



VARIABLES

Var
Eqn
VAR1
Opt=polar(0.444,98.626)

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

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. until $\text{mag}(S(1,1))=0$.

SIMULATIONS



S-PARAMETERS

S_Param

SP1

Freq=2 GHz

S-parameter simulation is run at a single frequency (2GHz).



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

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