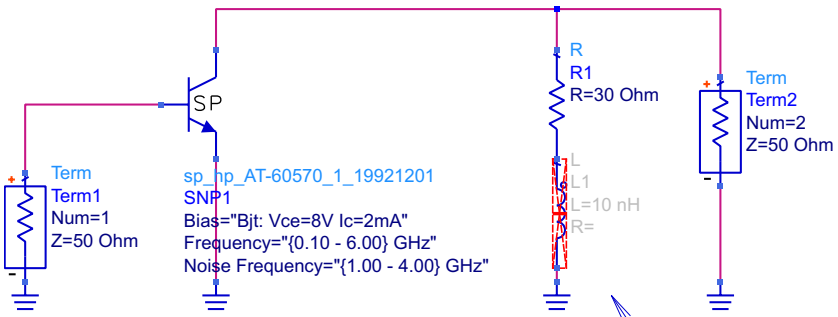
DEVICE CHARACTERIZATION: STABILITY



The circuit is resimulated with this stabilizing circuit activated. Results are output in "StabCkt.ds" and displayed in "Stability.dds". The inductor reduces the impact of the resistor on device noise figure and gain.

SIMULATIONS

S-PARAMETERS

S_Param
SP1
Start=1.9 GHz
Stop=2.2 GHz
Step=10 MHz
CalcNoise=yes

Stability is calculated from S-parameters.

OPTIONS

Options
Options1
Temp=16.85
Tnom=25
TopologyCheck=yes
V_RelTol=1e-6 V
I_RelTol=1e-6 A
GiveAllWarnings=yes
MaxWarnings=10

MEASUREMENTS

These equations may be entered directly in the display window instead of here.

Mu
mu1
Mu=mu(S)
StabFact
k1
K=stab_fact(S)
StabMeas
b1
B1=stab_meas(S)

Two numerical measures can be used to determine whether the circuit is stable.
Mu - the circuit is unconditionally stable whenever mu>1
K - the circuit is unconditionally stable whenever K>1 AND the stability measure, B>0

Results are output in "Stability.ds" and displayed in "Stability.dds".