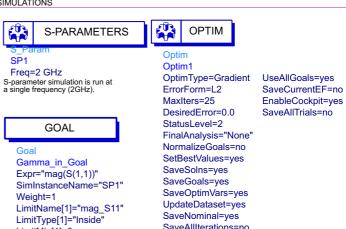## CREATE INPUT MATCHING NETWORK WITH TLs:

The device will be matched for minimum noise figure at 2 GHz.

1) The input reflection of "S1" is set to the complex conjugate of the impedance to be matched to 50Ohms (in this case, "Opt", the optimum noise match).

2) The TLin1 and TLin2 lengths are optimized until the a perfect matching happens between source and the matching network i.e. untill mag(S(1,1))=0.

SIMULATIONS

S-PARAMETERS

S_Param
SP1
Freq=2 GHz
S-parameter simulation is run at
a single frequency (2GHz).

GOAL

Goal
Gamma_in_Goal
Expr="mag(S(1,1))"
SimInstanceName="SP1"
Weight=1
LimitName[1]="mag_S11"
LimitType[1]="Inside"
LimitMin[1]=0
LimitMax[1]=0.001
LimitWeight[1]=1

OPTIM

Optim
Optim1
OptimType=Gradient
ErrorForm=L2
MaxIters=25
DesiredError=0.0
StatusLevel=2
FinalAnalysis="None"
NormalizeGoals=no
SetBestValues=yes
SaveSolns=yes
SaveGoals=yes
SaveOptimVars=yes
UpdateDataset=yes
SaveNominal=yes
SaveAllIterations=no
UseAllOptVars=yes

UseAllGoals=yes
SaveCurrentEF=no
EnableCockpit=yes
SaveAllTrials=no

S1P_Eqn
S1
S[1,1]=conj(Opt)
Z[1]=

TLOC
TLin2
Z=50.0 Ohm
E=44.7455 {o}
F=2 GHz

Ref

TLIN
TLin1
Z=50.0 Ohm
E=72.5063 {o}
F=2 GHz

Term
Term1
Num=1
Z=50 Ohm

VARIABLES

VAR
VAR1
Opt=polar(0.444,98.626)

"Opt" is the optimum source match for minimum noise, taken
from "SparamNoise.dds"