

## Features

0.1 GHz to 20 GHz Frequency Range  
Typical P1dB power > +22dBm  
Gain 45 dB Typical 42 dB minimum  
Gain Flatness  $\pm 1.5$  dB Typical  
3 dB Typical Noise Figure  
Internally Regulated  
Operates from Single +12V Supply  
Unconditionally Stable  
Available in Hermetic Laser sealed version  
State-of-the-Art GaAs Technology

## Applications

Radar  
Test Equipment  
Communications Systems  
EW Systems  
Lab Applications

## General Description

LA10407 is a Broadband Low Noise amplifier with flat gain and 4W CW Diode protection at input in a compact size. The amplifier I/Os are Internally matched to 50 Ohms and are DC blocked. The amplifier is ideal for use as medium power with low noise for test equipment, communication systems or where broadband amplification and power are required in a Hi-Rel communications system for Commercial or Military applications.



**Electrical Specifications**

Parameter	Symbol	Specification	Conditions
Frequency Range		0.1 to 20 GHz	
Small Signal Gain		42dB minimum	
Gain Flatness		±2.5dB maximum	
Noise Figure		4.5dB maximum	0.3 to 20 GHz, higher below 0.3 GHz and ≥18 GHz
Output Power (P1dB)		+23dBm typical	0.1 to 16 GHz, measured @10 GHz
Output Power (P1dB)		+22dBm typical	16 to 20 GHz
OIP3		29dBm typical	@ 10GHz Two tone F1-F2 = 10MHz
RF Input Power CW		+36dBm minimum	Protection for short period of time
RF Input Impedance <sup>2</sup>		1.8:1	Reference to 50Ω VSWR
RF Output Impedance <sup>2</sup>		1.8:1	Reference to 50Ω VSWR
Supply Voltage Positive		+12V	Small Signal
Supply Current Positive		400mA maximum	

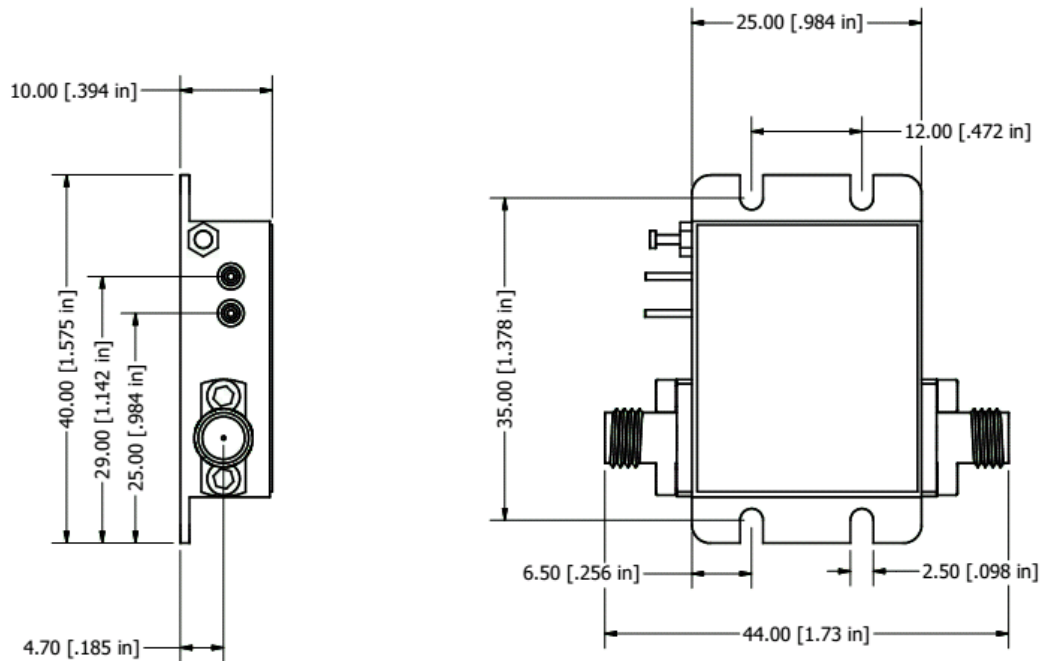
**Maximum Ratings<sup>1</sup>**

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Operating Temperature	OTR	-40		+85	°C	
Storage Temperature	STR	-40		+125	°C	
RF Input power (CW)				+36	dBm	@ 23°C
Die J <sub>unction</sub>	T <sub>J</sub>			+150	°C	
Positive Supply Voltage				+15	V	

**Notes**

Note 1	Unconditional Stability
Note 2	Possibly higher, over 18 GHz

**Package Outline: SMA Connectorized mm(inches)**



**Field replaceable SMA Connectors, Removable Ground slug**  
**Housing: Aluminum Gold over Nickel plated**

**Note: The unit must be attached to proper heat sink**

**Revision History**

<b>Date</b>	<b>Rev</b>	<b>Author</b>	<b>Details of Revision</b>
04-22-25	0	AR	Initial Version