



```
.define S11_nport 2*V(in3)-1
.define S21_nport 2*V(out3)
.define S12_nport 2*V(in4)
.define S22_nport 2*V(out4)-1
```

Imported S-parameter data from NanoVna
Zero bias voltage

```
.define Gamma(In,Src) Mag(2*V(In)-V(Src))
.define VSWR(In,Src) (1+Gamma(In,Src))/(1-Gamma(In,Src))
.define RetLoss(In,Src) - 20*Log(Gamma(In,Src))
.define MismatchLoss(In,Src) - 10*Log(1 - Gamma(In,Src)**2)
```

```
Gamma(in1,V1)=1
VSWR(in1,V1)=4.173MEG
RetLoss(in1,V1)=4.163u
MismatchLoss(in1,V1)=60.183
```

```
Gamma(in3,V3)=615.603m
VSWR(in3,V3)=4.203
RetLoss(in3,V3)=4.214
MismatchLoss(in3,V3)=2.069
```

```
.define S11 2*V(in1)-1
.define S21 2*V(out1)
.define S12 2*V(in2)
.define S22 2*V(out2)-1
```

```
.param Rpars 0.7
.param L 68n
.param RLoad 50
```

```
.define Power_dbm dbm(PG(V1))
Power_dbm=-15.338
PST=-1.334E-023
PDT=15.742m
```

PST is the amount of power stored in the reactive components (in Watts)
PDT is the power dissipated in the circuit (in Watts)

```
.define Power_dbm_nport dbm(PG(V3))
Power_dbm_nport=7.644
```





