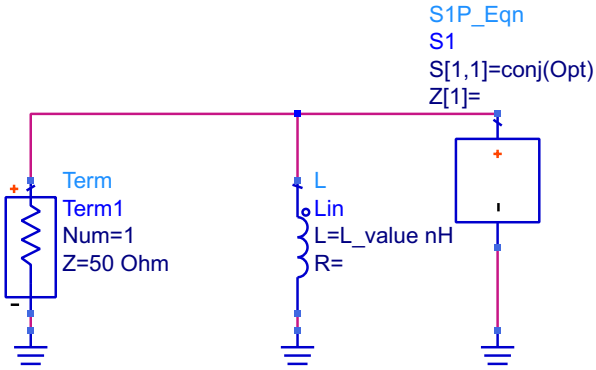
CREATE INPUT MATCHING NETWORK: Step 1



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 inductor is swept until the real part of the input impedance is 50 Ohms (see InputMatch.dds).

3) Once the inductor value is known, the same method is used to find the best value for a series capacitance (See Match2.dsn).

SIMULATIONS

S-PARAMETERS	PARAMETER SWEEP
S_Param	ParamSweep
SP1	Sweep1
Freq=2 GHz	SweepVar="L_value"
	SimInstanceName[1]="SP1"
	SimInstanceName[2]=
	SimInstanceName[3]=
	SimInstanceName[4]=
	SimInstanceName[5]=
	SimInstanceName[6]=
	Start=2.5
	Stop=3.5
	Step=0.1

S-parameter simulation is run at a single frequency (2GHz), while the inductor value is swept.

VARIABLES

Var Eqn

VAR
VAR1
Opt=polar(0.444,98.626)
L_value=0

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

"L_value" is defined here and set to 0. The actual values used in simulation are set in the ParamSweep component.