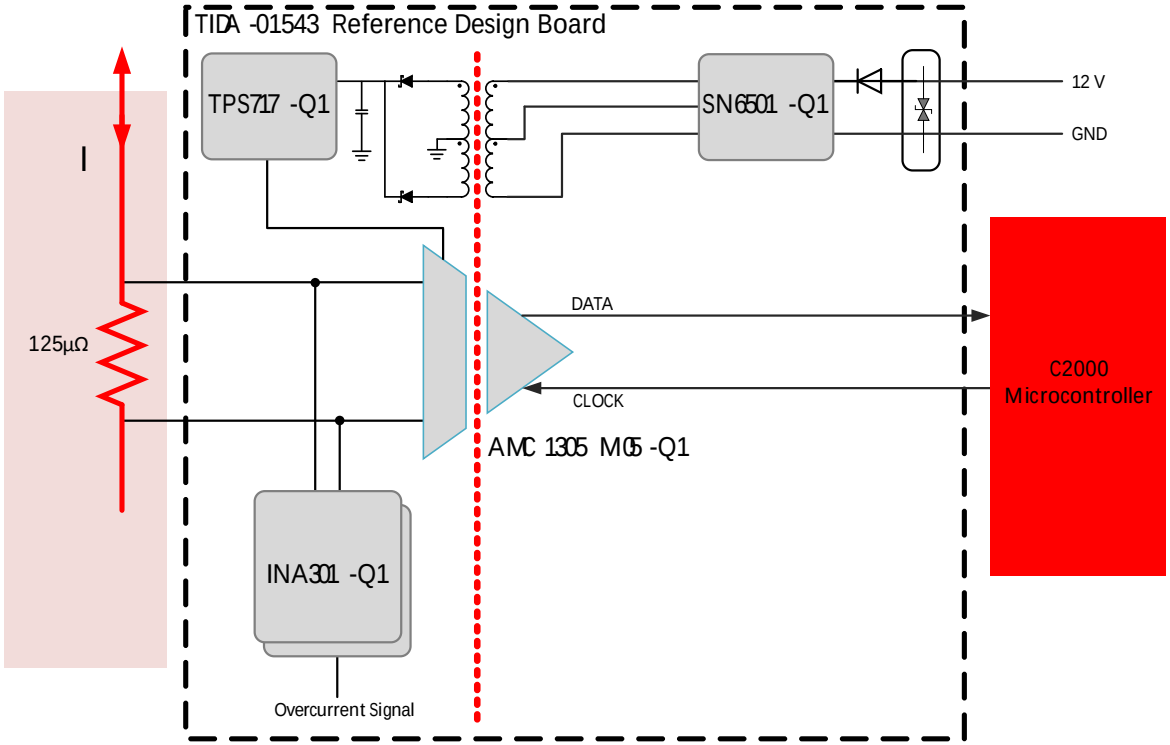
Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A



Orderable: EVM_orderable		Designed for:Public Release	Mod. Date: 7/19/2018
TID #: N/A		Project Title:±300A Isolated Current Sense for Traction Inverte	
Number: TIDA-01543	Rev: E1	Sheet Title:	
Assembly Rev: Version control disabled		Assembly Variant:[No Variations]	Sheet:1 of 3
Drawn By:		File: CoverSheet.SchDoc	Size: B
Engineer: S. M.		Contact: http://www.ti.com/support	

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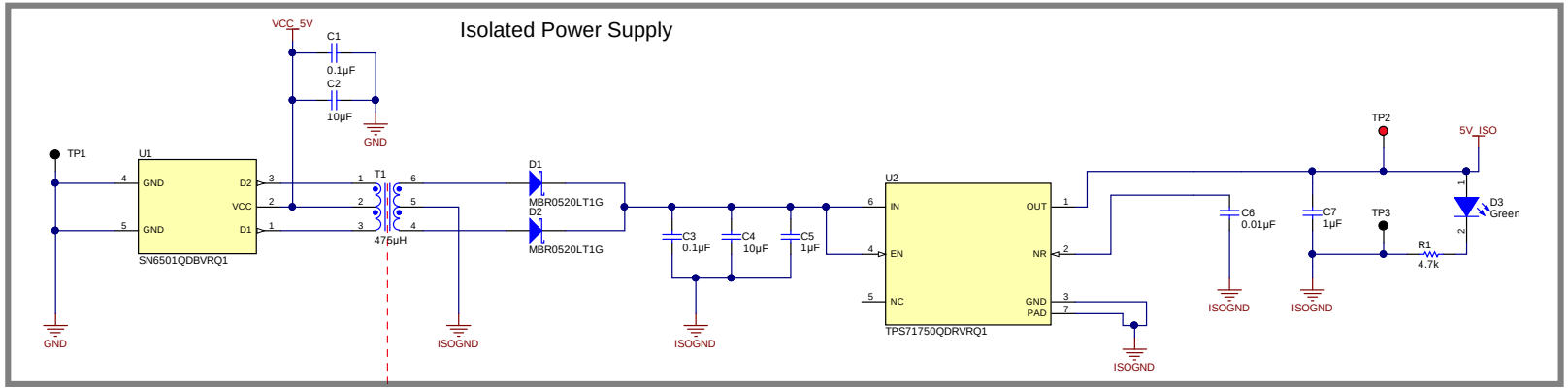

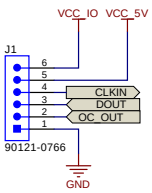

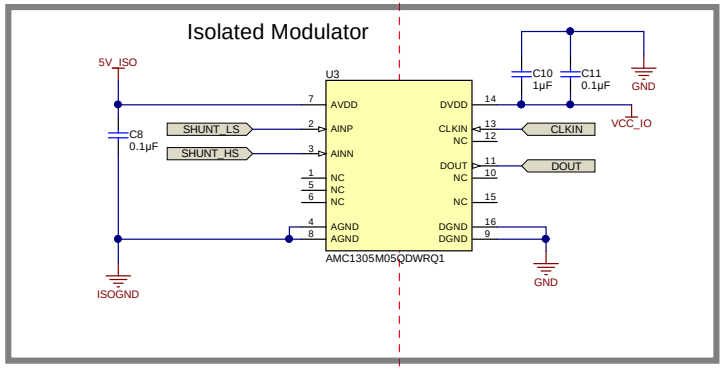

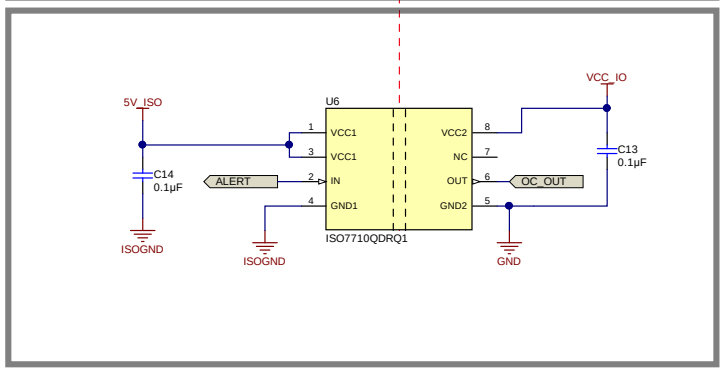

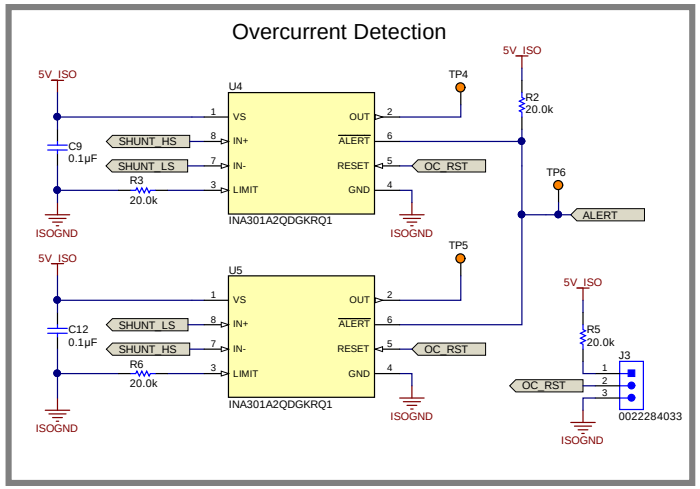

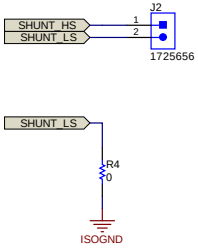

Note: R3 and R6 set the current at which the ALERT output is activated.
See the INA301 Datasheet for more Information.

80 uA current source in the INA, with R_Limit=20k
INA Threshold: 1.6V at Output
1.6V/50 = 32mV at INA input
Overcurrent detection triggers at +-256A with 125 uOhm shunt

Orderable: EVM_orderable	Designed for:Public Release	Mod. Date: 6/21/2018
TID #: N/A	Project Title:±300A Isolated Current Sense for Traction Inverte	
Number: TIDA-01543 Rev: E1	Sheet Title:	
Custom Rev: Version control disabled	Assembly Variant:[No Variations]	Sheet:2 of 3
Drawn By:	File: EVM_Main.SchDoc	Size: B
Engineer: S. M.	Contact: http://www.ti.com/support	

H1 1
NY PMS 440 0025 PH

H2 1
NY PMS 440 0025 PH

H3 1
NY PMS 440 0025 PH

H4 1
NY PMS 440 0025 PH

H5
1902C

H6
1902C

H7
1902C

H8
1902C

FID1

FID2

FID3

PCB Number: TIDA-01543
PCB Rev: A1

PCB LOGO

PCB LOGO

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 should delete this note too.

LBL1
PCB Label
Size: 0.65" x 0.20 "

ZZ1
Label Assembly Note
This Assembly Note is for PCB labels only

Variant/Label Table

Variant	Label Text
001	ChangeMe!
002	ChangeMe!

ZZ2
Assembly Note
This Assembly Note will show in the PcbDoc and associated outputs

ZZ3
Assembly Note
This Assembly Note will show in the PcbDoc and associated outputs

ZZ4
Assembly Note
This Assembly Note will show in the PcbDoc and associated outputs

Orderable: EVM_orderable		Designed for:Public Release	Mod. Date: 7/17/2018
TID #: N/A		Project Title:±300A Isolated Current Sense for Traction Inverte	
Number: TIDA-01543	Rev: E1	Sheet Title:	
EVM Rev: Version control disabled		Assembly Variant:[No Variations]	Sheet:3 of 3
Drawn By:		File: EVM_Hardware.SchDoc	Size: B
Engineer: S. M.		Contact: http://www.ti.com/support	

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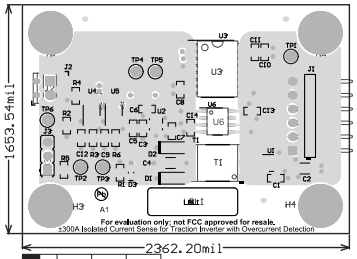
Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.40mil	3.5	
3	Top Layer	Copper	1.40mil		
4	Dielectric1	FR-4 High Tg	18.00mil	4.2	
5	GND	Copper	1.42mil		
6	Dielectric 2	FR-4 High Tg	20.00mil	4.2	
7	PWR	Copper	1.42mil		
8	Dielectric 3	FR-4 High Tg	18.00mil	4.2	
9	Bottom Layer	Copper	1.40mil		
10	Bottom Solder	Solder Resist	0.40mil	3.5	
11	Bottom Overlay				

ZZ1 ■Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
ZZ2 ■This Assembly Note will show in the PcbDoc and associated outputs
ZZ3 ■This Assembly Note will show in the PcbDoc and associated outputs
ZZ4 ■This Assembly Note will show in the PcbDoc and associated outputs



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED
ASSEMBLY VARIANT: [No Variations]

DESIGN INFORMATION

MIN. TRACK WIDTH: 10 MIL
MIN. CLEARANCE: 7.874 MIL
MIN. VIA PAD SIZE: 19.685 MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL
PER IPC-D-275 CLASS 2 LEVEL C
REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL
HOLE SIZE TOLERANCE (UNLESS OTHERWISE SPECIFIED): +/- 3 MIL

MATERIAL:
[ ] FR-408 [X] FR-4 High Tg [ ] OTHER
THICKNESS: [X] 62 MIL (1.6mm) +/-10% [ ] OTHER
TOLERANCE: [X] ANSI IPC-6012 TYPE 3 CLASS 2
[ ] OTHER +/-
BOW & TWIST: [X] ANSI IPC-6012 TYPE 3 CLASS 2
[ ] OTHER +/-

DRILLING:
REFERENCE: [X] AS SHOWN [X] NC_DRILL FILES
PTH COPPER THICKNESS: [X] 20-30 um [ ] OTHER

BOARD FINISH:
SILKSCREEN: [X] TOP [ ] BOTTOM
SILKSCREEN COLOR: [X] WHITE [ ] OTHER
SOLDER RESIST COLOR: [X] GREEN [ ] OTHER
[X] MATTE [ ] SEMI-GLOSS

SURFACE FINISH: [X] IMMERSION GOLD (ENIG) [ ] ENEPIG
[ ] IMM. TIN/SILVER OR EQUIV [ ] OTHER

ARRAY/PANEL: [ ] CUT AND TRIM PER M1 BOARD OUTLINE
[ ] N.C. ROUTE [X] V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBS TO MEET OR EXCEED THE REQUIREMENTS OF:
[X] ANSI IPC-A-600F CLASS -> [ ] 1 [X] 2 [ ] 3
[X] RoHS [ ] OTHER PER ORDER

ALL BOARDS MUST MEET OR EXCEED UL94-V0 REQUIREMENTS.
PCB MUST BEAR THE UL94V-0 UL REGISTERED MATERIAL ID NUMBER

ADDITIONAL REQUIREMENTS:
MICROSECTION: [ ] YES
BARE BOARD ELEC. TEST: [ ] NONE [X] REQUIRED [ ] PER ORDER
[ ] XX MIL VIAS REQUIRE NON-CONDUCTIVE FILL AND PLANARIZE
[ ] XX MIL VIAS REQUIRE CONDUCTIVE FILL AND PLANARIZE
[ ] OUTER XX MIL VIAS REQUIRE 50 OHM SINGLE-ENDED IMPEDANCE
[ ] LAYER 2 & 3 (INNER LAYERS) XX MIL WIDE, XX MIL SPACE TRACES REQUIRE 100 OHM DIFFERENTIAL IMPEDANCE

TEXAS INSTRUMENTS

PROJECT TITLE:
300A Isolated Current Sense for Traction Inverter with Overcurrent Detection

DESIGNED FOR:
Public Release

FILE NAME:
PCB.PcbDoc

ENGINEER: S. M.	LAYOUT BY: S. M.
SCALE: 1.00	ALTIUM DESIGNER VERSION: 17.1.5.472

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