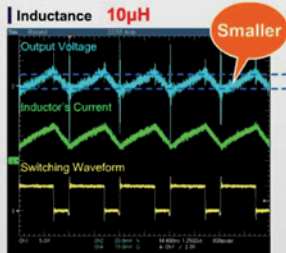


Effect on Ripple Voltage due Inductor's Current



- Formula for calculating Change in Inductor's Current

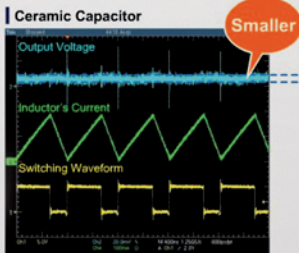
$$\Delta I_L = \frac{(V_{IN} - V_{OUT})}{L} \text{ ton}$$



- Formula for calculating Ripple Voltage

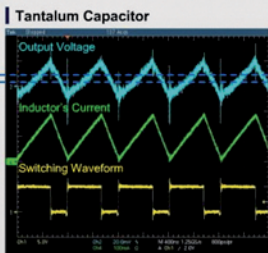
$$\text{Ripple Voltage} = \Delta I_L \times \text{ESR}$$

Effect on Ripple Voltage due to Capacitor



- ESR of Capacitor

Ceramic Capacitor ... 5m~20m Ω
Tantalum Capacitor ... 0.1~1 Ω
Al Electrolysis Capacitor ... 10m~10 Ω



- Formula for calculating Ripple Voltage

$$\text{Ripple Voltage} = \Delta I_L \times \text{ESR}$$