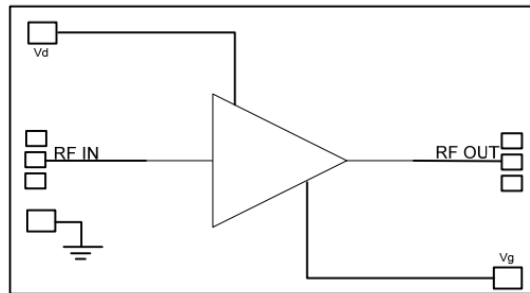


Features

- Frequency: 0.1-27GHz
- Small Signal Gain: 14dB
- Noise Figure: 2.2dB typ.
- P1dB: 18dBm
- Power Supply: +7.5 V/55 mA
- Input/Output: 50Ω
- Die Size: 0.995 x 0.76 x 0.1 mm

Typical Applications

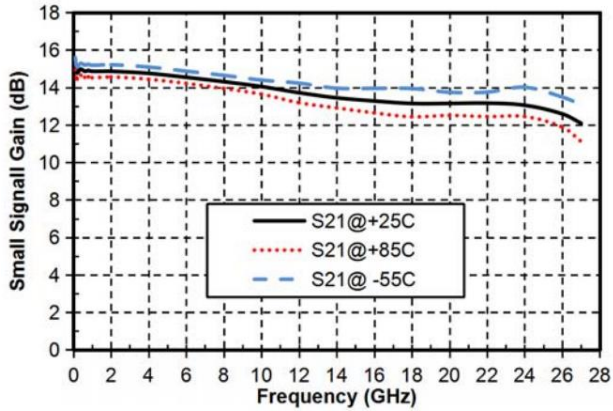
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Functional Block Diagram

Electrical Specifications

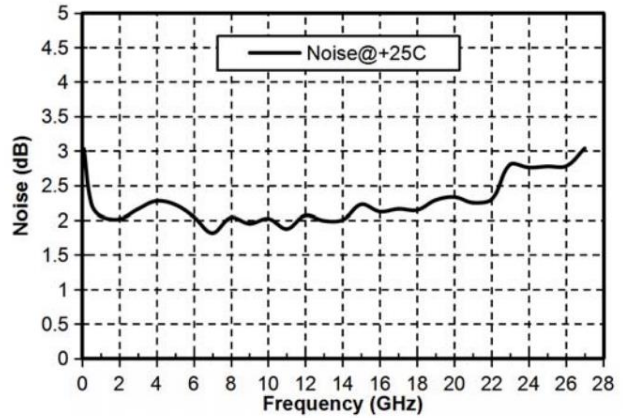
TA = +25°C, Vd = +7.5V with 30 Ω resistor, Vg = +0.6V

| Parameters | Min. | Typ. | Max. | Units |
|-------------------------------|--------|------|------|-------|
| Frequency | 0.1-27 | | | GHz |
| Small Signal Gain | - | 14 | - | dB |
| Gain Flatness | | ±1.7 | | dB |
| Noise Figure | - | 2.2 | 3.5 | dB |
| Output 1dB Compression (P1dB) | - | 18 | - | dBm |
| Saturated Output Power (Psat) | - | 19 | - | dBm |
| Input Return Loss | - | 14 | - | dB |
| Output Return Loss | - | 11 | - | dB |
| Static current | | 55 | | mA |

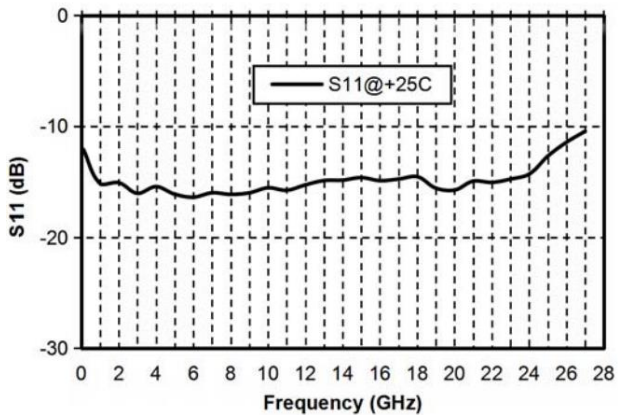
Gain vs. Temperature



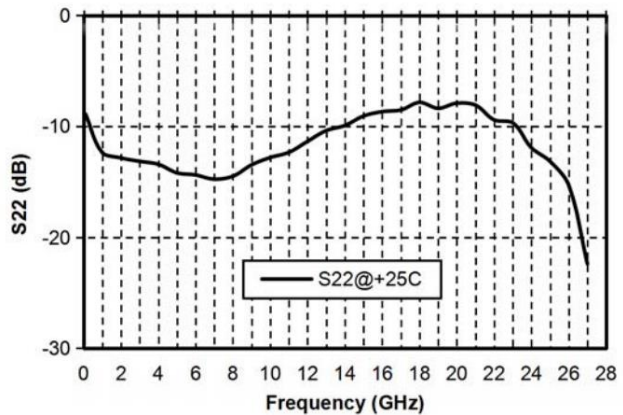
Noise Figure vs. Frequency



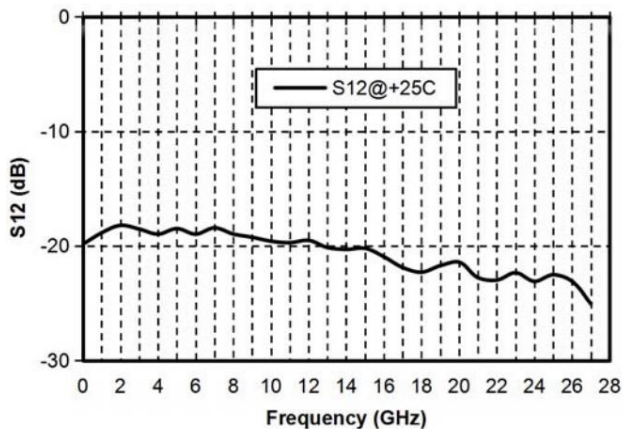
Input Return Loss vs. Frequency



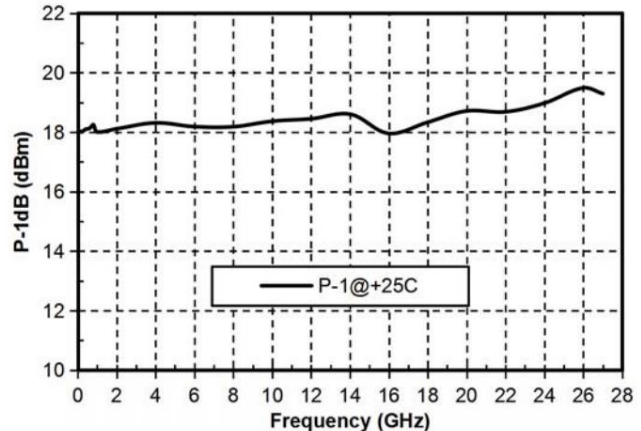
Output Return Loss vs. Frequency



Reverse Isolation vs. Frequency

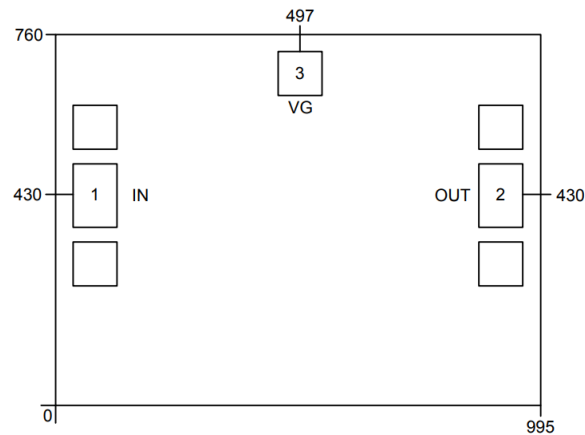


P1dB vs. Temperature





Outline Drawing: All Dimensions in μm

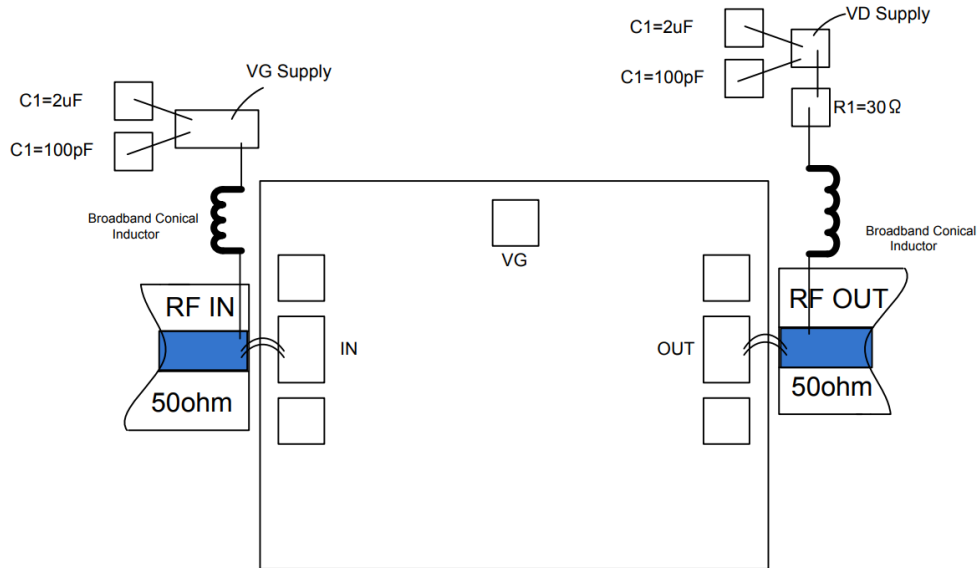


Pad Description

| Pad | Function | Description |
|------------|------------|---|
| 1* | RF IN, Vg | RF signal input terminal; Amplifier gate bias, external 100pF, 2uF bypass capacitor and inductance required, DC blocking capacitor required. |
| 2* | RF OUT, Vd | RF signal output terminal; Amplifier drain bias, external 100pF, 2uF bypass capacitor and inductance required, DC blocking capacitor required |
| Die bottom | GND | Die bottom must be connected to RF/DC ground. |



Assembly Drawing



Notes:

1. Die thickness: 100um
2. Typical bond pad is 100*100 μm²
3. Bond pad metalization: Gold
4. Backside metalization: Gold
5. Backside of the die (GND)
6. No connection required for unlabeled bond pads

Maximum Ratings:

1. Maximum drain voltage: +7V
2. Maximum input power: +20dBm
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C