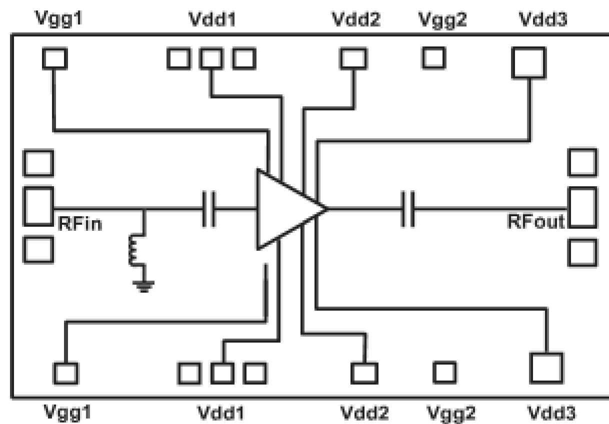
GaAs MMIC
Power Amplifier
28-31GHz

Features

- Frequency: 28-31GHz
- Gain: 28dB
- Psat:+ 33dBm
- Power Supply : +6.0V@700mA
- Die Size : 2.9 x 1.8 mm

Functional Block Diagram



Typical Applications

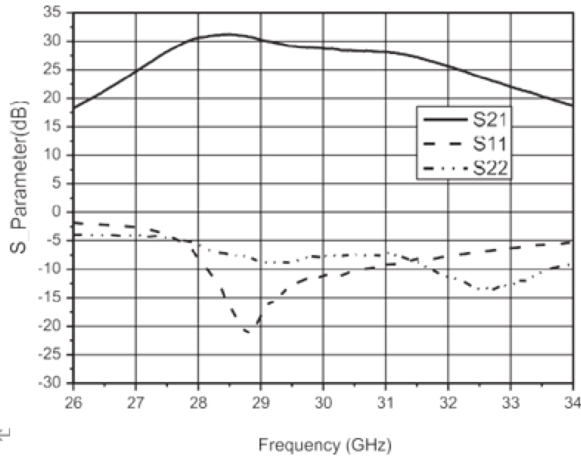
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

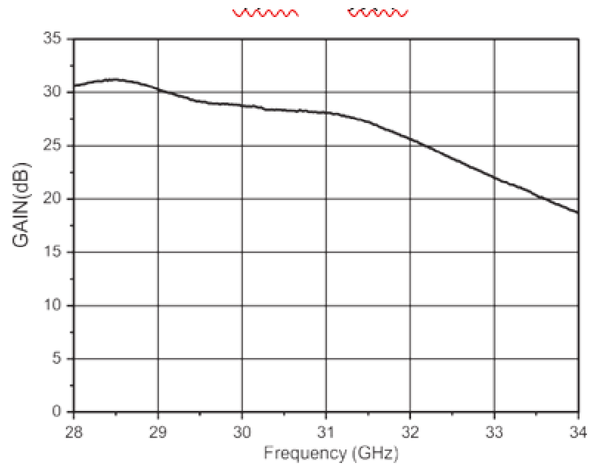
TA = +25ºC, Vdd = +6V, Vgg = -0.75V (On-wafer Measurement Results)

Parameters	Min.	Typ.	Max.	Units
Frequency		**28-31**		**GHz**
Gain		**28**		**dB**
Psat		**33**		**dBm**
Input Return Loss		**28**		**dB**
Output Return Loss		**13**		**dB**
Operating Current		**700**		**mA**

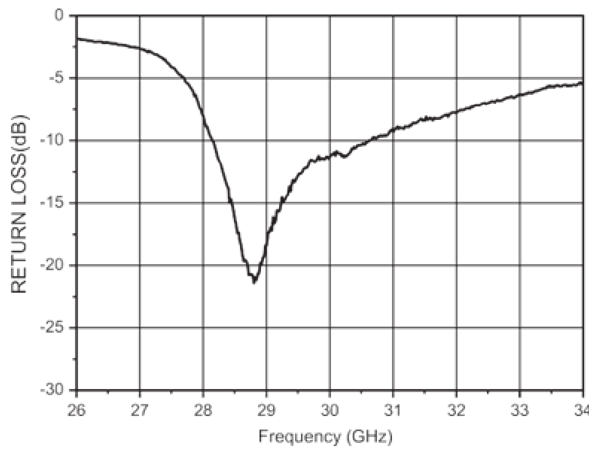
S Parameter vs. Frequency



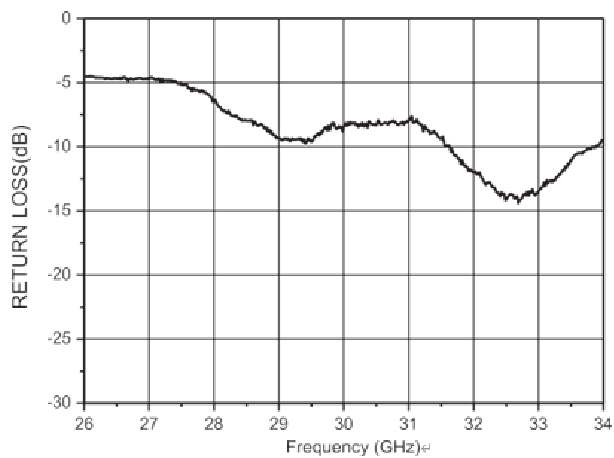
Gain vs. Frequency



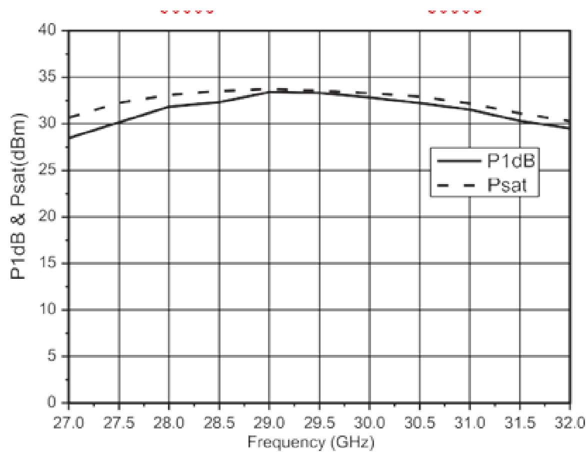
Input Return Loss vs. Frequency



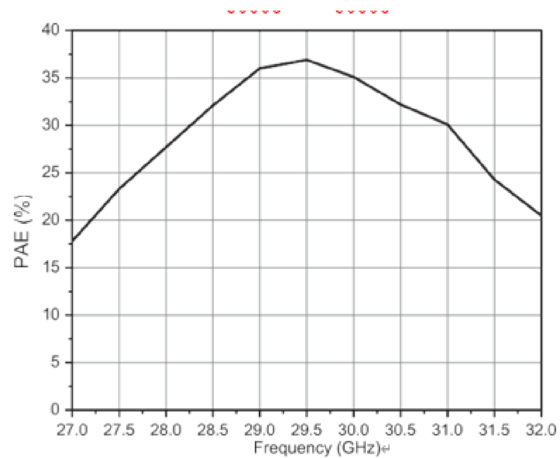
Output Return Loss vs. Frequency



P1dB&Psat vs. Frequency

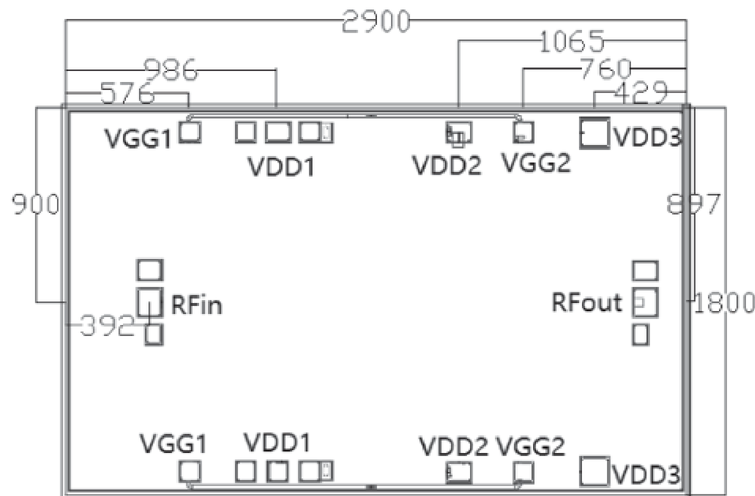


PAE vs. Frequency



Outline Drawing:

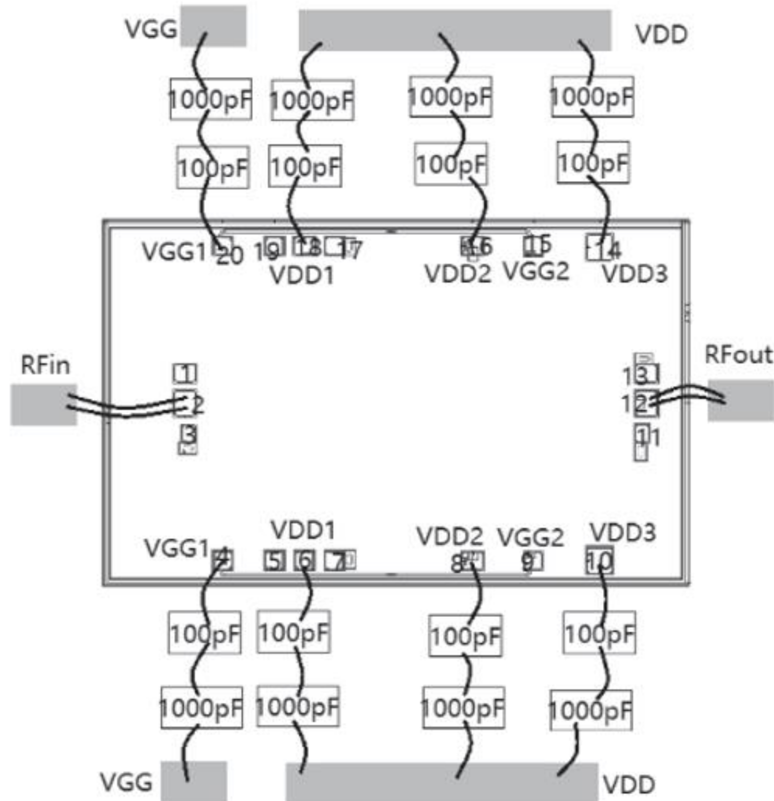
All Dimensions in μm



Pad Description

Pad	Function	Description
2	RF IN	Signal input terminal, connected to 50Ω circuit.
12	RF OUT&VDD	Signal output terminal, connected to 50Ω circuit.
6,8,10,14,16,18	Vdd	Amplifier power supply, external 100pF capacitor required.
4,9,15,20	Vgg	Amplifier gate power supply, external 100pF capacitor required.
1,3,5,7,11,13,17, 19	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: +6.5V
2. RF Input power: +13dBm
3. Operating temperature: -55℃ to +85℃
4. Storage temperature: -65℃ to +150℃