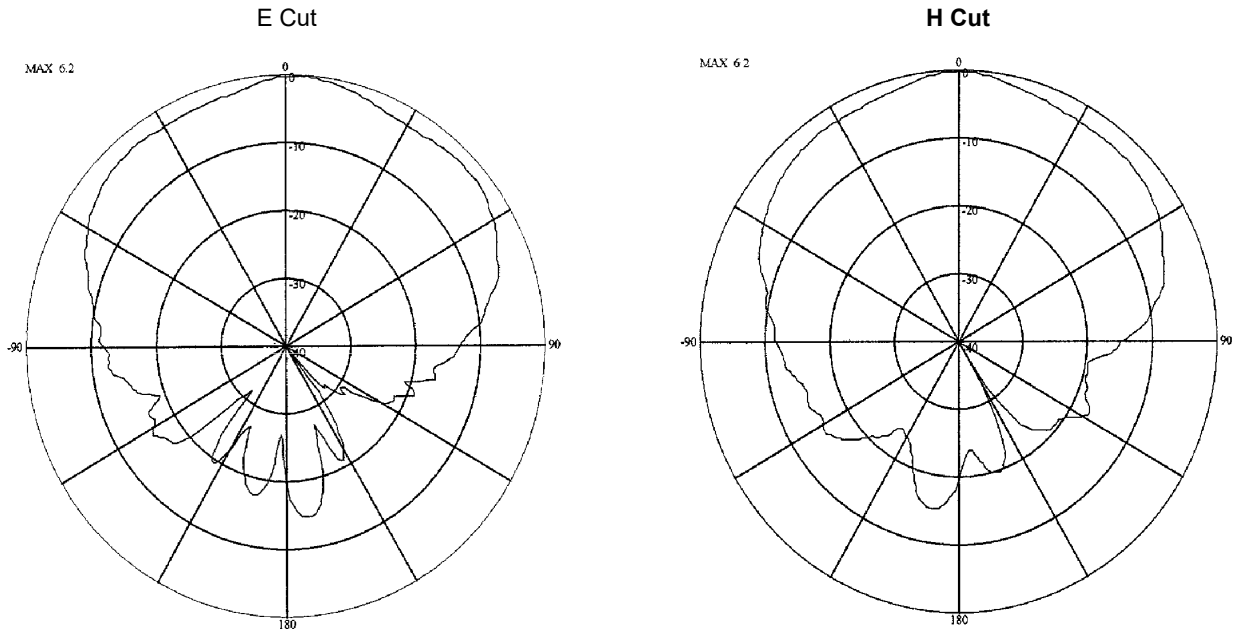
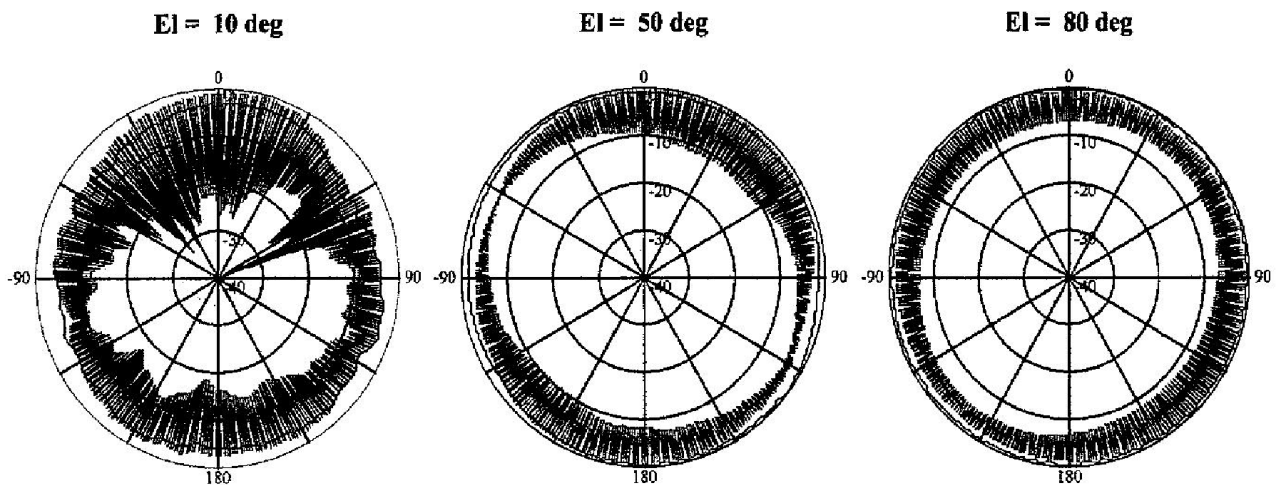


Figure 2-2. Far Field Plots Azimuth Cuts

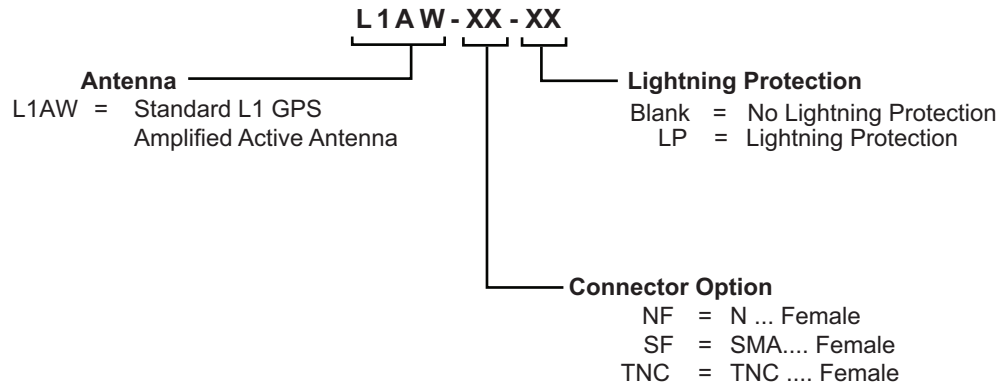


3 Product Options

Table 3-1. Available Options

Available Options		
Power Source Voltage	Voltage Input	Type
	DC 3VDC to 16VDC	Input on Center pin of RF Connector.
RF Connector	Type	Limitations
	N Female	N/A
	SMA Female	N/A
	TNC Female	N/A
Lightning Protection	DC to Ground on the Antenna Element	N/A

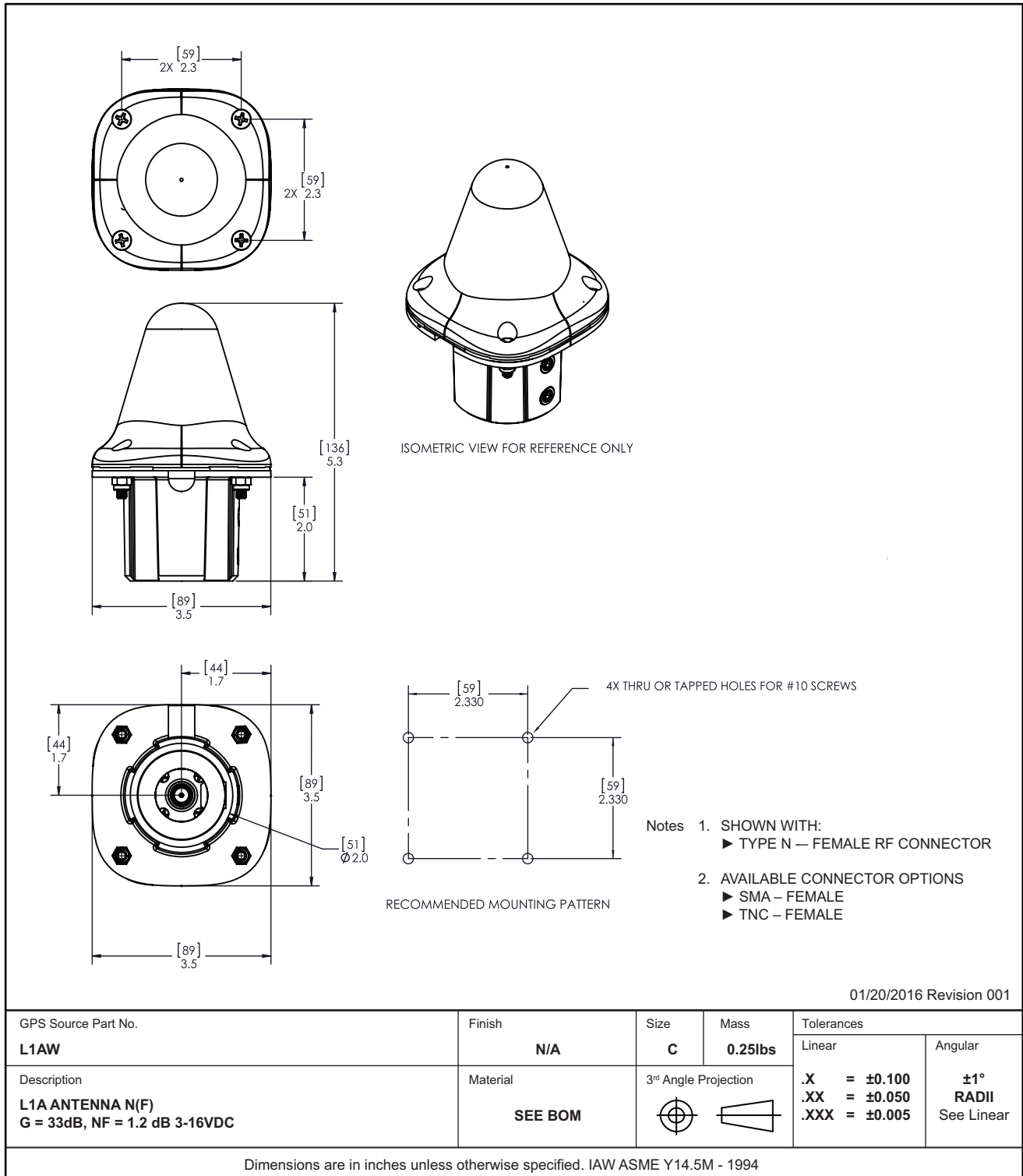
4 Product Code Decoder



- Notes:
1. Contact GPS Source for additional connector options.
 2. To have product/part codes customized to meet exact needs, contact GPS Source at techsales@gpssource.com or visit the website at www.gpssource.com.

5 Mechanical Drawing

5.1 L1AW GPS Active Antenna





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