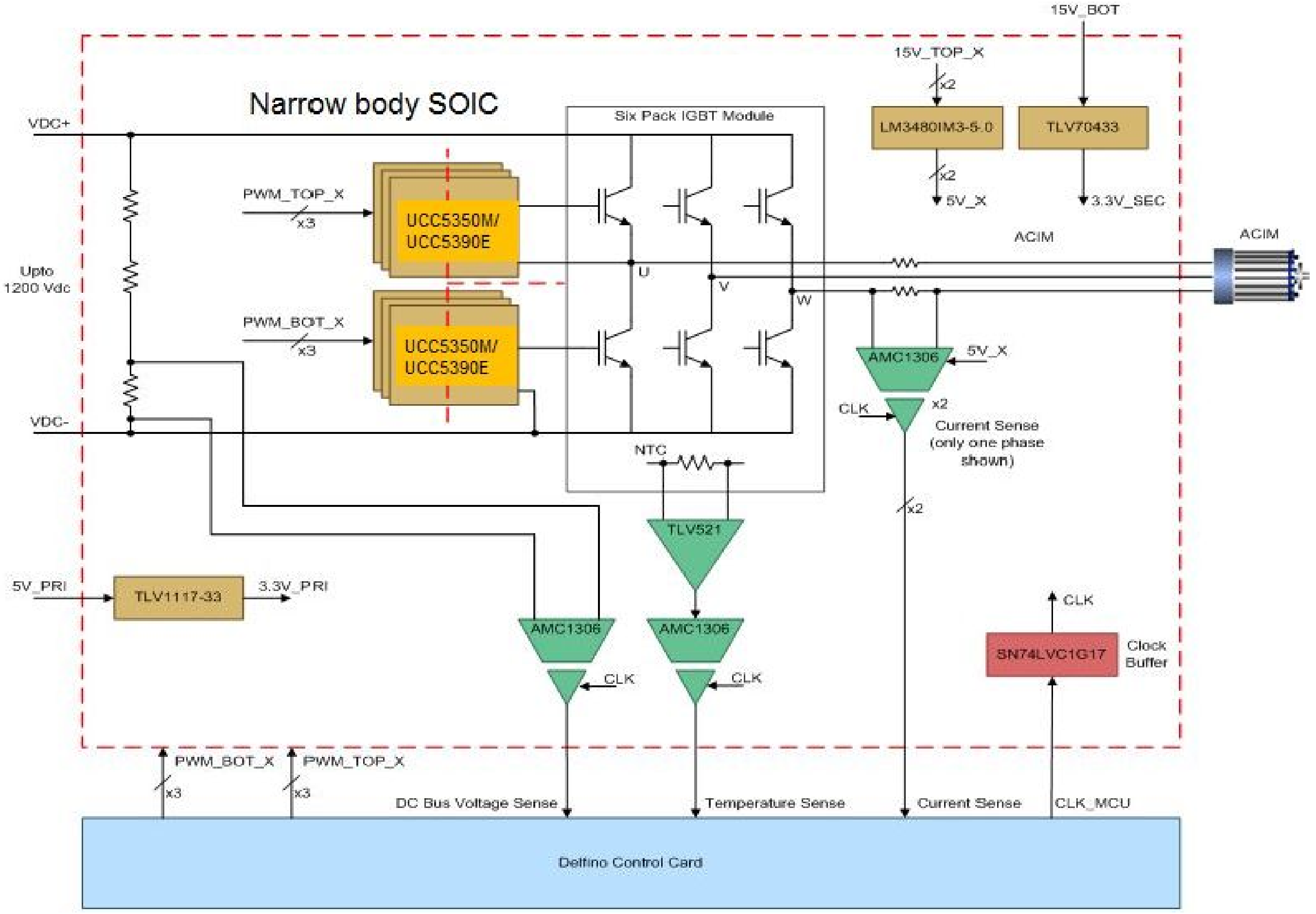
Revision History

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



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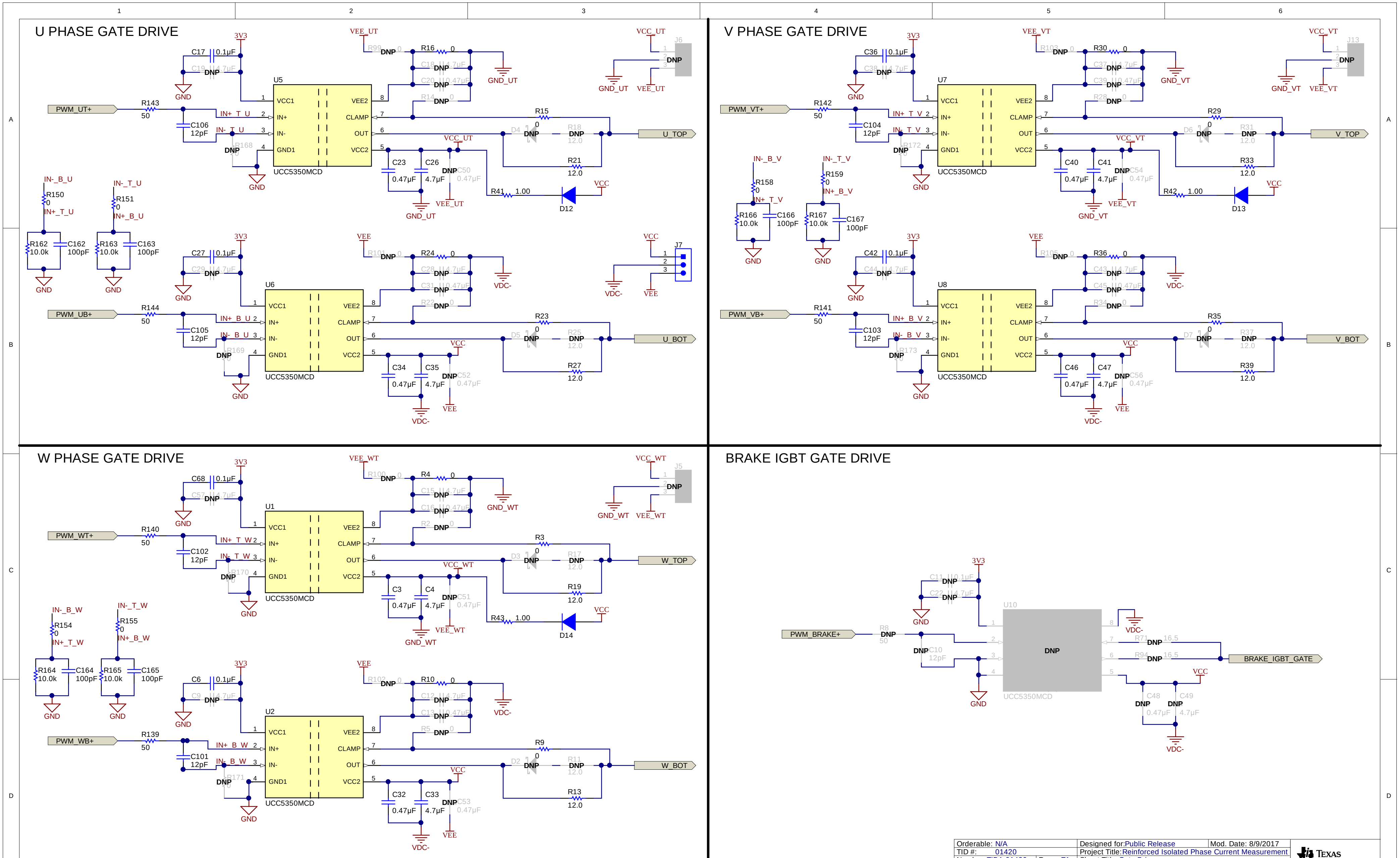
Orderable: N/A	Designed for: Public Release	Mod. Date: 6/13/2017	
TID #: 01420	Project Title: Reinforced Isolated Phase Current Measurement		
Number: TIDA-01420 Rev: E1	Sheet Title: Block Diagram		
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 1 of 5	
Drawn By: PN	File: TIDA-01420-E1_CoverSheet.SchDoc	Size: B	http://www.ti.com
Engineer: AB	Contact: http://www.ti.com/support		© Texas Instruments 2017



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TID #: 01420	Project Title: Reinforced Isolated Phase Current Measurement		
Number: TIDA-01420 Rev: E1	Sheet Title: Gate Drivers		
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 2 of 5	
Drawn By: PN	File: TIDA-01420-E1_Gate drivers.SchDoc	Size: B	http://www.ti.com
Engineer: AB	Contact: http://www.ti.com/support		

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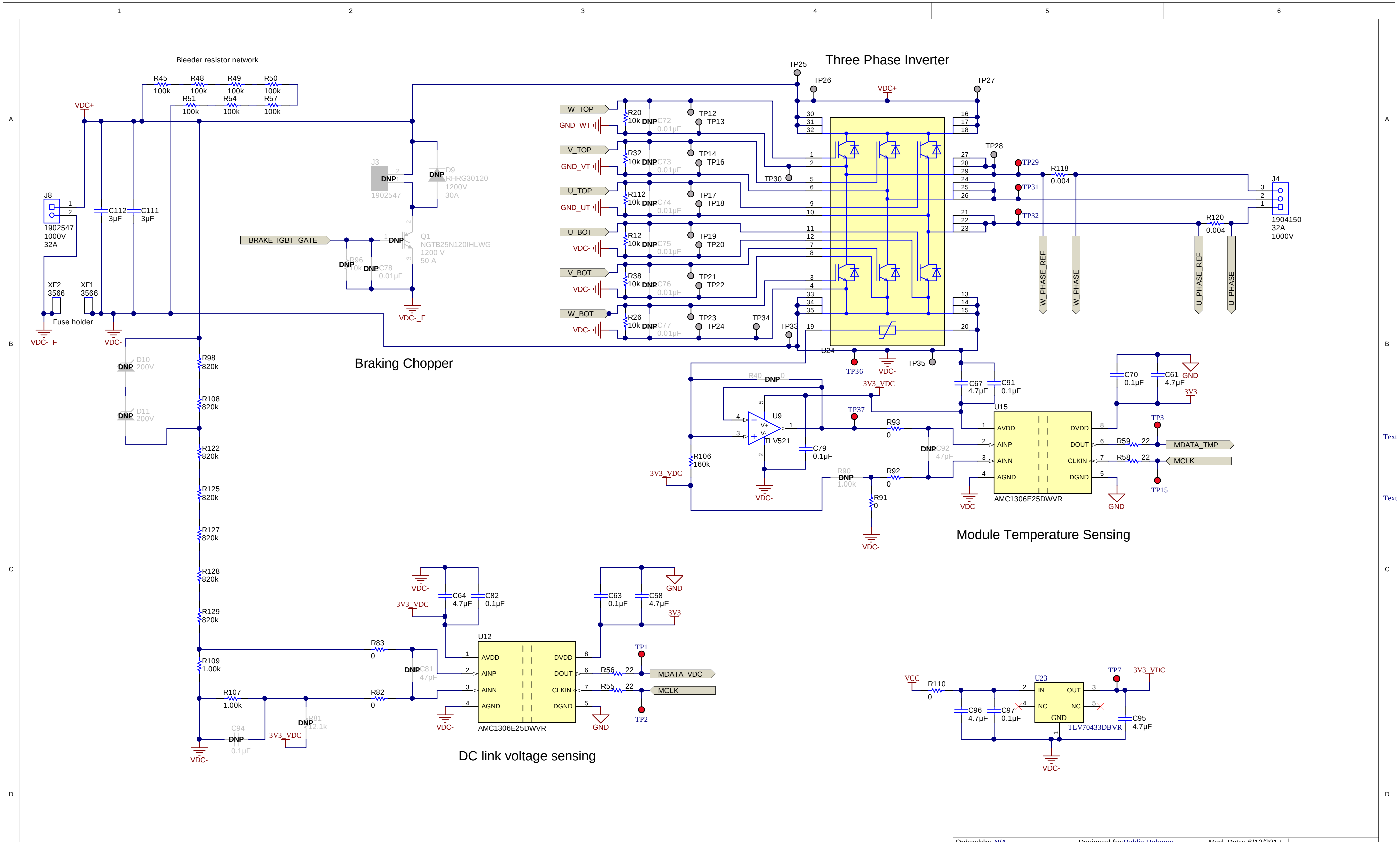

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TID #: 01420		Project Title: Reinforced Isolated Phase Current Measurement	
Number: TIDA-01420	Rev: E1	Sheet Title: Inverter, Temp and DC link Vtg Sense	
SVN Rev: Version control disabled		Assembly Variant: 001	Sheet: 3 of 5
Drawn By: PN		File: TIDA-01420-E1_IGBT Module, Temp and DC link se.SchDoc	Size: B
Engineer: AB		Contact: http://www.ti.com/support	

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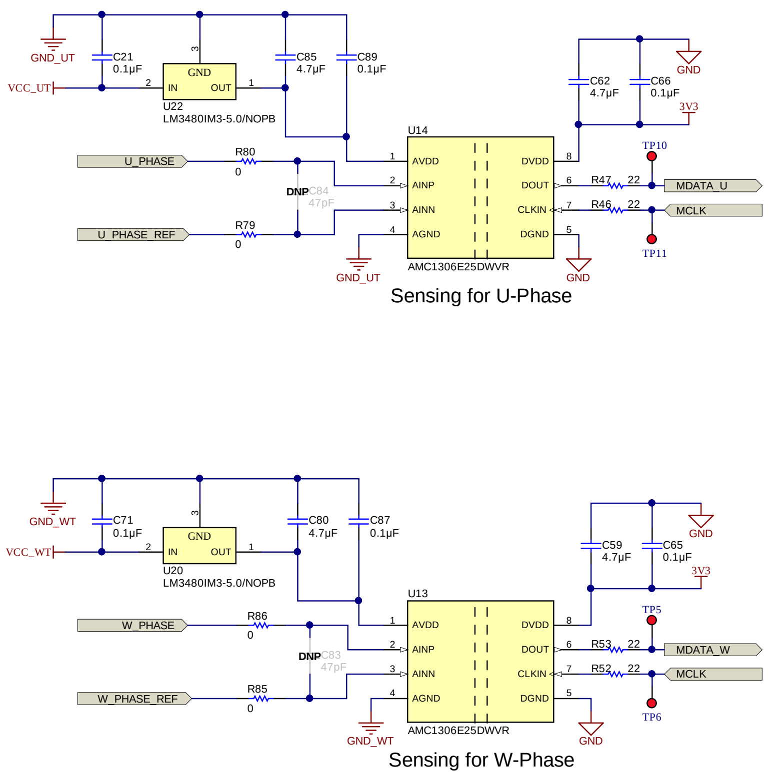
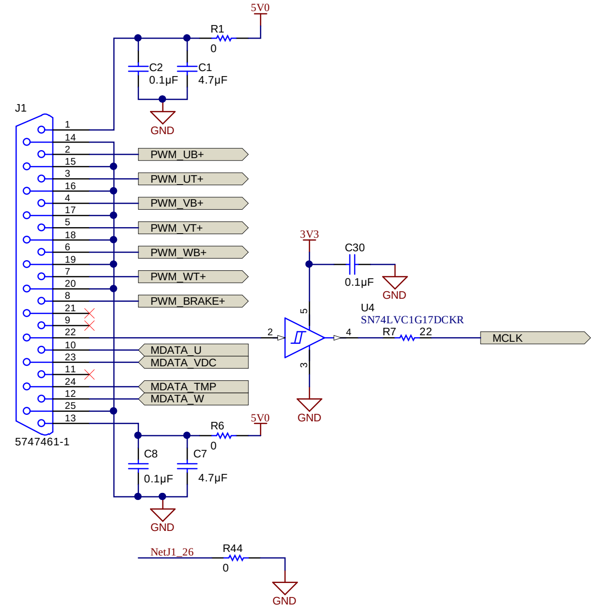
PHASE CURRENT SENSING



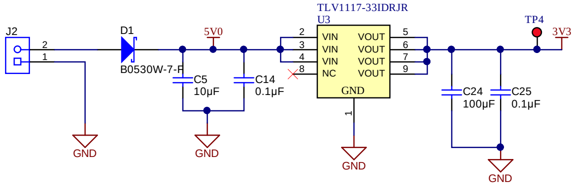
Sensing for U-Phase

Sensing for W-Phase

MCU INTERFACE



PRIMARY SIDE 3.3V SUPPLY



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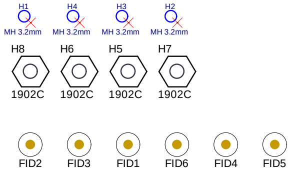
TID #: 01420	Project Title: Reinforced Isolated Phase Current Measurement		
Number: TIDA-01420 Rev: E1	Sheet Title: Current sense , MCU interface		
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 4 of 5	
Drawn By: PN	File: TIDA-01420-E1_Current sense, MCU Interface.SchDoc	Size: B	http://www.ti.com
Engineer: AB	Contact: http://www.ti.com/support		© Texas Instruments 2017



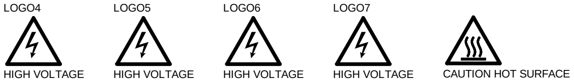
PCB Number: TIDA-01420
PCB Rev: E1

LBL1
PCB Label
Size: 0.65" x 0.20 "

PCB
LOGO
Pb-Free Symbol

PCB
LOGO
FCC disclaimer

PCB
LOGO
ESD Sensitive



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

ZZ2
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ3
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ4
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

Variant/Label Table	
Variant	Label Text
001	AMC1306E25

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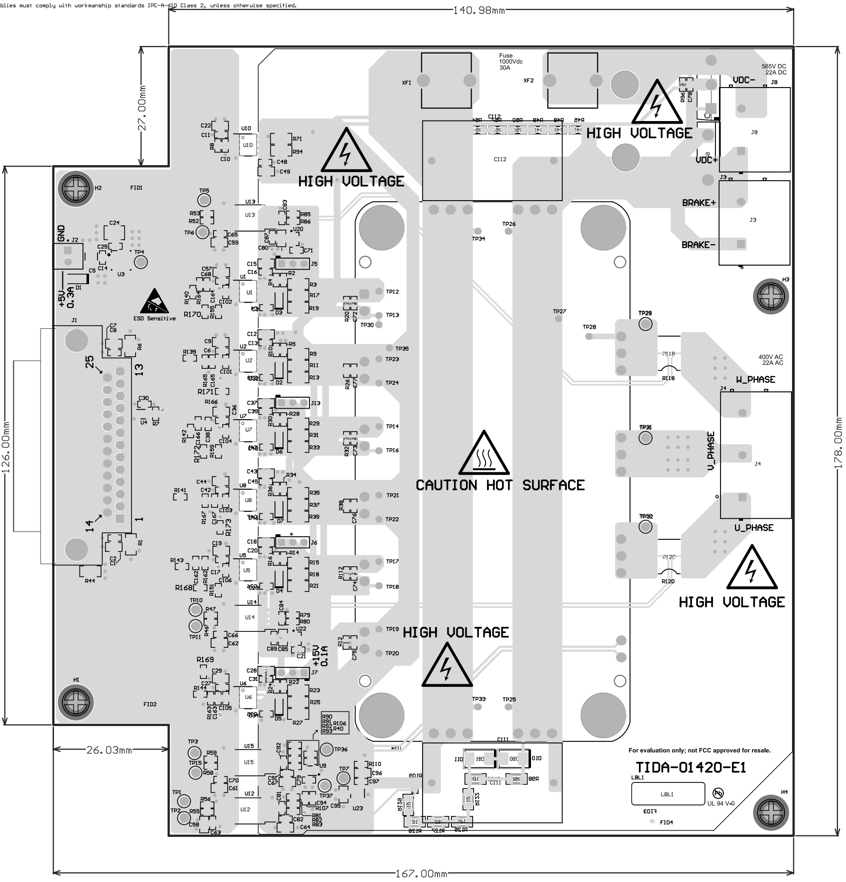
TID #: 01420	Project Title: Reinforced Isolated Phase Current Measurement		
Number: TIDA-01420 Rev: E1	Sheet Title: Hardware		
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 5 of 5	
Drawn By: PN	File: TIDA-01420-E1_EVM_Hardware.SchDoc	Size: B	http://www.ti.com
Engineer: AB	Contact: http://www.ti.com/support		© Texas Instruments 2017

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 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
ZZ3 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
ZZ4 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.



Layer Stack Up Detail for: TIDA-00914-E1

Layer Name	Gerber Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR4-High Tg
GND	(.G1)	1.4mil	FR4-High Tg
PWR	(.G2)	1.4mil	FR4-High Tg
Bottom Layer	(.GBL)	1.4mil	FR4-High Tg
Bottom Solder Mask	(.GBS)		Solder Resist

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)
167MM X 178MM

Number of Layers : 4
MIN. TRACK WIDTH: 15 MIL
MIN. CLEARANCE: 8 MIL
MIN. VIA DRILL SIZE: 7.87 MIL
MINIMUM ANNULAR RING 5.91 MIL 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 ☒ FR-4 High Tg ☐ OTHER ________
THICKNESS: ☒ 63 MIL (1.6mm) +/-10% ☐ OTHER ________
TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/- ________
BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/- ________
COPPER THICKNESS (FINISHED):
OUTER: ☒ 1.4MIL (1oz) ☐ 2MIL (1.4oz) ☐ 2.8MIL (2oz)
INNER SIGNAL: ☒ 1.4MIL (1oz) ☐ 2.8MIL (2oz) ☐ N/A
DRILLING:
REFERENCE: ☒ AS SHOWN ☒ NC_DRILL FILES
PTH MIN COPPER THICKNESS: ☒ 1MIL ☐ OTHER ________
BOARD FINISH:
SILKSCREEN: ☒ TOP ☒ BOTTOM
SILKSCREEN COLOR: ☒ WHITE ☐ OTHER ________
SOLDER RESIST COLOR:
☒ GREEN ☐ BLUE ☐ OTHER ________
SURFACE FINISH: ☒ IMMERSION GOLD (ENIG) ☐ ENEPIG
☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER ________
ARRAY/PANEL: ☐ CUT AND TRIM PER MECH LAYER 1
☐ N.C. ROUTE ☒ V. SCORE
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBS TO MEET OR EXCEED THE REQUIREMENTS OF:
☒ ANSI IPC-A-600F CLASS -> ☐ 1 ☒ 2 ☐ 3
☒ UL 94V-0 ☒ RoHS ☐ OTHER PER ORDER
ADDITIONAL REQUIREMENTS: VIA TENTING: YES ☐ NO ☒
MICROSECTION: ☐ YES IMPEDANCE CONTROL: YES ☐ NO ☒
BARE BOARD ELEC. TEST: ☐ NONE ☒ REQUIRED ☐ PER ORDER
MANUFACTURER'S UL: ☐ RAIL ☐ METAL ☒ SILK

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PROJECT TITLE:
Reinforced Isolated Phase Current Measurement

DESIGNED FOR:
Public Release

FILE NAME:
TIDA-01420-E1.PcbDoc

ENGINEER:
AB

LAYOUT BY:

SCALE: 1.00

ALTIUM DESIGNER VERSION:
16.1.9.221

1000 (mil)

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

ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #:	TIDA-01420	REV:	E1	SVN REV: Not In VersionControl
LAYER NAME = Top Overlay	TID #: TIDA-01420				
Multilayer Composite Print	GENERATED : 9/13/2017		10:27:31 AM		TEXAS INSTRUMENTS

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