

## HARMONIC BALANCE

## HarmonicBalance

HB1

MaxOrder=4 Var Egn **VAR** Freq[1]=RF1 VAR2 Freq[2]=RF2 Pin=-50 dBm Freg[3]=RF - IF F space=1 MHz

RF1=RF + F space / 2 Order[1]=5 Order[2]=5 RF2=RF - F space / 2

Order[3]=5

Var Egn **VAR** LNA parameters LNA K=13 dB

LNA P1dB=22 dBm

LNA NF=2.3 dB LNA TOI=38 dBm

Var Eqn

VAR

Vmix

PA parameters PA K=13 dB PA NF=2.3 dB PA TOI=38 dBm PA P1dB=22 dBm

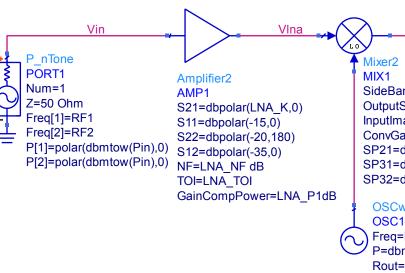
Var Eqn

**VAR** 

freq parameters RF=3 GHz IF=150 MHz df=84 MHz

Vfilt

Var Egn



MIX1 SideBand=BOTH

OutputSidebandSuppression=-35 dB InputImageRejection=-35 dB ConvGain=dbpolar(-8,0) SP21=dbpolar(-35,0) SP31=dbpolar(-35,0) SP32=dbpolar(-35,0)

BPF1 Fcenter=IF BWpass=df Apass=0.1 dB

IL=1 dB

Ripple=0.1 dB

BPF\_Chebyshev

BWstop=2 \* df

S12=dbpolar(-35,0) NF=PA NF dB Astop=40 dB TOI=PA TOI

AMP2

Freg=RF - IF

P=dbmtow(7) Rout=50 Ohm

**OSCwPhNoise** 

PhaseNoise=list(10Hz,-50dB, 100Hz,-70dB, 1kHz,-80dB, 10kHz,-90dB, 100kHz,-100dB)