

Switch peak current (CCM operation)

$$I_{SW} = I_{in} + I_{out} + I_{ripple}$$

Where:

$$I_{in} = \frac{V_{out}I_{out}}{V_{in}}$$

$$I_{ripple} = \frac{V_{in}}{L} * \frac{V_{out}}{V_{in} + V_{out}}$$

$$L = \text{Inductor value}$$

Current Sense resistor equation

$$R_{ISNS} = \frac{V_{ISNS}}{I_{SW}}$$