

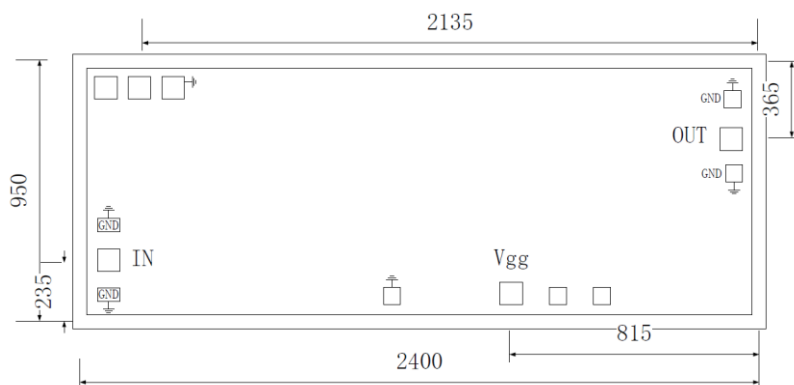
General Description

MWG001 is an wideband and low noise distributed amplifier designed and manufactured by GaAs pHEMT technology. This amplifier can achieve 16 dB small signal gain in the operating frequency band DC-35GHz, noise coefficient is only 2 dB, output 1 dB compression point is + 15 dBm, can be used as LO drive amplifier or IQ / mirror rejection mixer. Vdd is powered by BiasT+3V.

Features

- NF: 2 dB
- Gain: 16 dB;
- Output P1dB: +15dBm
- Supply Current: +3V@150 mA

Functional Diagram(Typicalbond: 100x100, unit: um)



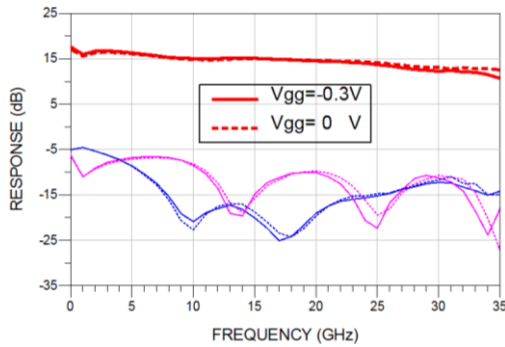
(Die Thickness: 50 um)

Electrical Specifications, $T_A = +25^\circ\text{C}$, $V_{dd} = +3\text{V}$, $V_{gg} = -0.3\text{V}$

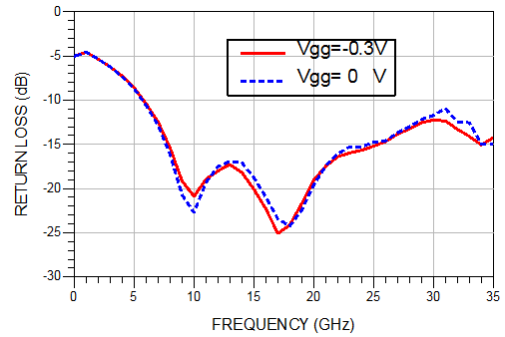
Parameter	Min	Typ	Max	Units
Bandwidth	DC		35	GHz
Gain	11	16		dB
Noise Figure	1.8	2		dB
Input Return Loss	8	10		dB
Output Return Loss	8	15		dB
Output Power for 1dB Compression	11	16		dBm
Supply Current (@Vdd=3V)		150		mA

Test Results

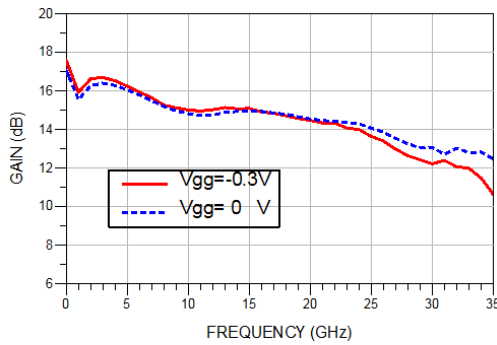
S_Parameter



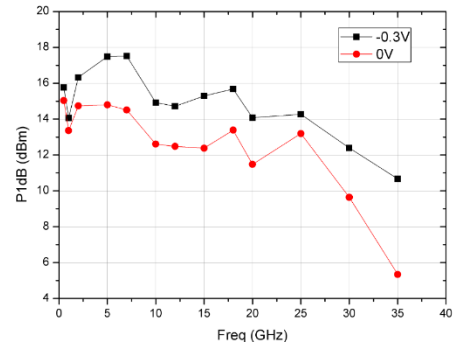
Output Return Loss



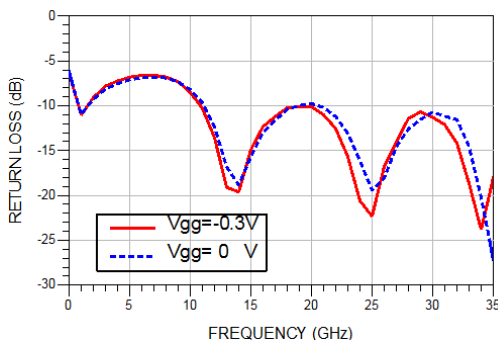
Gain



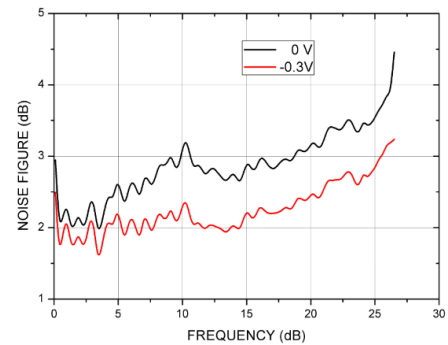
Output P1dB



Input Return Loss



Noise Figure



Assembly Diagram

