

```
%clear
Z=40+1i*125;
P=50e3;
V1=220e3;
pf=0.8;
Vp=V1/(sqrt(3));
Ip=P/(3*Vp*pf);
Ipa=acos(0.8);
I=Ip*(cos(Ipa)+1i*sin(Ipa));
Vs=Vp+I*Z;
Vs1=(sqrt(3))*abs(Vs);
PF=cos(angle(Vs)-angle(I));
Power=sqrt(3)*Vs1*Ip*PF
```

Power = 5.0323e+04