

QUICK START GUIDE FOR DEMO CIRCUITS 469A AND 469B

HIGH EFFICIENCY STEP-DOWN POWER SUPPLY

LTC3830 and LTC3832

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 1. Performance Summary

PARAMETER	CONDITION	VALUE
Minimum Input Voltage		3.1V
Maximum Input Voltage		8V
V _{OUT} (2.5V)	JP1 is short (JP1 is short internally on the DC469B), JP2 and JP3 are open	2.5V ±0.05V
V _{OUT} (1.8V)	JP2 is short, JP3 is open (on the DC469A, JP1 is open also)	1.8V ±0.05V
V _{OUT} (1.5V)	JP3 is short, JP2 is open (on the DC469A, JP1 is open also)	1.5V ±0.05V
Maximum I _{OUT}	Air flow 100LFM, V _{IN} = 5V	12A

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 V_{OUT}. It should be 2.5V ±0.05V.

4. Increase load current to 12A. V_{OUT} 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. V_{OUT} should be 1.8V ±0.05V
8. Turn off the 5V input power. Open JP2 and Short JP3.
9. Turn on 5V input power. V_{OUT} should be 1.5V ±0.05V

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HIGH EFFICIENCY STEP-DOWN POWER SUPPLY

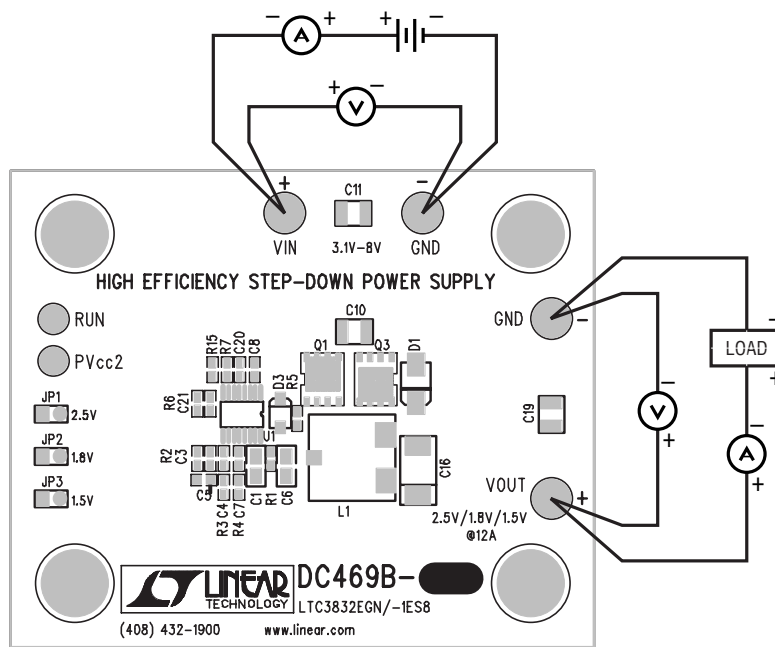
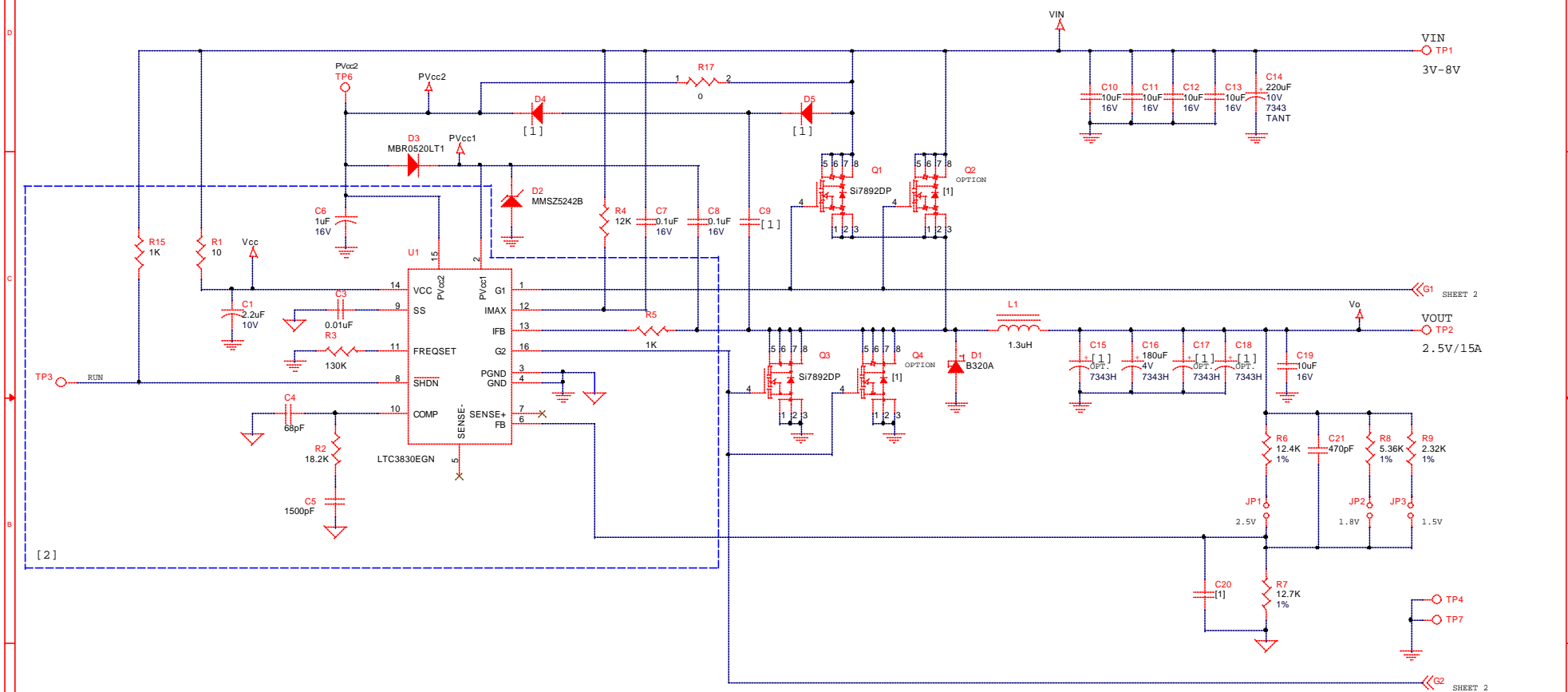


Figure 1. Proper Measurement Equipment Setup

REVISION HISTORY				
ECO	REV	DESCRIPTION	DATE	APPROVED
0	A	PRODUCTION RELEASE	12-19-01	>



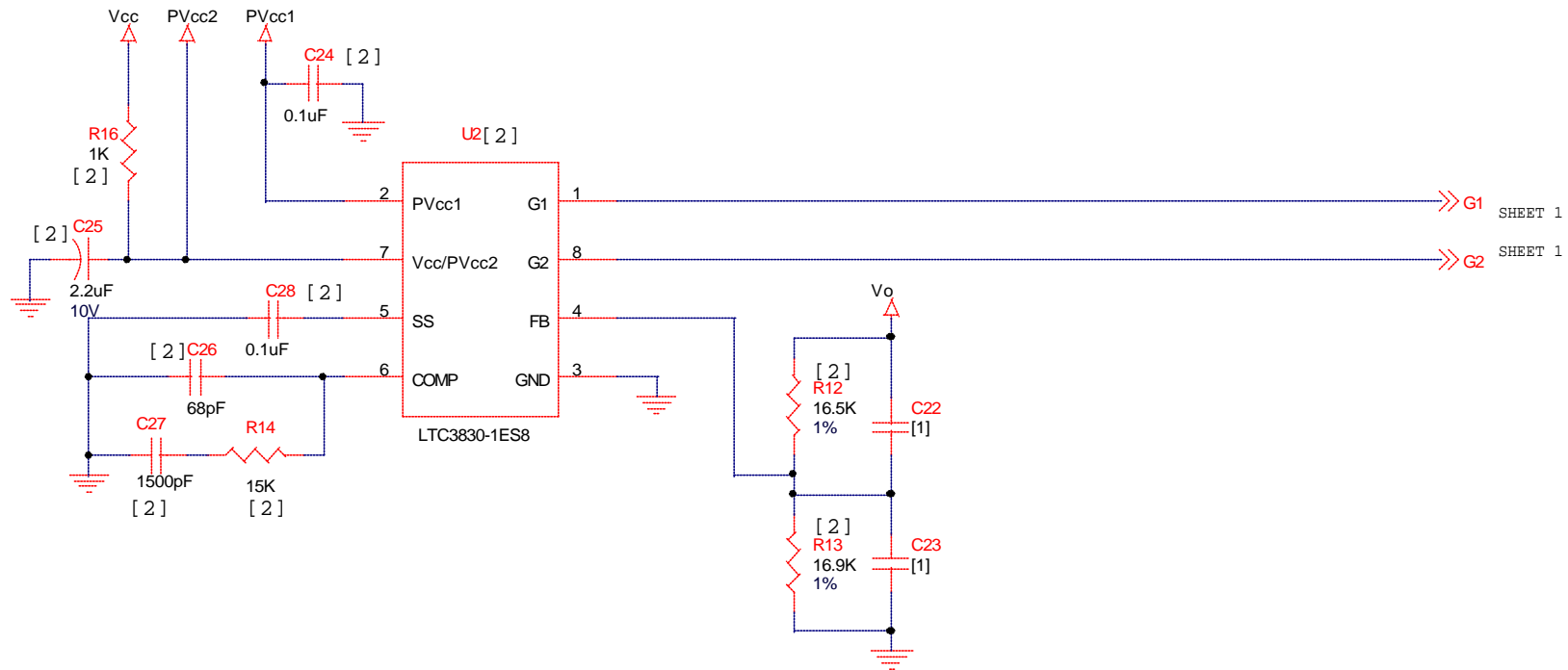
NOTES: UNLESS OTHERWISE SPECIFIED,

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

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE ON ANGLE --- 2 PLACES --- 3 PLACES --- INTERPRET DIM AND TOL PER ASME Y14.5M -1994	CONTRACT NO.		1630 McCarthy Blvd. Milpitas, CA 95035 Phone: (408)432-1900 Fax: (408)434-0507
	APPROVALS DRAWN MEI CHECKED APPROVED ENGINEER DESIGNER	DATE 12-19-01	
THIRD ANGLE PROJECTION 	SCALE NONE FILENAME 469A-2.DSN	DWG NO DC469A	REV A
DO NOT SCALE DRAWING	Tuesday, January 07, 2003	SHEET 1 OF 2	

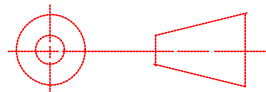
REVISION HISTORY

ECO	REV	DESCRIPTION	DATE	APPROVED
<ECO#>	A	PROTO	12-19-01	>



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DIMENSIONS ARE IN INCHES
TOLERANCE ON ANGLE ---
2 PLACES --- 3 PLACES ---
INTERPRET DIM AND TOL
PER ASME Y14.5M -1994

THIRD ANGLE PROJECTION



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APPROVED	
ENGINEER	
DESIGNER	

Tuesday, January 07, 2003



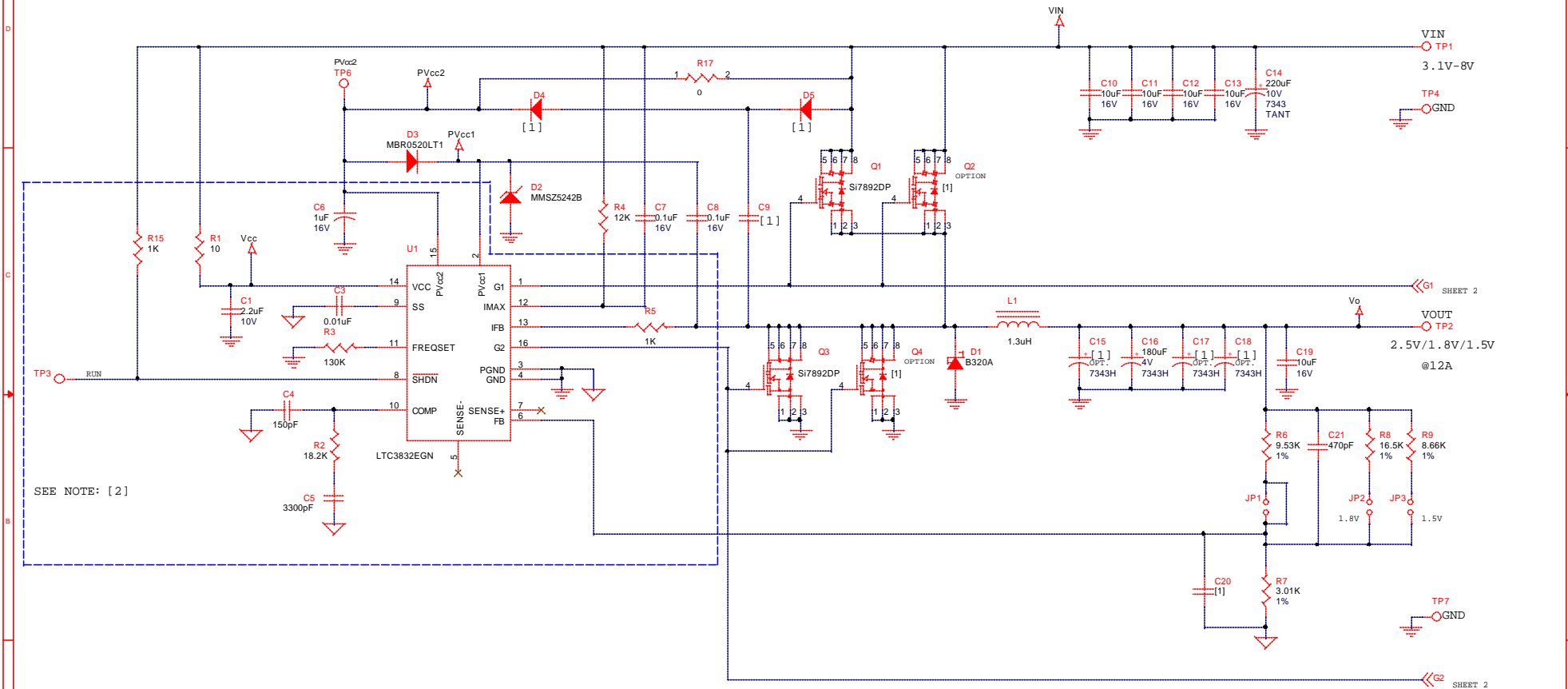
1630 McCarthy Blvd.
Milpitas, CA 95035
Phone: (408)432-1900
Fax: (408)434-0507

TITLE
**SCH,LTC3830ES8 HIGH EFFICIENCY
STEP-DOWN POWER SUPPLY**

SIZE	CAGE CODE	DWG NO	REV
A		DC469A	A

SCALE:NONE	FILENAME: 469A-2.DSN	SHEET 2 OF 2
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REVISION HISTORY			
ECO	REV	DESCRIPTION	DATE
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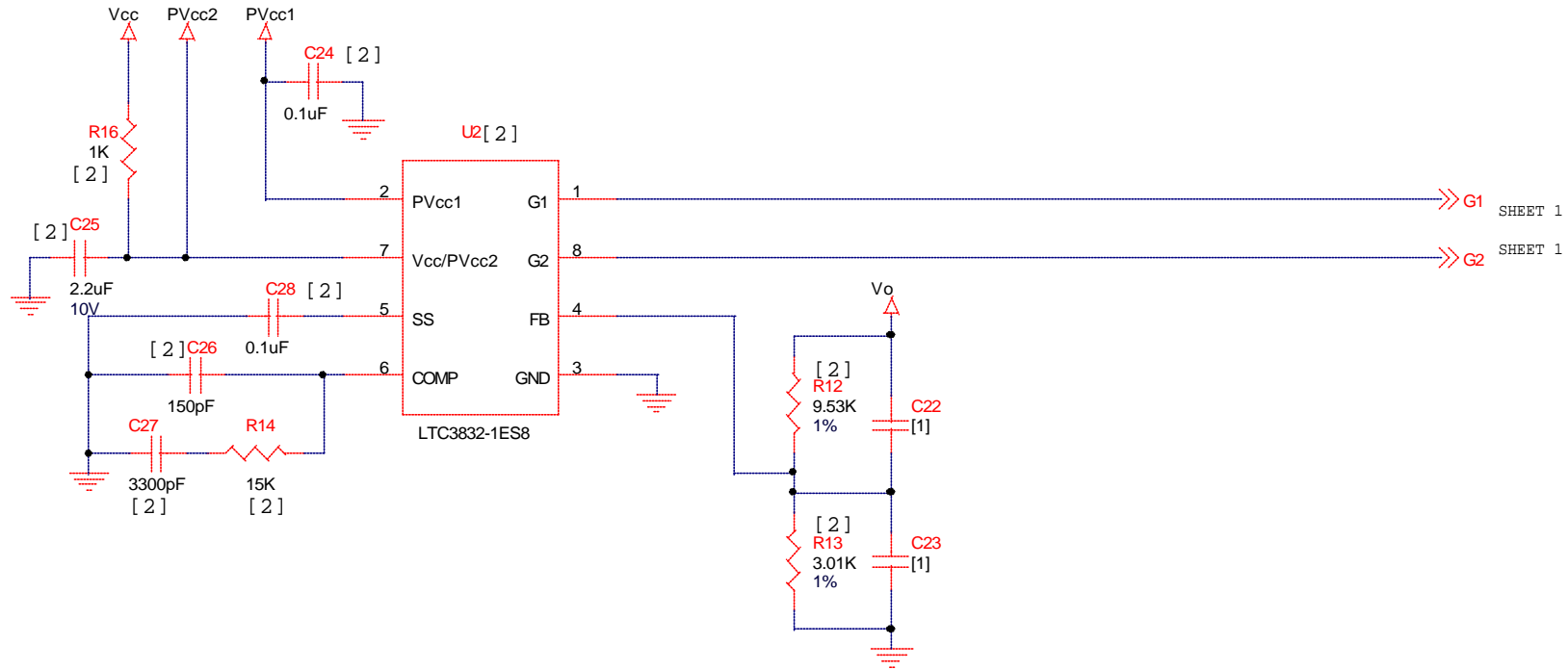
NOTES: UNLESS OTHERWISE SPECIFIED,

- [1] C9, C15, C17, C18, C20, D4, D5, Q2, Q4 OPTIONAL - DO NOT STUFF.
- [2] DC469B-A: COMPONENTS INSIDE DOTTED FRAME SHEET 1.
DC469B-B: COMPONENTS ON SHEET 2 INSTEAD.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE ON ANGLE --- 2 PLACES --- 3 PLACES --- INTERPRET DIM AND TOL PER ASME Y14.5M -1994	CONTRACT NO.		1630 McCarthy Blvd. Milpitas, CA 95035 Phone: (408)432-1900 Fax: (408)434-0507
	APPROVALS DRAWN MEI CHECKED APPROVED ENGINEER DESIGNER	DATE 12-19-01	
THIRD ANGLE PROJECTION 	SIZE B	CAGE CODE DWG NO DC469B	REV B
DO NOT SCALE DRAWING	Monday, January 06, 2003	SCALE: NONE FILENAME: 469B-1.DSN	SHEET 1 OF 2

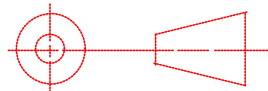
REVISION HISTORY

ECO	REV	DESCRIPTION	DATE	APPROVED
<ECO#>	B	PROTO	12-19-01	>



UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCE ON ANGLE ---
2 PLACES --- 3 PLACES ---
INTERPRET DIM AND TOL
PER ASME Y14.5M -1994

THIRD ANGLE PROJECTION



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CONTRACT NO.

APPROVALS	DATE
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CHECKED	
APPROVED	
ENGINEER	
DESIGNER	

Monday, January 06, 2003



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TITLE
**SCH,LTC3832EGN/-1ES8 HIGH EFFICIENCY
STEP-DOWN POWER SUPPLY**

SIZE	CAGE CODE	DWG NO	REV
A		DC469B	B

SCALE:NONE	FILENAME: 469B-1.DSN	SHEET 2 OF 2
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