


Isolated Inverter Platform (Enhanced Protection)

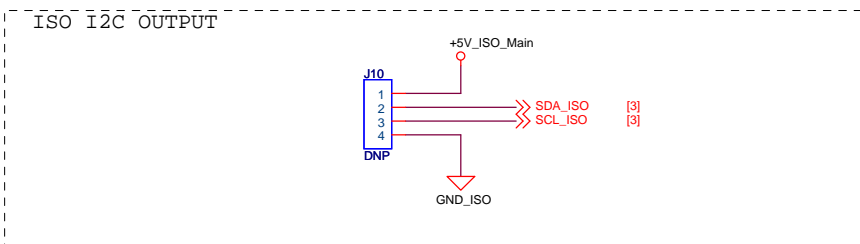
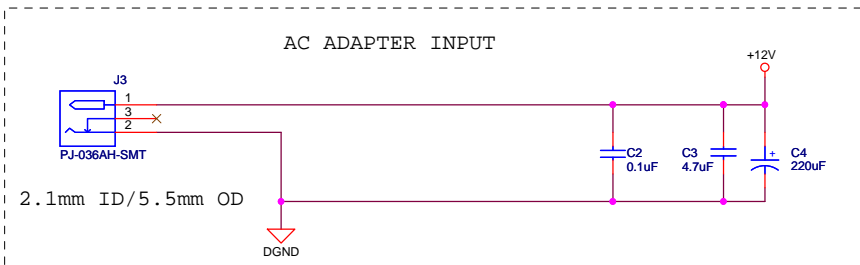
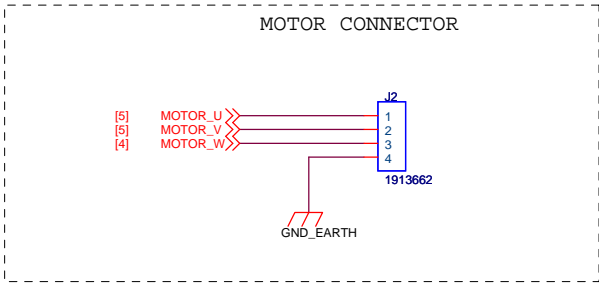
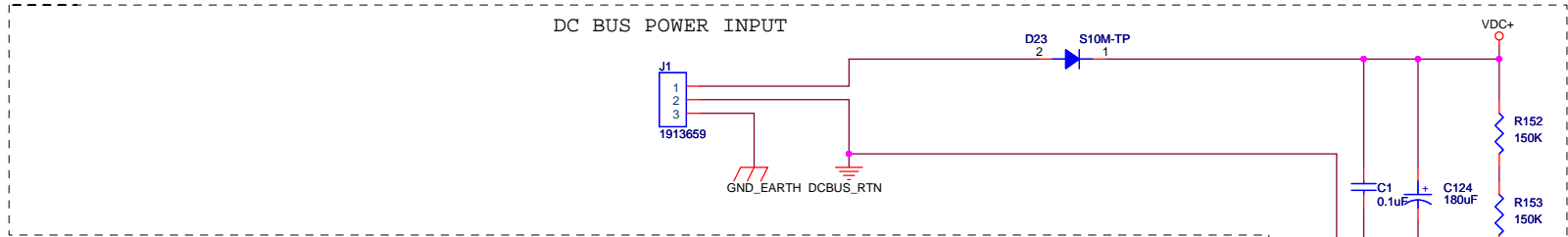
Table of Contents

PAGE 1:	COVER
PAGE 2:	CONNECTOR INTERFACE
PAGE 3:	POWER , ISOLATION
PAGE 4:	MOTOR DRIVER
PAGE 5:	VBUS / CURRENT SENSING
PAGE 6:	POWER SUPPLIES
PAGE 7:	BUFFER / LOGIC

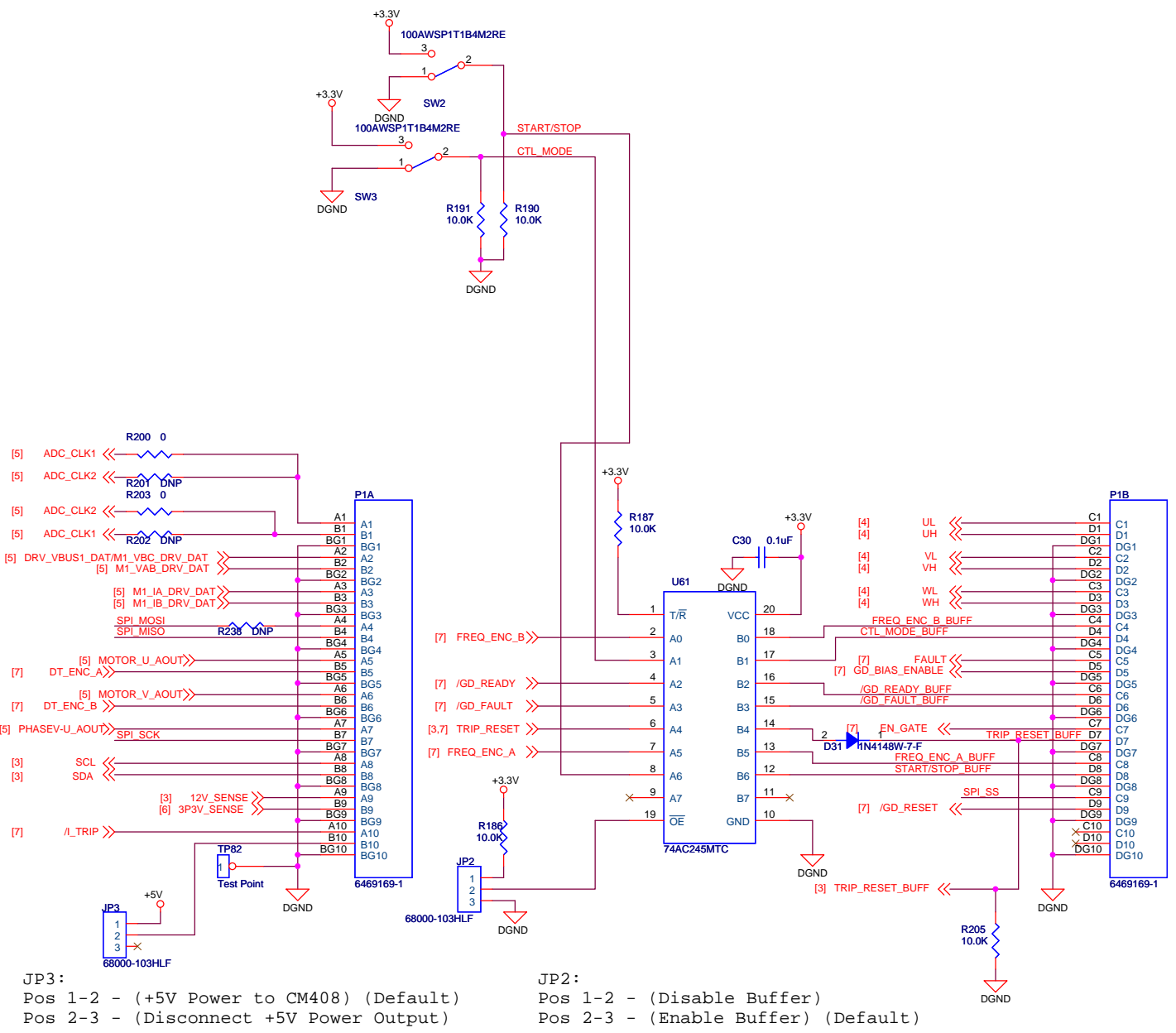
Revision History

- Rev 1: Initial Draft
- Rev 2: Pull Down Resistor on SEC_STO
 TRIP RESET Signal Move to U66 input
 Add jumper between +5V to the 40 pin connector
 Current Trip LED is driven by I_TRIP signal
 Change U27, U31, U62 to NAND gate
 Add common mode capacitors from DC+ to earth and DC- to earth
 Add W current shunt sense measurement

PROPRIETARY NOTICE EXCEPT AS OTHERWISE AGREED IN WRITING, THE INFORMATION AND DESIGN DISCLOSED HEREIN ARE THE PROPERTY OF ANALOG DEVICES, INC. (ADI) AND BOSTON ENGINEERING CORPORATION (BEC). IT MUST NOT BE COPIED OR DISTRIBUTED OUTSIDE ADI OR BEC EXCEPT TO AUTHORIZED PERSONS WITH A GENUINE NEED-TO-KNOW WHO BY THE USE HEREOF ACKNOWLEDGE BEC/ADI OWNERSHIP AND AGREE TO MAINTAIN THIS INFORMATION AND DESIGN IN STRICT CONFIDENCE.		BY	DATE	 300 Bear Hill Road Waltham, MA 02451 781-466-8010
	IR DATE			
	LAST CHANGE			
	DRAWN BY			
	CHECKED BY			
				COVER
				APPROVED BY
	SIZE	CAGE CODE	DWG NO	REV
	C	1NST2	02-XXXXXX	2
BARE PCB P/N			Tuesday, August 04, 2015	SHEET 1 OF 7
ASSY PCB P/N				

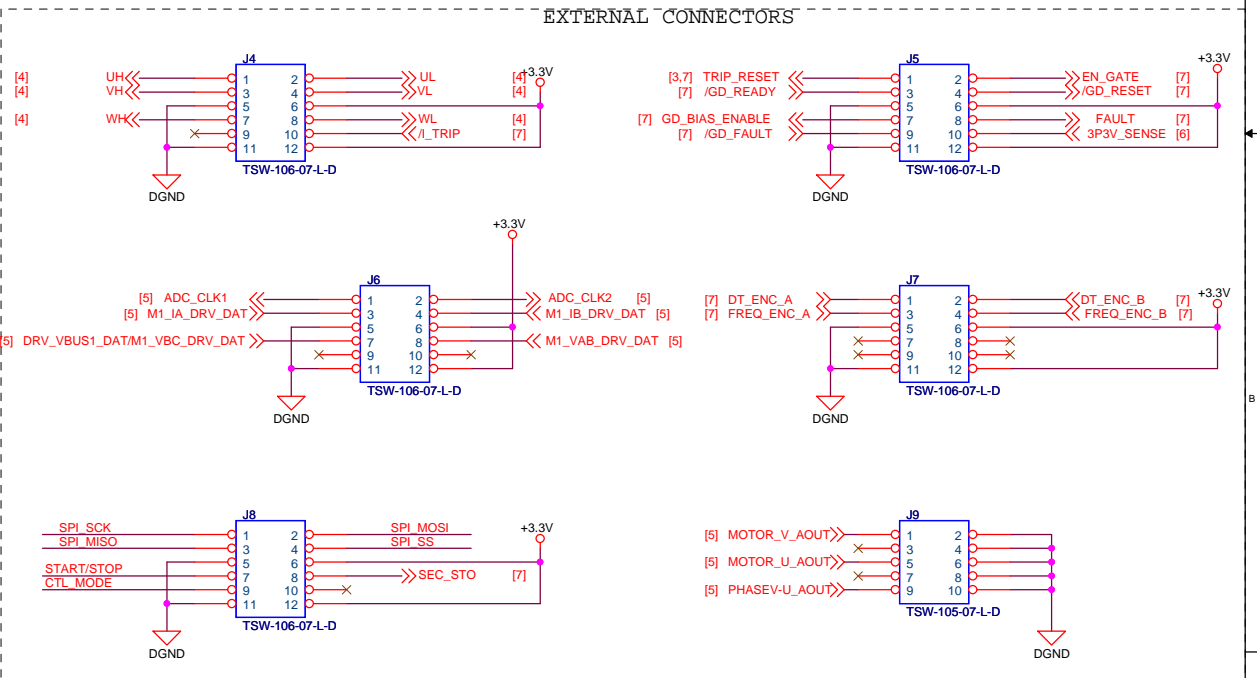


TO CM408-LITE CONNECTOR



JP3:
 Pos 1-2 - (+5V Power to CM408) (Default)
 Pos 2-3 - (Disconnect +5V Power Output)

JP2:
 Pos 1-2 - (Disable Buffer)
 Pos 2-3 - (Enable Buffer) (Default)

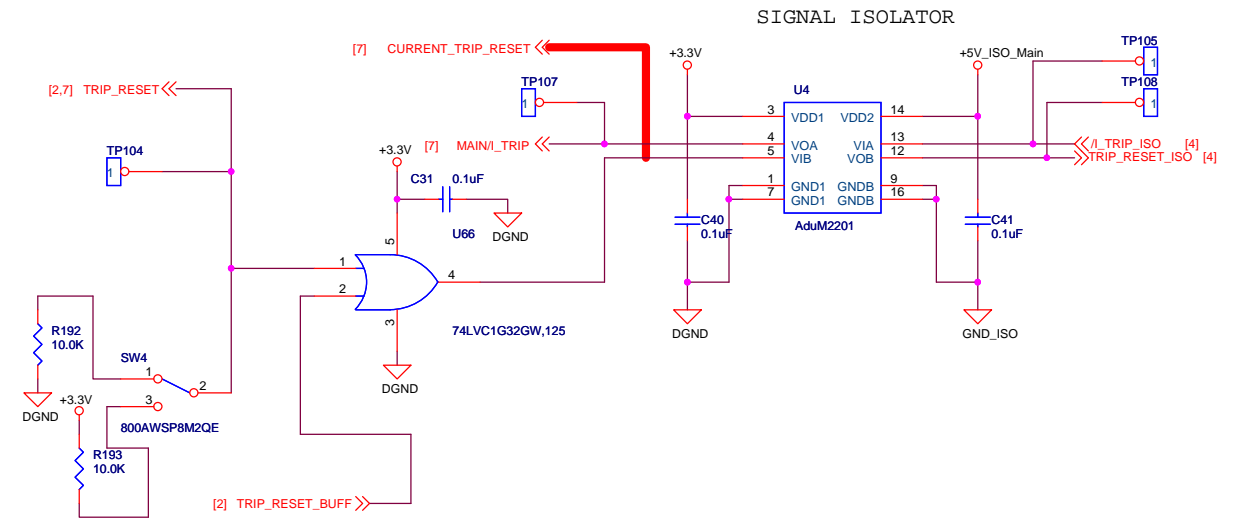
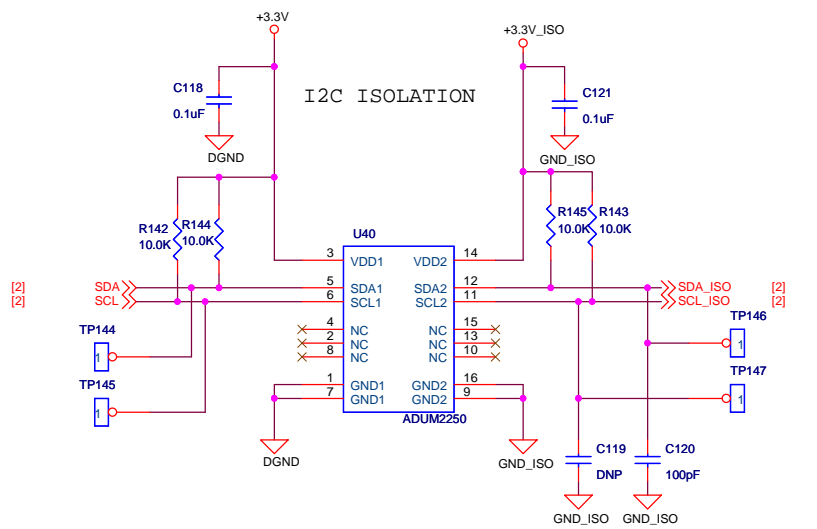
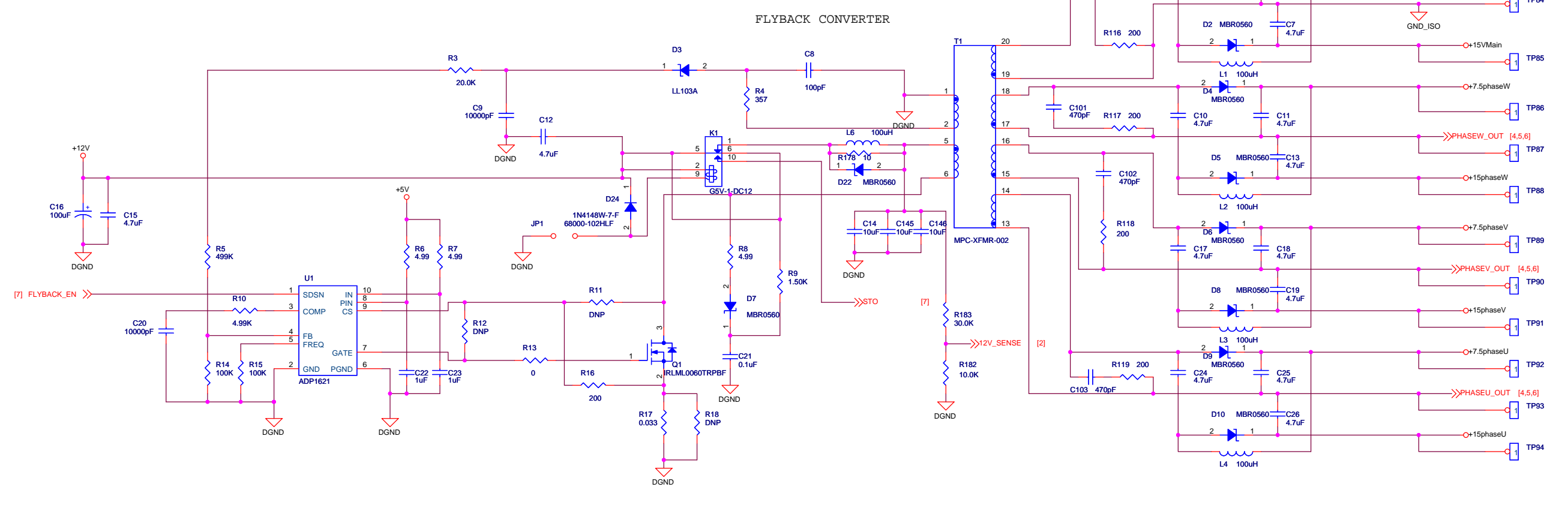


300 BEAR HILL ROAD
 WALTHAM, MA 02451
 781-466-8010

CONNECTOR INTERFACE

SIZE	CAGE CODE	DWG NO	REV
C	1NST2	02-XXXXXX	2

Tuesday, August 04, 2015 SHEET 2 OF 7



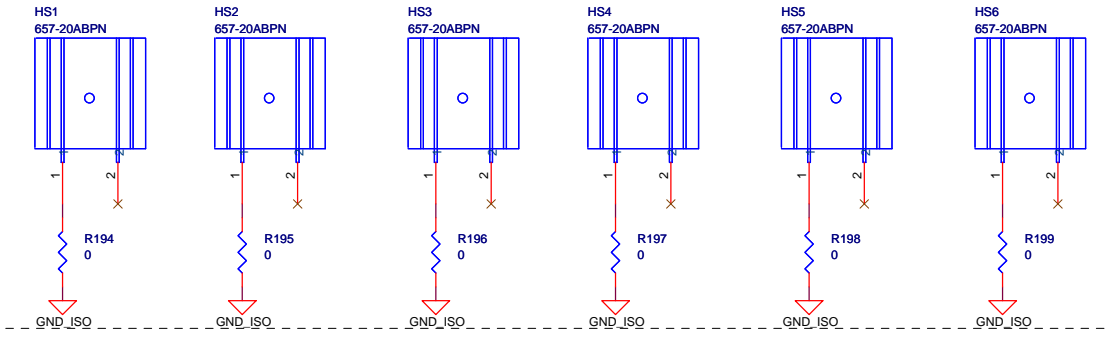
**BOSTON
ENGINEERING**

300 BEAR HILL ROAD
WALTHAM, MA 02451
781-466-8010

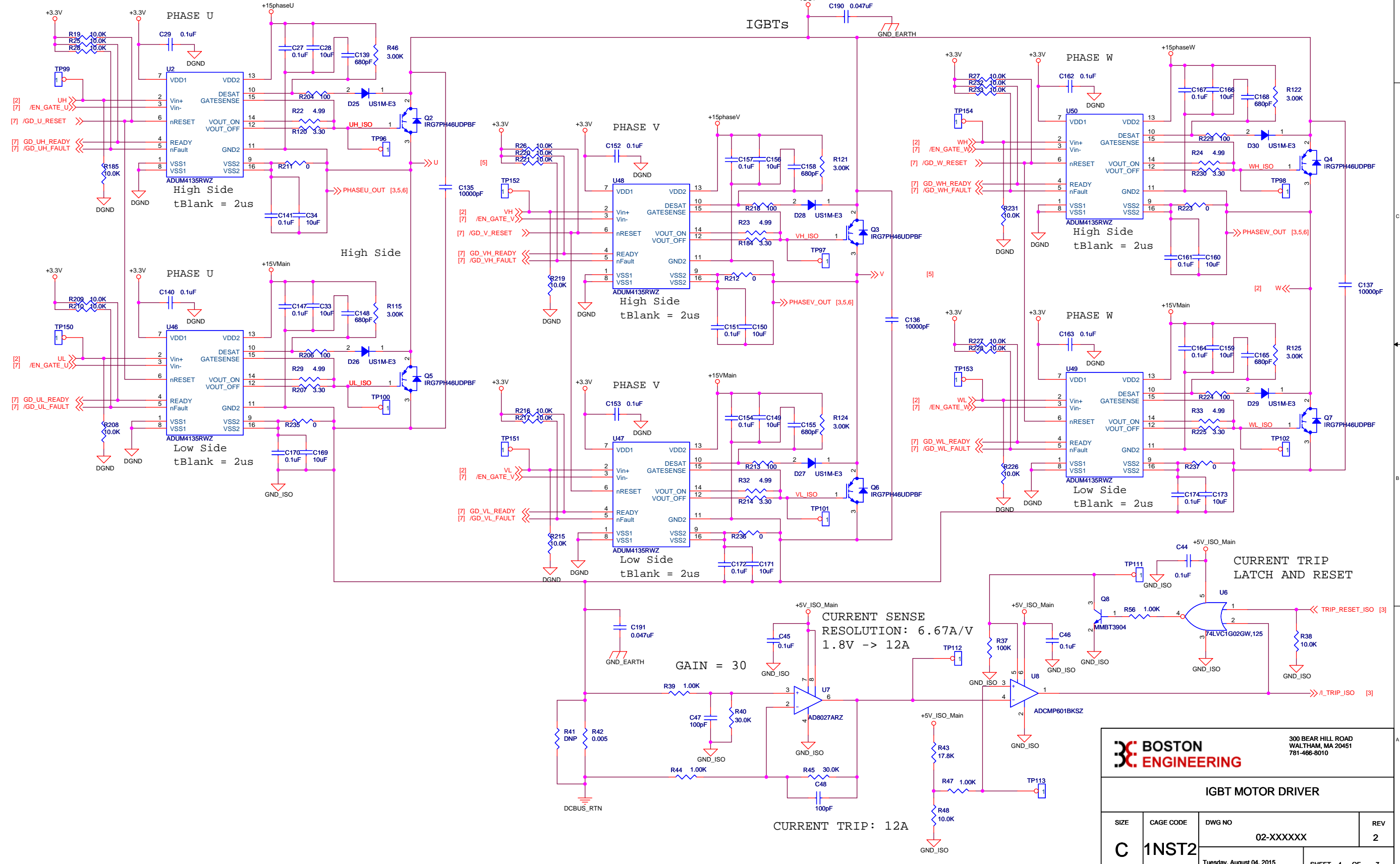
POWER SUPPLIES, ISOLATION

SIZE	CAGE CODE	DWG NO	REV
C	1NST2	02-XXXXXX	2

Tuesday, August 04, 2015 SHEET 3 OF 7



HEAT SINK FOR IGBT'S

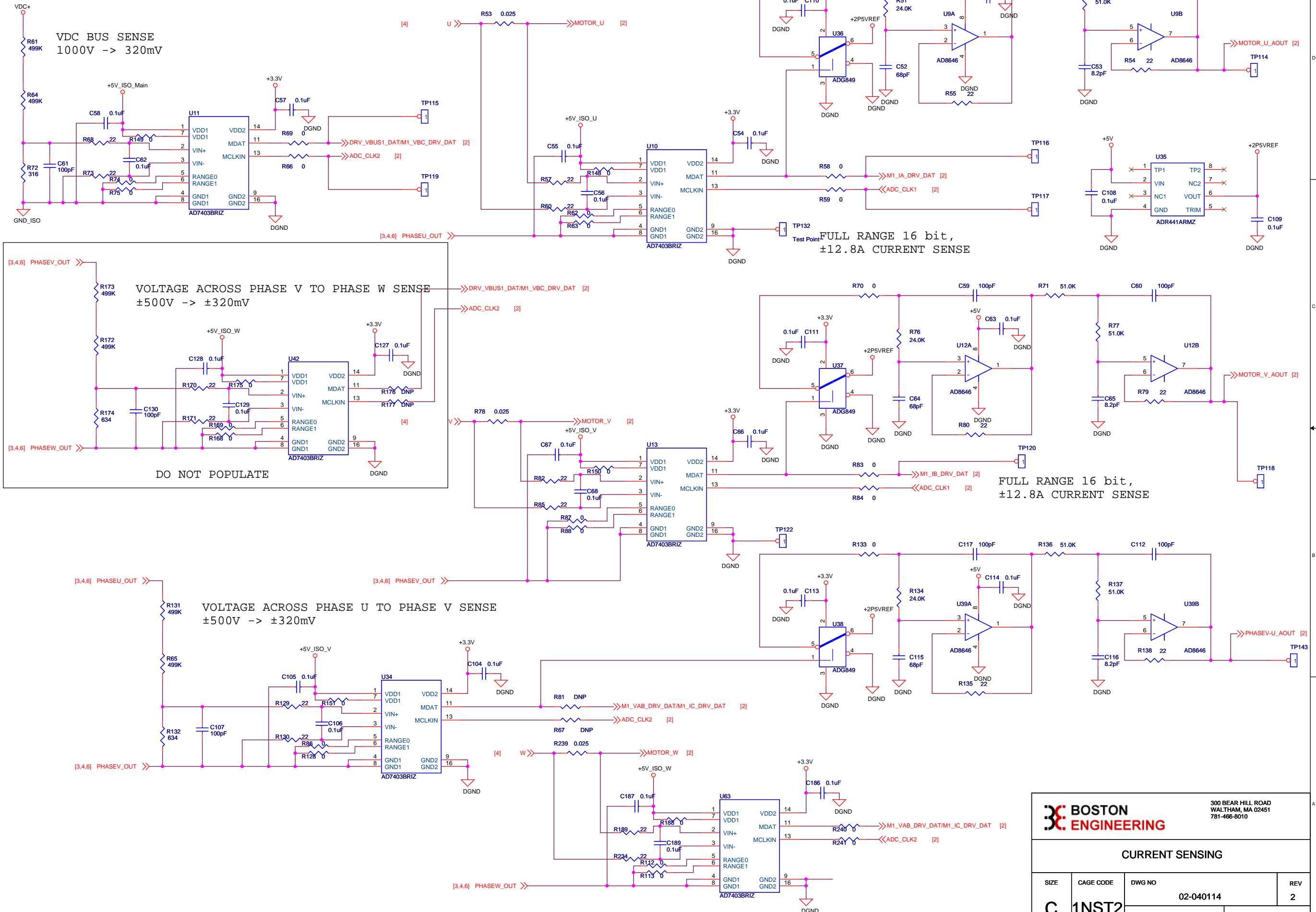


BOSTON ENGINEERING
 300 BEAR HILL ROAD
 WALTHAM, MA 20451
 781-466-8010

IGBT MOTOR DRIVER

SIZE	CAGE CODE	DWG NO	REV
C	1NST2	02-XXXXXX	2

Tuesday, August 04, 2015 SHEET 4 OF 7



VDC BUS SENSE
1000V -> 320mV

VOLTAGE ACROSS PHASE V TO PHASE W SENSE
±500V -> ±320mV

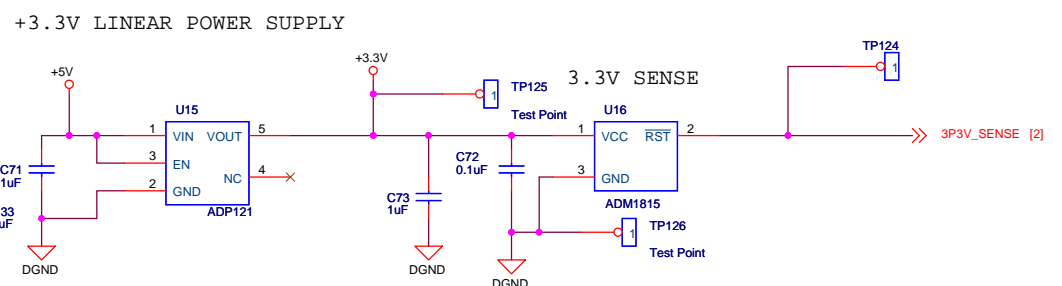
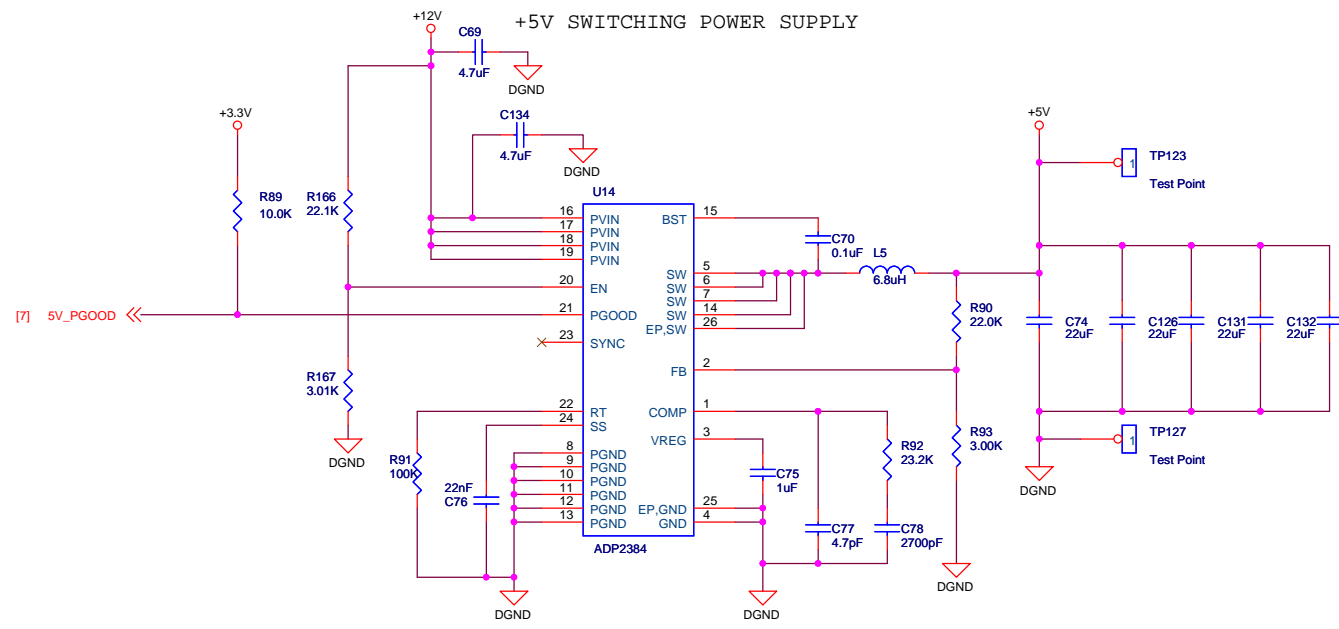
DO NOT POPULATE

VOLTAGE ACROSS PHASE U TO PHASE V SENSE
±500V -> ±320mV

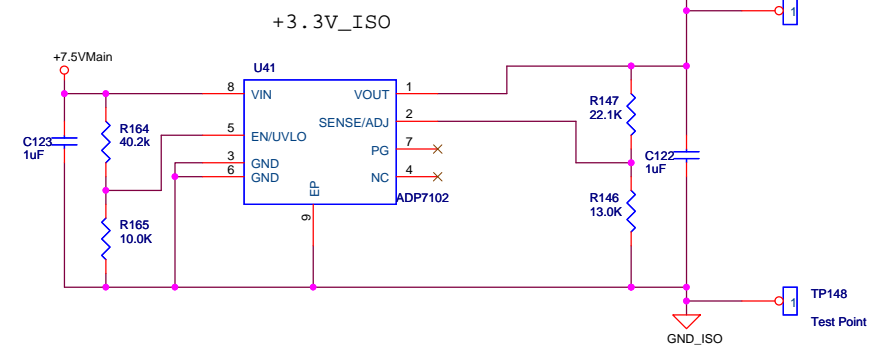
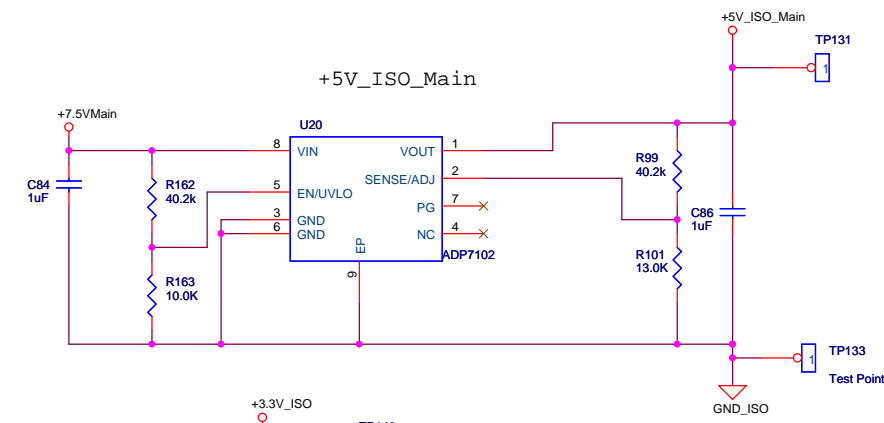
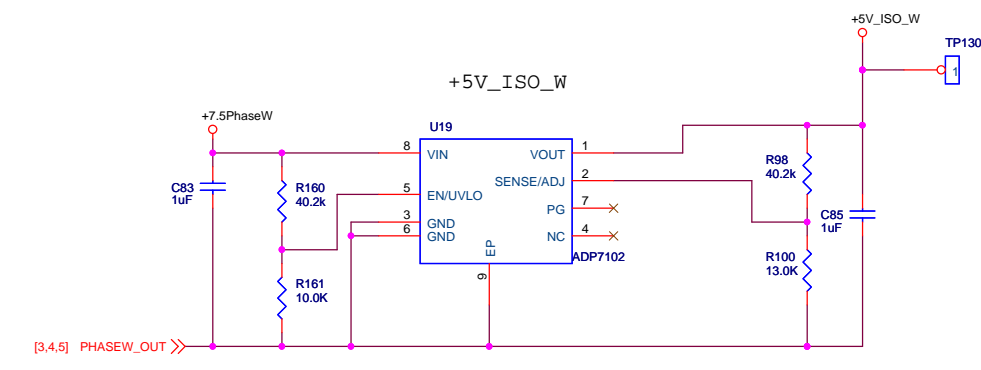
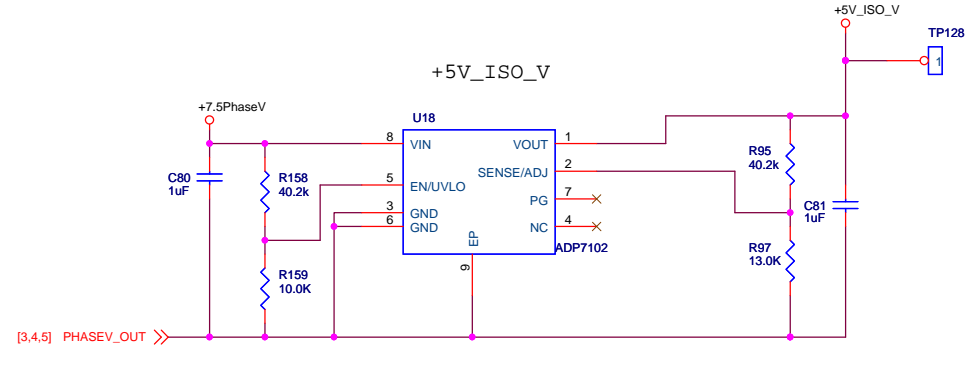
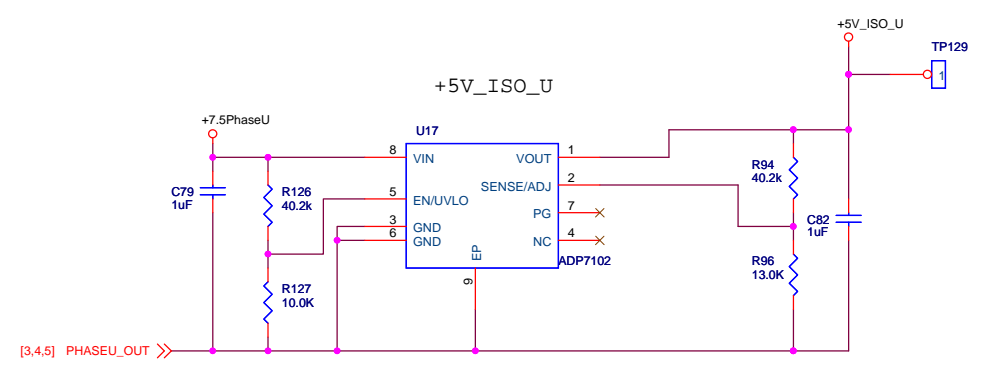
FULL RANGE 16 bit,
±12.8A CURRENT SENSE

FULL RANGE 16 bit,
±12.8A CURRENT SENSE

		300 BEAR HILL ROAD WALTHAM, MA 02451 781-466-8010	
CURRENT SENSING			
SIZE C	CAGE CODE 1NST2	DWG NO 02-040114	REV 2
Tuesday, August 11, 2015		SHEET 5 OF 7	



+5V ISO LINEAR POWER SUPPLIES



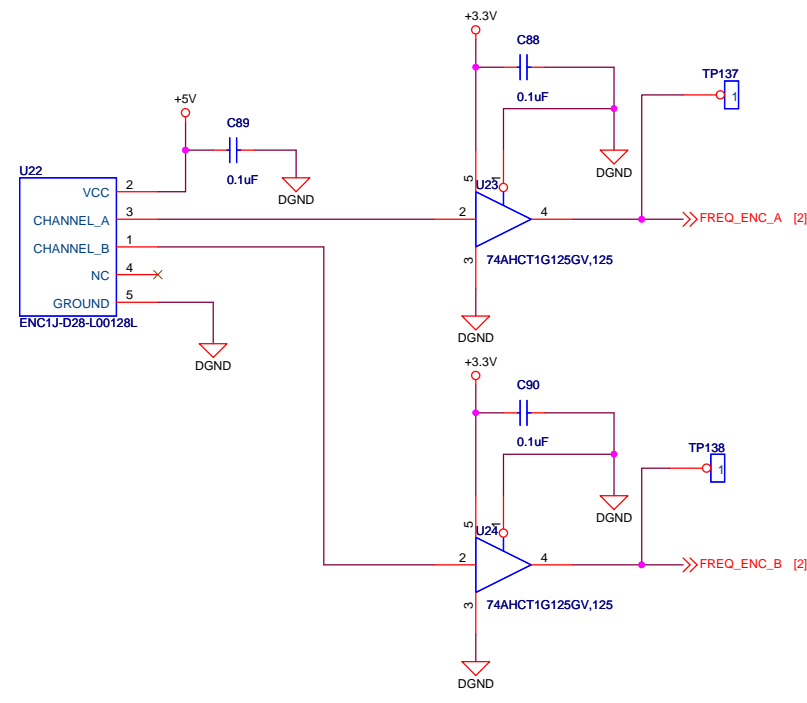
300 BEAR HILL ROAD
WALTHAM, MA 02451
781-466-8010

POWER SUPPLIES

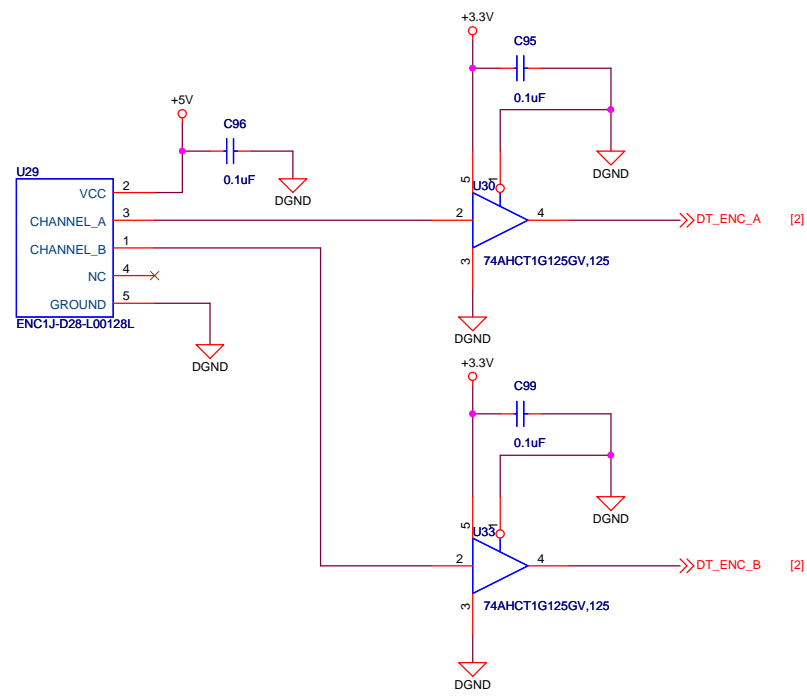
SIZE	CAGE CODE	DWG NO	REV
C	1NST2	02-XXXXXX	2

Tuesday, August 04, 2015 SHEET 6 OF 7

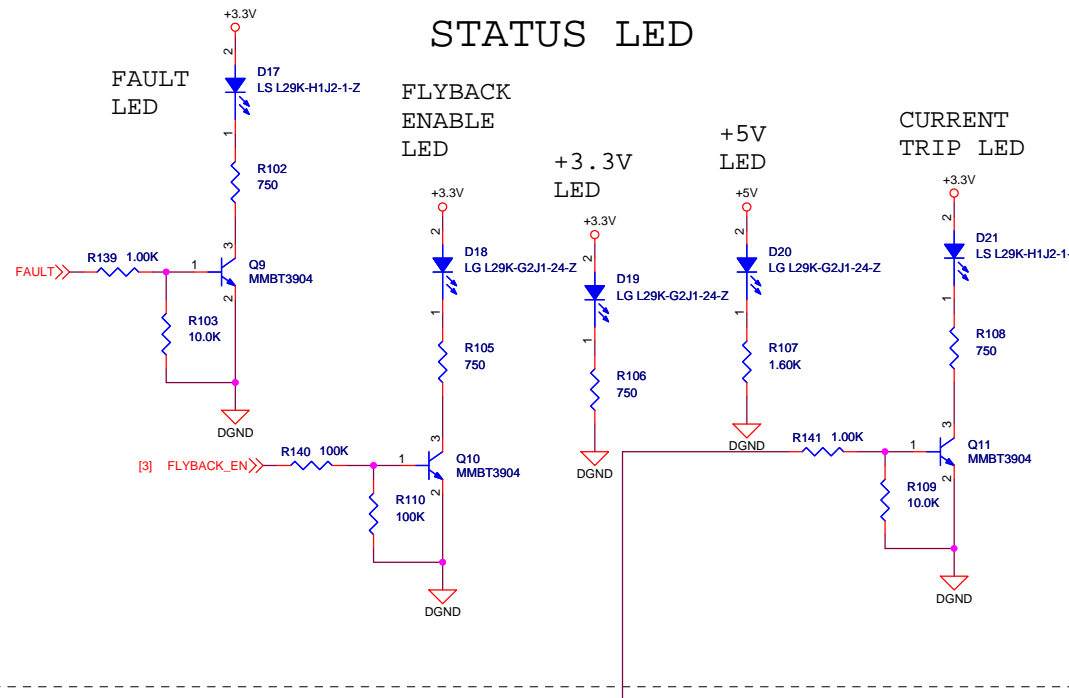
FREQUENCY ENCODER



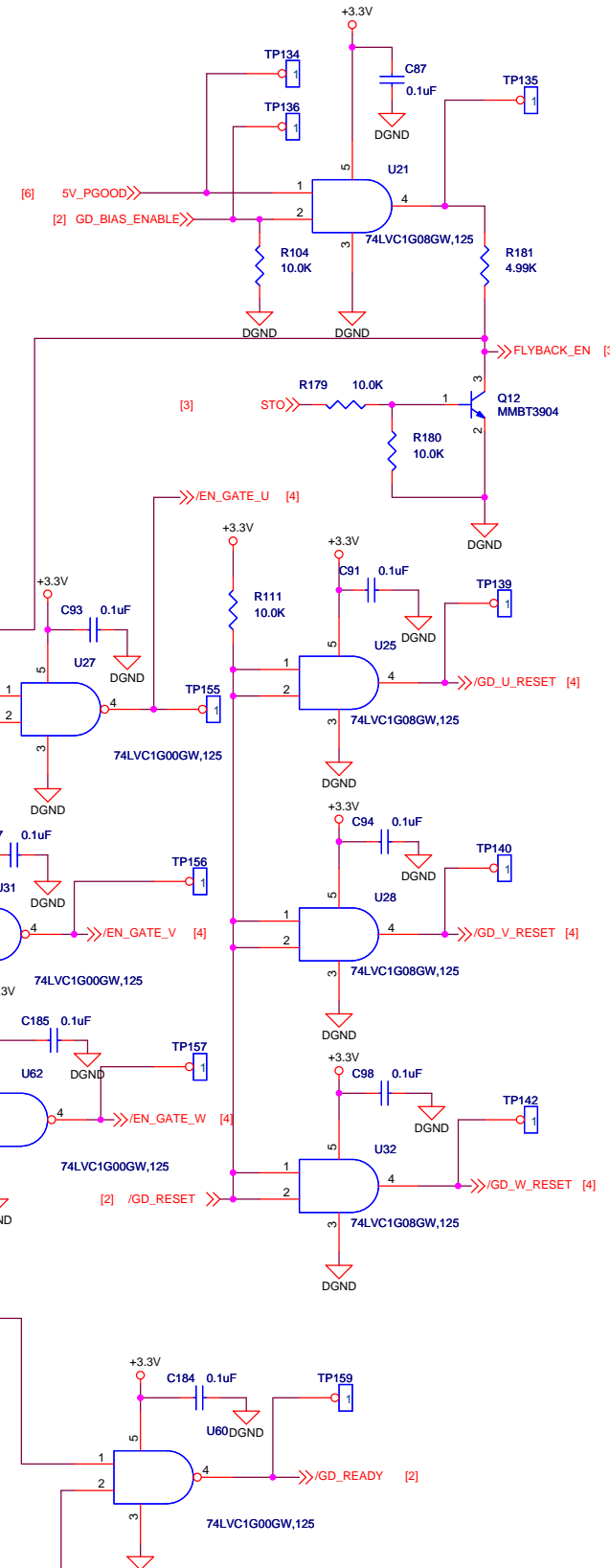
DEAD TIME ENCODER



STATUS LED



LOGIC



BOSTON ENGINEERING
300 BEAR HILL ROAD
WALTHAM, MA 02451
781-466-8010

BUFFER / LOGIC

SIZE	CAGE CODE	DWG NO	REV
C	1NST2	02-XXXXXX	2
		Tuesday, August 04, 2015	SHEET 7 OF 7