

General Description

MWL016A&B is a low noise amplifier designed and manufactured by GaAs pHEMT process, powered by a single power supply in a self-biased manner, with a high dynamic range. This low noise amplifier only needs +5V voltage supply, the normal working current is 31mA, the operating frequency can cover 2GHz to 4GHz, providing 31dB small signal gain, noise coefficient 0.7dB, output 1dB compression point to +11dBm.

Features

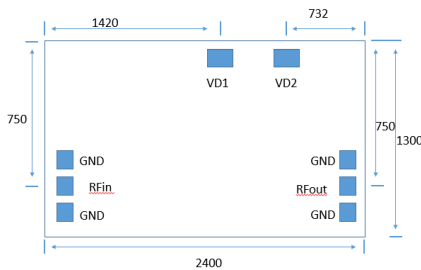
Noise Figure: 0.7dB

Gain: 31dB;

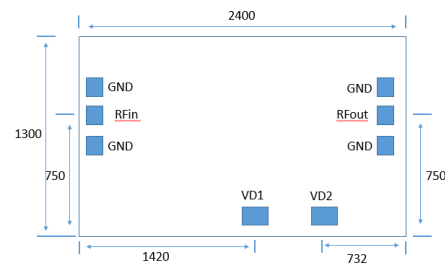
Output P1dB: +11dBm

Supply Current: +5V @ 31mA

Functional Diagram(Typical bond: 100x120, unit: um)



MWL016A



MWL016B

(Die Thickness: 100 um)

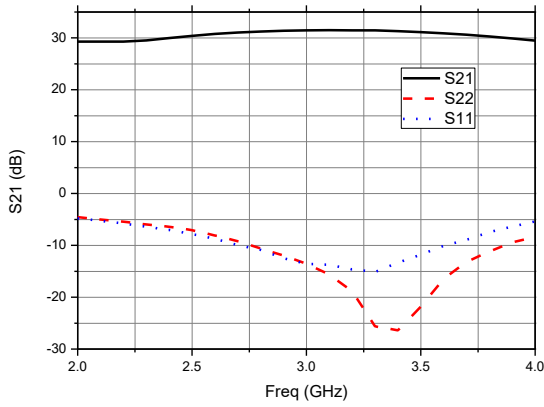
Electrical Specifications, $T_A = +25^\circ\text{C}$, $V_{dd} = +5.0\text{ V}$

Parameter	Min	Typ	Max	Units
Bandwidth	2		4	GHz
Gain		31		dB
Noise Figure		0.7		dB
Input Return Loss		10		dB
Output Return Loss		15		dB
Output Power for 1dB Compression		+11		dBm
Supply Current (@Vdd=5V)		31		mA

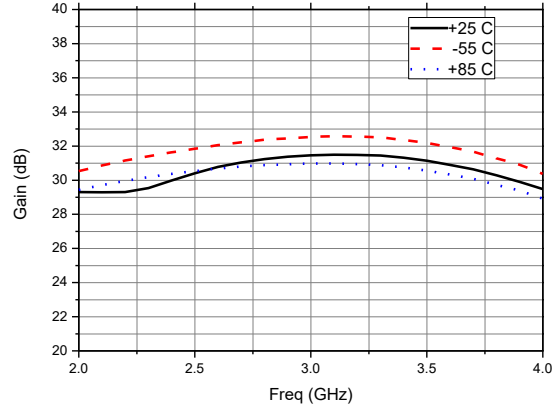


Test Results

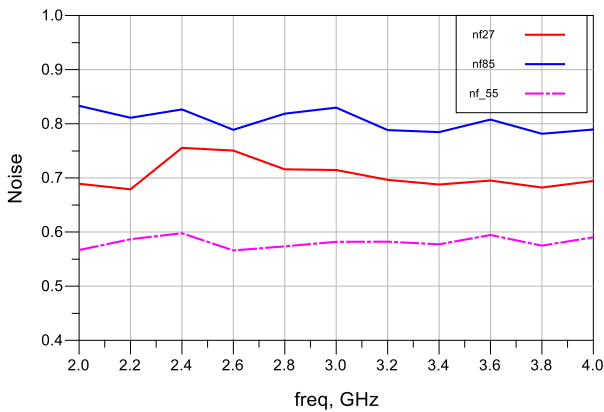
S_Parameter



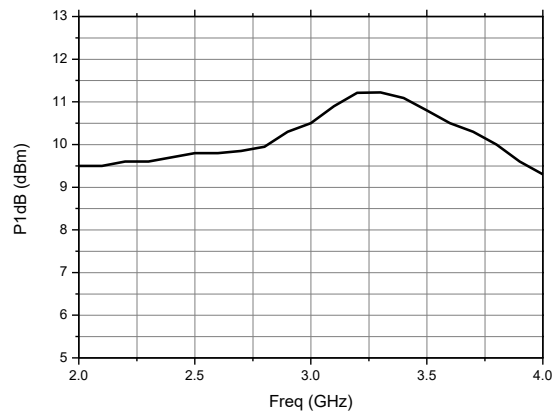
Gain



Noise Figure

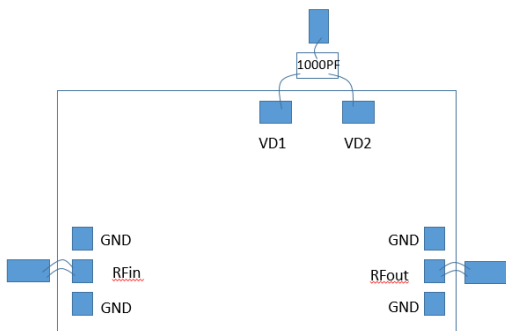


Output P1dB



Assembly Diagram

MWL016A



MWL016B

