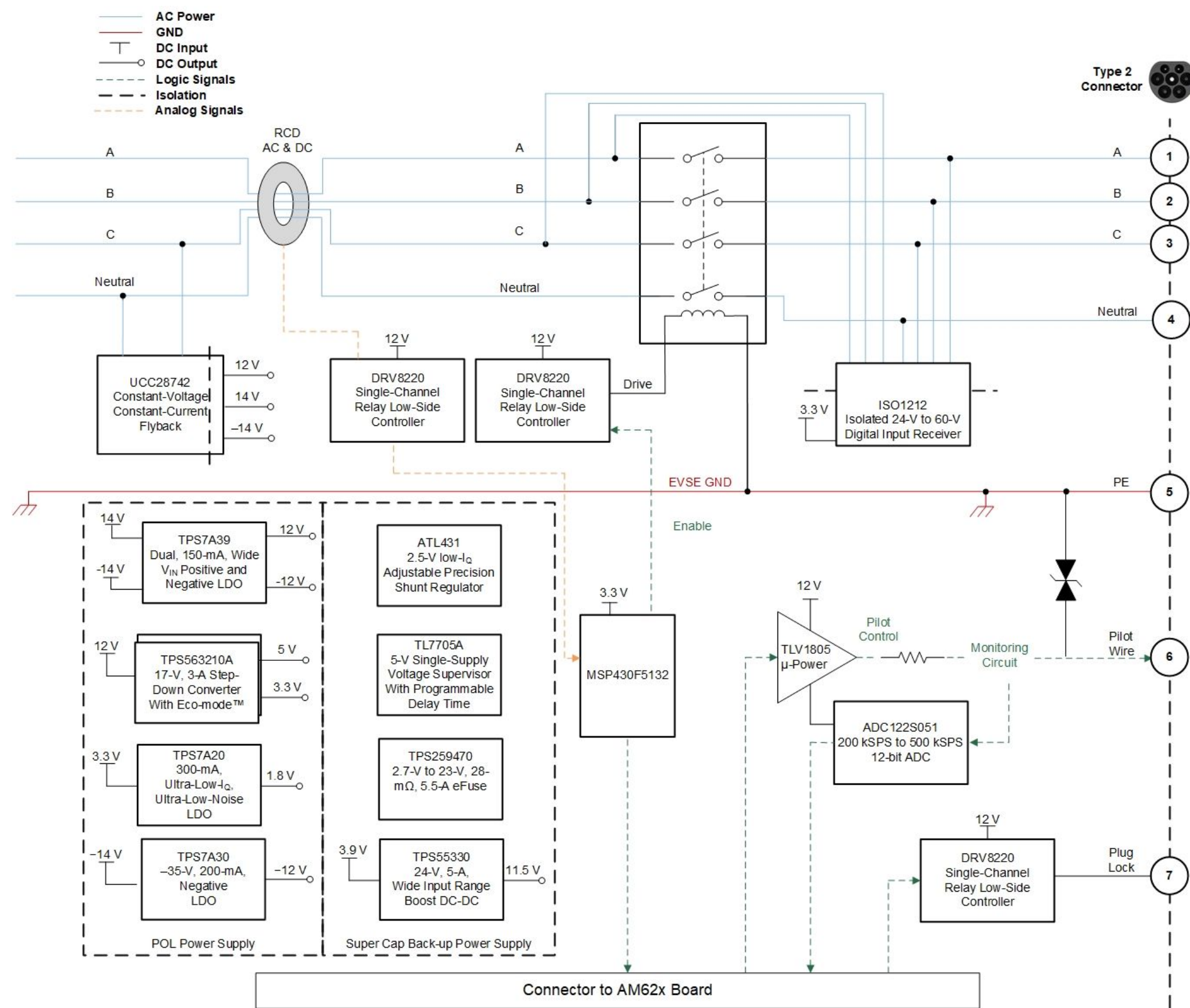


Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A



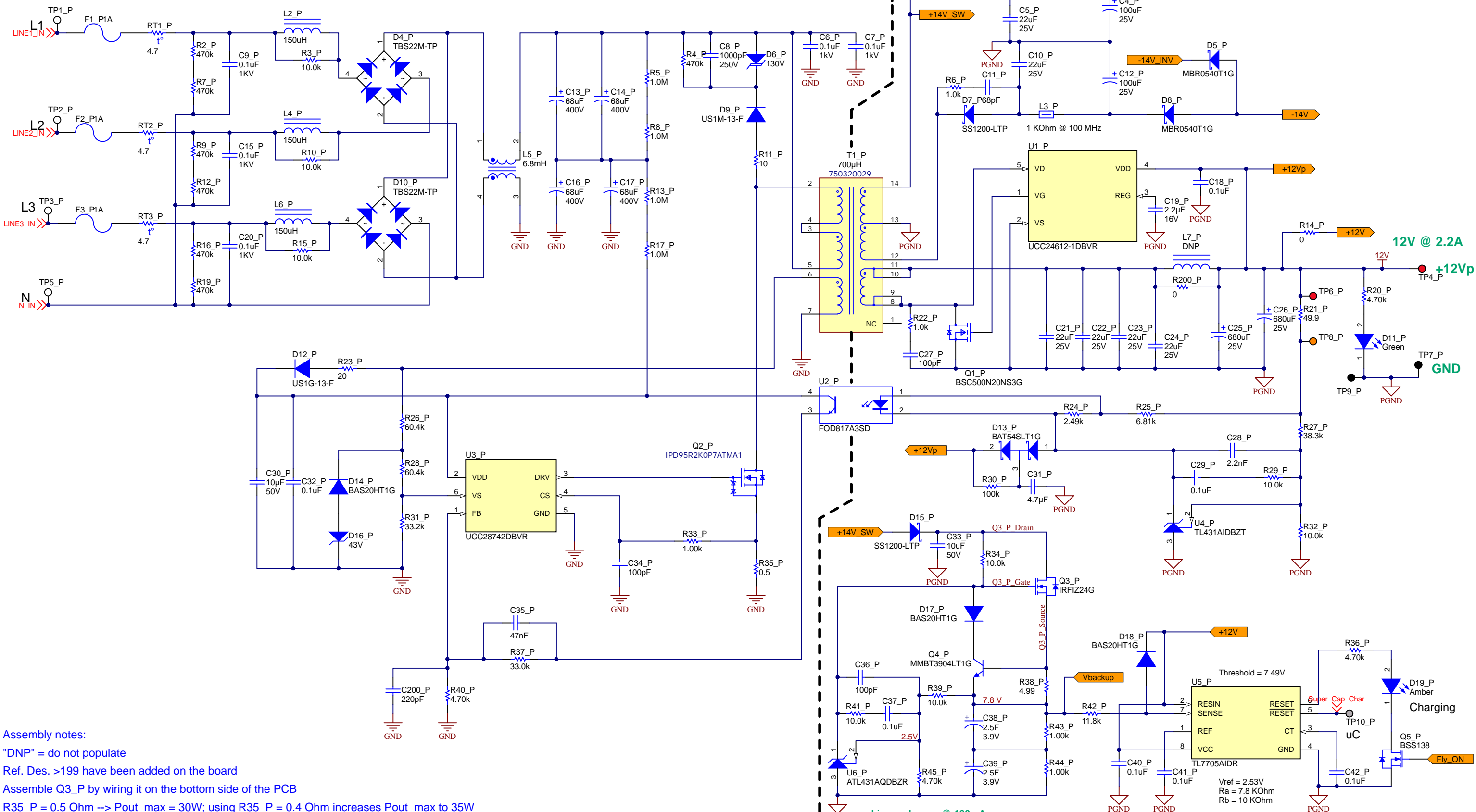
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TID #: TIDA-010239	Project Title: 3-phase Flyback + POL and LDO	
Number: PMP31161	Rev: C	Sheet Title:
SVN Rev: Version control disabled	Assembly Variant: [No Variations]	Sheet: 1 of 11
Drawn By:	File: AC_L2_Baseboard.SchDoc	Size: B
Engineer: R. Scibilia	Contact: http://www.ti.com/support	



Vin_min = 85 VAC (line-neutral)

Vin_max = 460 VAC (line-line)



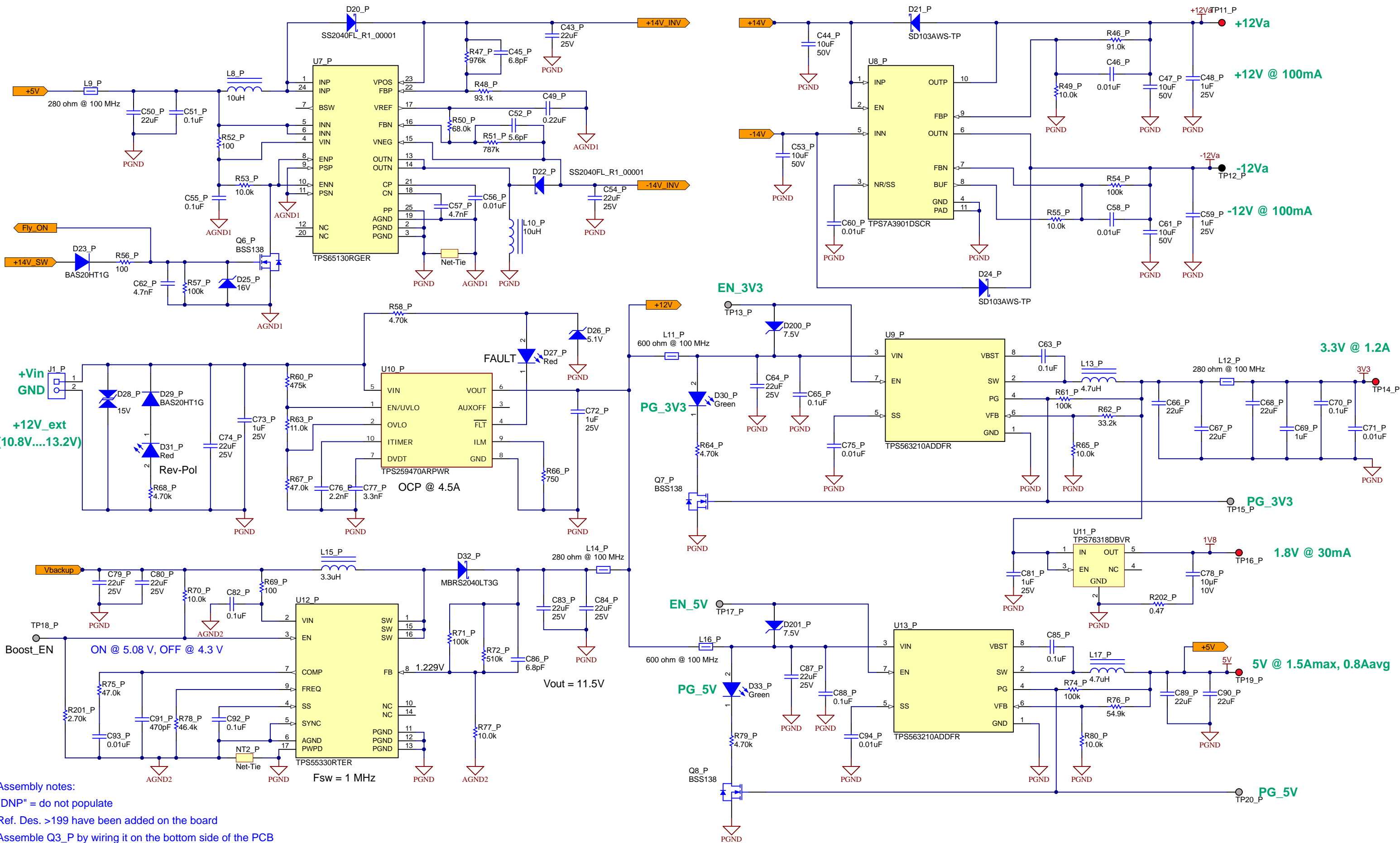
Assembly notes:
 "DNP" = do not populate
 Ref. Des. >199 have been added on the board
 Assemble Q3_P by wiring it on the bottom side of the PCB
 R35_P = 0.5 Ohm --> Pout_max = 30W; using R35_P = 0.4 Ohm increases Pout_max to 35W

Linear charger @ 120mA
 Charging time = 1 minute

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Number: PMP31161	Rev: C	Sheet Title:
SVN Rev: Version control disabled	Assembly Variant: [No Variations]	Sheet: 2 of 11
Drawn By:	File: AC_L2_Baseboard SCH-Flyback_PWR.SchDoc	Size: B
Engineer: R. Scibilia	Contact: http://www.ti.com/support	

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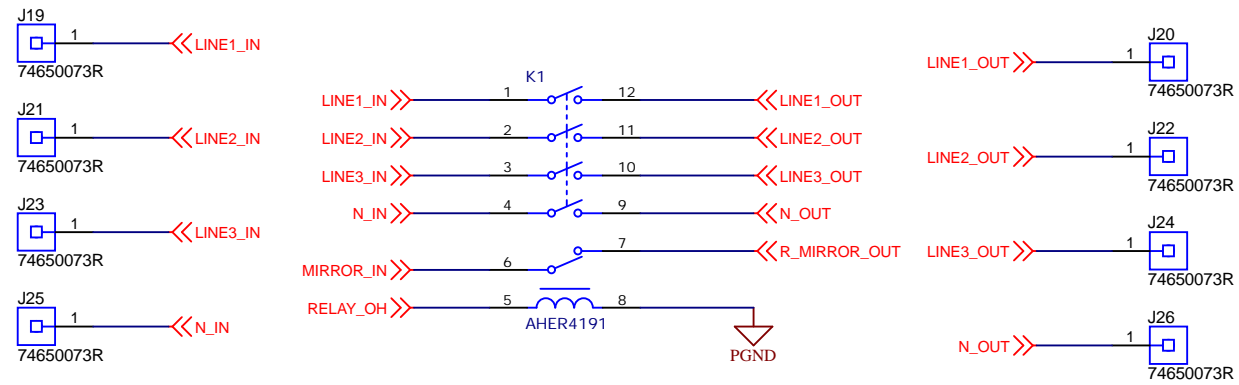
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TID #: PMP31161	Rev: C	Project Title: 3-phase Flyback + POL and LDO
SVN Rev: Version control disabled	Sheet Title:	Sheet: 3 of 11
Drawn By: R. Scibilia	File: AC_L2_Baseboard SCH-POL_PWR.SchDoc	Size: B
Engineer: R. Scibilia	Contact: http://www.ti.com/support	

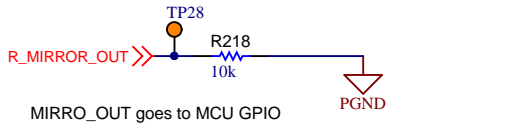
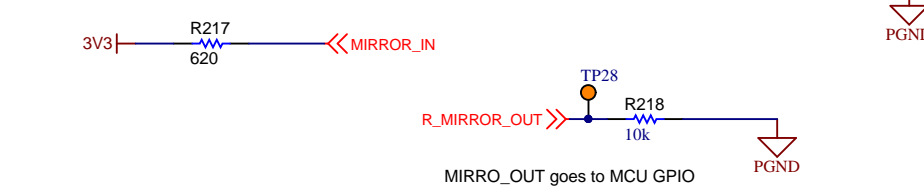
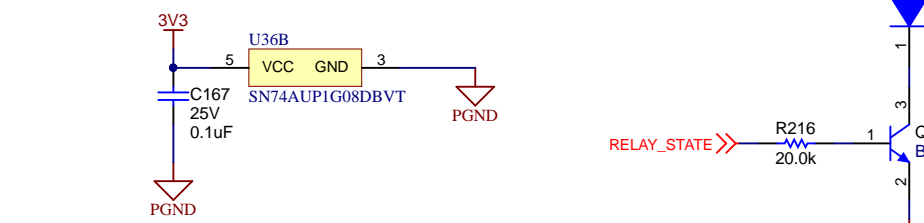
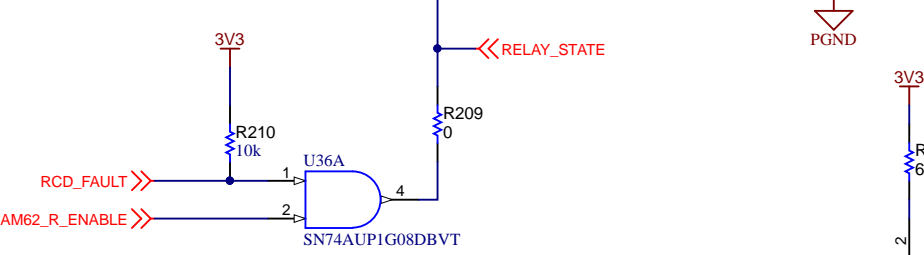
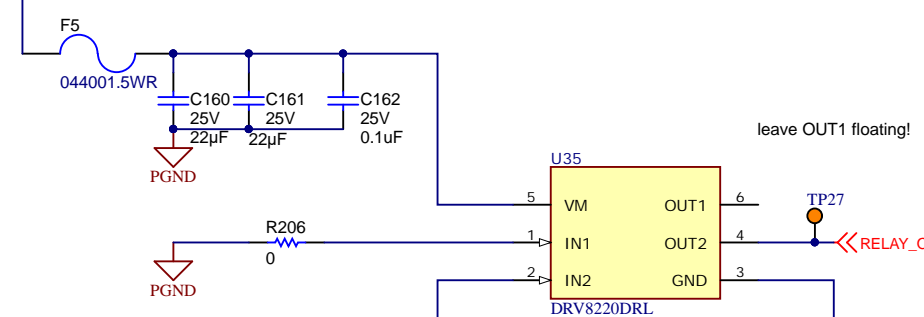


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Relay Driver



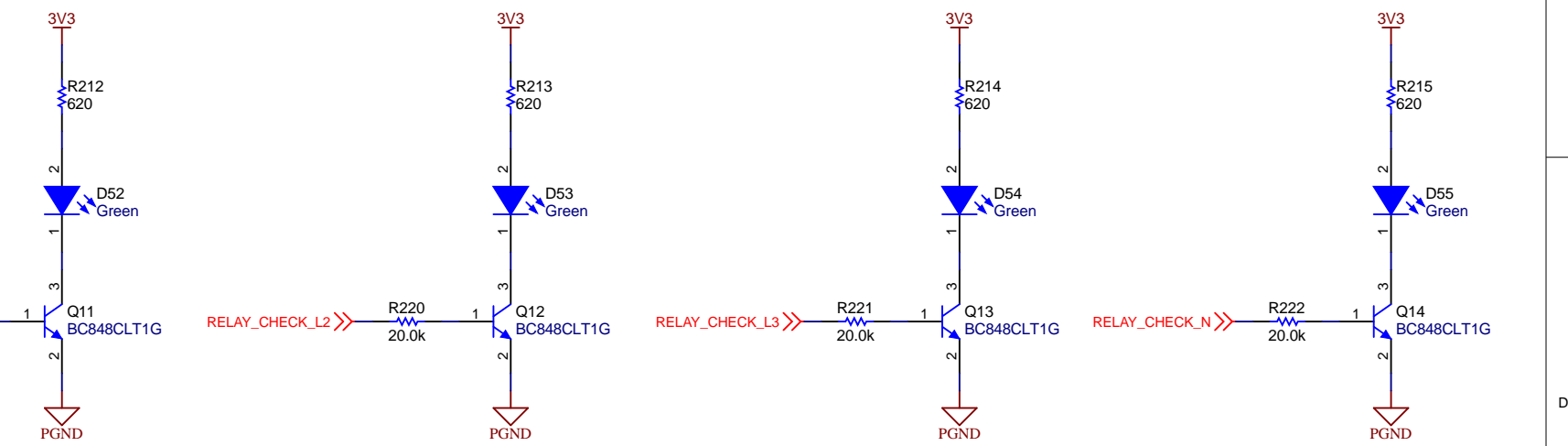
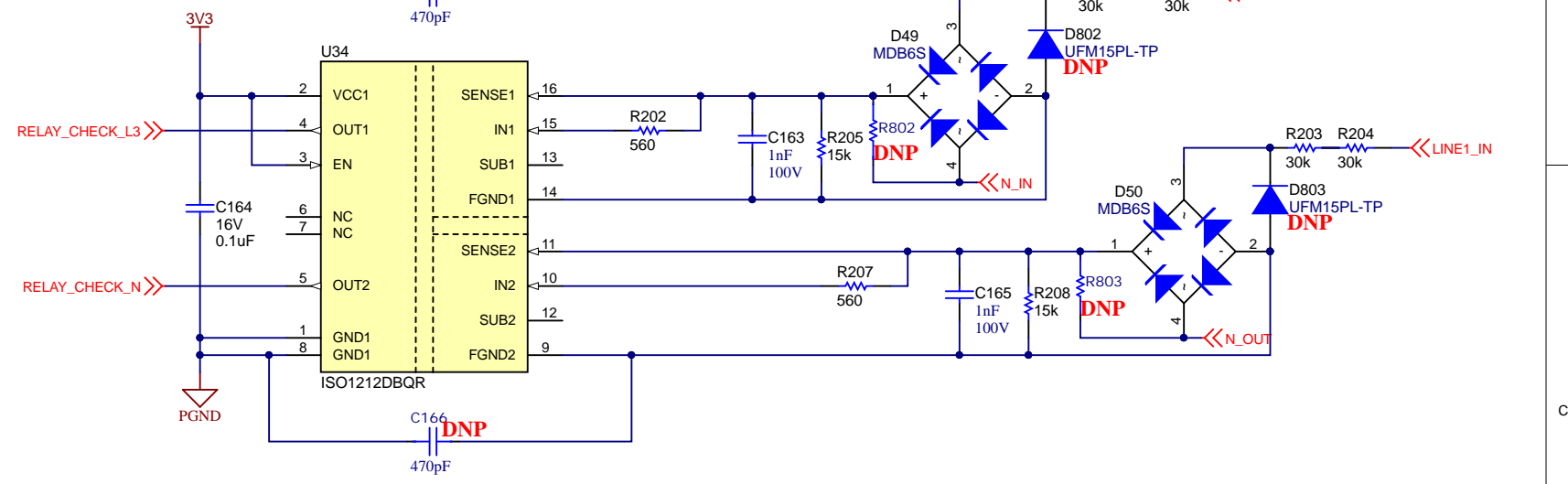
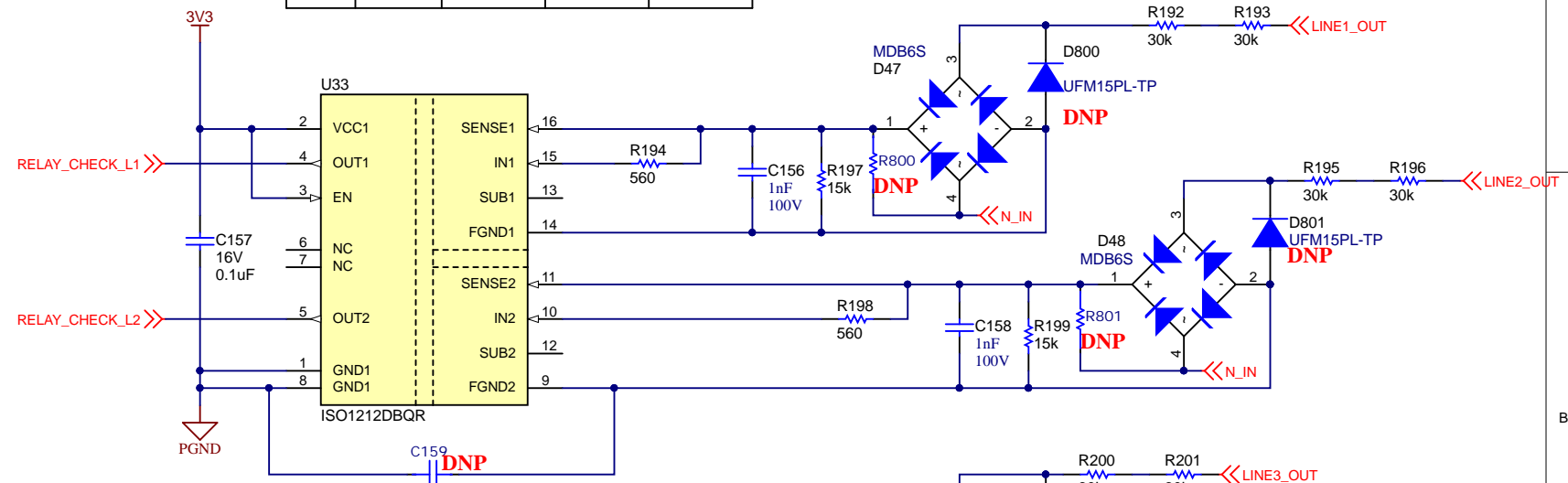
AHER4191: coil voltage 12V, operating current 333mA(36ohm), holding voltage 35% - 50%



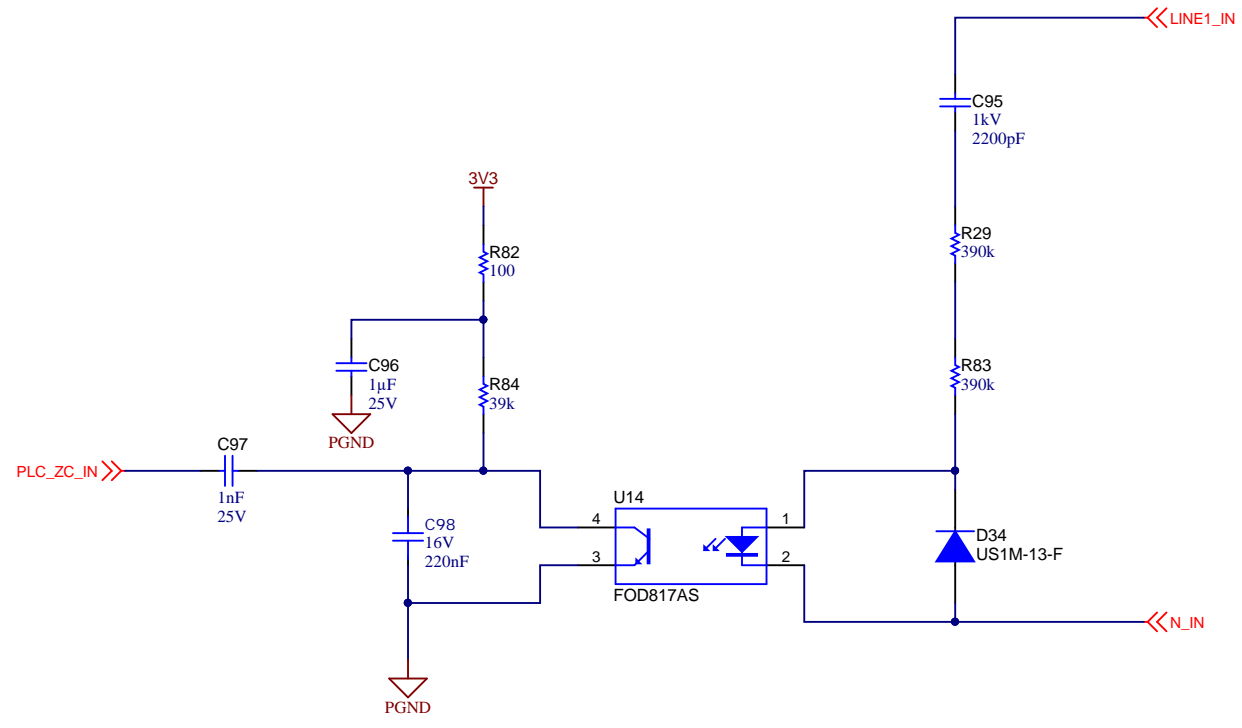
MIRRO_OUT goes to MCU GPIO

Welding Detection

Input Configuration				
VAC	Vin_max	Rthr R41+R42 R45+R46	Rshunt R47 R49	Rsense R43 R48
110	148	33k	24k	560
240	300	60k	15k	560



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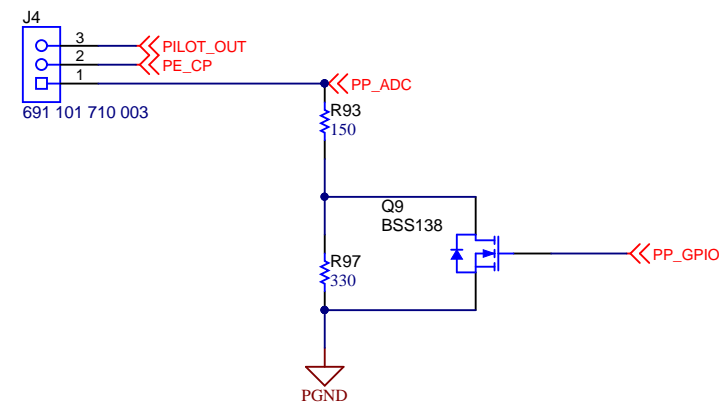
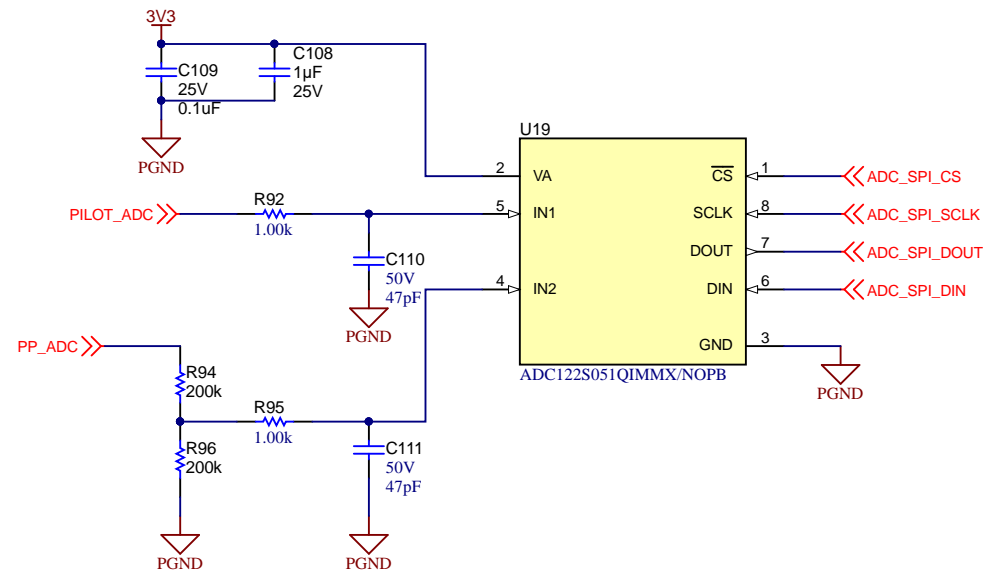
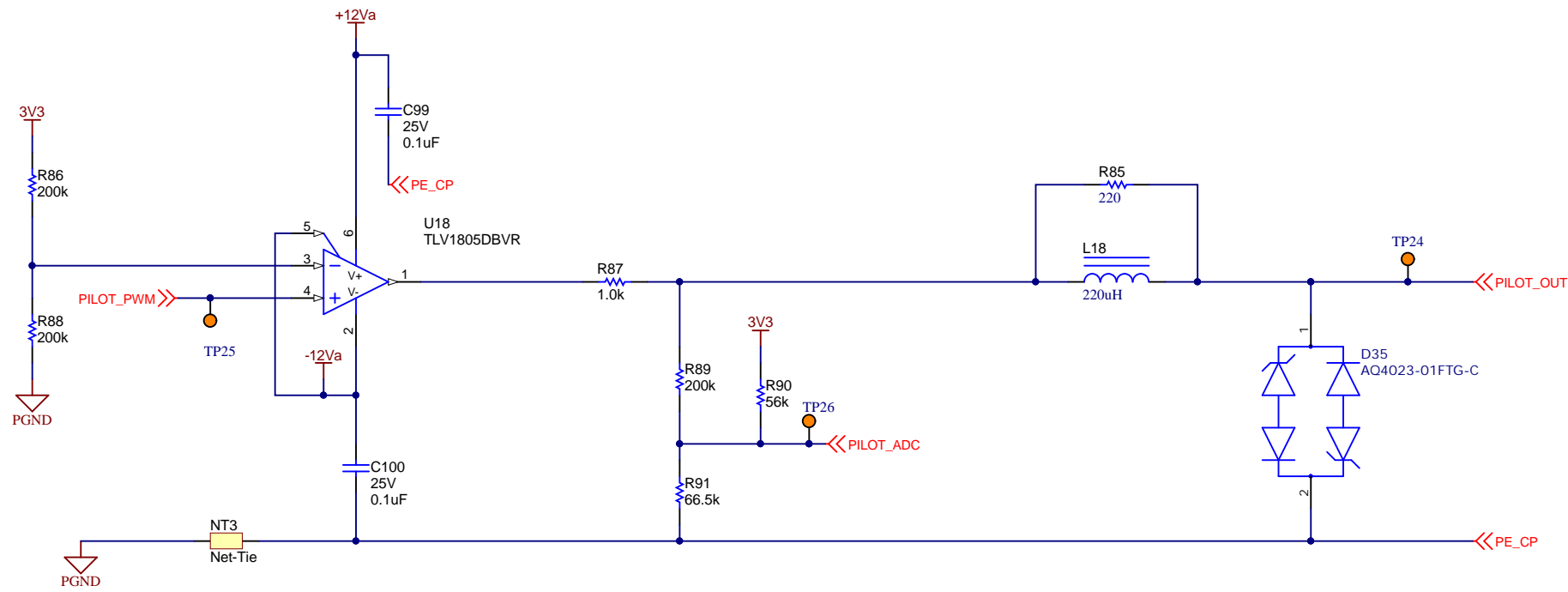


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TID #: TIDA-010239	Project Title: 3-phase Flyback + POL and LDO	
Number: PMP31161	Rev: C	Sheet Title: *
SVN Rev: * Version control disabled	Assembly Variant: [No Variations]	Sheet 5 of 11
Drawn By: *	File: AC_L2_Baseboard_HPGP_ZC.SchDoc	Size: B
Engineer: R. Scibilia	Contact: http://www.ti.com/support	



Pilot Interface



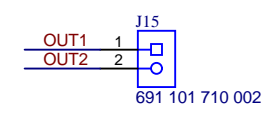
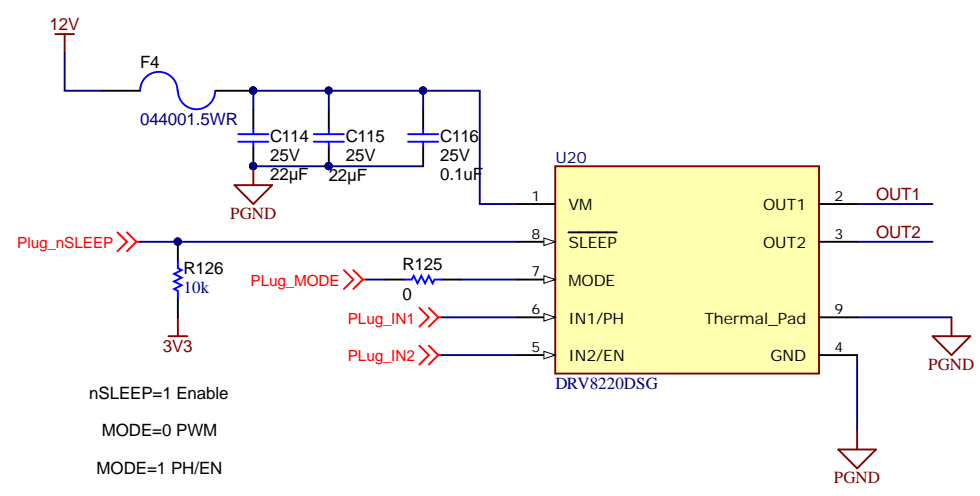
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Number: PMP31161	Rev: C	Sheet Title: *
SVN Rev: Version control disabled	Assembly Variant: [No Variations]	Sheet 6 of 11
Drawn By: *	File: AC_L2_Baseboard_Pilot_Wire_ADC.SchDoc	Size: B
Engineer: R. Scibilia	Contact: http://www.ti.com/support	



DRV8220DSG Plug Lock

CONNECTIONS

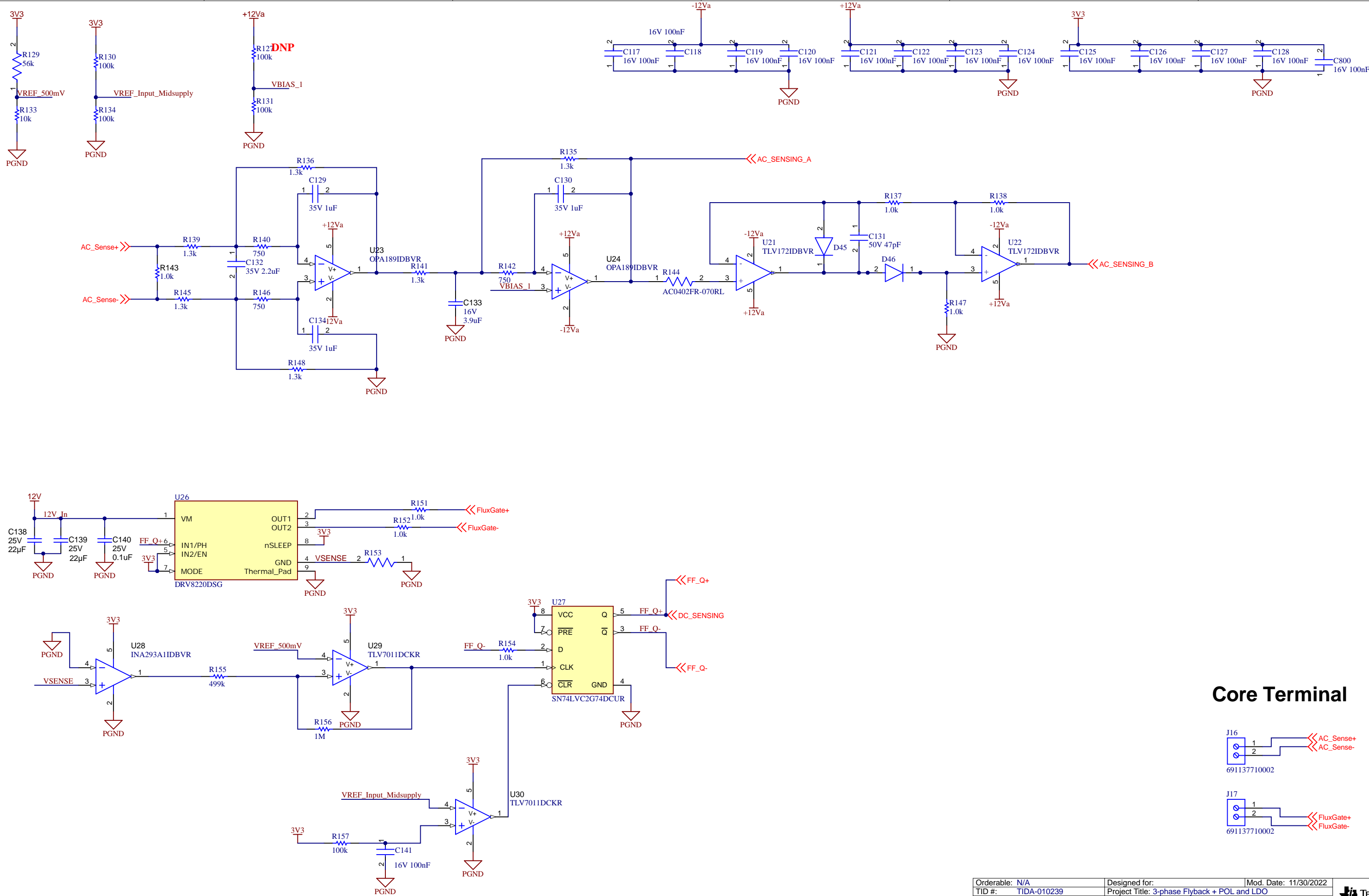


nSLEEP=1 Enable
 MODE=0 PWM
 MODE=1 PH/EN

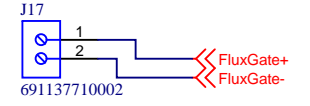
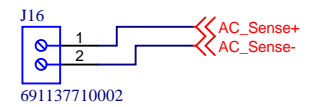
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Drawn By: *	File: AC_L2_Baseboard_PlugLock.SchDoc	Size: B
Engineer: R. Scibilia	Contact: http://www.ti.com/support	





Core Terminal

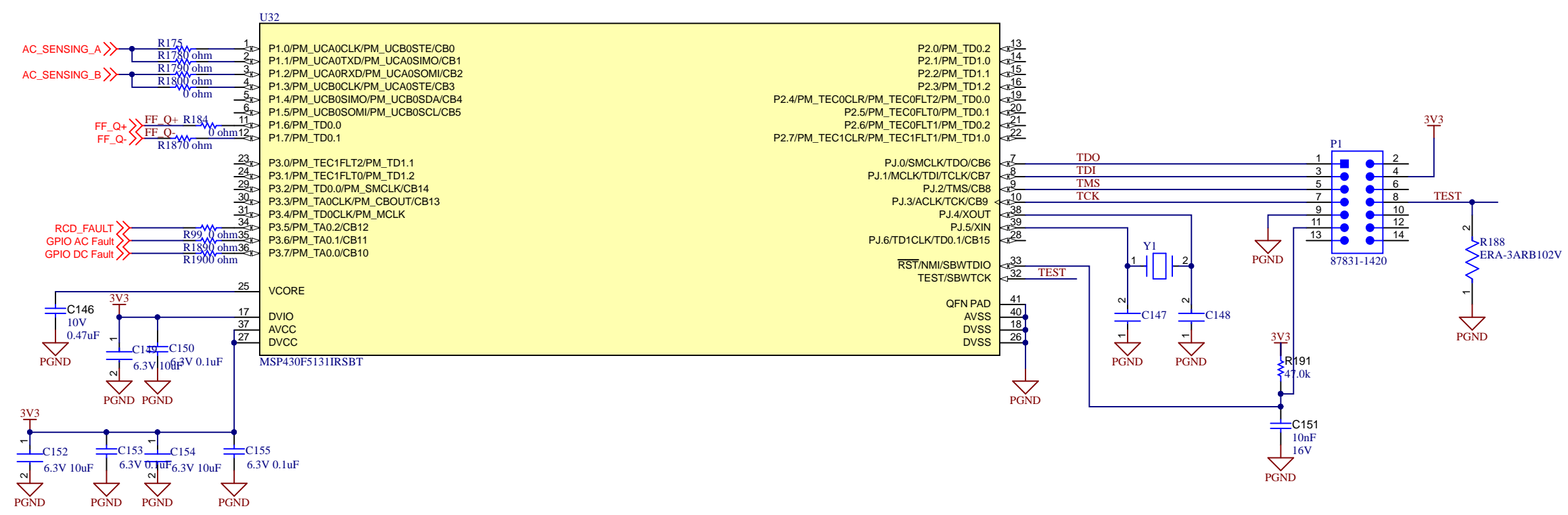


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Engineer: R. Scibilia	Contact: http://www.ti.com/support	



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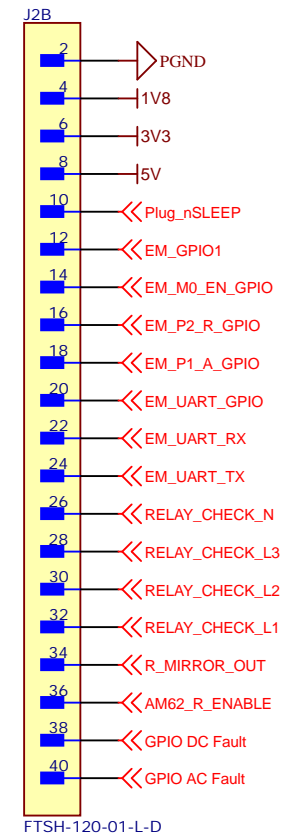
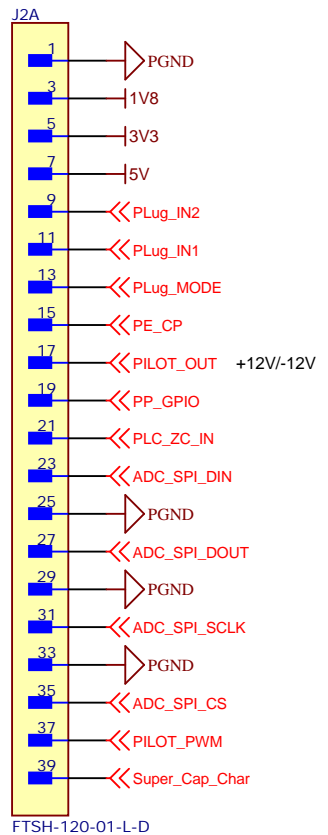
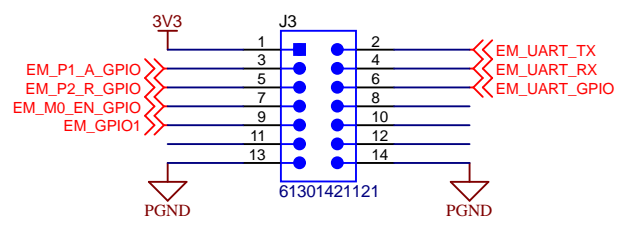
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Number: PMP31161	Rev: C	Sheet Title:
SVN Rev: Version control disabled	Assembly Variant: [No Variations]	Sheet: 9 of 11
Drawn By:	File: AC_L2_Baseboard_RCD_MCU.SchDoc	Size: B
Engineer: R. Scibilia	Contact: http://www.ti.com/support	



SECC board connector

E-meter board connector



FTSH-120-01-L-D

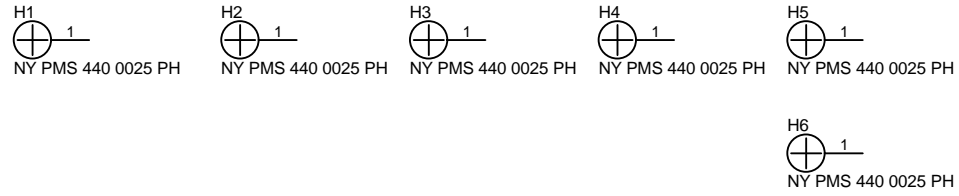
FTSH-120-01-L-D

PE_CP tied to GND on baseboard, treat it as diff pair with PILOT_OUT on SECC board

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Number: PMP31161	Rev: C	Sheet Title: *
SVN Rev: * Version control disabled	Assembly Variant: [No Variations]	Sheet: 10 of 11
Drawn By: *	File: AC_L2_Baseboard_Connectors.SchDoc	Size: B
Engineer: R. Scibilia	Contact: http://www.ti.com/support	





PCB Number: PMP31161
PCB Rev: C



PCB LOGO
FCC disclaimer

PCB LOGO
WEEE logo



LBL1
PCB Label
THT-14-423-10
Size: 0.65" x 0.20 "

Variant/Label Table	
Variant	Label Text
001	ChangeMe!
002	ChangeMe!

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SVN Rev: Version control disabled	Assembly Variant: [No Variations]	Sheet: 11 of 11
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