

Originals

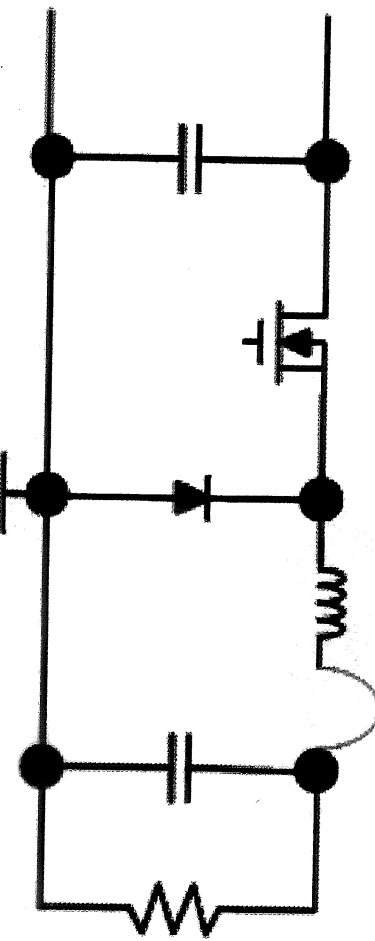
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Current Probe Insertion ---- Correct Location

The correct location to introduce a current probe (or current sense resistor), for any topology ---- is in series with the inductor. Note that this is the length from the switchir node to the output capacitor. This particular "stretch of land" is not critical.

OK

Correct place to introduce current probe
---- in series with Inductor
(also non-critical in terms of PCB layout)



MEASURE FET Currents

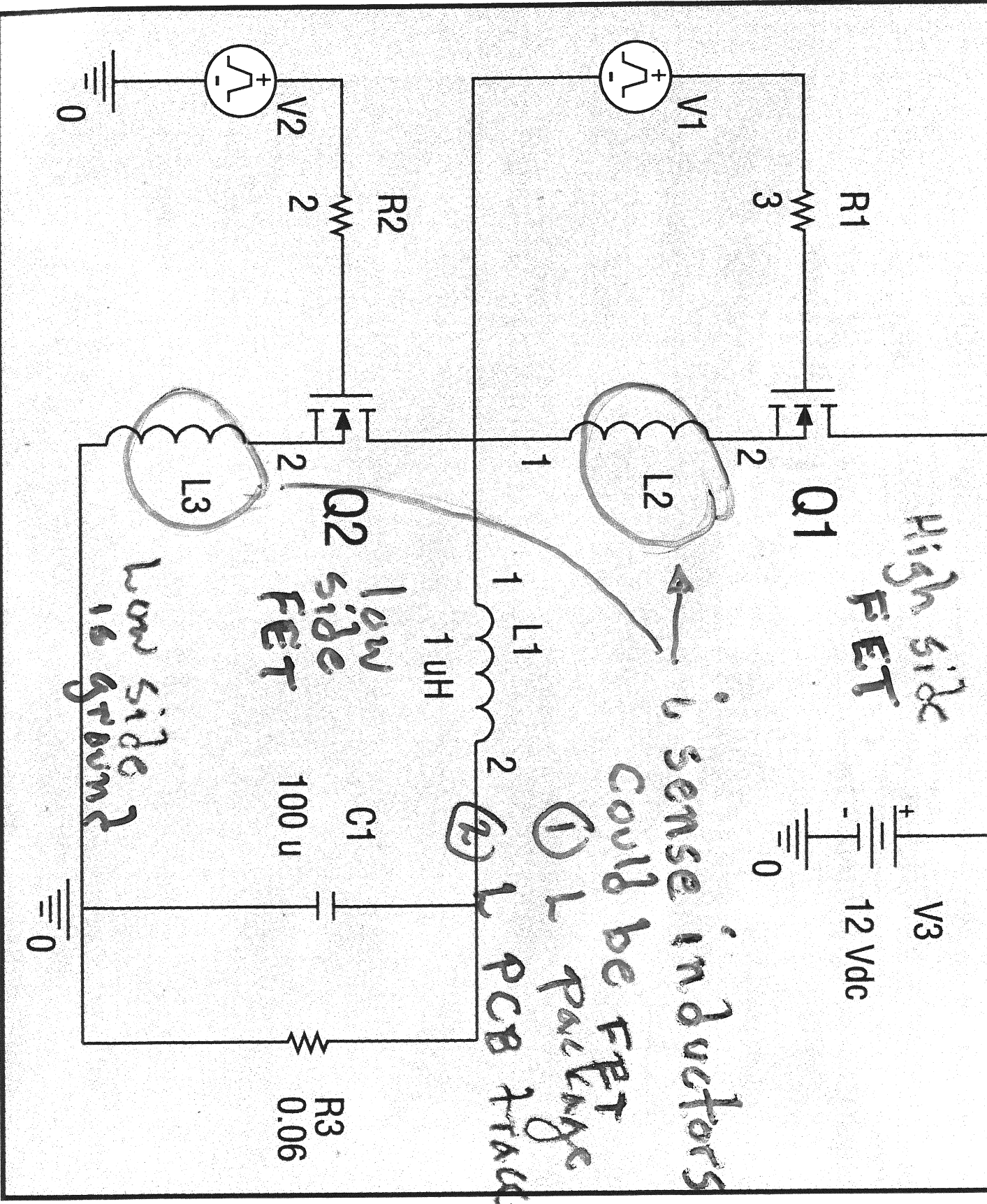


Fig. 1. Simplified schematic of a buck converter.

Buck i_L :

Laptop 50A
Desktop 100A
Server 150A $\Rightarrow I^2R$ loss

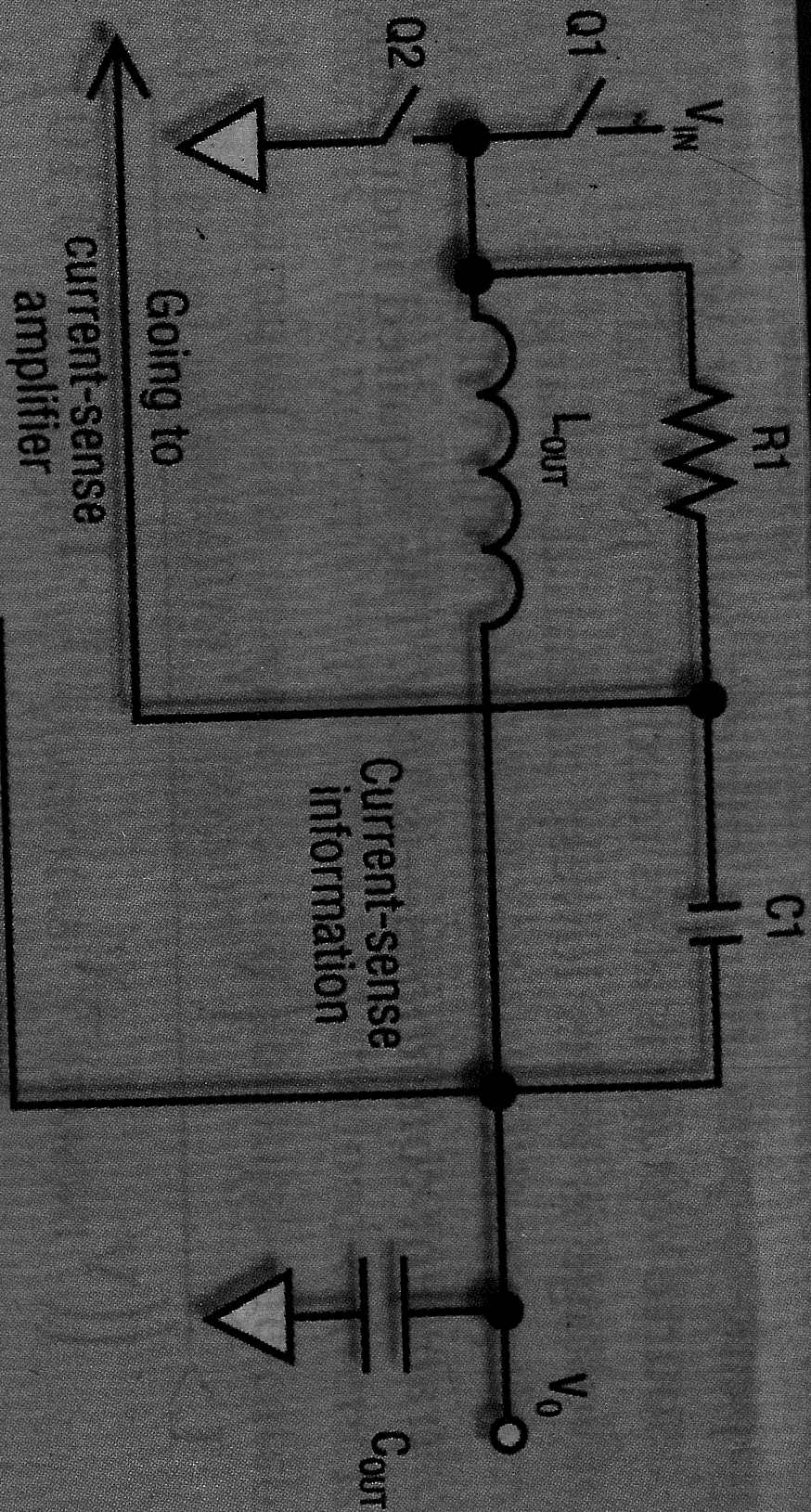


Fig. 2. Replacing R_{SENSE} with an inductor for current sensing reduces power losses and increases the efficiency of the regulator. Voltage-sensing information is across $C1$.