Modulator Model

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- Sampled once per period
- No delay between sample and control
- Normally sampled

Only this point matters - sampling behaviour
Digital PWM

Sampling in Modulators
PWM Small Signal Modeling

\[ v_m(t) \]

\[ v_c(t) + \Delta v(t) \]

\[ v_c(t) \]

\[ s(t) + \Delta s(t) \]

\[ s(t) \]

\[ \Delta s(t) \]

\[ \hat{s}[k] \]

\[ \frac{T_s}{V_a} \]