

28-37 GHz Broadband Low Noise Amplifier

General Description

The NBL00397 is a broadband low-noise amplifier operating in 28 to 37 GHz frequency range. Thin-film hybrid MIC process ensures robust characteristics over operating temperature range of -30 to +70 °C. The amplifier is a single bias design incorporating an internally protected voltage regulator. The model is available in a miniature housing with field replaceable K-connectors.



Performance at 25 °C

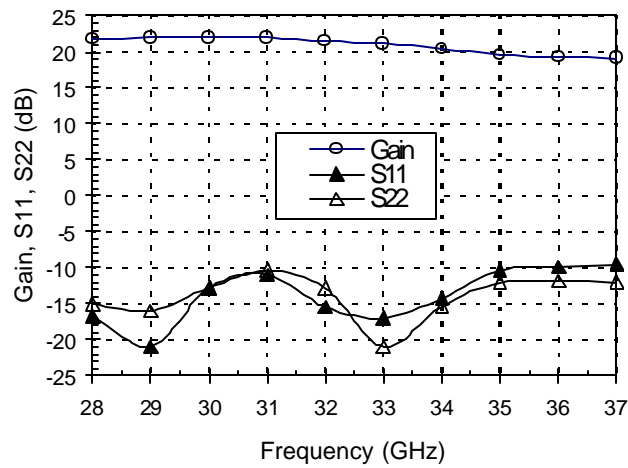
Parameter	Min.	Typ.	Max.	Units
Frequency Range	28		37	GHz
Gain	17	20		dB
Gain Flatness over Operating Frequency Range		± 1.5	± 2	dB
Noise Figure		2.5	3.0	dB
Output Power at 1 dB Compression	6	9		dBm
Input VSWR		1.9:1	2.5:1	
Output VSWR		1.9:1	2.5:1	
DC Supply Voltage	+8	+12	+15	V
Supplied Current at +12 V		75	95	mA

Customized Designs: For custom designs, including both electrical and mechanical, please contact us at sales@nextec-rf.com.

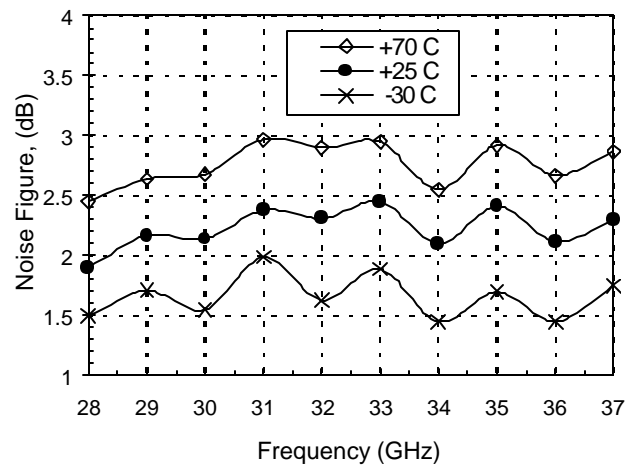
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Typical Test Data

Gain and Return Loss at 25 °C



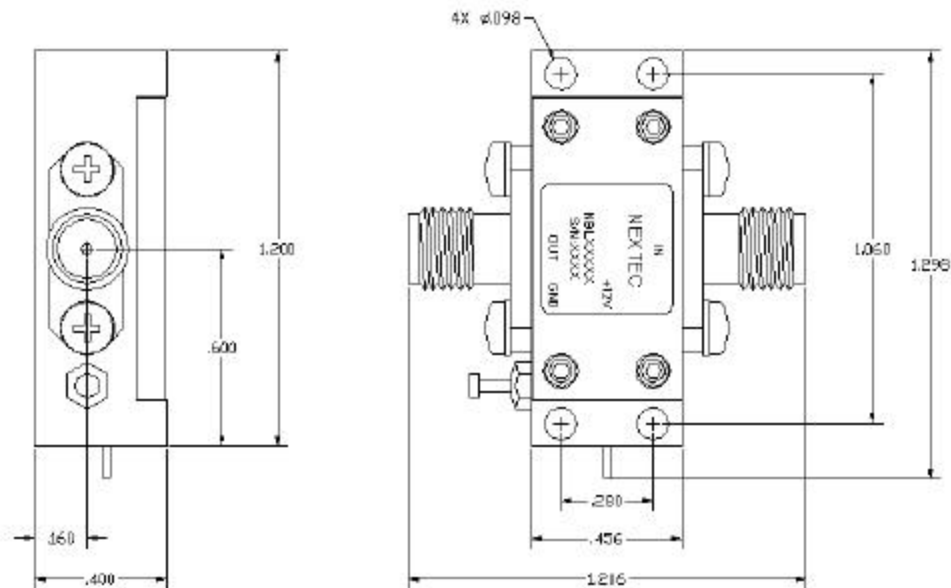
Noise Figure over Temperature



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Outline Drawing



(unit: inch)

Biassing and Operation

1. Turn off the input RF power and then mount the amplifier. The operating baseplate temperature should not exceed $+70^{\circ}\text{C}$. The noise figure will increase as the operating temperature of the amplifier increases.
2. Connect the ground terminal.
3. Apply DC supply voltage of +12 V. The amplifier incorporates a voltage regulator and can be biased in +8 to +15 V range.
4. Turn on the RF power. The input RF power should not exceed -10 dBm.

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