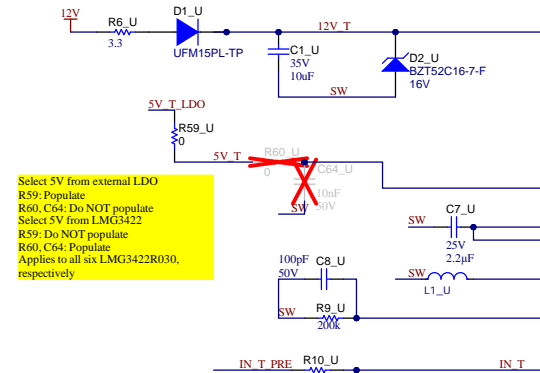
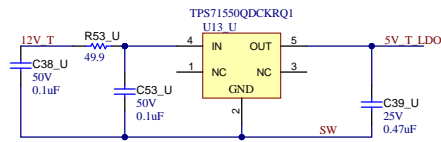
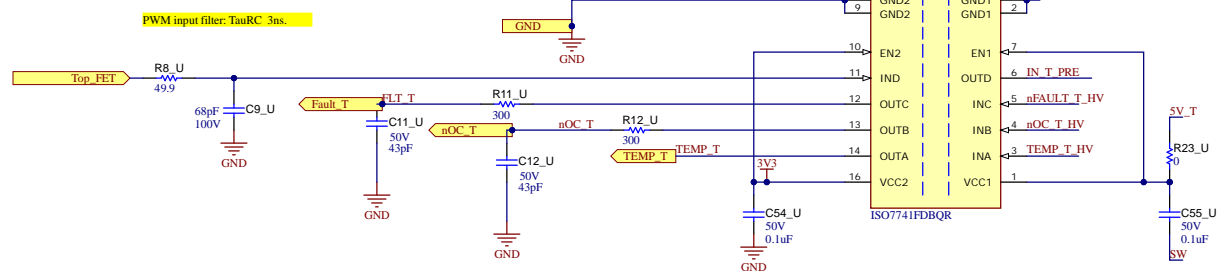


LDO FROM BOOTSTRAP TO SUPPLY ISOLATORS

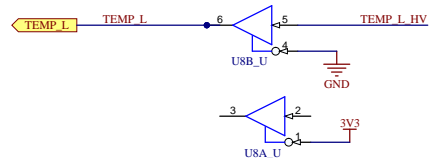
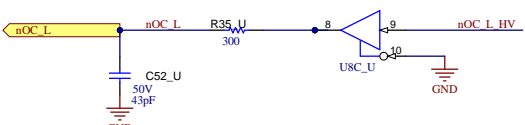
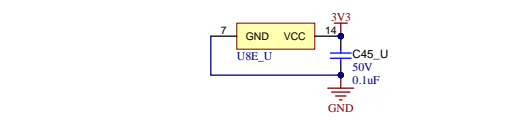


Select SV from external LDO
 R59: Populate
 R60, C64: Do NOT populate
 Select SV from LMG3422
 R59: Do NOT populate
 R60, C64: Populate
 Applies to all six LMG3422R030, respectively

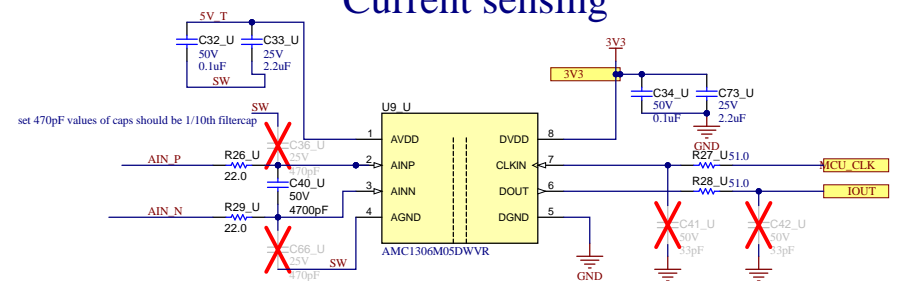
PWM input filter: TauRC
 56ns, ensure to match across all six FETs better than 10%. Adjust with final board.



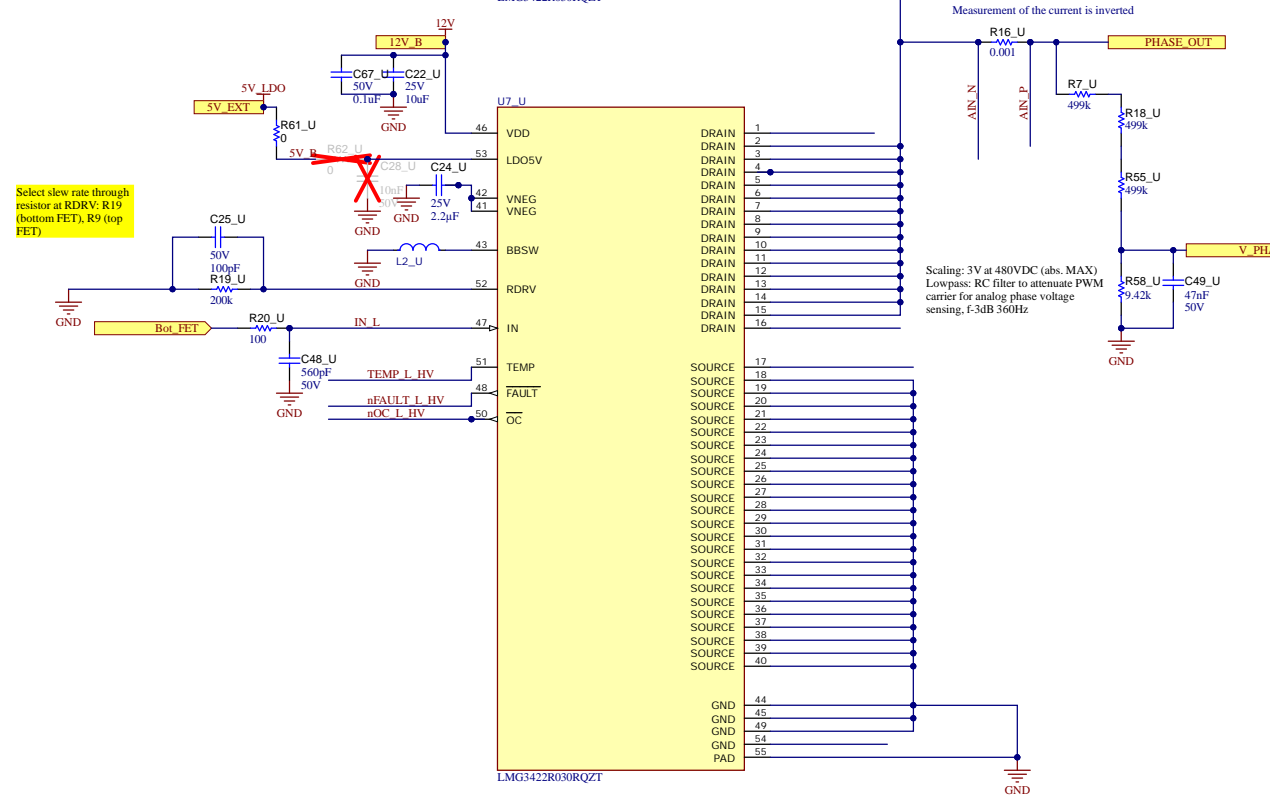
PWM input filter: TauRC 3ns



Current sensing



set 470pF values of caps should be 1/10th filtercap

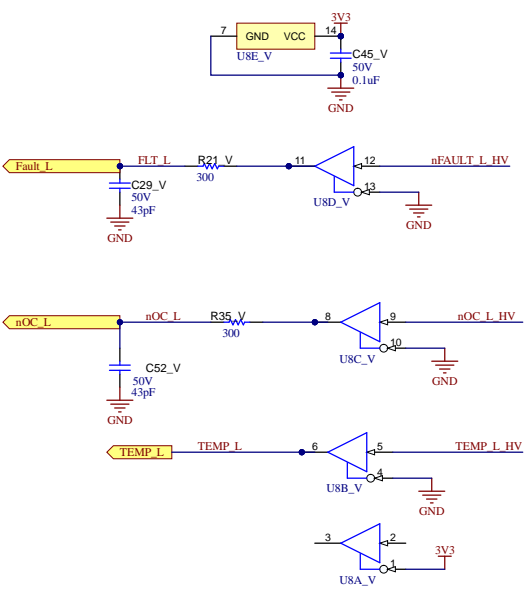
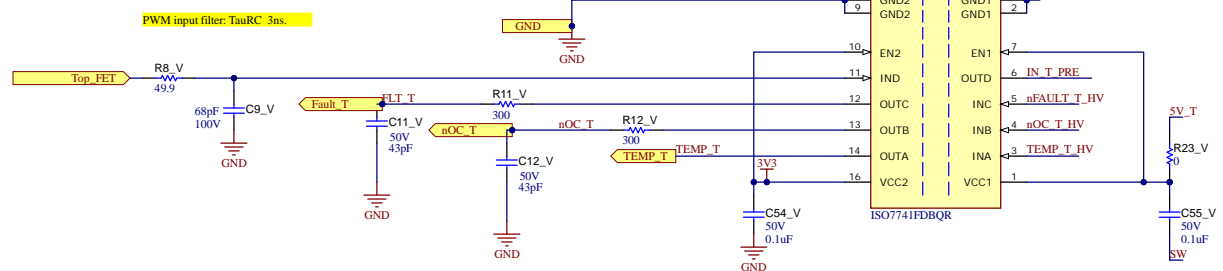
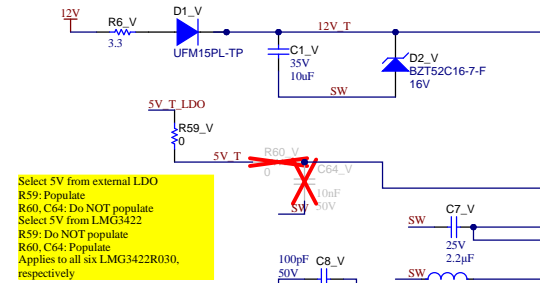
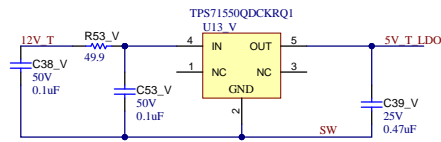


Select slew rate through resistor at RDRV: R19 (bottom FET), R9 (top FET)

Measurement of the current is inverted

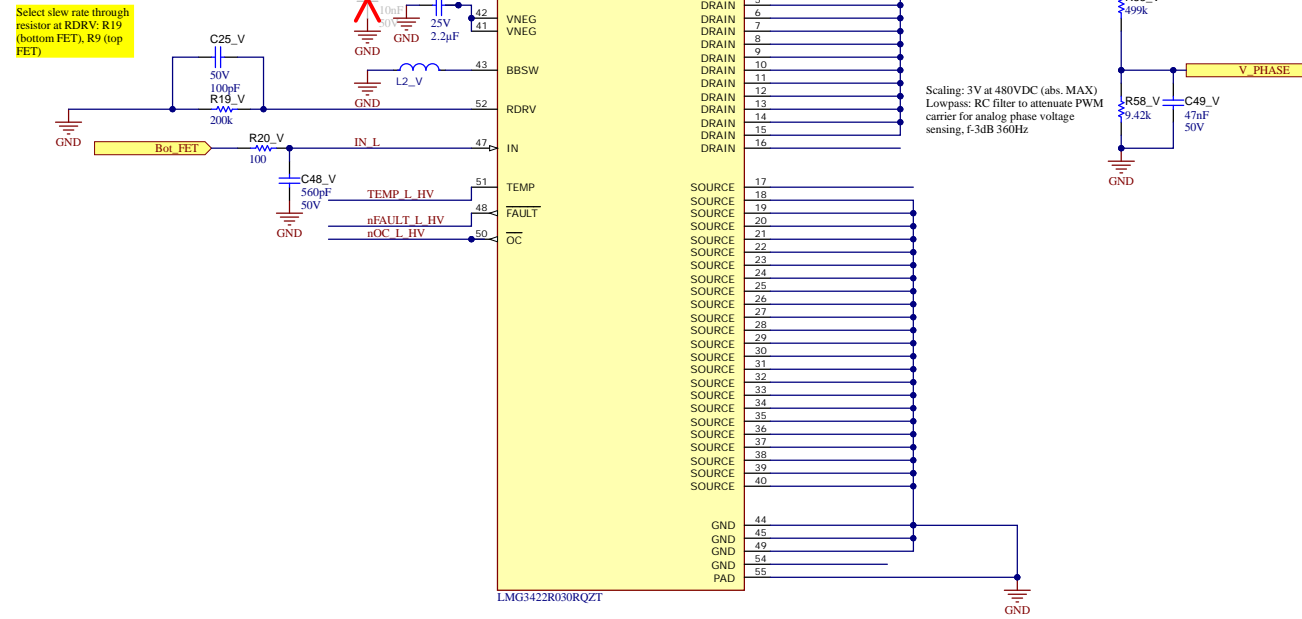
Scaling: 3V at 480VDC (abs. MAX)
 Lowpass RC filter to attenuate PWM carrier for analog phase voltage sensing, f=3dB 360Hz

LDO FROM BOOTSTRAP TO SUPPLY ISOLATORS

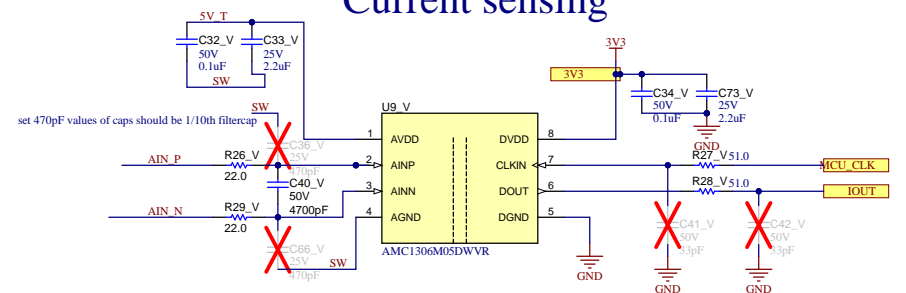


PWM input filter: TauRC 3ms. 56ns, ensure to match across all six FETs better than 10%. Adjust with final board.

Select slew rate through resistor at RDRV: R19 (bottom FET), R9 (top FET)

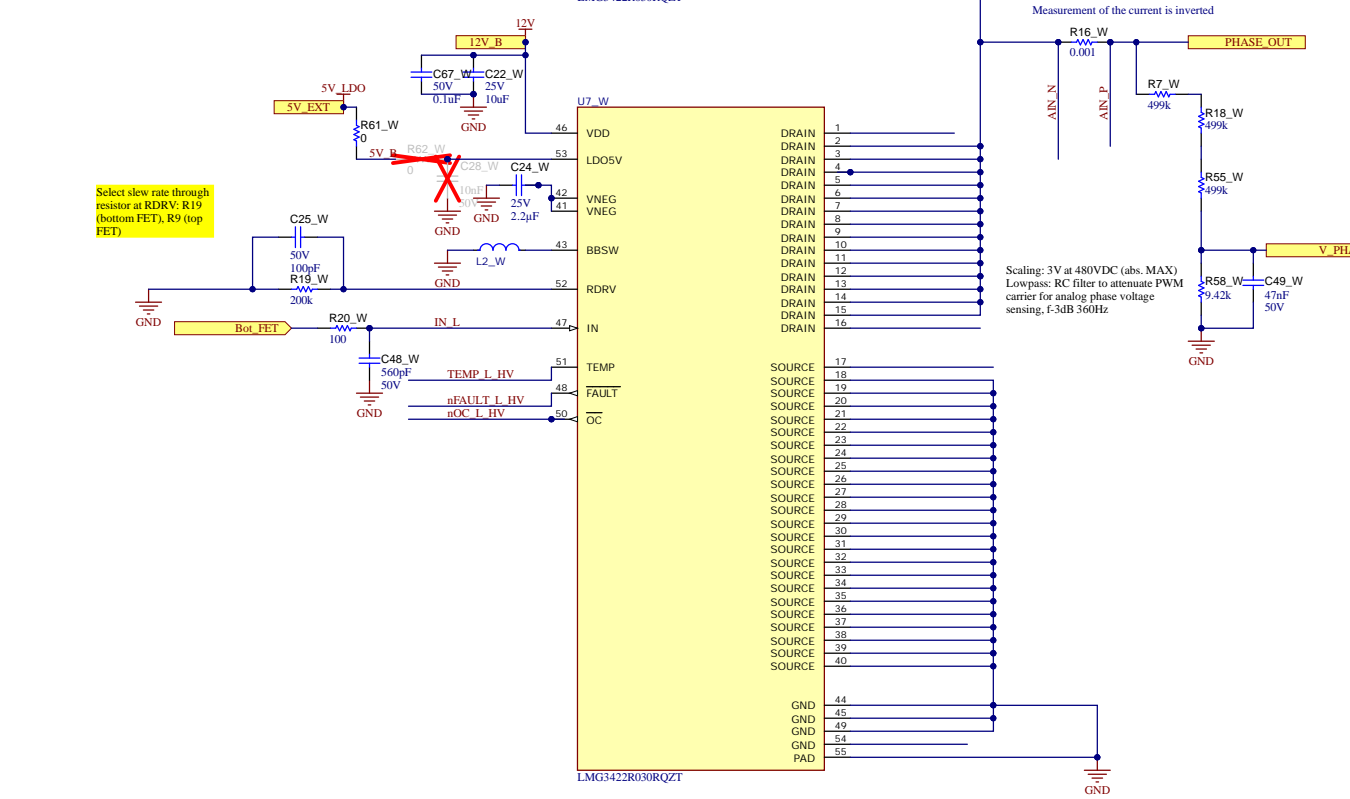
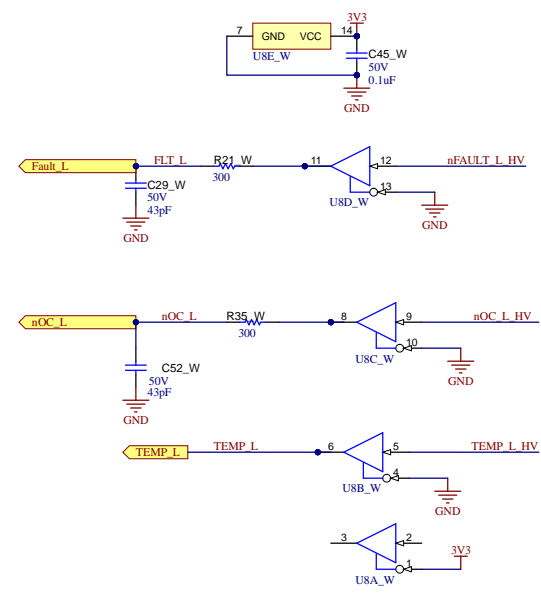
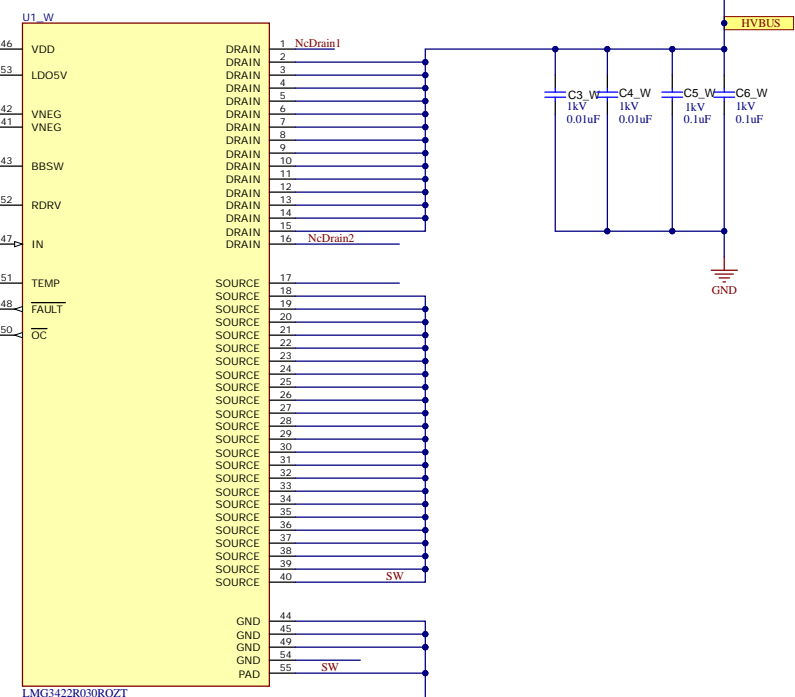
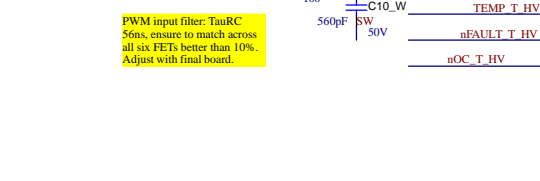
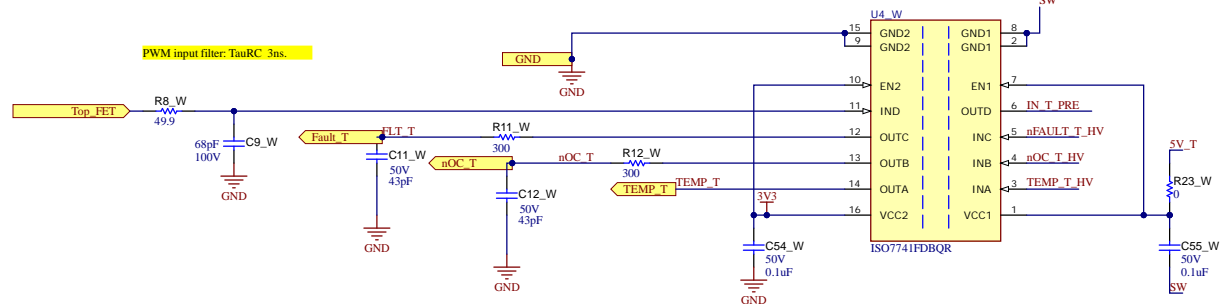
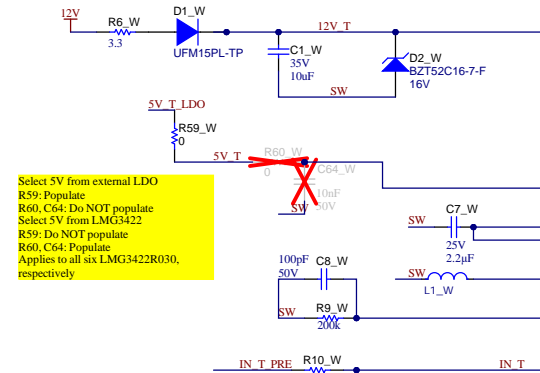
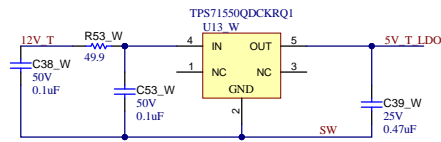


Current sensing

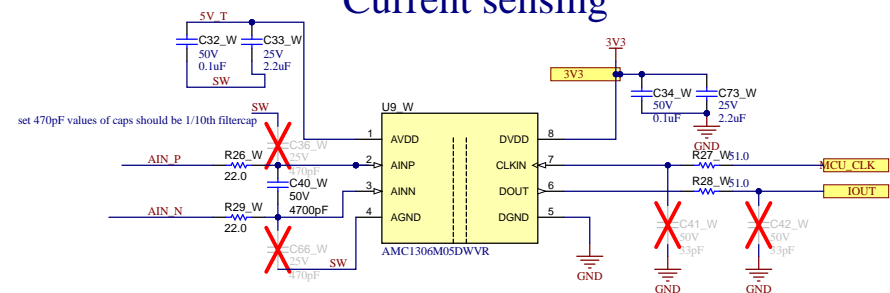


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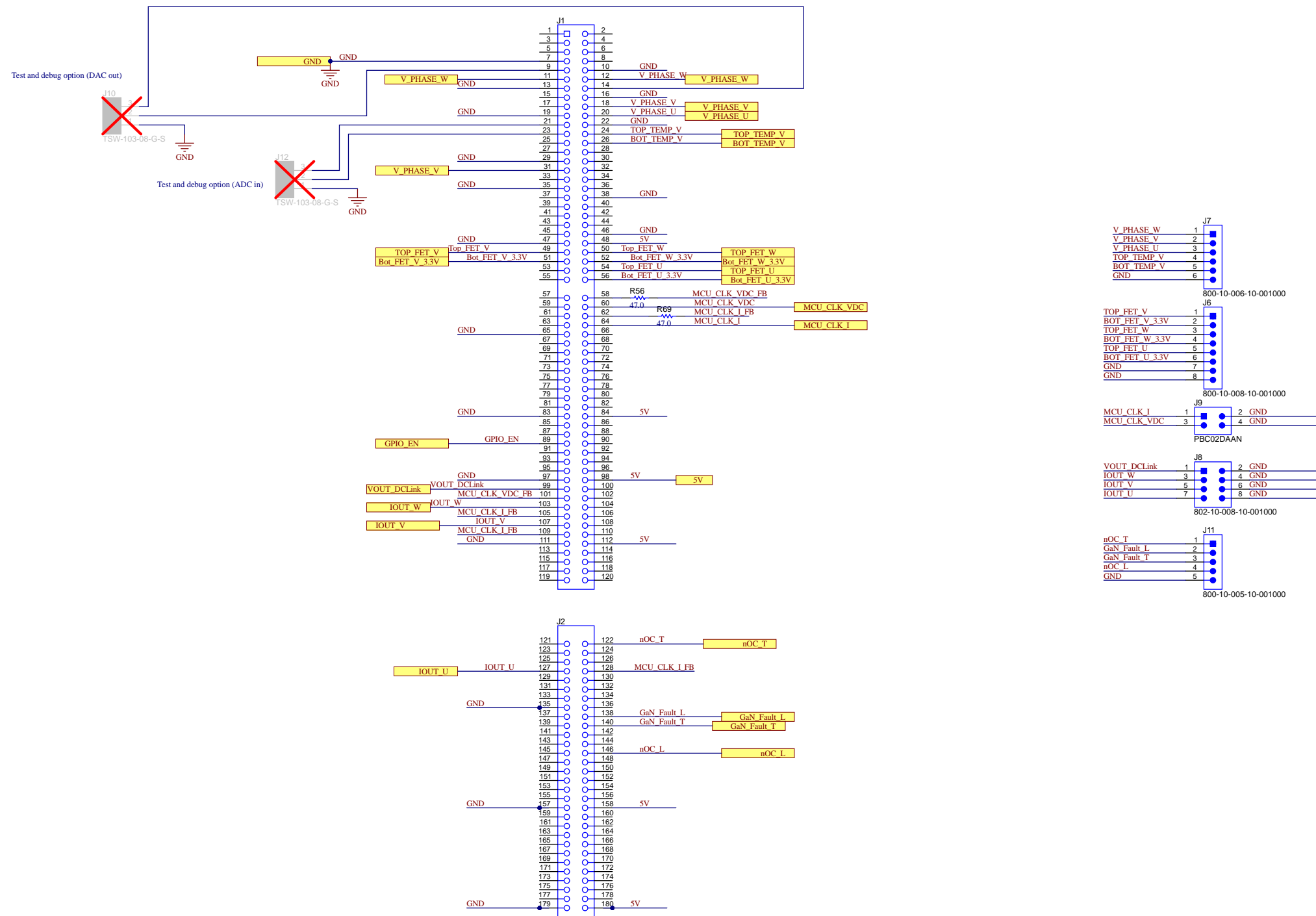
LDO FROM BOOTSTRAP TO SUPPLY ISOLATORS



Current sensing



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H1 NY PMS 440 0025 PH
 H2 NY PMS 440 0025 PH
 H3 NY PMS 440 0025 PH
 H4 NY PMS 440 0025 PH

H5 1902C
 H6 1902C
 H7 1902C
 H8 1902C

FID1 Fiducial
 FID2 Fiducial
 FID3 Fiducial
 FID4 Fiducial
 FID5 Fiducial
 FID6 Fiducial

LOGO1


 CAUTION HOT SURFACE

LOGO5

 CAUTION HOT SURFACE

Logo8
 PCB
 LOGO
 CAUTION. READ USER GUIDE BEFORE USE

Logo9
 PCB
 LOGO
 CAUTION. READ USER GUIDE BEFORE USE

Logo2

 CE Mark

LOGO11

 DANGER HIGH VOLTAGE

LOGO7

 DANGER HIGH VOLTAGE

PCB
 LOGO
 FCC disclaimer

PCB
 LOGO
 WEEE logo

PCB Number: TIDA-010255
 PCB Rev: E2

Variant/Label Table

Variant	Label Text
001	ChangeMe!
002	ChangeMe!

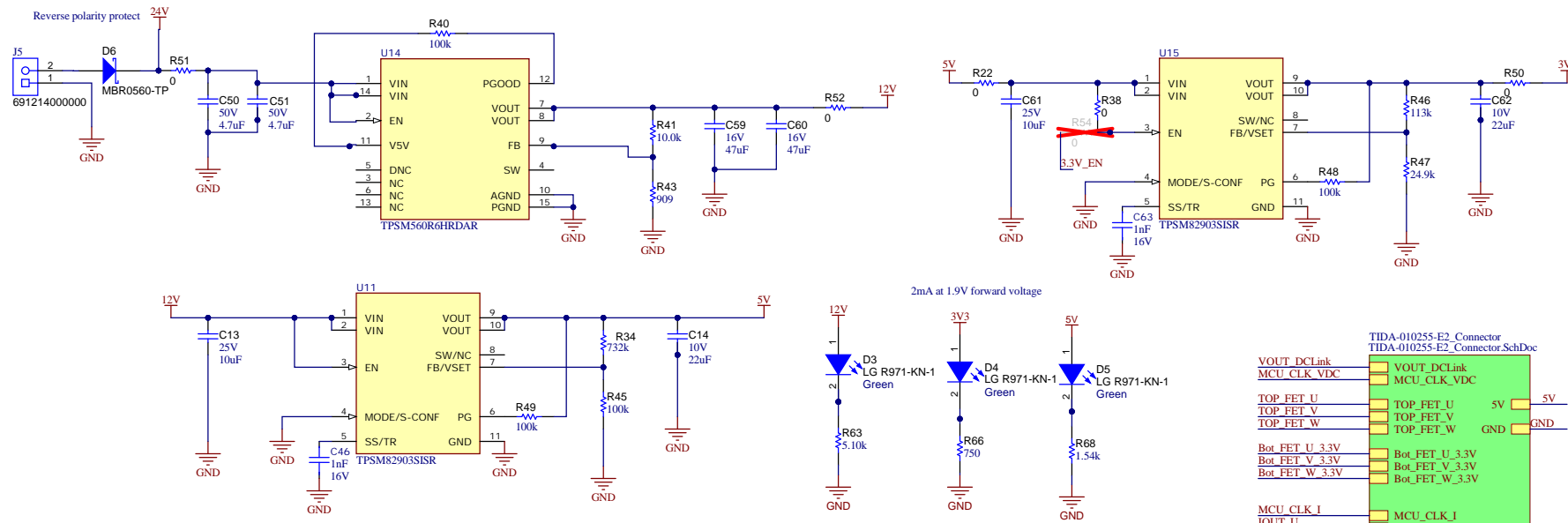
MH1 MTG_NoPads
 MH2 MTG_NoPads
 MH3 MTG_NoPads

MH4 MTG_NoPads
 MH5 MTG_NoPads
 MH6 MTG_NoPads

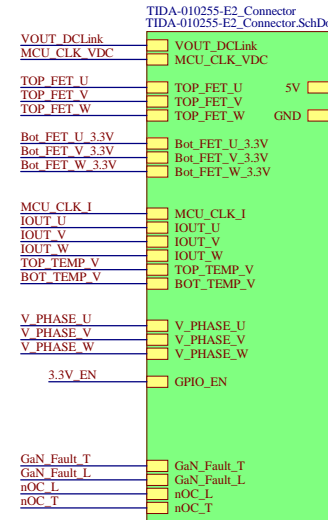
Texas Instruments and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. Texas Instruments and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. Texas Instruments and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 10/11/2023
TID #: N/A	Project Title: 3-Phase GaN inverter	
Number: TIDA-010255 Rev: E2	Sheet Title:	
SVN Rev: Unknown revision	Assembly Variant: 001	Sheet: 3 of 6
Drawn By:	File: TIDA-010255-E2_Hardware.SchDoc	Size: B
Engineer: Vicario/Staebler	Contact: http://www.ti.com/support	

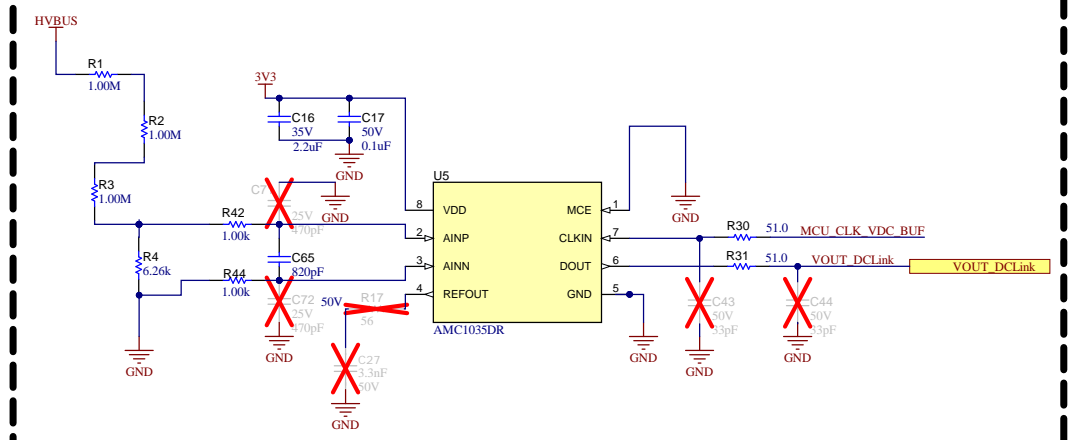
Power rails and connectors



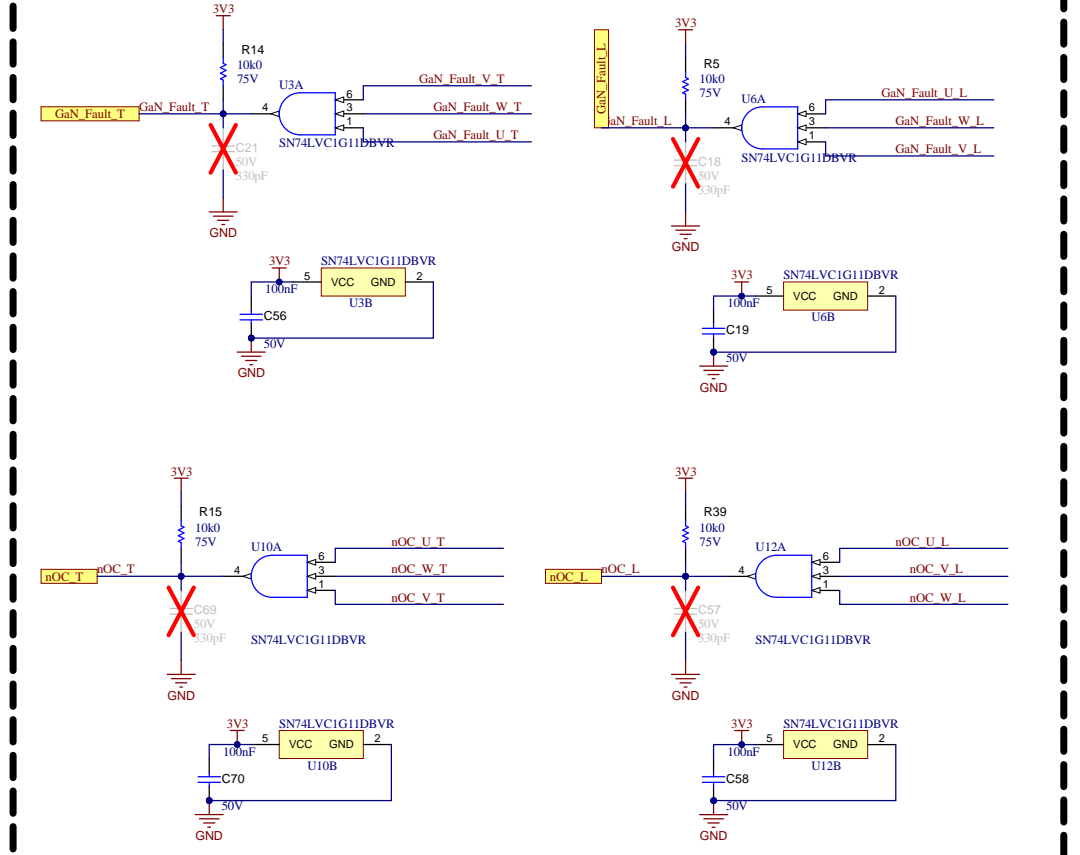
High Voltage DC inout and 3-phase output connectors



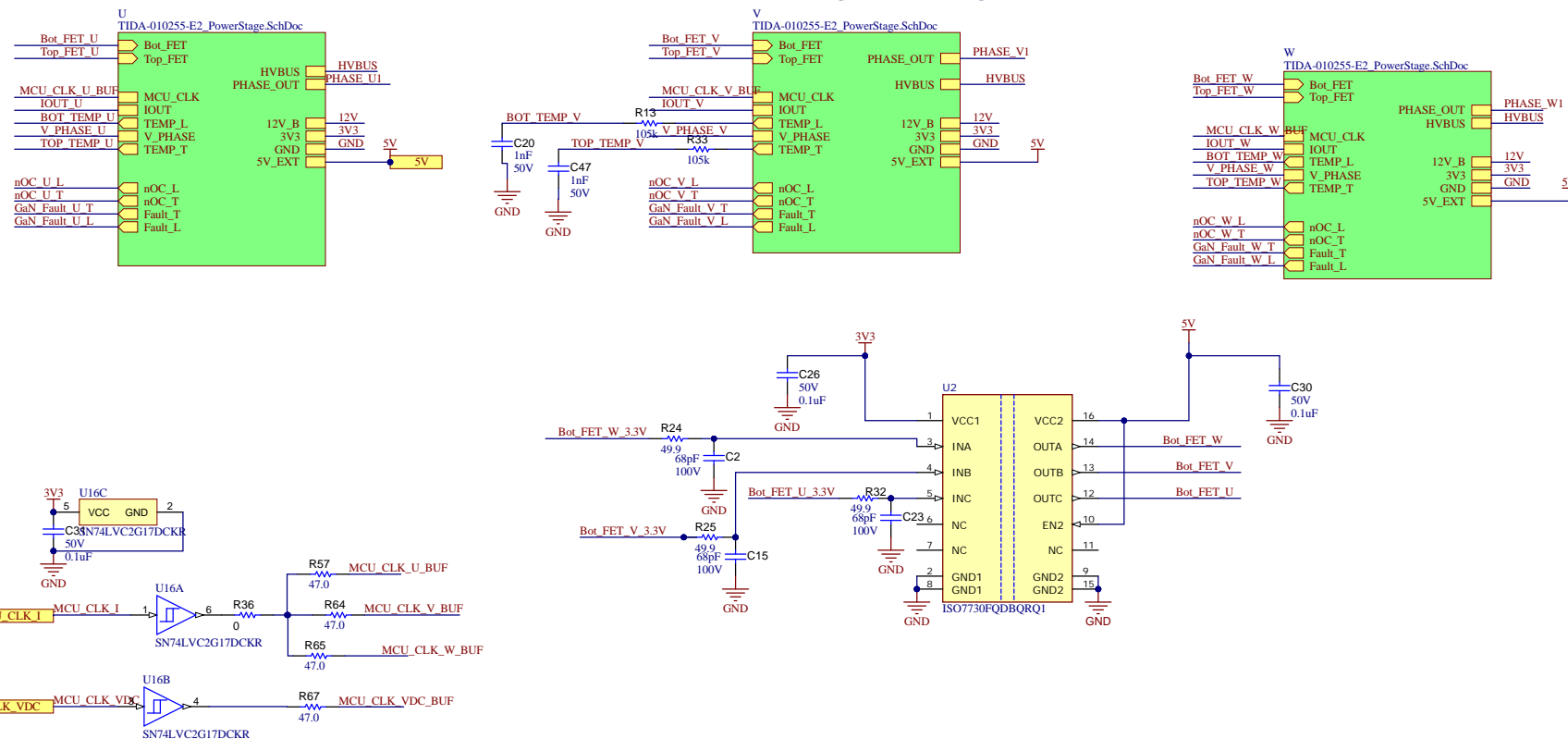
DC Voltage sensing



Fault sensing



Power stage and signal buffer



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