

Features

0.4 GHz to 6 GHz Frequency Range

Gain 40dB typ

Gain Flatness $< \pm 1.5$ dB typ ± 2.7 dB max

Typical Noise Figure < 3.2 dB 5 dB max

+31 dBm P1dB Typical

Internally Regulated

High EMI performance

DC to RF leakage -90 dBc typ -70 dBc max

Operates from a Single +15V Supply

Unconditionally Stable

State-of-the-Art GaAs Technology

Applications

Communication systems

Microwave Radio systems

Test Equipment

Point to Point Radios

Radar

General Description

LA10411 is a Broadband Low Noise amplifier with high power and low EMI leakage over the full frequency range. The amplifier I/Os are Internally matched to 50 Ohms. The device is ideal for use in communication system, or where amplification is required without adding excessive noise in a Hi-Rel communications system for Commercial or Military applications



Electrical Specifications

Parameter	Symbol	Specification	Conditions
Frequency Range		0.4 to 6 GHz	
Small Signal Gain		35dB minimum	
Gain Flatness		±2.7dB maximum	
Noise Figure		5dB maximum	Above 500 MHz
Input Power		+12dBm minimum	CW, without damage
Output Power (P1dB)		+31dBm typical	1dB compression point @ 4 GHz
RF Input Impedance		1.8:1	Reference to 50Ω VSWR
RF Output Impedance		1.8:1	Reference to 50Ω VSWR
EMI Leakage		-70dBc minimum	DC supply pin to RF out
Supply Voltage Positive		+15V	
Supply Current Positive		440mA maximum	

Maximum Ratings¹

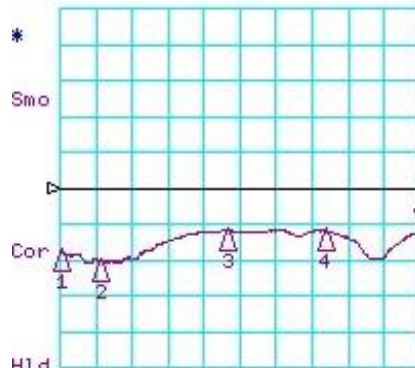
Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Operating Temperature	OTR	-40		+85	°C	
Storage Temperature	STR	-54		+95	°C	
RF Input power (CW)				+12	dBm	
Die J _{unction}	T _j			+150	°C	
Positive Supply Voltage				+16	V	

Notes

Note 1	Unconditional Stability
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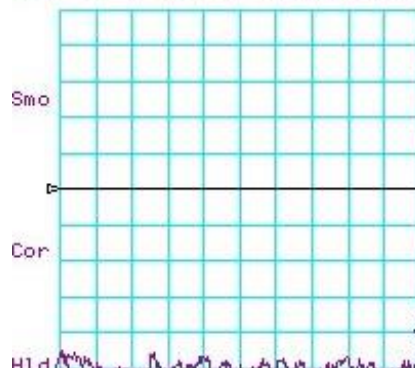
Simulation Plots

CH1 LOG 10 dB/ REF 0 dB
S11 5: -12.074 dB 6.000 000 000 GHz



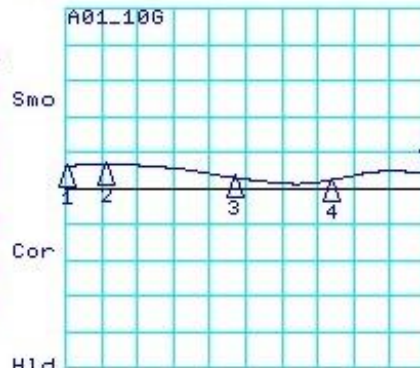
H1d
START 400.000 MHz STOP 6000.000 MHz

CH3 LOG 10 dB/ REF 0 dB
S12 5: -45.542 dB 6.000 000 000 GHz



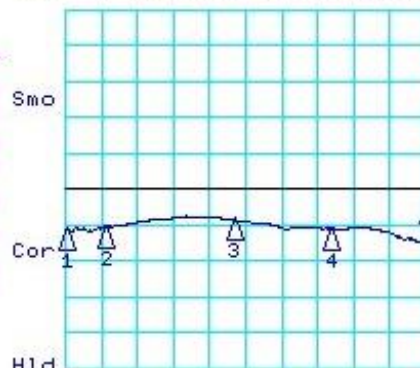
H1d
START 400.000 MHz STOP 6000.000 MHz

CH2 LOG 10 dB/ REF 34 dB
S21 5: 38.429 dB 6.000 000 000 GHz

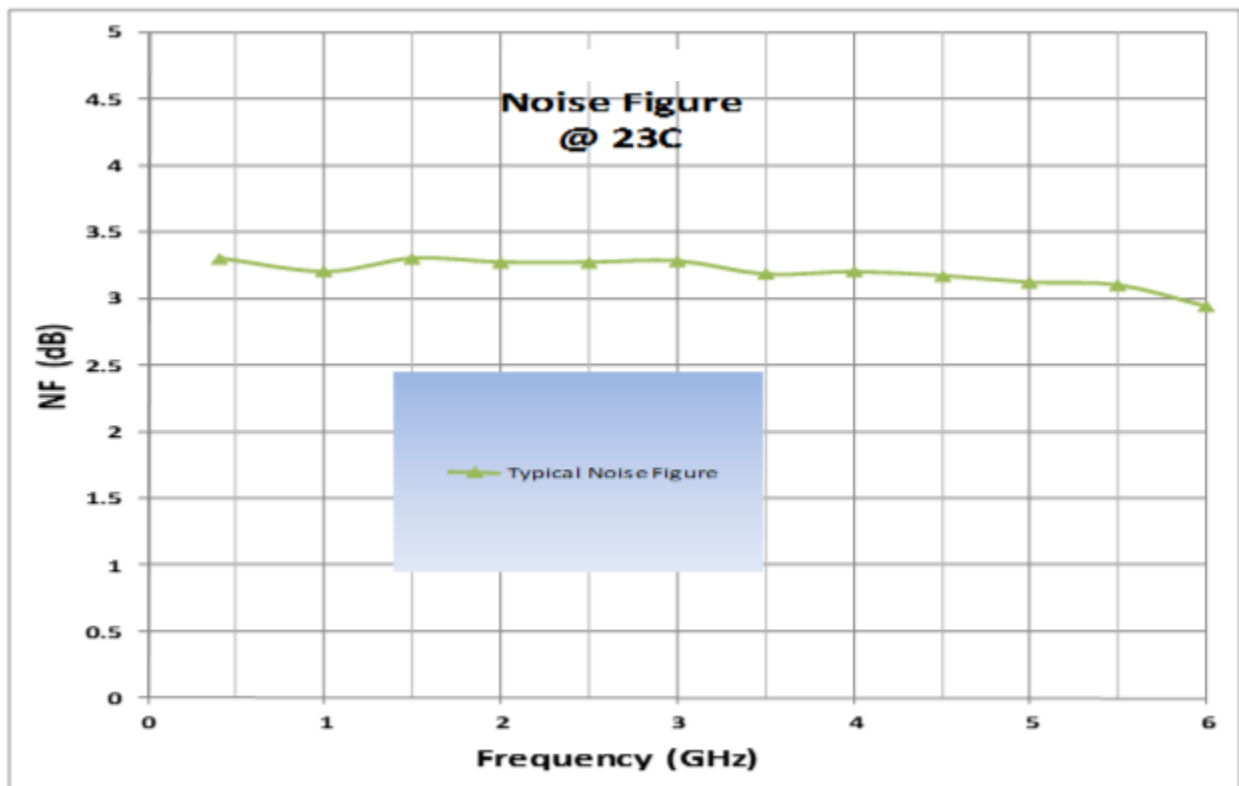
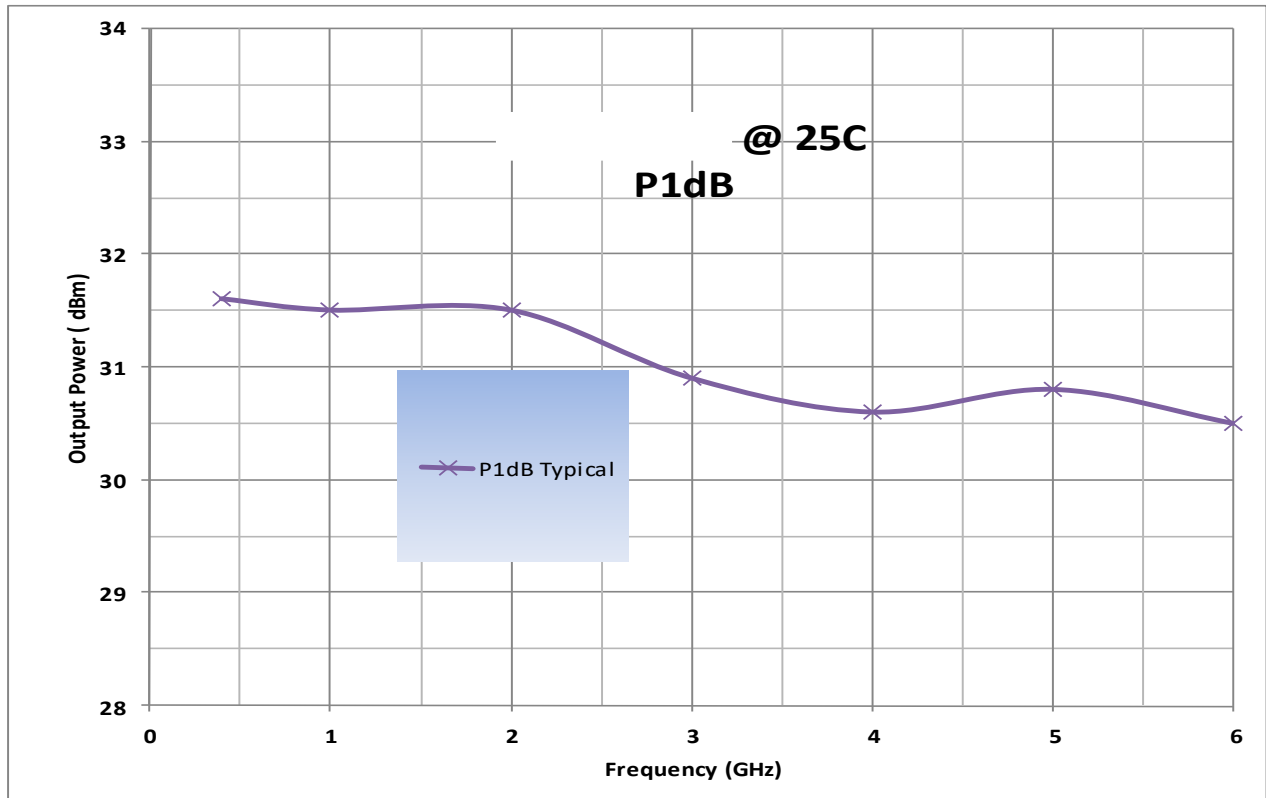


H1d
START 400.000 MHz STOP 6000.000 MHz

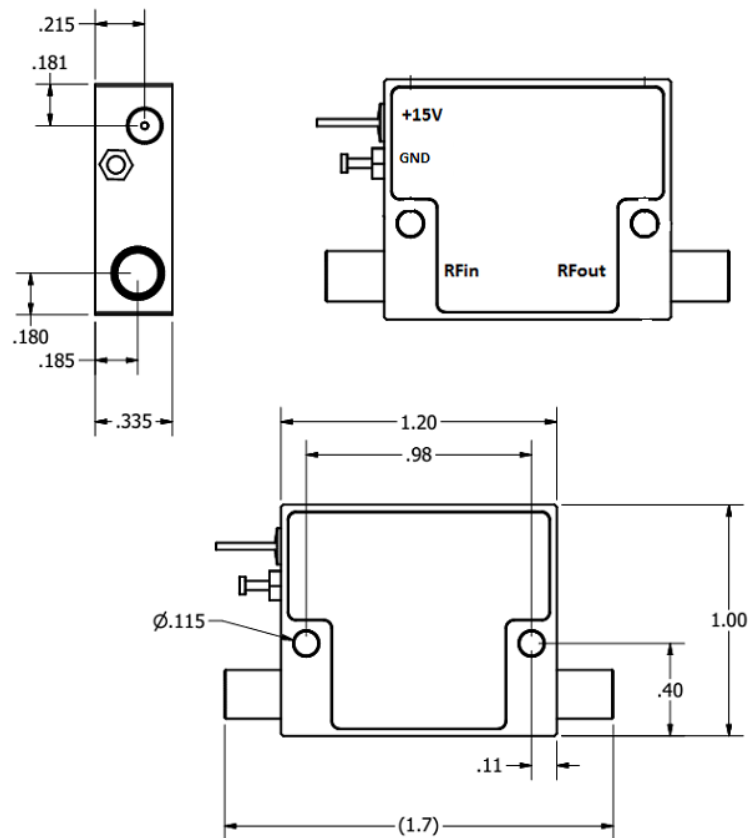
CH4 LOG 10 dB/ REF 0 dB
S22 5: -15.151 dB 6.000 000 000 GHz



H1d
START 400.000 MHz STOP 6000.000 MHz



Package Outline: SMA-F Connectorized (Inches)



Housing: Aluminum Gold over Nickel plated

Note: The unit must be attached to proper heat sink

Revision History

Date	Rev	Author	Details of Revision
04-23-25	0	AR	Initial Version