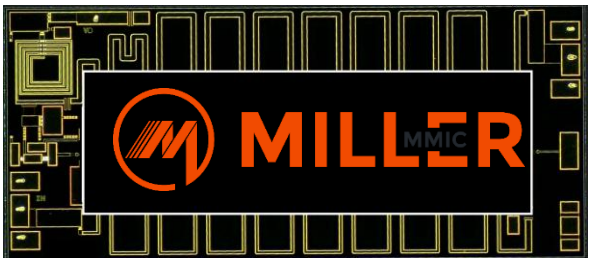
V1.0.0

GaAs MMIC
Power Amplifier
32-38GHz

Features

- Frequency: 32-38GHz
- Small Signal Gain: 18dB
- P1dB: 30.5dBm
- Psat: 31dBm
- Power Supply: +6V@1300mA
- Input/Output: 50Ω
- Die Size:2.77 x 2.93 x 0.1 mm



Typical Applications

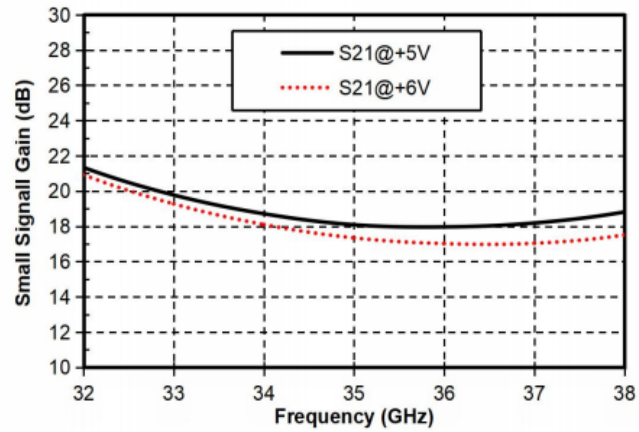
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

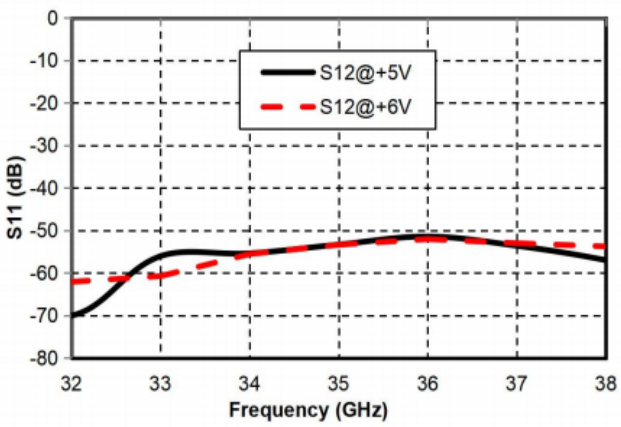
TA = +25ºC, Vd = +6V, Vg = -0.7V, Ids=1300mA

Parameters	Min.	Typ.	Max.	Units
Frequency		**32-38**		**GHz**
Small Signal Gain	**-**	**18**	**-**	**dB**
Gain Flatness		**±2.0**		**dB**
P1dB	**-**	**30.5**	**-**	**dBm**
Psat	**-**	**31**	**-**	**dBm**
Input Return Loss	**-**	**10**	**-**	**dB**
Output Return Loss	**-**	**15**	**-**	**dB**
***By tuning the Vg terminal voltage -2V~0V, the recommended gate voltage is -0.7V.**				

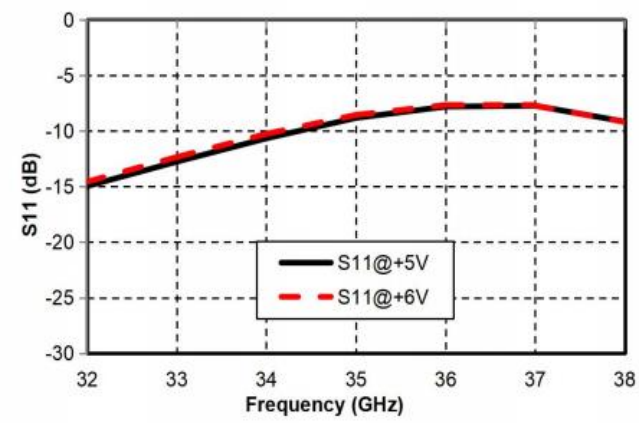
Gain vs. Frequency



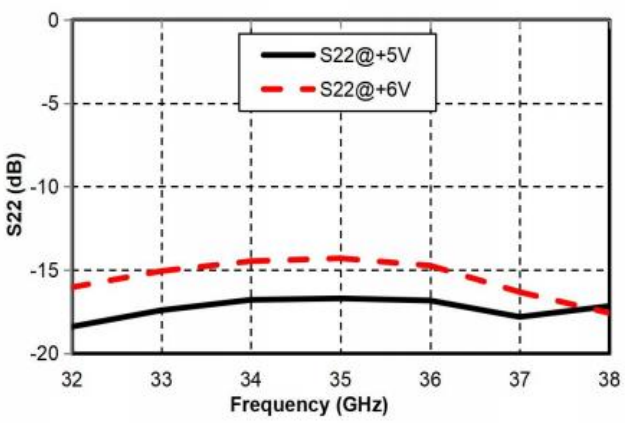
Reverse Isolation vs. Frequency



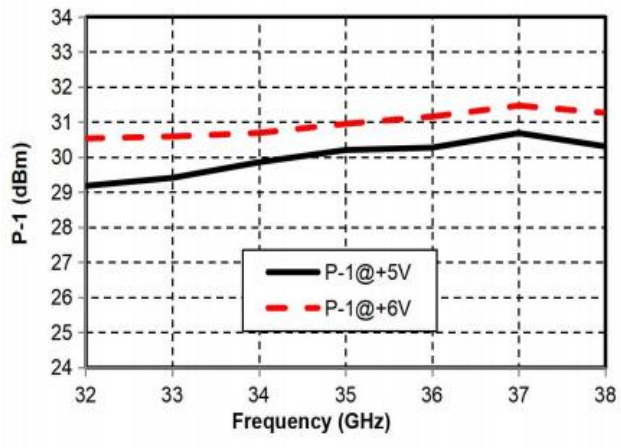
Input Return Loss vs. Frequency



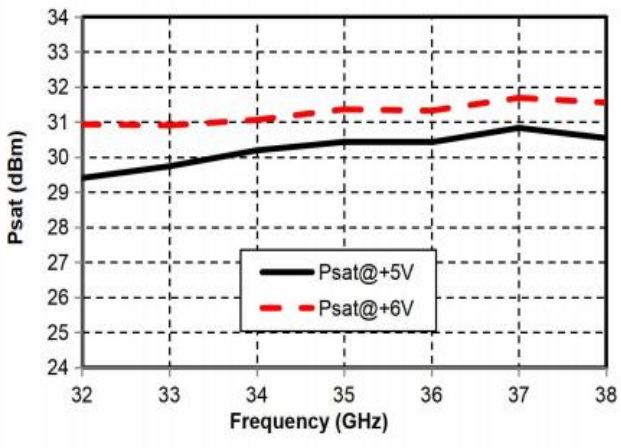
Output Return Loss vs. Frequency



P1dB vs. Frequency

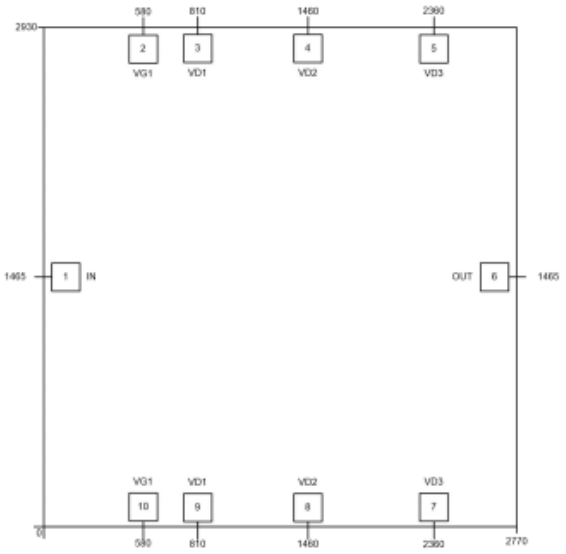


Psat vs. Frequency



Outline Drawing:

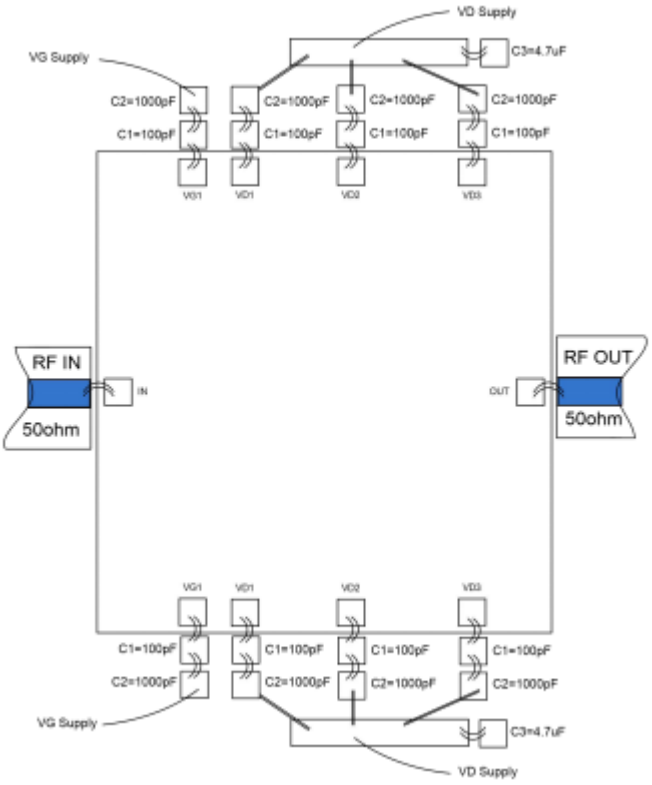
All Dimensions in µm



Pad Description

Pad	Function	Description
1	RF IN	Signal input terminal, connected to 50Ω circuit ; no blocking capacitor required.
6	RF OUT	Signal output terminal, connected to 50Ω circuit ; no blocking capacitor required.
3,4,5,7,8,9	Vd1~3	Amplifier drain bias; external 100pF, 1000pF, 4.7uF bypass capacitor required.
2,10	Vg1	Amplifier gate bias; external 100pF, 1000pF, 4.7uF bypass capacitor required.
6	Vg	Amplifier gate bias; external 100pF, 1000pF bypass 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 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: +9V
2. Maximum gate bias: -3V
3. Maximum input power: +25dBm
4. Operating temperature: -55℃ to +85℃
5. Storage temperature: -65℃ to +150℃