

6.0-18.0 GHz Broad Band Amplifier
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General Description

The NB00446 is a broadband medium power amplifier with an operating frequency range of 6 to 18 GHz. The model is available in a miniature housing with replaceable SMA connectors. A thin film hybrid MIC process ensures robust characteristics over operating temperature range of -30 to +70 °C. The amplifier incorporates internally protected voltage regulators and can be biased in a wide range of DC voltage. The small size, high gain and output power make the amplifier ideal for any general-purpose applications.

Performance at 25 °C

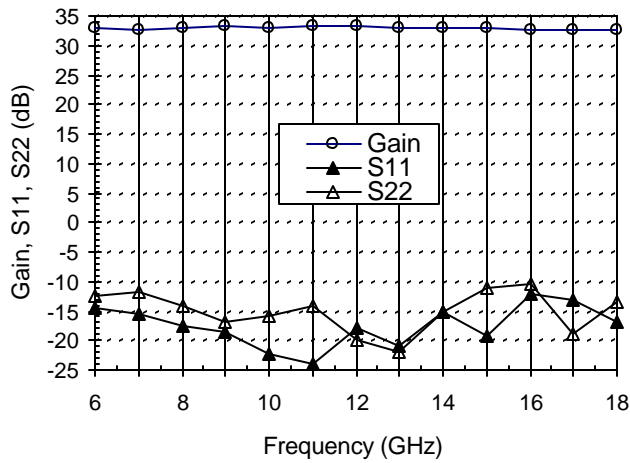
Parameter	Min.	Typ.	Max.	Units
Frequency	6.0		18.0	GHz
Gain	30	33		dB
Gain Flatness over Operating Frequency Range		± 1.2	± 2	dB
Noise Figure		5.5	7.0	dB
Output Power at 1 dB Compression	21	23		dBm
Input VSWR		1.7:1	2.0:1	
Output VSWR		1.9:1	2.0:1	
DC Supply Voltage (Vcc+)	+11	+12	+16	V
Supplied Current at +12 V (nominal bias, -17 dBm P _{in})		420	480	mA

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

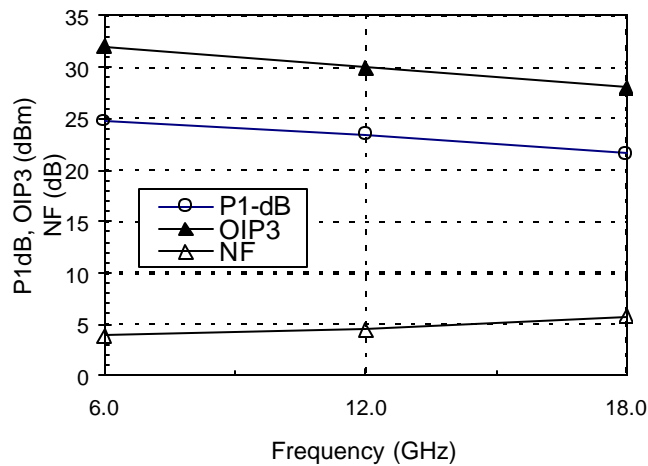
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Typical Test Data

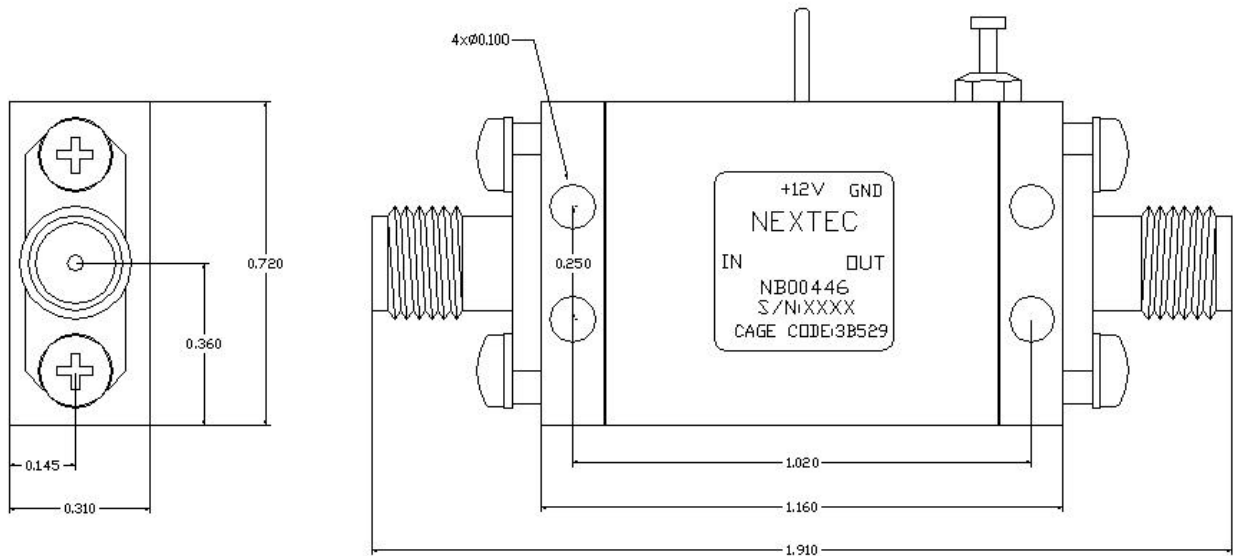
Gain and Return Loss at 25 °C



Output P₋₁ dB, IP₃ and Noise Figure at 25 °C



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6.0-18.0 GHz Broad Band Amplifier*Outline Drawing*

(unit: inch)

Biassing and Operation

1. Turn off RF input power. The amplifier, being an active device, generates heat when bias is applied. Adequate heat sinking is required. Operating baseplate temperature should not exceed +70 °C.
2. Connect ground terminal.
3. Apply positive supply voltage of +12 V.
4. Turn on RF power. The input RF power should not exceed 0 dBm.

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