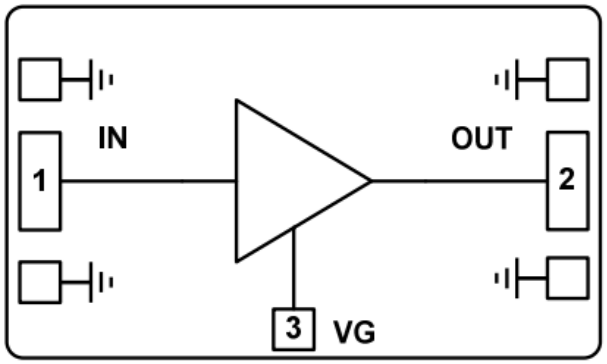
Features

- Frequency: 0.03-3GHz
- Small Signal Gain: 19dB
- Power Gain: 14.5dB
- Psat: +40.5dBm
- PAE: 55%
- Quiescent Operating Current: 0.47A
- Die Size : 2.45 x 1.7 x 0.1 mm

Functional Block Diagram



Typical Applications

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

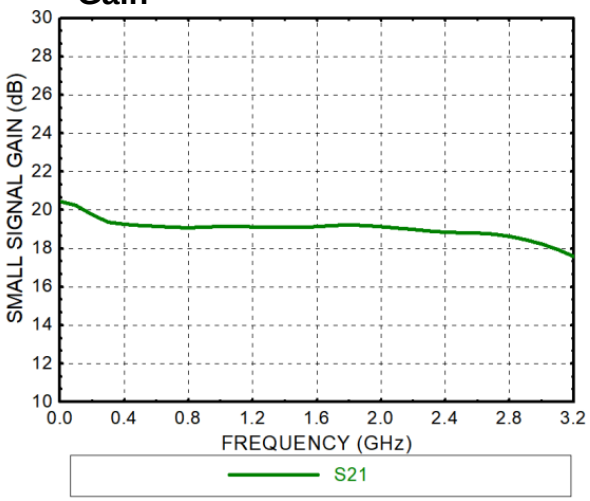
Electrical Specifications

TA = +25°C, Vd = +28V, IDQ = 470 mA*

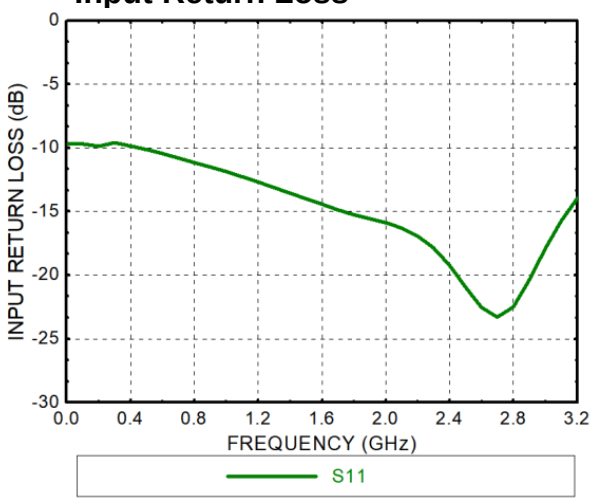
Parameters	Test Conditions	Min.	Typ.	Max.	Units
Frequency	--	0.03-3			GHz
Small Signal Gain	pin = -30dBm		19		dB
Input Return Loss			12		dB
Output Return Loss			12		dB
Reverse Isolation			35		dB
Power Gain	--		14.5		dB
Psat			40.5		dBm
PAE			55		%
Dynamic Drain Current			0.8		A

*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 -1.95V.

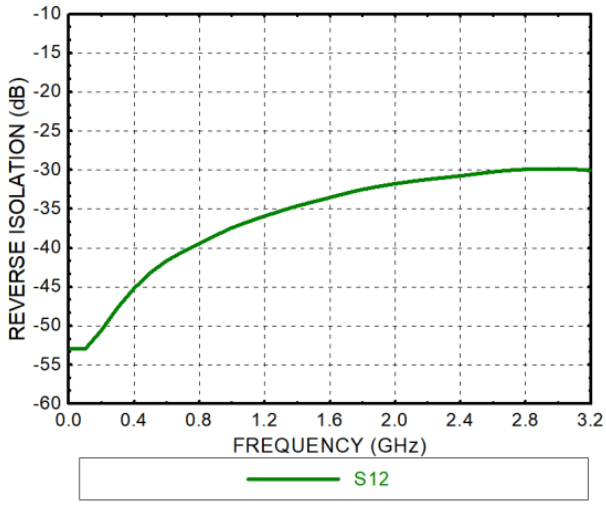
Gain



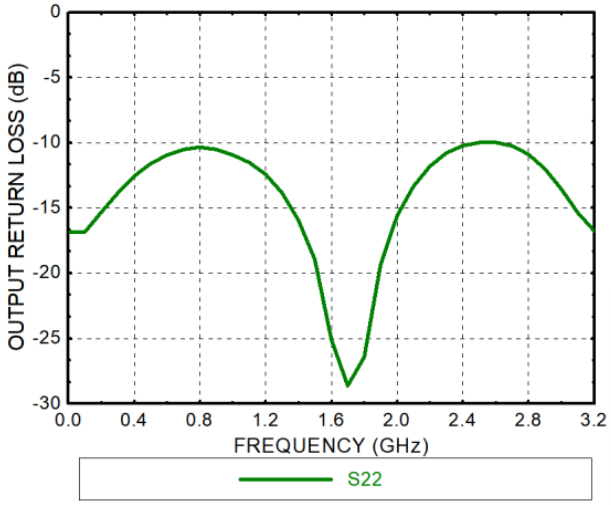
Input Return Loss



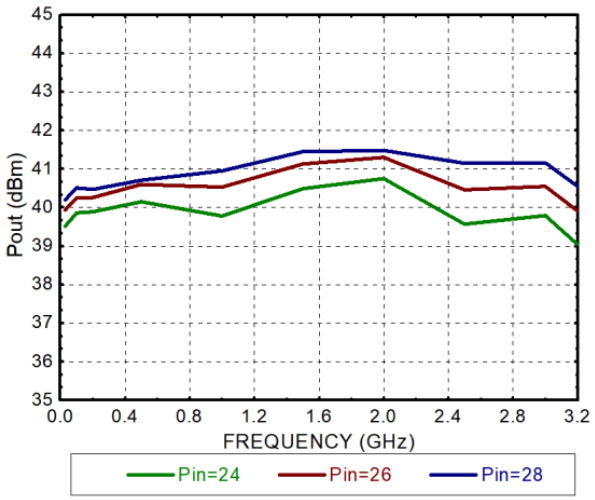
Reverse Isolation



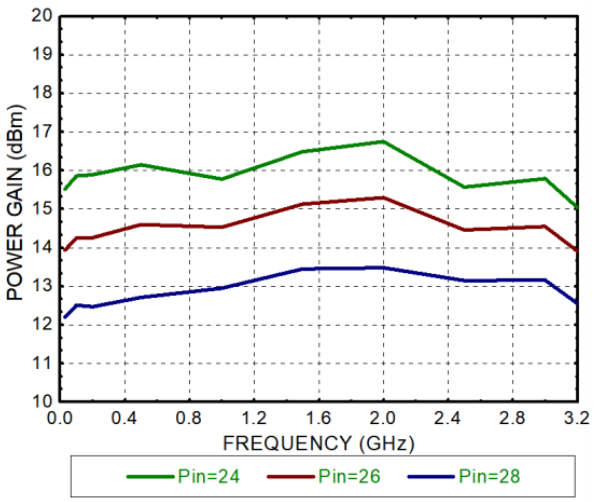
Output Return Loss



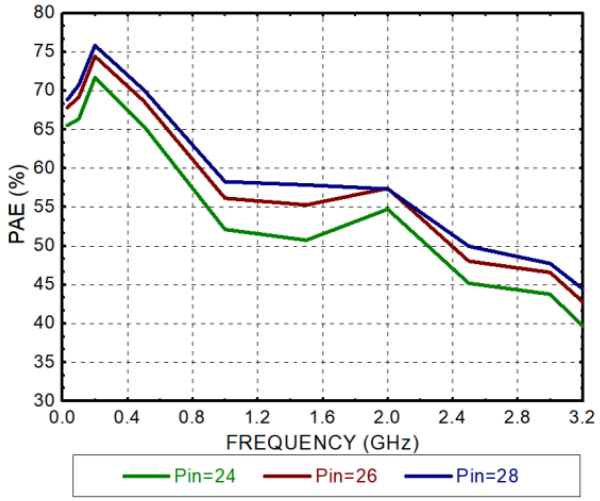
Output Power



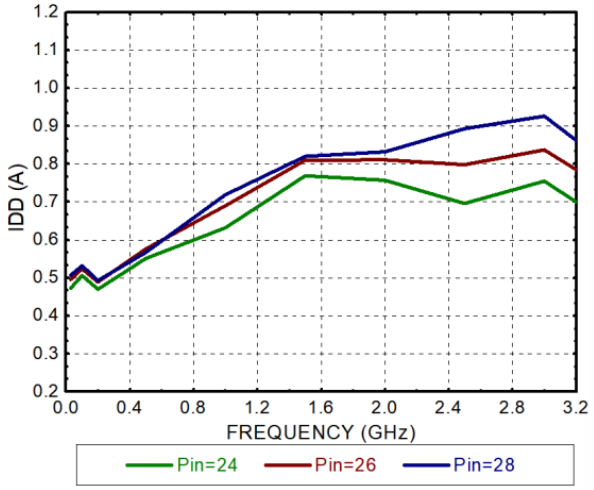
Power Gain



PAE

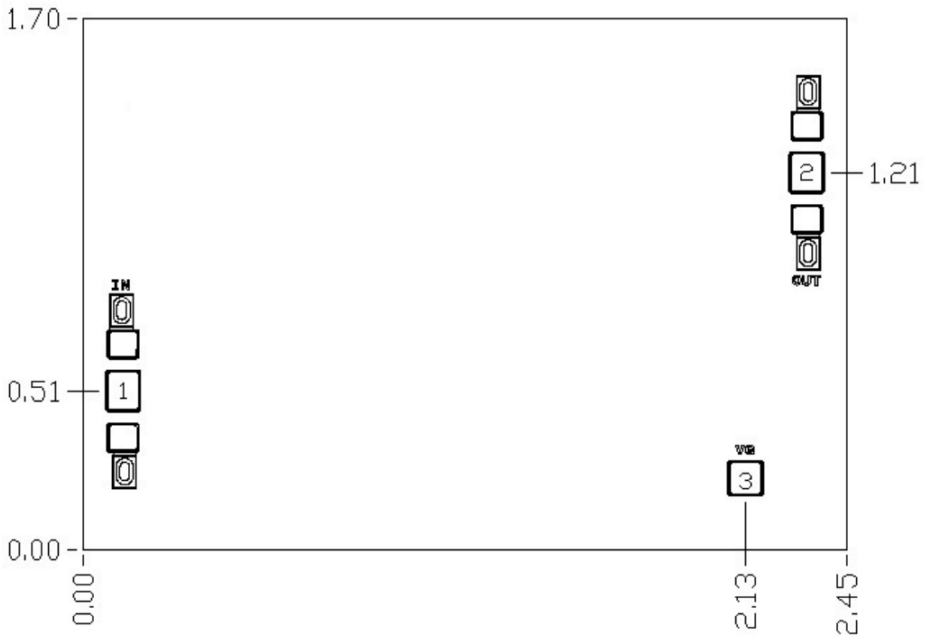


Dynamic Drain Current



Outline Drawing:

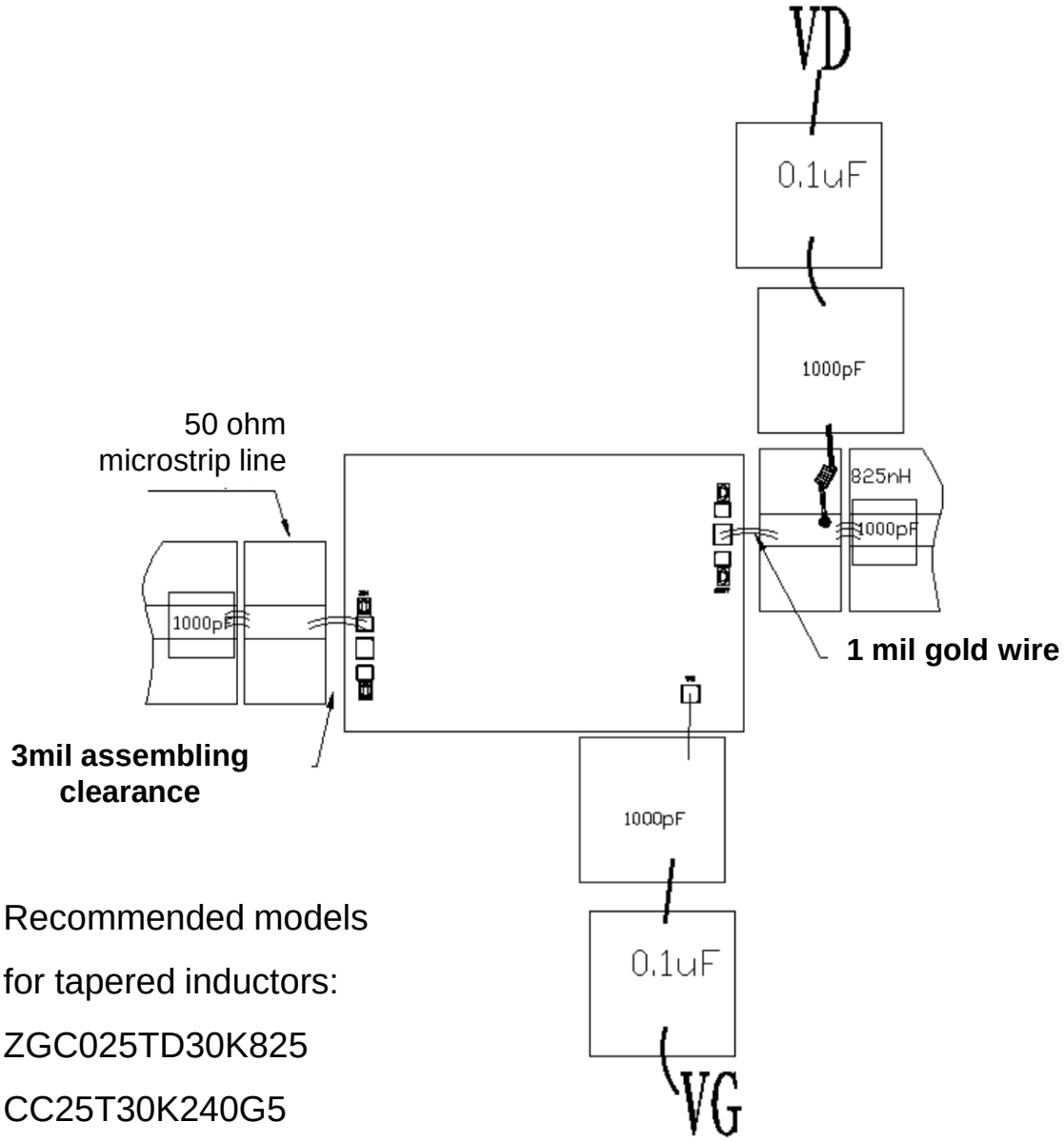
All Dimensions in mm



Pad Description

Pad	Function	Description
1	IN	This pad is DC-coupled and requires an external blocking capacitor, matched to 50 Ohms.
2	OUT	This pad is DC-coupled and requires an external bias inductor and DC-blocking capacitor, matched to 50 Ohms.
3	VG	Gate power supply voltage, recommended -3.0V~-1.8V.
Die Bottom	GND	Die bottom must be connected to RF/DC ground.

Assembly Drawing



Recommended models

for tapered inductors:

ZGC025TD30K825

CC25T30K240G5

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 μm^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: 1A
3. Gate voltage: -5V-0V
4. Positive gate current: 5mA
5. Input power: +33dBm
6. Junction temperature: 225℃
7. Installation temperature: 320(No more than 30 seconds)
8. Operating temperature: -55℃ to +85℃
9. Storage temperature: -65℃ to +150℃