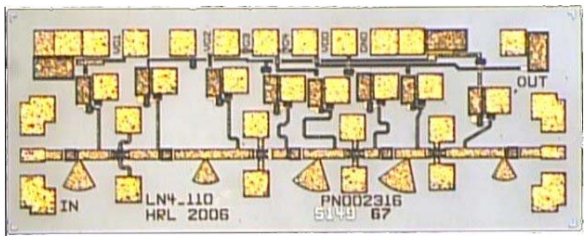
LN4-110



- **InP Low Noise Amplifier**
- **Full W-Band operation**
- **22 dB Gain**
- **3.5 dB Noise Figure**

The LN4-110 is a four stage MMIC amplifier that covers the entire W-Band. The amplifier is fabricated using HRL's passivated H2 InP HEMT process that is AS9100B certified. The LNA has a single drain supply and is typically used with an independent gate bias for the first stage and a common gate bias for the remaining stages.

Electrical Specifications, T_A=25°C, Vd=1.2 V, Id=35 mA, Pin = -30 dBm

Specification	Units	Min	Typ	Max
Frequency	GHz	75		110
Gain	dB	22	24	27
Input Return Loss	dB		-3	-3
Output Return Loss	dB		-5	0
Noise Figure	dB		3.5	

Typical Gain and Return Loss Performance

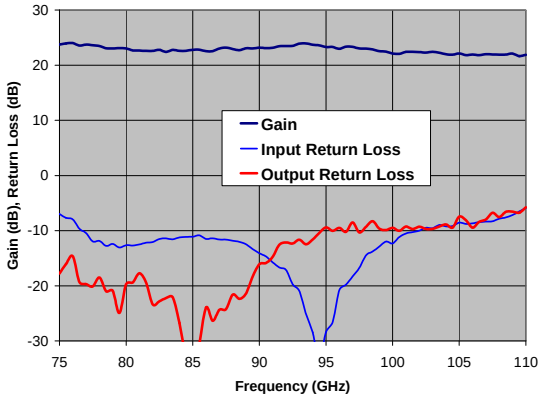


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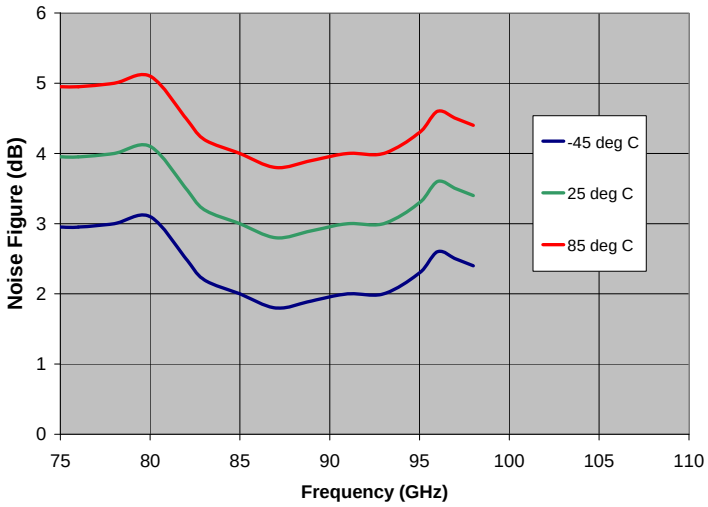
Table I Maximum Ratings

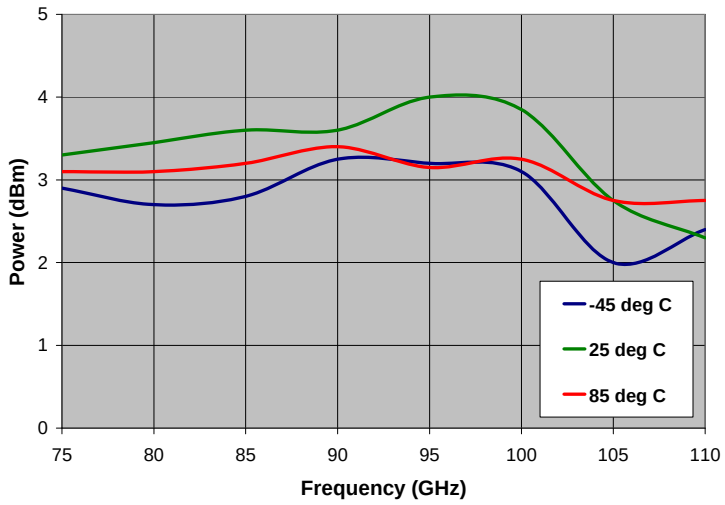
Symbol	Parameter	Value	Note
P_{IN}	Input Power	-20 dBm	1
I_G	Gate Current	1 mA	1
V_{DS}	Drain to Source Voltage	1.5 V	1
V_{GD}	Gate to Drain Voltage	-2.5 to 0.2 VDC	1
V_{GS}	Gate to Source Voltage	-1.0 to 0.2 VDC	1
T_M	Die Attach Temperature (30 seconds)	290° C	

1 T_{base} = 25 °C unless specified otherwise

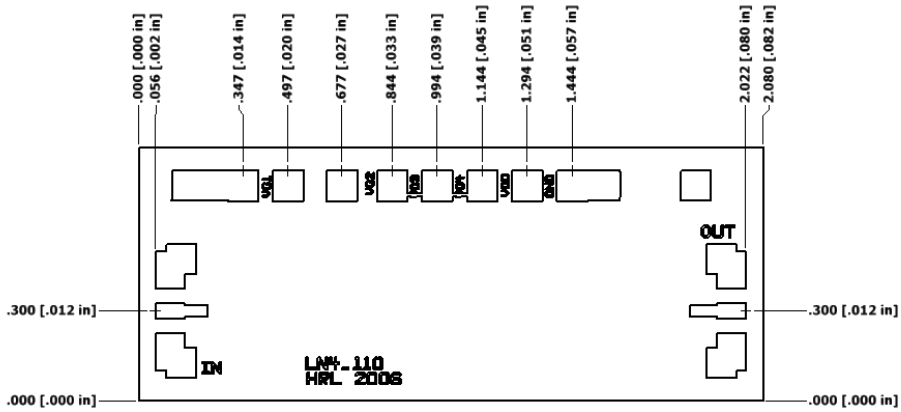
Typical Noise Figure Performance



Typical Saturated Output Power Performance

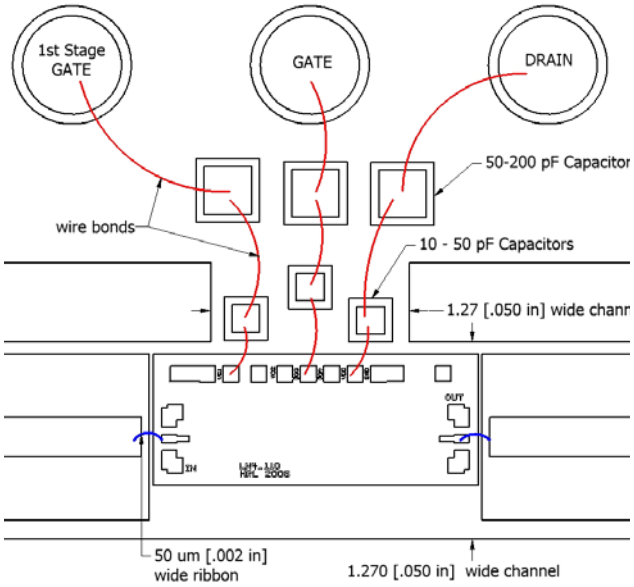


Outline Drawing



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

Typical Assembly Drawing



Schematic