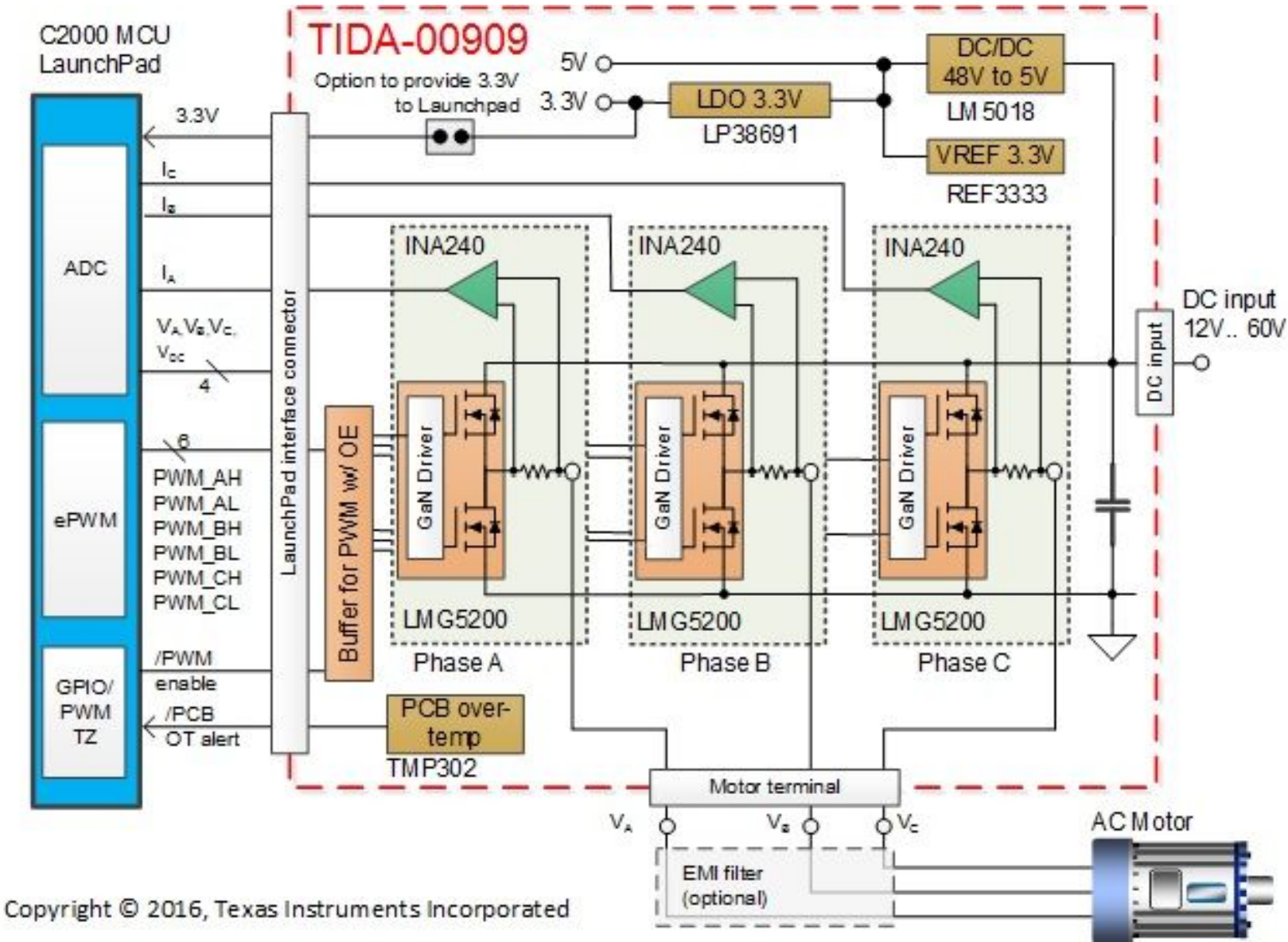


Revision History

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

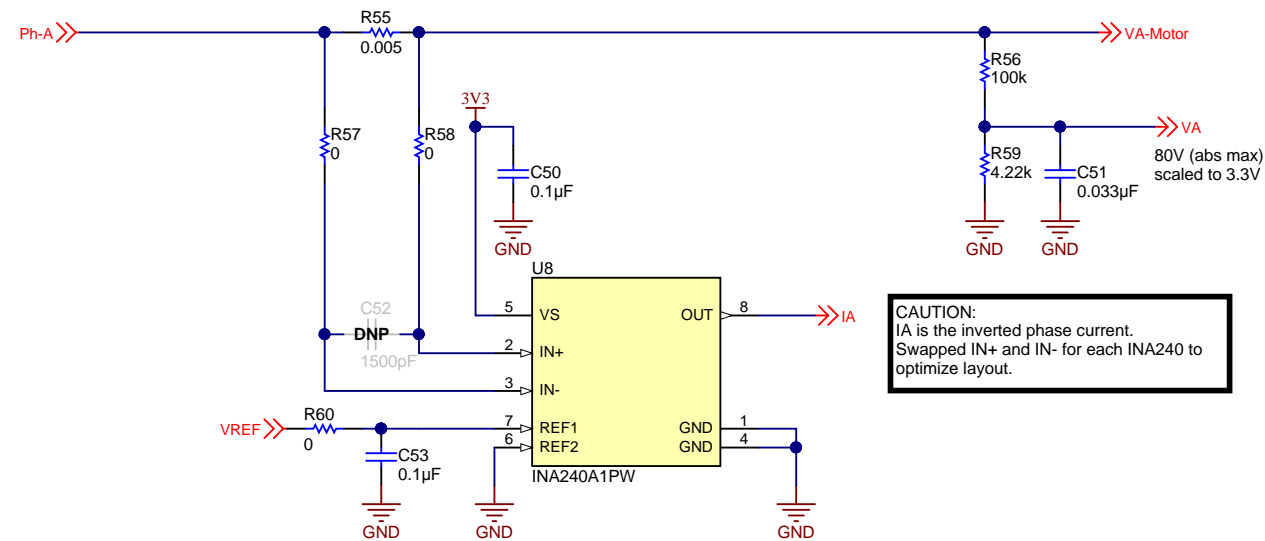


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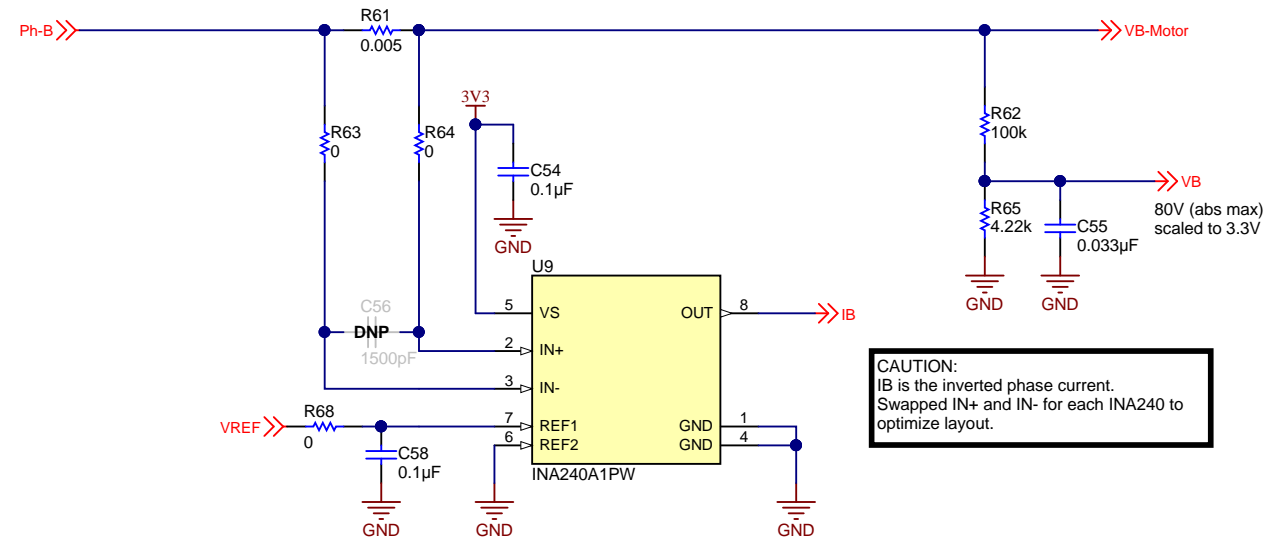
Orderable: N/A	Designed for: Public Release	Mod. Date: 10/28/2016
TID #: TIDA-00909	Project Title: TI Design	
Number: TIDA-00909	Rev: E1	Sheet Title:
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 1 of 3
Drawn By:	File: TIDA-00909_CS.SchDoc	Size: B
Engineer: Zhou/Staebler	Contact: http://www.ti.com/support	



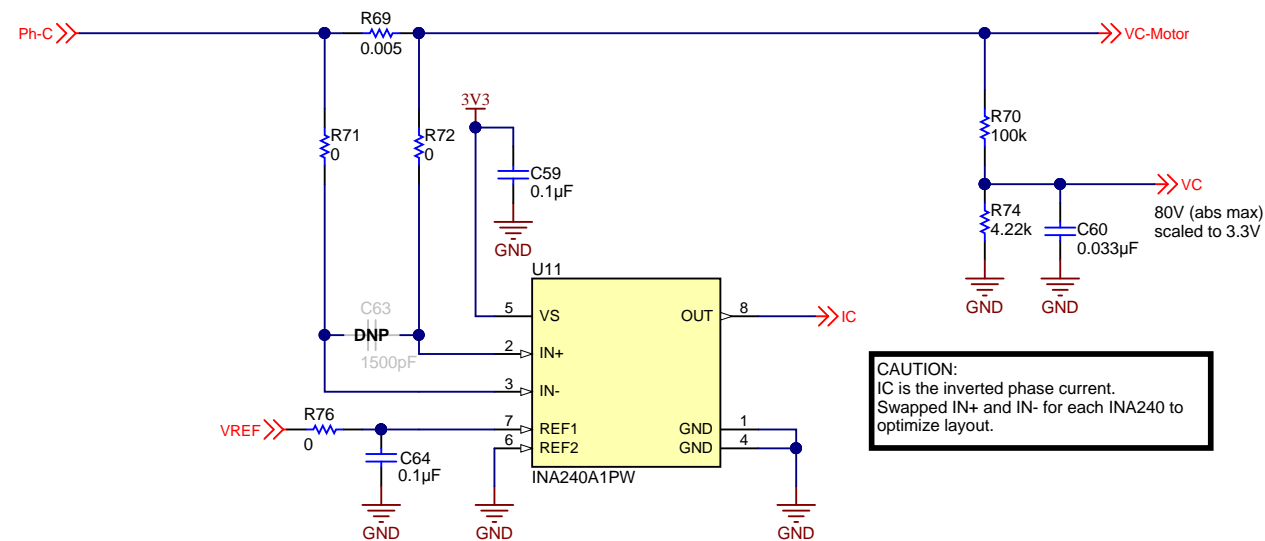
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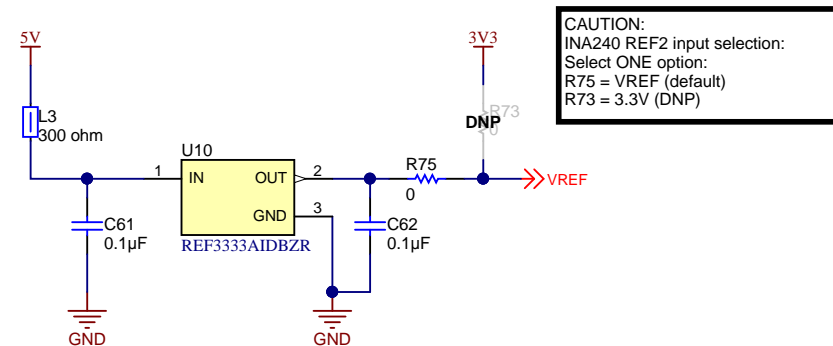
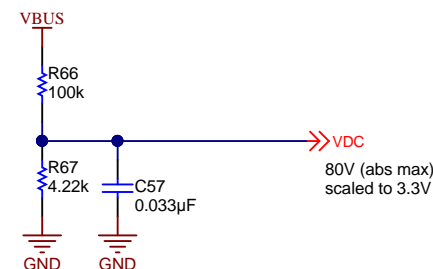
CAUTION:
IA is the inverted phase current.
Swapped IN+ and IN- for each INA240 to optimize layout.



CAUTION:
IB is the inverted phase current.
Swapped IN+ and IN- for each INA240 to optimize layout.



CAUTION:
IC is the inverted phase current.
Swapped IN+ and IN- for each INA240 to optimize layout.



CAUTION:
INA240 REF2 input selection:
Select ONE option:
R75 = VREF (default)
R73 = 3.3V (DNP)

Current	10	Amps
Thickness	2	oz/ft^2 ▼

Optional Inputs:

Temperature Rise	10	Deg C ▾
Ambient Temperature	85	Deg C ▾
Trace Length	1	inch ▾

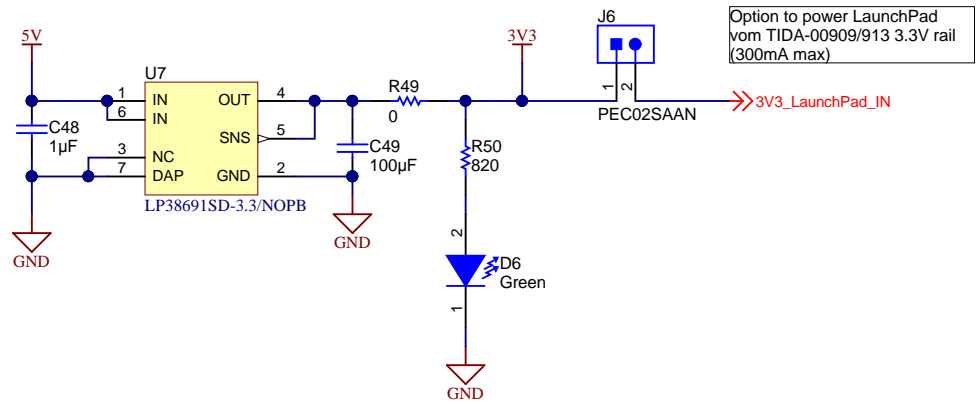
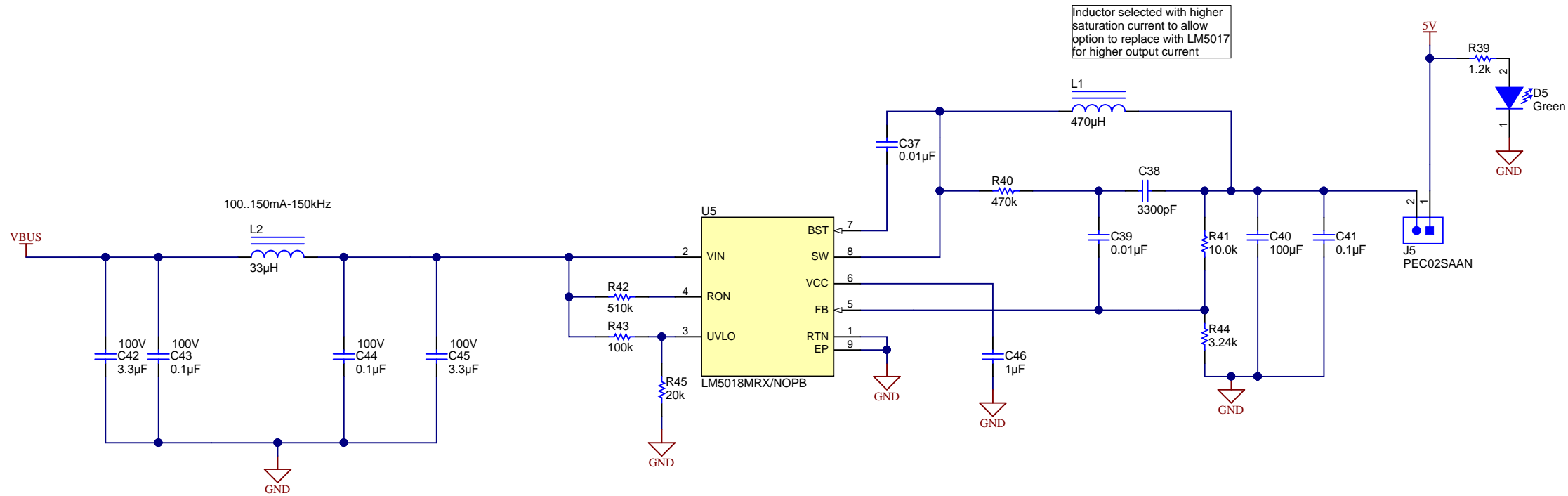
Results for Internal Layers:

Required Trace Width	368	mil ▼
Resistance	0.000839	Ohms
Voltage Drop	0.00839	Volts
Power Loss	0.0839	Watts

Results for External Layers in Air:

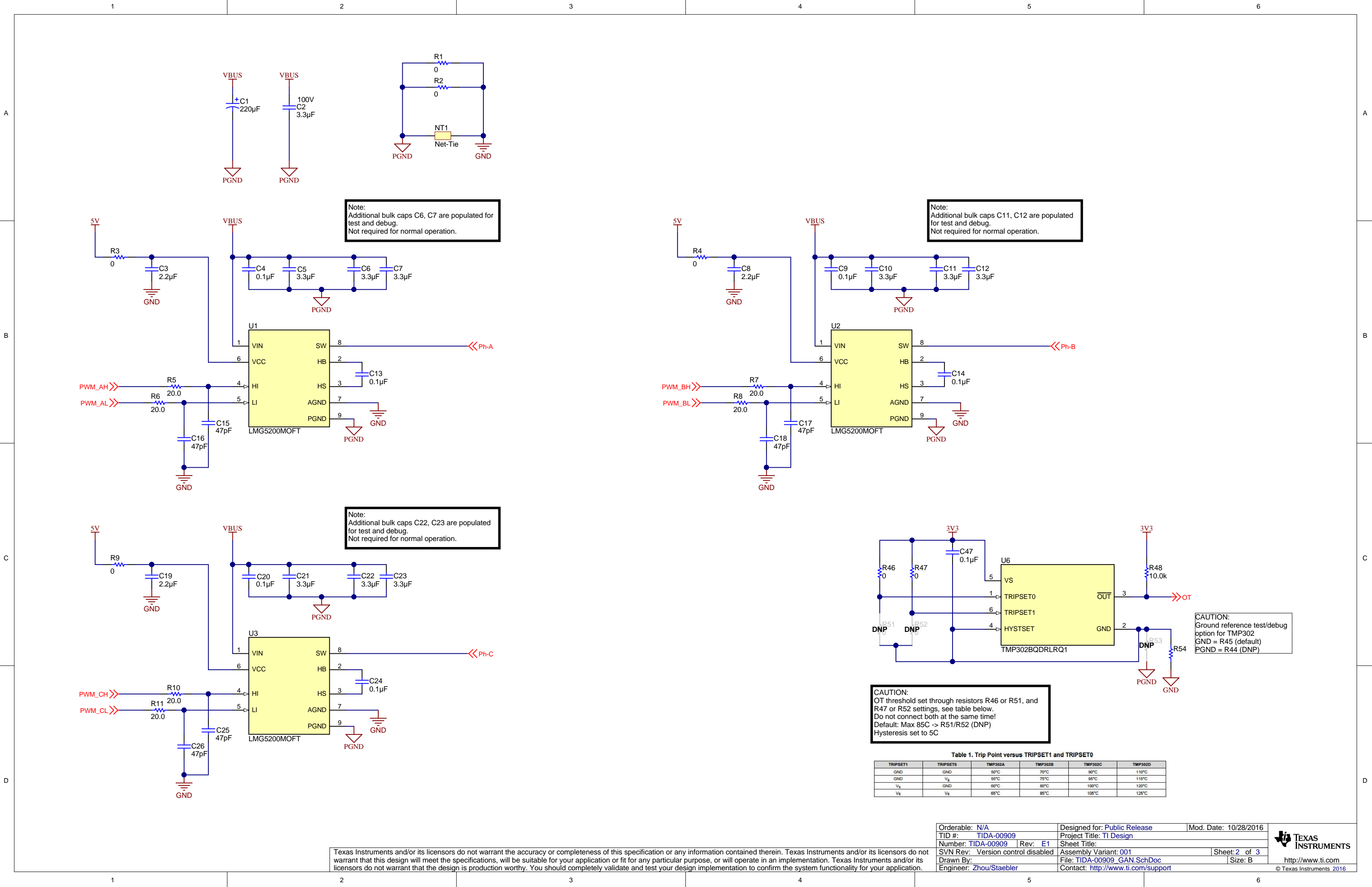
Required Trace Width	142	mil ▾
Resistance	0.00218	Ohms
Voltage Drop	0.0218	Volts
Power Loss	0.218	Watts

H1
MECH
691352510002



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Note:
Additional bulk caps C6, C7 are populated for test and debug.
Not required for normal operation.

Note:
Additional bulk caps C11, C12 are populated for test and debug.
Not required for normal operation.

Note:
Additional bulk caps C22, C23 are populated for test and debug.
Not required for normal operation.

CAUTION:
OT threshold set through resistors R46 or R51, and R47 or R52 settings, see table below.
Do not connect both at the same time!
Default: Max 85C -> R51/R52 (DNP)
Hysteresis set to 5C

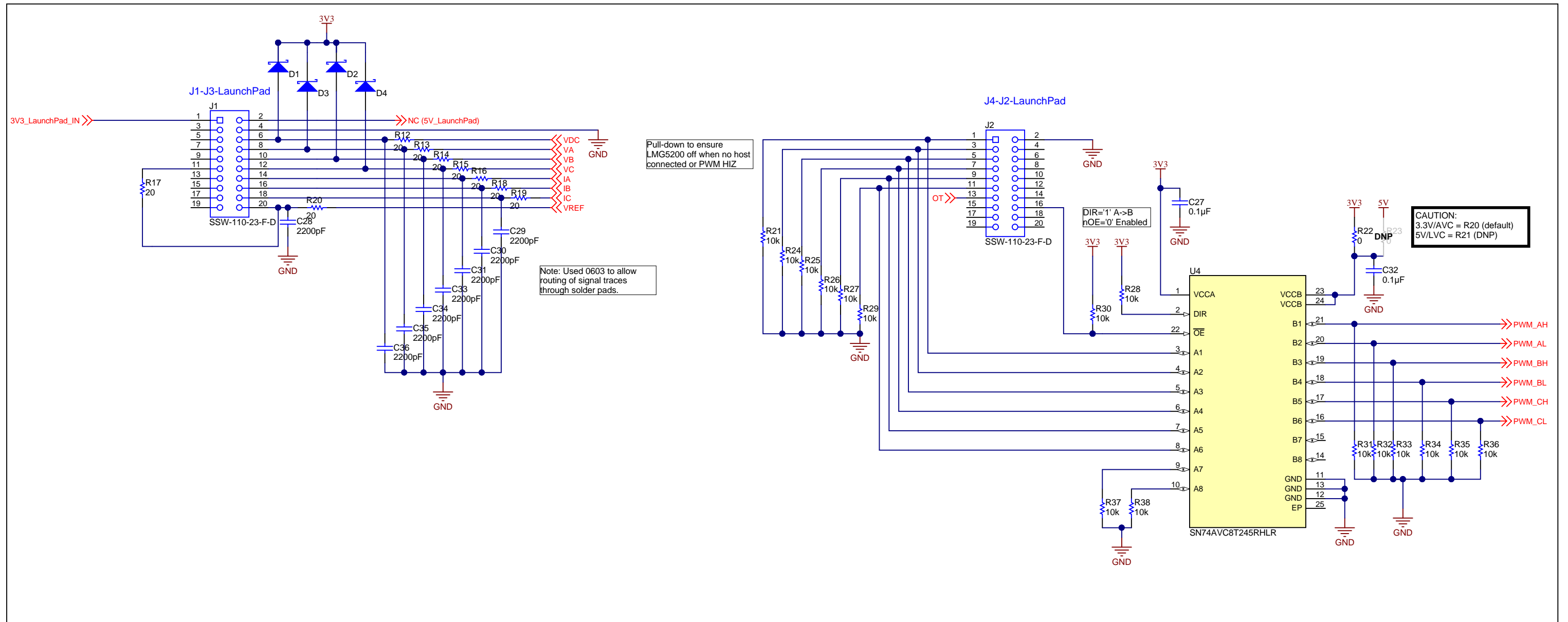
CAUTION:
Ground reference test/debug option for TMP302
GND = R45 (default)
PGND = R44 (DNP)

Table 1. Trip Point versus TRIPSET1 and TRIPSET0					
TRIPSET1	TRIPSET0	TMP302A	TMP302B	TMP302C	TMP302D
GND	GND	50°C	70°C	90°C	110°C
GND	V _B	55°C	75°C	95°C	115°C
V _B	GND	60°C	80°C	100°C	120°C
V _B	V _B	65°C	85°C	105°C	125°C

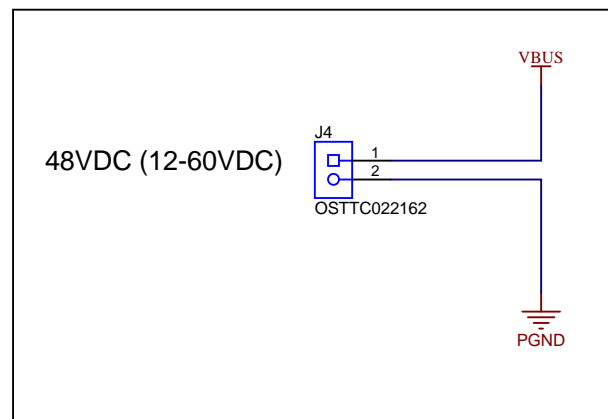
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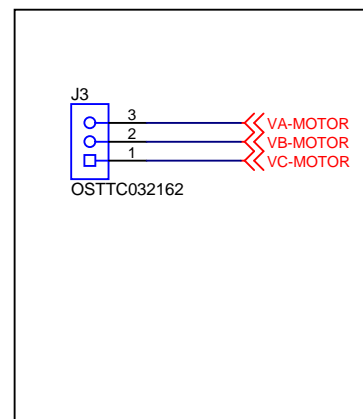
LaunchPad Interface



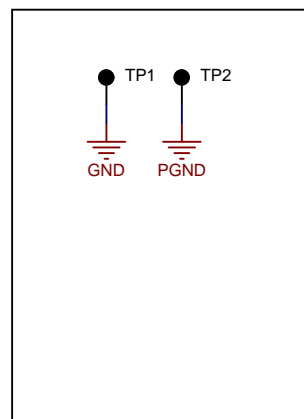
VIN Connector




Motor Connector



Test Points



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Number: TIDA-00909 Rev: E1	Sheet Title:		
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 3 of 3	
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