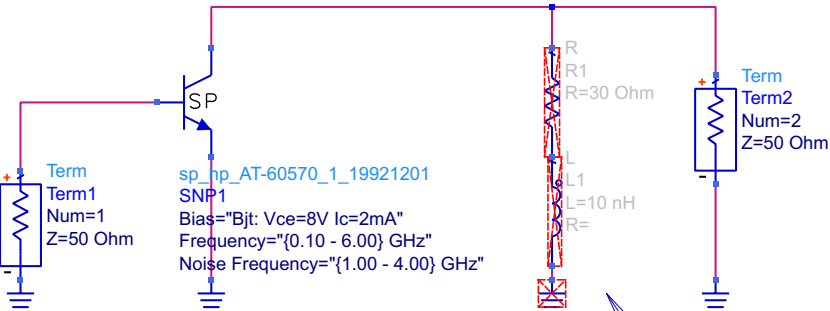


# DEVICE CHARACTERIZATION: STABILITY



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



Mu

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

Mu

Two numerical measures can be used to determine whether the circuit is stable. Mu - the circuit is unconditionally stable whenever  $\mu > 1$

mu1

$\mu = \mu(S)$

StabFact

K1

$K = \text{stab\_fact}(S)$

StabMeas

b1

$B1 = \text{stab\_meas}(S)$

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".