General Description

MWL021 is a low noise amplifier designed and manufactured using the GaAs pHEMT process. This amplifier requires +5V supply, normal operating current is 73mA, and the operating frequency covering 18GHz to 40GHz, providing 22dB of small signal gain with a noise figure of 3.8dB.

Features

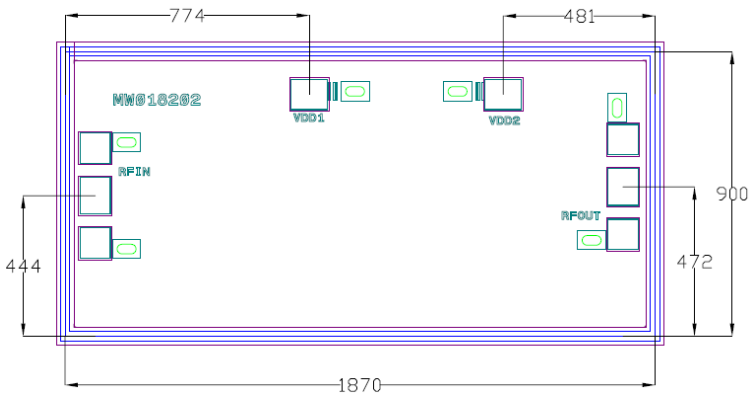
Noise Figure：3.8 dB

Gain：22 dB；

Output P1dB：14dBm

Supply Current：+5V@73mA

Functional Diagram(Typical bond：100x120um)



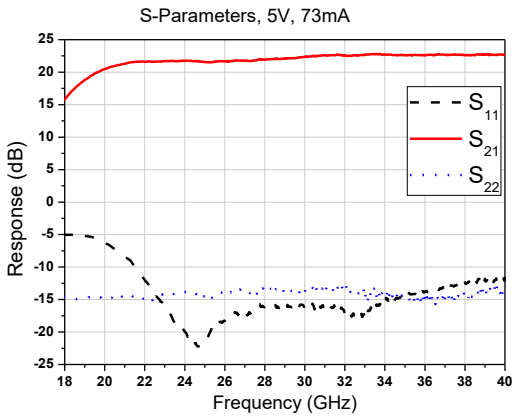
(Die Thickness: 100 um)

Electrical Specifications， $T_A = +25℃$，Vdd = +5 V

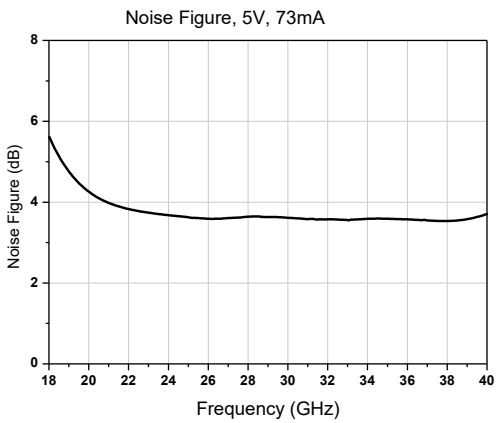
Parameter	Min	Typ	Max	Units
Bandwidth	18		40	GHz
Gain		22		dB
Noise Figure		3.8		dB
Input Return Loss		12		dB
Output Return Loss		13		dB
Output Power for 1dB Compression		14		dBm
Supply Current（@Vdd=5 V）		73		mA

Test Results

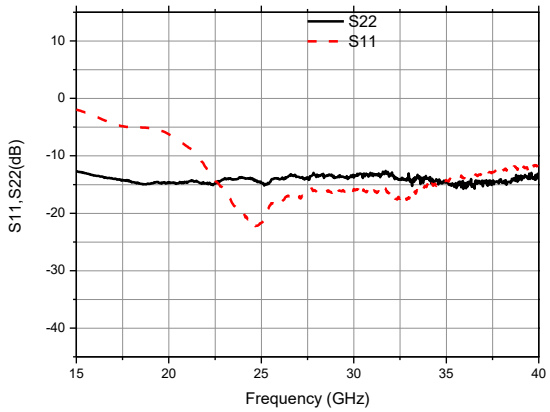
S_Parameter



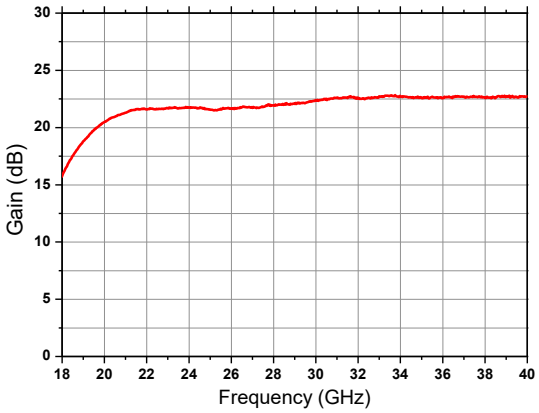
Noise Figure



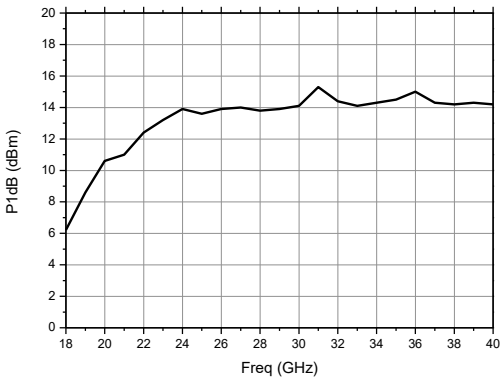
Input/Output Return Loss



Gain



Output P1dB



Assembly Diagram