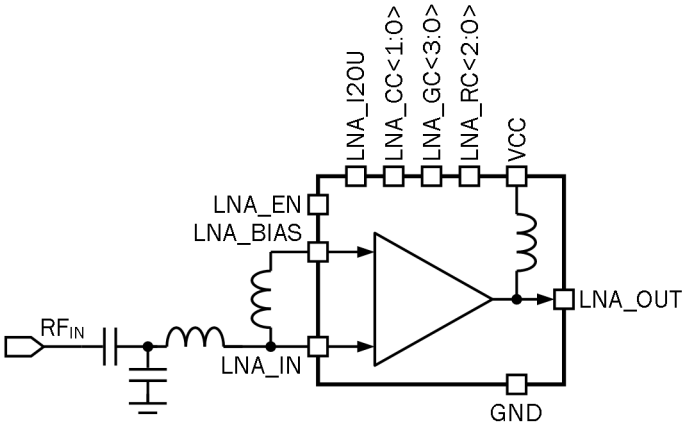
1220 to 1610 MHz Low noise amplifier

OVERVIEW

250iHP_LNA_01 is usually used as the first stage of receivers and is characterized by low noise figure and high linearity. LNA is based on a cascode circuit with output resonant circuit. The external elements are used matching the output to 50 Ω and for frequency range adjustment.

IP technology: iHP SiGe BiCMOS 0.25 um.
IP status: silicon proven.
Area: 0.68mm^2.



ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Conditions	Value			Units
			min	typ.	max	
Supply voltage	V_{CC}	-	2.8	3.0	3.3	V
Operating temperature range	T_j	-	-60	27	125	°C
Operating frequency	F_{IN}	-	1220	-	1610	MHz
Current consumption	I_{CC}	-	5.5	7.1	9.1	mA
Stand-by current	I_{STB}	-	-	-	200	nA
Gain	G	-	-	18	-	dB
Noise figure	NF	-	-	1.8	-	dB
Input VSWR	$VSWR_{IN}$	@50Ohm	-	1.2	-	-
Output VSWR	$VSWR_{OUT}$	@50Ohm	-	1.6	-	-
Input 1dB compression point	P_{1dB}	-	-	-14	-	dBm
3rd order intercept point	IIP3	-	-	+5	-	dBm
Input logic-level high	V_{IH}	For digital inputs	0.7V_{CC}	-	V_{CC}+0.25	V
Input logic-level low	V_{IL}		-0.25	-	0.3	V