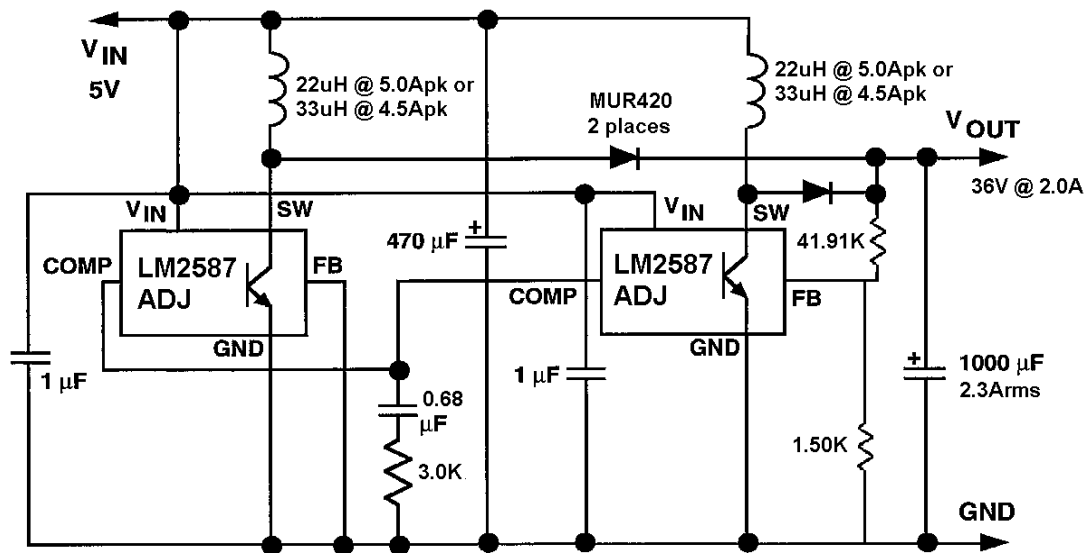


Increasing Available Load Power in an LM2587 Boost Regulator

One of the most frequently requested circuits is a method to squeeze more power out of a boost converter. The maximum load power available at the output is directly related to the input power available to the DC-DC converter.

When the input voltage is a low value (like 5V), this greatly reduces the amount of power that can be drawn from the source (because the maximum input current is limited by what the switch can handle). In the case of the LM2587, the maximum switch current is 5A (peak).

Increased load power can be obtained with the LM2587 by paralleling two devices (see Figure 50). Because current-mode control is used in the LM2587, the two converters will automatically share the load current demand.



DUAL LM2587 BOOST CIRCUIT

The right-hand regulator is the master that sets the duty cycle of both regulators (tying the **Compensation** pins together forces the duty cycles to track).

The master regulator has direct feedback from the output, while the other regulator has its Feedback pin grounded. Grounding the Feedback pin makes the regulator attempt to run "wide open" (at maximum duty cycle), but the master regulator controls the voltage at **both** Compensation pins, which adjusts the pulse widths as required to hold the output voltage at 36V.