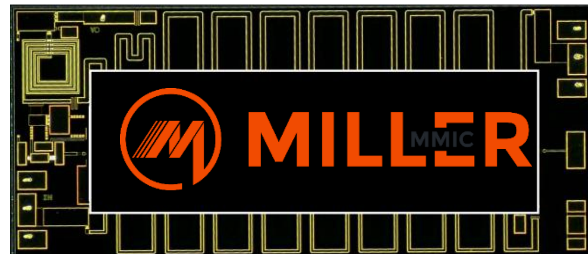
GaAs MMIC
Driver Amplifier
14-18GHz

Features

- Frequency: 14-18GHz
- Small Signal Gain: 26.5dB
- Gain Flatness: ±0.9dB
- P1dB: 28dBm
- Psat: 28.5dBm
- PAE: 46%
- Power Supply: +5V/300mA
- Input/Output: 50Ω
- Die Size: 2.27 x 1.2 x 0.1mm



Typical Applications

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

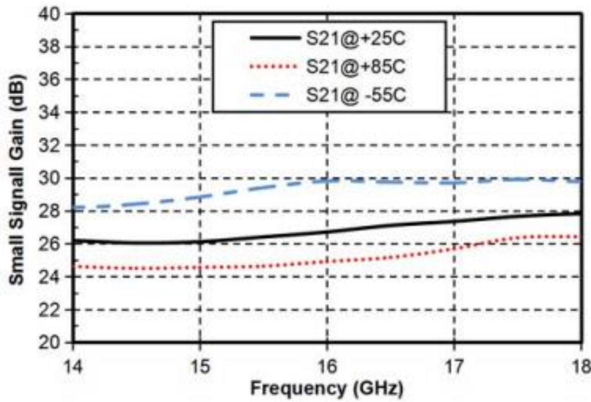
Electrical Specifications

TA = +25ºC, Vd = +5V, Ids = 300mA

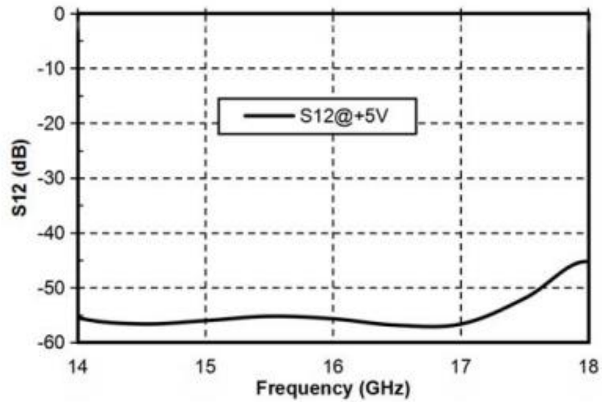
Parameters	Min.	Typ.	Max.	Units
Frequency		14-18		GHz
Small Signal Gain	-	26.5	-	dB
Gain Flatness		±0.9		dB
P1dB	-	28	-	dBm
Psat	-	28.5	-	dBm
PAE		46		%
Input Return Loss	-	19		dB
Output Return Loss	-	11		dB
Quiescent Current		300		mA

* By tuning the Vg terminal voltage -2V~0V, the Vg terminal voltage is recommended to be -0.75V.

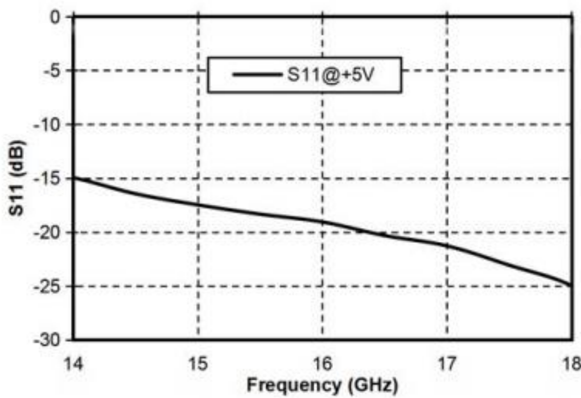
Gain vs. Frequency



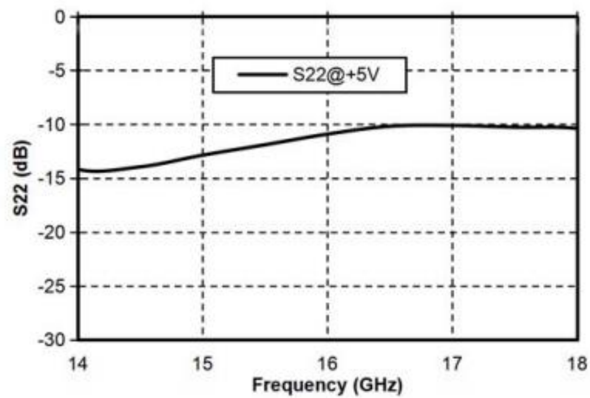
Reverse Isolation vs. Frequency



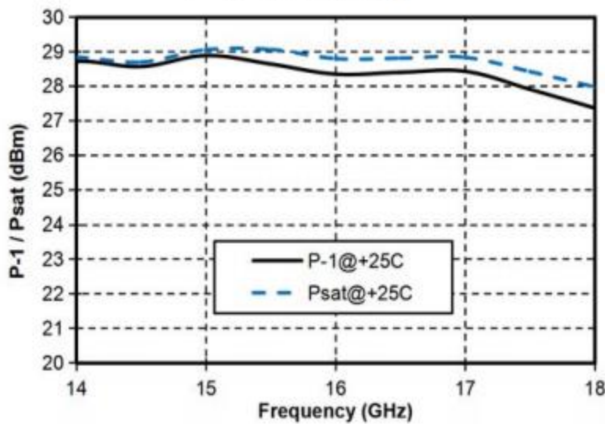
Input Return Loss vs. Frequency



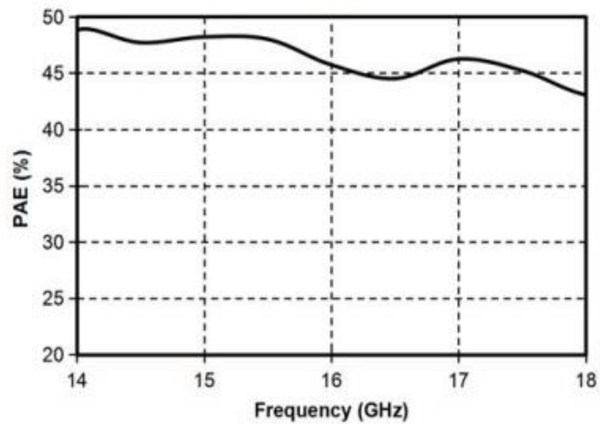
Output Return Loss vs. Frequency



P-1dB/Psat vs. Frequency

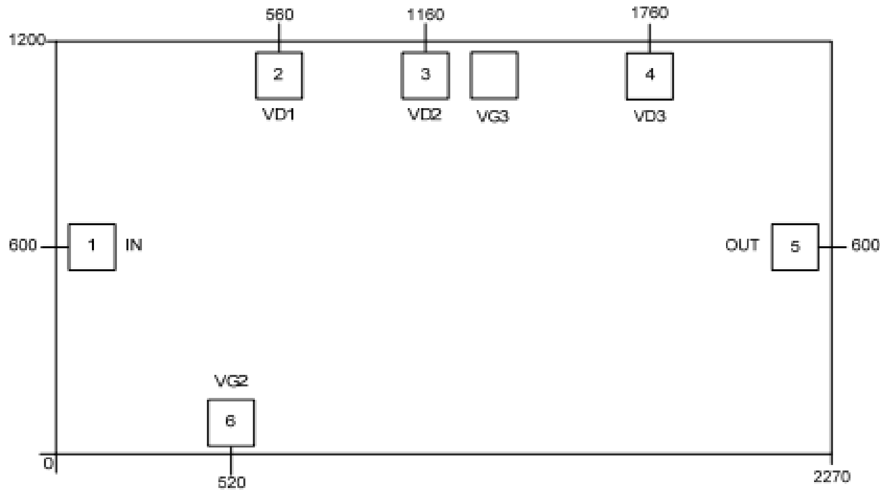


PAE vs. Frequency



Outline Drawing:

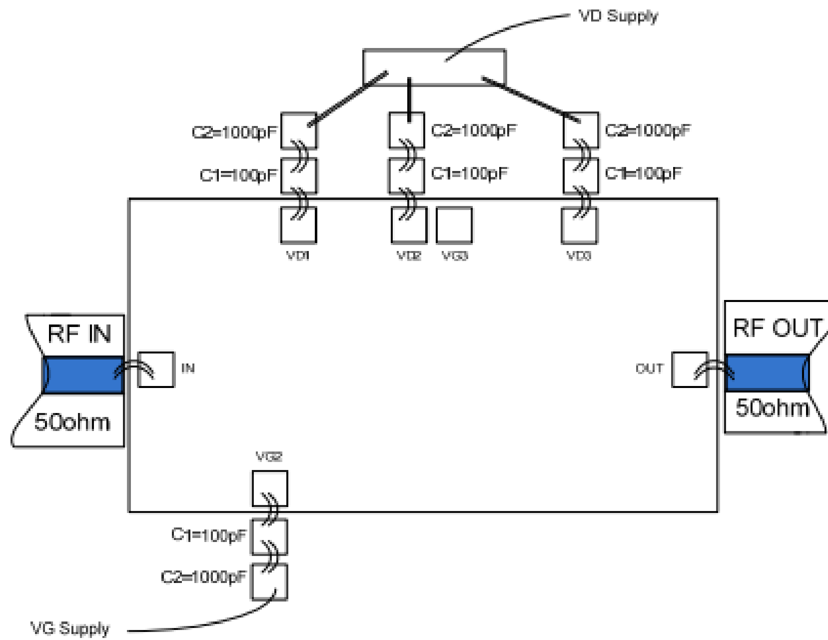
All Dimensions in um



Pad Description

PAD	Function	Description
1	RF IN	RF signal input terminal, no blocking capacitor required
5	RF OUT	RF signal output terminal, no blocking capacitor required
2,3,4	VD1~VD3	Amplifier drain bias, connected to external 100pF ,1000pF bypass capacitor.
6	VG2	Amplifier gate bias, connected to external 100pF ,1000pF bypass capacitor.
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 μm^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℃**