

## HD28185

## 3.0–4.0GHz Low Noise Amplifier

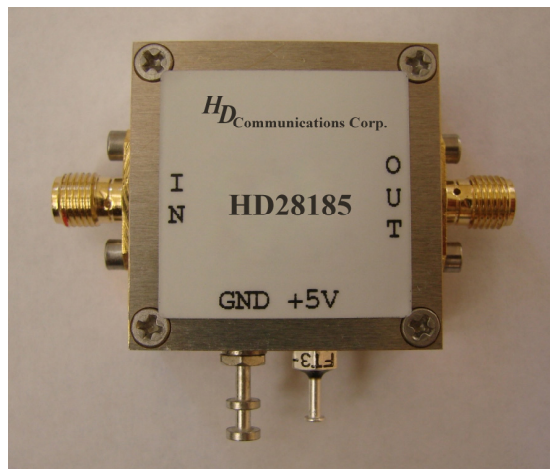
### Features

- Frequency Range: 3.0 – 4.0GHz
- Gain: 17.5dB
- $P_{1dB}$ : +18.5dBm
- IP3: +33.7dBm
- Noise Figure: 1dB
- DC Power: 5V/65mA
- SMA Connector

Performance measured @ 3.5GHz

### Description

HD28185 is a 1dB Noise Figure Low Noise Amplifier operates in wideband with frequency range from 3.0GHz to 4.0GHz.



### Electrical Specifications @ +25 °C, $Z_{in} = Z_{out} = 50 \Omega$ , $V_{cc} = 5V$

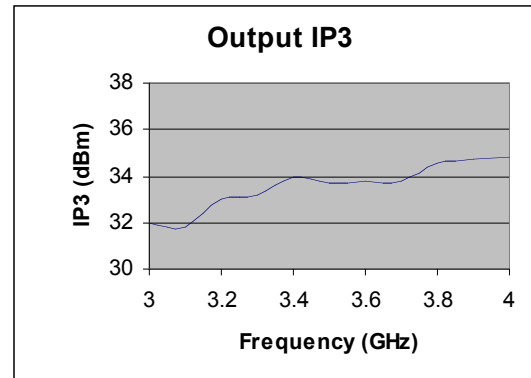
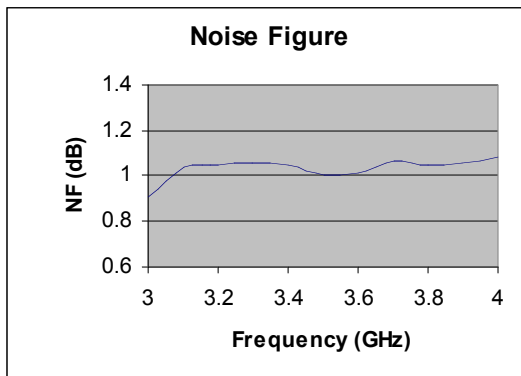
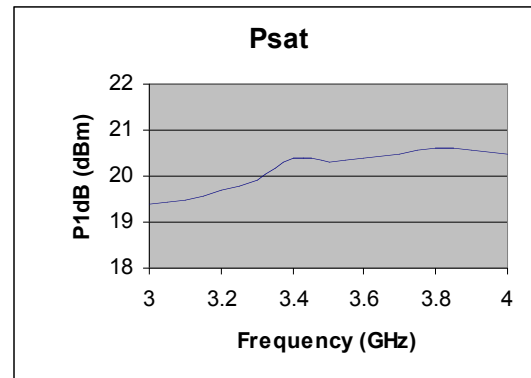
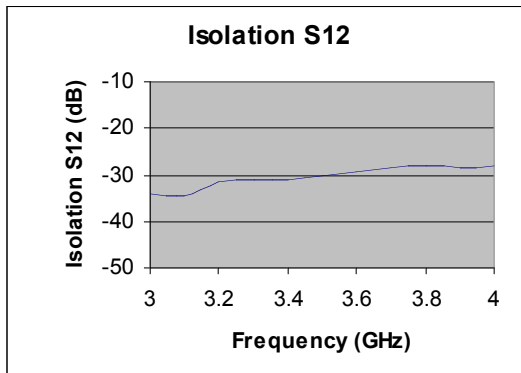
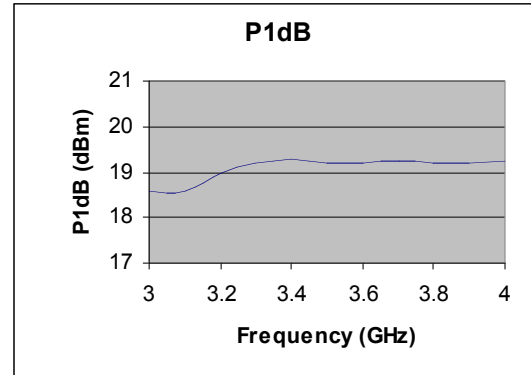
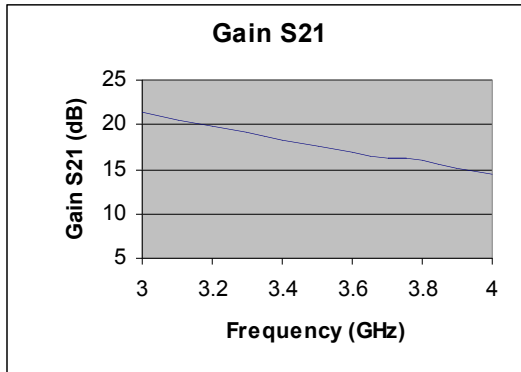
| Parameter                     | Unit | Minimum | Typical | Maximum |
|-------------------------------|------|---------|---------|---------|
| Frequency Range               | GHz  | 3.0     |         | 4.0     |
| Gain $f = 3.0\text{GHz}$      | dB   |         | 21.0    |         |
| $f = 3.5\text{GHz}$           | dB   |         | 17.5    |         |
| $f = 4.0\text{GHz}$           | dB   |         | 14.5    |         |
| $P_{1dB}$ $f = 3.0\text{GHz}$ | dBm  |         | +18.5   |         |
| $f = 3.5\text{GHz}$           | dBm  |         | +19.0   |         |
| $f = 4.0\text{GHz}$           | dBm  |         | +19.0   |         |
| IP3 $f = 3.0\text{GHz}$       | dBm  |         | +32.0   |         |
| $f = 3.5\text{GHz}$           | dBm  |         | +33.7   |         |
| $f = 4.0\text{GHz}$           | dBm  |         | +34.8   |         |
| Noise Figure                  | dB   |         | 1.0     |         |
| Reverse Isolation             | dB   |         | -30     |         |
| VSWR    Input VSWR            |      |         | 1.8:1   |         |
| Output VSWR                   |      |         | 1.4:1   |         |
| DC Power Supply               | V    | 3       | 5       | 5.5     |

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|                |    |  |    |  |
|----------------|----|--|----|--|
| Supply Current | mA |  | 65 |  |
|----------------|----|--|----|--|

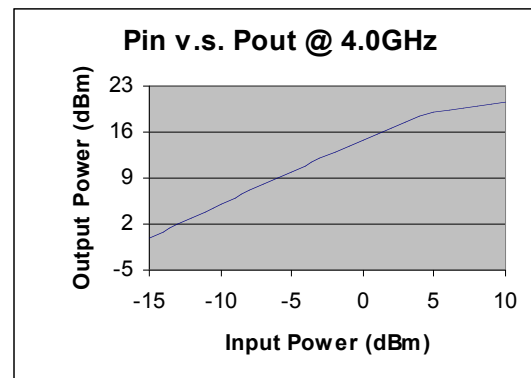
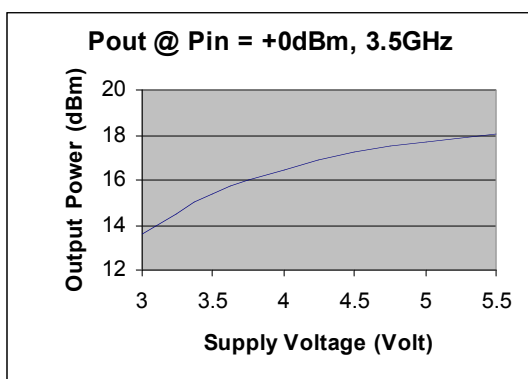
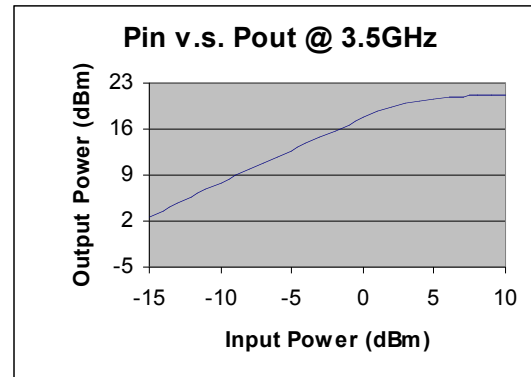
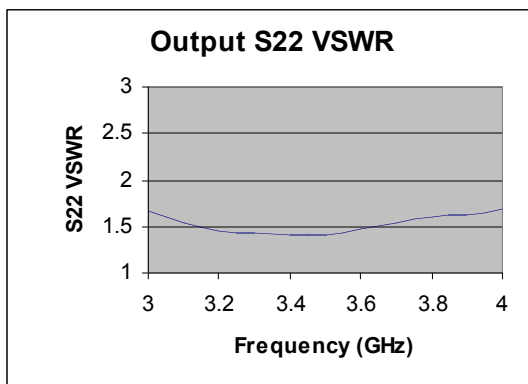
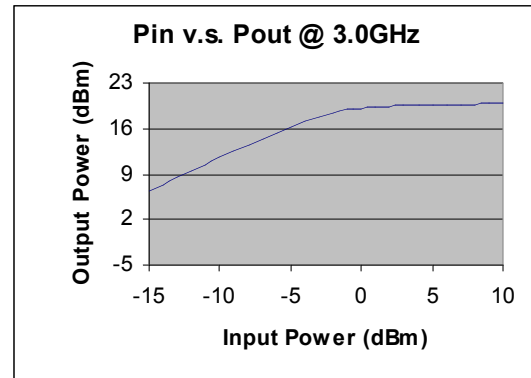
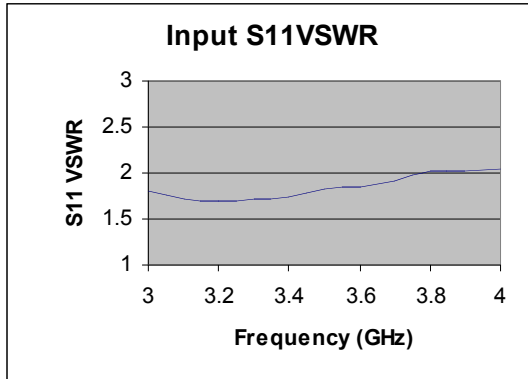
### Typical Performance @ +25 °C



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**3.0–4.0GHz Low Noise Amplifier**

**Typical Performance @ +25 °C**



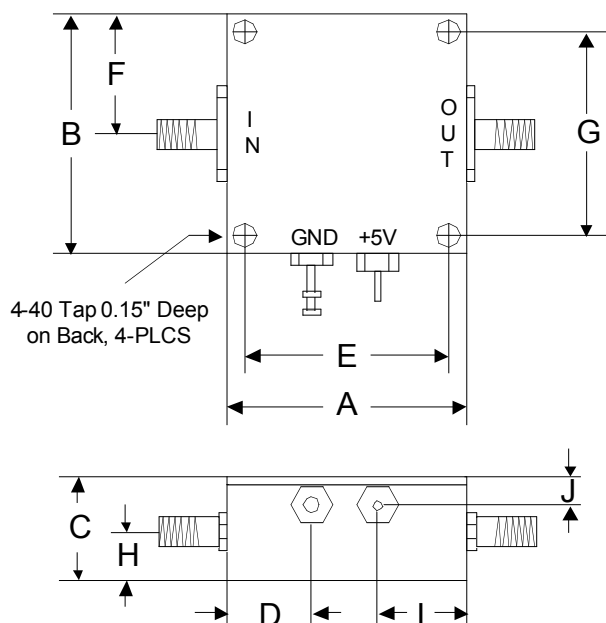
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### Absolute Maximum Ratings

| Parameter             | Absolute Maximum  |
|-----------------------|-------------------|
| RF Input Power        | +10dBm            |
| Supply Voltage        | +6V               |
| Operating Temperature | -40 °C to +85 °C  |
| Storage Temperature   | -55 °C to +125 °C |

### Outline



|      | A     | B     | C     | D     | E     | F     | G     | H     | I     | J     |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Inch | 1.250 | 1.250 | 0.563 | 0.450 | 1.000 | 0.625 | 1.000 | 0.250 | 0.500 | 0.187 |
| mm   | 31.75 | 31.75 | 14.29 | 11.43 | 25.40 | 15.88 | 25.40 | 6.35  | 12.70 | 4.76  |