

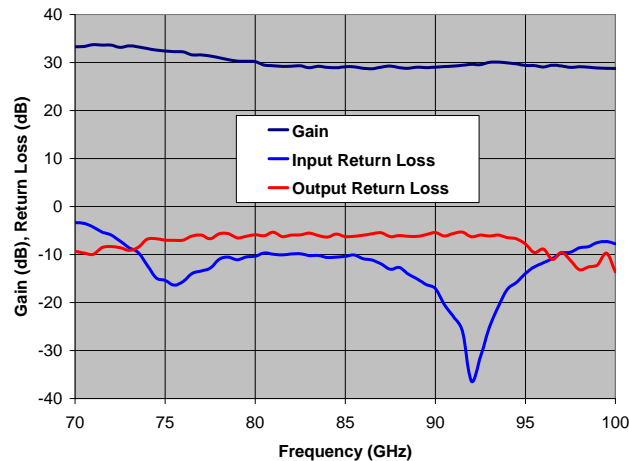
- InP Low Noise Amplifier
- 70-100 GHz
- 3 dB Noise Figure

The LN5-100 is a five stage MMIC amplifier die fabricated using HRL's H2 InP HEMT process that is AS9100B certified. The LNA is configured with a single drain connection, but the first stage can be configured with a separate drain supply by breaking an airbridge. The amplifier has an independent gate bias connection for the first stage and the remaining stages are reconfigurable but are delivered connected together.

Electrical Specifications, $T_A=25^\circ\text{C}$, $V_d=1.2\text{ V}$, $I_d=40\text{ mA}$, $P_{in} = -30\text{ dBm}$

Specification	Units	Min	Typ	Max
Frequency	GHz	70		100
Gain	dB	24	29	35
Input Return Loss	dB		-3	0
Output Return Loss	dB		-5	0
Noise Figure	dB		3	

Typical Gain and Return Loss Performance

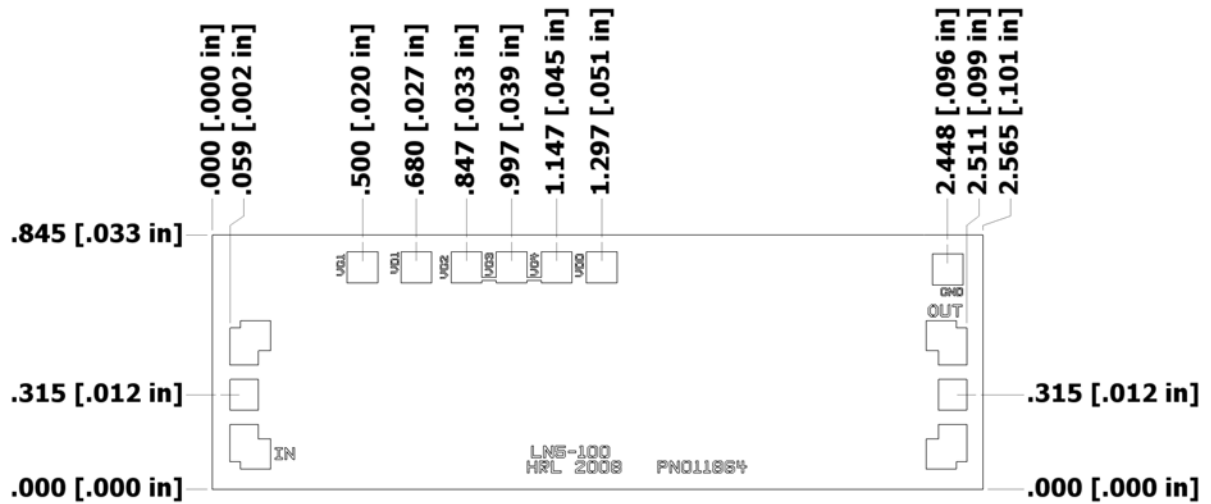


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Table I Maximum Ratings

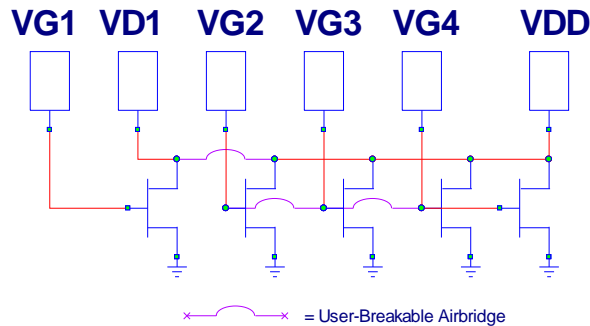
Symbol	Parameter	Value	Note
P_{IN}	Input Power	-20 dBm	
V_{DS}	Drain to Source Voltage	1.5 V	
V_{GD}	Gate to Drain Voltage	-2.5 to 0.2 VDC	
V_{GS}	Gate to Source Voltage	-1.0 to 0.2 VDC	
T_M	Die Attach Temperature (30 seconds)	290° C	

Outline Drawing



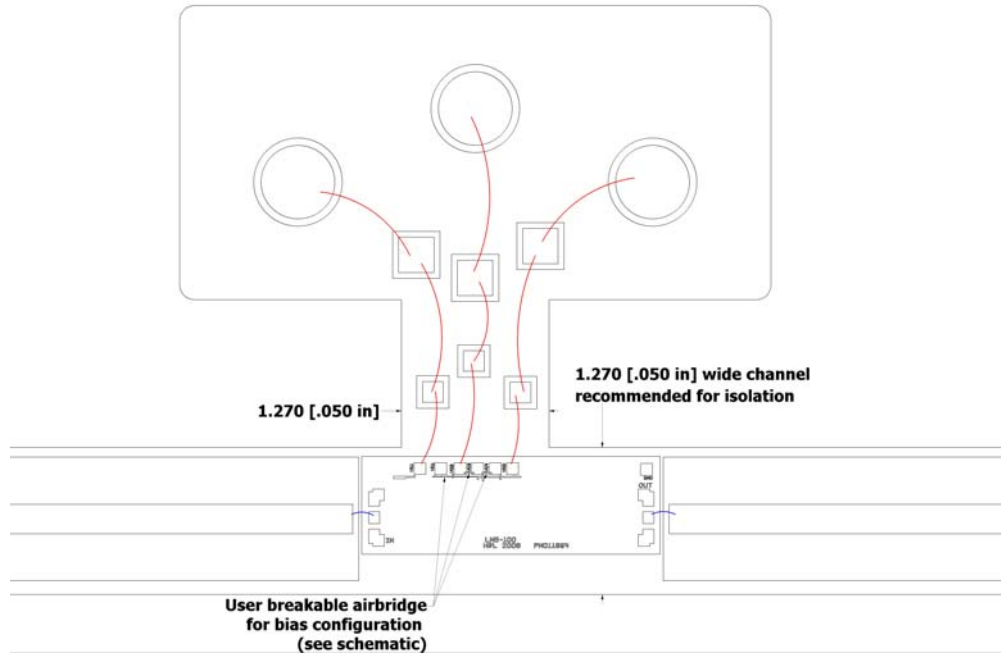
Bond pads are nominally 0.1mm square
 Bond pad locations shown from die edge to pad center
 Die thickness is nominally 50 um
 Die should not be plasma cleaned

DC Schematic



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Typical Assembly Drawing



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