

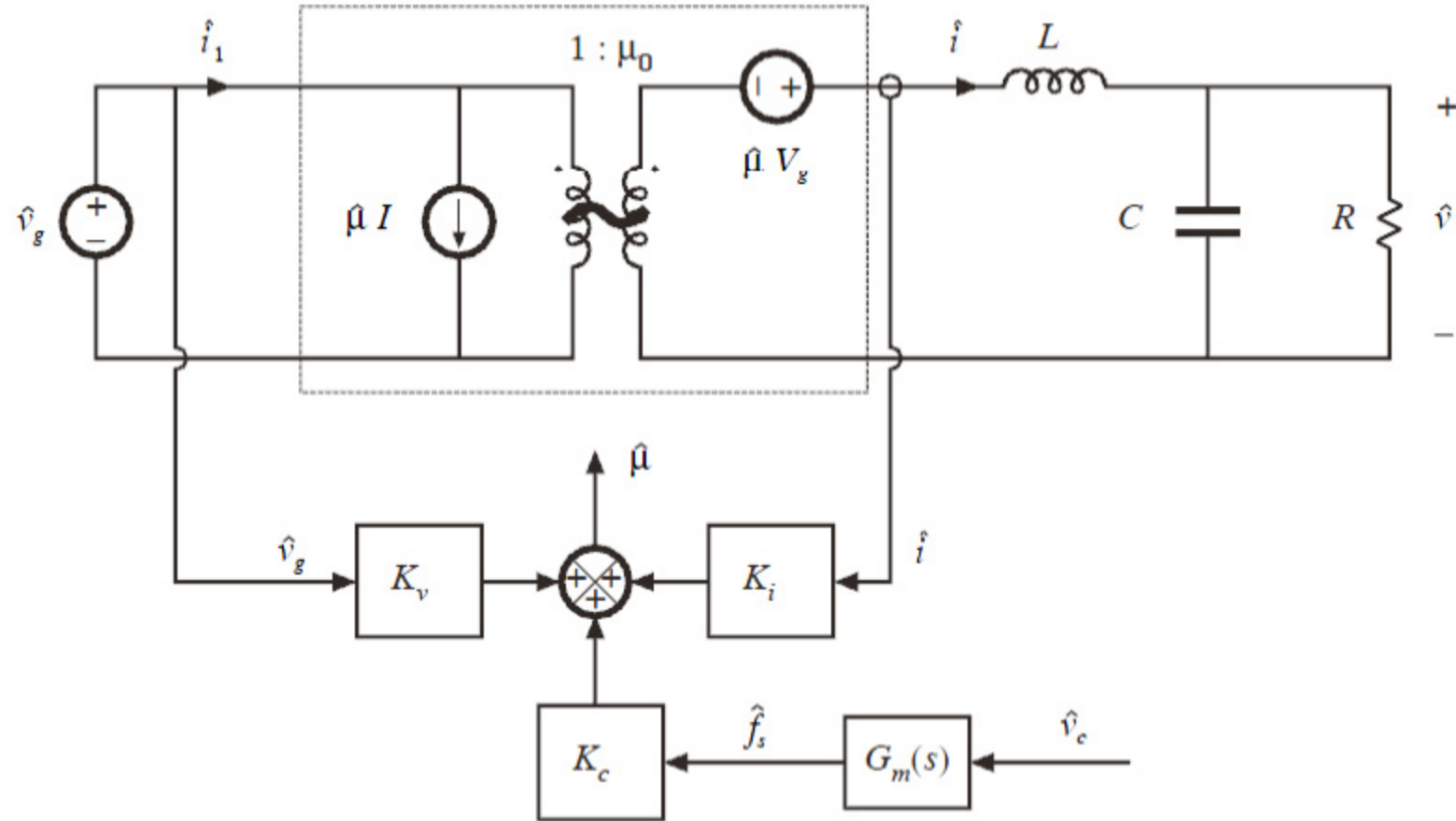
ZVS-QR Switch Cell SSM

$$\mu = 1 - F \cdot \frac{1}{2\pi} \left[\frac{1}{2\lambda} + \pi + \sin^{-1}\left(\frac{1}{\lambda}\right) + \sqrt{\lambda^2 - 1} + \lambda \right] = 1 - F \cdot P_{42}\left(\frac{1}{\lambda}\right)$$
$$F = \frac{f_s}{f_0} \quad \lambda = \frac{I_L R_0}{V_g}$$

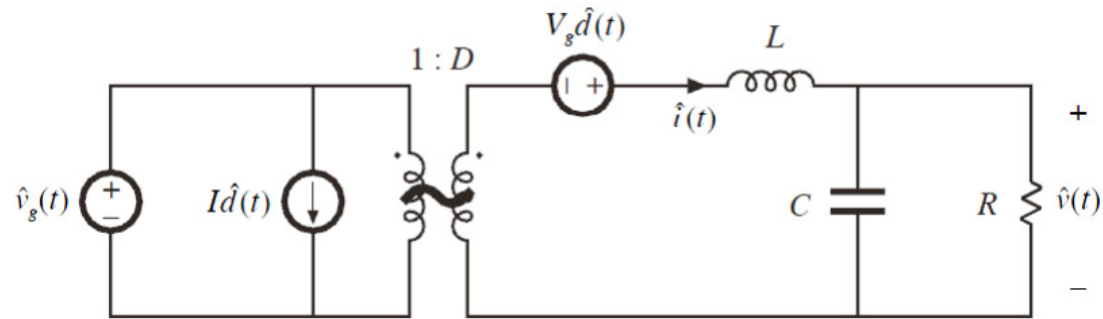
$$\mu = f(I_L, V_g, f_s)$$



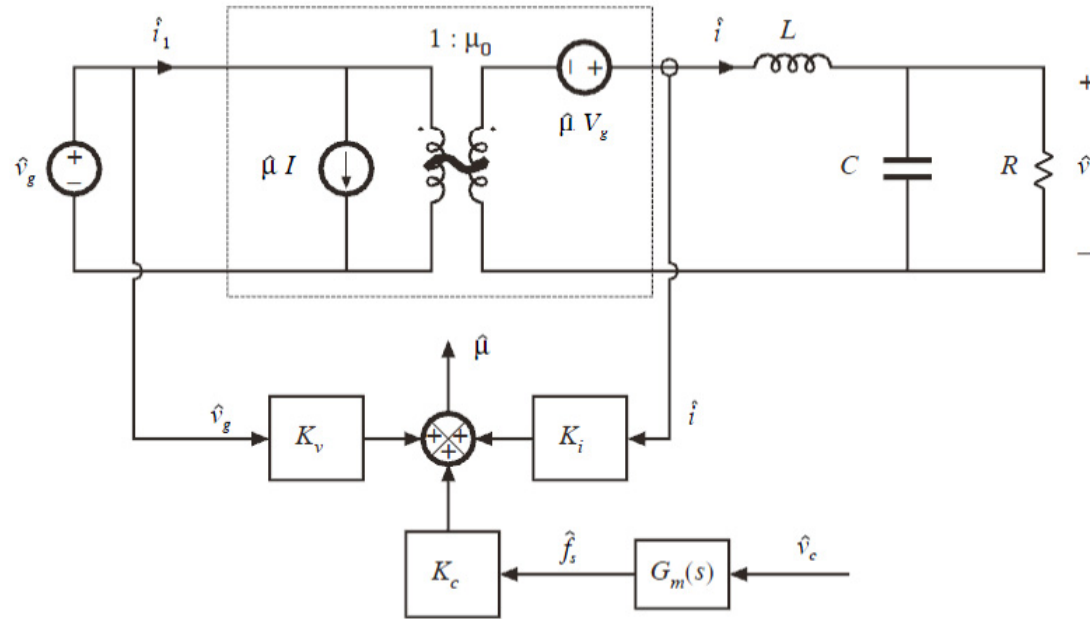
SSM, Soft-Switching Buck



PWM Transfer Functions

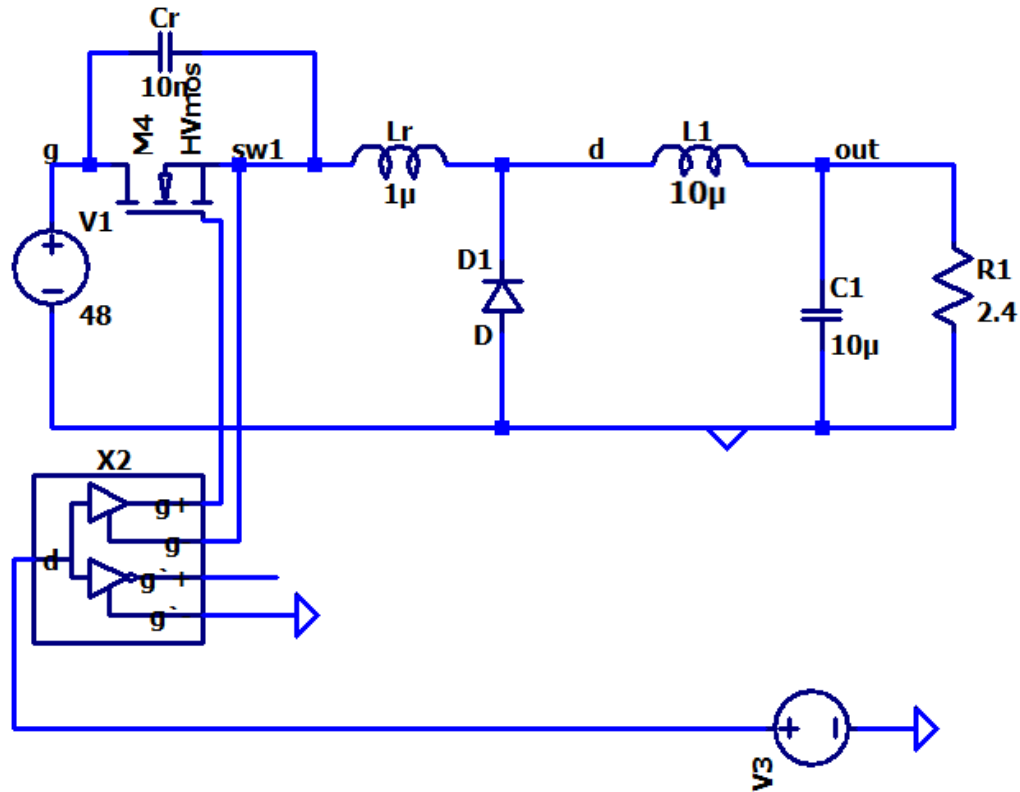


QR Transfer Functions

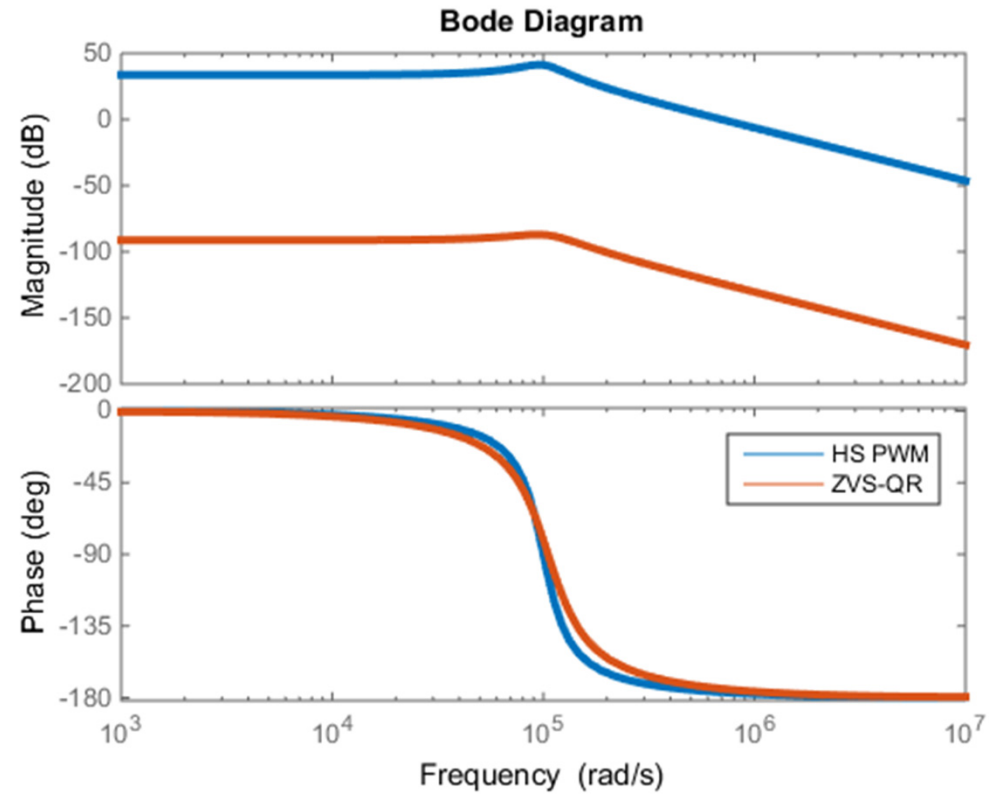




Example



Control-to-Output Transfer Function



Control-to-Output Transfer Function

