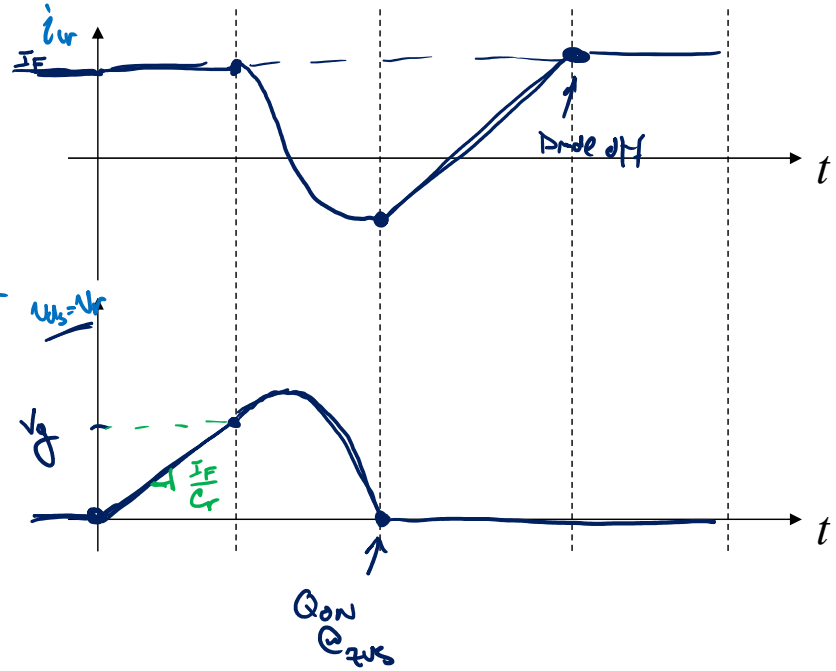
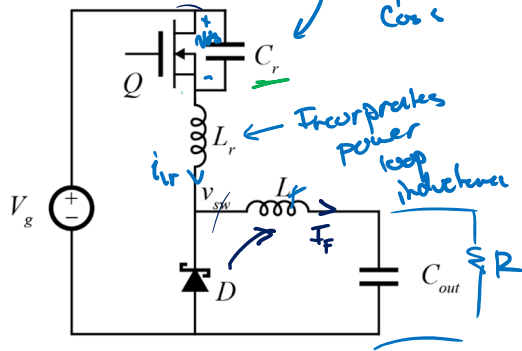


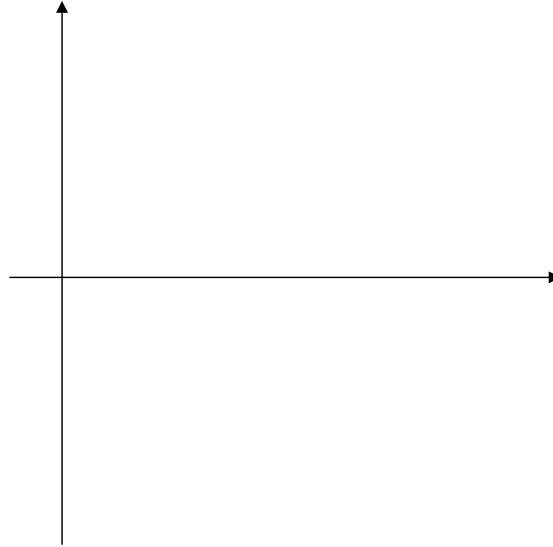
ZVS-QR Buck

conducting: Q, X, D, Q & D, Q

(I) (II) (III) (IV)



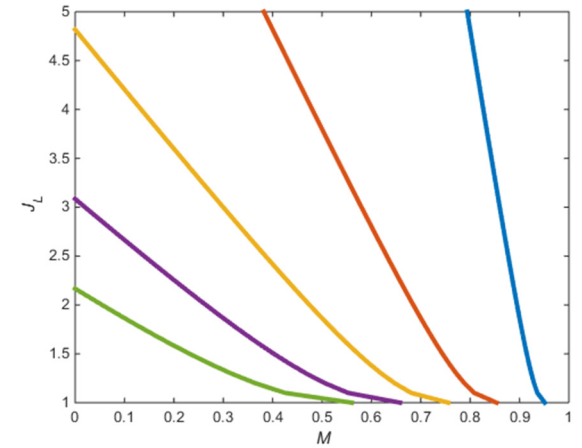
ZVS-QR State Plane



Averaging

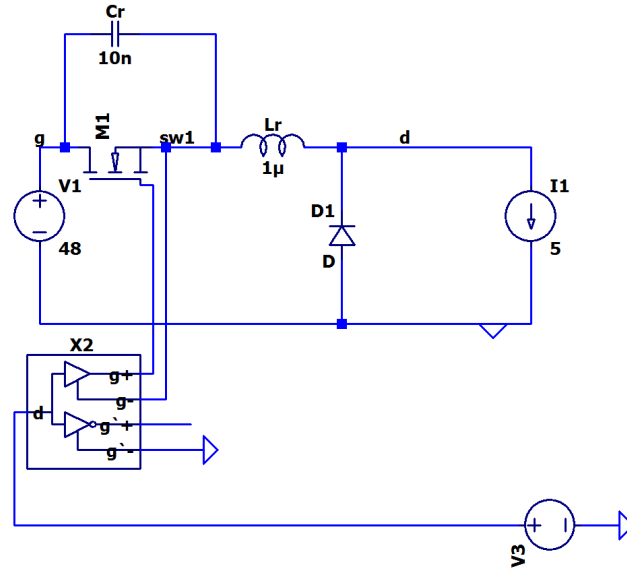


Complete Solution

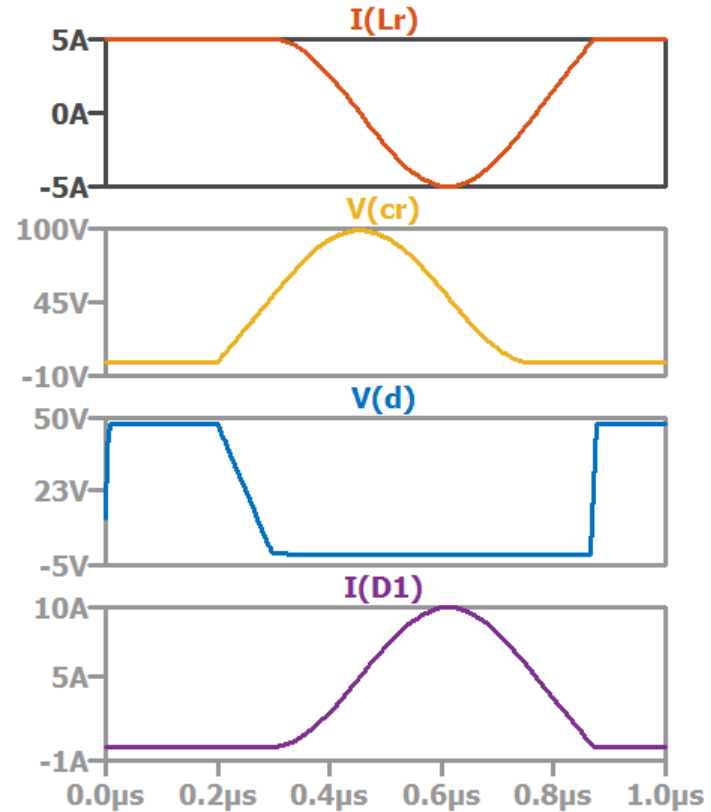
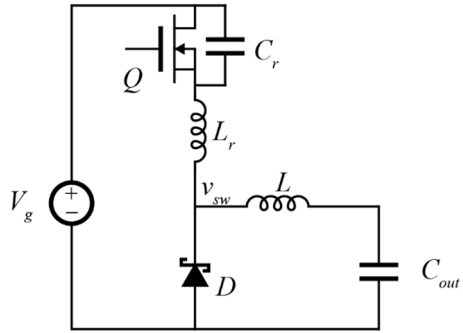


MOSFET Voltage Stresses

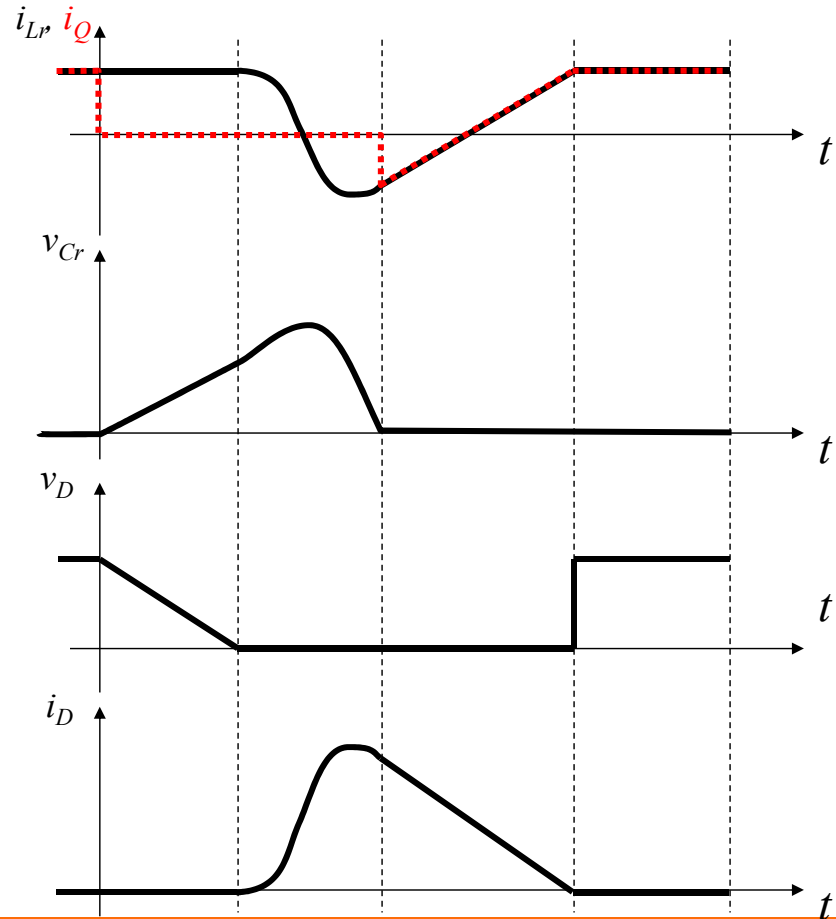
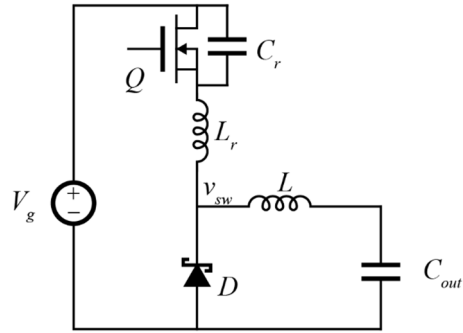
Test Circuit



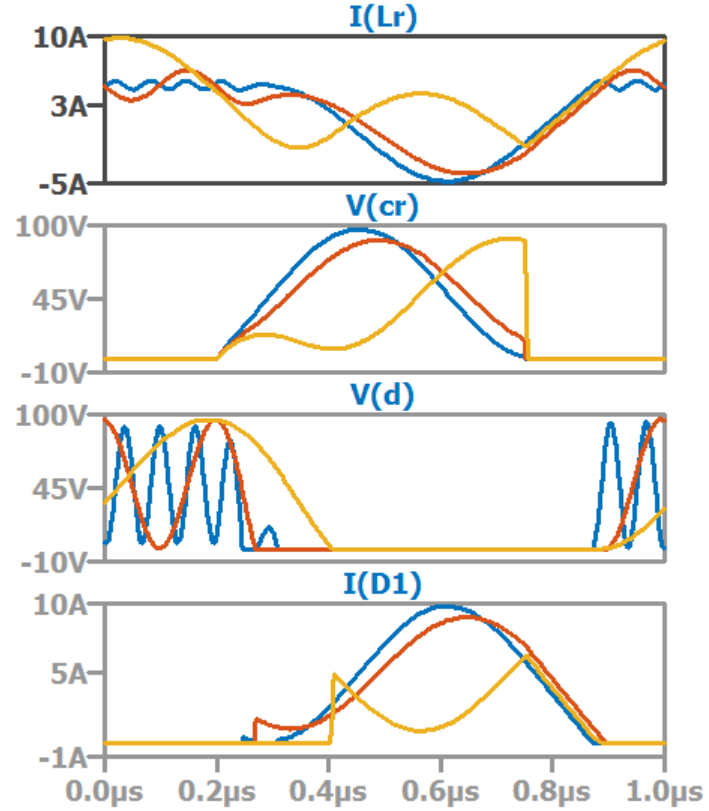
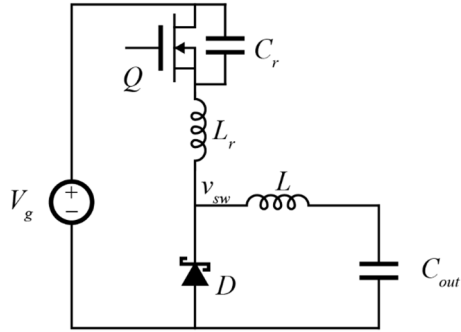
Simulation Results



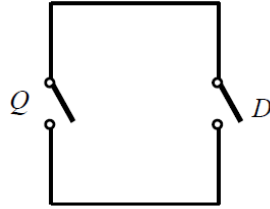
Diode Capacitance



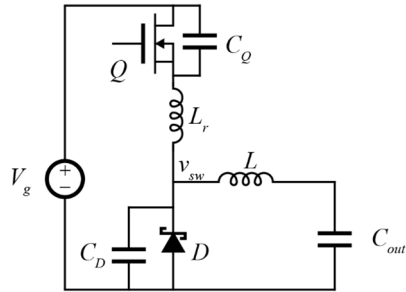
Simulation Results: Diode Capacitance



Wishlist: Multi-Resonant



ZVS-MR Buck



Operating Modes

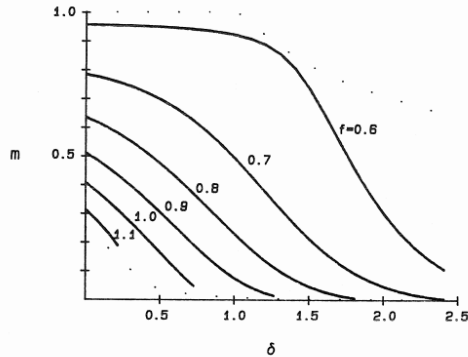


Figure 10.7: Load-to-output DC characteristics of a ZV-MR converter operating in modes (I, II)₁.

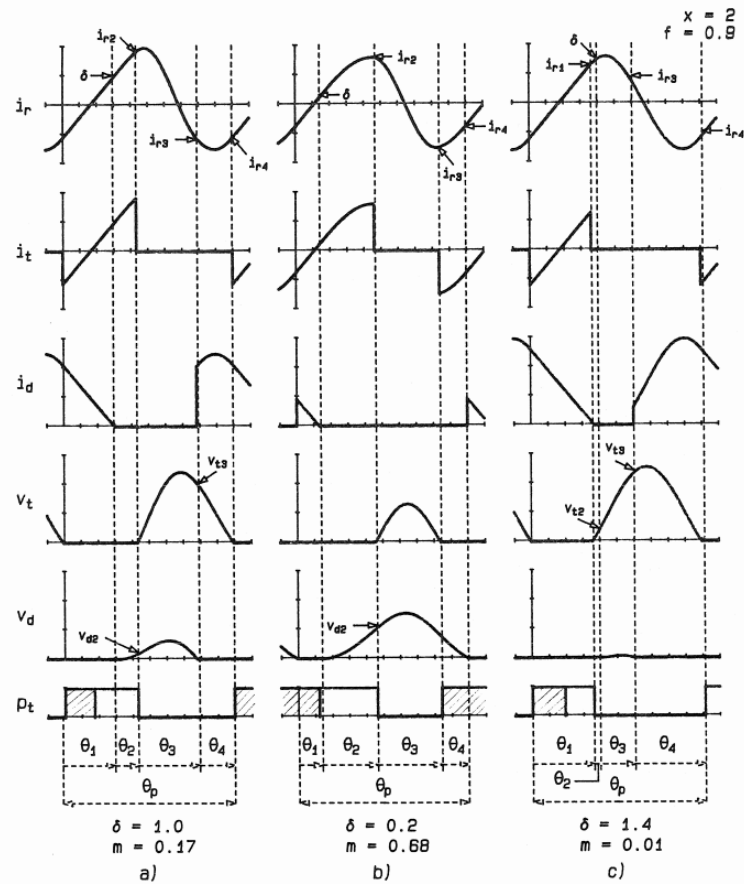
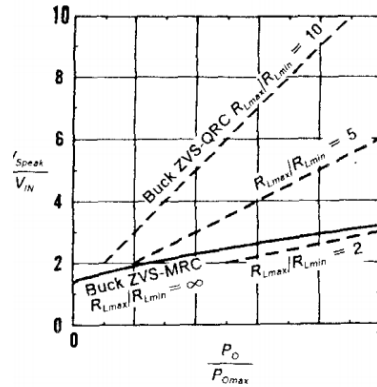


Figure 10.2: Typical waveforms for a ZV-MR converter operating in modes I₁ (a), II₁ (b) or III₁ (c).