$V_{inmax} := 32.6\ V$ $n\_mics := 15$ $I_{inmax} := 9.21\ A$ $V_{inverter} := 360\ V$

$$V_{out} := \frac{V_{inverter}}{n\_mics} = 24\ V$$

$$D_{buck} := \frac{V_{out}}{V_{inmax}} = 0.736$$

$f_{sw} := 50\ kHz$ $L := 0.1\ mH$

$$\Delta L_{max} := \frac{\left(V_{inmax} - V_{out}\right) \cdot D_{buck}}{f_{sw} \cdot L} = 1.266\ A$$

$$P := V_{inmax} \cdot I_{inmax} = 300.246\ W$$

$$I_{out} := \frac{P}{V_{out}} = 12.51\ A$$

$$I_{swmax} := \frac{\Delta L_{max}}{2} + I_{out} = 13.143\ A$$

BOOST

$V_{outboost} := 90\ V$ $V_{inboost} := 1\ V$ $P := V_{inboost} \cdot 9.21\ A = 9.21\ W$

$$D_{boost} := \frac{V_{outboost} - V_{inboost}}{V_{outboost}} = 0.989$$

$$I_{outboost} := \frac{P}{V_{outboost}} = 0.102\ A$$

$$\Delta L_{maxboost} := \frac{V_{inboost} \cdot D_{boost}}{f_{sw} \cdot L} = 0.198\ A$$

$$I_{swmaxboost} := \frac{\Delta L_{maxboost}}{2} + \frac{I_{outboost}}{1 - D_{boost}} = 9.309\ A$$