% Inductor Current

R1 = 68000;

R2 = 33000;

R3 = 6800;

L = 0.003;

C = 1\*10^-12;

E0 = 10;

R = R3+(R1\*R2)/(R1+R2);

a = R/(2\*L);

p = R/2 \* sqrt(C/L)

w0 = 1/(sqrt(L\*C))

f0 = w0/(2\*pi);

wd = w0\*sqrt(1-p^2)

E = E0\*R2/(R1+R2);

tmax = 3/f0;

t = 0:tmax/1024:tmax;

i = (E/R).\*(2.\*p./sqrt(1-p^2) .\* exp(-a.\*t) .\* sin(wd.\*t));

plot(t,i)

