

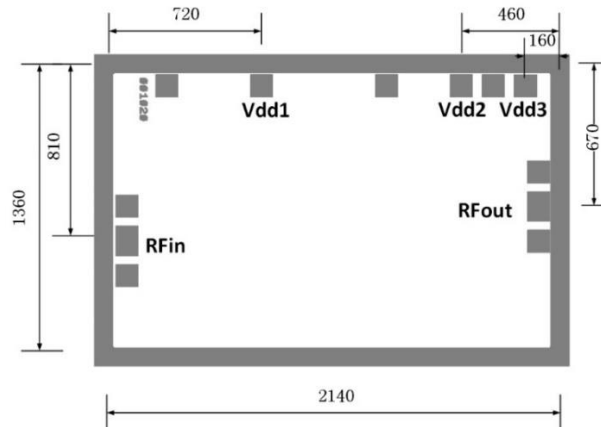
General Description

MWL001 is a high dynamic range low noise amplifier designed and manufactured by GaAs MMIC technology, powered by a single power supply with self-bias. This low noise amplifier only needs +2.5V voltage supply, the normal operating current is 63mA, the operating frequency can cover 14GHz to 29GHz, provides 27dB small signal gain, noise coefficient 2.1dB, output 1dB compression point to +9.5dBm.

Features

Noise Figure: 2.1 dB
 Gain: 27 dB
 Output P1dB: +9.5dBm
 Supply Current: +2.5V@63mA

Functional Diagram(Typical bond: 100x100, Unit: um)



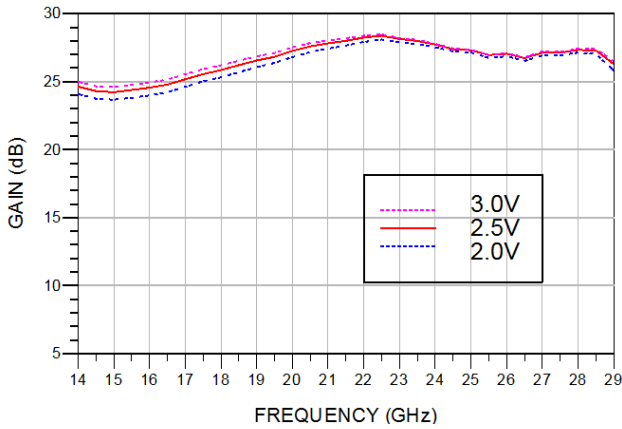
(Die Thickness: 100 um)

Electrical Specification, $T_A = +25^\circ\text{C}$, $V_{dd} = +2.5\text{V}$

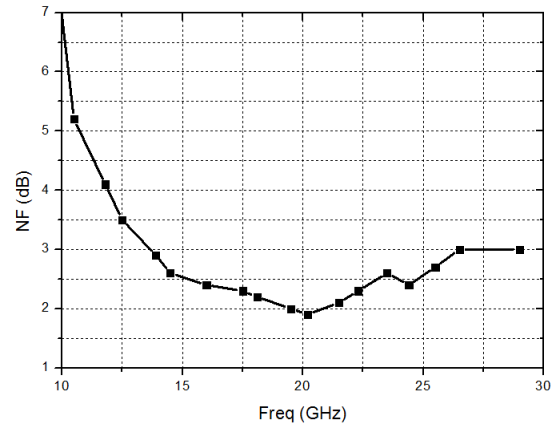
Parameter	Min	Typ	Max	Units
Bandwidth	14		29	GHz
Gain		27		dB
Gain Variation	-1.5		+1.5	dB
Noise Figure		2.1		dB
Input Return Loss		12		dB
Output Return Loss		15		dB
Output Power for 1dB Compression		+9.5		dBm
Supply Current (@Vdd=2.5V)		63		mA

Test Results

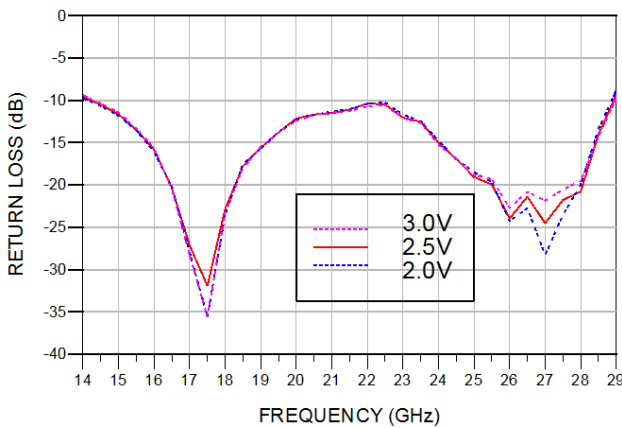
Gain



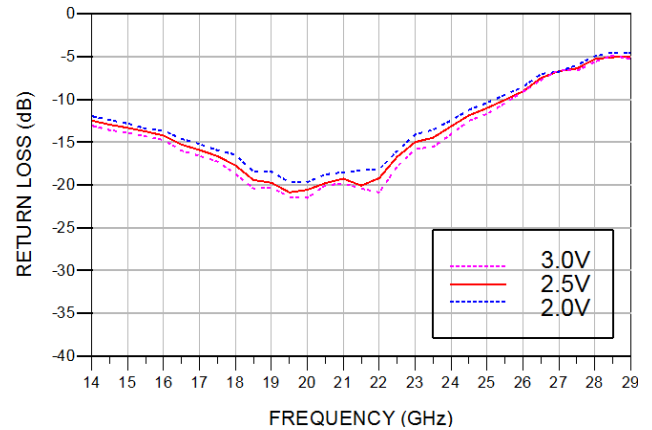
Noise Figure



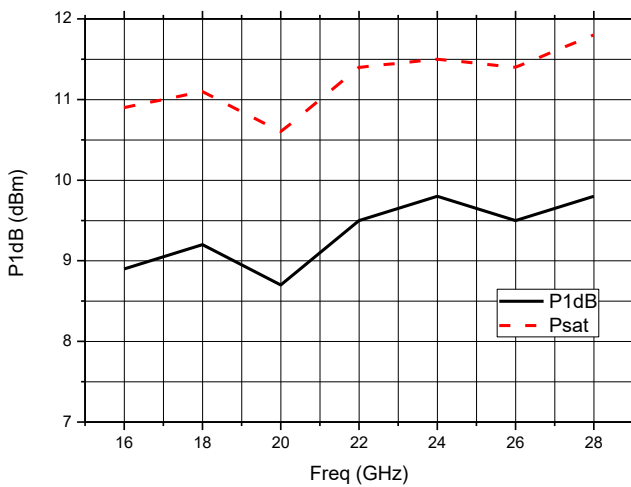
Input Return Loss



Output Return Loss



P1dB & Psat



Assembly Diagram

