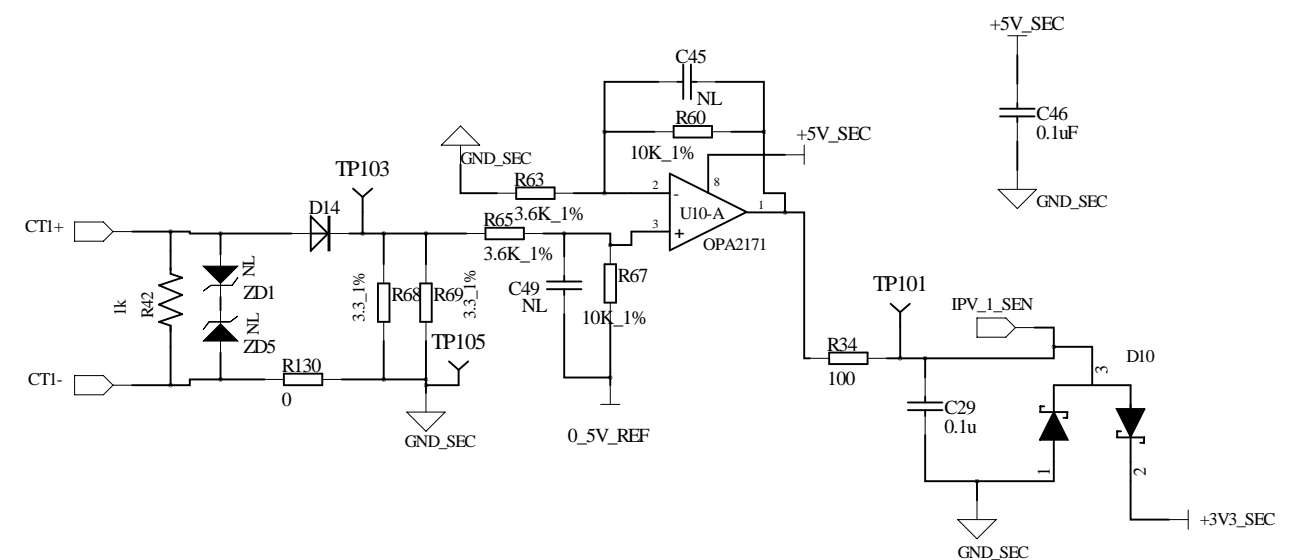
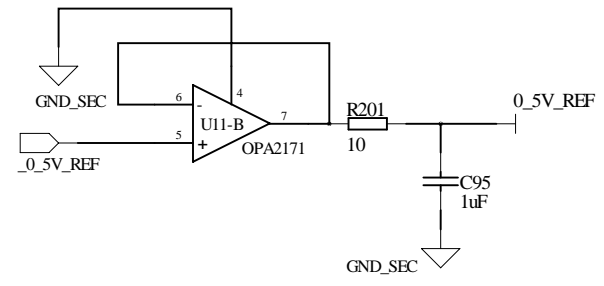
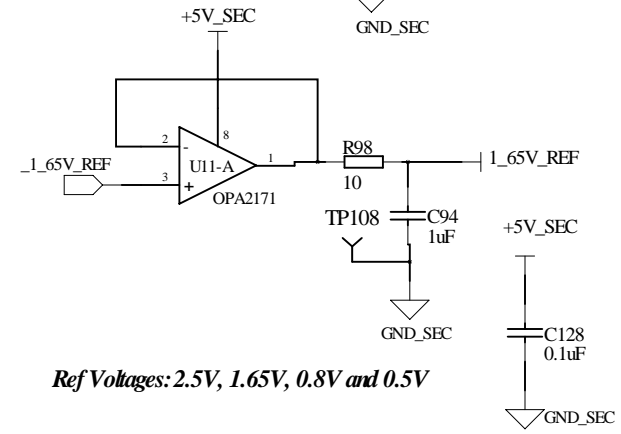
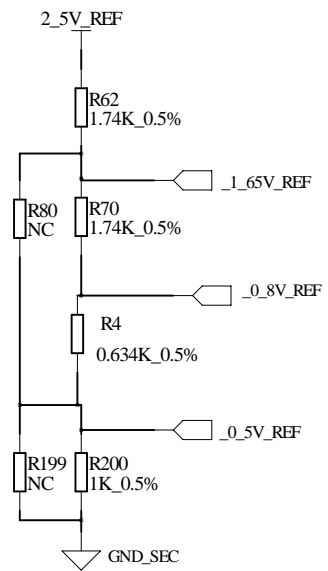
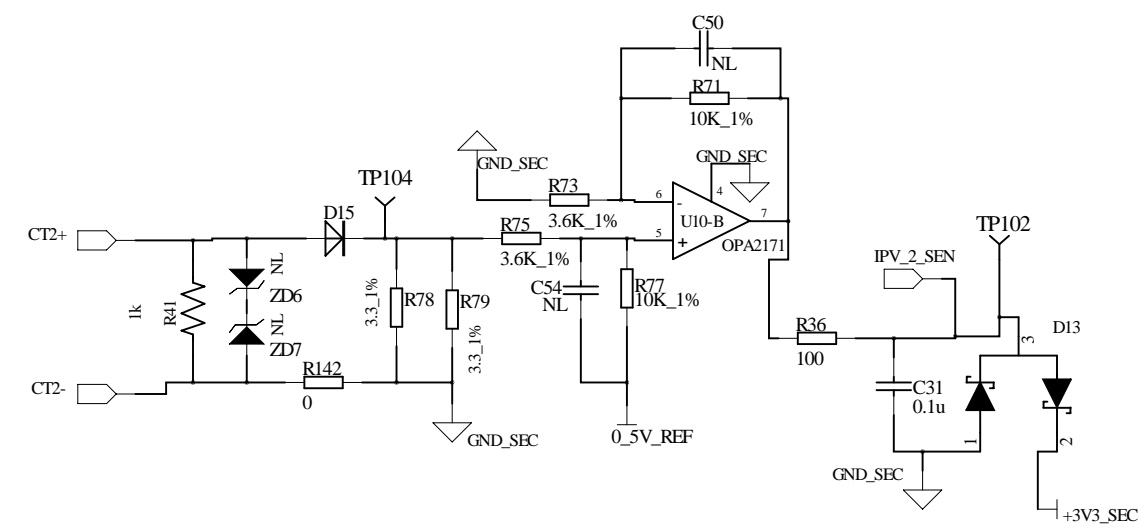
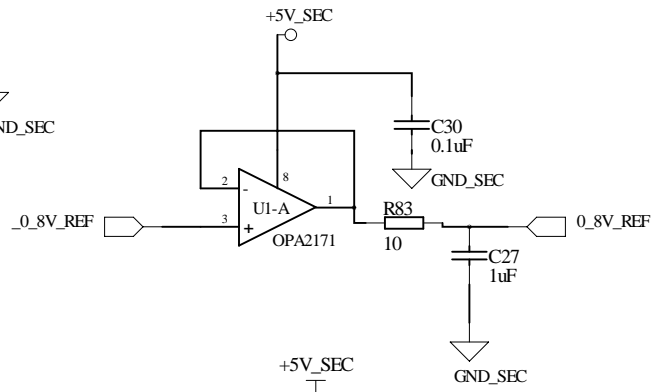
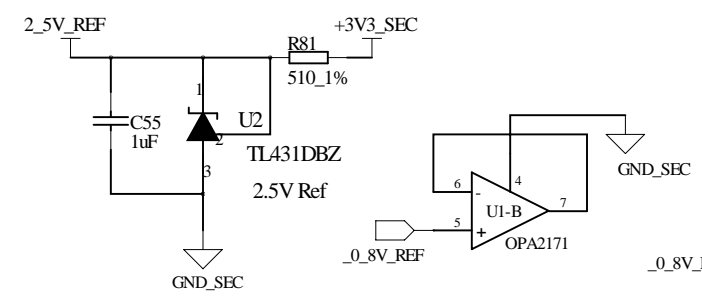


PV Input Voltage Sense (Isolated)



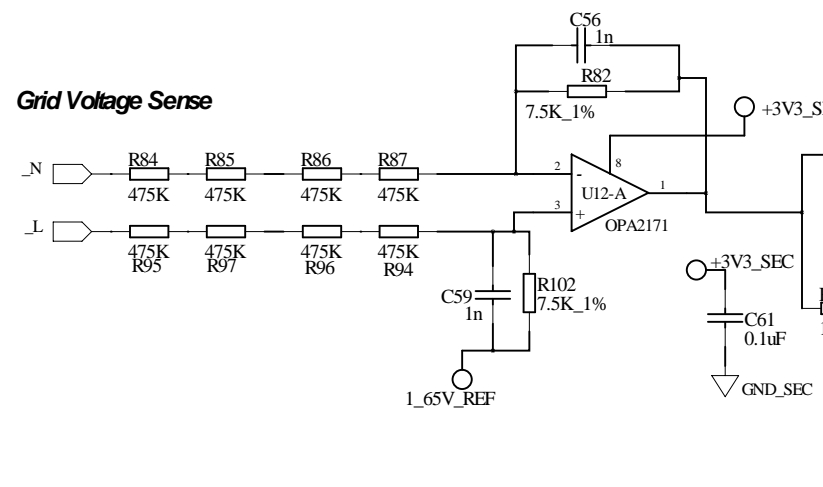
Primary MOSFET Current Sense



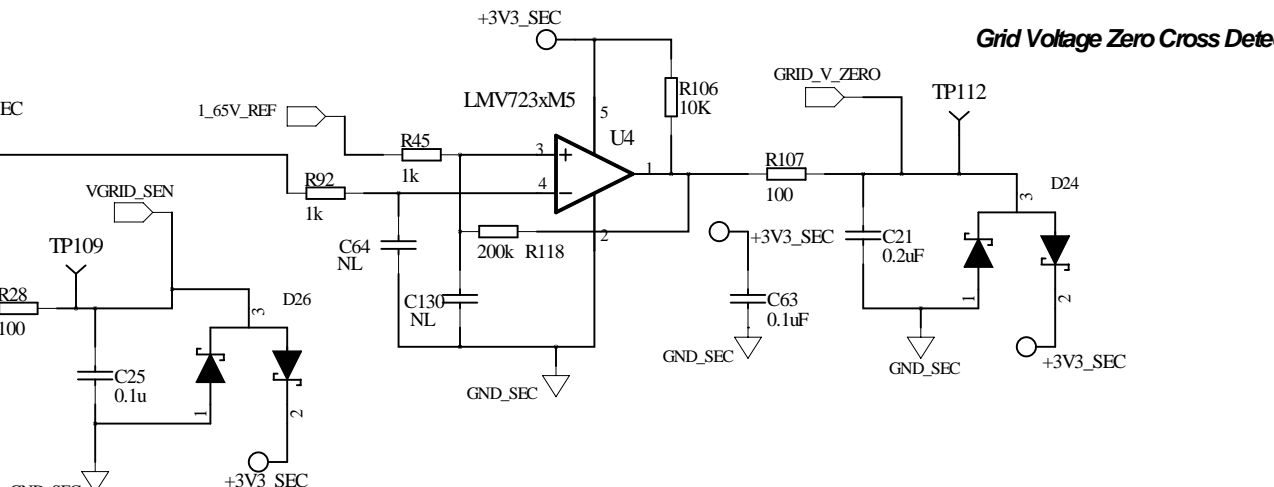
Ref Voltages: 2.5V, 1.65V, 0.8V and 0.5V

Title: PMP9461 - Micro Solar Inverter		
Page Contents: Signal Conditioning 3 & Vref		
Size: B	Signal Conditioning & Vref	Revision: 1.0
Date: 04-04-12	Sheet 1 of 10	

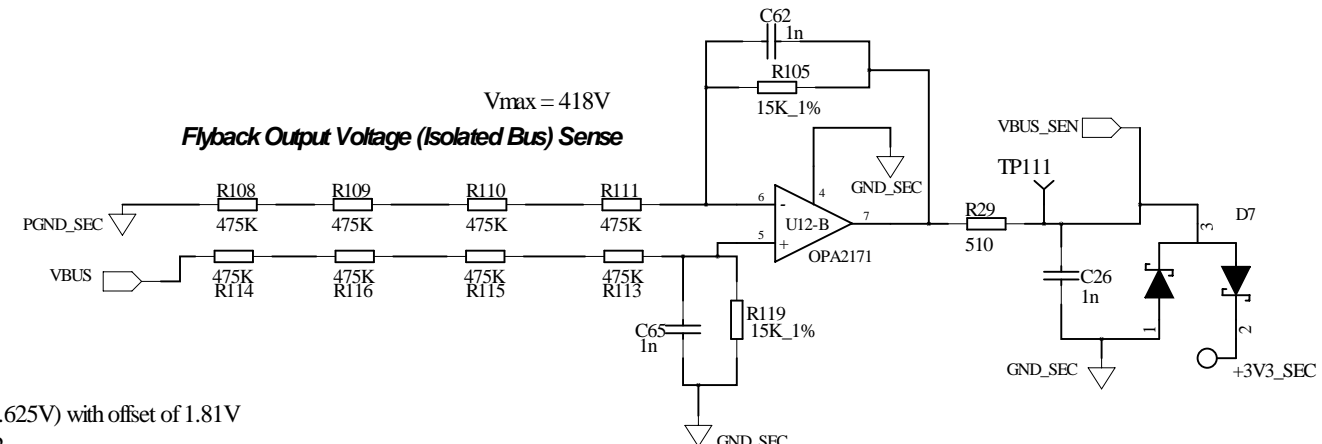
Grid Voltage Sense



Grid Voltage Zero Cross Detect

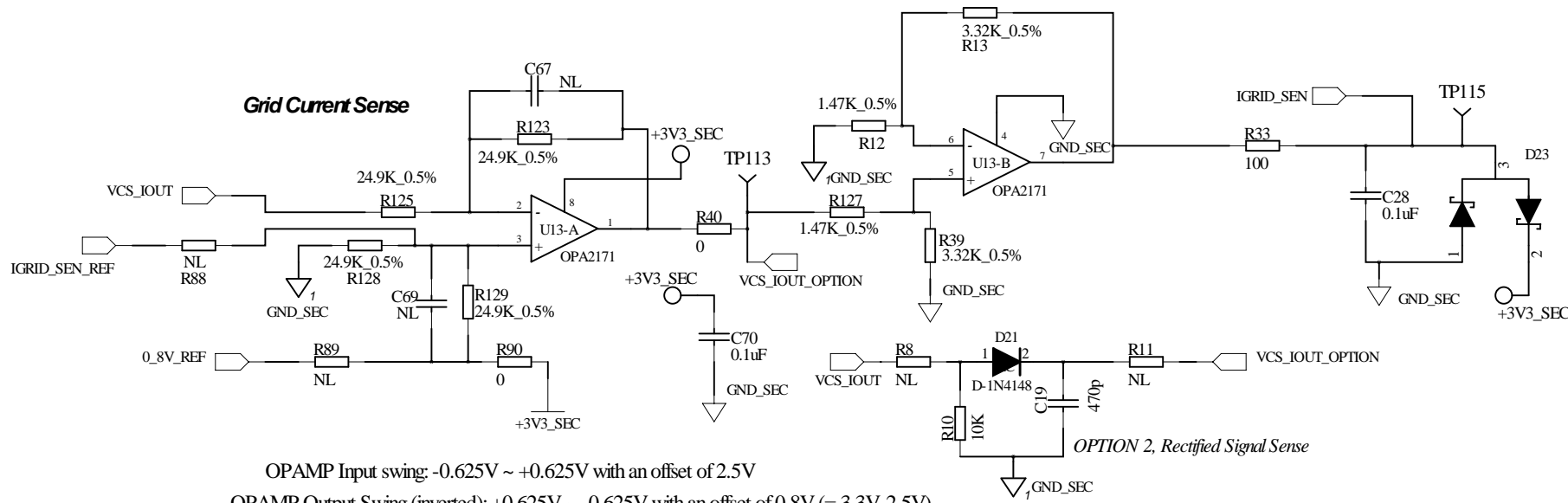


Flyback Output Voltage (Isolated Bus) Sense



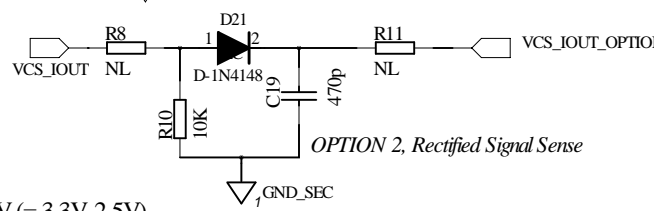
OPAMP Output Swing : $G \cdot (+0.625V \sim -0.625V)$ with offset of 1.81V
 Gain $G = R13/R12$
 Output Swing : $+1.41V \sim -1.41V$ with offset of 1.81V

Grid Current Sense

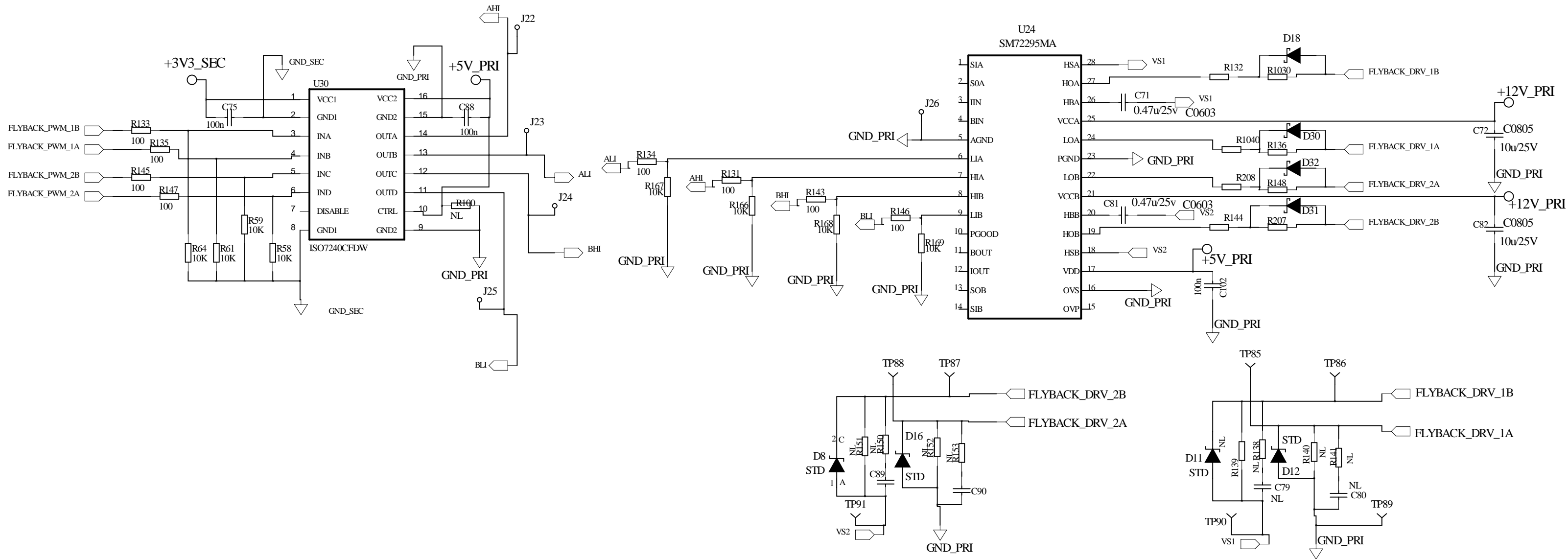


OPAMP Input swing: $-0.625V \sim +0.625V$ with an offset of 2.5V
 OPAMP Output Swing (inverted): $+0.625V \sim -0.625V$ with an offset of 0.8V (= 3.3V-2.5V)

OPTION 2, Rectified Signal Sense



Title: PMP9461 - Micro Solar Inverter		
Page Contents: Signal Conditioning 2		
Size: B	Signal Conditioning	Revision: 1.0
Date: 04-04-12	Sheet 2 of 10	

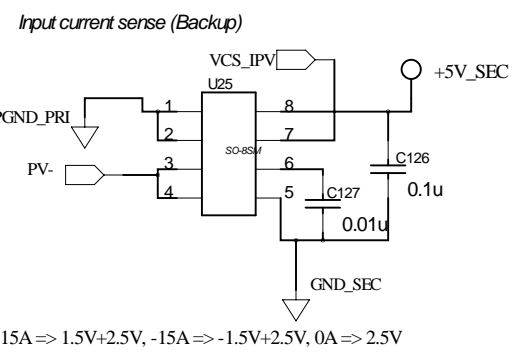
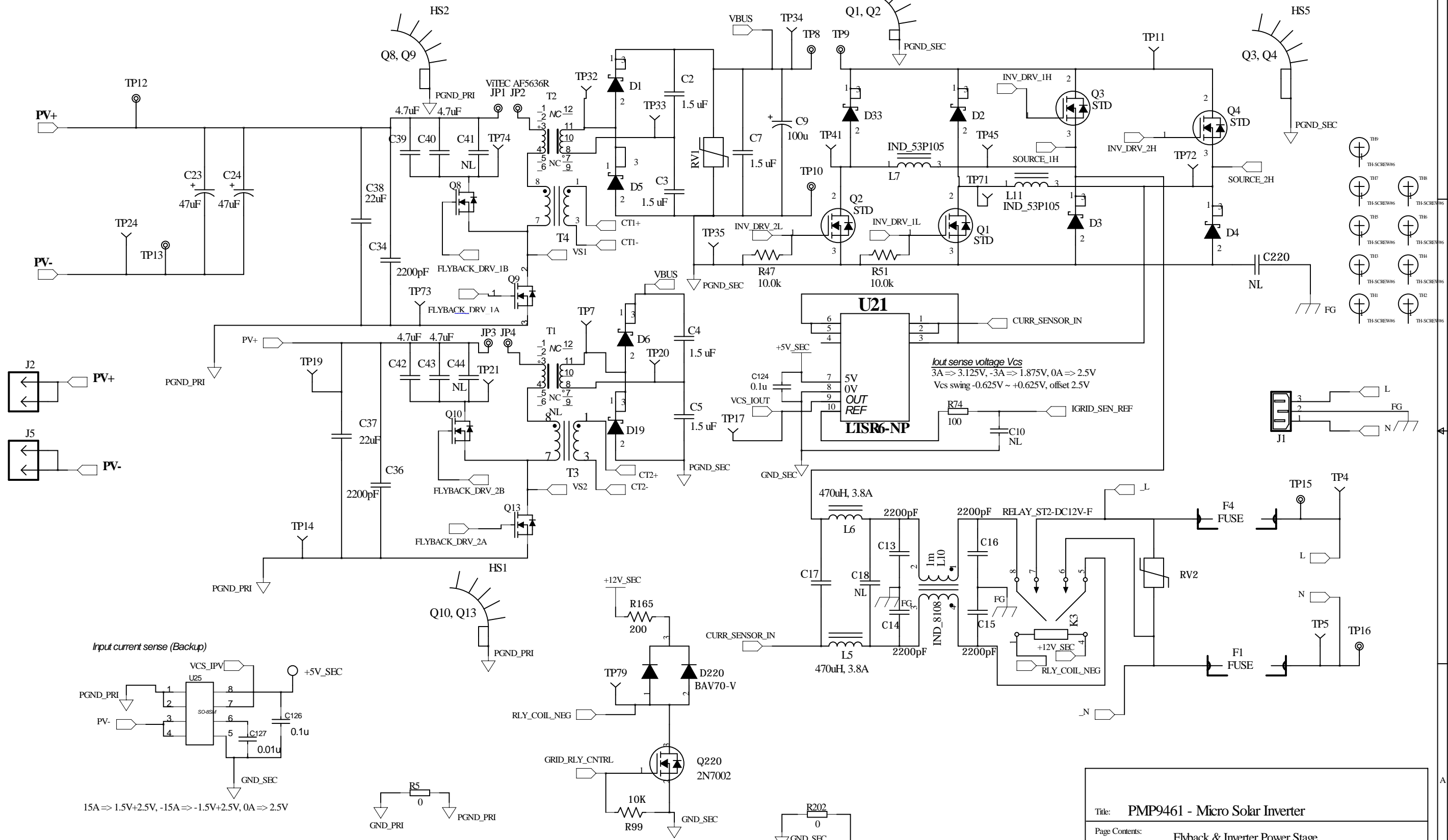


Title: PMP9461 - Micro Solar Inverter		
Page Contents: Flyback Stage Gate Drive		
Size: B	Flyback Gate Drive	Revision: 1.0
Date: 04-04-12	Sheet 3 of 10	

A

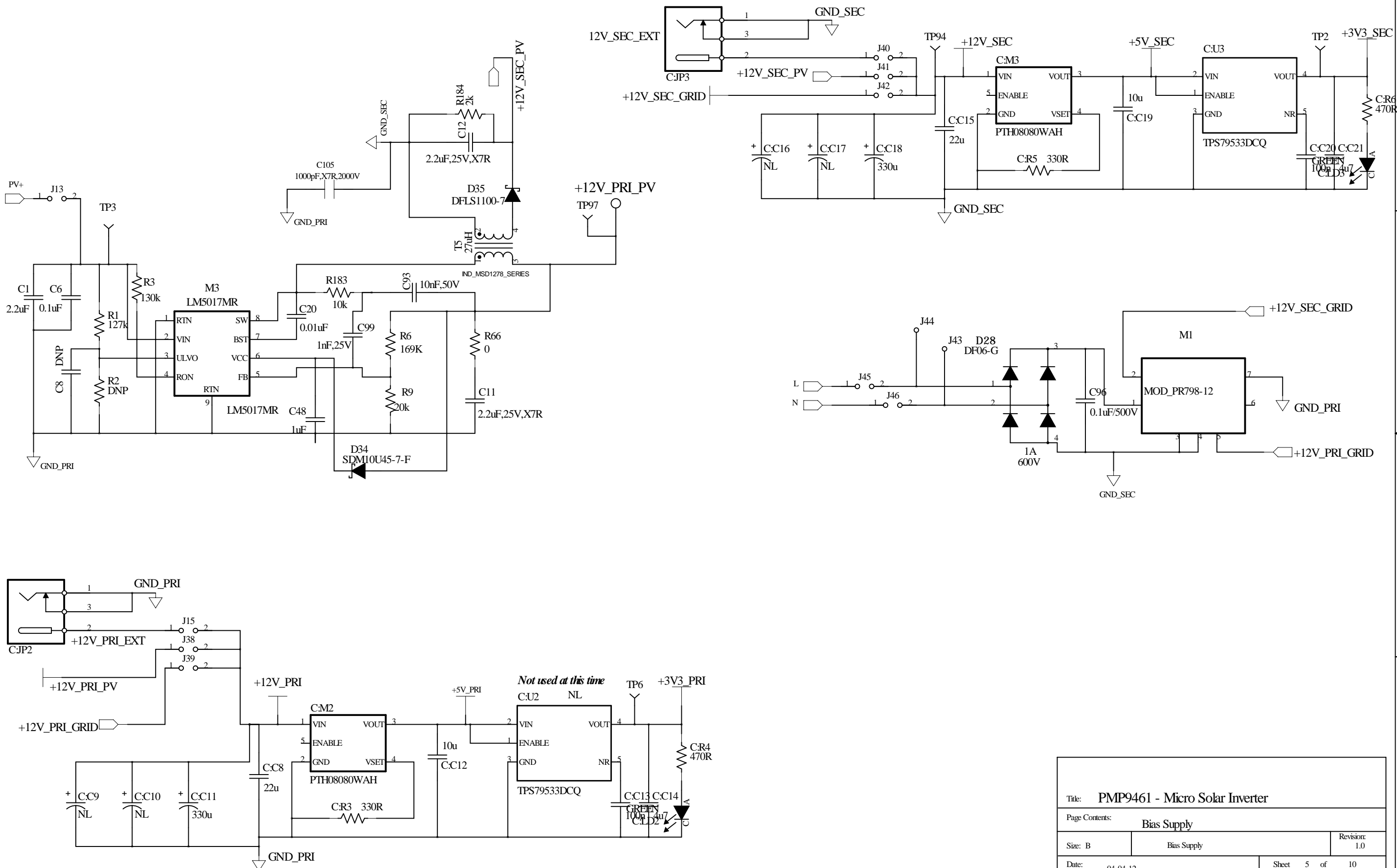
Primary Clamped Flyback Power Stage

Inverter Power Stage

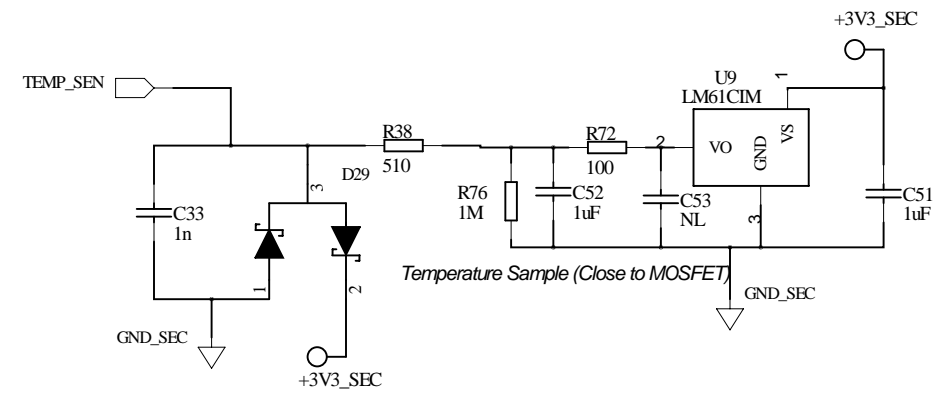
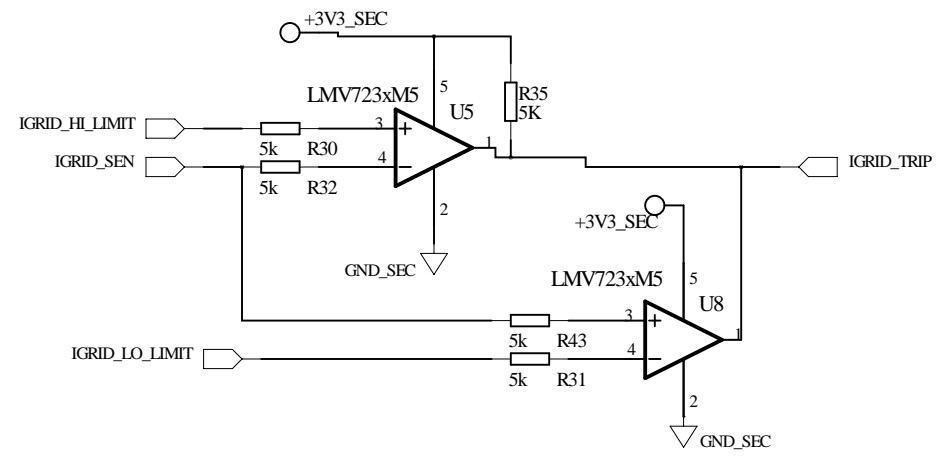
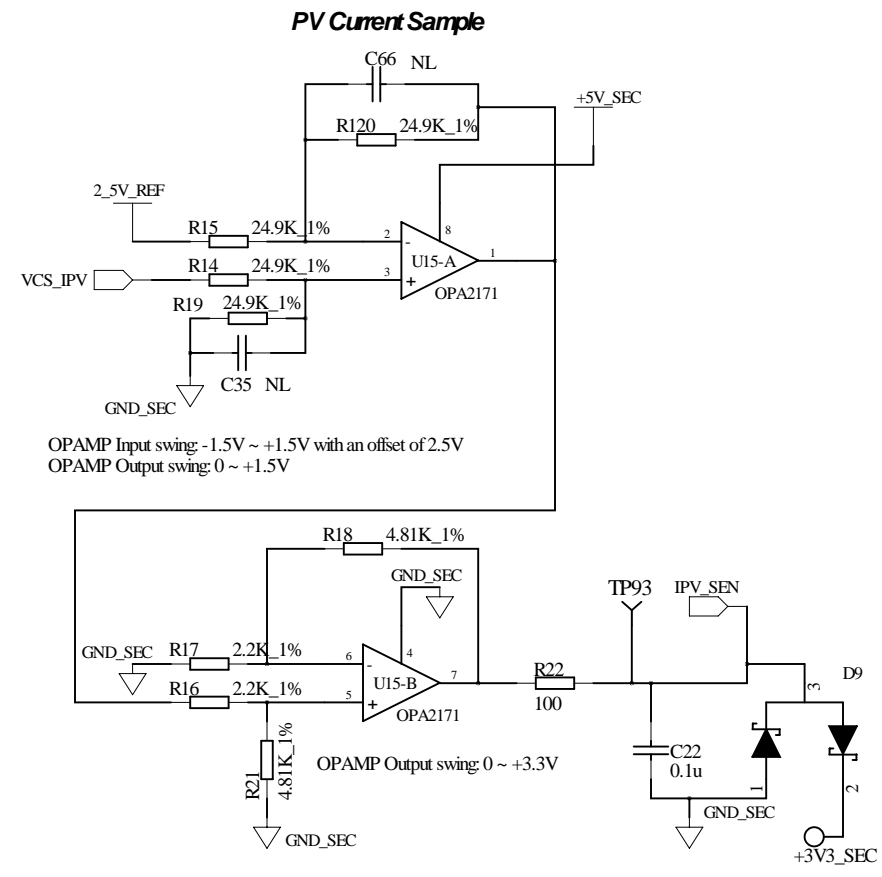
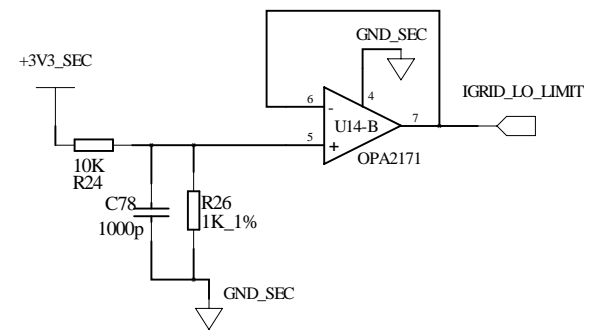
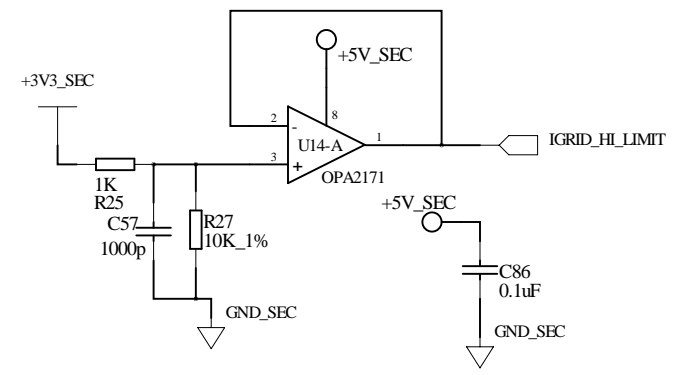


out sense voltage Vcs
 3A => 3.125V, -3A => 1.875V, 0A => 2.5V
 Vcs swing -0.625V ~ +0.625V, offset 2.5V

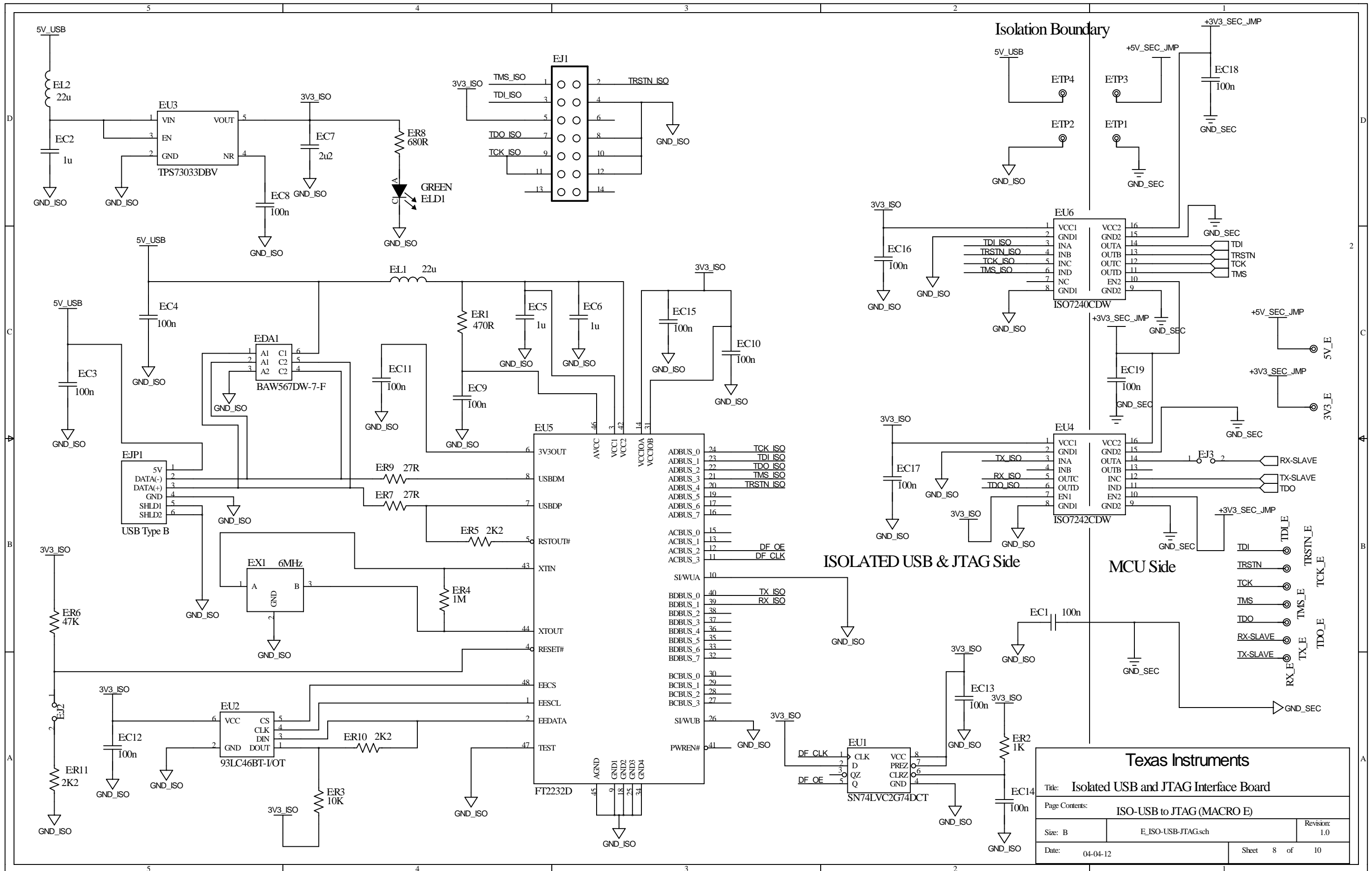
Title: PMP9461 - Micro Solar Inverter		
Page Contents: Flyback & Inverter Power Stage		
Size: B	Power Stage	Revision: 1.0
Date: 04-04-12	Sheet 4 of 10	



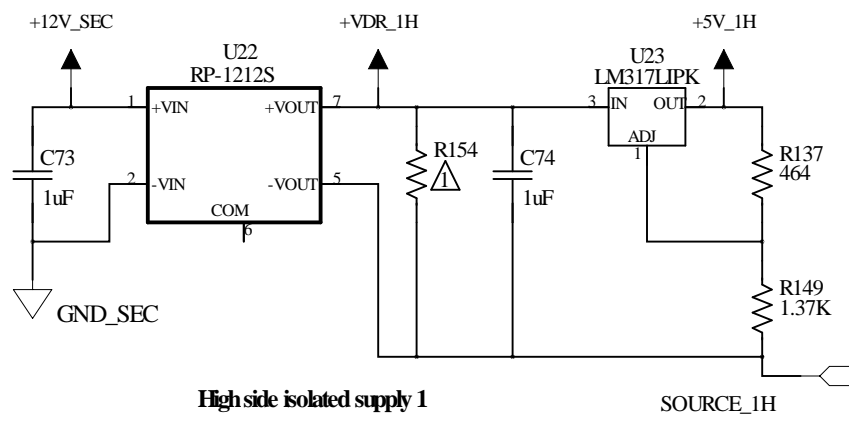
Title: PMP9461 - Micro Solar Inverter			
Page Contents: Bias Supply			
Size: B	Bias Supply	Revision: 1.0	
Date: 04-04-12	Sheet 5 of 10		



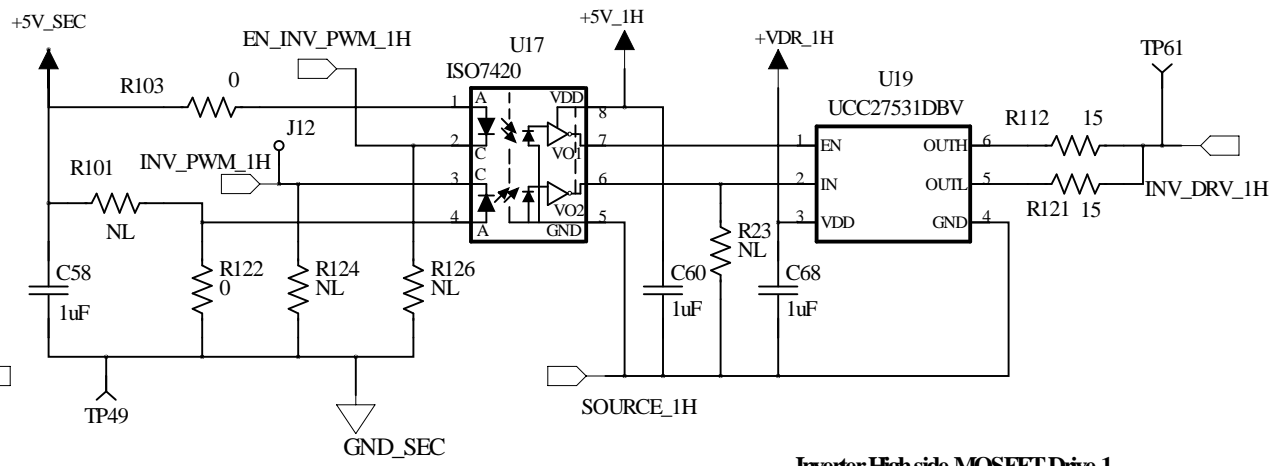
Title: PMP9461 - Micro Solar Inverter		
Page Contents: Signal Conditioning 1		
Size: B	Signal Conditioning	Revision: 1.0
Date: 04-04-12	Sheet 6 of 10	



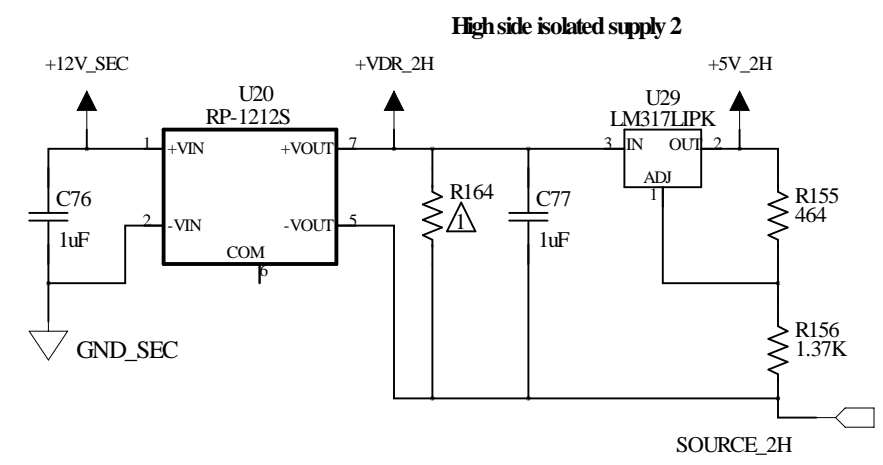
Texas Instruments		
Title: Isolated USB and JTAG Interface Board		
Page Contents: ISO-USB to JTAG (MACRO E)		
Size: B	E_ISO-USB-JTAG.sch	Revision: 1.0
Date: 04-04-12	Sheet 8 of 10	



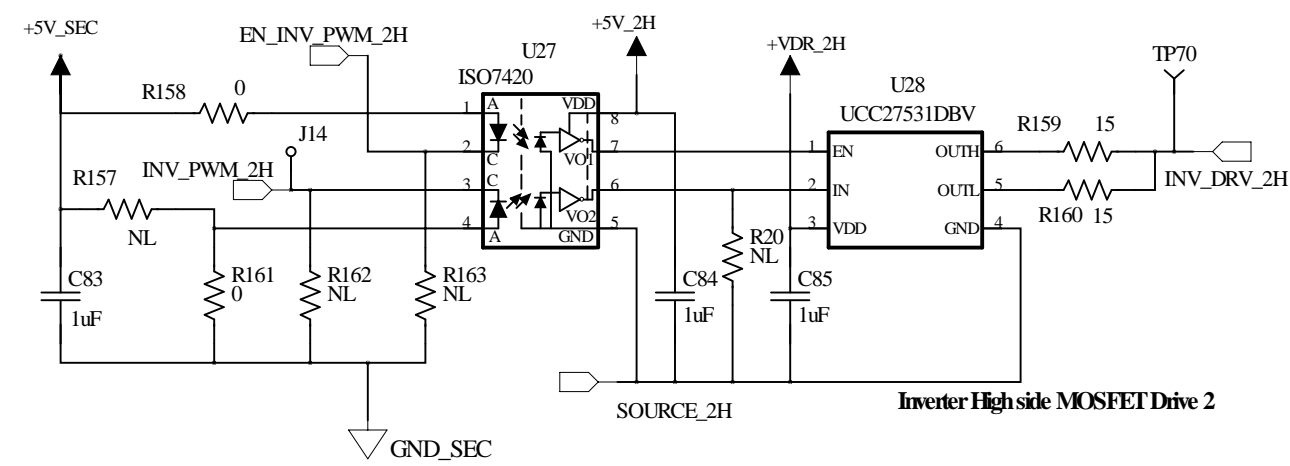
High side isolated supply 1



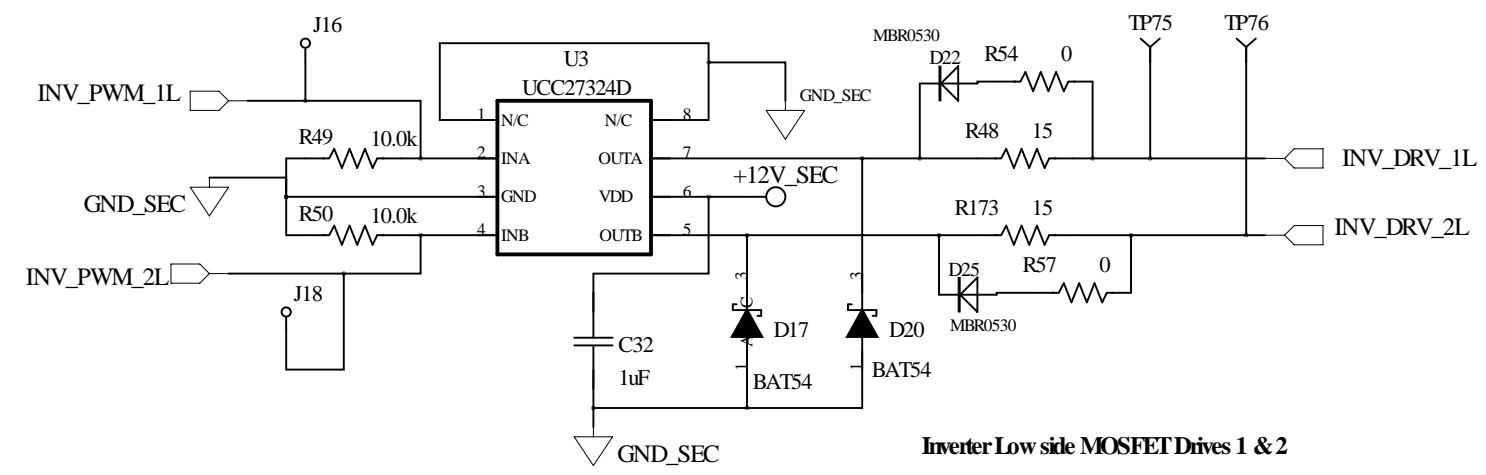
Inverter High side MOSFET Drive 1



High side isolated supply 2



Inverter High side MOSFET Drive 2



Inverter Low side MOSFET Drives 1 & 2

Title: PMP9461 - Micro Solar Inverter		
Page Contents: Inverter Gate Drive		
Size: B	Inverter Gate Drive	Revision: 1.0
Date: 11-10-12	Sheet 9 of 10	

6

5

4

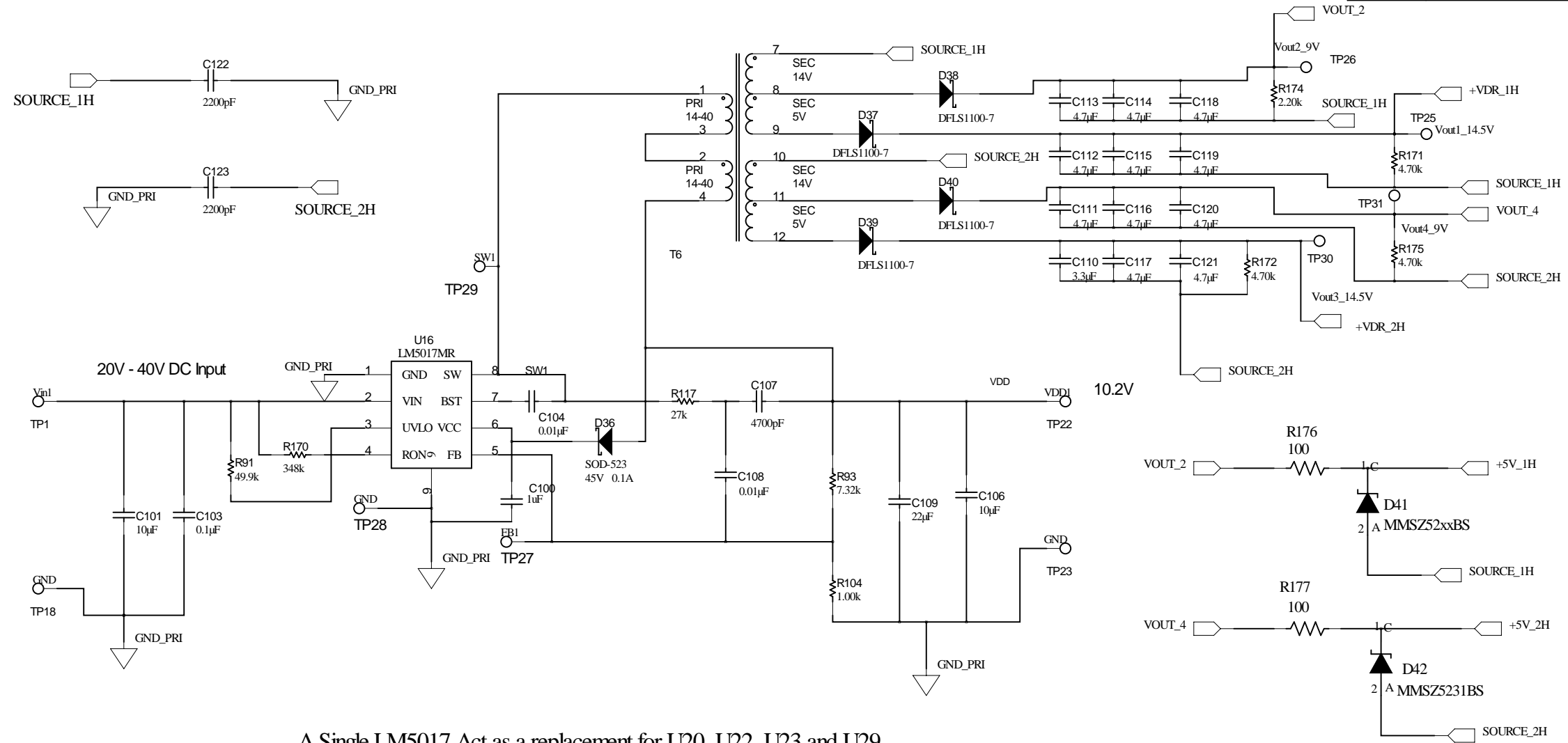
3

2

1

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

Please Refer to PMP9486 for PCB Layout Details as this part is not Included in the this PCB .



A Single LM5017 Act as a replacement for U20, U22, U23 and U29

COMPANY: PMP9461 - Micro Solar Inverter			
TITLE: Quad Power Supply for Drivers and ISolators			
DRAWN: Ambreesh	DATED:	CODE:	REV:
CHECKED:	DATED:	SIZE: B	DRAWING NO:
QUALITY CONTROL:	DATED:	SHEET: d0 10	
RELEASED: <Released By>	DATED: <Release Date>	SCALE: <Scale>	

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