% Phase Shift Oscillator

f0 = 6220; %Hz

j = sqrt(-1);

C = 1e-9; %F

R = 1/(2\*pi\*C\*f0\*sqrt(6)); % Ohms

K1 = 6; K2 = 5;

Rf = K1\*K2\*R;

K = -Rf/R;

f\_start = 100; f\_stop = 100000;

step = (f\_stop - f\_start)/4096; freq = f\_start:step:f\_stop;

Ts = K.\*((j.\*2.\*pi.\*freq.\*R.\*C).^3)./((j.\*2.\*pi.\*freq.\*R.\*C).^3 + K1.\*(j.\*2.\*pi.\*freq.\*R.\*C).^2 + K2.\*(j.\*2.\*pi.\*freq.\*R.\*C + 1));

Ms = 20\*log10(abs(Ts));

Ps = (180/pi)\*angle(Ts);

semilogx(freq,Ms),grid

figure

semilogx(freq,Ps),grid

