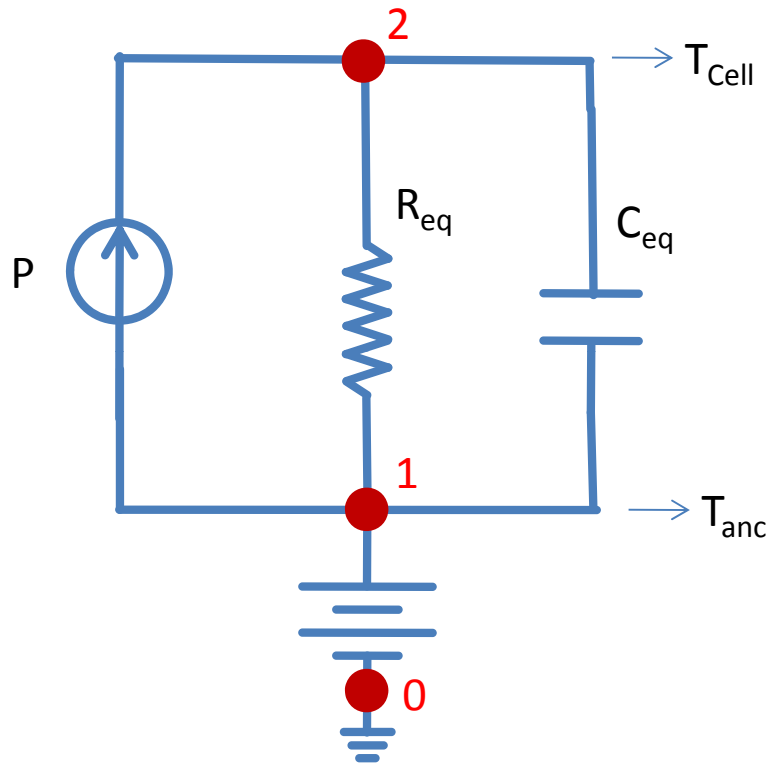


Example Circuit 1:
Transient Analysis

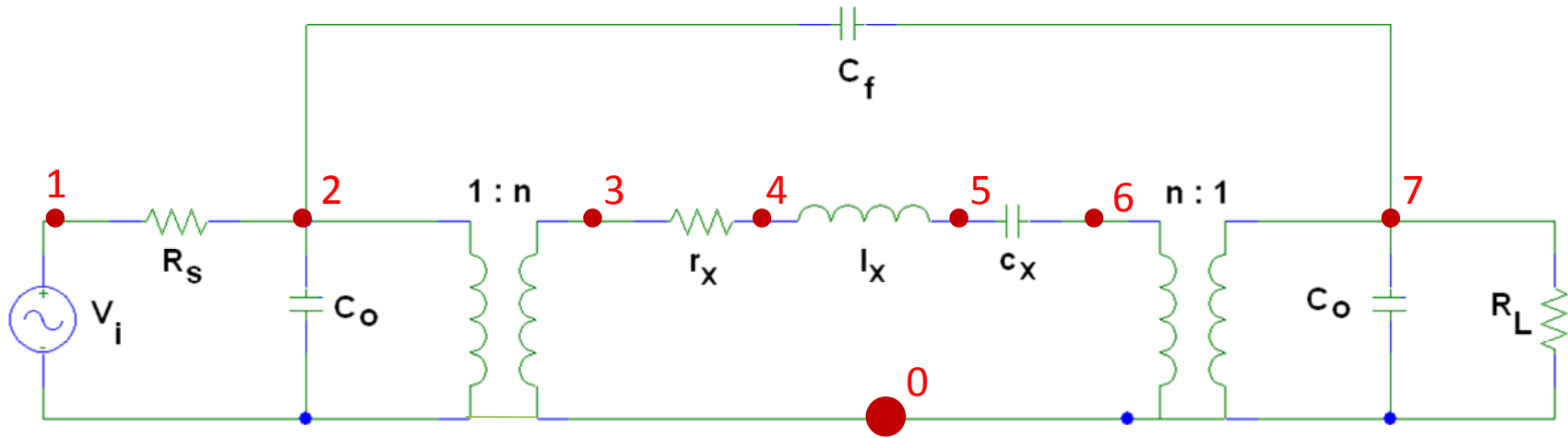


$R_{eq} = 20 \text{ k}\Omega$
 $C_{eq} = 266 \text{ }\mu\text{F}$
 $P = 2.745 \text{ mW}$
 $T_{anc} = 25 \text{ C}$

HSPICE CODE

```
*** Thermal Circuit Model ***  
.option post=2  
  
.param Req = 20k  
+ Ceq = 266u  
+ Tanc = 25  
+ pow = 2.745m  
  
Vanc 1 0 Tanc  
  
Req 2 1 Req  
  
Ceq 2 1 Ceq  
  
lin 1 2 PULSE(0 pow 100ns 10ns 10ns 100s 100s)  
  
.TRAN 10ms 60s  
  
.end
```

Example Circuit 2:
Frequency Domain - AC Analysis



r_x	$6.08 \times 10^{-8} \Omega$
c_x	$4.35 \times 10^{-7} \text{F}$
l_x	$1.61 \times 10^{-11} \text{H}$
η_e	3.72×10^{-6}
C_o	$3.34 \times 10^{-14} \text{F}$
R_s, R_L	50Ω

*** Resonator Circuit Model ***

.option post=2

.param rx = 6.08e-8

+ cx = 4.35e-7

+ lx = 1.61e-11

+ eta = 3.72e-6

+ co = 3.34e-14

+ Rs = 50

+ Rl = 50

+ n = eta*eta

Vvi 1 0 ac 1V

Rrs 1 2 Rs

CCo1 2 0 co

Lin1 2 0 1aH

Lin2 3 0 1aH*n

Kcin Lin1 Lin2 1

Rrx 3 4 rx

Llx 4 5 lx

Ccx 5 6 cx

Lout1 6 0 1aH*n

Lout2 7 0 1aH

Kcout Lout1 Lout2 1

Cco2 7 0 co

*Rrl 7 0 Rl

CCL 7 0 1pF

Ccf 2 7 1fF

.AC dec 1000 1x 1G

.end