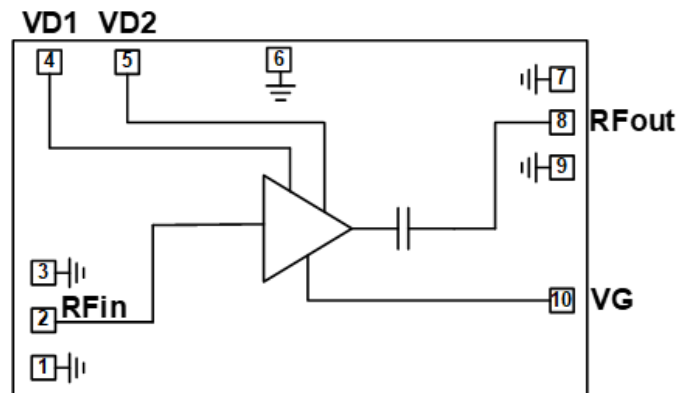


Features

- Frequency: 8-50GHz
- Small Signal Gain: 15dB@8-40GHz
- Noise Figure: 4.5dB
- Die Size: 1.4 x 1.45 mm

Functional Block Diagram



Typical Applications

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

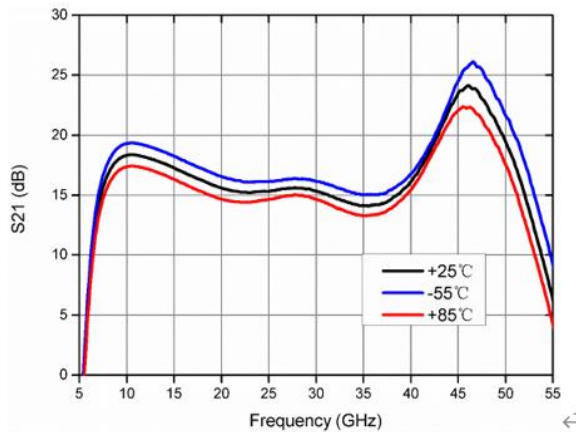
Electrical Specifications

TA = +25°C, VD1 = VD2 = +4V (On-wafer Measurement Results)

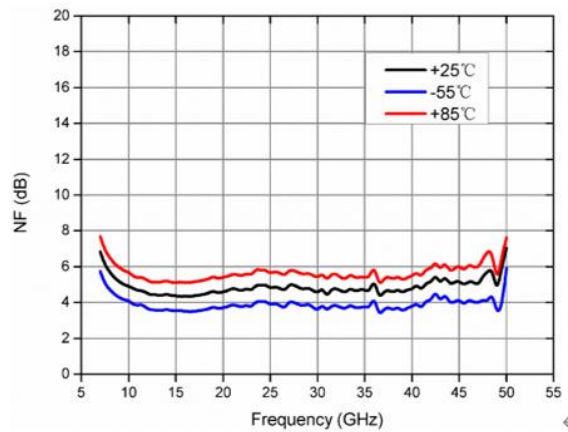
Parameters	Working Conditions	Min.	Typ.	Max.	Units
Frequency			8-50		GHz
Gain	8-40GHz		15		dB
	40-50GHz		20		dB
Gain Flatness	8-40GHz		±1		dB
	40-50GHz		±3		dB
Noise Figure			4.5		dB
Output 1dB Compression (P1dB)			14		dBm
Input Return Loss			7		dB
Output Return Loss			7		dB
OIP3			25		dBm
Quiescent Current			100		mA

(The following test results are the measured results of bonding gold-containing wires.)

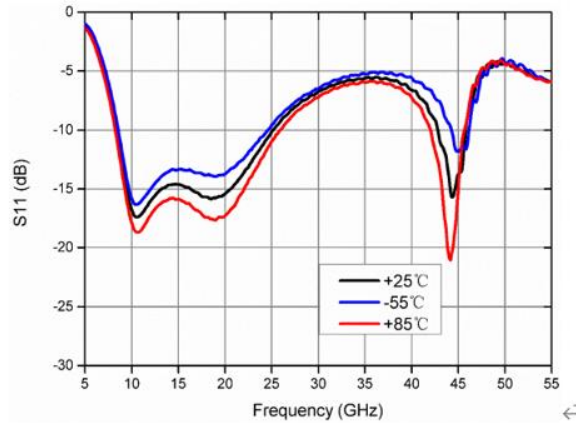
Gain vs. Frequency



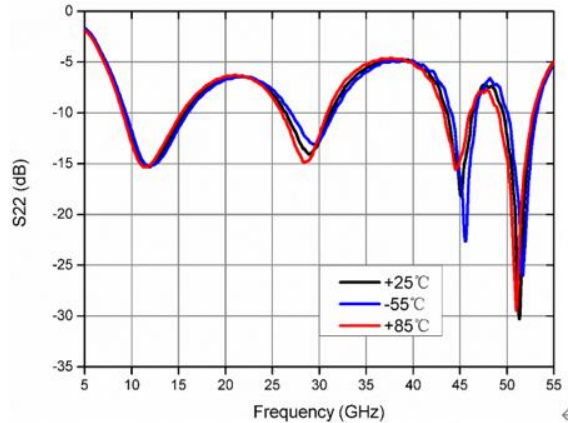
Noise Figure vs. Frequency



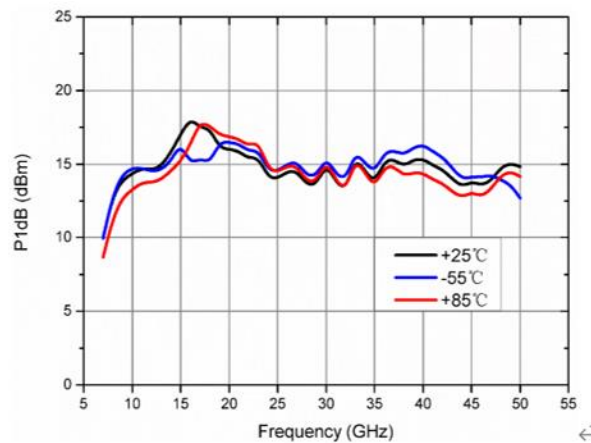
Input Return Loss vs. Frequency



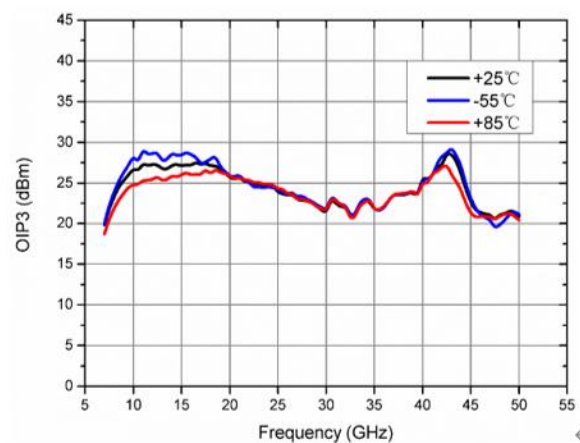
Output Return Loss vs. Frequency



P1dB vs. Frequency

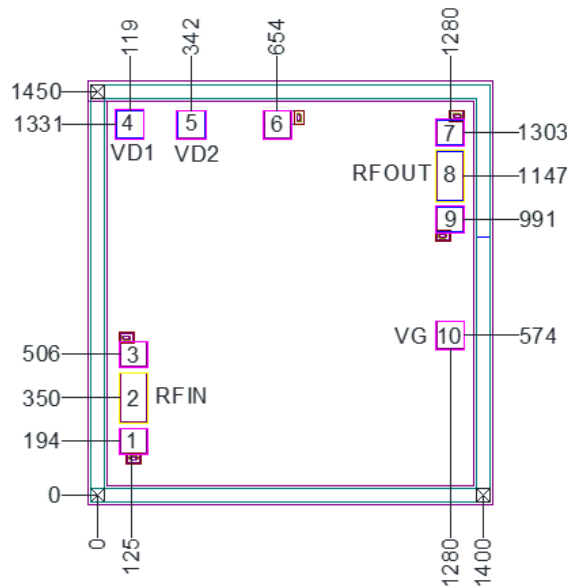


OIP3 vs. Frequency





Outline Drawing: All Dimensions in μm

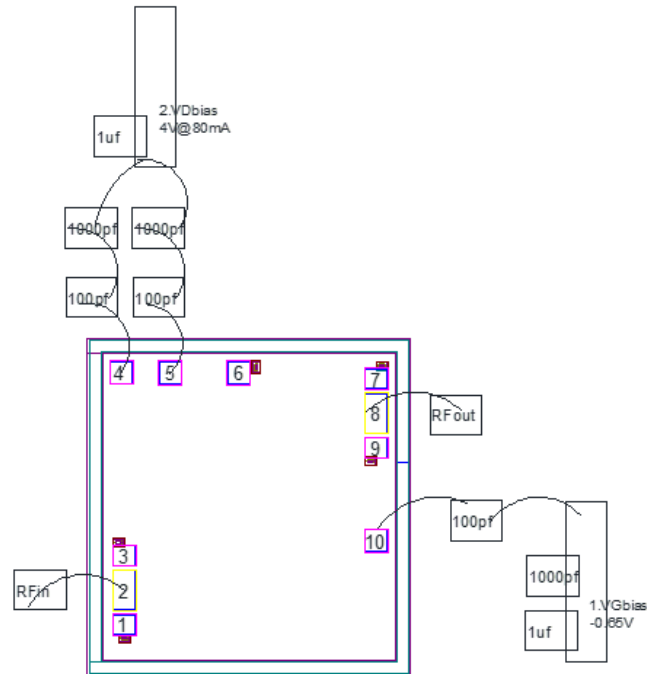


Pad Description

Pad	Function	Description	Pad Size (μm)	Equivalent Circuit
2	RF IN (VD)	RF signal input terminal, DC-blocking capacitor required.	100x120	
8	RF OUT (VG)	The RF signal output port has an on-chip DC-isolated capacitor and presents an open circuit.	100x120	
4,5	VD1,VD2	Amplifier drain supply +4V	100x100	
10	VG	Amplifier gate supply -0.65V, with a 100k Ω resistor	100x100	
1,3,6,7,9	GND	Grounding pads	100x100	



Assembly Drawing (Bond testing)



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. Maximum supply voltage: +5.5V
2. Operating temperature: -55°C to +85°C
3. Storage temperature: -65°C to +150°C