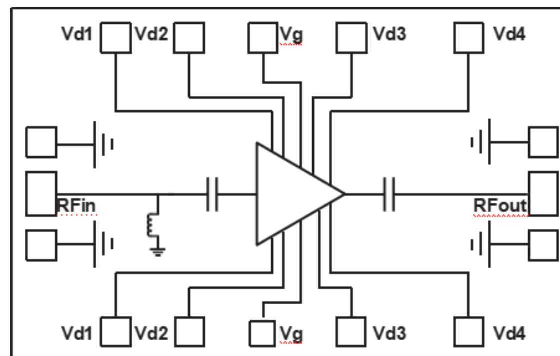
GaAs MMIC
Power Amplifier
32-35GHz

Features

- Frequency: 32-35GHz
- Gain: 23dB
- Psat:+ 33dBm
- Power Supply : +6.0V@1000mA
- Die Size : 3.25 x 1.8 mm

Functional Block Diagram



Typical Applications

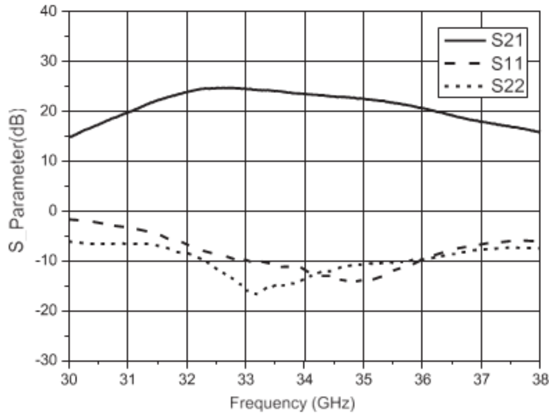
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

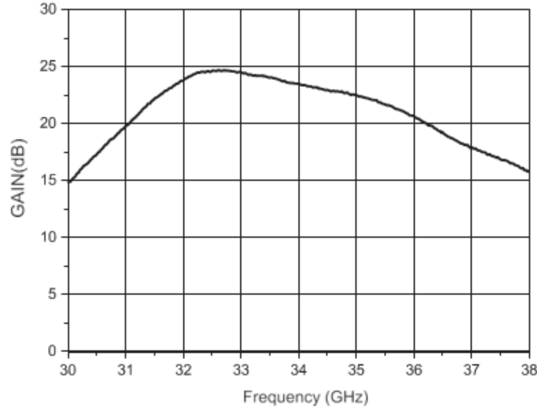
TA = +25ºC, Vdd = +6V, Vgg = -0.35V (On-wafer Measurement Results)

Parameters	Min.	Typ.	Max.	Units
Frequency	32-35			GHz
Gain		23		dB
Psat		33		dBm
Input Return Loss		11		dB
Output Return Loss		13		dB
Operating Current		1000		mA

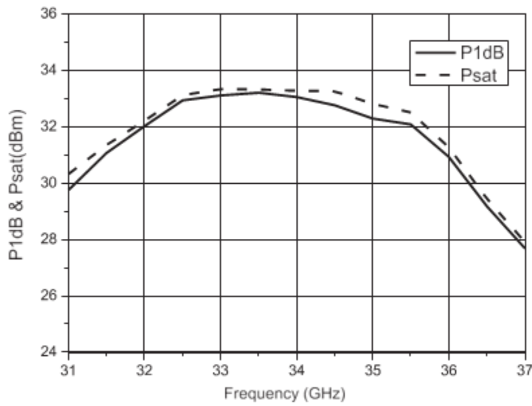
S Parameter vs. Frequency



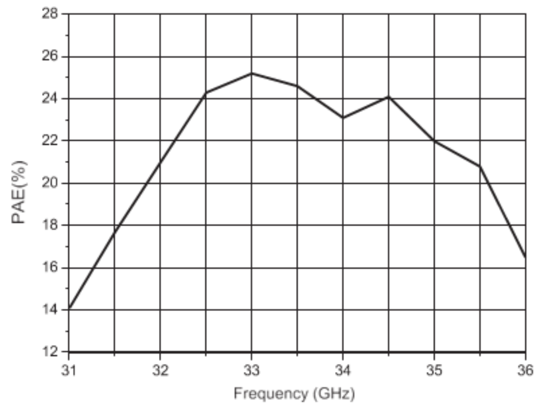
Gain vs. Frequency



P1dB&Psat vs. Frequency



PAE vs. Frequency



MILLER MMIC

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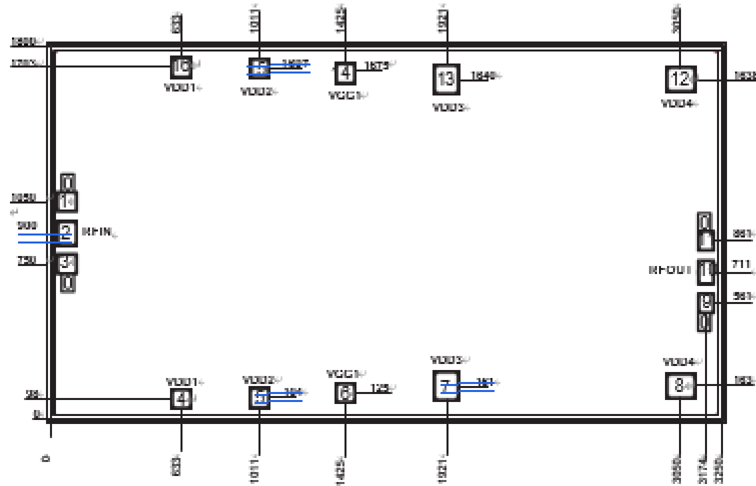
Outline Drawing:

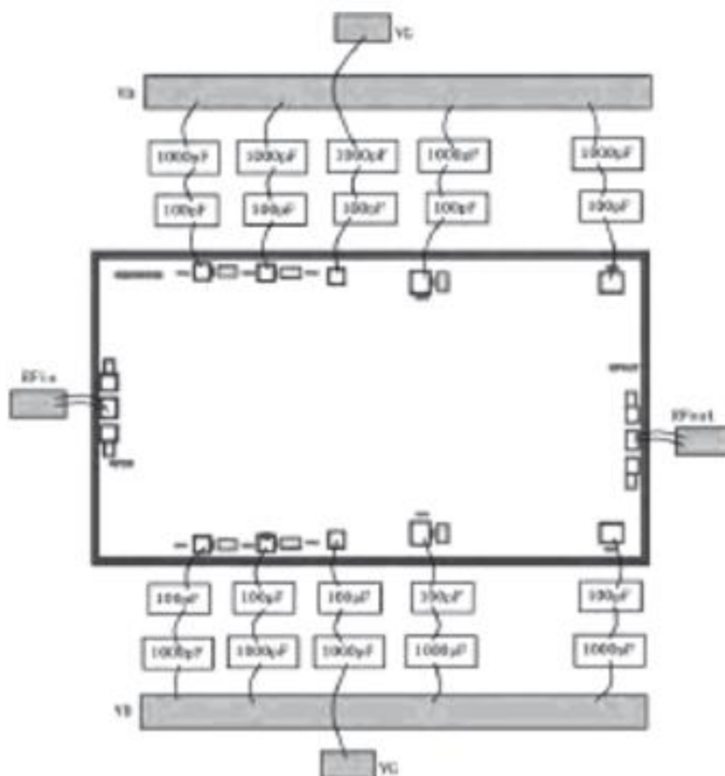
All Dimensions in μm



Pad Description

Pad	Function	Description
2	RF IN	Signal input terminal, connected to 50Ω circuit.
10	RF OUT&VDD	Signal output terminal, connected to 50Ω circuit.
4,5,7,8,12,13,15, 16	Vdd	Amplifier power supply, external 100pF capacitor required.
6,14	Vgg	Amplifier gate power supply, external 100pF capacitor required.
1,3,9,11	GND	Die bottom must be connected to RF/DC ground.

Assembly Drawing (Bond testing)



Notes:

1. Die thickness: 100um
2. Typical bond pad is 100*100 μm²
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. Supply voltage: +7V
2. RF Input power: +5dBm
3. Operating temperature: -55℃ to +85℃
4. Storage temperature: -65℃ to +150℃