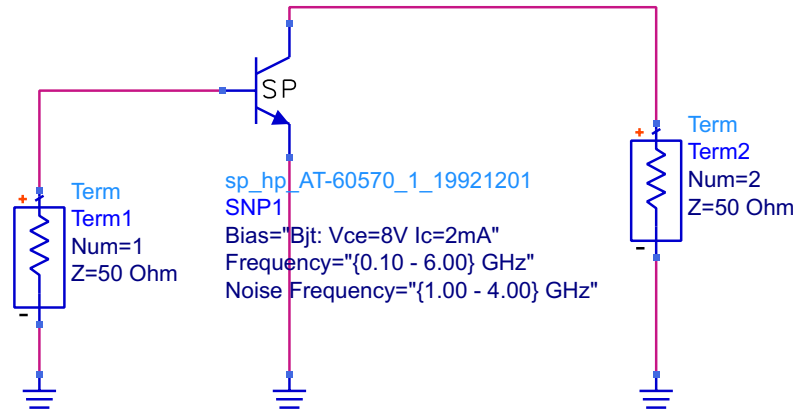


MEASUREMENTS

NsCircle

Noise circles will be calculated for each point in the frequency sweep.
Note the ns_circle function uses the *normalized* equivalent noise resistance, so Rn must be divided by Z0.

```
NsCircle
N1
NoiseCircles=ns_circle({1.5,2,2.5,3,3.5},NFmin,Sopt,Rn/50,51)
```

specify values for noise circles in dB here
(default is NFmin+{0,1,2,3})

SIMULATIONS

S-PARAMETERS

```
S_Param
SP1
Start=1.9 GHz
Stop=2.2 GHz
Step=1 MHz
CalcNoise=yes
```

Noise analysis is set in the "S_Param" simulation component. At each frequency,
rn: - effective noise resistance
Sopt - optimum noise match
NFmin - minimum noise figure
are calculated.

OPTIONS

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

This options block is used to set the ambient temperature for the simulation. The default value of "Temp" is 25C, which is a convenient value for semi-conductors. However, for the most accurate noise analysis, "temp" should be set to 16.85C.

RESULTS
Results are written to SparamsNoise.ds and displayed in SparamNoise.dds