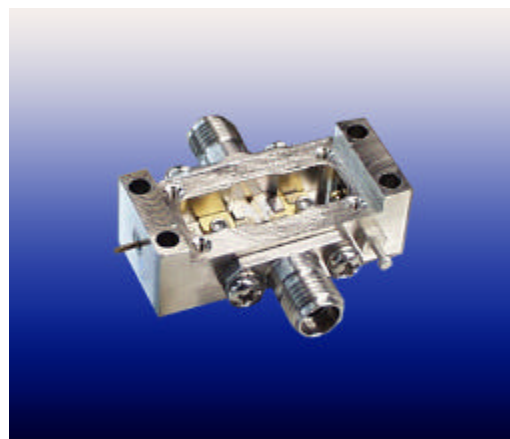


2.0-18.0 GHz Broad Band Amplifier

General Description

The NB00391 is a broadband power amplifier operating in 2 to 18 GHz frequency range. 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.



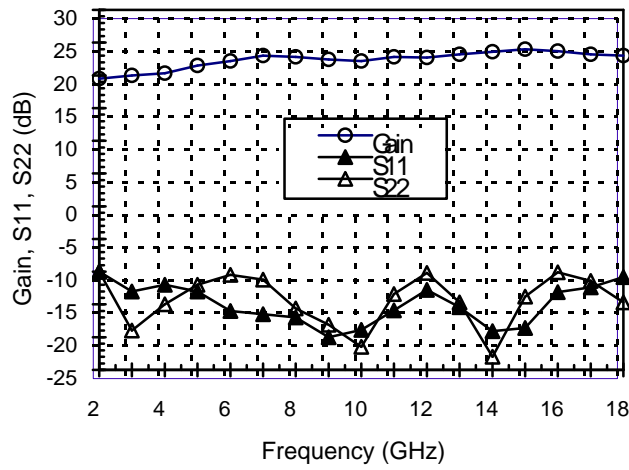
Performance at 25 °C

Parameter	Min.	Typ.	Max.	Units
Frequency	2.0		18.0	GHz
Gain	17	22		dB
Gain Flatness over Operating Frequency Range		± 2.5	± 3	dB
Noise Figure		9.0	12.0	dB
Output Power at 1 dB Compression	17	20		dBm
Saturated Output Power	20	23		dBm
Third Order Intercept Point (-10 dBm P _{in} , each tone)	26	29		dBm
Input VSWR		1.9:1	2.4:1	
Output VSWR		1.9:1	2.4:1	
DC Supply Voltage (V _{cc+})	+11	+12	+15	V
DC Supply Voltage (V _{cc-})	-15	-5	-4	V
Supplied Current at +12 V (nominal bias, -17 dBm P _{in})		250	290	mA
Supplied Current at -5 V		5	8	mA
Maximum Input Power without Damage			8	dBm

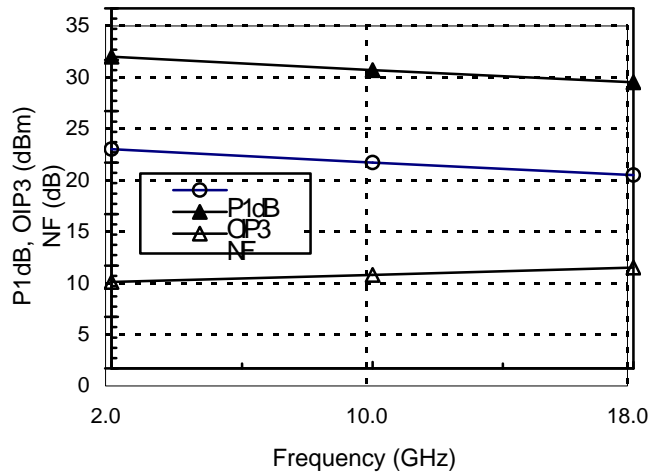
2.0-18.0 GHz Broad Band Amplifier

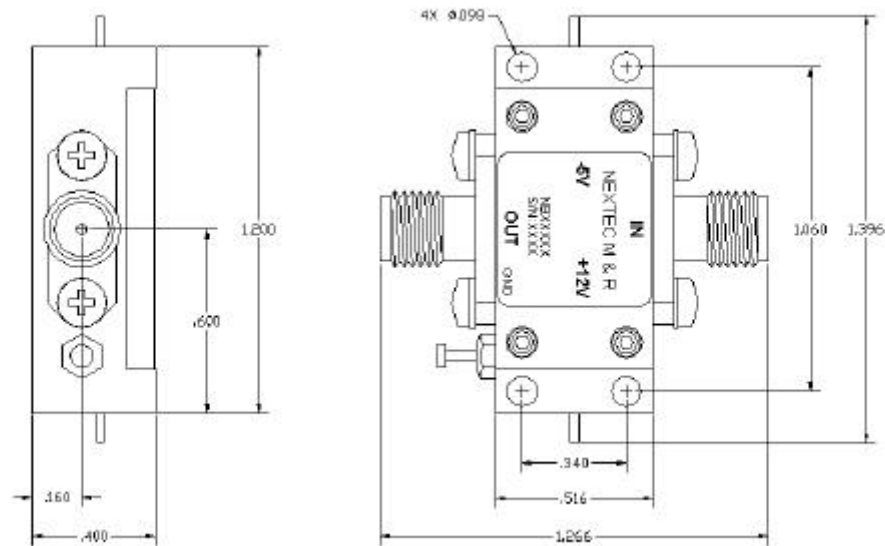
Typical Test Data

Gain and Return Loss at 25 °C



Output P_{-1 dB}, IP₃ and Noise Figure at 25 °C



2.0-18.0 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 negative supply voltage of -5 V as shown.
4. Apply positive supply voltage of +12 V.
5. Turn on RF power. The input RF power should not exceed +8 dBm.