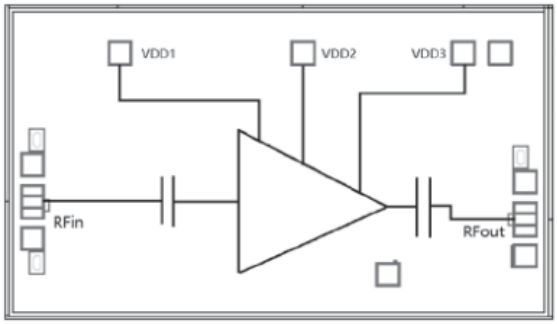
V1.0.0

GaAs MMIC
Driver Amplifier
12-30GHz

Features

- **Frequency: 12-30GHz**
- **Gain: 15dB**
- **P1dB: +15.5dBm**
- **Power supply: +5.0V@86mA**
- **Die Size: 2190 x 1250 µm**

Functional Block Diagram



Typical Applications

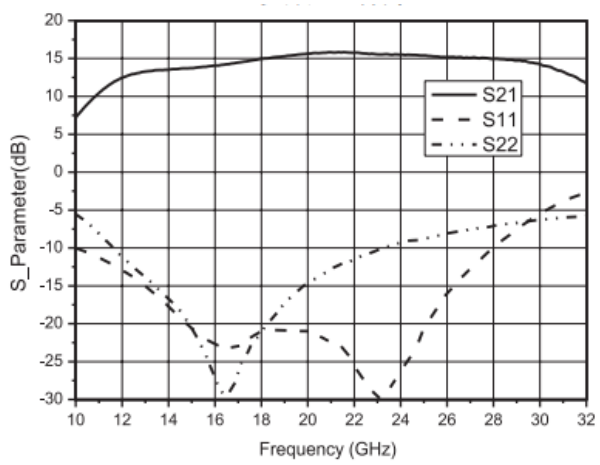
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

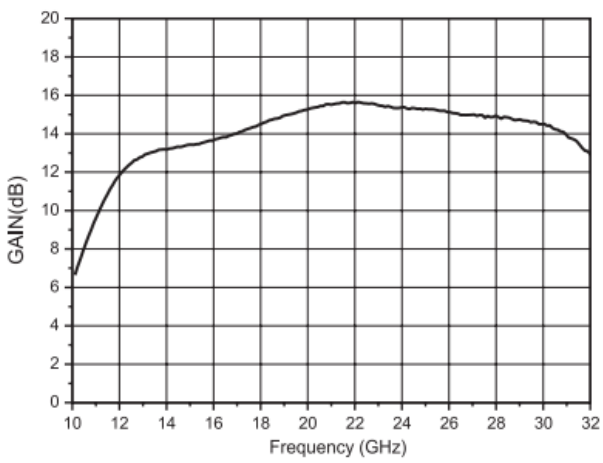
TA = +25ºC, Vdd = +5V

Parameters	Min.	Typ.	Max.	Units
Frequency		**12-30**		**GHz**
Gain		**15**		**dB**
P1dB		**15.5**		**dBm**
Input Return Loss		**18**		**dB**
Output Return Loss		**14**		**dB**
Operating Current		**86**		**mA**

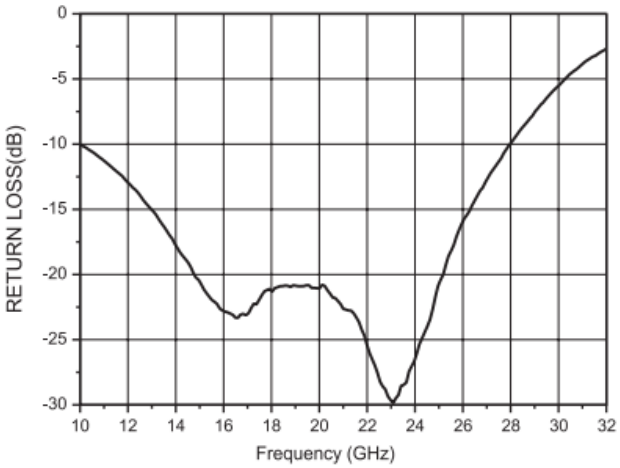
S_Parameter vs. Frequency



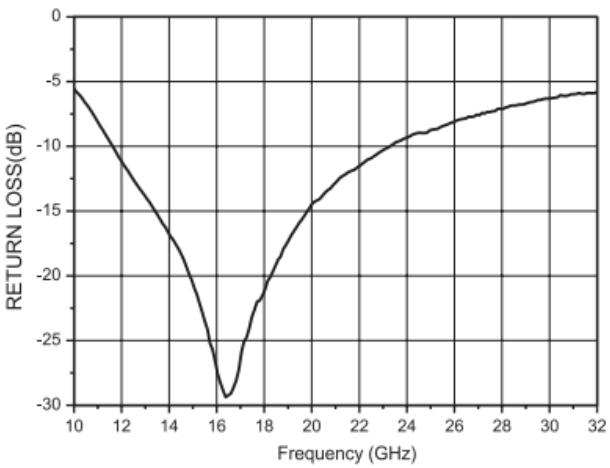
Gain vs. Frequency



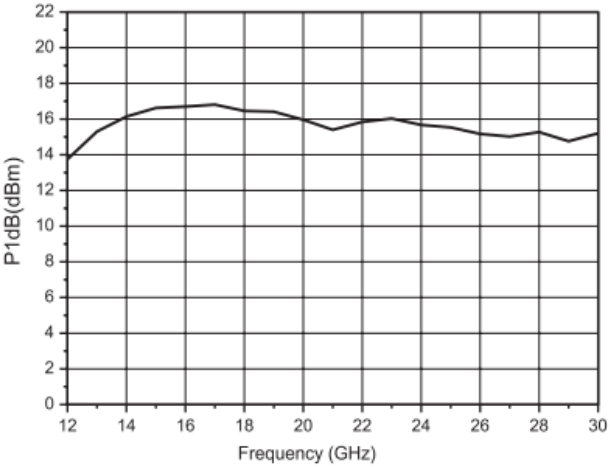
Input Return Loss vs. Frequency



Output Return Loss vs. Frequency

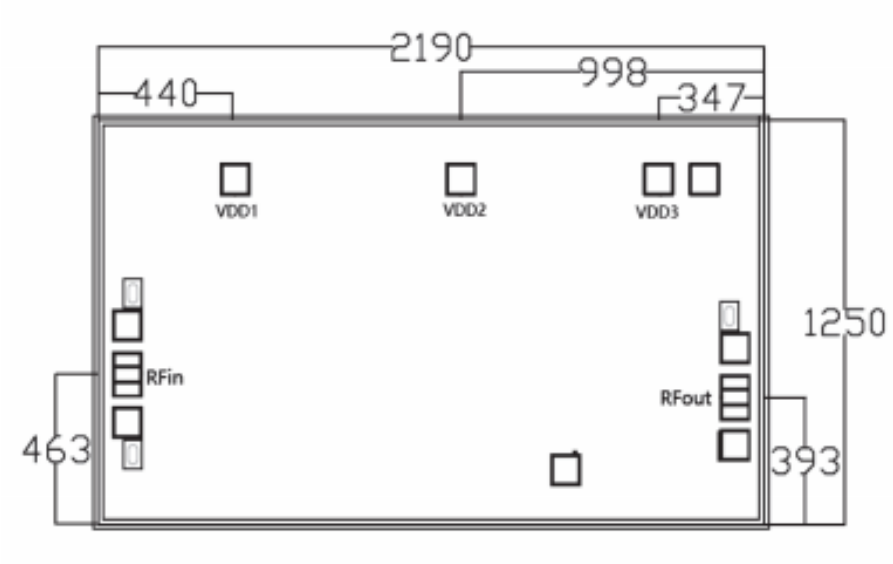


P-1dB vs. Frequency



Outline Drawing:

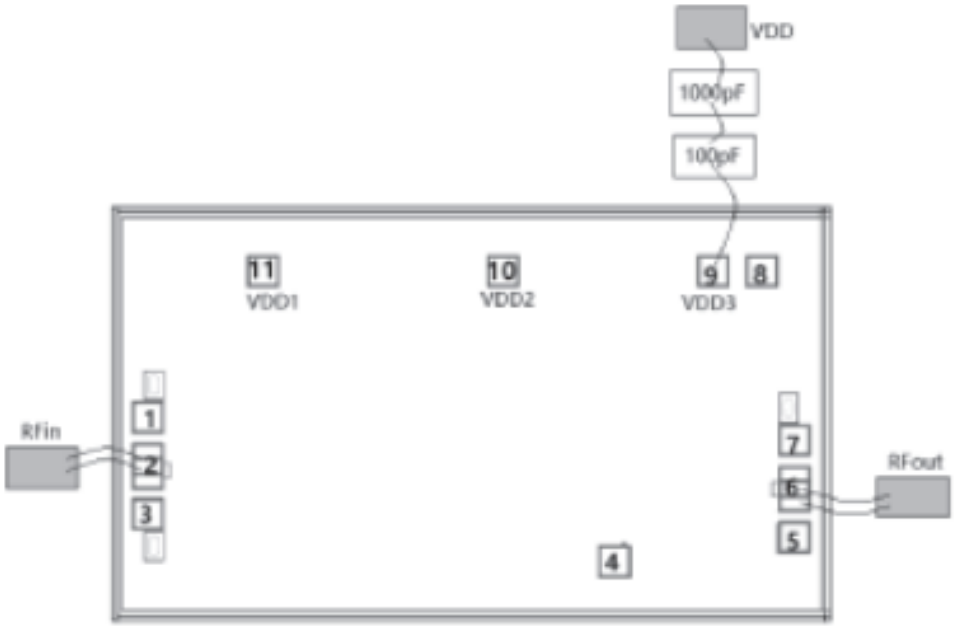
All Dimensions in um



Pad Description

PAD	Function	Description
1,3,4,5,7,8	GND	Die bottom must be connected to RF/DC ground
2	RF IN	RF signal input terminal, external 50-ohm system required
6	RF OUT	RF signal output terminal, external 50-ohm system required
9,10,11	Vdd	Amplifier power supply, external 100pF capacitor required

Assembly Drawing



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: +5.5V
2. RF input power: +10dBm
3. Operating temperature: -55℃ to +85℃
4. Storage temperature: -65℃ to +150℃