



Power Amplifier

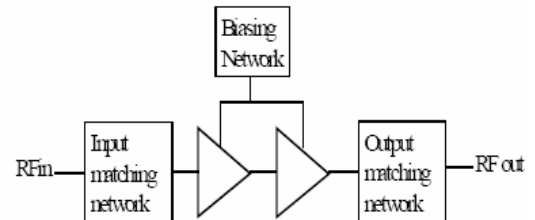
RGPA01

Description

The **RGPA01** is a 2.4 to 2.5 GHz high efficiency GaAs Enhancement Mode pHEMT MMIC power amplifier. This MMIC power amplifier doesn't require any off chip components.

The device is designed for 802.11b/g and WLAN MIMO system. The Power Amplifier exhibits unparalleled linearity and efficiency for both 802.11g and 802.11b WLAN systems.

Functional Diagram



Applications

- IEEE 802.11 b/g WLAN
- Cellular System
- WiFi Systems
- ISM Band Systems

Key Features

- High Gain
- High Performance
- Low Cost
- Output Power in the range of 26 dBm

Electrical Specification

Conditions: $V_{cc} = 3.3\text{ V}$ & $T_A = 25\text{ }^\circ\text{C}$

Parameter	Min	Typical	Max	Units
Frequency Range	2.4		2.5	GHz
Gain	26		28	dB
Power Output (P1dB)		26		dBm
Efficiency @ P1dB		37		%
EVM @20 dBm		3.2		%
Input Return Loss		12		dB
Output Return Loss		12		dB
Supply Current		225		mA
DC Voltage		3.3		V

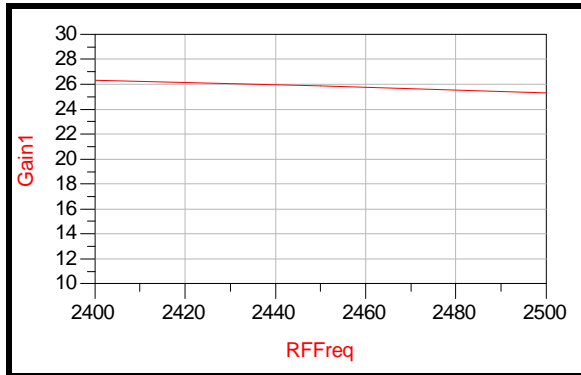


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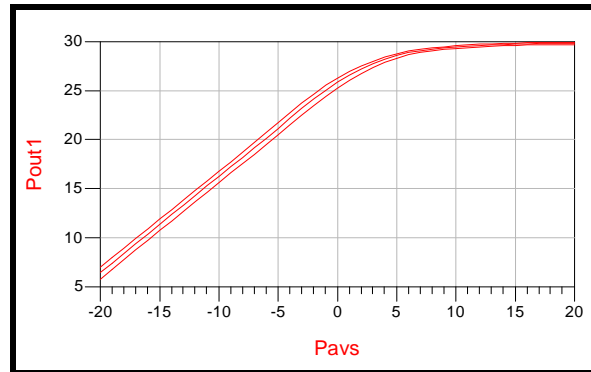
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Simulated Results

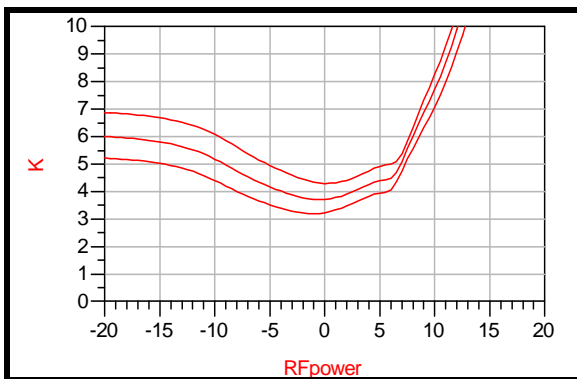
Small signal gain Vs Freq



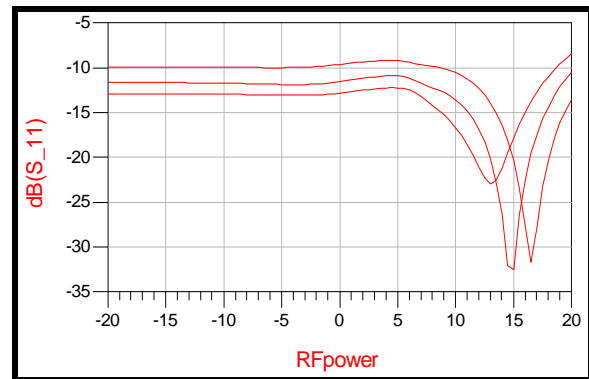
Pout Vs Pin



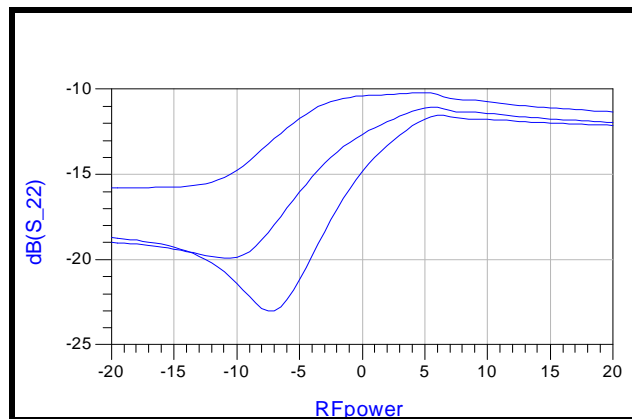
Stability Factor Over Power



Input Return Loss Vs Power



Output Return Loss Vs Power





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Layout

