



Description

The RF18 Series Ka-Band LNA offers premium performance and reliability in the most versatile package available.

The latest technology in GaAs HEMT devices produces the lowest possible noise temperatures in an un-cooled LNA. System performance is enhanced by outstanding gain stability and gain flatness.

In addition, the RF18 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 the RF18 Series 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 combination of RF cable and circular connector DC input, the RF18 Series LNA is ready for integration into your system.

FEATURES

- Noise Temperatures as low as 180K
- 36-Month Warranty
- Input and Output Isolators
- +12 to +28 VDC Operation
- Waterproof, Painted Aluminum Housing
- Reverse Voltage Protection
- Pressurizable Feed
- Optional Fault Alarm (Current Sensing)

OPTIONS

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

CONFIGURATIONS

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

ENVIRONMENTAL

- Operating Temperature: -40 to +60 °C
- 100% Relative Humidity, Condensing

Electrical

PARAMETER	NOTES	LIMITS	UNITS
Frequency Range		18.300 to 20.200	GHz
Noise Temperature	(see ordering information)	180 to 200	K @ +23 °C ambient
Gain		55 (min.)	dB
Gain Flatness	Full band /40MHz	±2.00 (max.)	dB
Gain Slope	/40MHz	±0.20 (max.)	dB
Gain Stability vs. Time		0.01 (max.)	dB/MHz
		±0.10 (max.)	dB/hour
		±0.20 (max.)	dB/24 hours
		±0.20 (max.)	dB/month
Output Power @ 1dB Gain Compression (P_{1dB})		+5	dBm
Output Third Order Intercept Point	Measured with two tone input; each tone @ -65 dBm input	+12	dBm
Input/Output VSWR		1.50:1(max.)	
Input Overdrive		0	dBm CW
Group Delay	/40 MHz		
Linear		0.01	ns/MHz
Parabolic		0.001	ns/MHz ²
Ripple		0.1	ns peak-to-peak
AM/PM Conversion	@ -10 dBm output power	0.03 (max.)	°dB
Primary Power	(see ordering information for available options)		
Voltage	(+ 15 VDC for fault option)	+12 to +28	VDC
Current		180 typical	mA

Mechanical

Weight		2	lbs.
Finish		Paint	White; epoxy enamel
Feed Pressure		2	PSI
Connectors	RF Input RF Output (standard) DC Voltage (Fault option)	WR42 Waveguide ¹ SMA 6-pin MS ²	Cover flange Female MS3112E10-6P

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.

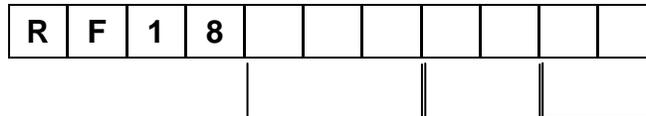
Environmental

Operating Temperature	Ambient	-40 to +60	°C
Storage Temperature	Ambient	-40 to +70	°C
Relative Humidity	Condensing	100	%

Specifications are subject to change.



Ka-Band LNA Configurator



Noise Temperature (K)
180 190 200

Special Notes
XX - None
CP - Cable Power

Fault Alarm
XX - None
F1 - Contact Closure (Dry form "C")