Introduction to AC-link topologies





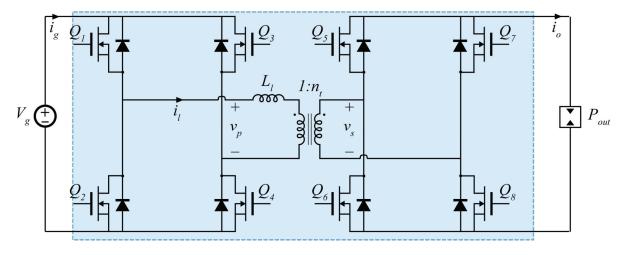


DC-Transformer (DCX)



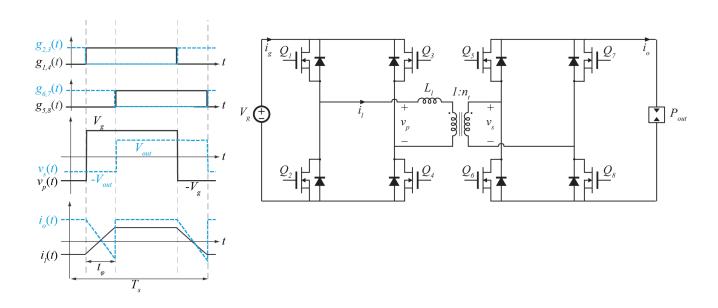


Dual Active Bridge

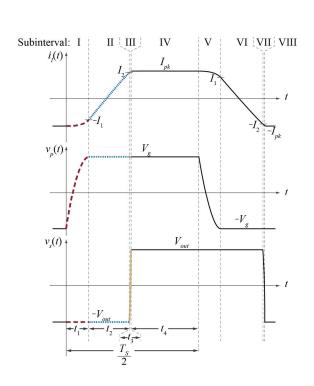


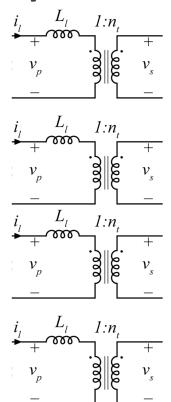


Switching Behavior (PSM)



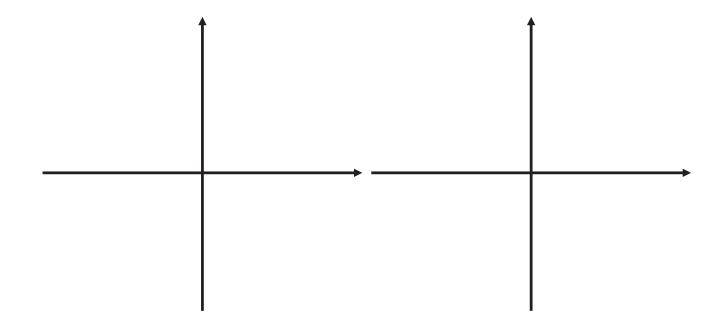
DAB Operation Analysis







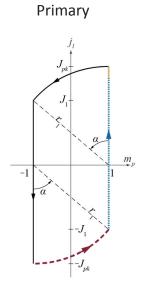
DAB State Plane



ZVS Condition

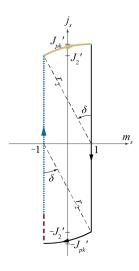


State Plane Solution



$$I_{base} = V_g \sqrt{\frac{C_p}{L_l}} \qquad I_{base} = V_g \sqrt{\frac{C_s}{n_t^2 L_l}}$$

Secondary



$$I_{base} = V_g \sqrt{\frac{C_s}{n_t^2 L_t}}$$

Averaging Step

