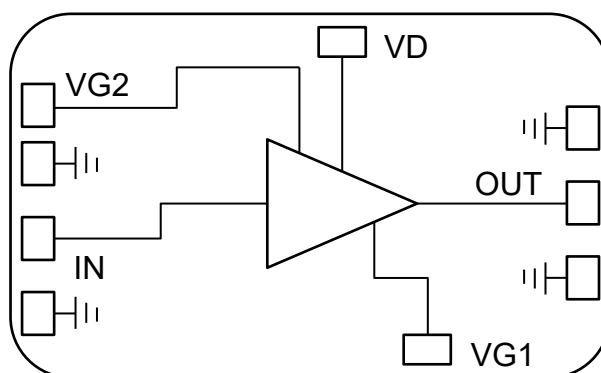


**Features**

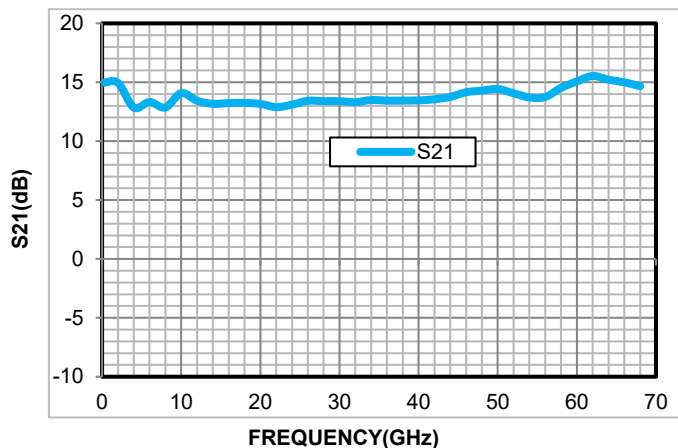
- Frequency: DC-67GHz
- Gain: 13.5dB typ.
- NF: 4dB
- P1dB: 18.5dBm
- Psat:21.5dBm
- Input /Output Return Loss: 12dB Typ.
- Power Supply: VD=+8 V,VG1=-1.67V
- Idq: 140mA
- Die Size: 1.6 x 1.35 x 0.05 mm

**Functional Block Diagram****Electrical Specifications**

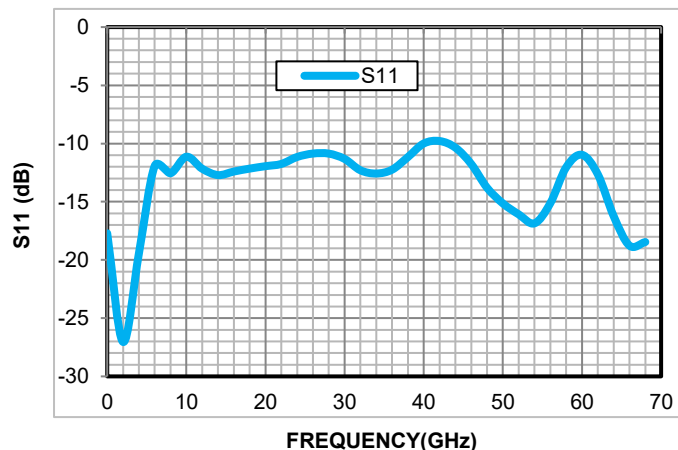
TA = +25°C, VD =+8V,VG1=-1.67V,Idq=140mA

| Parameters | Min.  | Typ. | Max. | Units |
|------------|-------|------|------|-------|
| Frequency  | DC-67 |      |      | GHz   |
| Gain       | 13    | 13.5 | 15.5 | dB    |
| NF         | 3.2   | 4    |      | dB    |
| P1dB       | 17    | 18.5 | 19.5 | dBm   |
| Psat       | 20    | 21.5 | 23.6 | dBm   |
| Input RL   | 10    | 12   |      | dB    |
| Output RL  | 7.3   | 12   |      | dB    |

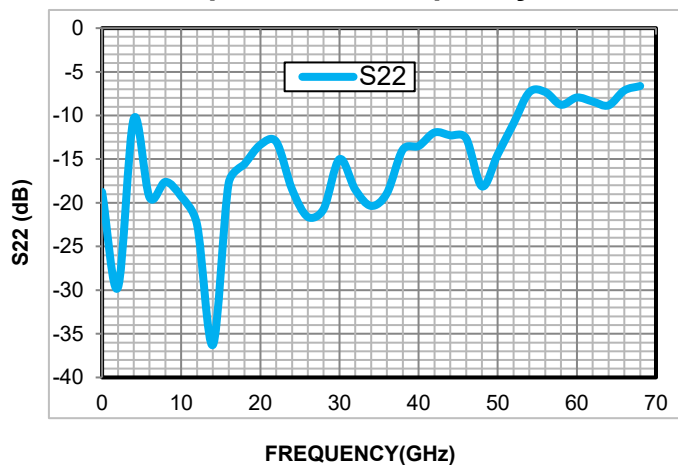
Gain vs. Frequency



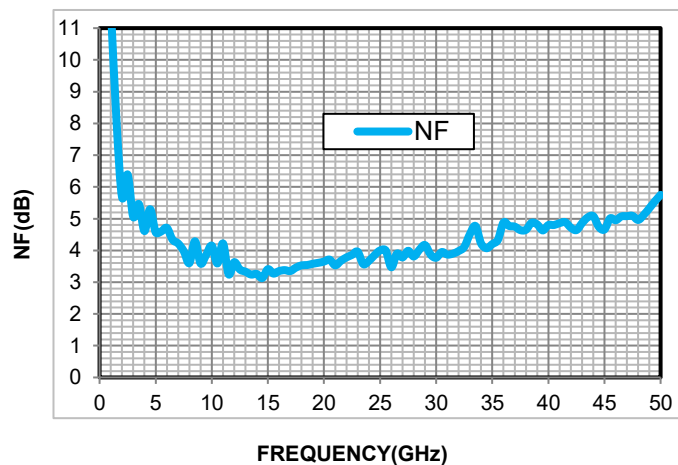
Input RL vs. Frequency



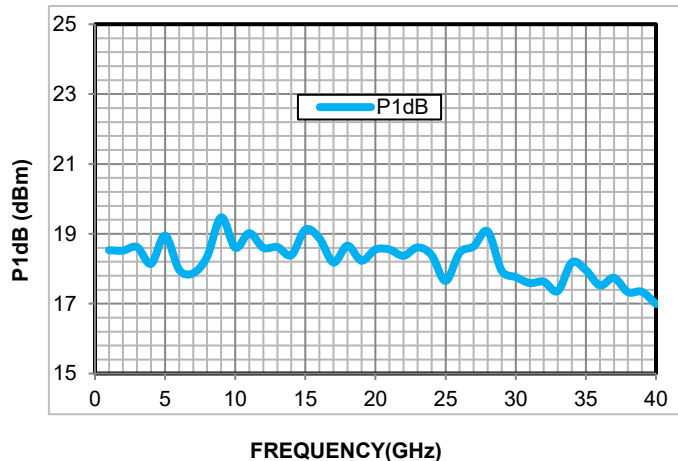
Output RL vs. Frequency



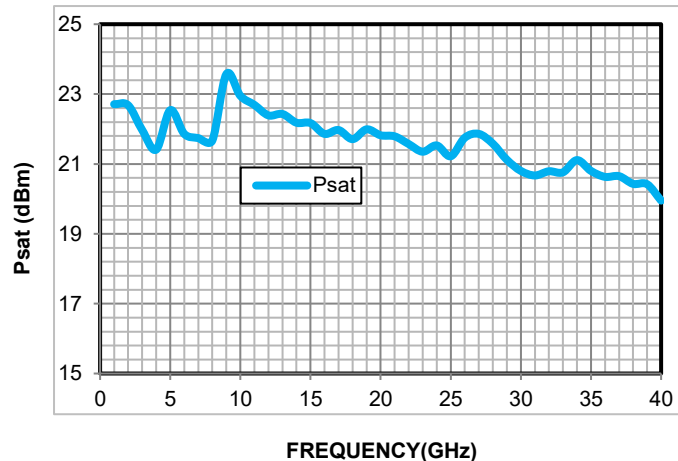
NF vs. Frequency



P1dB vs. Frequency

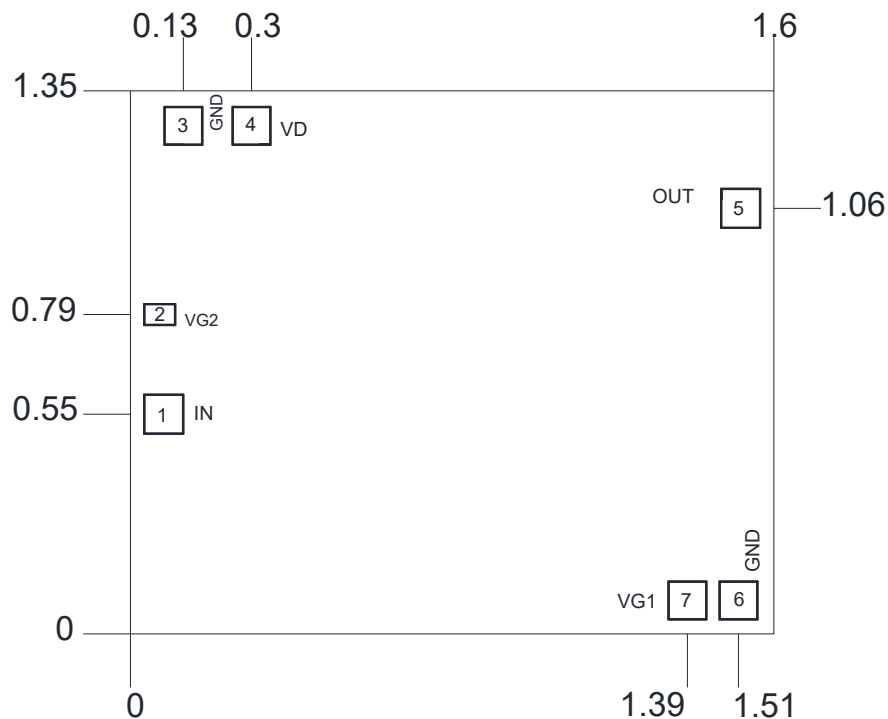


Psat vs. Frequency

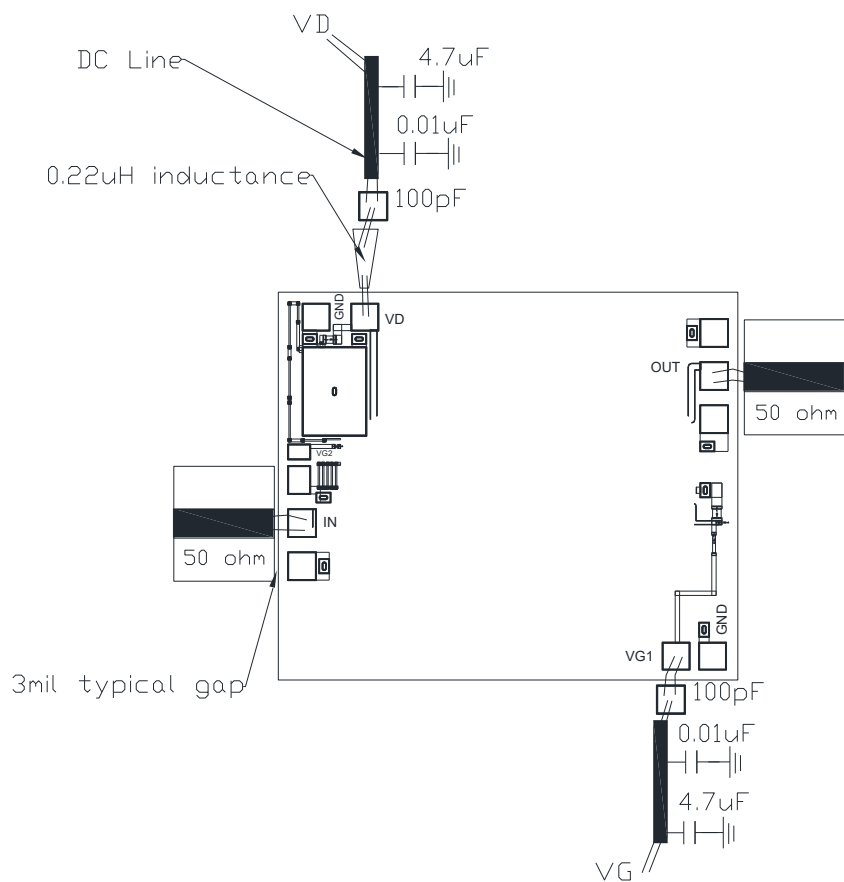


**Outline Drawing:**

All Dimensions in mm

**Pad Description**

| Pad            | Function | Description                                                                           |
|----------------|----------|---------------------------------------------------------------------------------------|
| 1,5            | IN, OUT  | 50 ohm circuit matched, and there is no blocking capacitor integrated inside the chip |
| 4              | VD       | Drain Bias                                                                            |
| 7              | VG       | Gate Bias                                                                             |
| 3,6            | GND      | RF and DC ground                                                                      |
| Bottom of chip | GND      | The bottom of the chip should be in good contact with the RF and DC ground            |

**Assembly Drawing****Notes:**

1. Die thickness: 50um
2. Typical bond pad is 100\*100  $\mu\text{m}^2$
3. Bond pad metalization: Gold
4. Backside metalization: Gold
5. Backside of the die (GND)
6. No connection required for unlabeled bond pads
7. No Internal DC Block at both input and output.
8. Input/Output use two 25um gold wire, length less than 250um is recommended.

**Maximum Ratings:**

1. Input power: +15dBm
2. Operating temperature: -55°C to +85°C
3. Storage temperature: -65°C to +150°C