



## Core Loss Calculator

Part Number:

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Please Enter Inductor Data OR Wave Form Data

ENTER WAVEFORM DETAILS

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Current RMS (Irms) A:

Ripple Current ( $\Delta I$ ) A:

Frequency (kHz):

Req Inductance ( $\mu H$ ):

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Inductor current RMS ( Irms ) A:

Frequency (kHz):

Voltage input (Vin) V:

Voltage output (Vo) V:

Output current Max (Io) A:

Ripple voltage (Vripple) mV:

Voltage drop at switch (Vsw) V: 1.5

Voltage drop Diode (forward voltage drop) (Vd) V:0.5

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Assumption:

- Approximate Calculation for Buck converter.
- For the loop stability reason - output capacitor should have resistance of > 100 mOhms.
- No LC post filter

## Result

**Winding Loss: (W)**

**Core Loss DC:** (W)

**Core Loss AC:** (W)

**Req Inductance:** ( $\mu\text{H}$ )

**Peak Current:** (A)

**Temp Rise DC:** ( $\Delta\text{T}^\circ\text{C}$ )

**Temp Rise AC:** ( $\Delta\text{T}^\circ\text{C}$ )

**Total Temp Rise ( $\Delta\text{T}$ ) No Airflow:** ( $\Delta\text{T}^\circ\text{C}$ )