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Orderable: N/A	Designed for: Public Release	Mod. Date: 1/9/2017
TID #: 00774	Project Title: 18V/1kW, 98% eff power stage for brushless motor	
Number: TIDA-00774 Rev: E2	Sheet Title:	
Rev: Version control disabled	Assembly Variant: 001	Sheet: 1 of 5
Drawn By: Manu	File: TIDA-00774_CoverSheet_SchDoc	Size: B
Engineer: Manu Balakrishnan	Contact: http://www.ti.com/support	

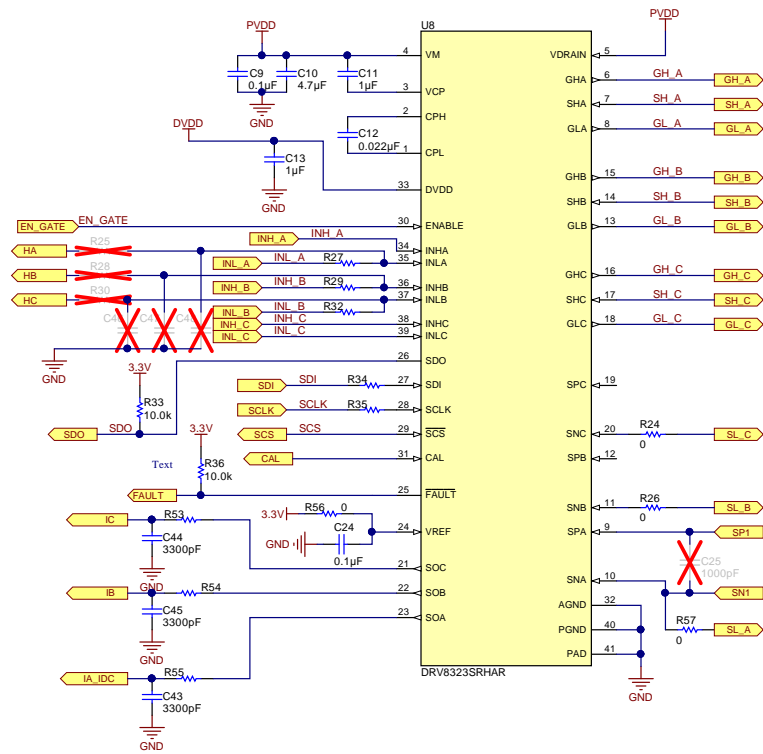
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TEXAS INSTRUMENTS

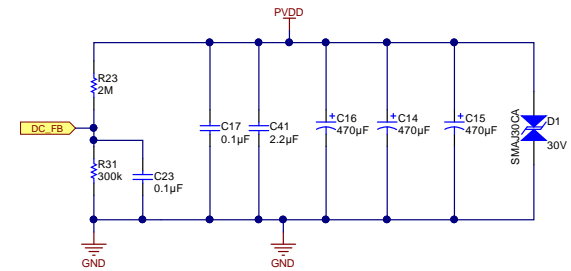
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Three Phase gate Driver

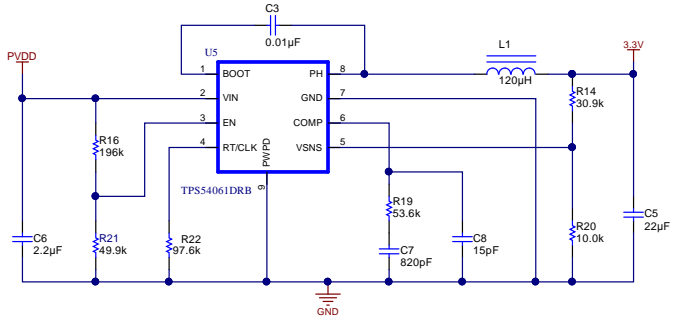


Power Supply

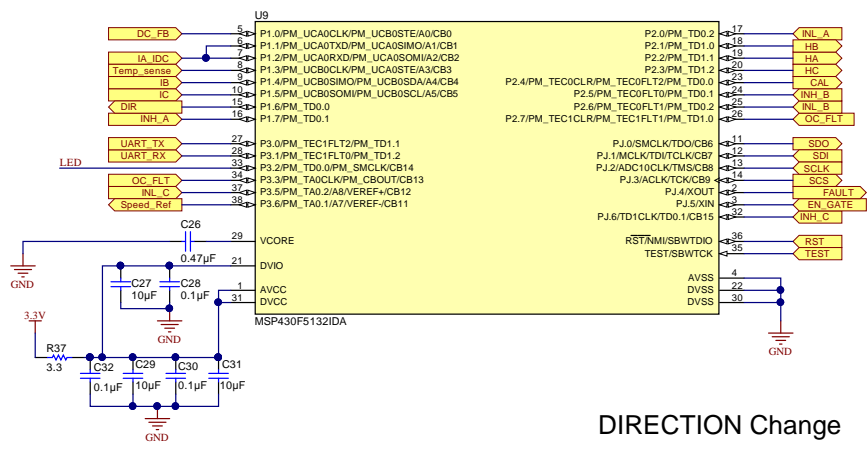


Note: No need to populate C25, if the DRV8323 amplifiers are configured for MOSFET VDS current sensing
Do not populate R24, R26, R57 if the DRV8323 amplifiers are configured for DC bus current sensing using the shunt resistor

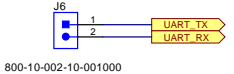
18 to 3.3 V DC-DC converter



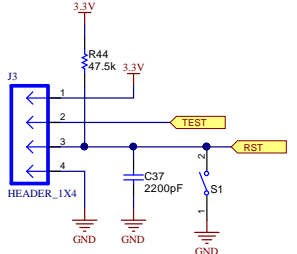
Microcontroller



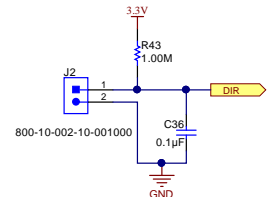
Provision for UART communication



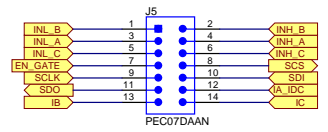
MCU Programming connector



DIRECTION Change

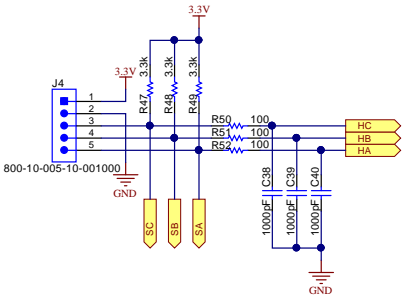


Signal interface connector



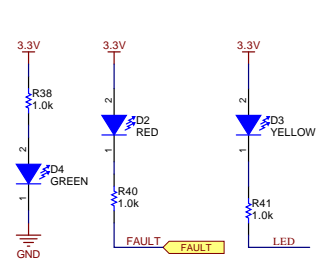
Note: short or open the connector J2 for rotation direction change

Hall Sensor interface

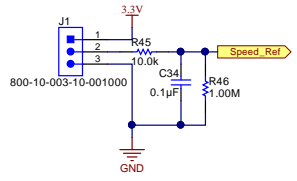


Note: The hall sensor must be connected in proper sequence to match with the winding connections.

LED Indication

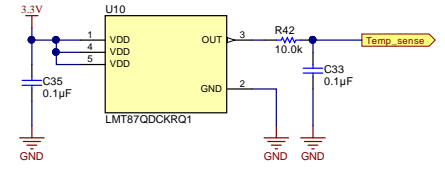


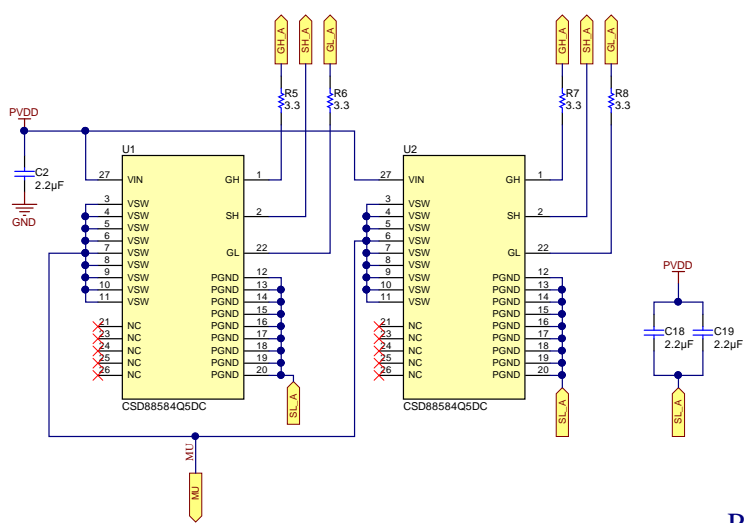
SPEED Reference



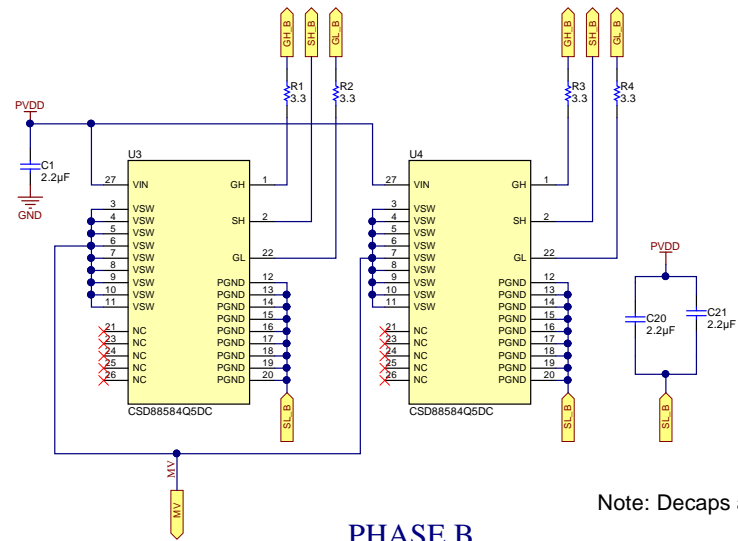
Note: Connect an external 20k POT at J1 Pin No.2 should be the midpoint

Temperature Sensor



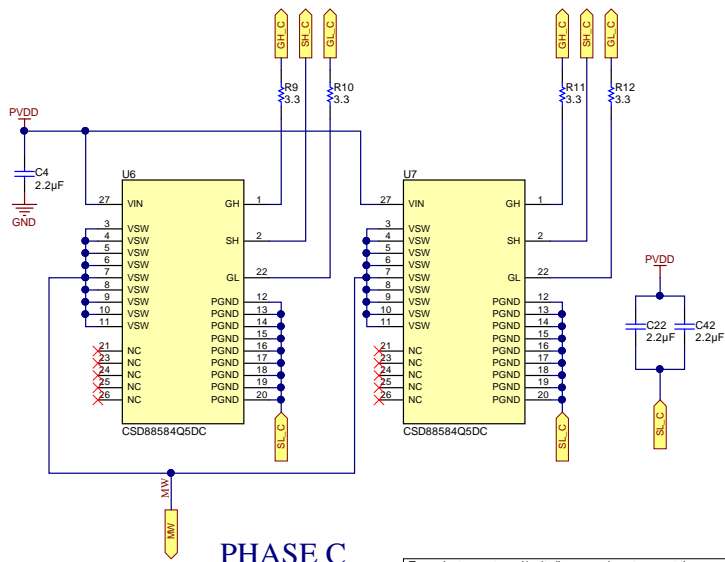


PHASE A



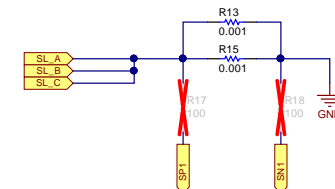
PHASE B

Note: Decaps across each inverter leg



PHASE C

Current Sense Resistors



Note: No need to populate R17,R18, if the DRV8323 amplifiers are configured for MOSFET VDS current sensing

PCB Number: TIDA-00774
PCB Rev: E2



PCB
LOGO
Logo2

PCB
LOGO
Logo3

Label Table	
Variant	Label Text
001	ChangeMe!
002	ChangeMe!

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.

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Drawn By: Manu	File: TIDA-00774_Hardware.SchDoc	Size: B
Engineer: Manu Balakrishnan	Contact: http://www.ti.com/support	http://www.ti.com

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