

High Performance L-Band Low Noise Amplifiers

General Information

Intended for either indoor or outdoor environments, the CPI Locus Microwave L31 Series L-Band Low Noise Amplifier (LNA) provides a combination of superior performance, reliability and cost effectiveness.

Features

- Outdoor packaging
- Integral Fault Alarm



11557 DS Rev B

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L31 Series Low Noise Amplifiers



	Range			Units	Notes
Electrical Specifications					
Frequency	1.510-1.577	1.525-1.561	1.500-1.700	GHz	
Noise Temperature	30 or 35 max.	30 or 35 max.	35 or 40 max.	K	@+23°C
Gain	50 or 60 min.	50 or 60 min.	50 or 60 min.	dB	
Gain Flatness	+/-0.5 max.	+/-0.5 max.	+/-1.0 max.	dB	per full band
Gain Slope	+/-0.25 max.	+/-0.25 max.	+/-0.25 max.	dB	per 10 MHz
P _{1dB}	+10, 12 or 18 min.	+10, 12 or 18 min.	+10, 12 or 18 min.	dBm	
VSWR					
Input	1.3 typ., 1.5 max.	1.3 typ., 1.5 max.	1.5 typ., 2.0 max.	:1	
Output	1.3 typ., 1.5 max.	1.3 typ., 1.5 max.	1.5 typ., 2.0 max.	:1	
Input Overdrive	0 max.	0 max.	0 max.	dBm	non-damaging
AM/PM Conversion	0.1 max.	0.1 max.	0.1 max.	°/dB	@-5 dBm output
Group Delay					
Linear	0.01 max.	0.01 max.	0.01 max.	ns/MHz	per 40 MHz
Parabolic	0.001 max.	0.001 max.	0.001 max.	ns/MHz ²	per 40 MHz
Ripple	0.1 max.	0.1 max.	0.5 max.	ns p-p	per full band
Power Requirement					110/220 VAC available
Input Voltage	+12 to +24	+12 to +24	+12 to +24	VDC	
Current	220 nom.	220 nom.	220 nom.	mA	current sensing
Fault Alarm	contact closure	contact closure	contact closure	Form 'A'	
Mechanical Specifications					
Outline	LMI Dwg #11490			inches	
Weight	0.65			lbs.	
Finish	paint			white	other options available
Connectors					
RF Input	N or SMA			Female	
RF Output	N or SMA			Female	
Power/Alarm	4 pin			MS-type	mate included
Environmental					
Operating Temperature	-40 to +60			°C	consult factory for VAC option
Humidity	100			%	with condensation

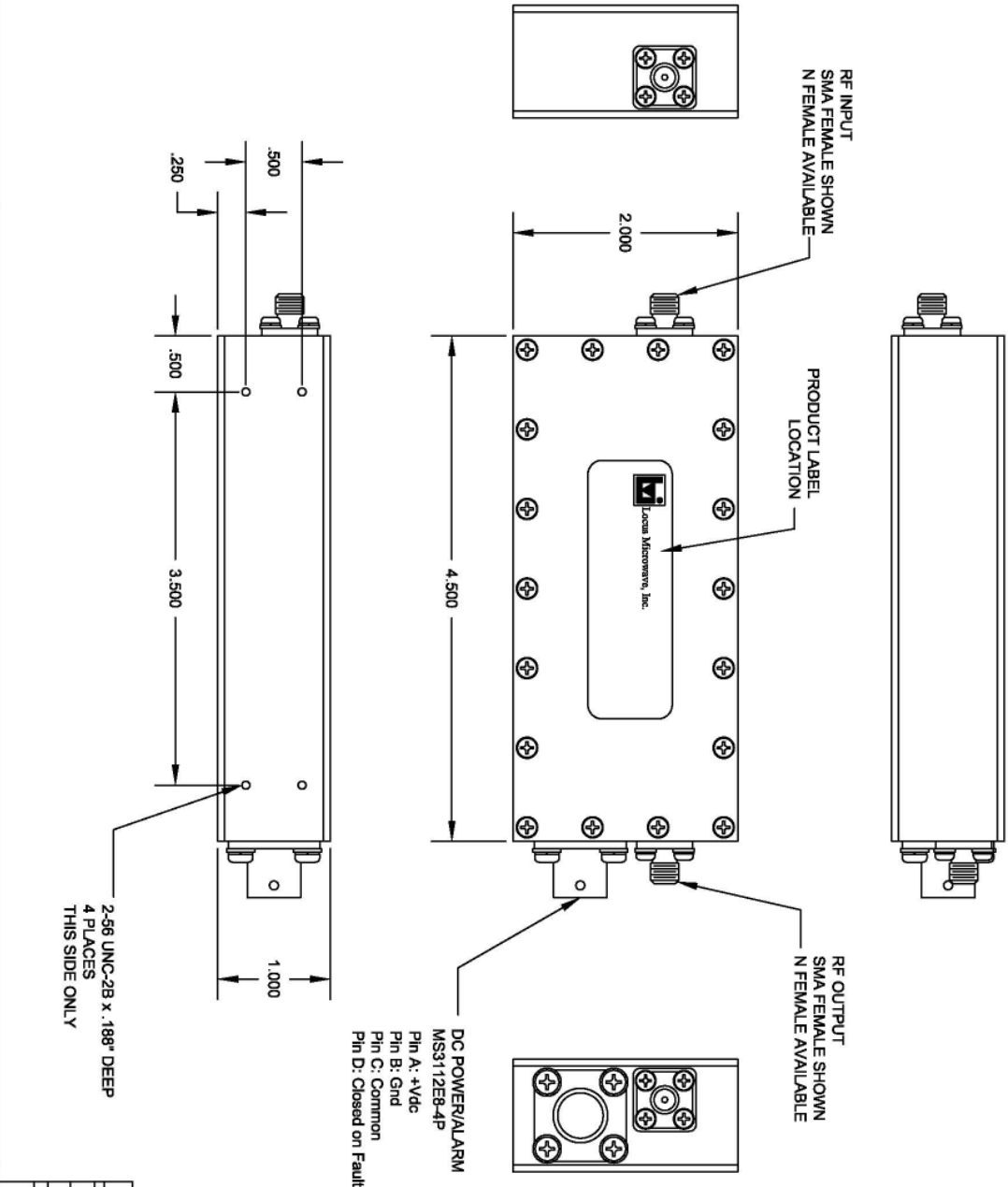
Seal all connectors using appropriate weatherproofing materials. Failure to seal connectors could result in down time and repair expenses that are not covered under warranty.

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

REVISION HISTORY			
ZONE	REV	CHANGE NO	DESCRIPTION
-	-	-	INITIAL RELEASE

DWN BY	APPR BY	DATE
SES	SES	11/02/25

Outline Drawing



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES		LOCUS MICROWAVE INC.	
FUNCTIONS	DECIMALS	SIZE	CORE DRAWING
ASSEMBLY	XX & .01	B	34TH3
DATE	XXX & .01	DWG NO.	11490
THIRD ANGLE PROJECTION	XXX & .01	PROJ.	
SCALE 1:1		PAGE 1 OF 1	

4 3 2 1

A B C D

L31 Series Low Noise Amplifiers



Model Number Configuration

1 2 3 4 5 6 7

L 3 1 x x x x - x x x - x x

1 Frequency	2 Gain	3 P _{1dB}	4 Power	5 Noise Temp
0 = 1.510-1.577 GHz	5 = 50 dB	1 = 10 dBm	D = 12-24 VDC *2	030 K
1 = 1.525-1.561 GHz	6 = 60 dB	2 = 12 dBm	A = 110/220 VAC *4	035 K
2 = 1.500-1.700 GHz *1		4 = 18 dBm		040 K

6 Input Type	7 Output Type	A Accessories	B Finish	Federal Standard
S = SMA (F)	S = SMA (F) *2	0 = None	0 = White	37925
N = N (F)	N = N (F) *3	1 = 4 Pin Mate DC Only	1 = Dark Green	34094
		2 = 4 Pin Pigtail DC Only	2 = Desert Tan	33446
		3 = 6 Pin Mate AC Only	3 = Beige	37722
		4 = 6 Pin Pigtail AC Only	4 = Sand	33303
			5 = Forest Green	34083
			6 = Metalast	

*1 NOTE: 35K Noise Temp Minimum

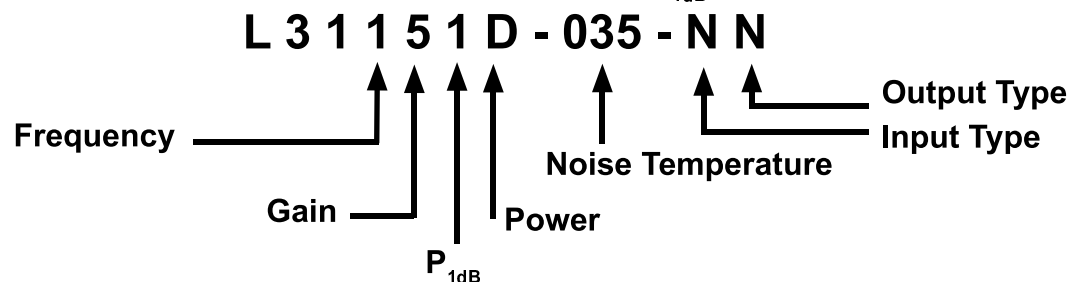
*2 NOTE: LNAs ordered as components of a Redundancy system require DC power and an SMA (F) output connector.

*3 NOTE: SMA (M) to N (F) adapter supplied.

*4 NOTE: AC version uses 6 pin MS connector for power and alarms.

Selections shaded in gray will require Engineering review.

Example: 1.525-1.561 GHz, 50 dB Gain, +10 dBm P_{1dB}, DC Power, 35K Noise



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