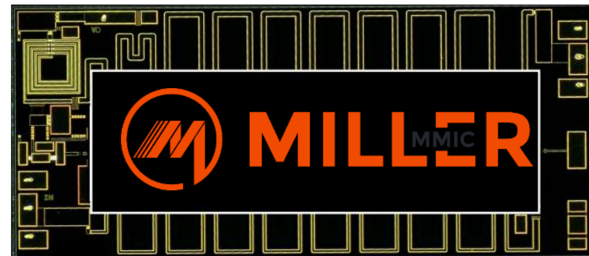
*GaAs MMIC*
*Driver Amplifier*
*14-18GHz*



## Features

- **Single Biasing Voltage(Self Biased)**
- **Frequency: 14-18GHz**
- **Small Signal Gain: 21dB**
- **Gain Flatness: ±0.9dB**
- **P1dB: 20dBm**
- **Psat: 21dBm**
- **Power Supply: +5V/75mA**
- **Input/Output: 50Ω**
- **Die Size: 1.68 x 0.98 x 0.1mm**




## Typical Applications

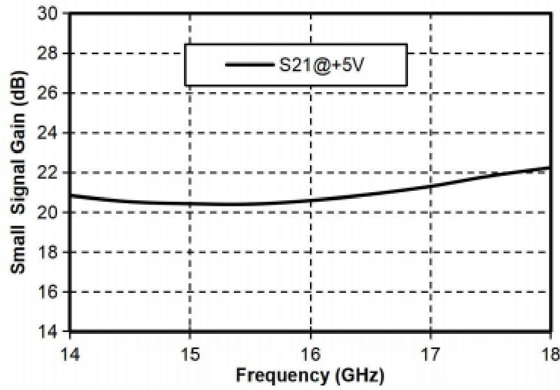
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

## Electrical Specifications

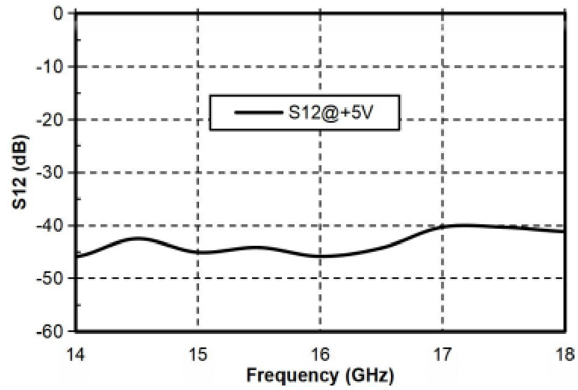
**TA = +25ºC, Vd = +5V, Ids = 75mA**

| Parameters | Min. | Typ. | Max. | Units |
|---|---|---|---|---|
| Frequency | | 14-18 | | GHz |
| Small Signal Gain | - | 21 | - | dB |
| Gain Flatness | | ±0.9 | | dB |
| P1dB | - | 20 | - | dBm |
| Psat | - | 21 | - | dBm |
| Input Return Loss | - | 17 | | dB |
| Output Return Loss | - | 16 | | dB |
| Quiescent Current | | 75 | | mA |

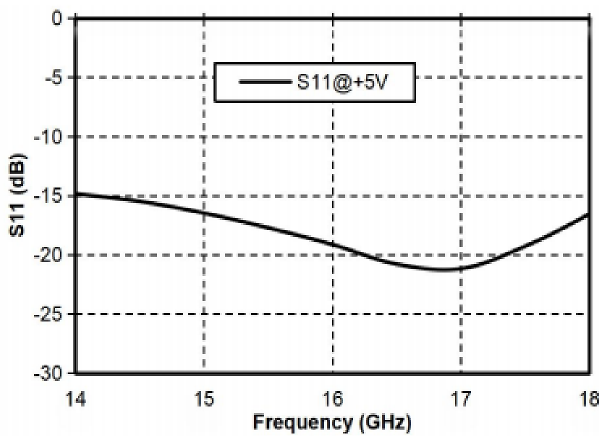
## Gain vs. Frequency



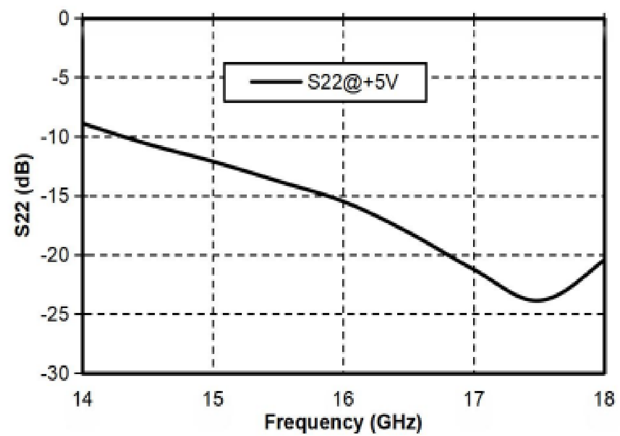

## Reverse Isolation vs. Frequency



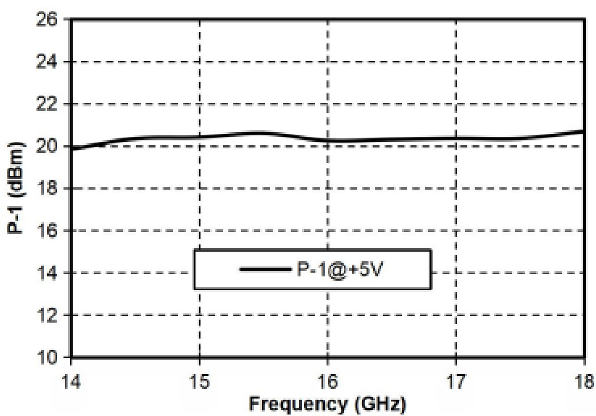

## Input Return Loss vs. Frequency



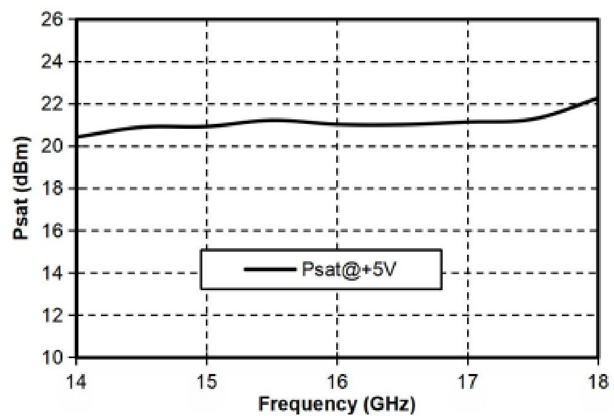

## Output Return Loss vs. Frequency




## P-1dB vs. Frequency

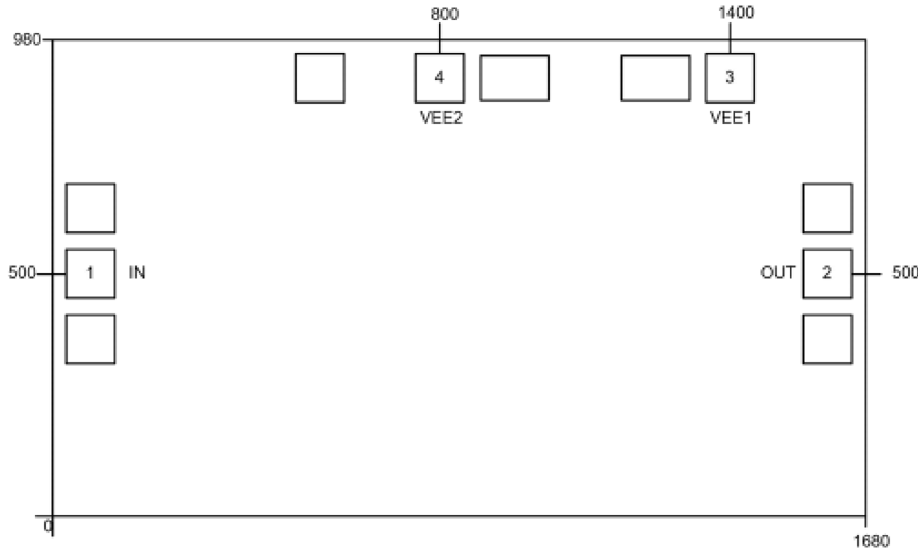



## Psat vs. Frequency



## Outline Drawing:

All Dimensions in um




## Pad Description

| PAD | Function | Description |
|---|---|---|
| 1 | RF IN | RF signal input terminal, no blocking capacitor required |
| 2 | RF OUT | RF signal output terminal, no blocking capacitor required |
| 3,4 | VEE1,VEE2 | Amplifier drain bias, connected to external 100pF ,1000pF bypass capacitor. |
| Die Bottom | GND | Die bottom must be connected to RF/DC ground |

MILLER MMIC

# MM3067

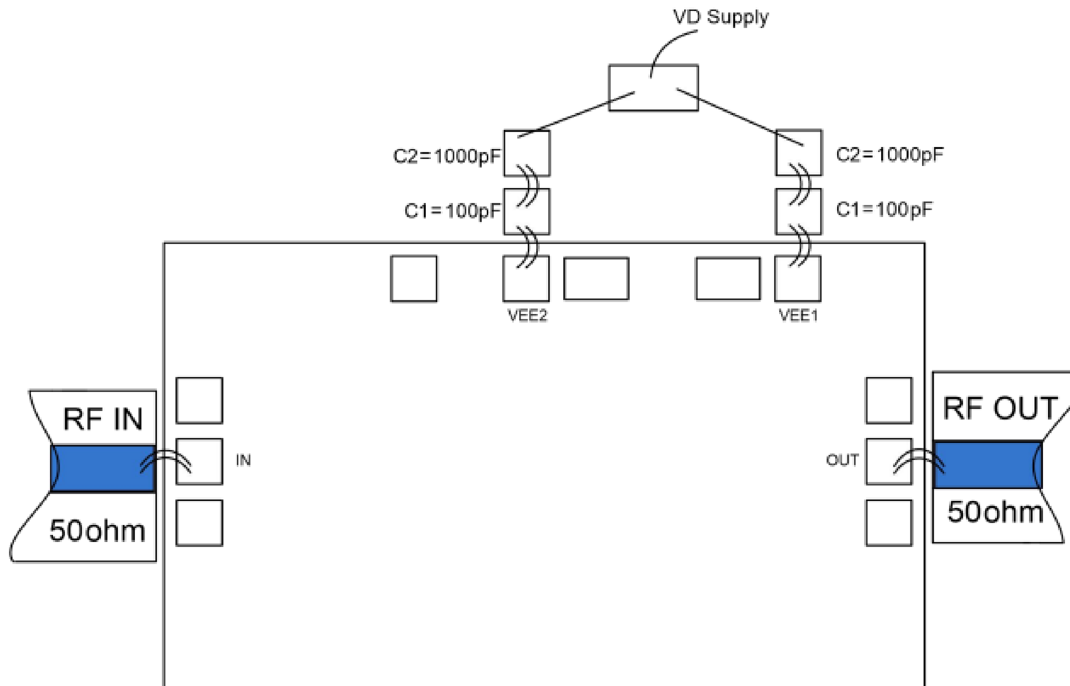
V1.0.0

*GaAs MMIC*
*Driver Amplifier*
*14-18GHz*

MM3067

DRIVER AMPLIFIER – MMIC 14-18GHz

## Assembly Drawing




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

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