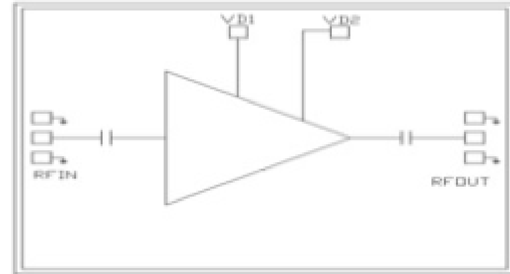
Features

- **Frequency: 2.6-4.2GHz**
- **Small Signal Gain: 28.5dB**
- **P1dB: 23dBm**
- **Psat: 24.5dBm**
- **Power Supply: 5V@155mA**
- **Input/Output: 50Ω**
- **Die Size: 2.62 x 1.52 x 0.1 mm**

Functional Block Diagram



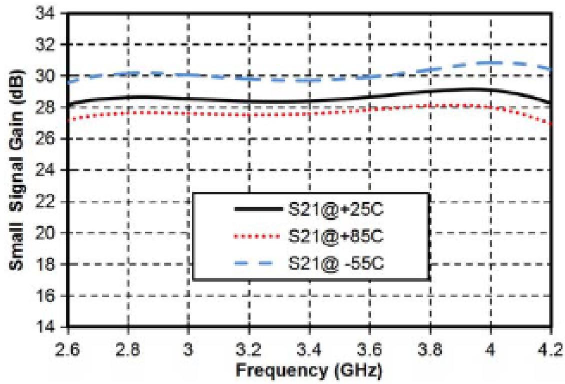
Typical Applications

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

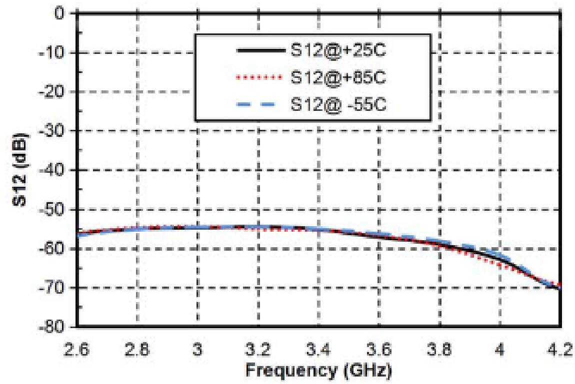
Electrical Specifications

TA = +25ºC, Vd = +5V

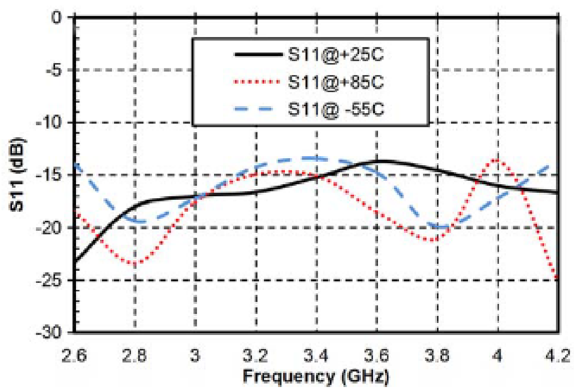
Parameters	Min.	Typ.	Max.	Units
Frequency		2.6-4.2		GHz
Small Signal Gain	28	28.5	129	dB
Gain Flatness		±0.5		dB
P1dB	22.5	23	24	dBm
Psat	23.5	24.5		dBm
Input Return Loss	8	16		dB
Output Return Loss	7.5	13		dB
Quiescent Current		155		mA



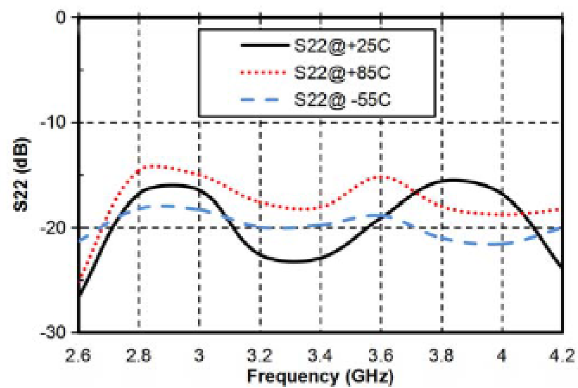
Gain vs. Frequency
Small Signal Gain (dB)
Frequency (GHz)
S21@+25C
S21@+85C
S21@ -55C



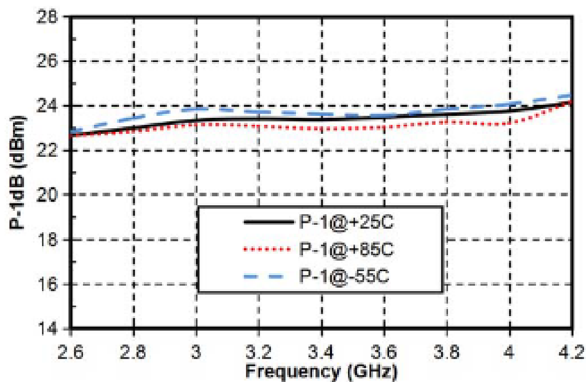
Reverse Isolation vs. Frequency
S12 (dB)
Frequency (GHz)
S12@+25C
S12@+85C
S12@ -55C



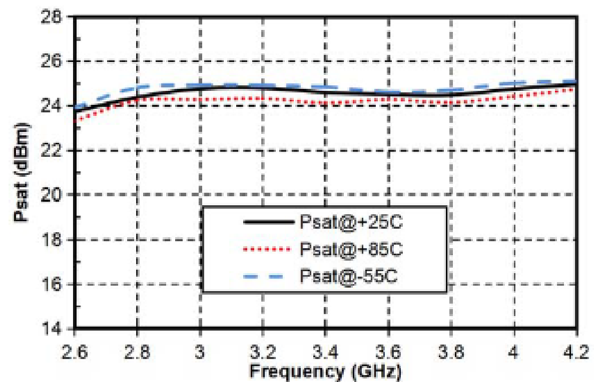
Input Return Loss vs. Frequency
S11 (dB)
Frequency (GHz)
S11@+25C
S11@+85C
S11@ -55C



Output Return Loss vs. Frequency
S22 (dB)
Frequency (GHz)
S22@+25C
S22@+85C
S22@ -55C



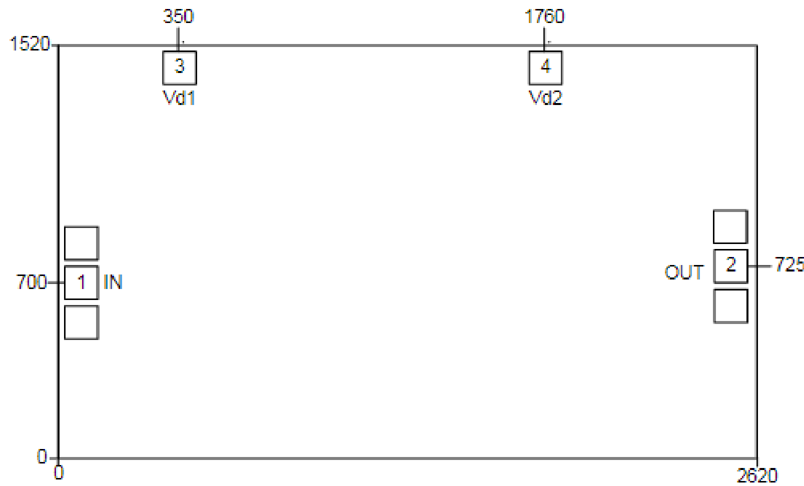
P-1dB vs. Frequency
P-1dB (dBm)
Frequency (GHz)
P-1@+25C
P-1@+85C
P-1@-55C



Psat vs. Frequency
Psat (dBm)
Frequency (GHz)
Psat@+25C
Psat@+85C
Psat@-55C

Outline Drawing:

All Dimensions in um



Pad Description

PAD	Function	Description
1	RF IN	RF signal input terminal, no blocking capacitor required
2	RF OUT	RF signal output terminal, no blocking capacitor required
3,4	Vd1, Vd2	Amplifier drain bias, connected to external 100pF, 1000pF 100nF bypass capacitor.
Die Bottom	GND	Die bottom must be connected to RF/DC ground

*Ports 3 and 4 need to be powered on simultaneously

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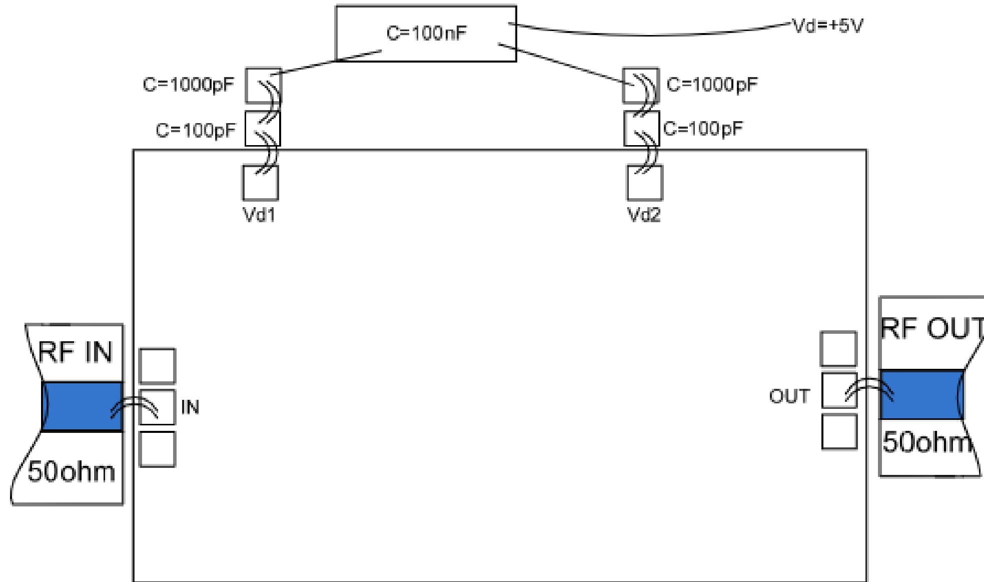
Assembly Drawing



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 drain voltage: +7V**
2. **Maximum input power: +20dBm**
3. **Operating temperature: -55℃ to +85℃**
4. **Storage temperature: -65℃ to +150℃**