

```

commandwindow
clear
clc
close all
syms t
Q(t)= 0.25*sin(25*3.142*t)
V(t) = 0.5*cos(0.2*3.142*t)
tn =[0:0.0001:0.35]
I=diff(Q(t))
In=subs(I,tn)
figure(1)
plot(tn,In)
xlabel('time(sec)')
ylabel('current(A)')
axis tight
grid on
grid minor
P= I*V
Pn=subs(P,tn)
figure(2)
plot(tn,Pn)
xlabel('time(sec)')
ylabel('power(watts)')
axis tight
grid on
grid minor

figure(3)
plot(tn,In,'r',tn,Pn,'b')
xlabel('time(sec)')
ylabel('variable')
grid on
grid minor
legend('Current(A)', 'Power(W)')

```