DESCRIPTION

Demonstration circuits 469A and 469B are synchronous step down power supplies providing up to 12A current at programmable 2.5V, 1.8V or 1.5V. The input range is 3.1V to 8V. DC469A features the LTC3830 while DC469B features the LTC3832. Both are voltage mode synchronous buck controllers. Both demo circuit boards provide additional footprints for paralleling MOSFETs and input/output capacitors for higher current applications.

Also, the backside of each demo circuit board has a footprint for SO8 versions of the devices: the LTC3830-1 (on the DC469A); and the LTC3832-1 (on the DC469B). Before stuffing this portion of circuit, the related LTC3830 or LTC3832 circuitry on the topside must be removed. See the schematics for details.

Design files for this circuit board are available. Call the LTC factory.

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>CONDITION</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Input Voltage</td>
<td></td>
<td>3.1V</td>
</tr>
<tr>
<td>Maximum Input Voltage</td>
<td></td>
<td>8V</td>
</tr>
<tr>
<td>VOUT (2.5V)</td>
<td>JP1 is short (JP1 is short internally on the DC469B), JP2 and JP3 are open</td>
<td>2.5V ±0.05V</td>
</tr>
<tr>
<td>VOUT (1.8V)</td>
<td>JP2 is short, JP3 is open (on the DC469A, JP1 is open also)</td>
<td>1.8V ±0.05V</td>
</tr>
<tr>
<td>VOUT (1.5V)</td>
<td>JP3 is short, JP2 is open (on the DC469A, JP1 is open also)</td>
<td>1.5V ±0.05V</td>
</tr>
<tr>
<td>Maximum IOUT</td>
<td>Air flow 100LFM, V_IN = 5V</td>
<td>12A</td>
</tr>
</tbody>
</table>

QUICK START PROCEDURE

Demonstration circuits 469A and 469B are easy to set up to evaluate the performance of the LTC3830 and LTC3832. Refer to Figure 1 for proper measurement equipment setup and follow the procedure below:

NOTE: Default jumper settings: JP1 is short (DC469B: JP1 is short internally), JP2 and JP3 are open

1. Connect the input 5V power source to VIN and GND pins using wires capable of handling 8A current.
2. Turn on the 5V input power supply.
3. Measure VOUT. It should be 2.5V ±0.05V.
4. Increase load current to 12A. VOUT should be 2.5V ±0.05V.
5. Turn off the load.
6. Turn off the 5V input power. Short JP2 (DC469A: open JP1 also).
7. Turn on +5V input power. VOUT should be 1.8V ±0.05V
8. Turn off the 5V input power. Open JP2 and Short JP3.
9. Turn on 5V input power. VOUT should be 1.5V ±0.05V
Figure 1. Proper Measurement Equipment Setup
NOTES: UNLESS OTHERWISE SPECIFIED,


[2] FOR LTC3830-1ES8 - REPLACE CIRCUITRY IN DOTTED FRAME
(DO NOT STUFF) WITH CIRCUITRY ON SHEET 2.