Final Degree Project

Boost Converter DC-DC

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Appendix C

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C. FINAL MODIICATIONS

The described design worked optimal until the day of the last presentation when appeared some problems. The converter could not work at the limit.

Searching the problem we found the solution, I supposed a current source, I $_{source}$, on the output of the operational amplifier that belongs to a PI regulator of the pwm.

Usually, the majority of pwm, has a current in the output of the OA so, to make the PI regulation we need to connect, the resistance R_{comp} and the capacitor C_{comp}, from the right pin of pwm to ground to obtain a voltage, as the figure (1).

But in the case of the chosen pwm we have a voltage source, V $_{source}$, in the output of the AO, so the PI regulator has a usual structure as inversor OA figure (2).
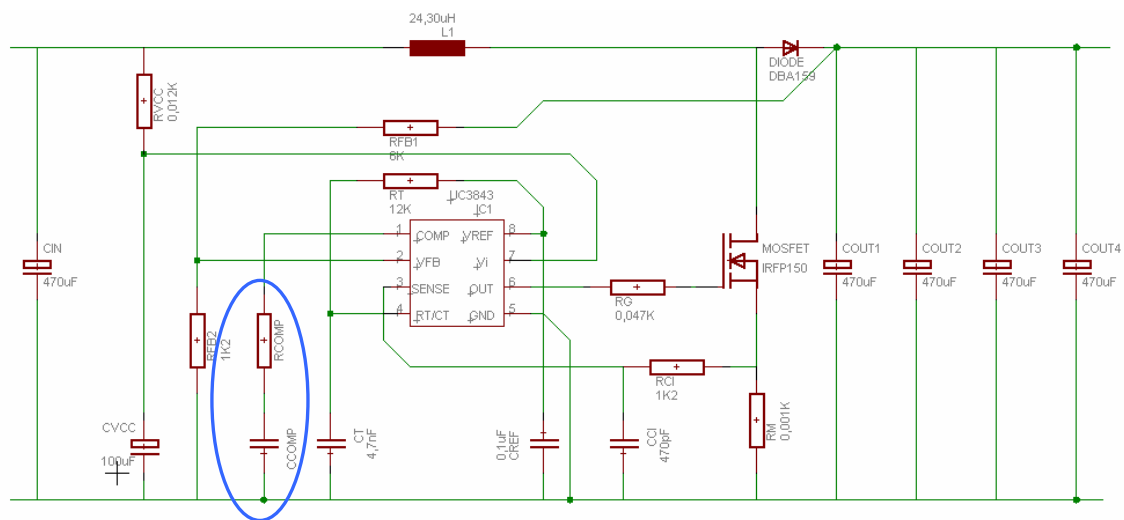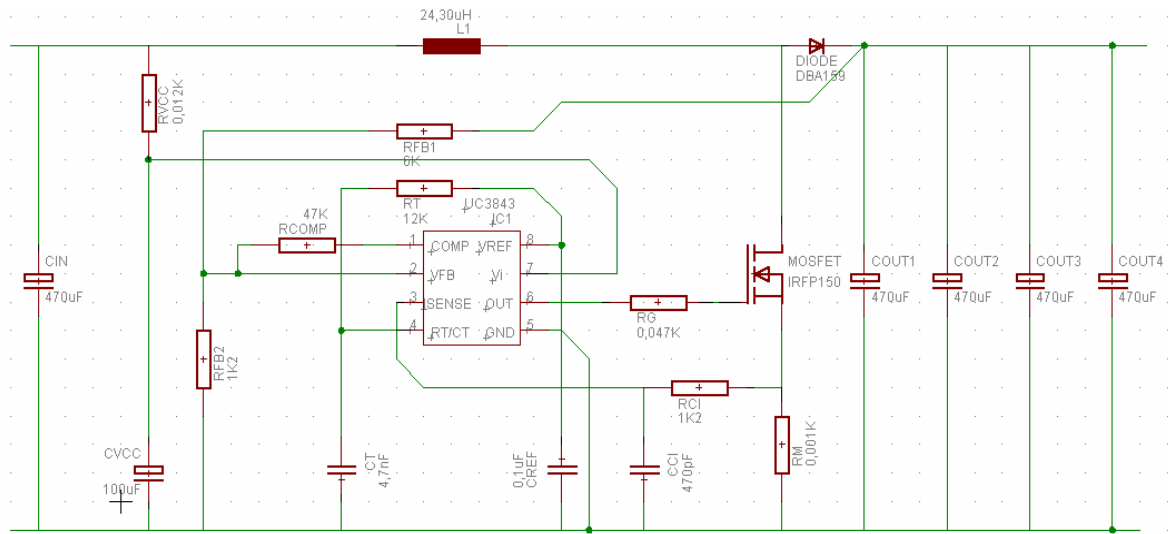

Fig.1: Wrong schematics diagram.

Fig.2: Final schematics diagram

With this last schematic diagram the result obtained was completely satisfactory in all the different tests.