nextec-RF

NBL00444

2-20 GHz Broadband Low Noise Amplifier

General Description

The NBL00444 is a broadband low-noise amplifier operating in 2 to 20 GHz frequency range. Thin-film hybrid MIC process ensures robust characteristics over operating temperature range of -30 to +70 ^{0}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 SMA-connectors.

Performance at 25 ^{0}C

Parameter	Min.	Typ.	Max.	Units
Frequency Range	2		20	GHz
Gain	8	10		dB
Gain Flatness over Operating Frequency Range		±0.6	±1.2	dB
Noise Figure		4.0	4.5	dB
Output Power at 1 dB Compression	7	8		dBm
Input VSWR		1.9:1	2.2:1	
Output VSWR		1.8:1	2.2:1	
DC Supply Voltage	+9	+12	+15	V
Supplied Current at +12 V		70	110	mA

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

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April 28, 2004

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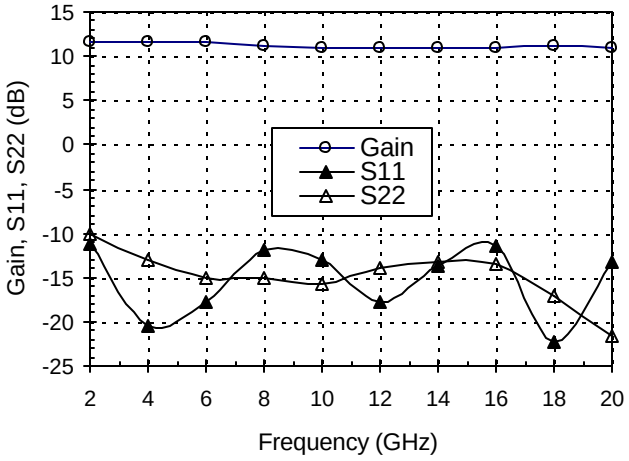
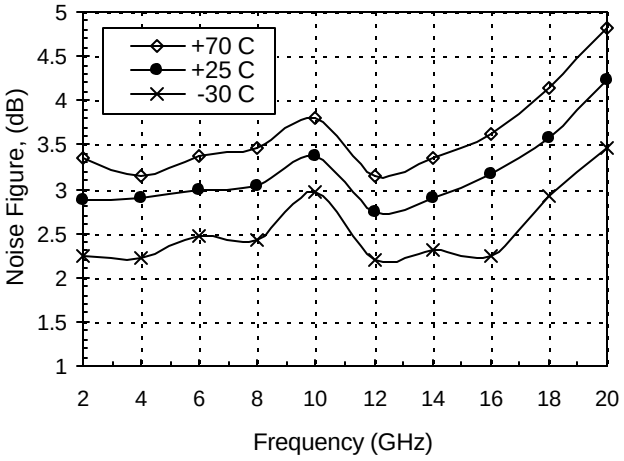
Typical Test Data

Gain and Return Loss at 25 ^{0}C



Noise Figure over Temperature



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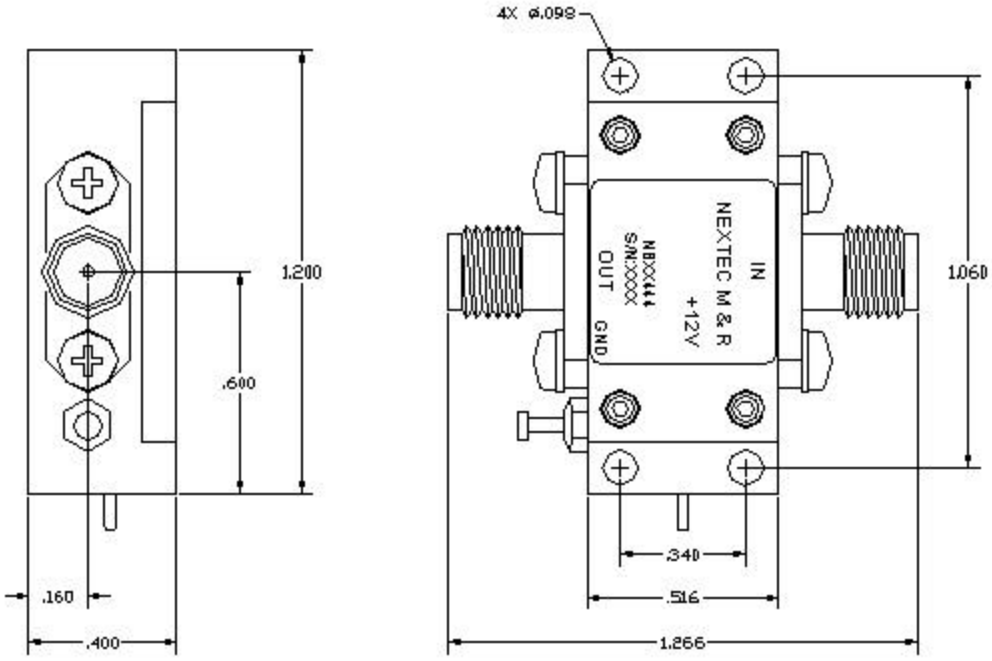
Outline Drawing



(unit: inch)

Biasing and Operation

1. Turn off the input RF power and then mount the amplifier. The operating baseplate temperature should not exceed +70 ^{0}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 +9V to +15 V range.
4. Turn on the RF power. The input RF power should not exceed +13 dBm.

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