RADITEK

SATCOM
Ku-Band LNA

Low Noise Amplifier Ku-Band 10.7-13.0GHz

RoHS COMPLIANT

(65/100)K Noise Temperature

50dB Gain, +15 to +20 VDC

Our Ku-Band LNA offers premium performance and reliability in the most versatile package available for a Ku-Band LNA. The latest technology in GaAs HEMT devices produces the lowest possible noise temperatures in an un-cooled LNA. In addition, the RF2 Series LNA is backed by a 36-month warranty and by more than 30 years experience in the design of high performance communications amplifiers.

The performance of this LNA is matched by a full range of features chosen with the communication system designer in mind. From the compact weatherproof housing to the standard circular connector DC input and optional of RF cable, this LNA is ready for integration into your system.

Features
- Noise Temperatures as low as 65K
- All Standard Ku-Band Frequencies available
- 36-Month Warranty
- Input and Output Isolators
- +15 to +20 VDC Operations
- Waterproof, Painted Aluminum Housing
- Reverse Voltage Protection
- Pressurizable Feed

Options
- Universal AC Power Supply
- Fault Alarm (Current Sensing)

Configurations
- 1:1 Redundant LNA System
- 1:2 Redundant LNA System

Order Examples: RLNA-Ku-90K-Sf-60d15v-p3
Description:
(Low Noise Amplifier, Ku, (10.95-12.75GH), 90°K Noise temperature, SMAf 50dB gain, 15-20Volts dc, No Alarm

Options table

System / controller **1:1, 1:2 or Dual (1:1)**	**Freq Bands** **see below**	**LNA Gain** **50, 60dB**	**LNA Noise Temp:** **65, 75, 85, 95, 70, 80, 90, 100, or N/A**
Fault Alarm: 1. none, 2 contact close form c relay		**3.Connector** **SMAf, Nf**	**Input Voltage:** **1***5-20Vdc,* **1***8-64Vdc, 100-240VAC (47-400Hz)*
Freq Bands 10.95-12.75, 10.95-11.75, 11.70-12.20, 12.25-12.75,11.25-11.75, 10.70-12.75, 10.95-11.70, 10.95-12.20, 12.50-12.75, 10.70-11.70, 10.95-11.95, 10.70-12.20, 10.90-11.70, 12.20-12.75, 10.90-12.75, 11.70-12.75, 10.90-12.80, 11.80-13.00			

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Low Noise Amplifier, Ku-Band,
65-100K Noise Temperature, 50dB Gain, +15 to +20 VDC

Electrical Specifications			
Parameter	**Notes**	**Limits**	**Units**
Frequency Range	All standard bands	10.700 to 13.000	GHz
Noise Temperature	(see ordering information)	65 to 100	K @ +23 °C ambient
Gain Gain Flatness Gain Slope Gain Stability vs. Time	50dB available (see ordering information) Full band /40MHz /40MHz	60 (min.) ±0.50 (max.) ±0.20 (max.) 0.01 (max.) ±0.10 (max.) ±0.20 (max.) ±0.20 (max.)	dB dB dB dB/MHz dB/hour dB/24 hours dB/month
Output Power @ 1dB Gain Compression (P1dB)	+ 15 dBm optional (see ordering information)	+10	dBm
Output Third Order Intercept Point	Measured with two tone input; each tone @ -65 dBm input	+20	dBm
Input/Output VSWR		1.30:1(max.)	
Input Overdrive	(maximum level)	0	dBm CW
Out-of-Band Signal Presence	Specification-compliant	-30	dBm CW input; in 14.00 to 14.50 GHz
Group Delay Linear Parabolic Ripple	/40 MHz	 0.01 0.001 0.1	 ns/MHz ns/MHz^2 ns peak-to-peak
AM/PM Conversion	@ -10 dBm output power	0.03 (max.)	^{o}/dB
Primary Power Voltage Current	(see ordering information for available options) (200mA for +15dBm power option)	 +15 to +20 150 typical	 VDC mA
Mechanical			
Size	width X length X height	2.75 X 9.64 X 2.12 69.9 X 244.9 X 53.9	in. mm.
Weight		2	lbs.
Finish		Paint	White; epoxy enamel
Feed Pressure		2	PSI
Connectors	RF Input RF Output (standard) RF Output (option) DC Voltage (AC/Fault (option)	WR75 Waveguide[1] SMA Type N[2] 6-pin MS[2] 6-pin MS mate	Cover flange Female Female MS3112E10-6P MS3116F10-6S

1. Use supplied full (for mating with a grooved flange) or half (for mating with a flat flange) gasket to ensure a weatherproof seal.
2. Cover connectors with electrical putty or tape to ensure a weatherproof seal.

Environmental			
Operating Temperature	Ambient	-40 to +70	°C
Relative Humidity	Condensing	100	%
Specifications are subject to change.			

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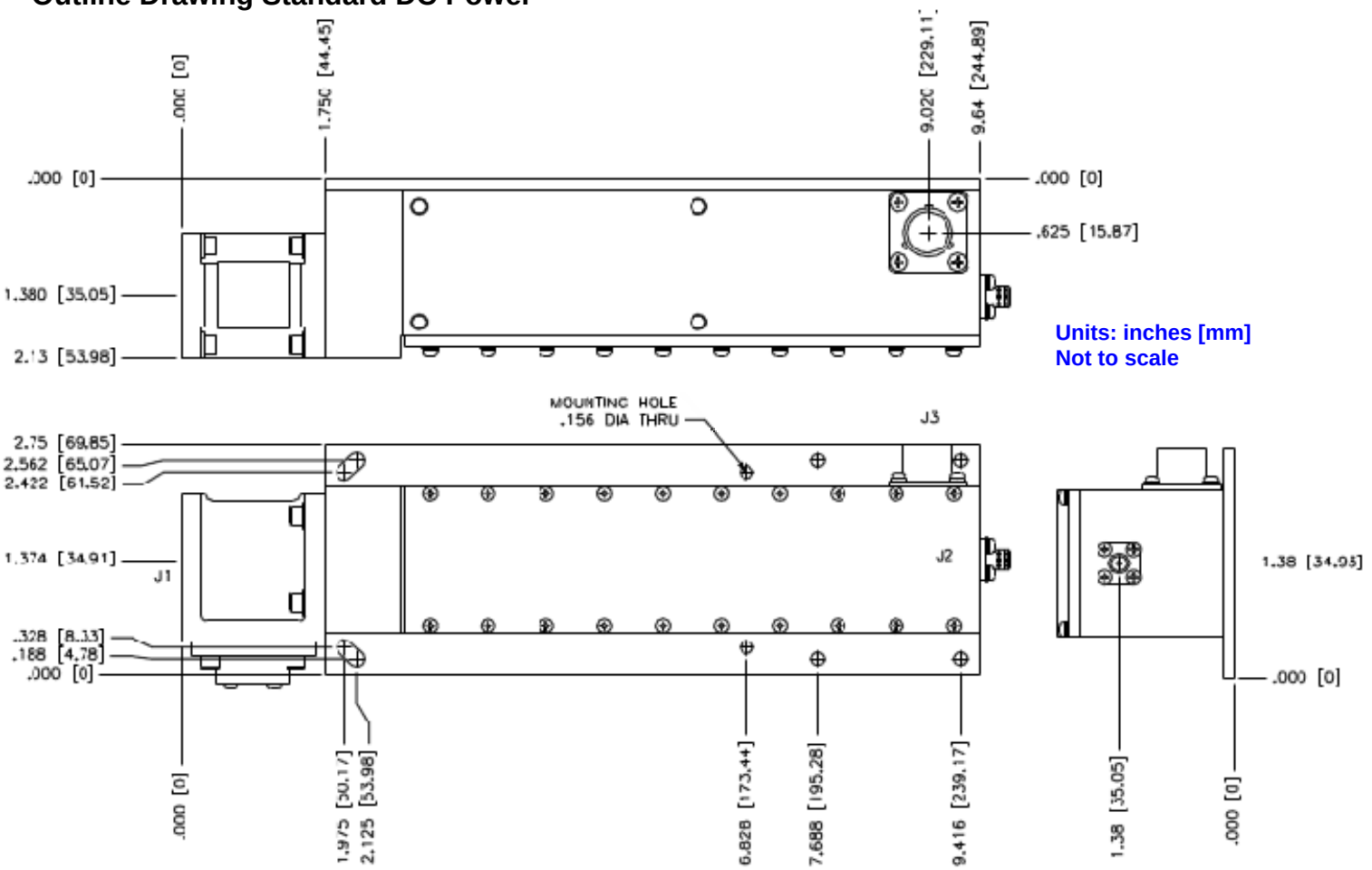
Technical Notes	
Gain vs. Ambient Temperature Coefficient	-0.05 dB/°C for Units with 60 dB Gain -0.04 dB/°C for Units with 50 dB Gain
Noise Temperature vs. Ambient Temperature	De-rate noise temperature by 0.40K/°C for ambient temperatures over +23 °C

Outline Drawing Standard DC Power



Prime Power / Alarm Interface

Pin	Standard	Alarm	AC Power*	Alarm / AC Power*	DC Power
A	+15 to +20 V_{DC}	+15 to +20 V_{DC}	85 to 265 V_{AC} Line	85 to 265 V_{AC} Line	-18 to -64 V_{DC}
B	Ground	Ground	AC Ground	AC Ground	-18 to -64 V_{DC} RTN
C	Ground	Ground	85 to 265 V_{AC} RTN.	85 to 265 V_{AC} RTN.	Ground
D	NC	Open On Fault	NC	Open On Fault	NC
E	NC	Common	NC	Common	NC
F	NC	Closed On Fault	NC	Closed On Fault	NC

*AC Power option requires an add-on enclosure that houses the universal power supply.

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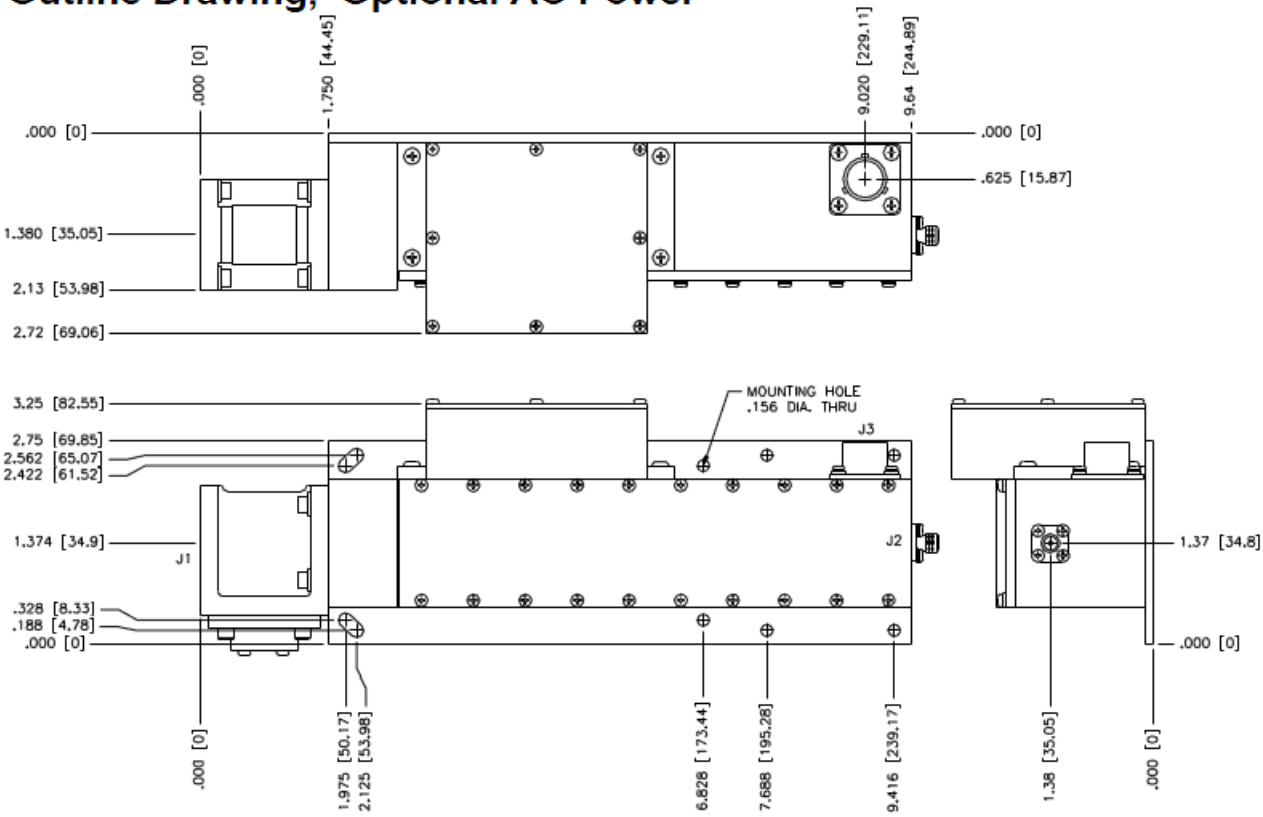
Outline Drawing, Optional AC Power



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