

EE 463 Term Project 1

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# Introduction

Today, computers, televisions and mobile phones have become indispensable in our lives. We can't think of a life without them. So how do we get the energies of these devices?

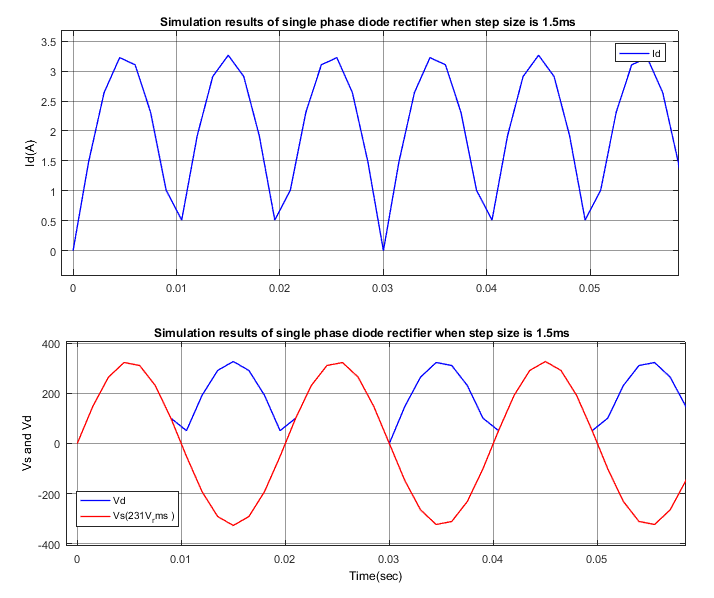
In many power electronics applications, the input power is 50 - 60 AC power from the mains and is converted to DC in the application. Diode rectifiers can be used in industry where there is no control voltage required or in applications where power transmission is not required. In diode rectifiers, the power flow is only one way from mains to load. Diode rectifiers are preferred in DC power supply, AC motor drives and many other areas.

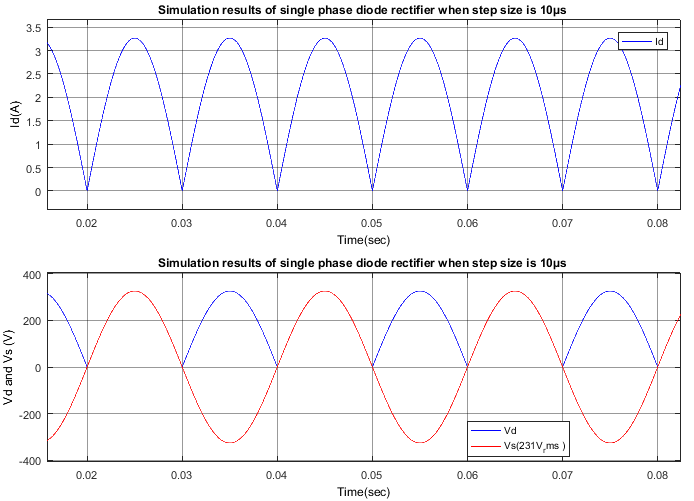
In this Project covers that single phase rectifier under different type loads

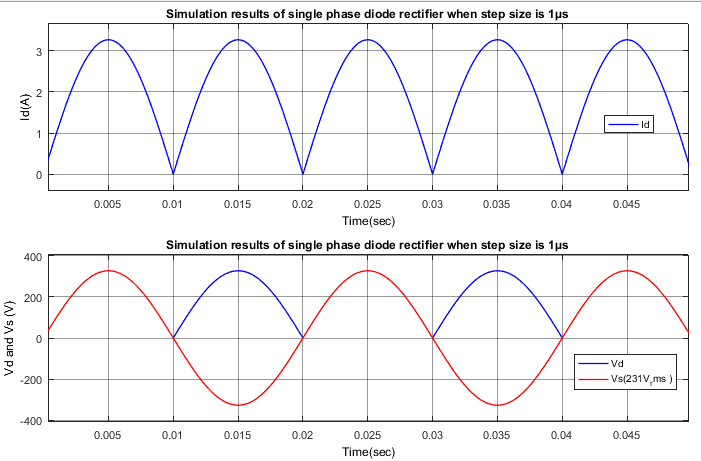
…….. to be continued.

Q1)

In this question discrete time step calculations in the simulation of a single-phase uncontrolled rectifier that is feeding a resistive load (R=100Ω) is performed. Simulation results with step size 1.5 msec, 10 µsec and 1 µsec can be observed in Figure 1, 2, and 3, respectively.







# Q3)