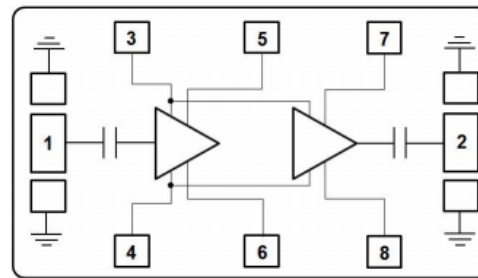


Features

- Frequency: 13-17GHz
- Small Signal Gain: 28 dB @ +5 V; 27 dB @ +6 V
- P1dB: 31 dBm @ +5 V; 32 dBm @ +6 V
- Psat: 32 dBm @ +5 V; 33 dBm @ +6 V
- PAE: 40 % @ +5 V; 42 % @ +6 V
- Quiescent Current: 590 mA @ +5 V; 630 mA @ +6 V
- Input/Output: 50Ω
- Die Size: 2.5 × 2.0 × 0.1mm

Functional Block Diagram

Typical Applications

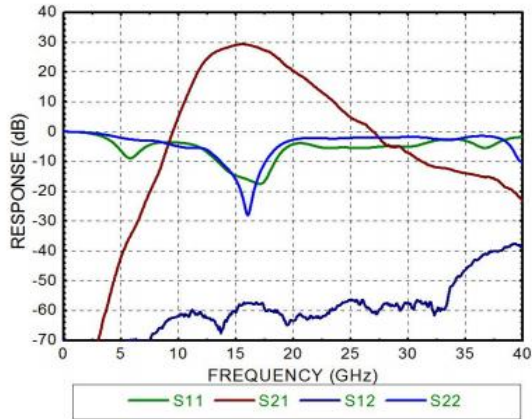
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

TA = +25°C

Parameters	VDD=+5V			VDD=+6V			Units
	Min.	Typ.	Max.	Min.	Typ.	Max.	
Frequency	13-17			13-17			GHz
Small Signal Gain		28			27		dB
Reverse Isolation		60			60		dB
P1dB		31			32		dBm
Psat@pin=8dBm		32			33		dBm
PAE@pin=8dBm		40			42		%
Input Return Loss		13			13		dB
Output Return Loss		11			11		dB
Operating Current		590			630		mA
<p>*Biasing the amplifier at this quiescent current by adjusting VG, typically -0.55V, adjustable from -1V~0V.</p>							

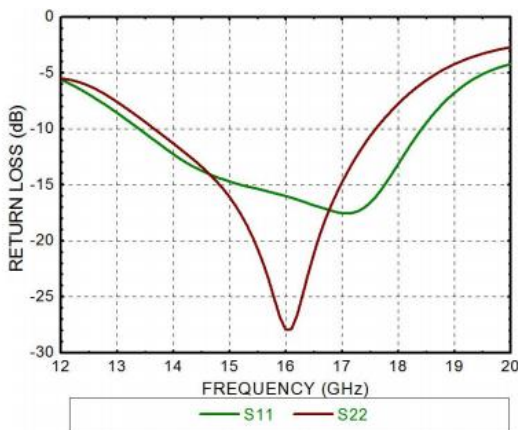
S Parameters @ VD=+5V



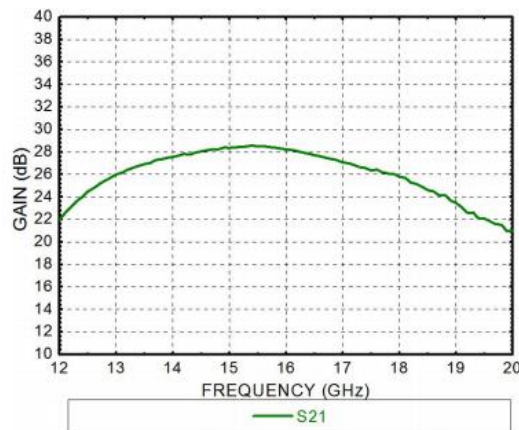
Small Signal Gain @ VD=+5V



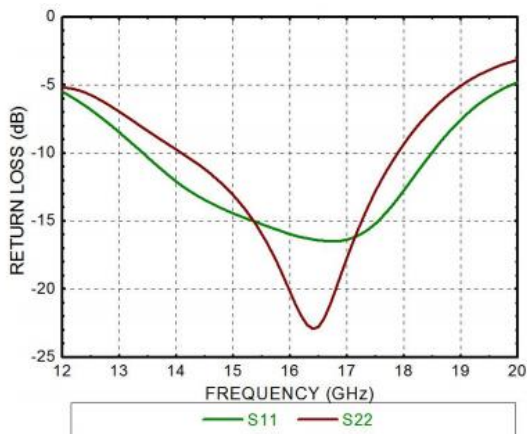
Return Loss @ VD=+5V



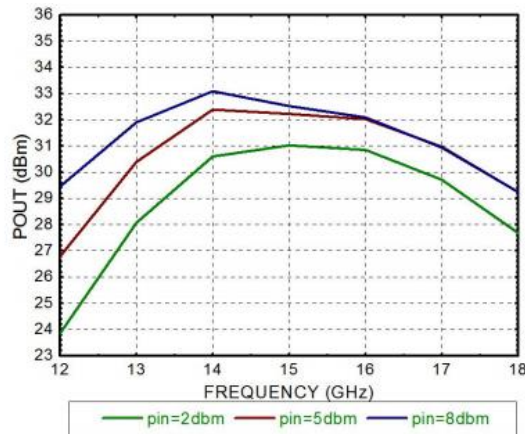
Small Signal Gain @ VD=+6V



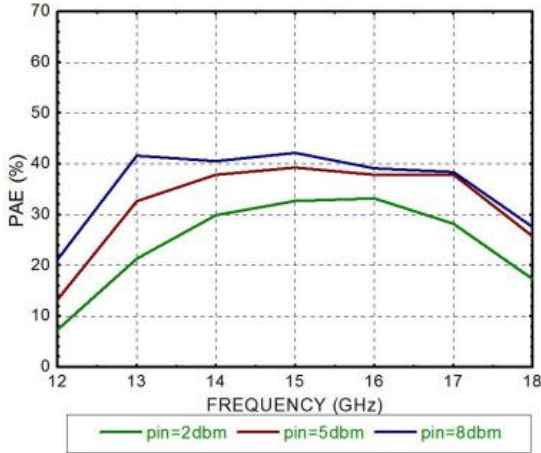
Return Loss @ VD=+6V



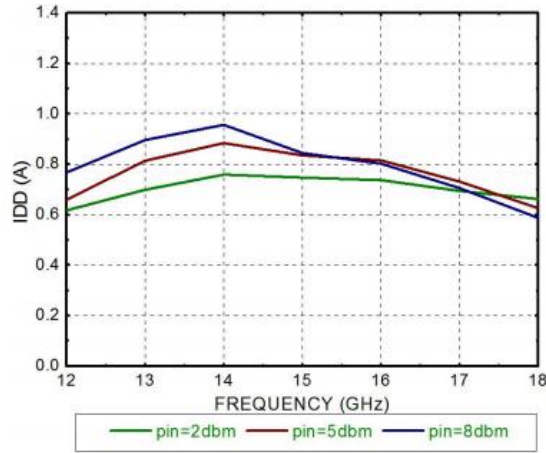
POut @ VD=+5V



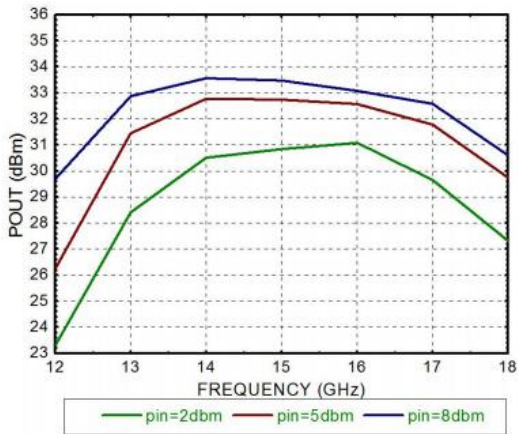
PAE @ VD=+5V



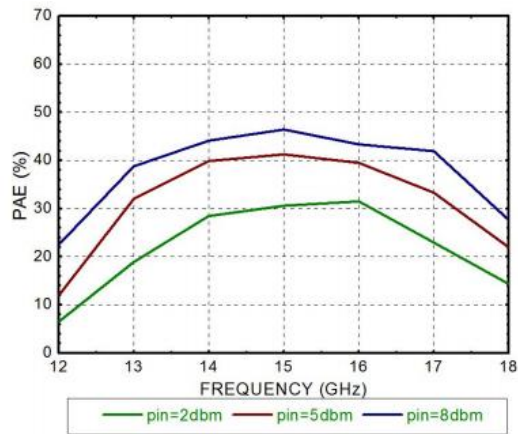
IDO @ VD=+5V



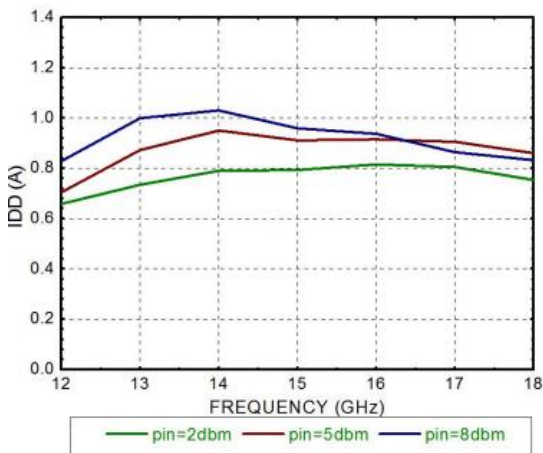
POut @ VD=+6V



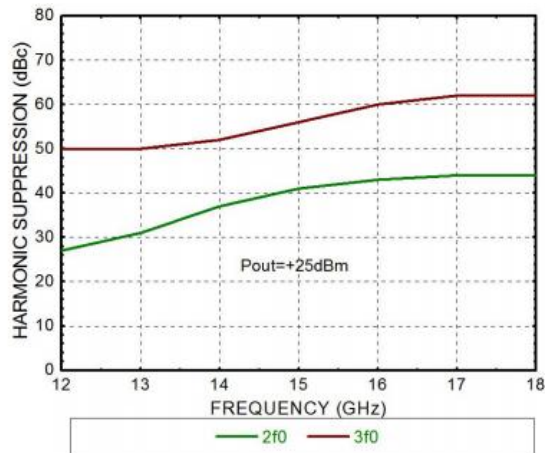
PAE @ VD=+6V



IDO @ VD=+6V

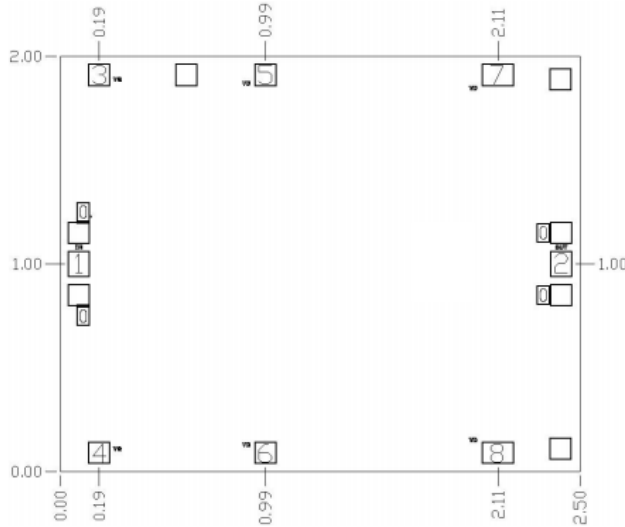


Harmonic suppression @ VD=+5V





Outline Drawing: All Dimensions in mm

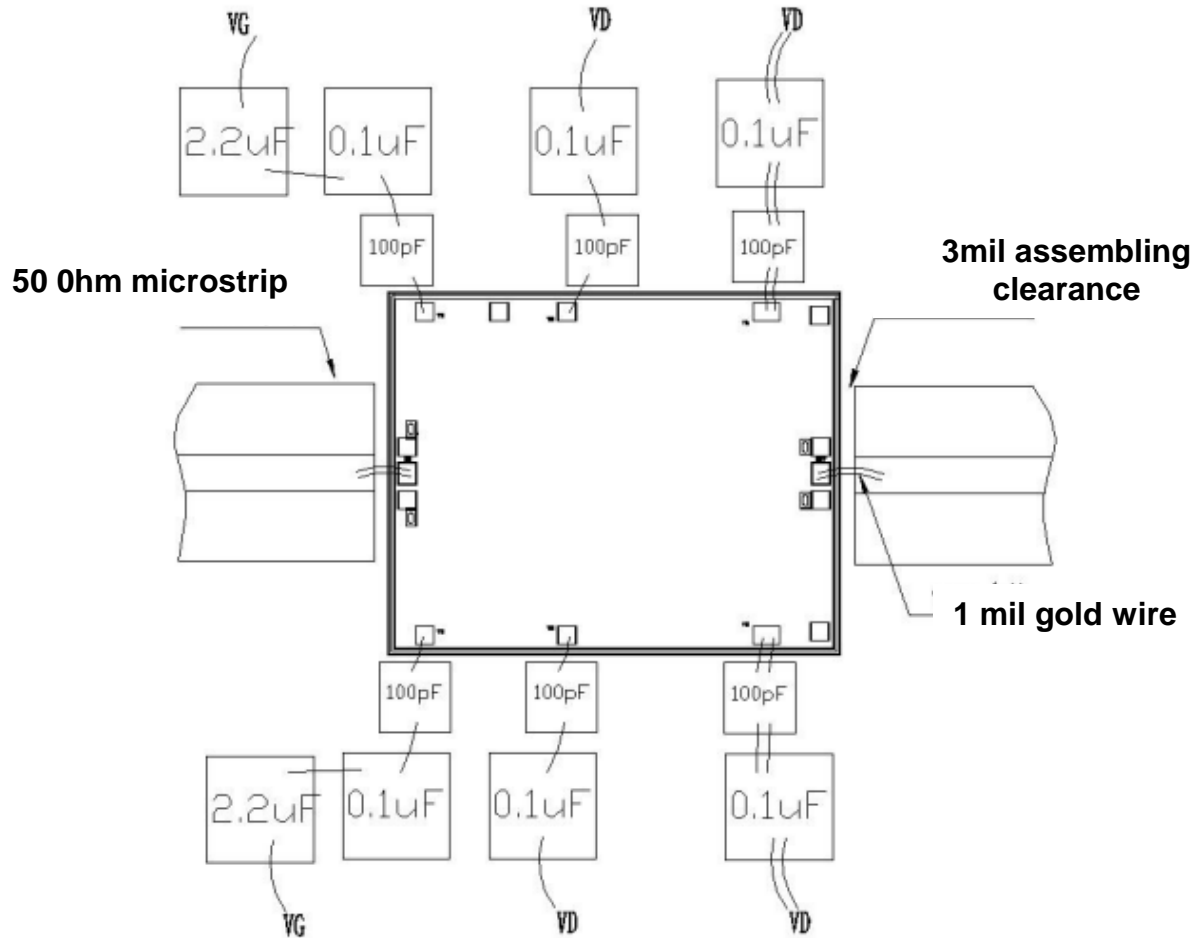


Pad Description

PAD	Function	Description
1	IN	The pad is AC coupling with an on-chip DC blocking capacitor matched to 50 Ohm
2	OUT	The pad is AC coupling with an on-chip DC blocking capacitor matched to 50 Ohm
3,4	VG	Negative supply voltage, -0.55V recommended
5,6,7,8	VD	Positive supply voltage, +5V or +6V recommended
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 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. RF input power: +18dBm
2. Positive supply voltage: +7V
3. Negative supply voltage: -2V~0V
4. Operating temperature: -55°C to +85°C
5. Storage temperature: -65°C to +150°C
6. Channel temperature: 150°C