



.PARAM

SpicePar1
CPL=1
CPC=1
trin=100p

.PARAM

SpicePar2
N=9
tr=10e-9
BW=0.35/tr
w0=2*3.141592*BW
Zx=50
Cx=1/(w0*Zx*sqrt(2*N/ln(2)-5/8))*1e12
Lx=Zx^2*Cx*1e-12*1e9
L1=2*Lx
C1=Cx
C2=2*Cx
C3=2*Cx
C4=2*Cx
C5=2*Cx
R1=Zx
R2=Zx/2
R3=Zx/2
R4=Zx/2
R5=Zx/2

.PARAM

SpicePar3
L1=90.33
C1=18.07
C2=36.13
C3=36.13
C4=36.13
C5=36.13
R1=50
R2=25
R3=25
R4=25
R5=25

Nutmeg script

```
CUSTOM1
SpiceCode=
tran 1e-9 50e-9
meas TRAN range PP tran.v(vout)
let ten=0.1*range
let ninety=0.9*range
meas TRAN rise_time TRIG tran.v(vout) VAL=ten RISE=1 TARG tran.v(vout) VAL=ninety RISE=1
let tr1=rise_time*1e9
```

Nutmeg script

```
CUSTOM2
SpiceCode=
SP DEC 67 1MEG 800MEG
let dB_S21 = dB(v(s_2_1))
let dB_S11 = dB(v(s_1_1))
let dB_S22 = dB(v(s_2_2))
```

custom1.time	custom1.tran.tr1
0	9.97

