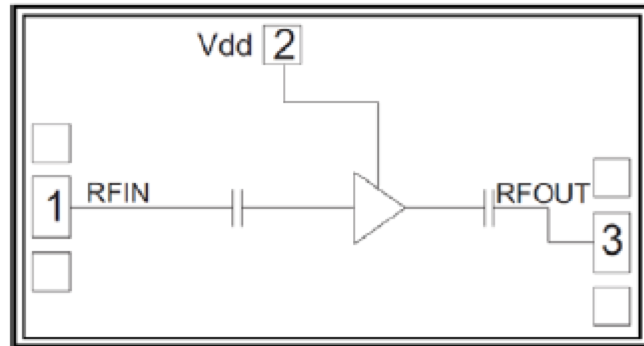
Features

- Frequency: 1-20GHz
- Small Signal Gain: 12.5dB
- Gain Flatness: ≤±0.75dB
- Noise Figure: 4.5dB
- P1dB: 23dBm
- Psat: 24.5dBm
- Power Supply: +8V/250mA
- Input/Output: 50Ω
- Die Size: 2.6 x 1.65 x 0.1 mm

Functional Block Diagram



Typical Applications

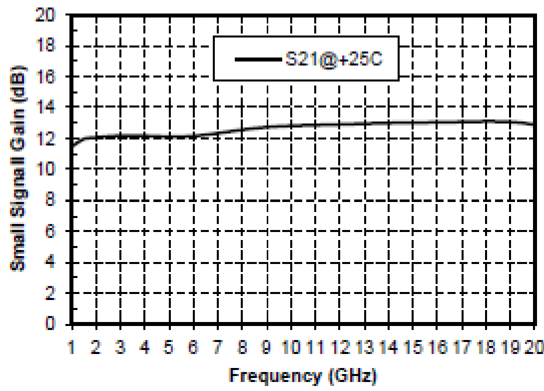
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

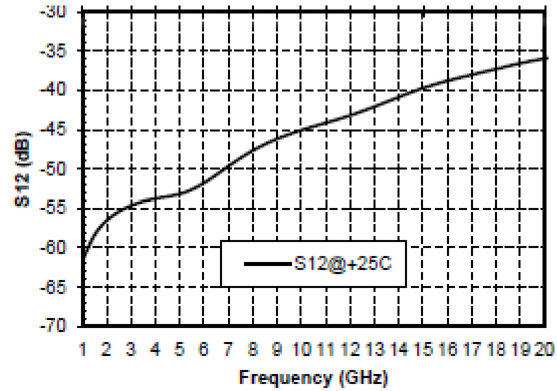
TA = +25°C, Vd = +8V

Parameters	Min.	Typ.	Max.	Units
Frequency		1-20		GHz
Small Signal Gain	11.5	12.5	13	dB
Gain Flatness		±0.75		dB
Noise Figure	-	4.5	5.5	dB
Output 1dB Compression (P1dB)	21	23	24	dBm
Saturated Output Power (Psat)	22.5	24.5	25.5	dBm
Input Return Loss	10	19	-	dB
Output Return Loss	9	18	-	dB
Static Current		250		mA

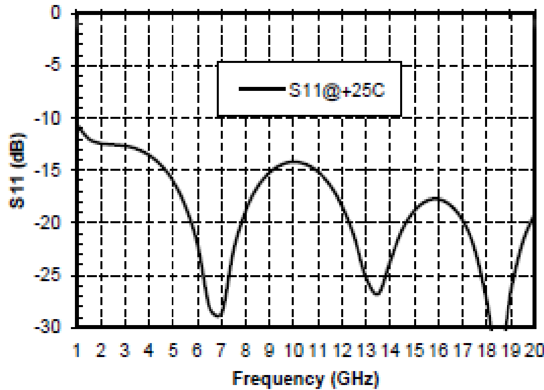
Gain vs. Frequency



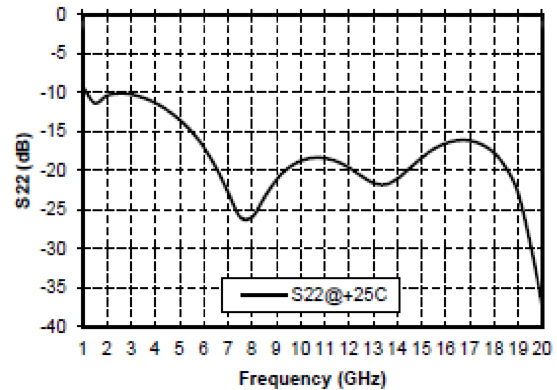
Reverse Isolation & Frequency



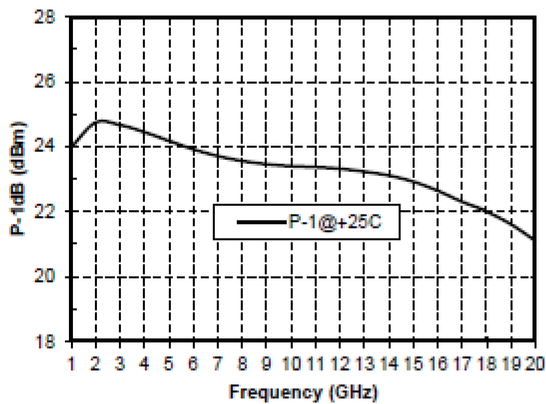
Input Return Loss vs. Frequency



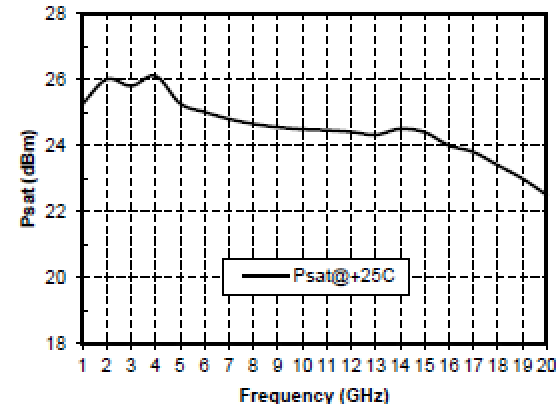
Output Return Loss vs. Frequency



P1dB vs. Frequency



Psat vs. Frequency



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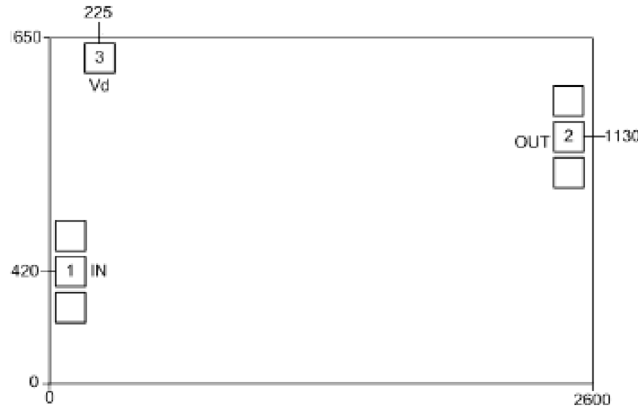
Sales: sales@millermmic.com

Outline Drawing:

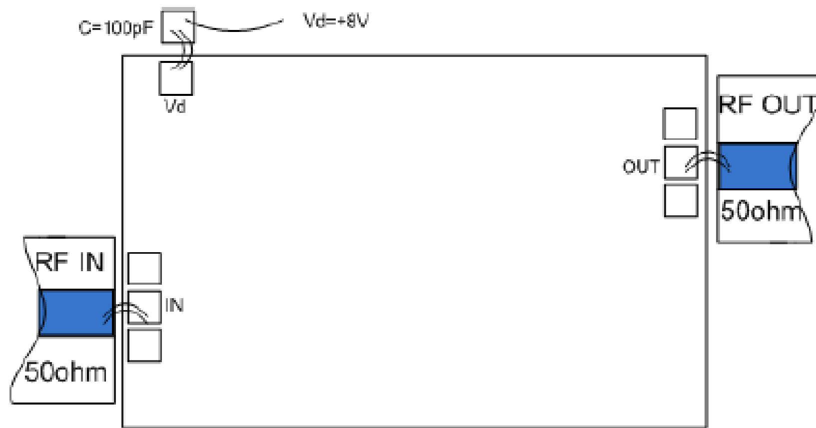
All Dimensions in µm



Pad Description

Pad	Function	Description	Equivalent Circuit
1	RF IN	RF signal input terminal; no blocking capacitor required.	
2	RF OUT	RF signal output terminal; no blocking capacitor required.	
3	Vd	Amplifier drain bias; external 100pF bypass capacitor required.	
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 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: +10V
2. Maximum input power: +20dBm
3. Operating temperature: -55℃ to +85℃
4. Storage temperature: -65℃ to +150℃