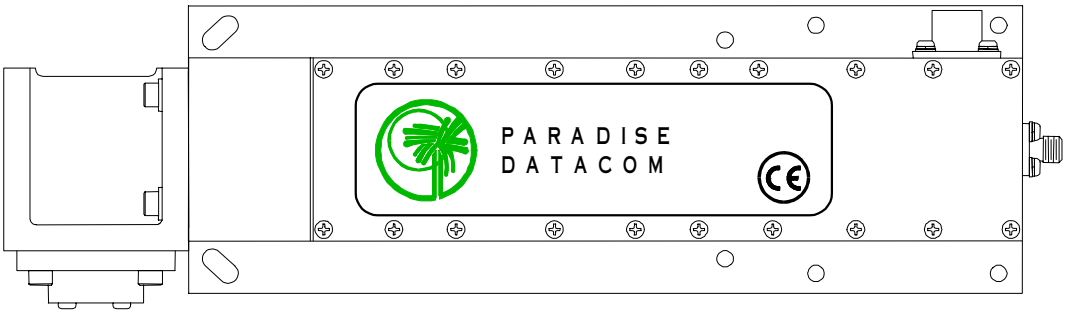
RF-2130
Ku-Band LNA
10.700 – 13.000 GHz

PARADISE DATACOM
AN INTELEK GROUP COMPANY



Description

The RF-2130 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 uncooled LNA. System performance is enhanced by outstanding gain stability and gain flatness. In addition, the RF-2130 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 the RF-2130 is matched by a full range of features chosen with the communication system designer in mind. From the compact weatherproof housing to the standard combination of RF cable and circular connector DC input, the RF-2130 is ready for integration into your system.

Features

- Noise Temperatures as low as 65K
- All Standard Ku-Band Frequencies Available
- Outstanding Gain Flatness and Gain Stability
- 36-Month Warranty
- Input and Output Isolators
- +12 to +28 VDC Operation
- Waterproof, Painted Aluminum Housing
- Reverse Voltage Protection
- Pressurizable Feed

Options

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

System Configurations

- 1:1 Redundant LNA System
- 1:2 Redundant LNA System
- Dual 1:1 Redundant LNA System

Paradise Datacom LLC
1012 East Boal Avenue
Boalsburg, PA 16827
USA
Telephone: +1 814 466 6275
Fax: +1 814 466 3341

www.paradisedata.com

Paradise Datacom Ltd
1 Wheaton Road, Witham
Essex, CM8 3TD
United Kingdom
Telephone: +44(0) 1376 515636
Fax: +44(0) 1376 533764

200416A.RF2130.doc 12/06/02

RF-2130
Ku-Band LNA
10.700 – 13.000 GHz

PARADISE DATACOM
AN INTELEK GROUP COMPANY

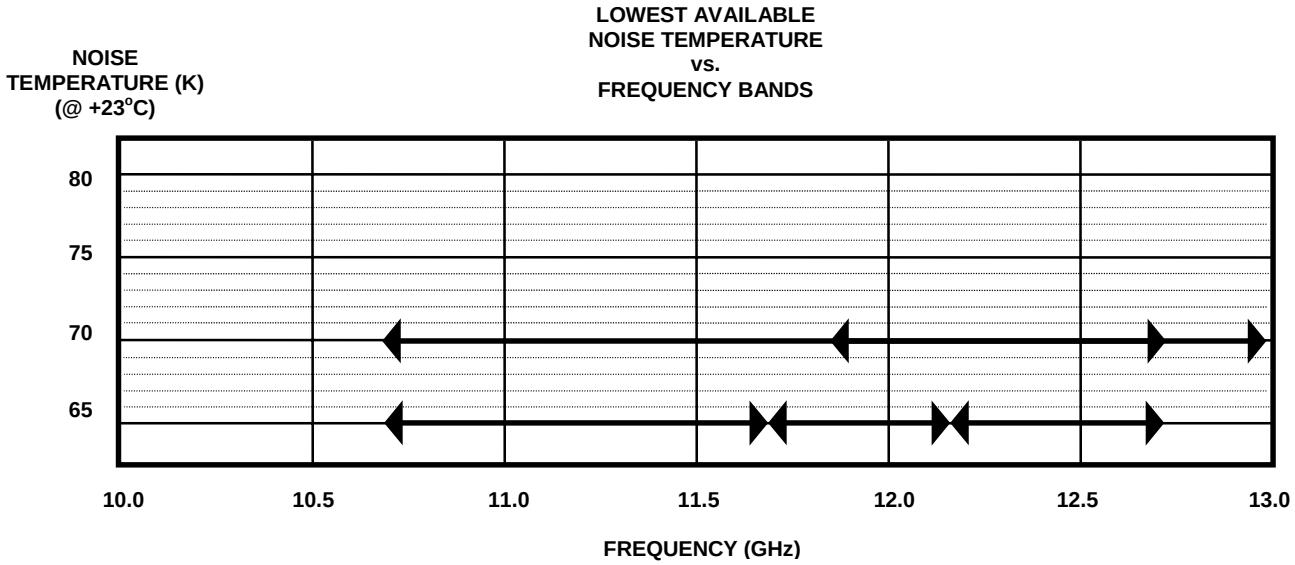
PARAMETER	NOTES	LIMITS	UNITS
Electrical			
Frequency Range	All standard bands (see ordering information)	10.700 to 13.000	GHz
Noise Temperature	(see ordering information)	65 to 100	K @ +23 °C ambient
Gain Gain Flatness Gain Slope Gain Stability vs. Time	50 dB available (see ordering information) Full 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 (P_{1dB})	+ 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		0	dBm CW
Out-of-Band Signal Presence	Specification-compliant	-30	dBm CW input; in 14.00 to 14.50 GHz band
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.)	°/dB
Primary Power Voltage Current	(see ordering information for available options) (+ 15 VDC for fault option) (200 mA for +15 dBm power option)	 +12 to +28 150 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 SMA Type N 6-pin MS	Cover flange Female Female MS3112E10-6P
Environmental			
Operating Temperature	Ambient	-40 to +70	°C
Relative Humidity	Condensing	100	%

RF-2130
Ku-Band LNA
10.700 – 13.000 GHz

PARADISE DATACOM
AN INTELEK GROUP COMPANY

Technical Notes

Gain vs. Ambient Temperature Coefficient	-0.04 dB/°C for Units with 60 dB Gain -0.03 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



RF-2130- - - - - -

Noise Temperature (K)

65, 70, 75, 80, 85, 90, 95, 100

Gain (dB)

50, 60

Frequency Band (GHz)

A: 10.95-12.75	K: 10.70-11.70
B: 10.95-11.75	L: 10.95-11.95
C: 11.70-12.20	M: 10.70-12.20
D: 12.25-12.75	N: 10.90-11.70
E: 11.25-11.75	P: 12.20-12.75
F: 10.70-12.75	R: 10.90-12.75
G: 10.95-11.70	S: 11.70-12.75
H: 10.95-12.20	T: 10.90-12.80
J: 12.50-12.75	U: 11.80-13.00

Special Notes

Blank:	None
SP:	Application Specific
TC:	Temp. Compensation
P3:	+25 dBm OIP3
N:	Type N (f) RF Output
CP:	Cable Power

Fault Alarm

Blank:	None
F1:	Contact Closure (Dry Form "C")

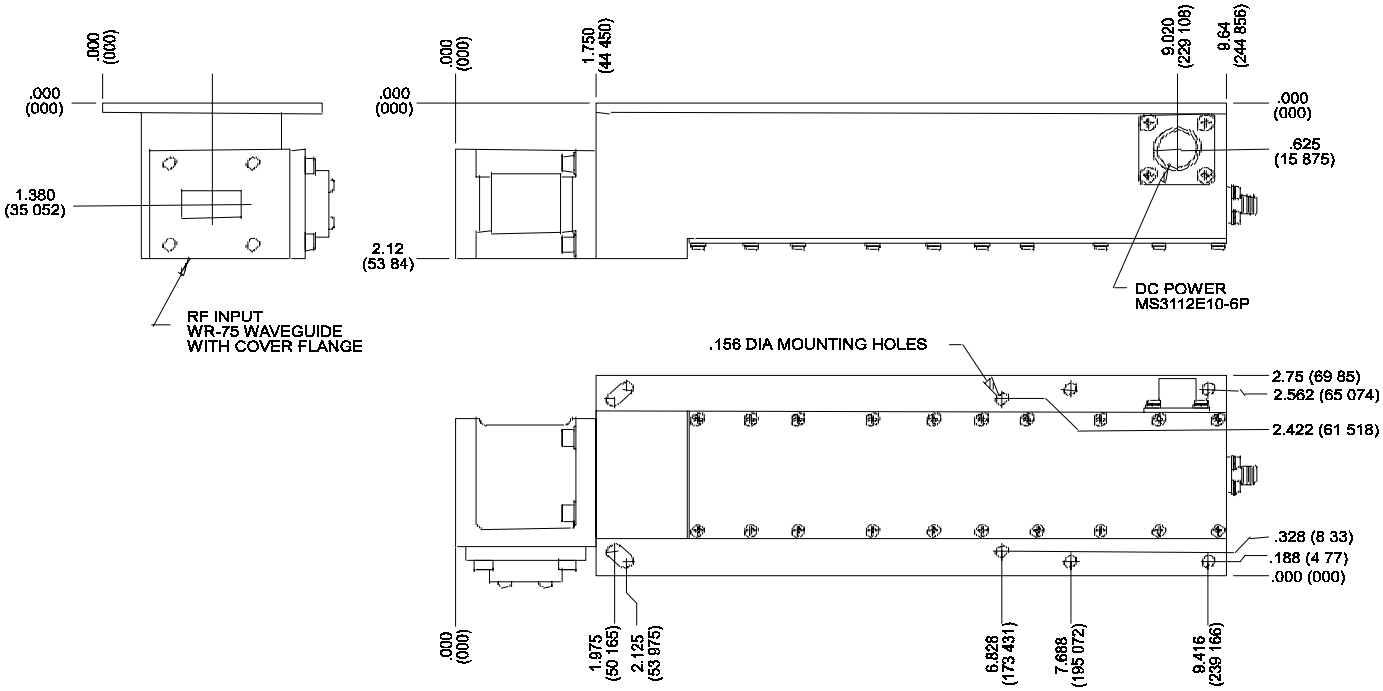
Input Voltage

Blank:	+12 to +28 VDC
A1:	85 - 265 VAC, 47-440 Hz
A3:	-18 to -64 VDC

RF-2130
Ku-Band LNA
10.700 – 13.000 GHz

PARADISE DATACOM
AN INTELEK GROUP COMPANY

OUTLINE DRAWING



Note: Dimensions in inches (mm)

PRIME POWER / ALARM INTERFACE

PIN	STANDARD	ALARM	AC POWER*	ALARM/AC POWER*
A	+12 to +28 VDC	+15 to +28 VDC	85 to 265 VAC LINE	85 to 265 VAC LINE
B	GROUND	GROUND	AC GROUND	AC GROUND
C	GROUND	GROUND	85 to 265 VAC RTN.	85 to 265 VAC RTN.
D	NC	OPEN ON FAULT	NC	OPEN ON FAULT
E	NC	COMMON	NC	COMMON
F	NC	CLOSED ON FAULT	NC	CLOSED ON FAULT

*AC Power option requires an add-on enclosure that houses the universal power supply.
Consult factory for RF-2130 outline drawing with AC power supply option.