

General Description

MWL005 is a high dynamic range low noise amplifier designed and manufactured by GaAs pHEMT process, powered by a single power supply in a self-biased manner. This low noise amplifier only needs + 2V voltage supply. The normal operating current is 17mA. The operating frequency can cover 37GHz to 48GHz. It provides 13dB small signal gain. The noise coefficient is 2.5dB. The output compression point is + 2dBm.

Features

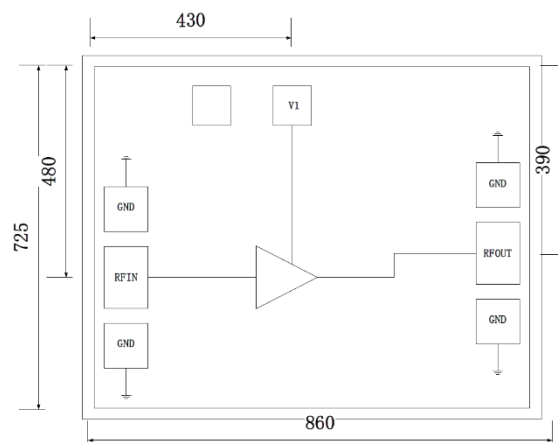
Noise Figure: 2.5 dB

Gain: 13 dB

Output P1dB: +2 dBm

Supply Current: +2.0V@17mA

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



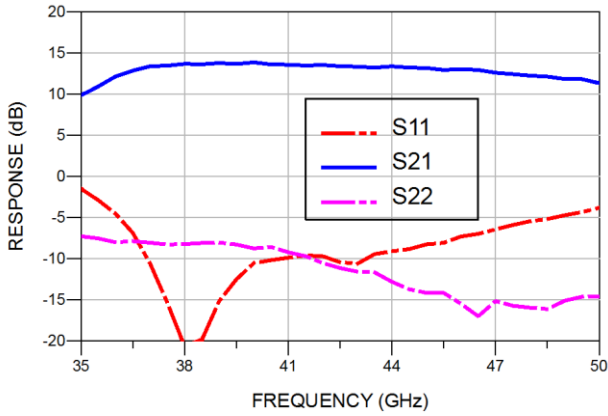
Thickness: 50 um)

Electrical Specifications, $T_A = +25^\circ\text{C}$, $V_{dd} = +2\text{V}$

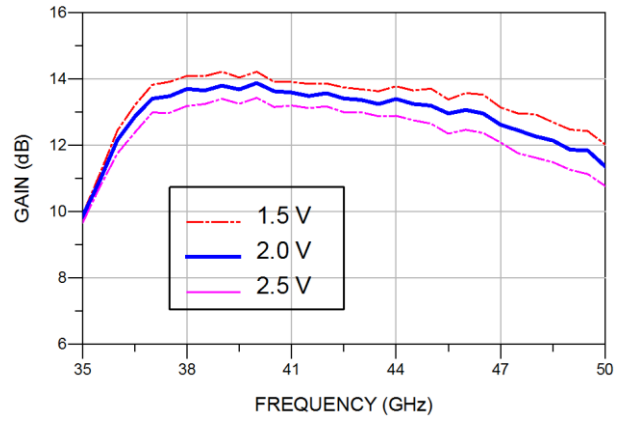
Parameter	Min	Typ	Max	Units
Bandwidth	37		48	GHz
Gain		13		dB
Noise Figure		2.5		dB
Input Return Loss		10		dB
Output Return Loss		12		dB
Output Power for 1dB Compression		+2		dBm
Supply Current (@Vdd=2.0V)		17		mA

Test Results

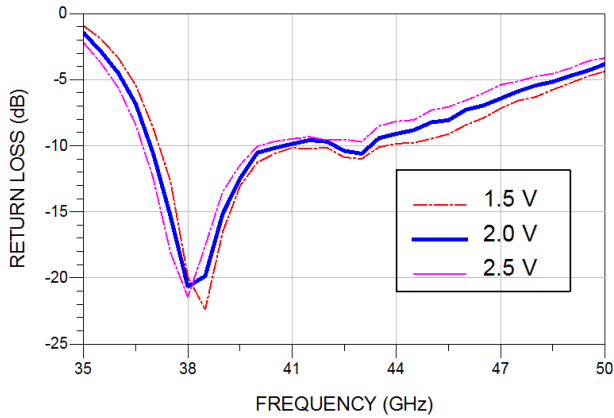
S_Parameter



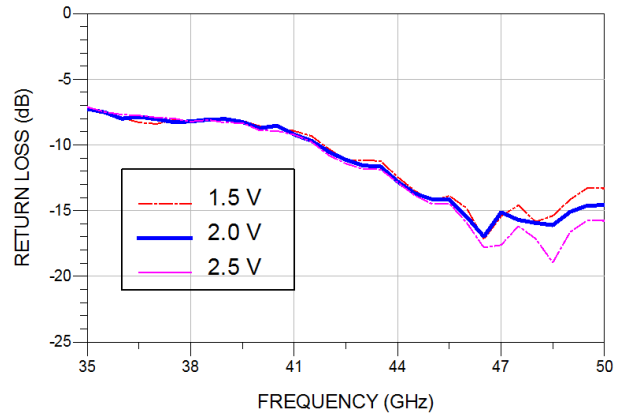
Gain



Input Return Loss



Output Return Loss



Assembly Diagram

