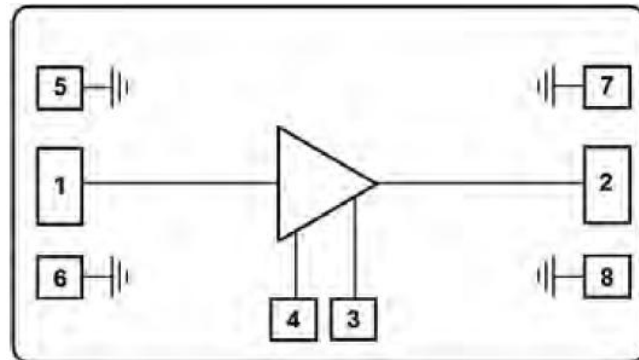


**Features**

- Operating Frequency: DC-20GHz
- Gain: 12dB
- P-1: +26dBm
- Psat: +28dBm
- PAE: 20%
- Static Operating Current: 350mA@ +10 V
- Die Size: 2.99 x 1.25 x 0.1 mm

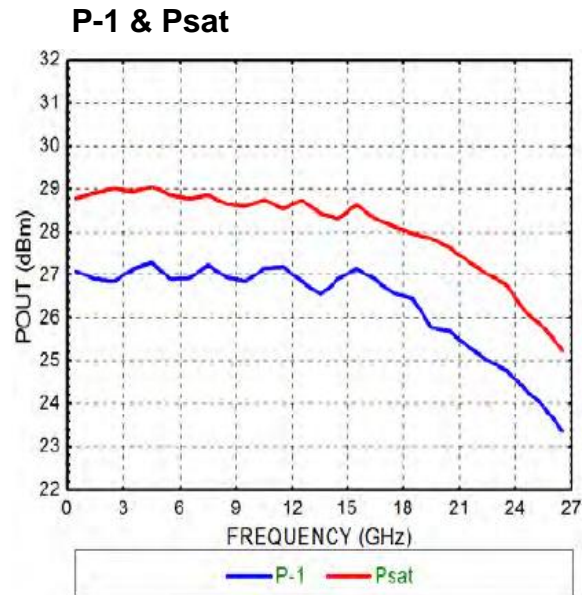
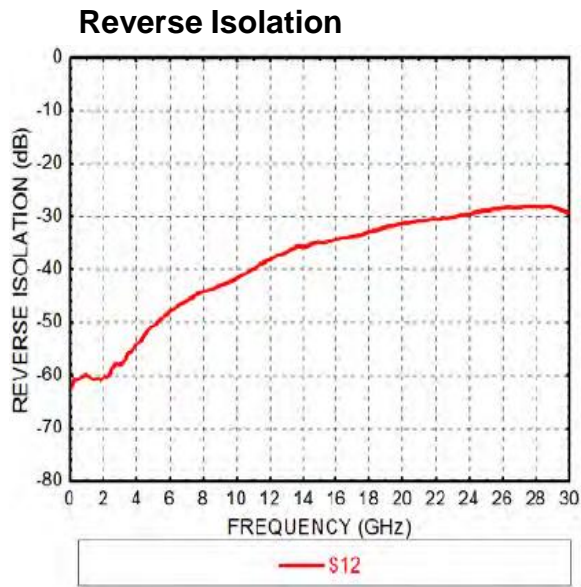
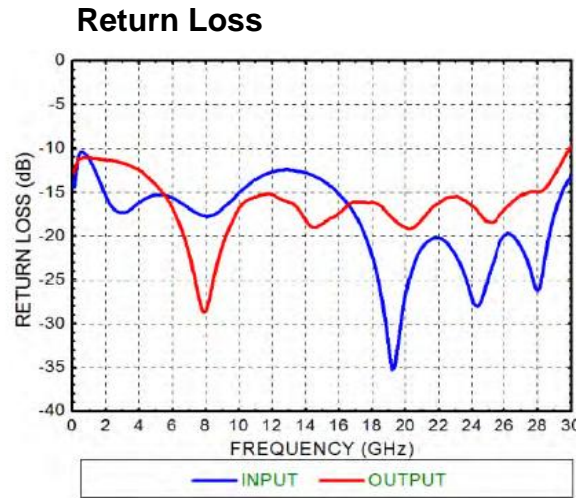
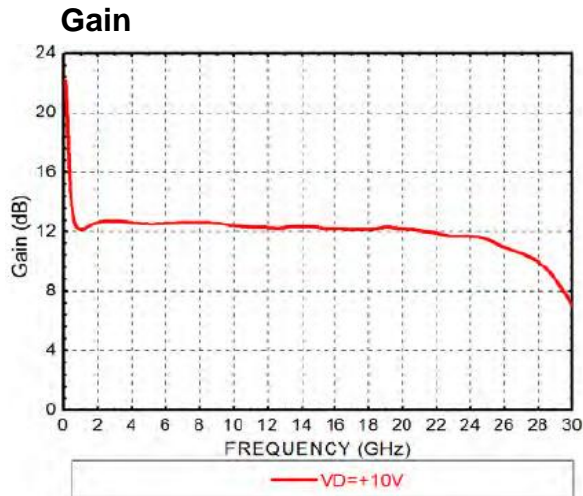
**Typical Applications**

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

**Functional Block Diagram**

**Electrical Specifications**

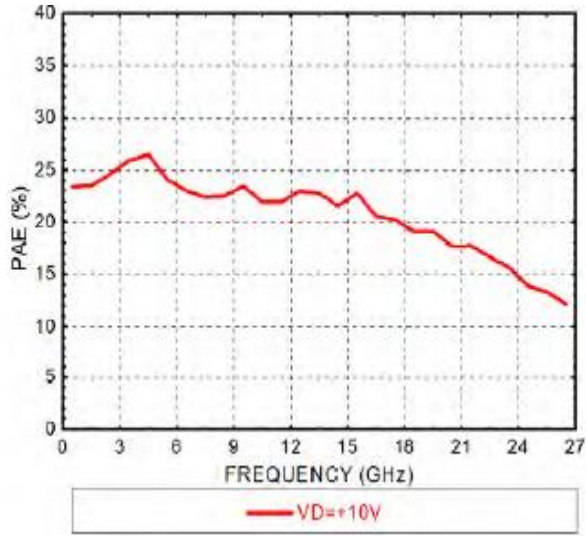
TA = +25°C, Vd = +10V, Vg = -0.9V, Idq = 350mA

| Parameters                           | Min.         | Typ.       | Max. | Units      |
|--------------------------------------|--------------|------------|------|------------|
| <b>Frequency</b>                     | <b>DC-20</b> |            |      | <b>GHz</b> |
| <b>Gain</b>                          |              | <b>12</b>  |      | <b>dB</b>  |
| <b>Input Return Loss</b>             |              | <b>15</b>  |      | <b>dB</b>  |
| <b>Output Return Loss</b>            |              | <b>15</b>  |      | <b>dB</b>  |
| <b>Output 1dB Compression (P1dB)</b> |              | <b>26</b>  |      | <b>dBm</b> |
| <b>Saturated Output Power (Psat)</b> |              | <b>28</b>  |      | <b>dBm</b> |
| <b>PAE</b>                           |              | <b>20</b>  |      | <b>%</b>   |
| <b>Dynamic Operating Current</b>     |              | <b>400</b> |      | <b>mA</b>  |

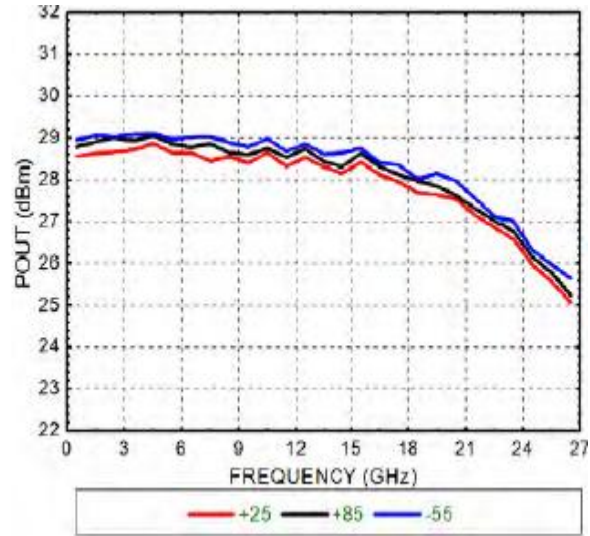




### PAE

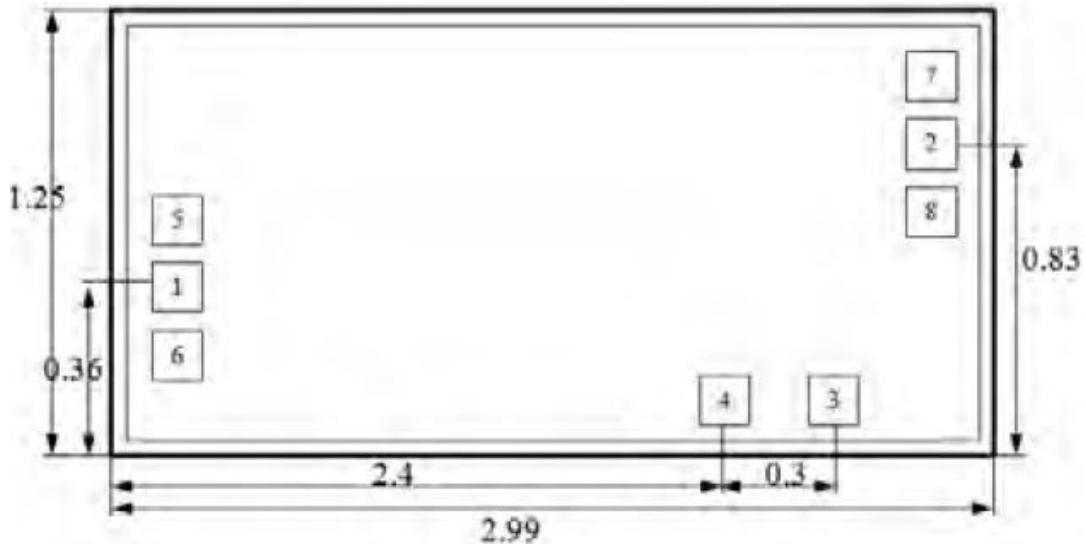


### Psat vs. Temperature





**Outline Drawing:**  
All Dimensions in mm

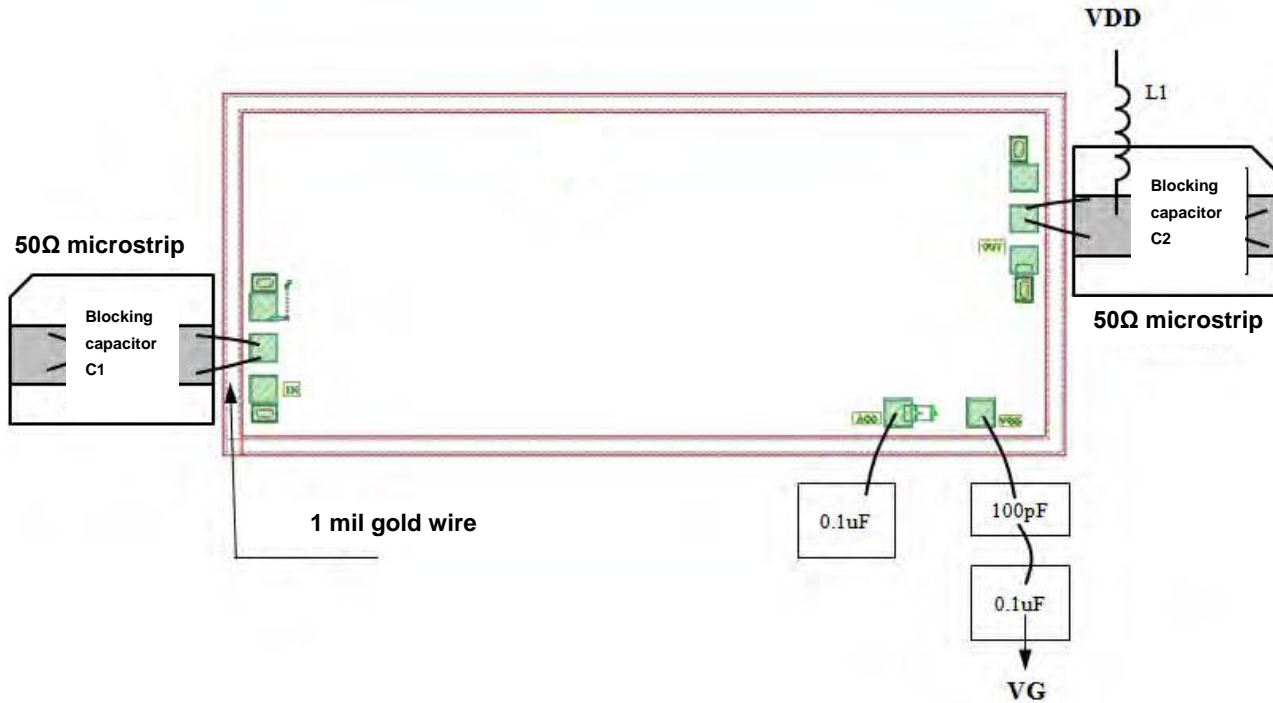


**Pad Description**

| PAD | Function | Description   |
|-----|----------|---|
| 1   | IN       | DC coupling 50Ω Impedance                           |
| 2   | OUT      | DC coupling 50Ω Impedance                           |
| 3   | VG       | Negative power supply voltage; -0.9V recommended    |
| 4   | ACG      | 0.1uF capacitor required to be connected externally |
| 5-8 | GND      | Die bottom must be connected to RF/DC ground        |



### Assembly Drawing



#### Notes:

1. Die thickness: 100um
2. Typical bond pad is 100\*100 μm<sup>2</sup>
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. RF input power: +27dBm
2. Power supply voltage: +12V
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C