



## High Performance K-Band Low Noise Amplifiers

### General Information

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

### Features

- Outdoor packaging
- Integral Fault Alarm



**K Band LNA  
L81 Series**

# L81 Series Low Noise Amplifiers

CODAN SATCOM



	Range	Units	Notes
<b>Electrical Specifications</b>			
Frequency	18.2-20.2, 18.0-22.0, 20.2-21.2, 19.2-21.2, or 19.7-21.2	GHz	
Noise Temperature	110, 130, 170 or 180 max.	K	@+23°C
18.3-20.2 GHz	130, 170 or 180 max.	K	@+23°C
18.0-22.0 GHz	180 max.	K	@+23°C
Gain	40, 50 or 60 min.	dB	
Gain Flatness	+/-1.5 max.	dB	per GHz
Gain Slope	+/-0.2 max.	dB	per 40 MHz
$P_{1dB}$	+9 min.	dBm	
VSWR			
Input	1.20 typ., 1.30 max.	:1	
Output	1.30 typ., 1.50 max.	:1	
Overdrive	0 max.	dBm	non-damaging
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 40 MHz
Power Requirement			
Input Voltage	+12 to +24	VDC	
Current	220 nom.	mA	
Fault Alarm	contact closure	Form 'A'	current sensing
<b>Mechanical Specifications</b>			
Outline	LMI Dwg #10195	inches	
Weight	0.4 nom.	lbs.	
Finish	paint	white	
Connectors			
RF Input	UG-597/U	Flange	WR42 waveguide
RF Output	SMA	Female	
Power	4 pin	MS-type	mate included
Pressure Test	5	psi	
<b>Environmental</b>			
Operating Temperature	-40 to +60	°C	°C
Humidity	100	%	with condensation

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

06/11

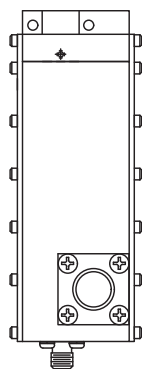
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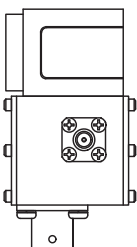
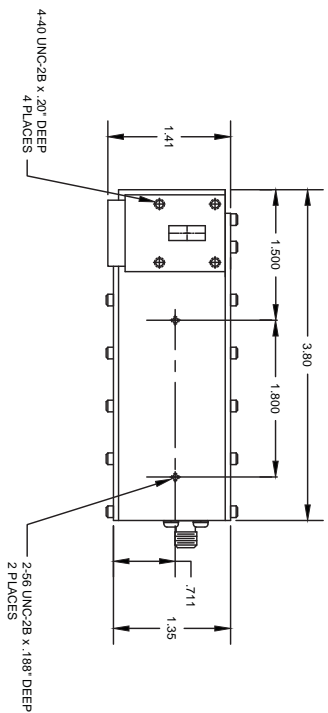
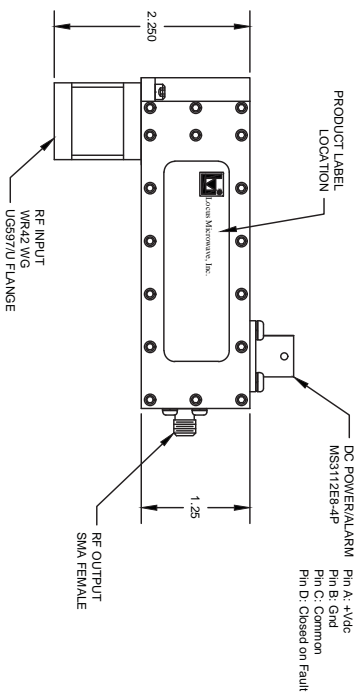
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REVISION HISTORY		DESCRIPTION	DWN BY	APPR BY	DATE
ZONE	REV	CHANGE NO			
...	-		JPD	JPD	05/06/17
	A		JPD	JPD	07/02/06
	B	904	SES	SES	11/02/24
		ENGINEERING RELEASE			
		CHG ISOLATOR, ADD 3 HOLES, REMOVE 1 HOLE			
		ADD VIEWS, CHANGE FLANGE CALLOUT			



# Outline Drawing



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES		LOCUS MICROWAVE INC.	
FRACTIONS	DECIMALS	OUTLINE, K-BAND LNA	
±.004	.XX + .01	SIZE	CORE PART
ANGLES	.XXX ± .005	C	34TH3
1:0.25		SCALE	1:1
THIRD ANGLE PROJECTION		PROJ	
		REV	B
		DATE	10195
		PAGE	1 OF 1

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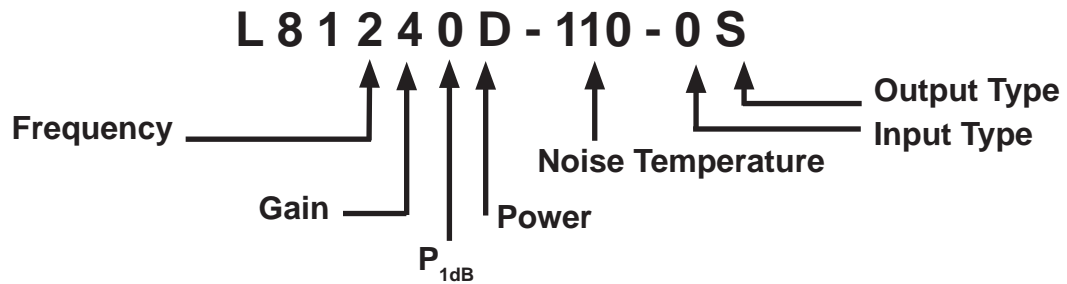
## Model Number Configuration

**1 2 3 4      5      6 7**  
**L 8 1 x x x x - x x x - x x**

<p><b>1 Frequency</b></p> <p>0 = 18.2-20.2 GHz *1</p> <p>1 = 18.0-22.0 GHz *2</p> <p>2 = 20.2-21.2 GHz</p> <p>3 = 19.2-21.2 GHz</p> <p>4 = 19.7-21.2 GHz</p>	<p><b>2 Gain</b></p> <p>4 = 40 dB</p> <p>5 = 50 dB</p> <p>6 = 60 dB</p>	<p><b>3 P 1dB</b></p> <p>0 = 9 dBm</p>	<p><b>4 Power</b></p> <p>D = 12-24 VDC</p>	<p><b>5 Noise Temperature</b></p> <p>110 K</p> <p>130 K</p> <p>170 K</p> <p>180 K</p>
<p><b>6 Input Type</b></p> <p>0 = UG-597/U Flange</p>	<p><b>7 Output Type</b></p> <p>S = SMA (Female) *3</p>	<p><b>A Accessories</b></p> <p>0 = None</p> <p>1 = 4 Pin Mate</p> <p>2 = 4 Pin Pigtail</p>	<p><b>B Finish</b></p> <p>0 = White</p> <p>1 = Dark Green</p> <p>2 = Desert Tan</p> <p>3 = Beige</p> <p>4 = Sand</p> <p>5 = Forest Green</p> <p>6 = Metalast</p>	<p><b>Federal Standard</b></p> <p>37925</p> <p>34094</p> <p>33446</p> <p>37722</p> <p>33303</p> <p>34083</p>

- \*1 NOTE: 130 K NOISE TEMP MINIMUM
- \*2 NOTE: 180 K NOISE TEMP MINIMUM
- \*3 NOTE: LNAs ordered as components of a Redundancy system require an SMA (F) output connector.

**Example: 20.2-21.2 GHz, 40 dB Gain, +9 dBm P<sub>1dB</sub>, DC Power, 110K Noise**



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