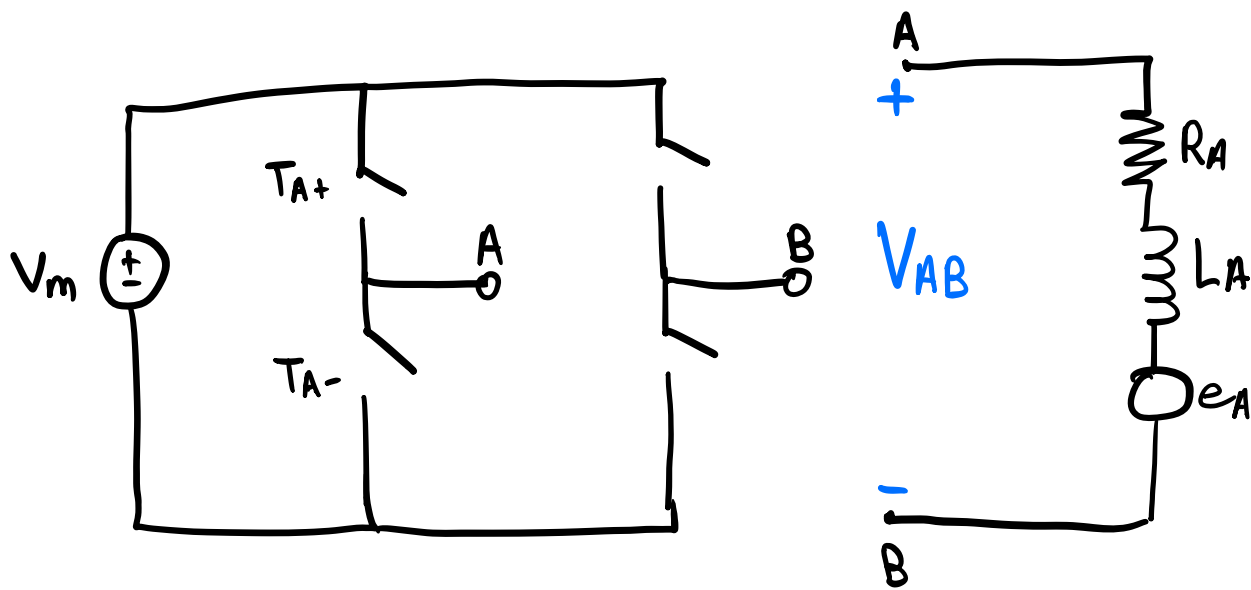


Golf-Cart (Full Bridge):



$$V_{AB} = V_m (D_A - D_B)$$

Pair
Pair

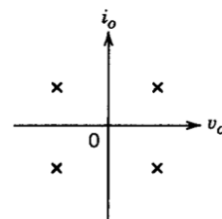
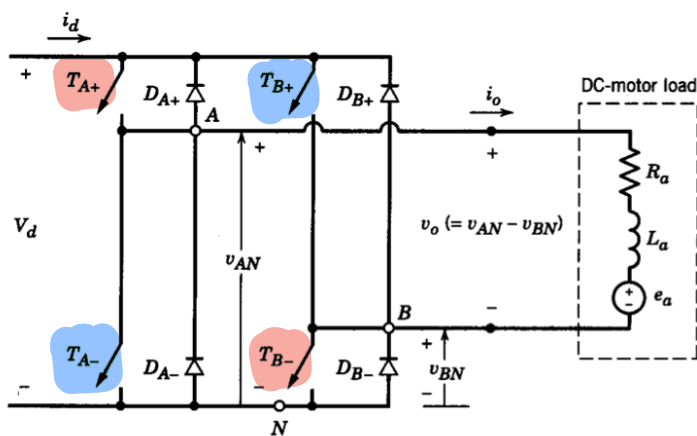
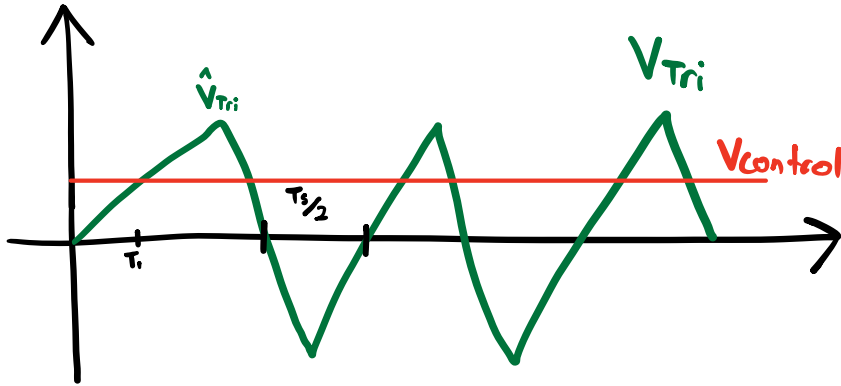


Figure 7-27 Full-bridge dc-dc converter.

Bipolar Mode:



@ $T_1 \rightarrow V_{tri} = V_{control}$

-occurs at $\frac{V_{control}}{\hat{V}_{tri}} \cdot \frac{T_s}{4}$

$$D_1 = \frac{t_{on}}{T_s} = \frac{1}{2} \cdot \left(1 + \frac{V_{control}}{\hat{V}_{tri}} \right)$$

$$D_2 = 1 - D_1$$

$$V_o = V_m [2D_1 - 1]$$

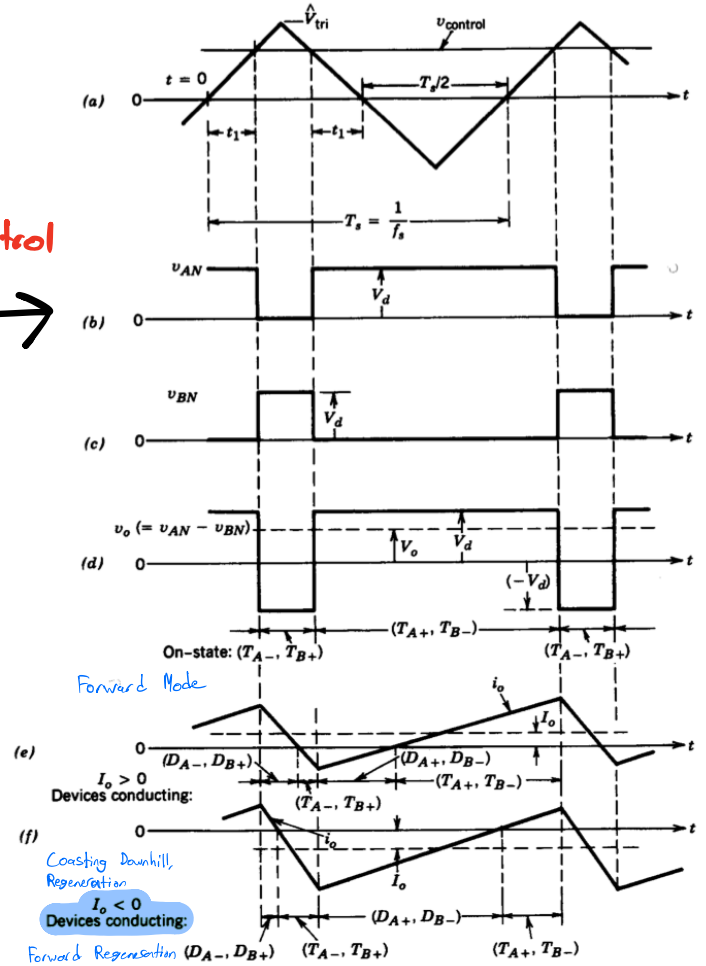
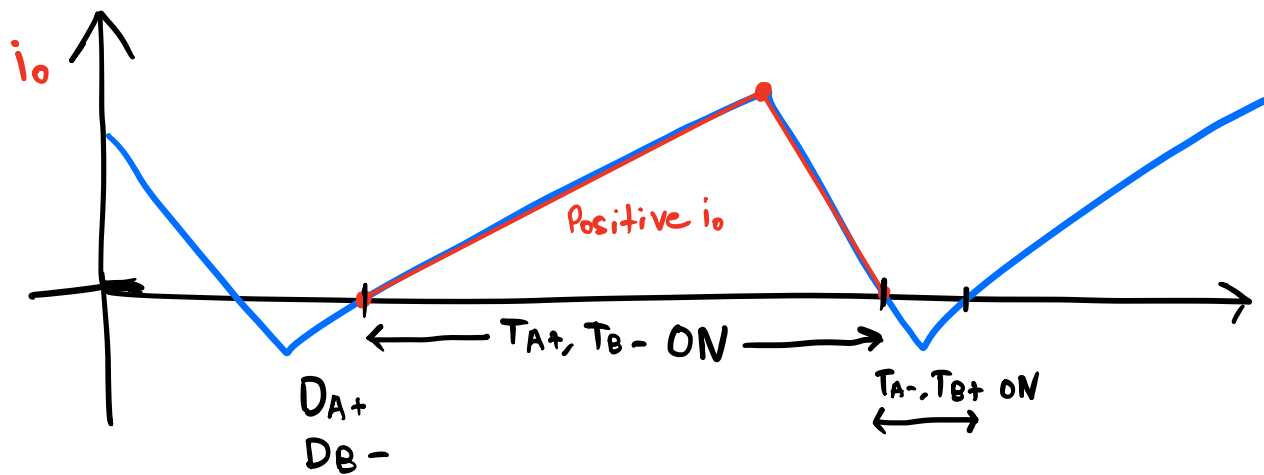
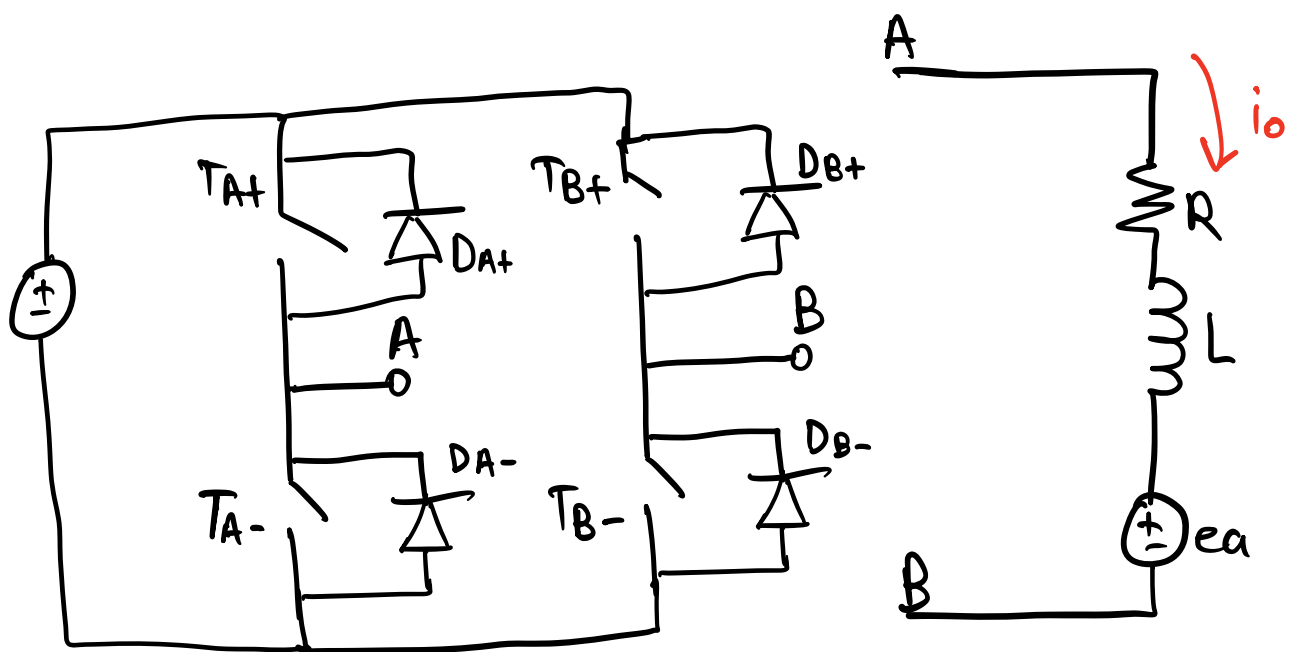


Figure 7-28 PWM with bipolar voltage switching.



$V_{\text{control}} > V_{\text{tri}} \rightarrow T_{A+}$ 'ON'

$V_{\text{control}} < V_{\text{tri}} \rightarrow T_{B+}$ 'ON'

T_{A+} and T_{A-} Complementary Mode

T_{B+} and T_{B-} Complementary Mode

Unipolar:

$f_{sw} \times 2$ Double switching frequency

- Smaller Ripple @ Higher ^{f_{sw}} frequency