



# VOLGA 100A HALF BRIDGE MODULE

## NOTES

DNI = Do Not Insert.

## REVISION HISTORY

### Rev B

PAGES - ALL

- THIS VERSION IS SECOND BOARD SPIN AS ORIGINALLY BUILT.
- Change C1 to 10uF (1015330)
  - Add R48 to U4A pin 1 to GND
  - Move C4 & C5 to no populate
  - Change R45 from a NP to a populated part
  - Add U11, used as inverter between U9 pin 3 to U9 pin 2
  - Added EN to U2A pin 4
  - Add C67
  - Added U2A pin 12 (DIS) between R46 pull-up and R13 feedback
  - Changed U9 to 74HC2G08DP,125
  - Moved R6 & D4 to NP
  - Add 10K pull-up on U11 pin 1 (R50)

### Rev C

- THIS VERSION IS SECOND BOARD SPIN WITH REWORKS INCLUDED.
- Change R10 to 143K
  - Change C6 to .01uF
  - Use spare section of U4 to timeout upper FETs
  - Change R23 to 665 Ohms
  - Change R18 to 66.5K
  - Add 10K pulldowns to gate drives to hold off FETS in case Vbat comes up first
  - Add R33,C71,R56, C72 to increase dead time

### Rev D

- THIS VERSION IS THIRD BOARD SPIN .
- Change 5V precision reference to LP2980 LD0.
  - Change current sense resistors to Stackpole for lower inductance.
  - Increase size of TVS diodes.
  - Change R33 from 10 Ohms to 30.1 Ohms.

### Rev E

- THIS VERSION IS FOURTH BOARD SPIN
- Change R56 from 10 Ohms to 30.1 Ohms.

### Rev F

- UP REV FOR PREPRODUCTION .
- Convert to Cadence.
  - Remove F2.
  - Eliminate alternate current sense resistors.

### Rev G

- CHANGES TO PREPRODUCTION BASED ON GOLDEN BOARDS.
- Change R23 to 365 ohms and R18 to 120K.

### Rev H

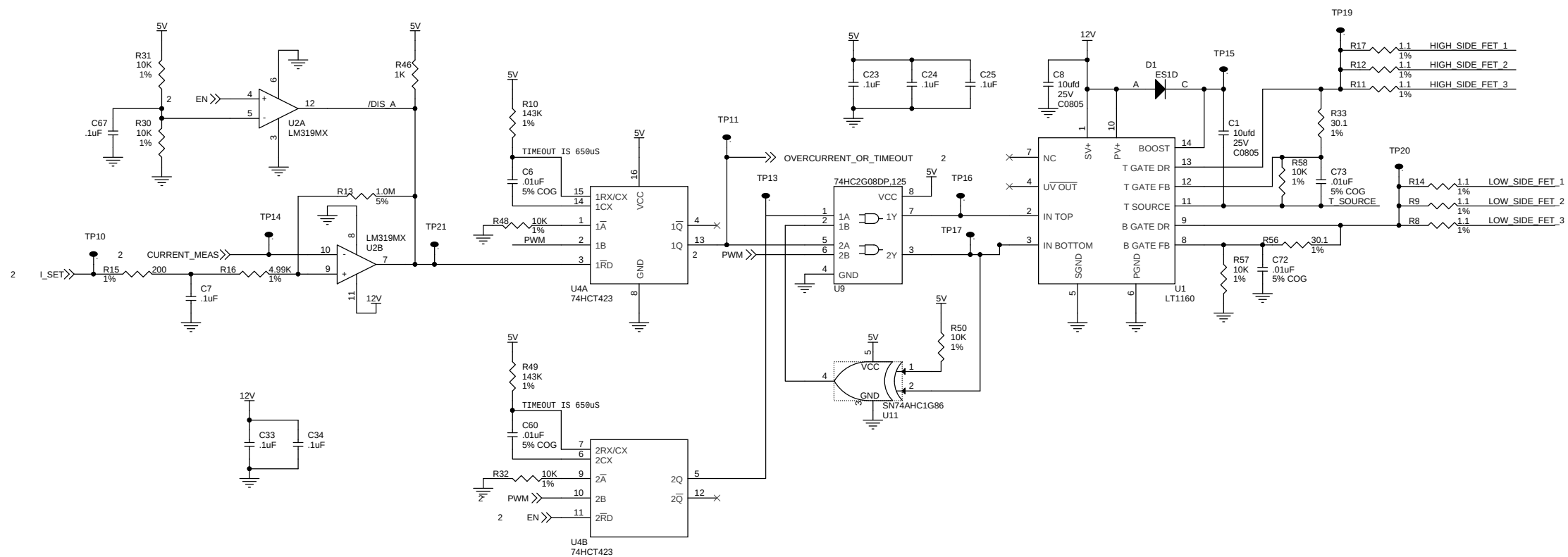
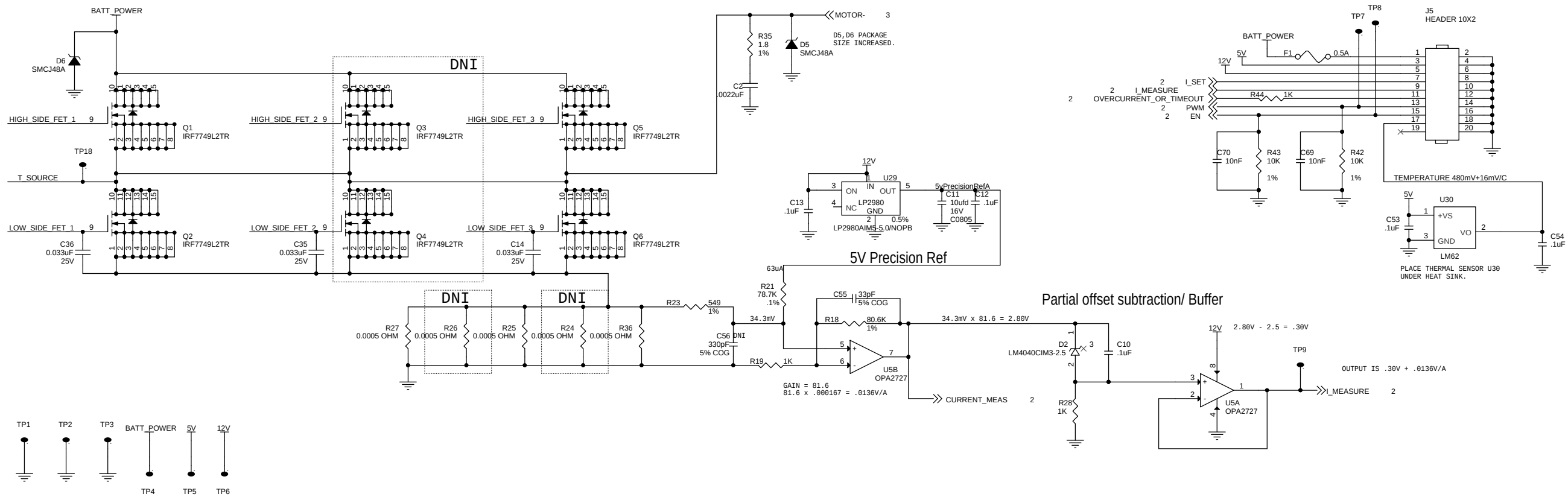
- Change R23 to 549 ohms and R18 to 80.6K.

#### BOM PARTS

- ☐ REF1 PCB Q25043-003
- ☐ SCH SCHEMATIC Q26003-003

|                               |                             |              |
|-------------------------------|-----------------------------|--------------|
| Title                         |                             |              |
| VOLGA 100A HALF BRIDGE MODULE |                             |              |
| Size B                        | Document Number             | Rev H        |
| Q26003-003                    |                             |              |
| Date:                         | Wednesday, October 02, 2013 | Sheet 1 of 3 |

## 02 - MOTOR DRIVE



|                               |                 |                              |  |     |
|-------------------------------|-----------------|------------------------------|--|-----|
|                               |                 |                              |  |     |
| Title                         |                 |                              |  |     |
| VOLGA 100A HALF BRIDGE MODULE |                 |                              |  |     |
| Size                          |                 |                              |  |     |
| C                             | Document Number |                              |  | Rev |
|                               | Q26003-003      |                              |  | H   |
| Date:                         |                 | Wednesday, November 13, 2013 |  |     |
| Sheet                         |                 | 2 of 3                       |  |     |

03 - BYPASS CAPS, MISC

