

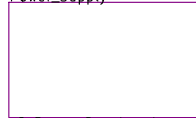
# BLDC Driver

Block Diagram



s1\_Block\_Diagram.sch

Power Supply



s2\_Power\_Supply.sch

MCU Interfaces



s3\_MCU\_Interfaces.sch

Main



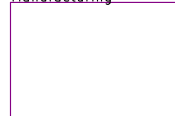
s4\_Main.sch

Hall Sensor inf



s5\_Hall\_Sensor\_Inf.sch

Manufacturing




s6\_Manufacturing.sch

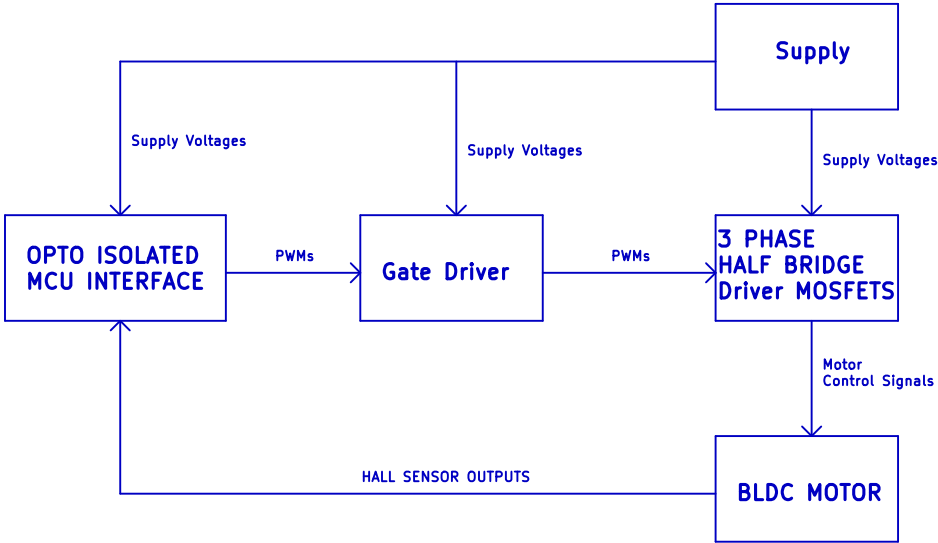
Revision History



s7\_Revision\_History.sch

Release Date: 30th April, 2019		 System Level Solutions Inc. Plot#32, Phase 1, Zone D/4, G.I.D.C. Estate, V.U.Nagar – 388121, Gujarat, INDIA	Copyright © 2018 System Level Solutions, Inc. All rights reserved.		
Designed By: APC, ISHAN	Date: 30th April, 2019		Sheet Name: /		
Drawn By: APC	Date: 30th April, 2019		Title: BLDC Driver		
Verified By: APC	Date: 1st MAY, 2019		Size: A4	Document Number: PCB-BLDCDRV-1918-1B-01	Rev: 1B
Customer:			Date: 2019-04-30		Sheet: 1/8

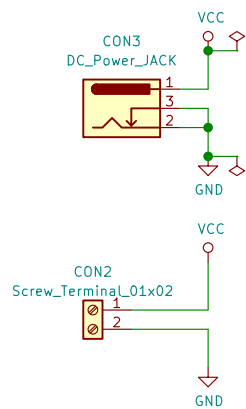
# Block Diagram



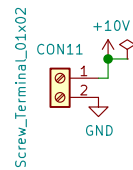
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Sheet Name: /Block Diagram/		
Title: BLDC Driver		
Size: A4	Document Number: PCB-BLDCDRVR-1918-1B-01	Rev: 1B
Date: 2019-04-30		Sheet: 2/8

# Supply Section

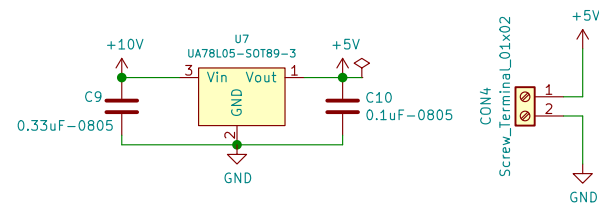
**+60V0\_5Amp  
Input Supply  
From EV BATT**



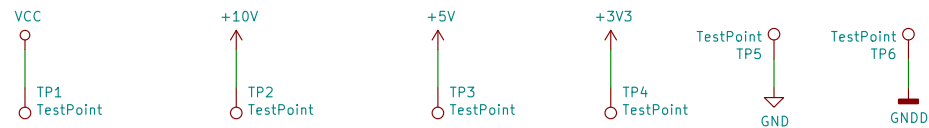
**+10V External Supply  
For Opto isolator  
and Gate Drivers**



**+5V0 Supply  
For Hall Sensors**



## Test Points



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Sheet Name: /Power\_Supply/

Title: BLDC Driver

Size: A4 Document Number: PCB-BLDCDRVR-1918-1B-01

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# MCU Interfaces

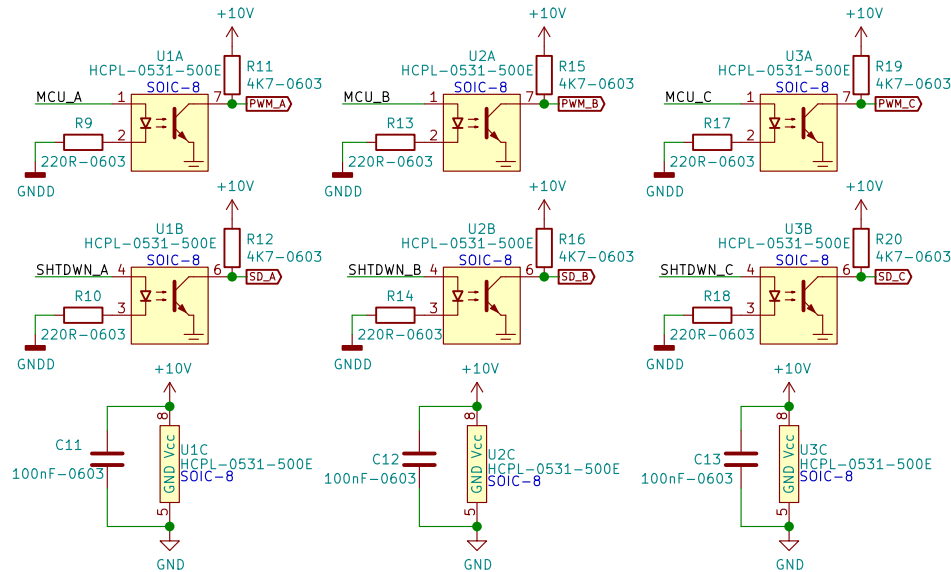
## PWM Interfaces From MCU

Screw\_Terminal\_01x02  
CON6 1 MCU\_A  
2 SHTDWN\_A

Screw\_Terminal\_01x02  
CON7 1 MCU\_B  
2 SHTDWN\_B

Screw\_Terminal\_01x02  
CON8 1 MCU\_C  
2 SHTDWN\_C

## Opto Isolators



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Sheet Name: /MCU\_Interfaces/

Title: BLDC Driver

Size: A4 Document Number: PCB-BLDCDRV-1918-1B-01

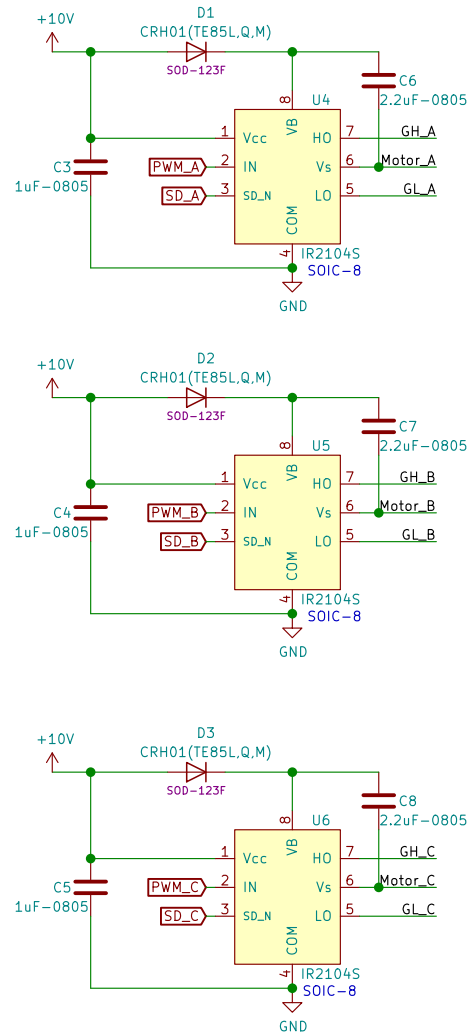
Rev: 1B

Date: 2019-04-30

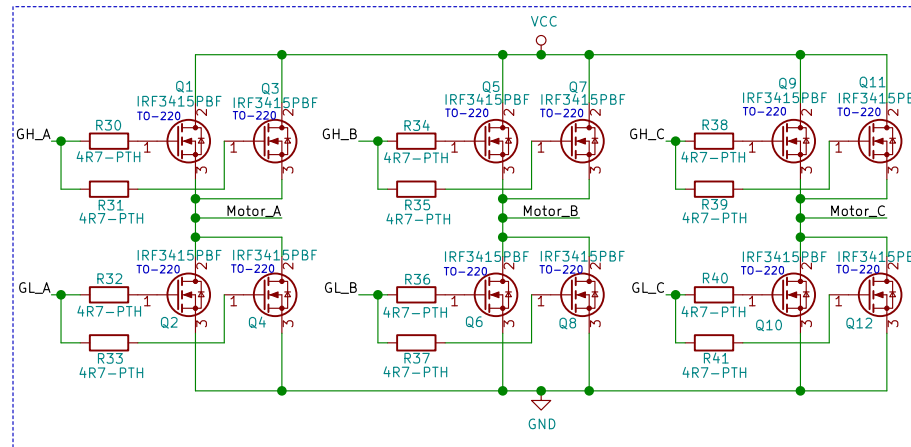
Sheet: 4/8

# Gate Drivers and Half Bridges

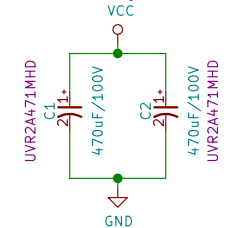
## GATE Drivers



## Half Bridges



## Filter Capacitors



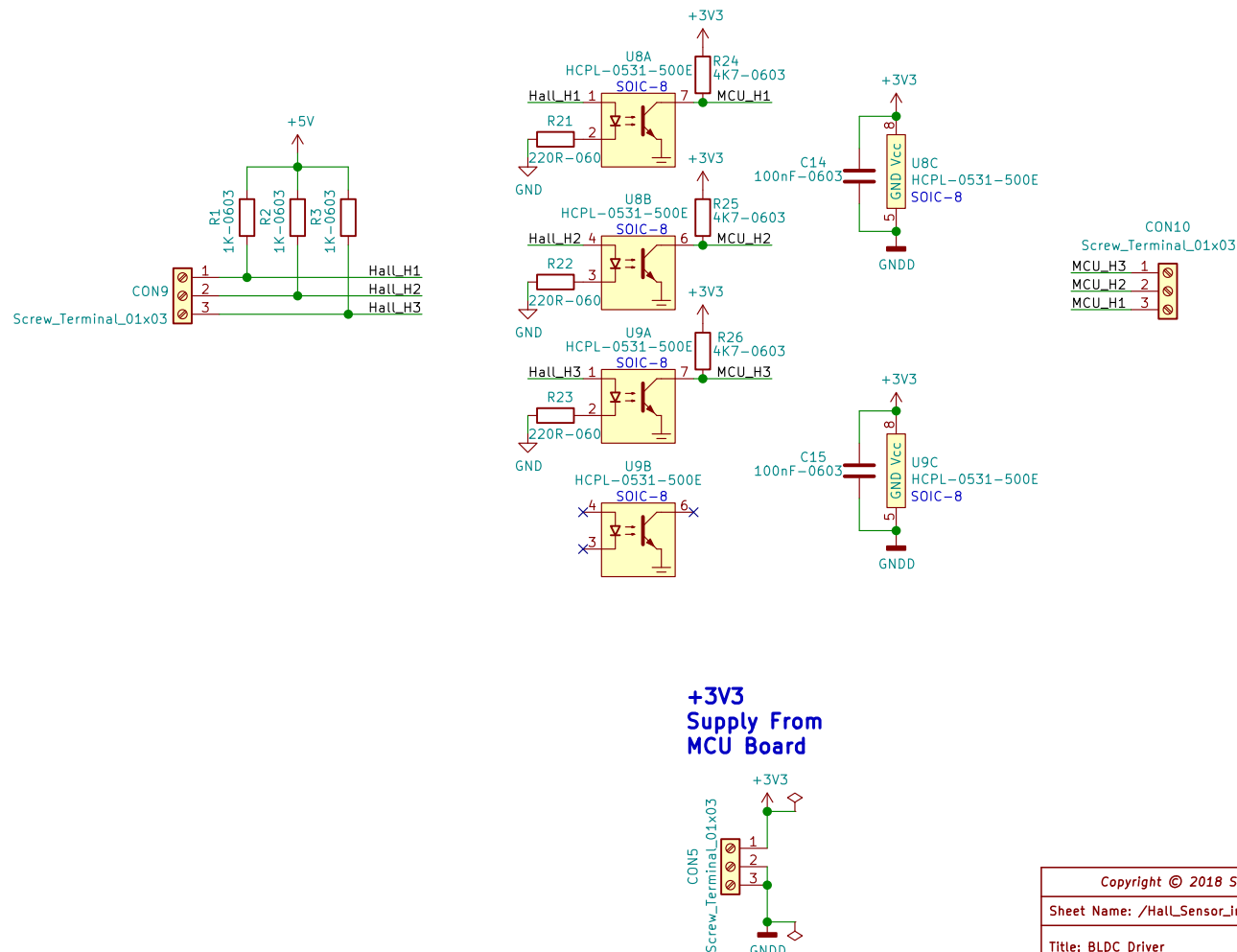
Note: All the Gate Resistors used in Half Bridge is Special resistors which have capability to withstand Pulsed Currents of 0.5Amps  
Manufacturer Part No : PR02000204708JA100

## Motor Connector



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Sheet Name: /Main/			
Title: BLDC Driver			
Size: A4	Document Number: PCB-BLDCDRV-1918-1B-01	Rev: 1B	
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# Hall Sensor Interfaces



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Sheet Name: /Hall_Sensor_Inf/		
Title: BLDC Driver		
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Date: 2019-04-30	Sheet: 6/8	

# Mechanicals

## Fiducials



## Mounting Holes



## SLS LOGO



## Heat Sink



## Skrew



## Bolt



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Title: BLDC Driver		
Size: A4	Document Number: PCB-BLDCDRV-1918-1B-01	Rev: 1B
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# Revision History

Sr. No.	Revision	Date	Description
1	REV1A	11th Feb,2019	Changes done as per the ECR documents.
2	REV1B	1st MAY,2019	(1)Changed MOSFETs from SMD/LOW Power to PTH(TO-220)/HIGH Power. (2)Added TVS diode across drain and source of Mosfets to protect against Back emf and voltage spikes. (3)Changed HALL Sensor Pull ups from 10k to 1K.

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Sheet Name: /Revision History/

Title: BLDC Driver

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