

Solution to lecture 8 exercises

8-100

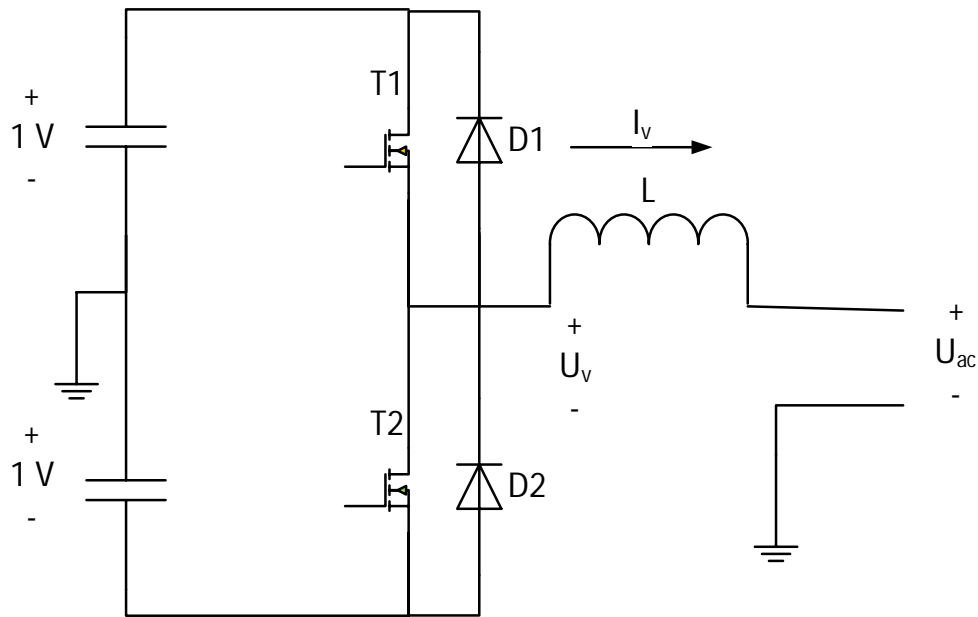


Figure 1

- $U_d = 2 \text{ V}$
- $m_f = 5, f_s = 5 \cdot 50 = 250 \text{ Hz}$
- $L = 2.0 \text{ mH}$
- $m_a = 0.8$
- U_{ac} is considered same as the PWM modulation reference. $U_{ac} = 0.8 \text{ V}$ peak with phase angle 0.

The wave forms are shown in Figure 2 below, where the PWM voltage reference is shown as a signal that is sampled at the peaks of the triangular wave. The sampled voltage reference is then compared with the triangular wave to define the switching's.

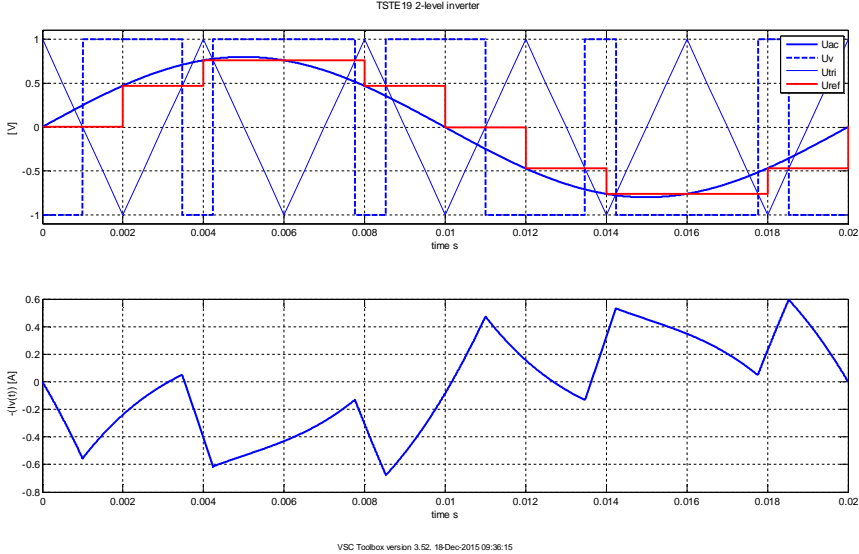


Figure 2