

$$L = \frac{(6-5)}{0.3 \times 2 \times 700 \text{e}3} \times \frac{5.4}{6.4}$$

$$L = 2 \mu\text{H}$$

choose $L = 5.2 \mu\text{H}$

$$\Delta I_{\text{ripple}} = \frac{(6-5)}{5.2 \text{e}-6 \times 700 \text{e}3} \times \left(\frac{5.4}{6.4} \right)$$

$$= 23\%$$

$$= 0.46 \text{ A}$$

Output Capacitor

$$\Delta V_{\text{ripple}} = \Delta I_{\text{ripple}} \times \left(\frac{1}{8 \times f_{\text{sw}} \times C_{\text{out}}} + ESR_{\text{out}} \right)$$

$$\frac{\Delta V_r}{\Delta I_r} - ESR_{\text{out}} = \frac{1}{8 \times f_{\text{sw}} \times C_{\text{out}}}$$

$$C_{\text{out}} = \frac{1}{8 f_{\text{sw}} \left(\frac{\Delta V_r}{\Delta I_r} - ESR_{\text{out}} \right)}$$

$$= 1.66 \mu\text{F}$$

$$\Delta V_r = 190 = 50 \text{ mV}$$

$$\Delta I_r = 0.46 \text{ A}$$

$$f_{\text{sw}} = 700 \text{ kHz}$$

$$ESR_{\text{out}} = 3 \text{ m}\Omega$$

go to

$2 \times 10^4 \mu\text{F}$ for stability