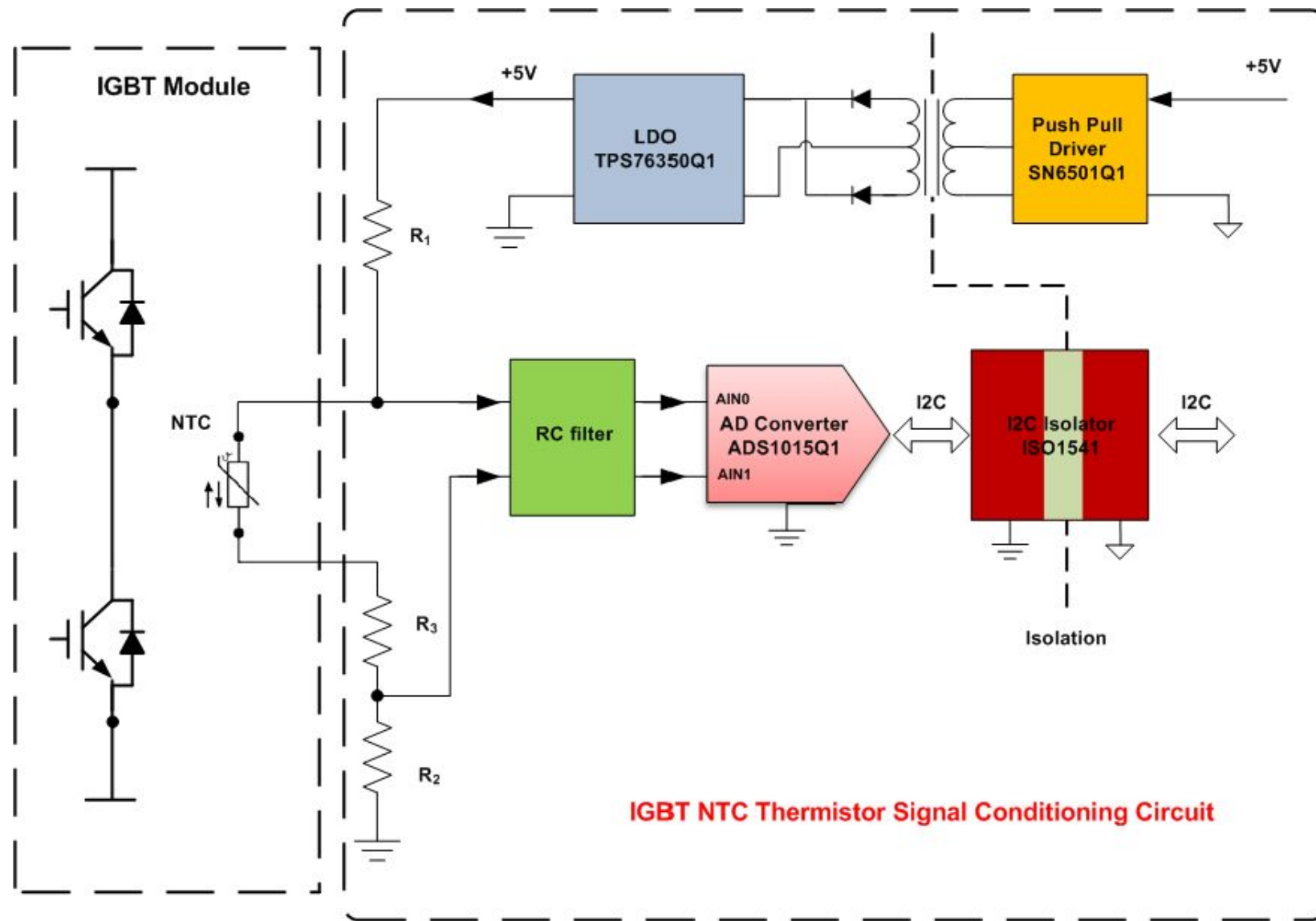
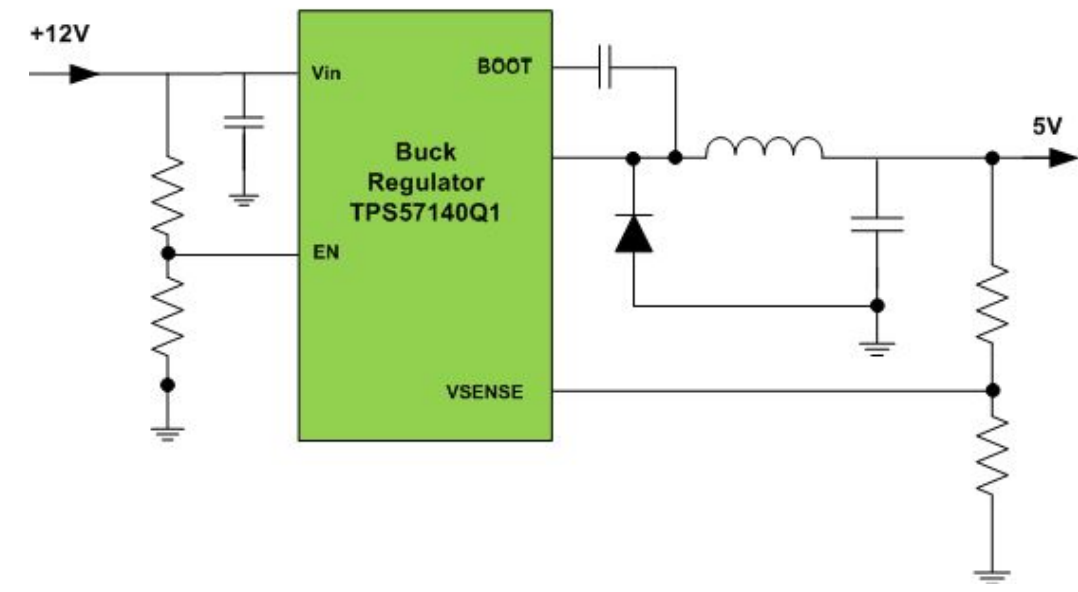


Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A

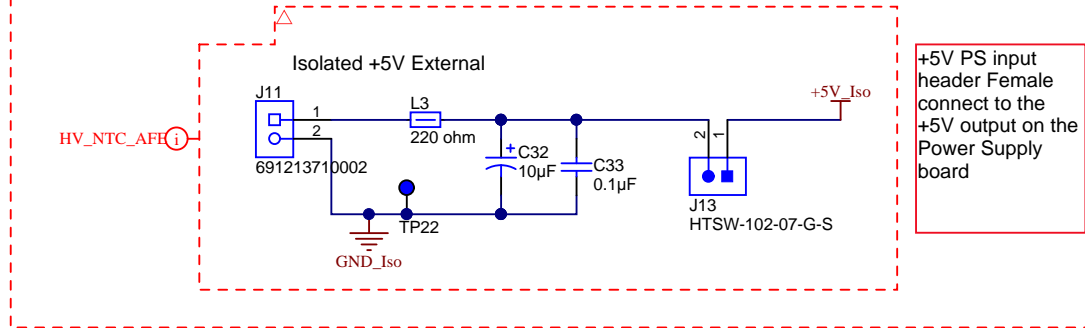
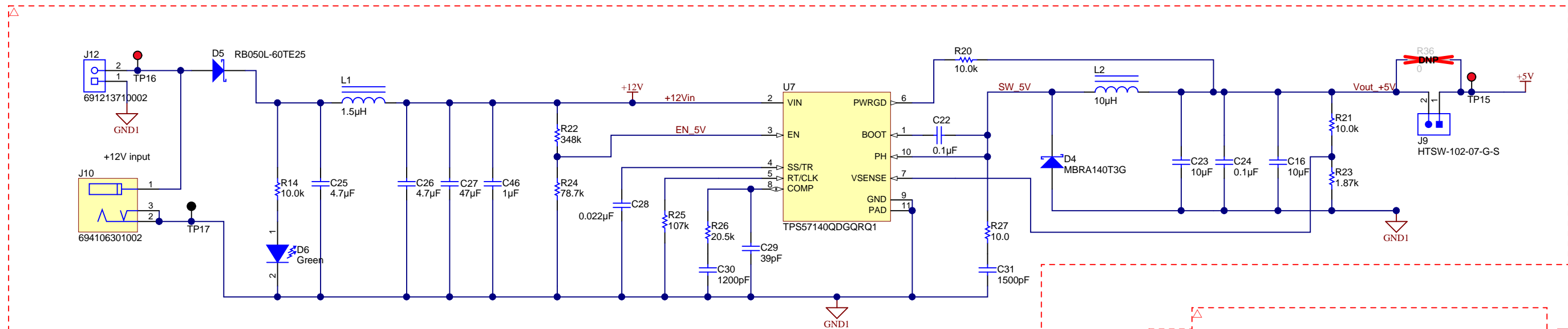


12V to 5V Step-down DC-DC Converter



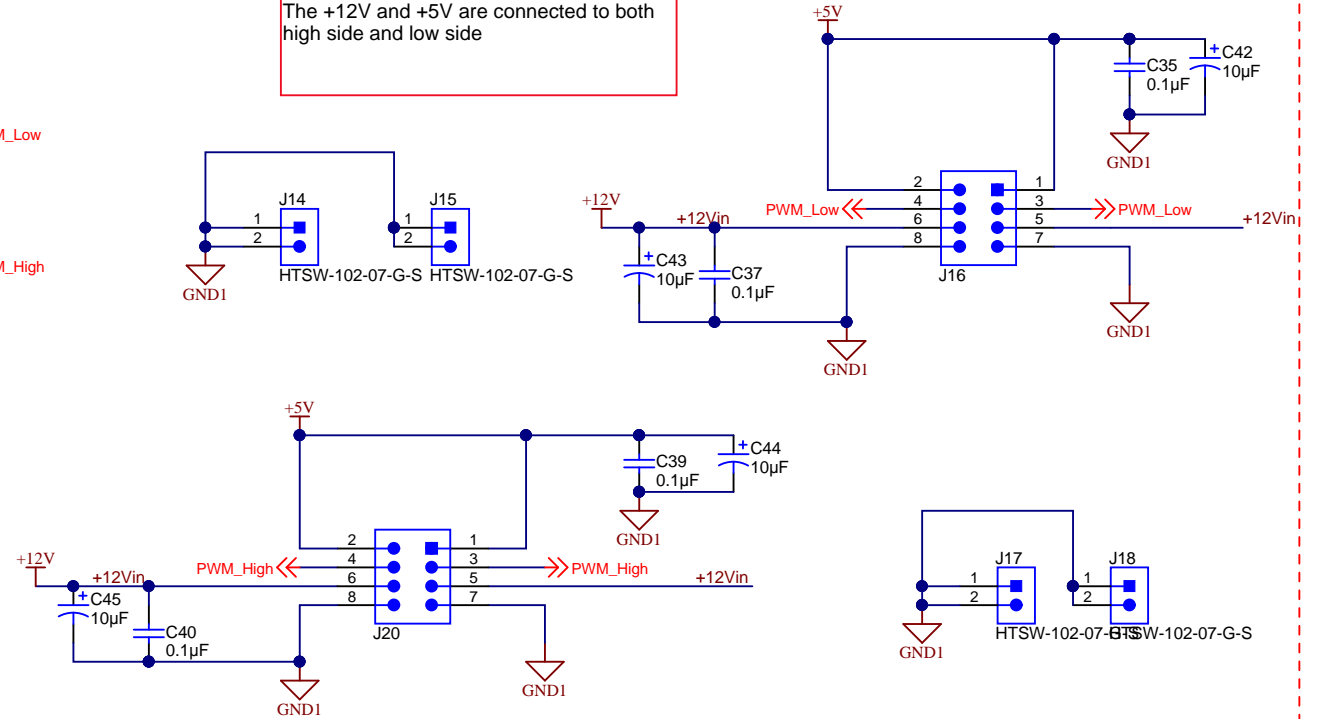
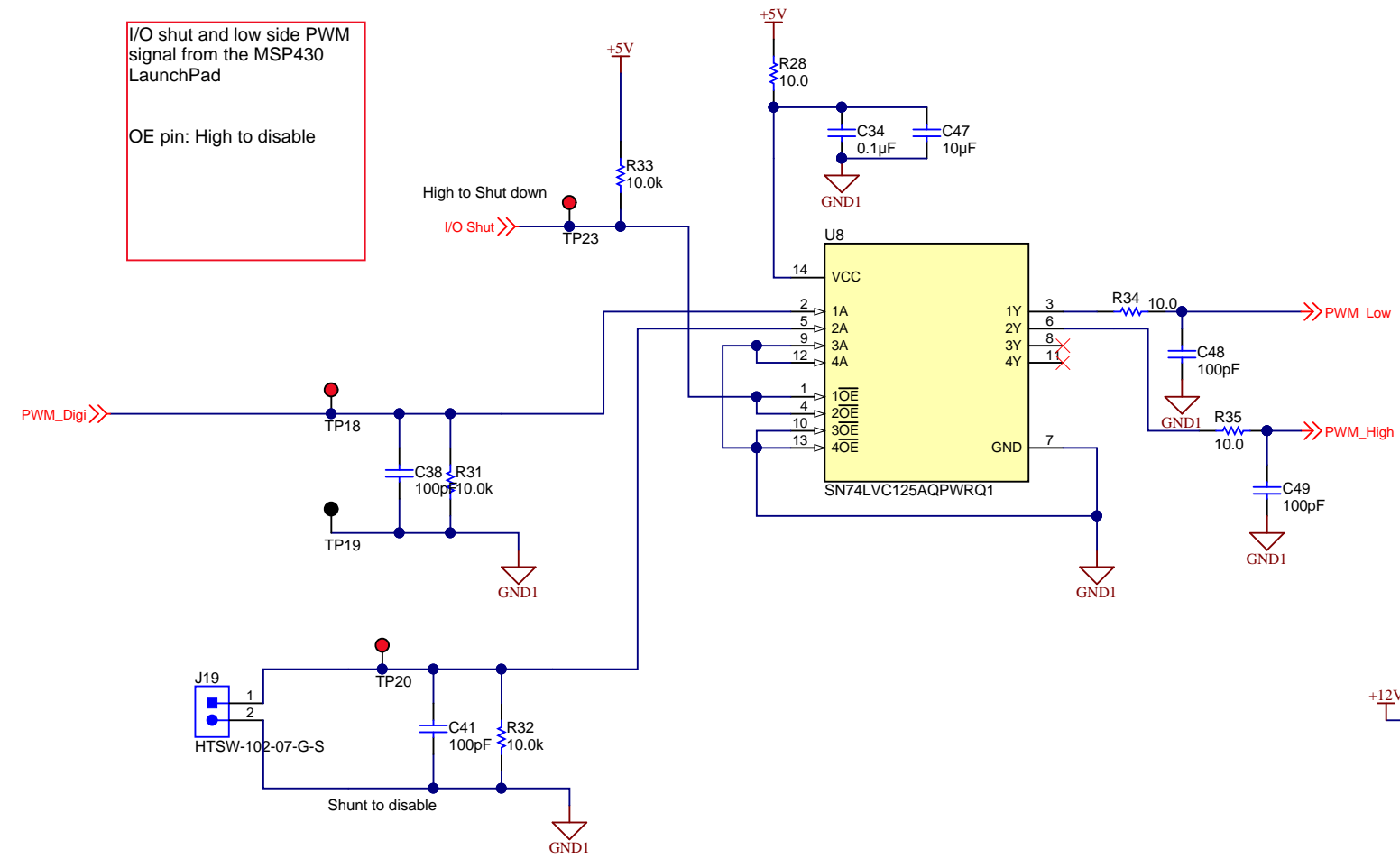
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TID #: TIDA-00794	Project Title: Thermal Protection of IGBT Modules for HEV/EV Tr	Sheet Title:	
Number: TIDA-00794	Rev: E1	Assembly Variant: 001	Sheet: 1 of 3
SVN Rev: Version control disabled	Drawn By:	File: CoverSheet.SchDoc	Size: B
Engineer: X.Gong	Contact: http://www.ti.com/support	http://www.ti.com © Texas Instruments 2015	



I/O shut and low side PWM signal from the MSP430 LaunchPad
 OE pin: High to disable

Pin Connections for the NTC sensor board
 +12V PWM1/2 +5V GND
 The +12V and +5V are connected to both high side and low side

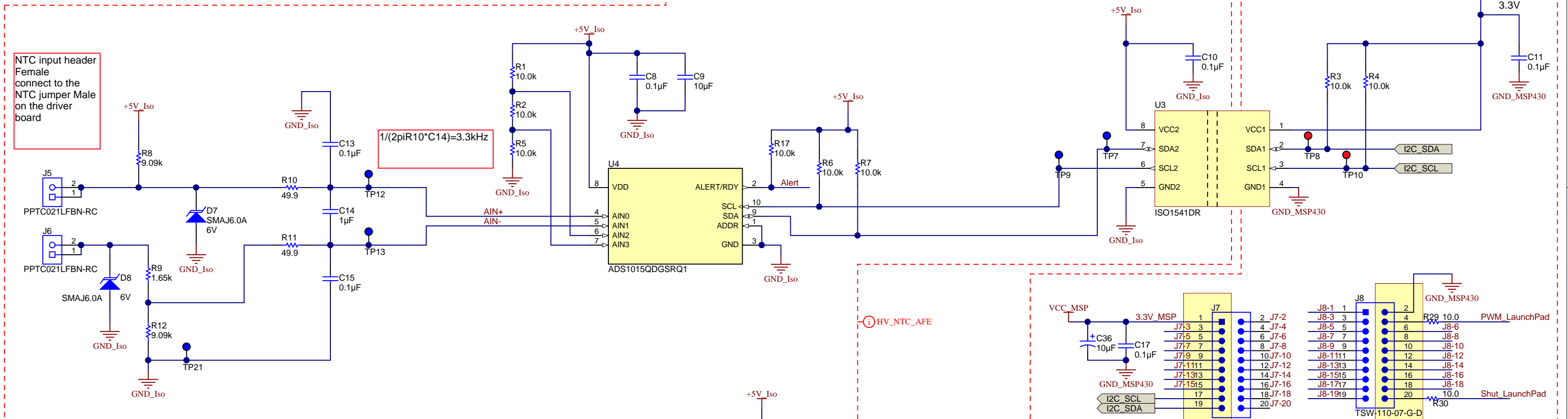
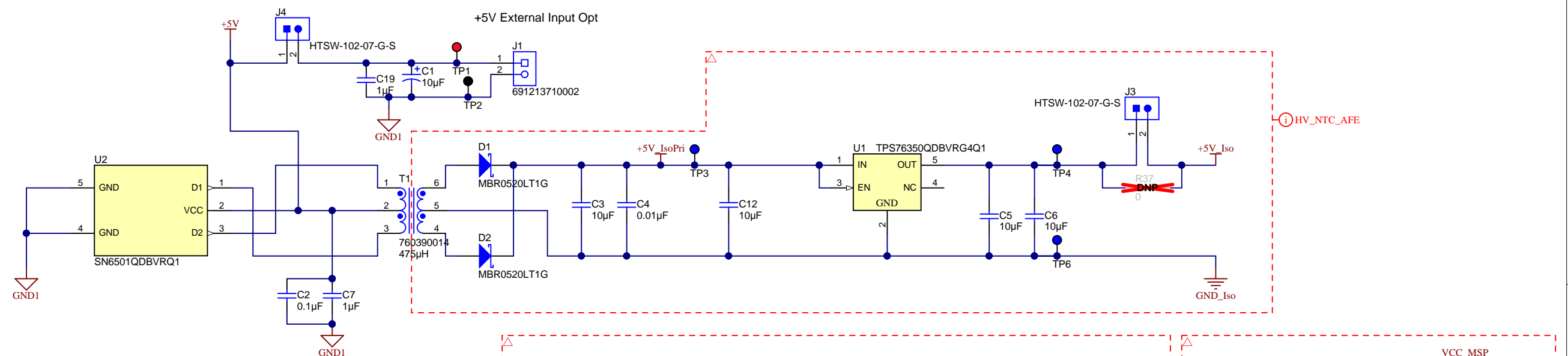


LV_PS and Buffer

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Number: TIDA-00794	Rev: E1	Sheet Title:
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 2 of 3
Drawn By:	File: Power Supply sensing_SchDoc	Size: B
Engineer: X.Gong	Contact: http://www.ti.com/support	



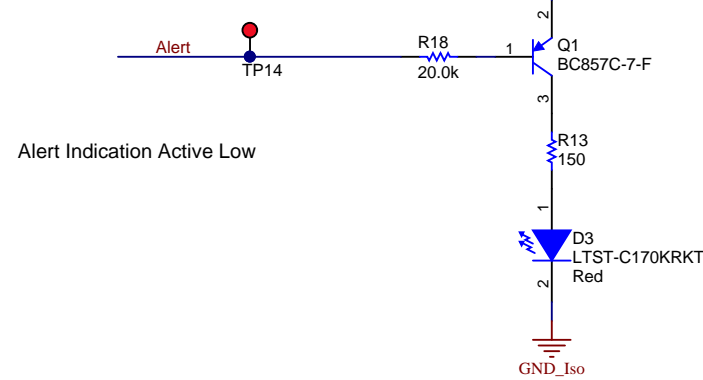


NTC resistance:
100R to 10.5k

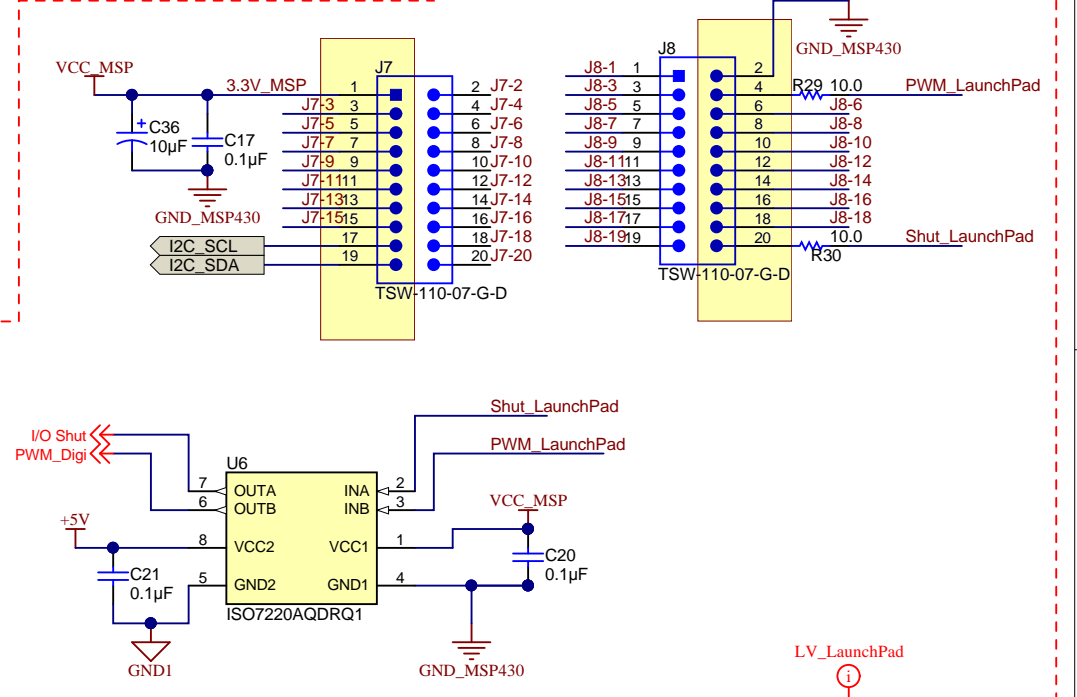
GND_Iso:
Ground of Signal Conditioning circuit must be very short
Circuit Connections to this Ground must be as few as possible

Op Amp linearization:
Vin=2.51V - 3.33V
Vo=1V - 4V

Op Amp output RC filter:
31kHz corner frequency



Shut down output jumper
Female
Connect to the shut down
header Male
PWM output jumpers
Female
connect to the PWM IN1
jumper Male
and the PWM ground Male
on the driver board
respectively



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TID #: TIDA-00794	Project Title: Thermal Protection of IGBT Modules for HEV/EV Tr	
Number: TIDA-00794	Rev: E1	Sheet Title:
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 2 of 4
Drawn By:	File: NTC Sensing02.SchDoc	Size: B
Engineer: X.Gong	Contact: http://www.ti.com/support	

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PCB Number: TIDA-00794
PCB Rev: E1

PCB
LOGO
Texas Instruments

PCB
LOGO
Pb-Free Symbol

A You should delete the nylon screws/standoffs and/or the bumpons as needed for your design (or substitute other parts from Hardware.IntLib). Bumpons are cheaper, but provide less clearance.

Deleting anything else from this page may result in your EVM submission being rejected (until you add them back).

Update the Label Text in the Label Table as needed for each Assembly Variant.

You can delete this note too.


Label Table	
Variant	Label Text
001	ChangeMe!
002	ChangeMe!

ZZ1
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ2
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ3
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

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Number: TIDA-00794	Rev: E1	Sheet Title:	
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 3 of 3	
Drawn By:	File: TID_Hardware.SchDoc	Size: B	
Engineer: X.Gong	Contact: http://www.ti.com/support		

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