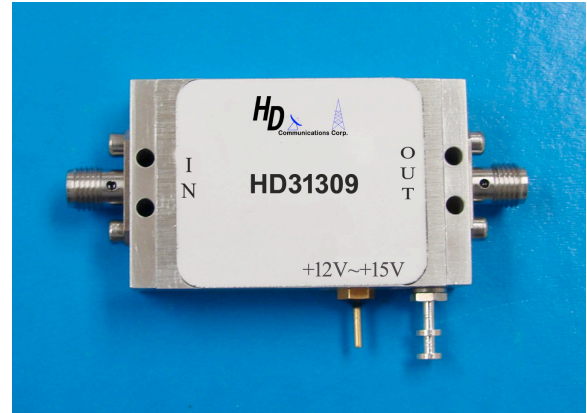


Features

- Frequency Range: 50-6000MHz
- Gain: 37dB
- P_{1dB}: +20dBm
- OIP3: +35dBm
- Noise Figure: 5dB (typ.)
- DC Power: 12V to 15V @ 180mA
- SMA-female



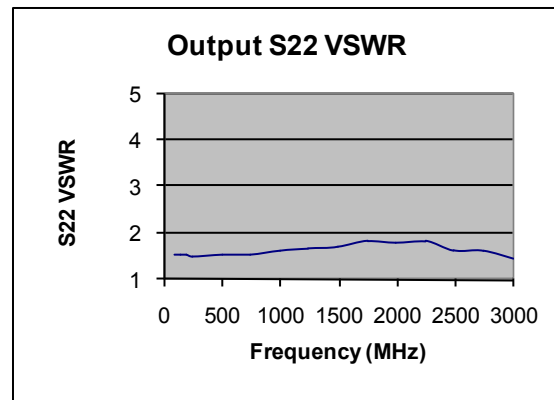
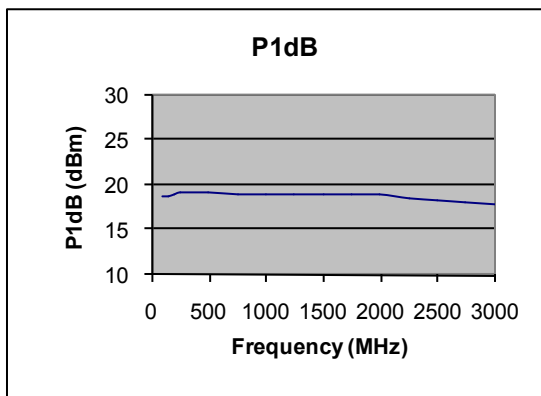
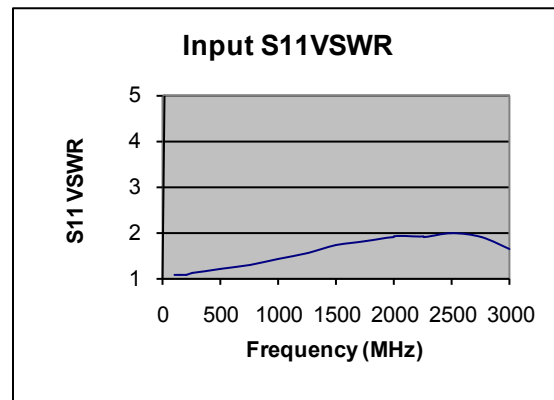
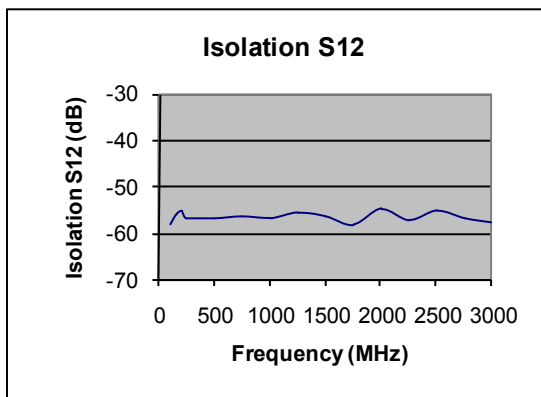
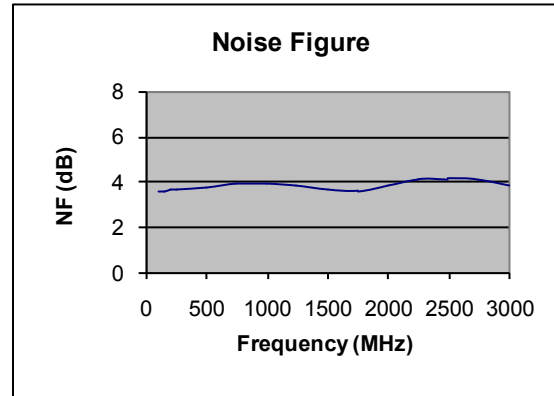
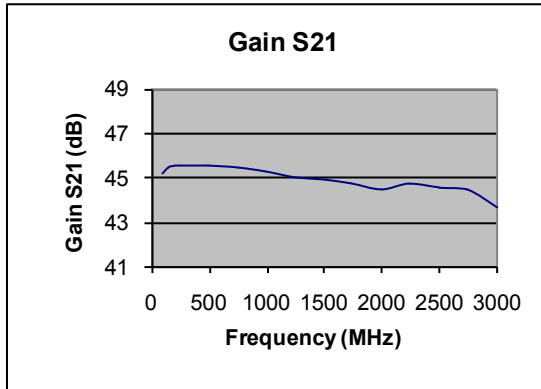
Description

HD31309 is a 37dB gain RF Amplifier, with frequency range of 50 MHz to 6000MHz.

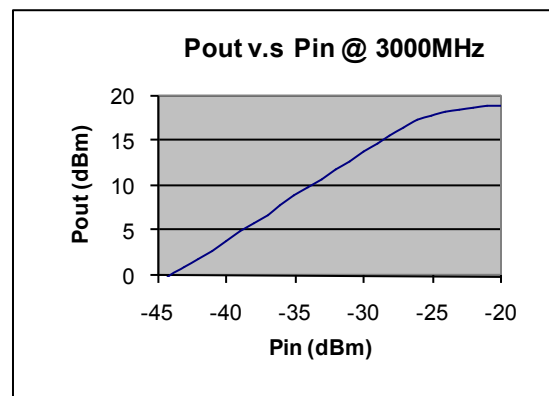
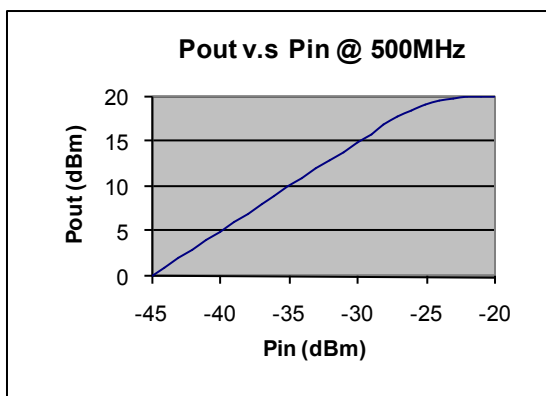
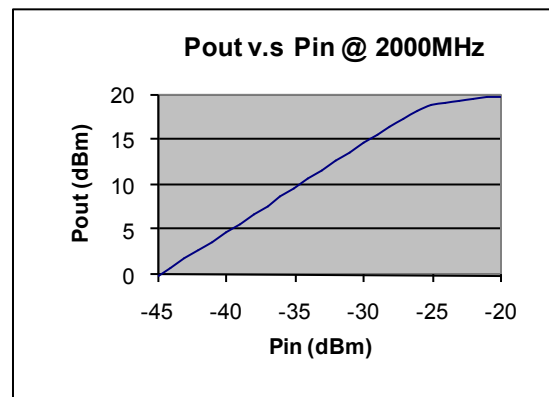
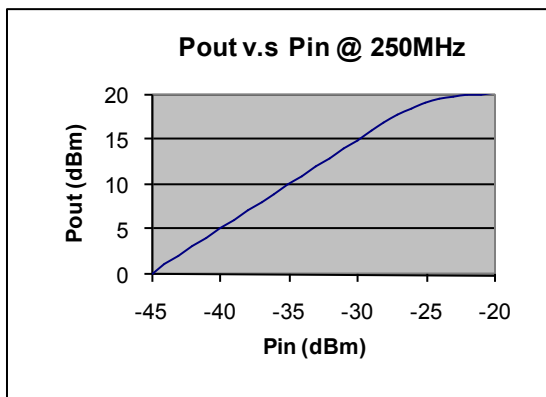
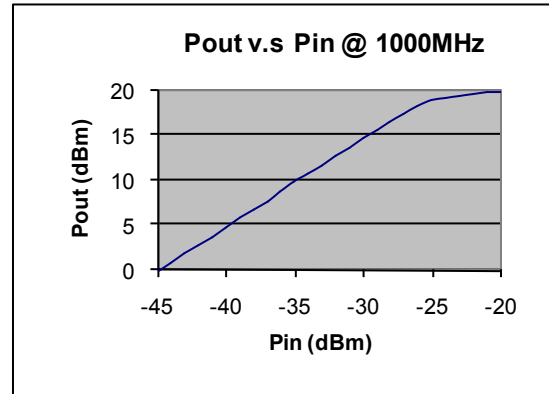
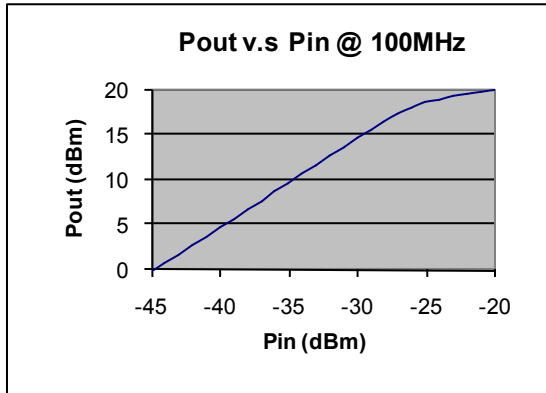
Electrical Specifications @+25 °C, Z_{in}=Z_{out}=50 Ω, V_{supply} = +12VDC

| Parameter | Unit | Minimum | Typical | Maximum |
|---|------------|--------------------------------|-------------|-------------|
| Frequency Range | MHz | 50 | | 6000 |
| Gain (S21) f = 50MHz | dB | | 38.0 | |
| f = 3000MHz | dB | 37.0 | 38.5 | |
| f = 6000MHz | dB | | 36.8 | |
| Gain Flatness | dB | | ±1.2 | |
| Output Power P _{1dB} | dBm | | +20 | |
| Saturated Output Power P _{Sat} | dBm | | +22 | |
| Output Third Order Intercept IP3 | dBm | | +35 | |
| Noise Figure | dB | | 5.0 | 6.0 |
| Reverse Isolation (S12) @1500MHz | dB | | -50 | |
| VSWR-Input (S11) | ratio:1 | 1.3@50MHz | 1.3@3000MHz | 1.4@6000MHz |
| VSWR-Output (S22) | (unitless) | 2.0@50MHz | 1.5@3000MHz | 1.8@6000MHz |
| DC Power Supply - voltage | V | | 12 | 15 |
| DC Power Supply - current | mA | | 180 | 220 |
| Operating Temperature | °C | -40 | | +85 |
| Size (RF/DC feedthrough excluded) | Inch | 1.79 (L) x 1.10 (W) x 0.45 (H) | | |
| Weight | Oz | 1.4 | | |

Typical Performance @+25 °C



Typical Performance @+25 °C



Absolute Maximum Ratings

| Parameter | Absolute Maximum |
|-----------------------|-------------------|
| RF Input Power | +13dBm |
| Supply Voltage | +25V |
| Operating Temperature | -40 °C to +85 °C |
| Storage Temperature | -55 °C to +125 °C |

Outline

