

General Description

MWL020 is a low noise amplifier designed and manufactured using the GaAs pHEMT process. This amplifier requires +5V supply, normal operating current of 47mA, operating frequency covering 18GHz to 40GHz, providing 12dB of small signal gain, noise figure is 2.8dB, and output 1dB compression point is +9dBm.

Features

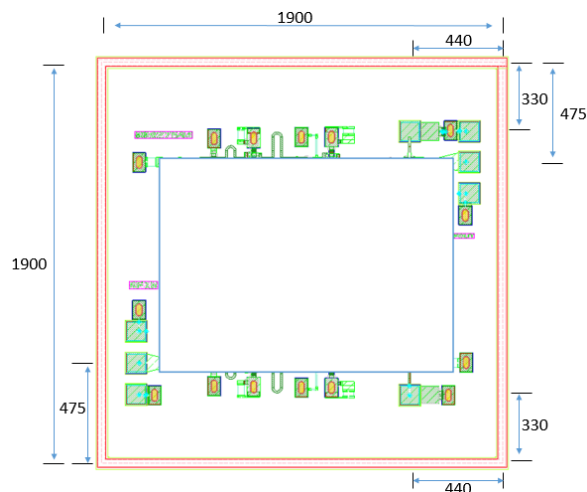
Noise Figure: 2.8 dB

Gain: 12dB;

Output P1dB: +9dBm

Supply Current: +5V@47mA

Functional Diagram (Typical bond: 100x120um)



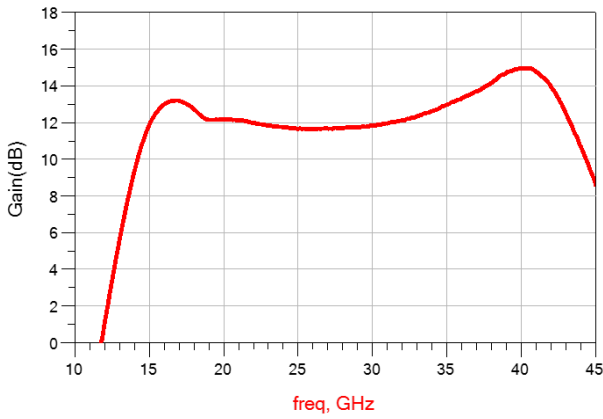
(Die Thickness: 100 μm)

Electrical Specifications, $T_A = +25^\circ\text{C}$, $V_{dd} = +5\text{ V}$

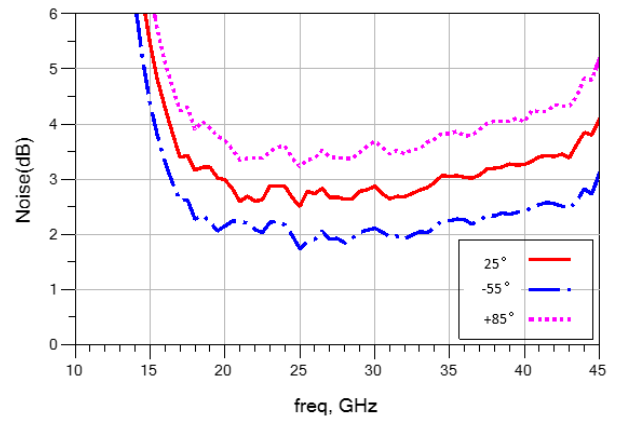
Parameter	Min	Typ	Max	Units
Bandwidth	18		40	GHz
Gain		12		dB
Noise Figure		2.8		dB
Input Return Loss		-11		dB
Output Return Loss		-20		dB
Output Power for 1dB Compression		9		dBm
Supply Current (@Vdd=5 V)		47		mA

Test Results

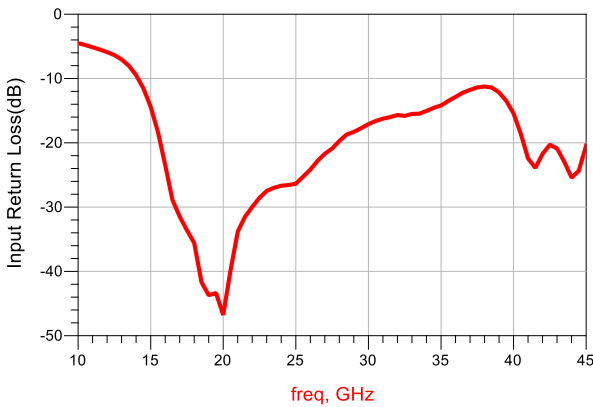
Gain



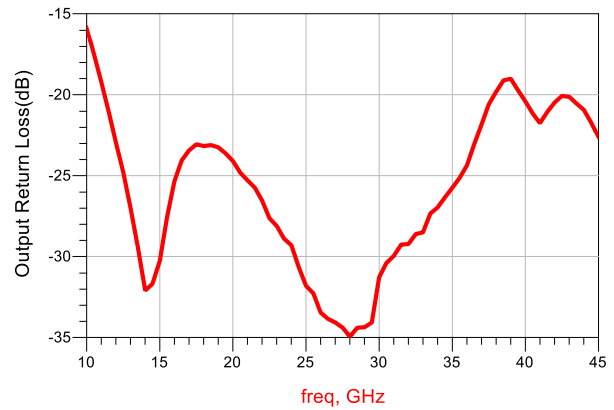
Noise Figure



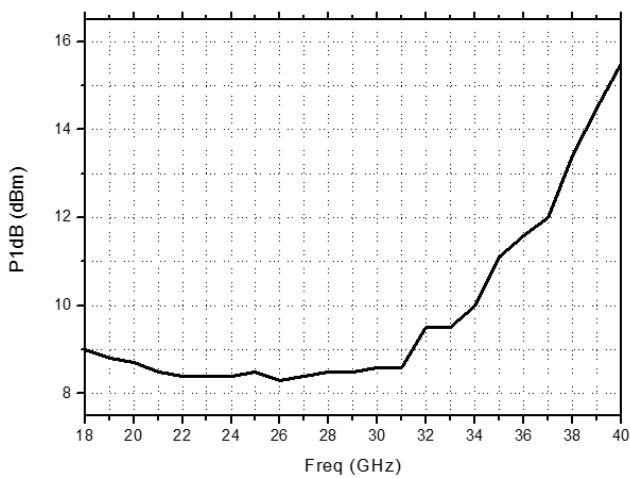
Input Return Loss



Output Return Loss



Output P1dB



Assembly Diagram

