Introduction to AC-link topologies

DAB Converter "Quasi-resonant"
Switching Behavior

During primary switching transition
\[ i_p(t) < 0 \]
\[ V_p: V_g < V_y \]

possible to obtain ZVs (on all 8 devices)

Output Current Vs. Inductance

- To maintain low RMS currents and good switch utilization, small inductance is preferred
Dual Active Bridge Converter

Issues:
- ZVS lost at light load
- XF saturation may occur if $v_p$ or $v_o$ are not purely AC
- Performs poorly at $v_o \neq v_g$

Conditions: $r_1, r_2 \rightarrow s_p, s_2$