



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.

# DEVICE CHARACTERIZATION: STABILITY

## 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**

mu1

Mu=mu(S)

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

**StabFact**

k1

K=stab\_fact(S)

K - the circuit is unconditionally stable whenever K>1 AND the stability measure, B>0

**StabMeas**

b1

B1=stab\_meas(S)

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