



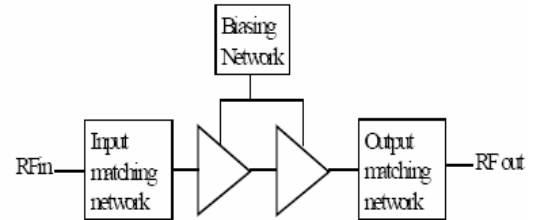
### 2.4GHz, 25dBm Power Amplifier

RPA11

#### Description

The **RPA11** 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.



#### Applications

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

#### Key Features

- High Gain
- High Performance
- Low Cost

#### Electrical Specification

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

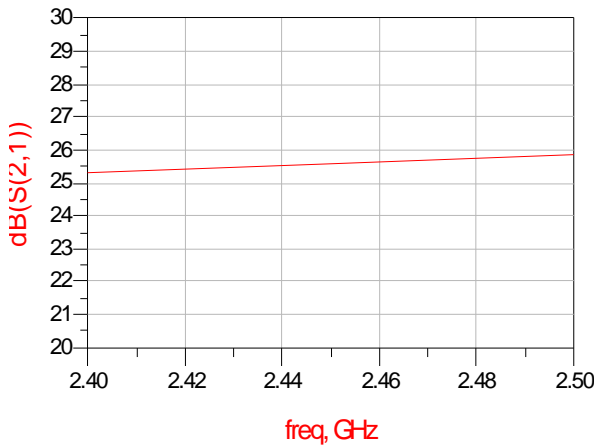
Parameter	Min	Typical	Max	Units
Frequency Range	2.4		2.5	GHz
Gain		25.5		dB
Power Output (P1dB)		25.2	25	dBm
Efficiency @ P1dB		37		%
EVM @20 dBm		3.2		%
Input Return Loss		12.5		dB
Output Return Loss		7		dB
Supply Current		225		mA
DC Voltage		3.3		V



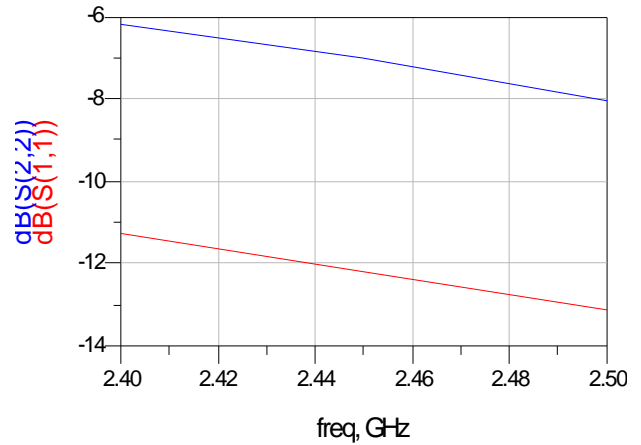
**2.4GHz, 25dBm Power Amplifier**  
**Simulated Results**

RPA11

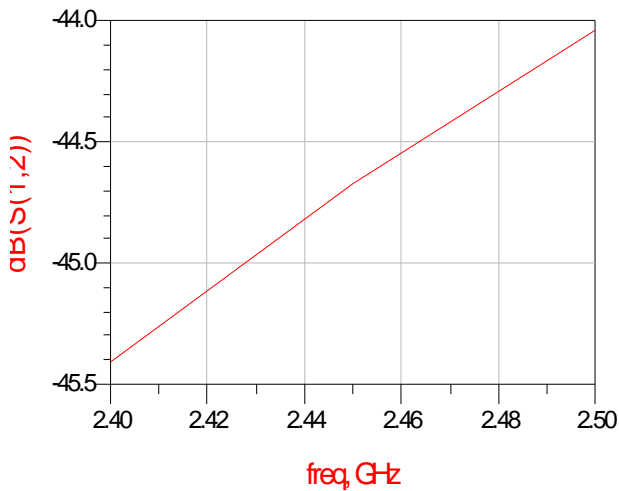
**Small signal gain Vs Freq**



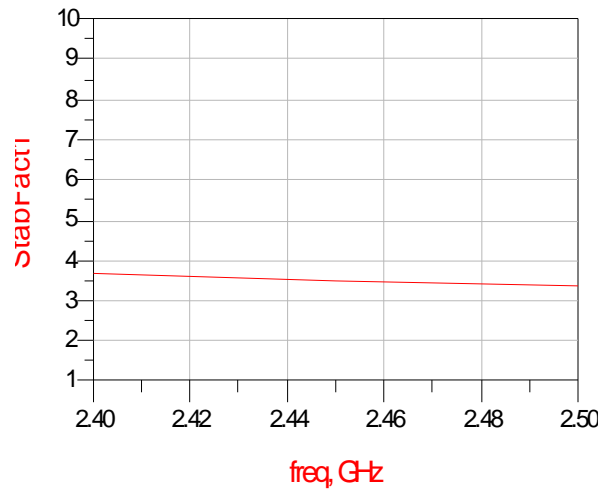
**Input/Output Return Loss Vs Freq**



**Reverse isolation Vs Freq**



**Stability Vs Freq**

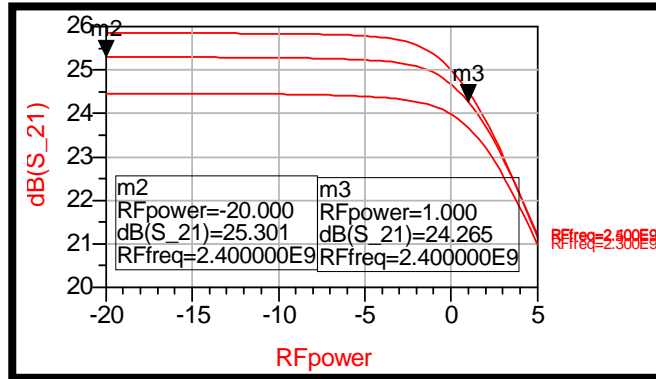




2.4GHz, 25dBm Power Amplifier

RPA11

Gain Vs Power



Stability over Power

