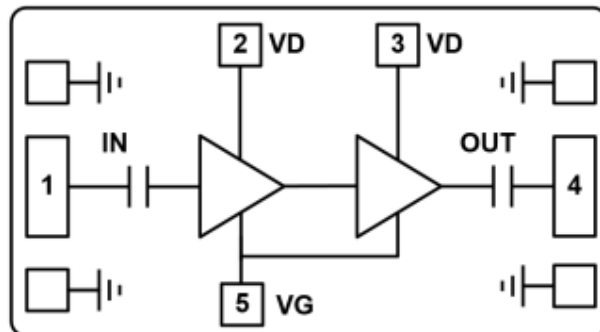


**Features**

- Frequency: 2-2.6GHz
- Small Signal Gain: 34dB
- Power Gain: 26.5dB@pin=+16dBm
- Output Power: +42.5dBm@pin=+16dBm
- PAE: 58%@pin=+16dBm
- Quiescent Operating Current: 365mA
- Die Size : 2.5 x 2.0 x 0.1 mm

**Typical Applications**

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

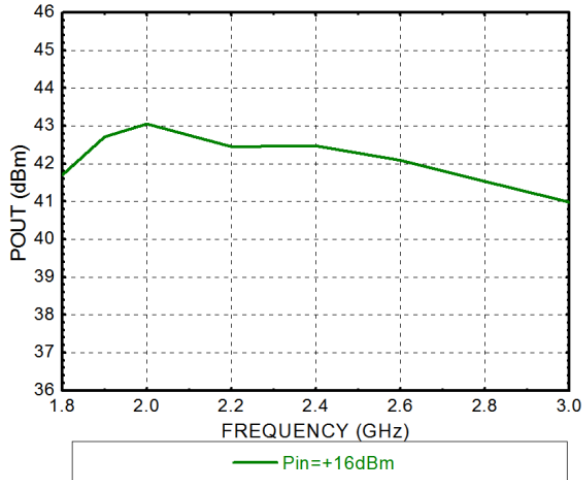
**Functional Block Diagram**

**Electrical Specifications**
**TA = +25°C, Vd = +28V, IDQ = 365mA\***

Parameters	Test Conditions	Min.	Typ.	Max.	Units
<b>Frequency</b>	--	<b>2-2.6</b>			<b>GHz</b>
<b>Small Signal Gain</b>	<b>pin = -30dBm</b>		<b>34</b>		<b>dB</b>
<b>Input Return Loss</b>			<b>15</b>		<b>dB</b>
<b>Reverse Isolation</b>			<b>55</b>		<b>dB</b>
<b>Power Gain</b>	<b>pin = +16dBm</b>		<b>26.5</b>		<b>dB</b>
<b>Psat</b>			<b>42.5</b>		<b>dBm</b>
<b>PAE</b>			<b>58</b>		<b>%</b>
<b>Dynamic Drain Current</b>			<b>1.0</b>	<b>1.3</b>	<b>A</b>

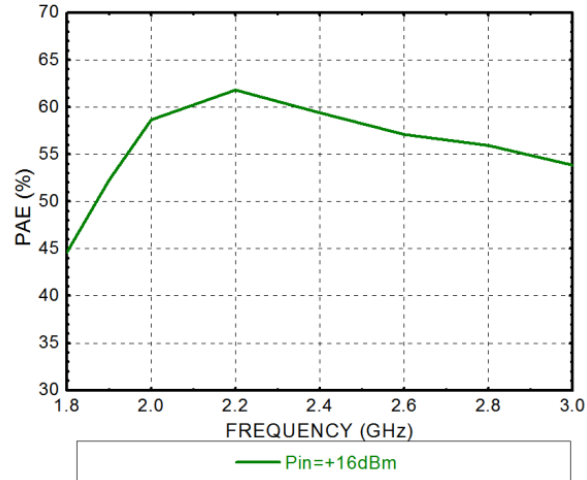
\*The static operating current can be controlled by adjusting VG. The recommended operating range for VG is 3V to 1.8V, with a typical value of 2.2V.



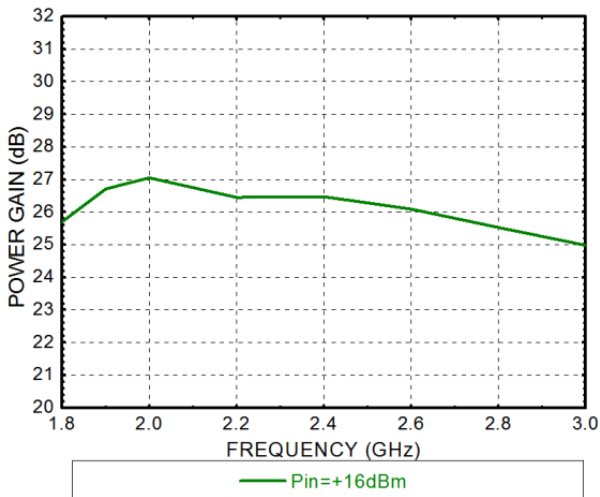
### Output Power



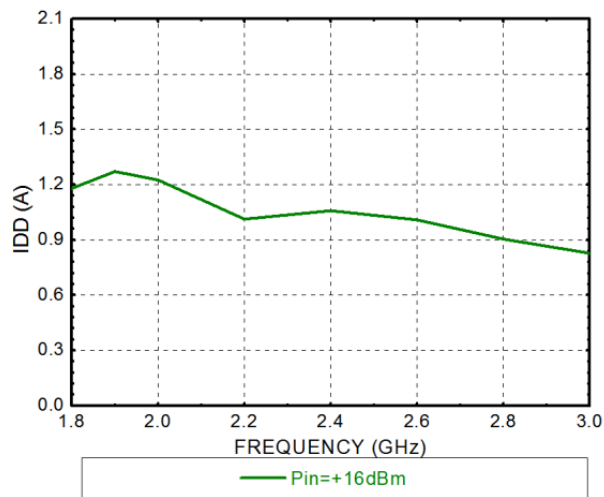
### PAE



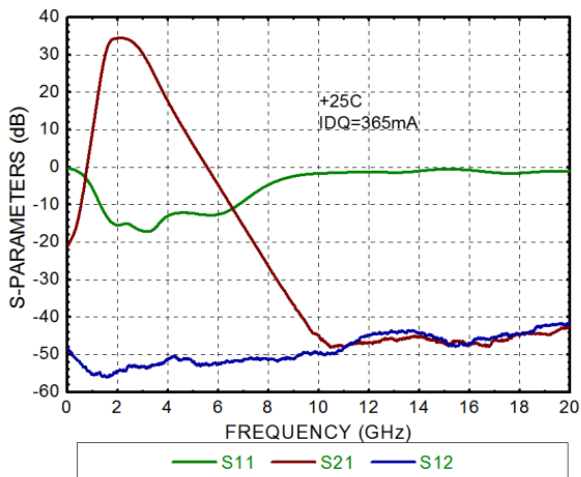
### Power Gain



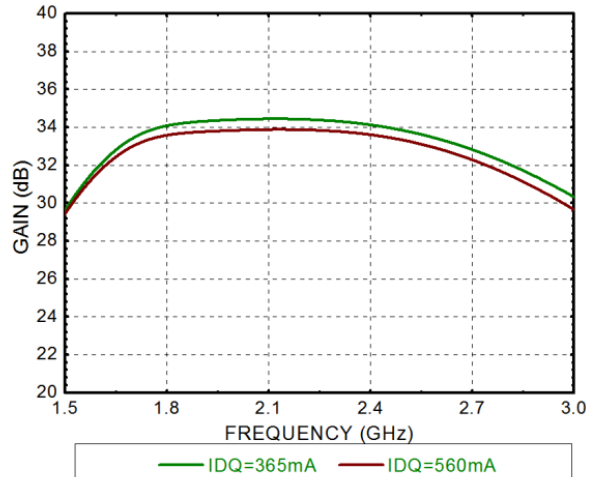
### Dynamic Drain Current



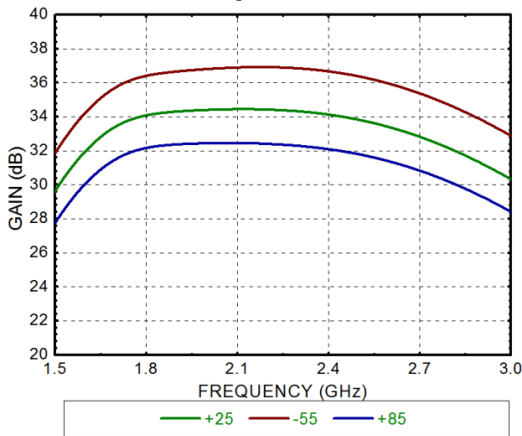
### S-Parameters



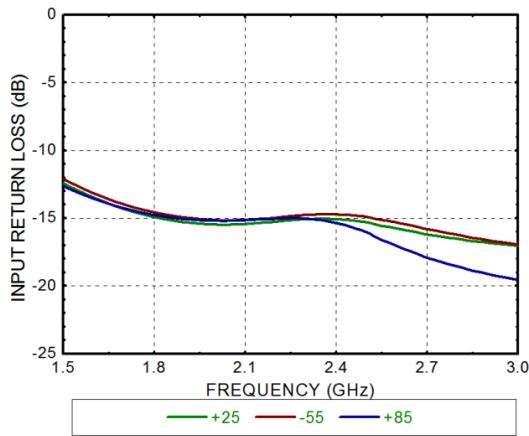
### Gain vs. Quiescent Current



Gain vs Temperature

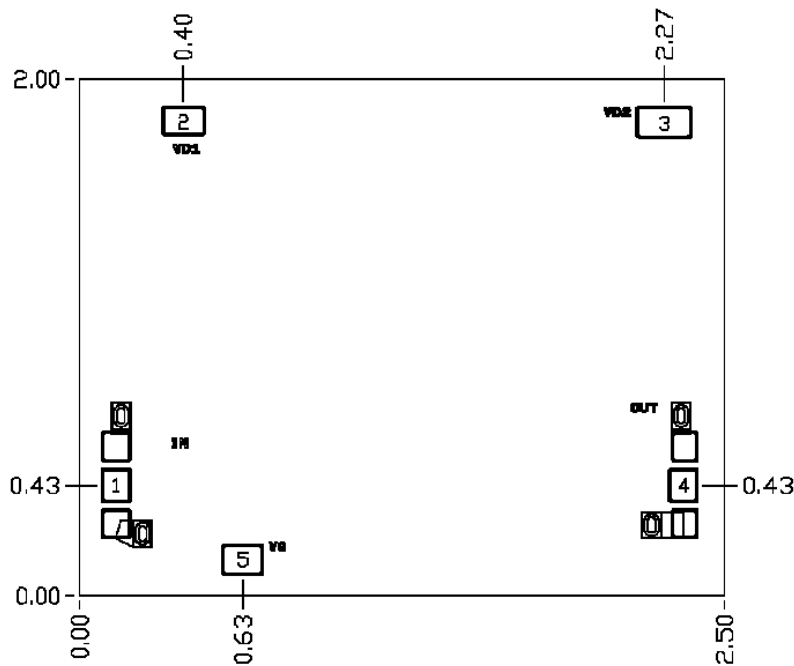


Input Return Loss vs Temperature



**Outline Drawing:**

All Dimensions in mm

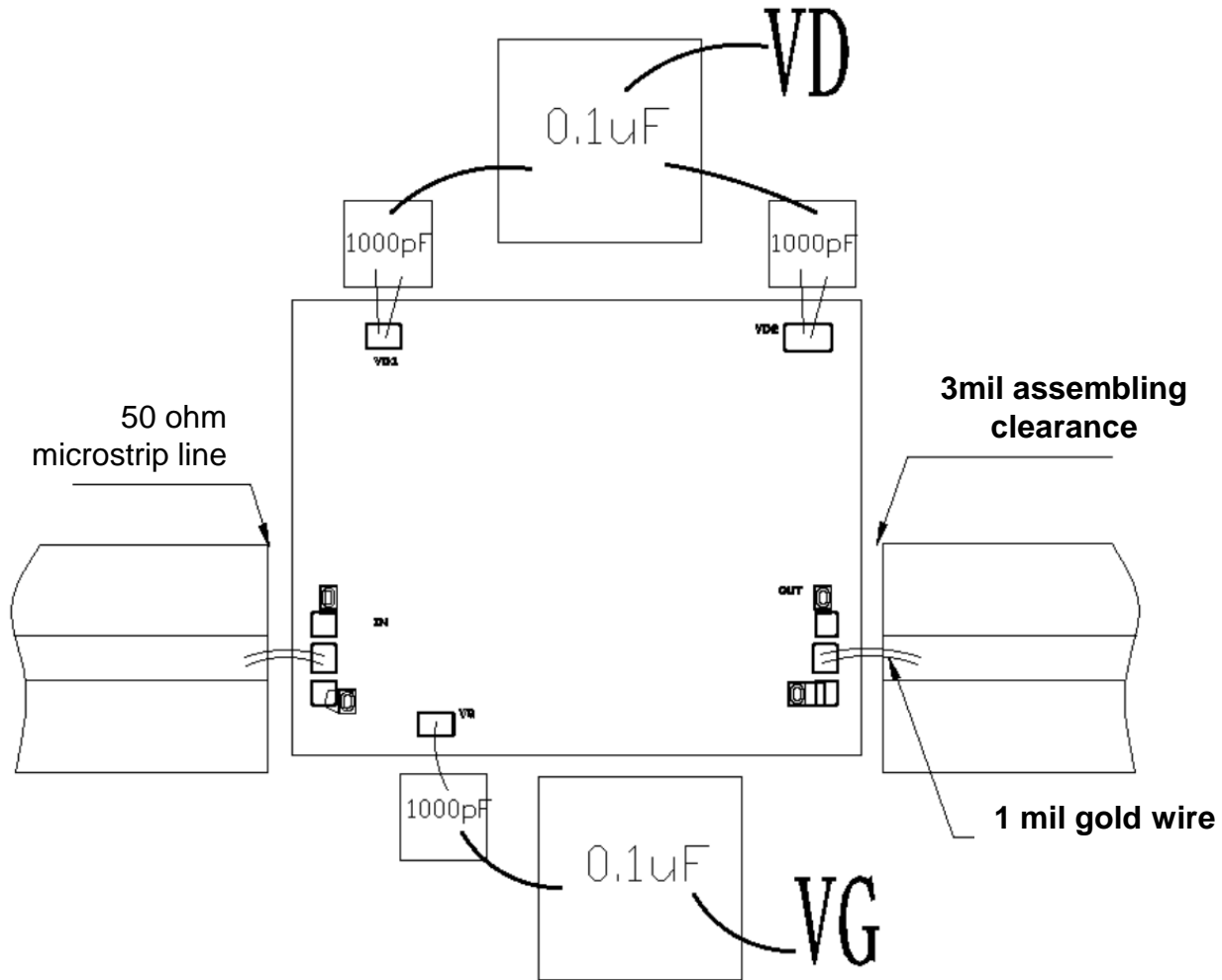


**Pad Description**

Pad	Function	Description
1	IN	This pad is AC-coupled, with an integrated DC-blocking capacitor on-chip, connected to 50Ω circuit.
4	OUT	This pad is AC-coupled, with an integrated DC-blocking capacitor on-chip, connected to 50Ω circuit.
2,3	VD	Drain power supply voltage, recommended 28V.
5	VG	Gate power supply voltage, recommended operating range -3.0V to -1.8V, typical value -2.2V
Die Bottom	GND	Die bottom must be connected to RF/DC ground.



### Assembly Drawing



Note: Power supply decoupling should be as thorough as possible; in practical applications, the outermost decoupling capacitor can be appropriately increased.

#### Notes:

1. Die thickness: 100um
2. Typical bond pad is 100\*100  $\mu\text{m}^2$
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. Drain voltage: +32V
2. Drain current: 1.8A
3. Gate voltage: -5V-0V
4. Positive gate current:  $\pm 5\text{mA}$
5. Input power: +26dBm
6. Junction temperature: 225°C
7. Operating temperature: -55°C to +85°C
8. Storage temperature: -65°C to +150°C