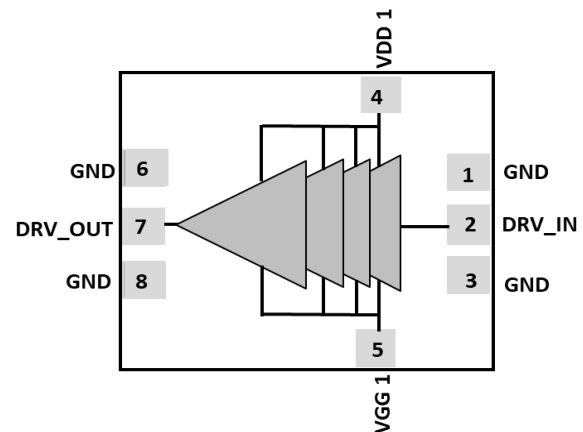


Features:-

- RF Frequency: 20-40GHz
- Noise Figure: 3dB
- Small Signal Gain: 26dB
- Biasing: VDD= 4V, VGG=-0.65V, ID=156mA
- 0.1um GaAs pHEMT Technology

Functional Block Diagram:-



Description:-

RFLN06A is a four stage low noise amplifier for KA band with flat gain over wide bandwidth, low Noise Figure, high isolation, stability and high linearity. The LNA is designed to operate from 20-40 GHz using 0.1um GaAs pHEMT process.

The designed LNA, bias current and gain can be set with the gate bias to allow the user to customize the current, gain and NF value to fit the application.

The LNA offers 3 dB noise figure, 26dB of small signal gain, OP1dB of 11.4dBm with low noise figure along with the flexibility of setting current and gain makes this LNA an ideal front end amplifier in 5G and SATCOM Application.

Results are shown with all parasitics & coupling effects at desire frequency.

Pin Configuration: -

Pin No.	Pin Name	Description
1, 3, 6, 8	GND	RF Ground
2	DRV_IN	Input
7	DRV_OUT	Output
4	VDD1	Drain Bias Voltage
5	VGG1	Gate Bias Voltage

Applications:-

- 5G RF transceiver.
- Satellite Communication.
- Point to point communication system.
- 5G RF transceiver.
- Radar Application.

Low Noise Amplifier



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Electrical Specification: -

Freq = 20-40GHz, VDD = 4 V, VGG = -0.65V, ID=156 mA, Zo=50 Ω

Parameters	Test Condition	Units	Typ
Gain	20 GHz	dB	26
	30 GHz		26
	40 GHz		17
Output P1dB	20 GHz	dBm	-
	30 GHz		-
	40 GHz		-
OIP3 Pin = -15dBm Δf = 200MHz	20 GHz	dBm	-
	30 GHz		-
	40 GHz		-
Noise Figure	20 GHz	dB	5
	30 GHz		3
	40 GHz		3.1
Input Return Loss	20 GHz	dB	0.9
	30 GHz		6.7
	40 GHz		7
Output Return Loss	20 GHz	dB	7.5
	30 GHz		18
	40 GHz		12
Drain Current (Id)	-	mA	156
Drain Voltage (VDD)	-	V	4
Gate Voltage (VGG)	-	V	-0.65

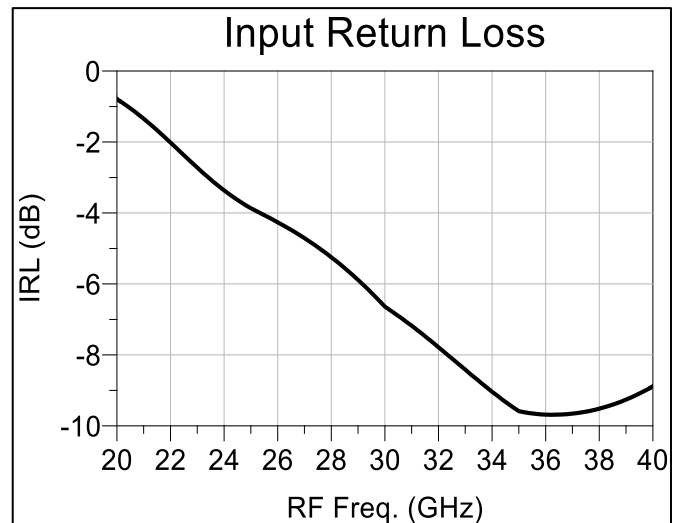
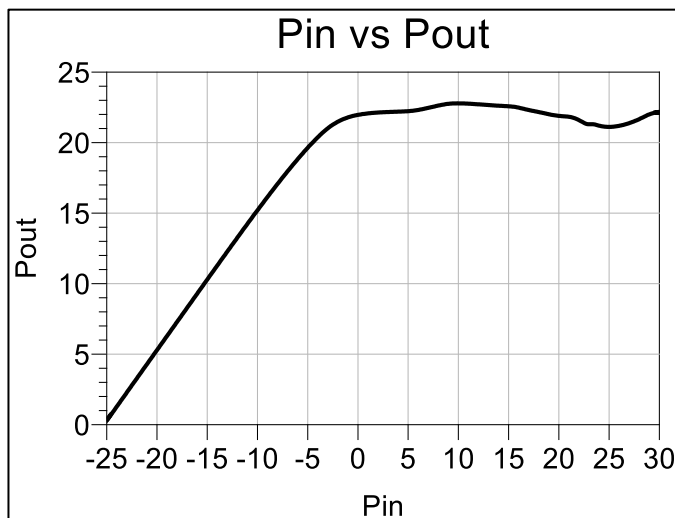
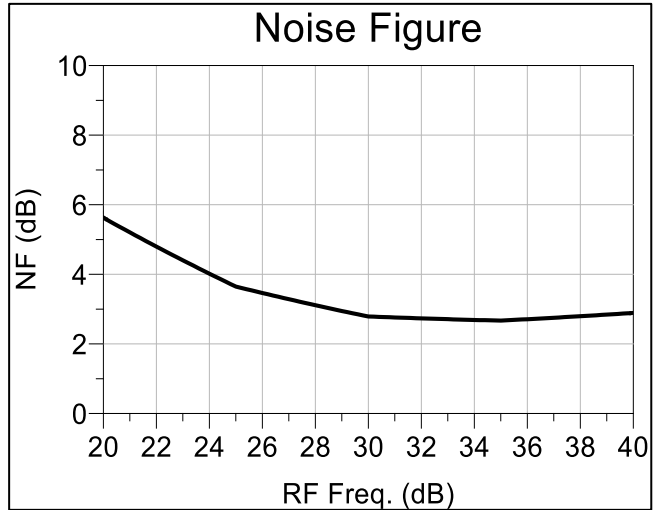
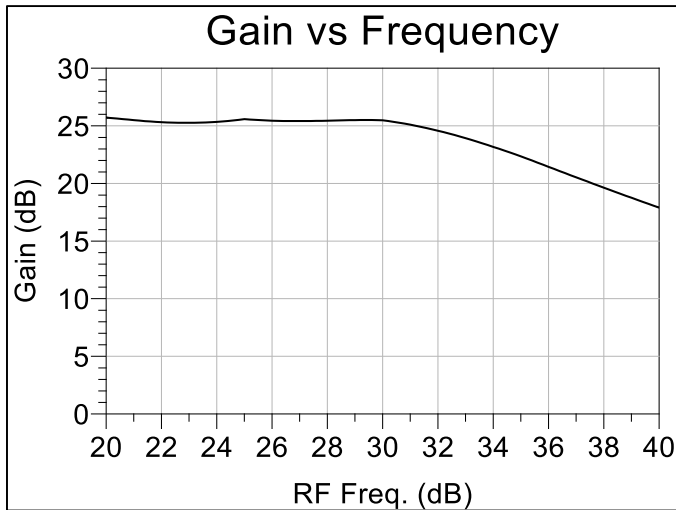
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Typical Performance Curve: -



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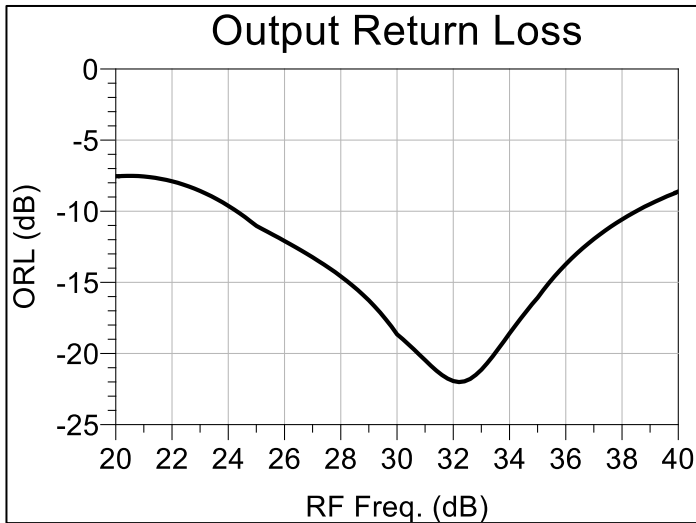
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