

L1A GPS Antenna

Features

- ❖ Outstanding Noise Figure, < 1dB
- ❖ Excellent Gain, 33dB typ.
- ❖ Wide Voltage Range, 3-16VDC
- ❖ Tiny Current Draw, < 20mA
- ❖ Multiple Connector Options



Description

The L1A is a high performance L1 GPS antenna that is ideally suited for many 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. The product includes high frequency selectivity to avoid interference with other nearby transmitters.

The L1A is also 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).

L1A GPS Antenna

Electrical Specifications, Operating Temperature -40 to 85⁰ C

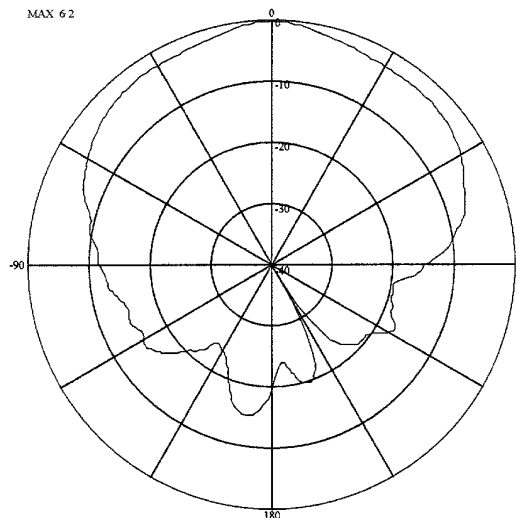
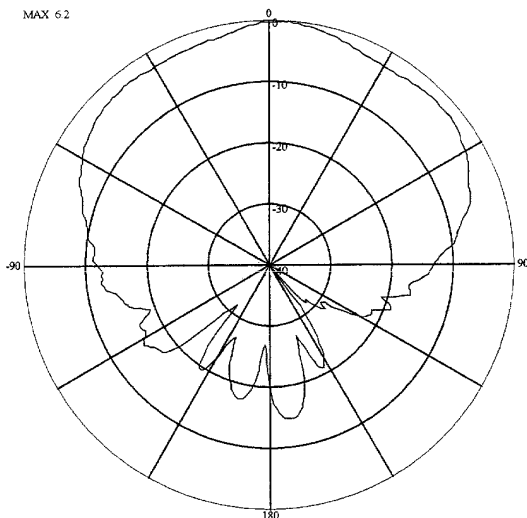
Parameter	Conditions	Min	Typ	Max	Units
Frequency Range: (Passband)	Ant – Output, VDC = 3 to 16V, Output = 50Ω	1570	1575	1580	MHz
Out Imped.			50		Ω
Gain					
Element:	Ant Element		3	3.5	dBIC
LNA	LNA, VDC = 3 to 16V, Output =50Ω	32	33	35	dB
Output SWR	VDC = 3 to 16V, Output = 50Ω			2.5:1	-
Noise Figure	VDC = 3 to 16V, Output = 50Ω		0.8	1.0	dB
Selectivity	Ant – Output, VDC = 3 to 16V, Output = 50Ω				
+/- 50MHz		-22	-24	-25	dB
+/- 100MHz		-34	-35	-37	dB
Req. DC Input V.	DC Input on RF Output Center Conductor	3		16	VDC
Current-Amplified	Amplifier Current Draw, DC Input		17	20	mA
Polarization	Right Hand Circular				

Performance Data:

Far Field Patterns – 1575 MHz

Rotating Linear – (E Cut)

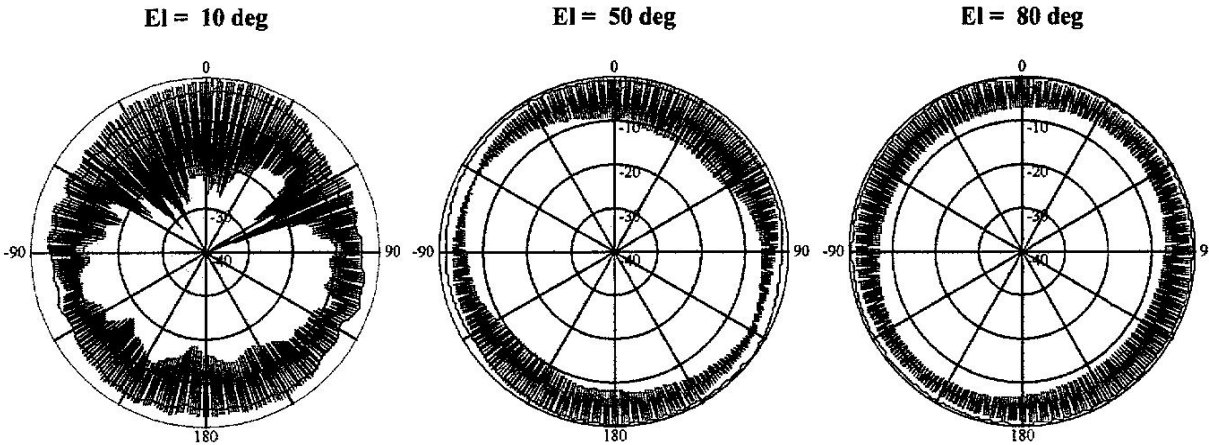
Rotating Linear – (H Cut)



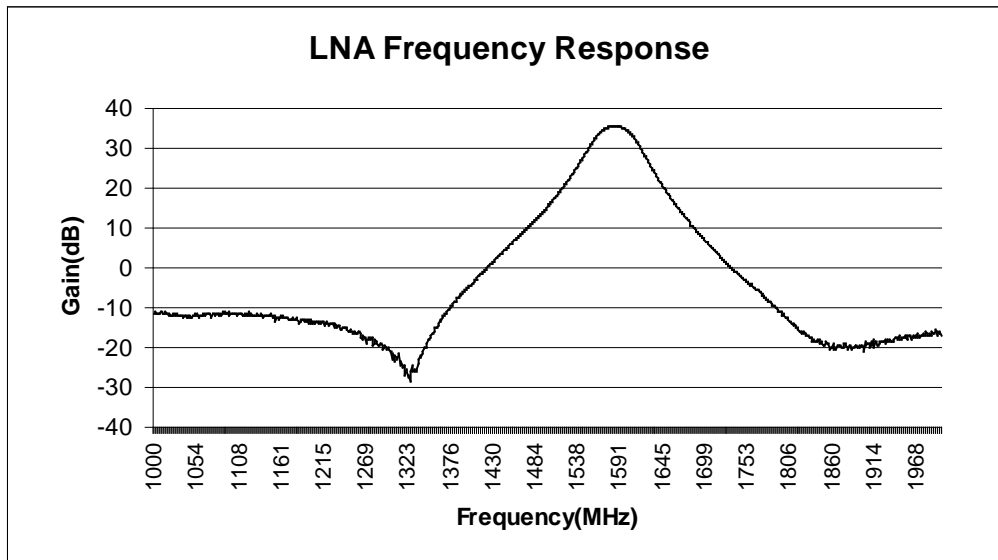
L1A GPS Antenna

Far Field Patterns – 1575 MHz

Azimuth Cuts:



LNA Frequency Response



Notes:

Frequency selectivity of antenna element adds additional out of band rejection.

L1A GPS Antenna

Available Options:

Power Supply Options:		
Source Voltage Options	Voltage Input	Type
	DC 3-16 VDC	Input on Center pin of RF Connector.
RF Connector Options:		
Connector Options	Connector Type	Limitations
	N (Female)	
	SMA (Male & Female)	
	TNC (Female)	
Mounting Option:		
	"L" Bracket Pole Mount HW	See Figure below

Notes: None

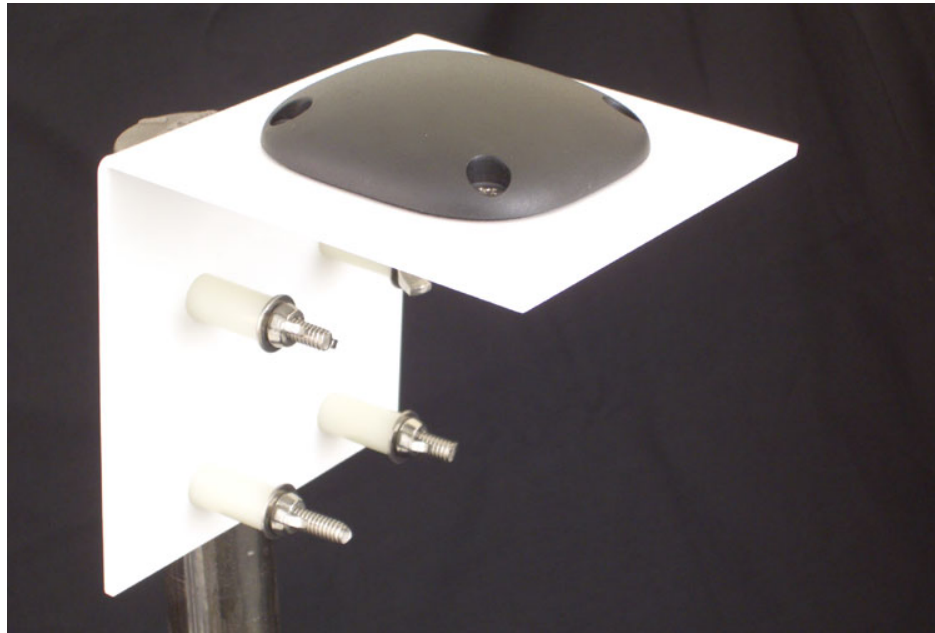


Figure 1. "L" Bracket Pole Mount HW

L1A GPS Antenna

Mechanical:

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

HOLE LOCATIONS
4 PLACES

$\phi 1.5$
CUT OUT FOR CONNECTOR
AND CONNECTOR SCREW
CLEARANCE.

PATTERN FOR MOUNTING
SCALE 1/1

NOTES

1. SHOWN WITH:
TYPE N - FEMALE RF CONNECTOR.

OTHER CONNECTOR OPTIONS AVAILABLE:
SMA - FEMALE,
TNC - FEMALE.

4X $\phi .192$ THRU
 $\perp \phi .408$

.649

1.290

3.445

3.445

2.333

2.333

	DRAWN JWK	DATE 08FEB2008	TITLE ANTENNA ASSEMBLY (1) ACTIVE ANTENNA (GPS SWANT) (1) G+5MHz NF+1.3dB RANGE+ 51MHz		
	CHECKED PWC		SIZE A	DSM NO. 	DWG FILE NAME 031-FAN-AAQ-XCX-RXZ
	APPROVED 		SCALE 1/2	GPS SOURCE PART NUMBER FAN-AAQ-XCX-RXZ	REV 001
				SHEET 1 OF 1	

L1A GPS Antenna

Part Number

L1A – PM - NF

Product:

Standard GPS L1
Amplified Antenna

Pole Mount Option:

Connector Options:

NF – N, Female
SM – SMA, Male
SF – SMA, Female
TF – TNC, Female

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.

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