

# High Performance K-Band Low Noise Amplifiers

## General Information

Intended for either indoor or outdoor environments, the CPI Locus Microwave L81 Series K-Band Low Noise Amplifier (LNA) provides a combination of superior performance, reliability and cost effectiveness.

## Features

- Outdoor packaging
- Lowest Noise Figures



11563 DS Rev C

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# L81 Series Low Noise Amplifiers

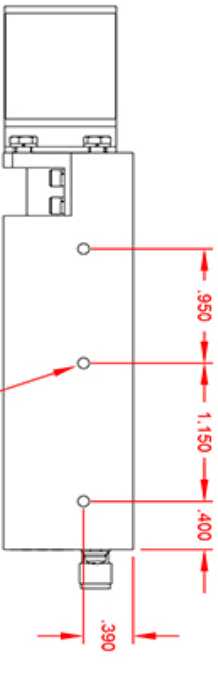
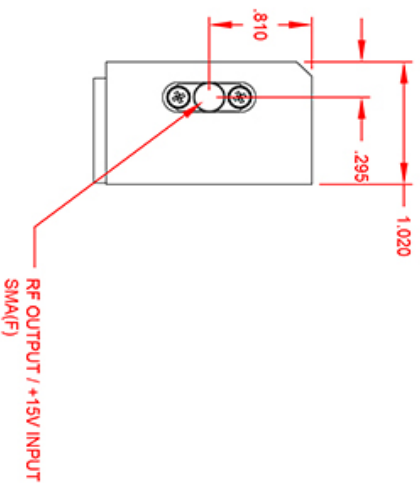
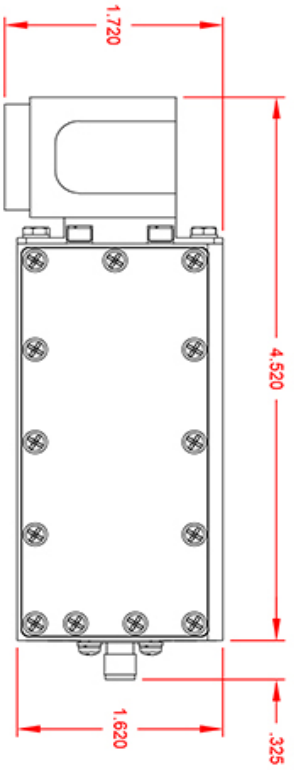
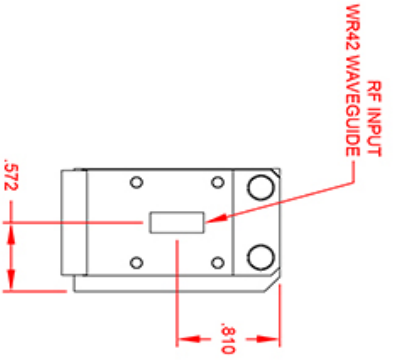
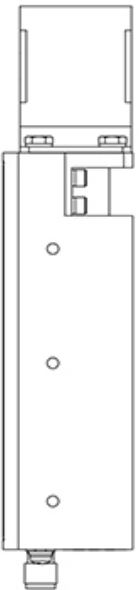


	Range	Units	Notes
<b>Electrical Specifications</b>			
Frequency	19.2-21.2 or 20.2-21.2	GHz	
Noise Temperature	115 or 130 max.	K	@+23°C
Gain	45 min./ 50 max.	dB	
Gain Flatness	+/-1.0 max.	dB	per GHz
Gain Slope	+/-0.2 max.	dB	per 40 MHz
P <sub>1dB</sub>	+5 min.	dBm	
VSWR			
Input	1.2 typ., 1.3 max.	:1	
Output	1.3 typ., 1.5 max.	:1	
Input Overdrive			
In-band w/o damage	0	dBm	
Tx-band w/o degradation	-30	dBm	
AM/PM Conversion	0.02 max.	°/dB	@-10 dBm output
Group Delay			
Linear	0.01 max.	ns/MHz	per 40 MHz
Parabolic	0.001 max.	ns/MHz <sup>2</sup>	per 40 MHz
Ripple	0.1 max.	ns p-p	per full band
Power Requirement			
Input Voltage	+12 to +20	VDC	
Current	225 max.	mA	
<b>Mechanical Specifications</b>			
Outline	LMI Dwg #11989		
Weight	0.4 nom.	lbs.	
Finish	paint	white	other options available
Connectors			
RF Input	UG-597/U	Flange	WR42 waveguide
RF Output/DC Input	Super SMA	Female	
Pressure test	5	psi	
<b>Environmental</b>			
Operating Temperature	-40 to +60	°C	
Humidity	100	%	with condensation

*Seal all connectors using appropriate weatherproofing materials. Failure to seal connectors could result in down time and repair expenses that are not covered under warranty.*

Specifications are subject to change at the discretion of CPI Locus Microwave, Inc.

REVISION HISTORY				DESCRIPTION	DWN BY	APPR BY	DATE
ZONE	REV	CHANGE NO	INITIAL RELEASE		SES	SES	14/02/07
...	.						



4-40 UNC-28 x .25" DEEP  
3 PLACES  
BOTH SIDES

**GP**  
Communications & Power Industries  
communications & medical products division  
building design center

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN DECIMALS  
FRACTIONS & MM  
ANGLES & ° MIN  
XXX.X XX.X X.X  
THIRD ANGLE PROJECTION

OUTLINE, K-BAND LNA

CODE ENCL  
34TH3  
DWS NO  
11989

SCALE 1:1 PROJ

PAGE 1 OF 1

4

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# L81 Series Low Noise Amplifiers



## Model Number Configuration

**1 2 3 4 5 6 7**

**L 8 1 x x x x - x x x - x x**

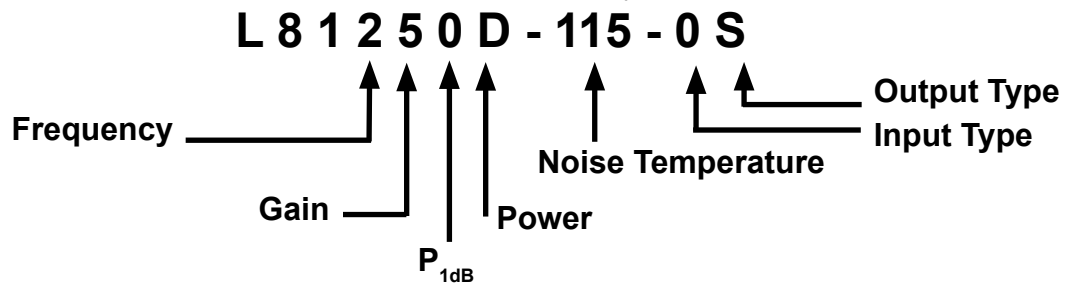
<b>1 Frequency</b>	<b>2 Gain</b>	<b>3 P<sub>1dB</sub></b>	<b>4 Power</b>	<b>5 Noise Temp</b>
2 = 20.2-21.2 GHz	5 = 45 dB	0 = 5 dBm	D = 12-20 VDC	115 K
3 = 19.2-21.2 GHz	x = tbd	x = tbd	x = tbd	130 K
x = tbd				xxx

<b>6 Input Type</b>	<b>7 Output Type</b>	<b>A Accessories</b>	<b>B Finish</b>	<b>Federal Standard</b>
0 = UG-597/U Flange	S = SMA (F) <b>*1</b>	0 = None	0 = White <b>*2</b>	37925
x = tbd	x = tbd	x = tbd	1 = Dark Green	34094
			2 = Desert Tan	33446
			3 = Beige	37722
			4 = Sand	33303
			5 = Forest Green	34083
			6 = Metalast	
			7 = Flat Black	
			x = tbd	

**\*1** NOTE: "S" was used prior to "9" up until 2015 to denote SMA (F) connector

**\*2** NOTE: White is standard color, contact CPI for price options on other colors

**Example: 20.2-21.2 GHz, 45 dB Gain, +5 dBm P<sub>1dB</sub>, DC Power, 115K Noise**



Please confirm configurations against product specifications, and with factory, prior to order.