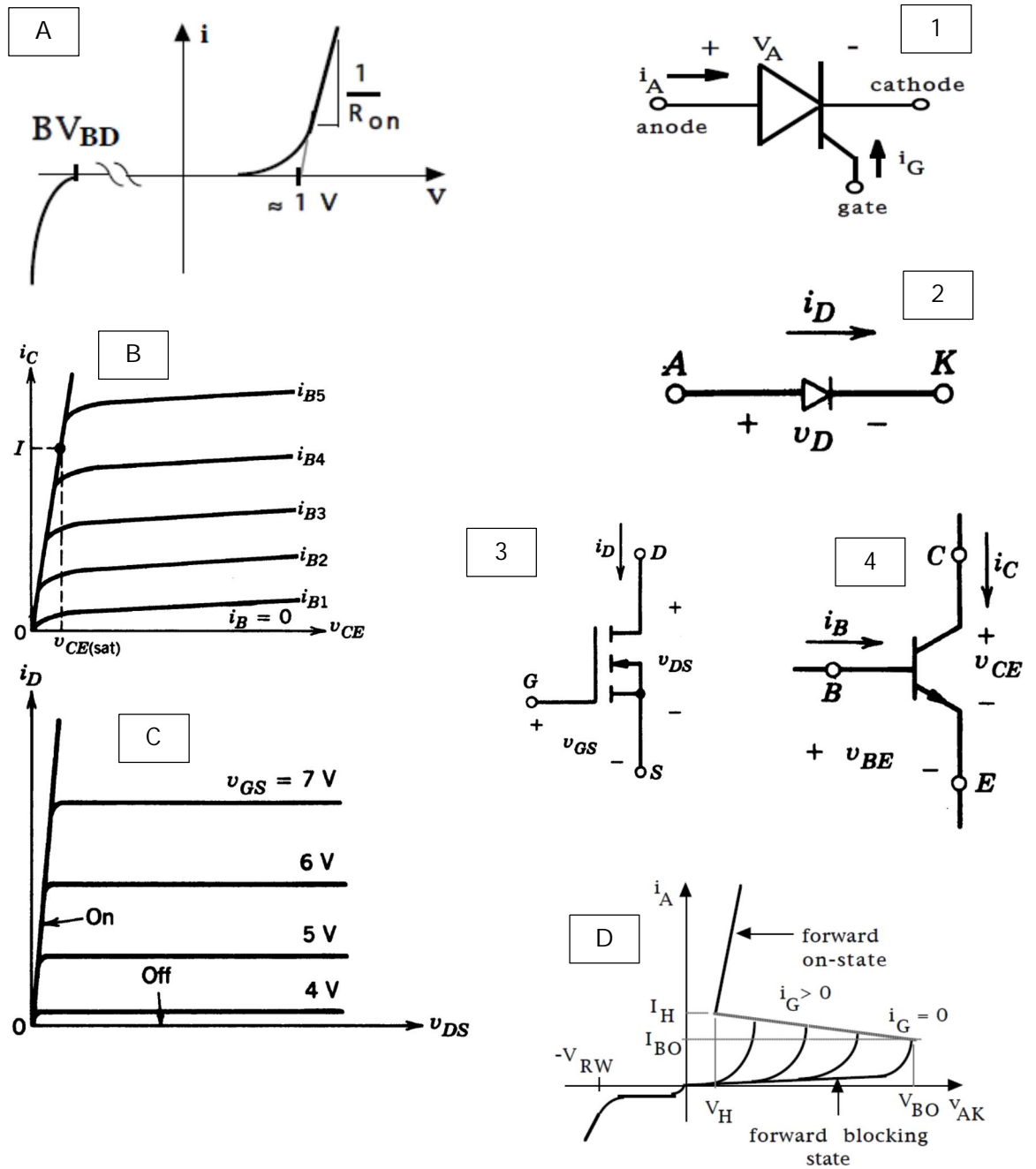


Diagnostic test on power electronic

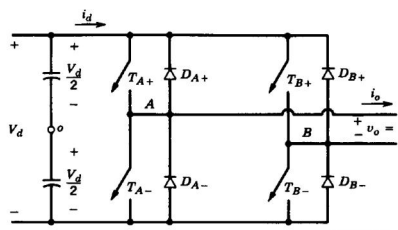
1. Combine I-V characteristics with the corresponding semiconductor device



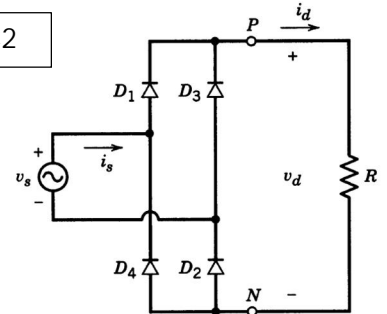
Tomas Jonsson

2. Combine circuit diagram, voltage/current waveform, output voltage equation, and spectra

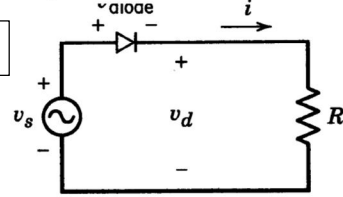
C1



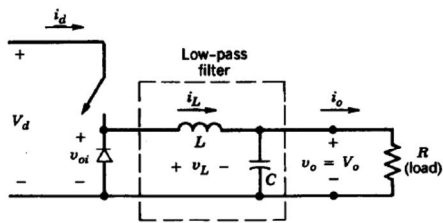
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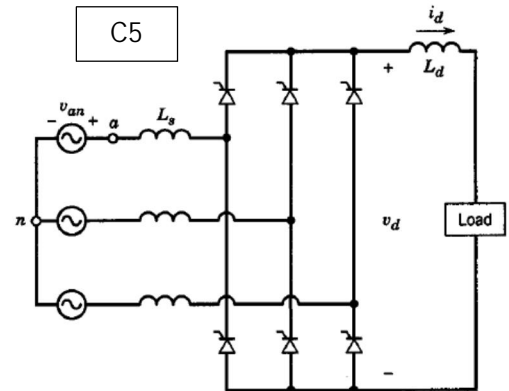
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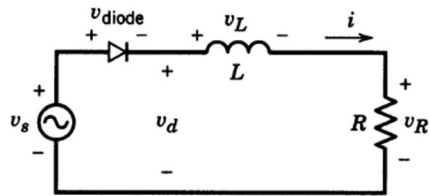
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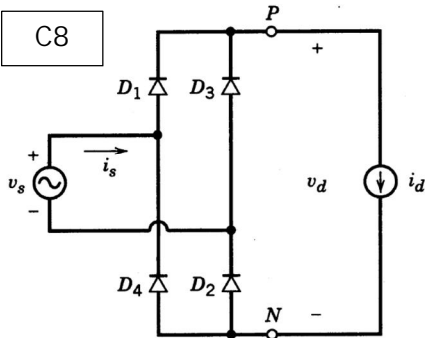
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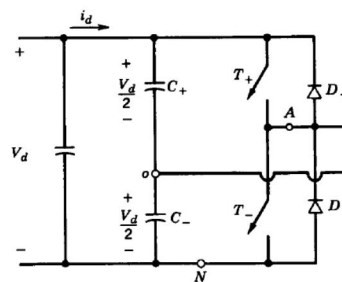
C6



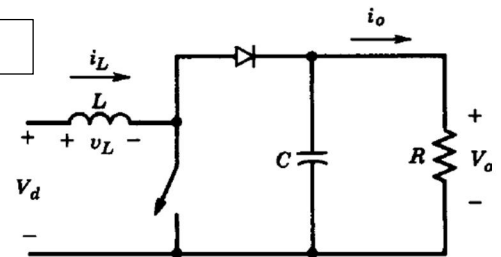
C8

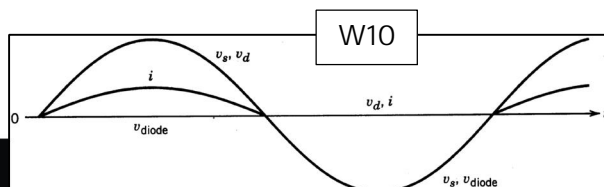
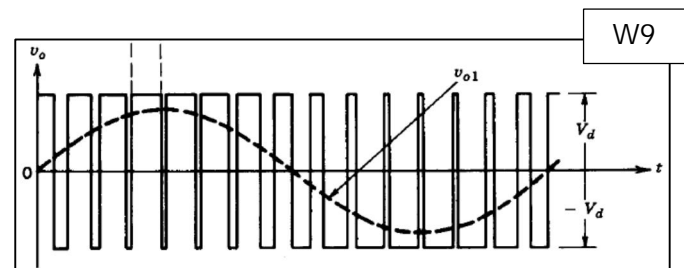
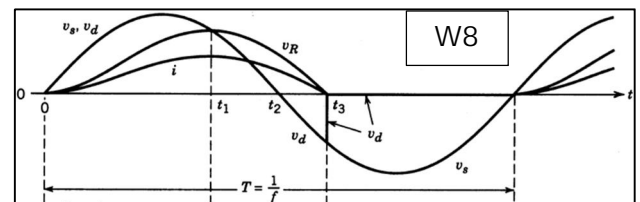
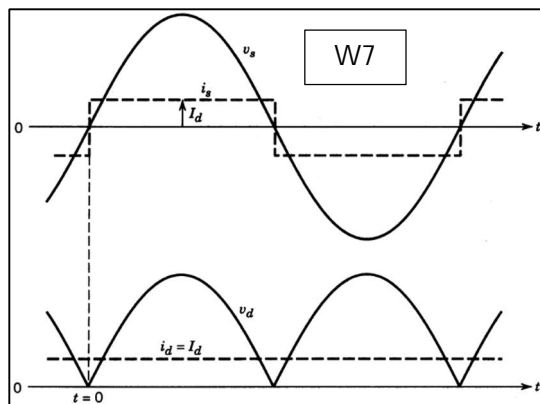
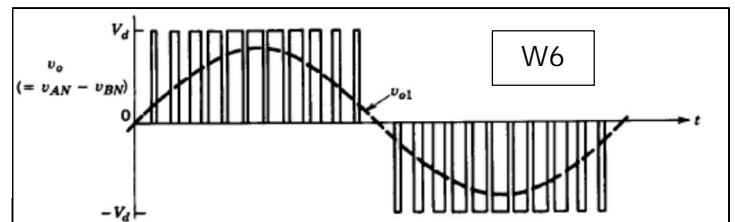
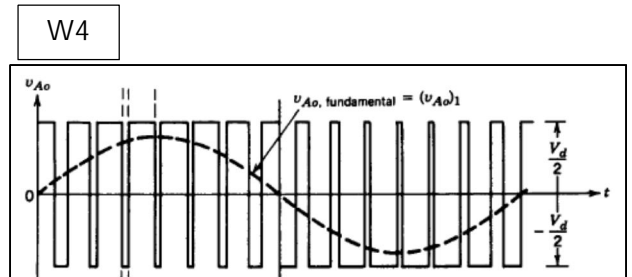
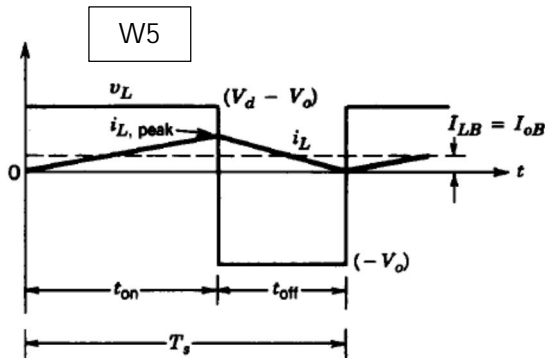
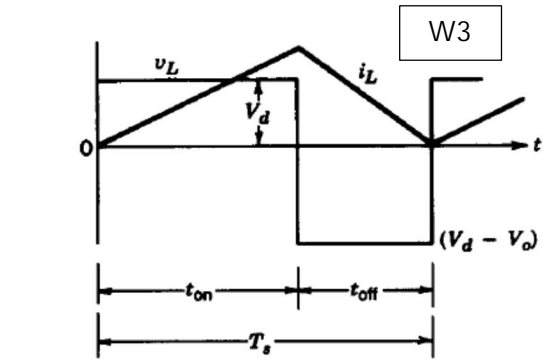
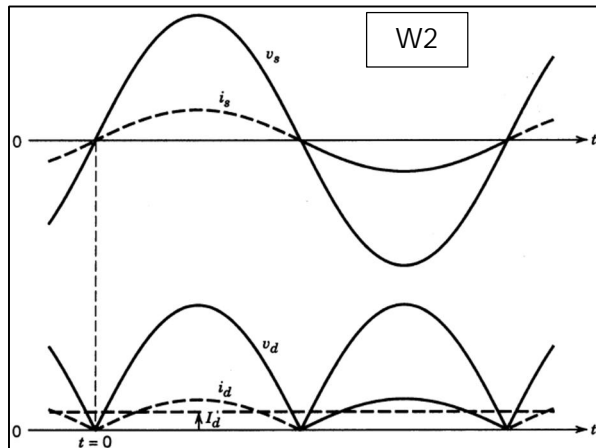
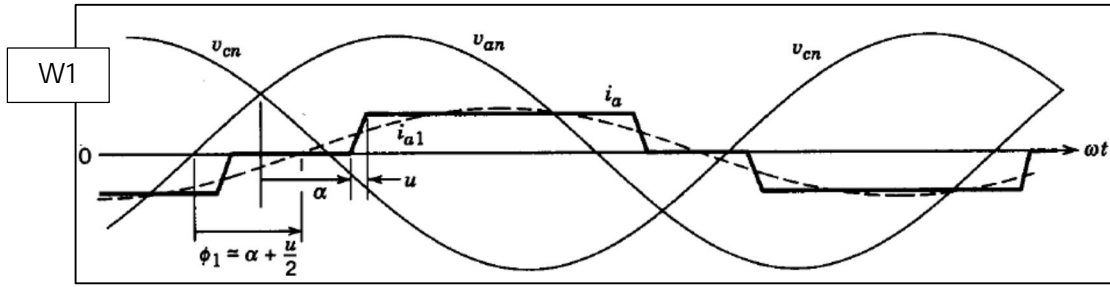


C7



C9





Eq1

$$\frac{V_o}{V_d} = D$$

Eq3

$$\hat{V}_{o1} = m_a V_d$$

Eq2

$$\frac{V_o}{V_d} = 1 - D$$

$$V_d = 0.45V_s$$

Eq4

Eq5

$$\hat{V}_{o1} = m_a \frac{V_d}{2}$$

Eq6

$$V_d = 0.9V_s$$

Eq7

$$V_d = 0.45V_s - f(V_s, L, R)$$

Eq8

$$V_d = 1.35V_{LL} \cos\alpha - \frac{3\omega L_s}{\pi} I_d$$

Spectra

