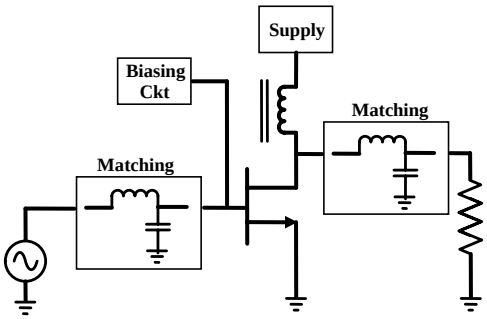
1.7-2.5GHz Low Noise Amplifier with High OIP3

RLW02

Description

The **RLW02** is 1.7 to 2.5 GHz high linearity GaAs Enhancement mode pHEMT Low Noise Amplifier IP Block with high OIP3 .The device is designed for use in the IEEE 802.11b/g, PCS, WCDMA and Cellular system.

The die area of RLW01 is 0.7 mm x 0.7 mm, with on chip input and ESD. This makes it suitable for being packed in small SOT29 Packages. It requires a single +5.0 Volt supply and consumes 87 mA current.



Applications

- PCS and WCDMA System
- Cellular System
- WLAN/WiFi Systems
- ISM Band Systems

Key Features

- Low Current, Low Cost
- Noise Figure is less than 1 dB
- Can be optimized for a narrow band operation with off chip matching

Electrical Specification

Conditions: Vcc = 5 V & T_A=25 ^{0}C

Parameter	Min	Typical	Max	Units
Frequency Range	1.7	2.2	2.5	GHz
Gain		16		dB
Input Return Loss		18		dB
Output Return Loss		14		dB
Noise Figure		0.86		dB
Power Output (P1dB)		22		dBm
OIP3		38		dBm
Supply Voltage		5		V
Supply Current		87		mA

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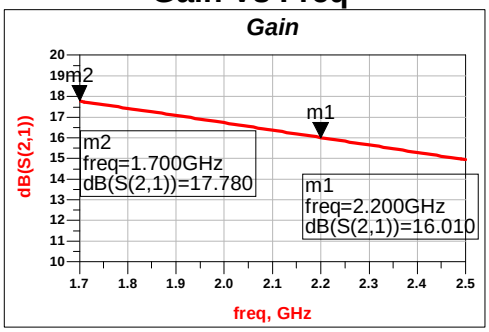
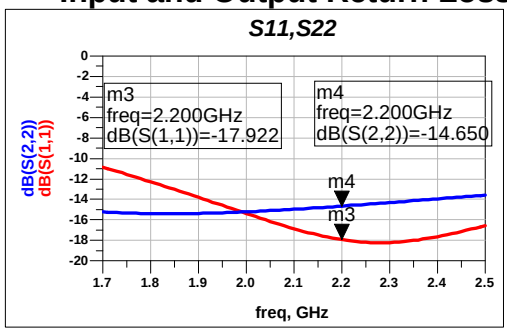
Simulated results

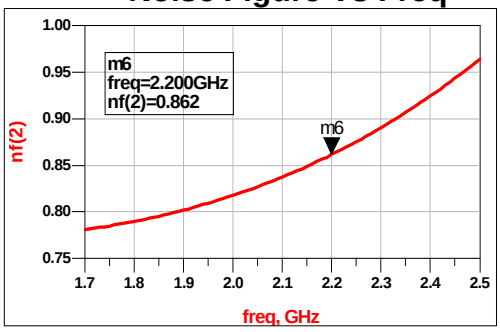
Gain Vs Freq



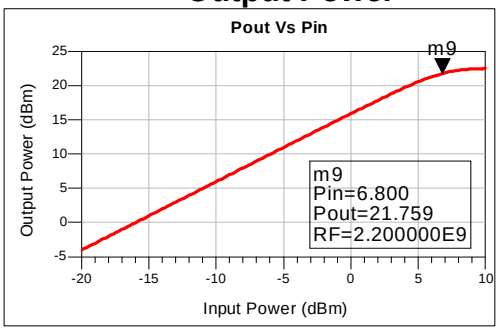
Input and Output Return Loss



Noise Figure Vs Freq



Output Power



OIP3 (dBm) at 10dBm output Power