

## PW1515-201

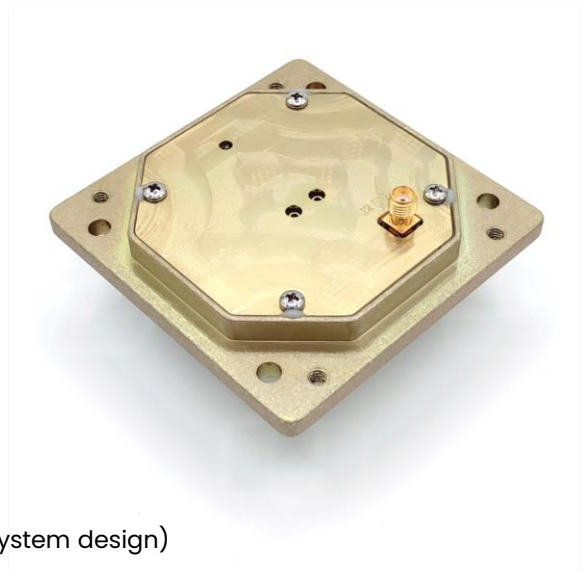
GPS L1 LNA

### Features

- ✓ Same active circuitry as PW1515-001
- ✓ Radiation tolerant
- ✓ Wide operating temperature range

### Benefits

- ✓ Commercial off-the-shelf (COTS)
- ✓ Facilitates Hardware-In-The-Loop (HITL) tests
- ✓ Facilitates irradiation tests
- ✓ Consultation services available (link budget, architecture and system design)



### Product Overview

PW1515-201 is the LNA-only version of the PW1515-001 antenna. It shares identical features and design with PW1515-001 in every aspect, except for the absence of the radiating element. Instead, the input of the LNA section is connectorized.

This configuration facilitates connectorized tests, including Hardware-In-The-Loop test (HITL), irradiation test, noise figure and active gain test and verification, and more.

### Related Products

Part Number	Description
PW1515-001	Active GPS L1 Antenna
PW1515-301	GPS L1 Test Hat
PW2020-000	Active S-Band RHCP RX Omni Antenna
PW2020-300	S-Band RHCP RX Omni Test Hat
PW2222-110	S-Band Dual-CP TX Omni Antenna

Information furnished by PlaneWave, Inc. is believed to be accurate and reliable. However, no responsibility is assumed by PlaneWave for its use, nor for any infringements of patents or other rights of third parties that may result from its use.

## Electrical Specifications

Parameter / Condition	Min	Typ	Max	Unit
Operating Frequency	1563		1587	MHz
VSWR			2:1	
Gain (Notes 1 and 2)	12	15	18	dB
Noise Figure (Note 2)		2.2	3.5	dB
Rejection @ 2200 MHz	60			dBc
Voltage	4.5	5	12	V
Current		25	30	mA

**Note 1:** LNA gain is customizable upon request

**Note 2:** Measured over the full operating temperature range

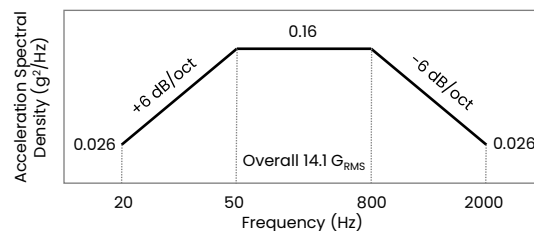
## Mechanical Specifications

Parameter / Condition	Value	Unit	Limits
Connector	SMA Female		
Mass	110	g	Max
Compatible Antenna	PW1515-001		

## Environmental Specifications

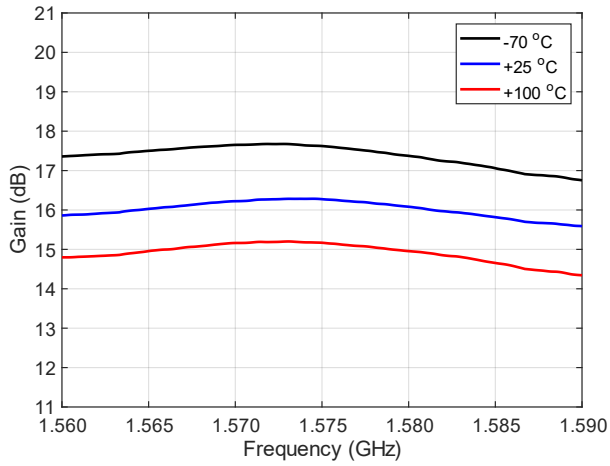
Parameter / Condition	Min	Typ	Max	Unit
Operating Temperature	-70		100	°C
Storage Temperature	-70		100	°C
Radiation Hardness (TID)	500			krad
Destructive Single Event Effects (Note 1)	37			MeV-cm <sup>2</sup> /mg
Vibration	14.1			G <sub>RMS</sub>

Random Vibration Test Levels  
(GSFC-STD-7000)

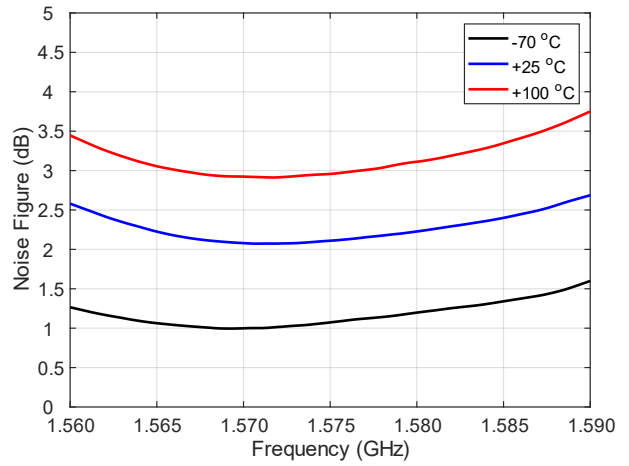


**Note 1:** No destructive SEE was observed when tested with heavy ions up to the above LET

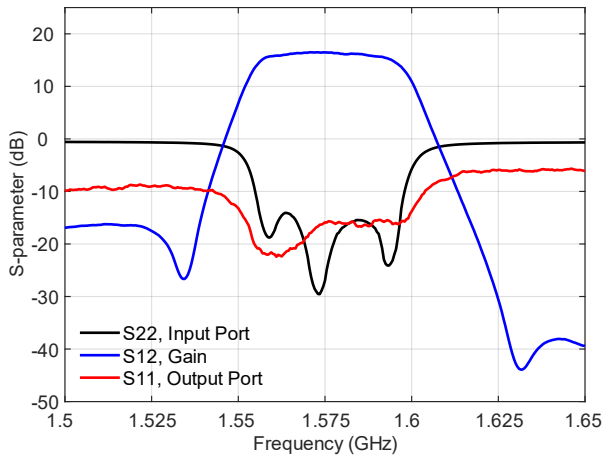
LNA Gain



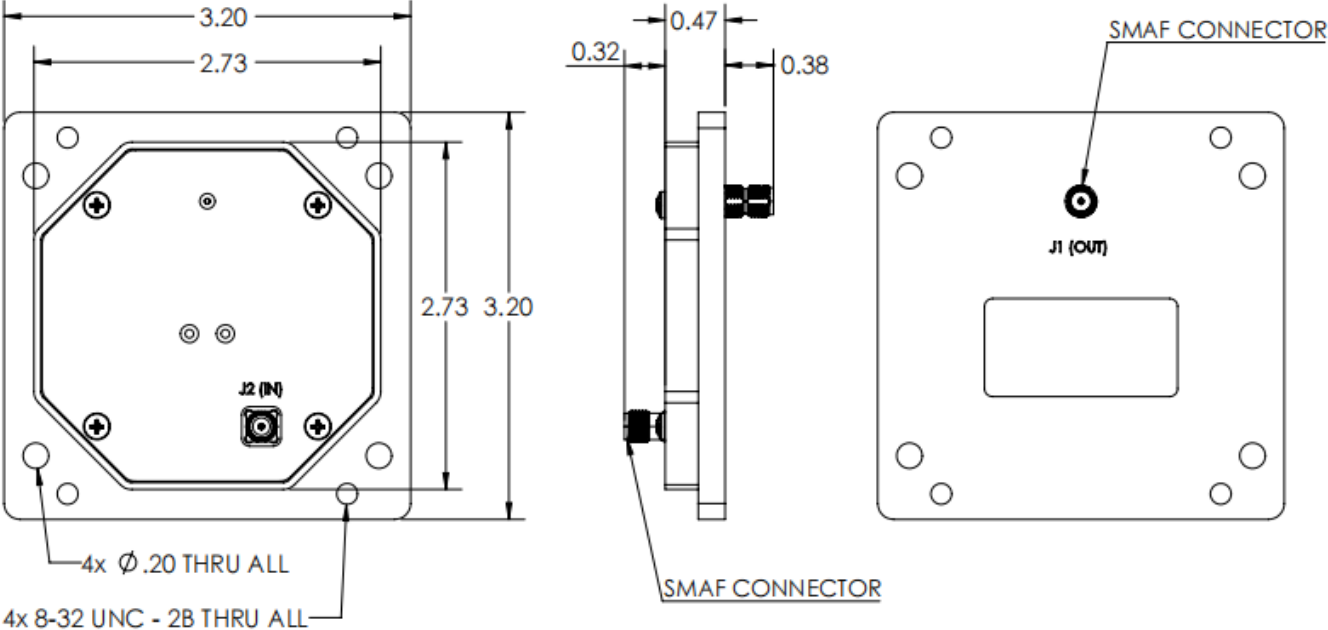
Noise Figure



S-parameters



**Mechanical Outline**



**Dimensions shown in inches.**

Tolerances - Two Place Decimal: ±0.010, Three Place Decimal: ±0.005

**Contact PlaneWave, Inc.**

6925 Canby Ave, Ste 110  
Reseda, CA 91335

[www.planewaveinc.com](http://www.planewaveinc.com)  
[sales@planewaveinc.com](mailto:sales@planewaveinc.com)