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Revisions			
Rev	Description	Date	Approved
A	Initial Release	07/13/2015	Mario Guardado

# FREEDOM BLDC MOTOR DRIVER SHIELD

		<b>Wireless Connectivity Operation</b> 6501 William Cannon Drive West Austin, TX 78735-8598	
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Designer: M. Force		Drawing Title: <b>FRDM-MC-LVBLDC</b>	
Drawn by: M. Force		Page Title: <b>TITLE PAGE</b>	
Approved: Mario Guardado		Document Number: SCH-28719 PDF: SPF-28719	
Date: Monday, July 13, 2015		Sheet 1 of 6	

1. Unless Otherwise Specified:

- All resistors are in ohms, 1% or 5%, 1/16 Watt
- All capacitors are in uF, 10%, 50V
- All voltages are DC
- All polarized capacitors are aluminum electrolytic

2. Interrupted lines coded with the same letter or letter combinations are electrically connected.

3. Device type number is for reference only. The number varies with the manufacturer.

4. Special signal usage:

- \_B Denotes - Active-Low Signal
- <> or [] Denotes - Vectored Signals

5. Interpret diagram in accordance with American National Standards Institute specifications, current revision, with the exception of logic block symbology.

MCU Peripheral / Port Map		
Function	MCU Peri	MCU Port
PWM_AT	FTM0_CH0	PTC1
PWM_AB	FTM0_CH1	PTC2
PWM_BT	FTM0_CH2	PTC5
PWM_BB	FTM0_CH3	PTC4
PWM_CT	FTM0_CH4	PTD4
PWM_CB	FTM0_CH5	PTD5
BEMF_A	ADC0_SE8	PTB0
BEMF_B	ADC1_DP0	ADC1_DP0
BEMF_C	ADC0_DP0	ADC0_DP0
VOLT_DCB	ADC0_SE13	PTB3
CUR_DCB	ADC1_SE18	ADC1_SE18
HALL_A / ENC_A	FTM2_CH0	PTB18
HALL_B / ENC_B	FTM2_CH1	PTB19
HALL_C / ENC_I	FTM1_CH1	PTA13

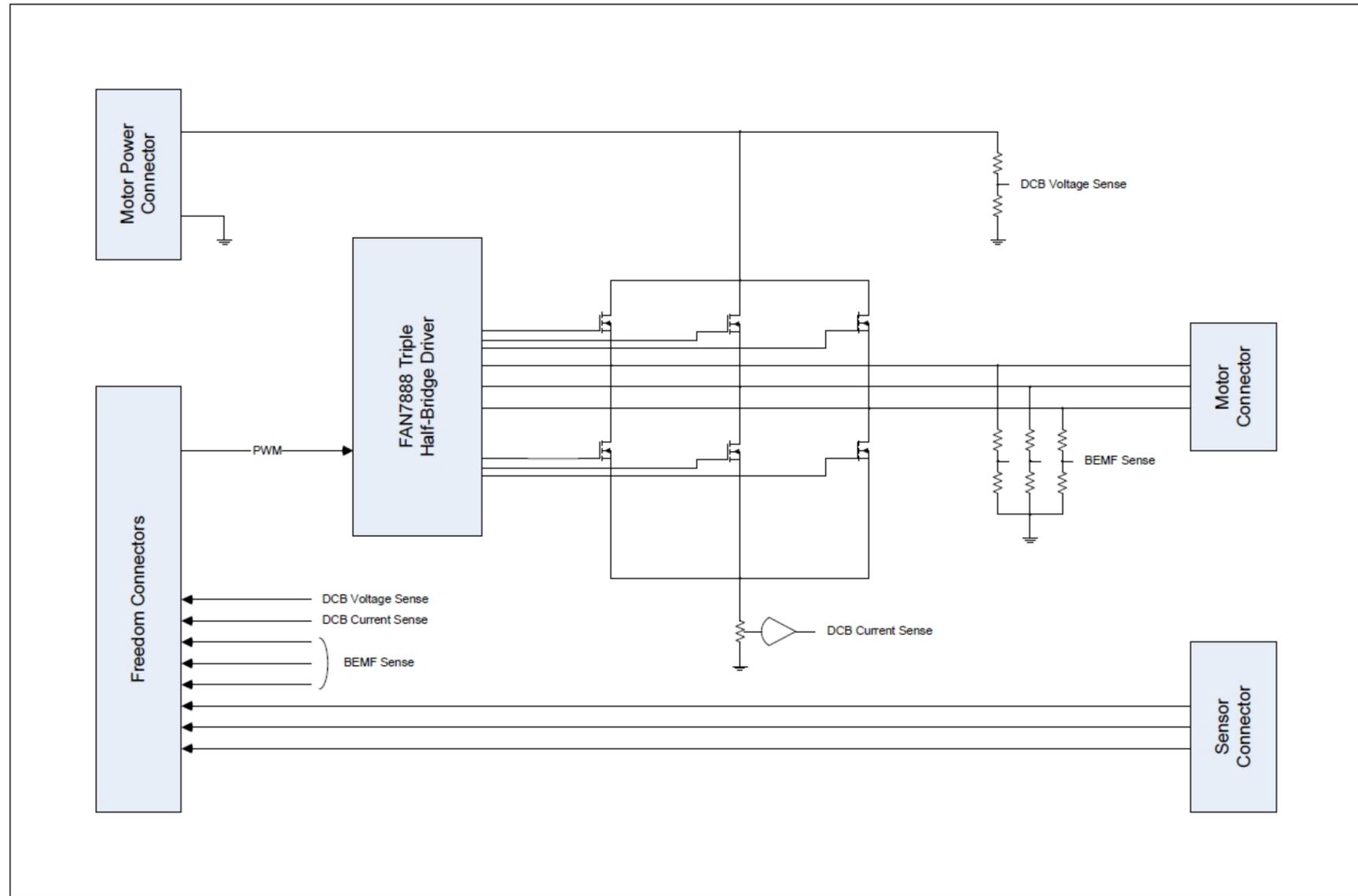


ICAP Classification: FCP: -X- FIUO: PUBI: \_

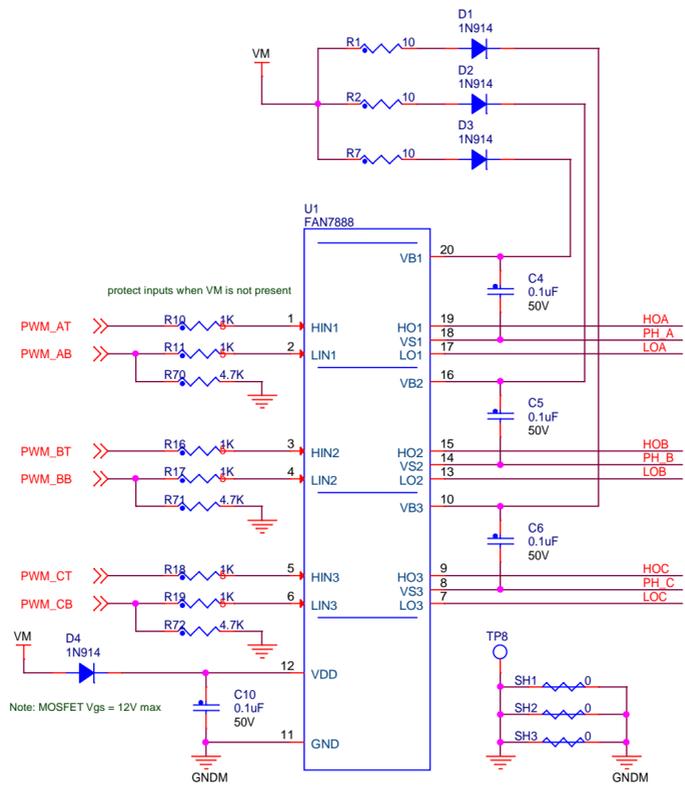
Drawing Title: **FRDM-MC-LVBLDC**

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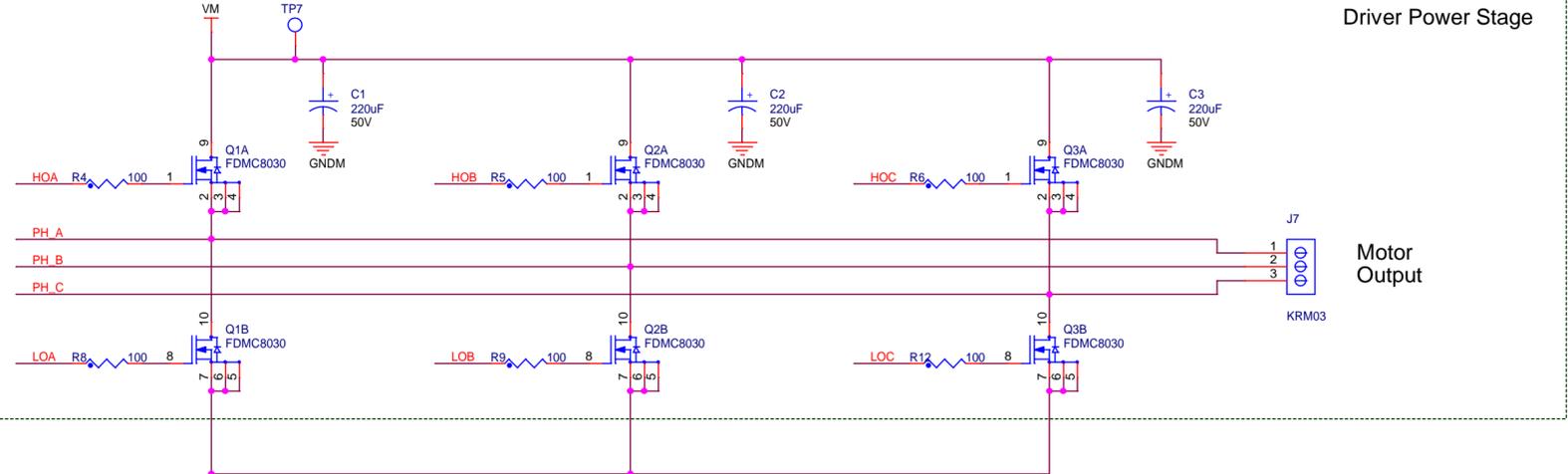
Size C	Document Number SCH-28719 PDF: SPF-28719	Rev A
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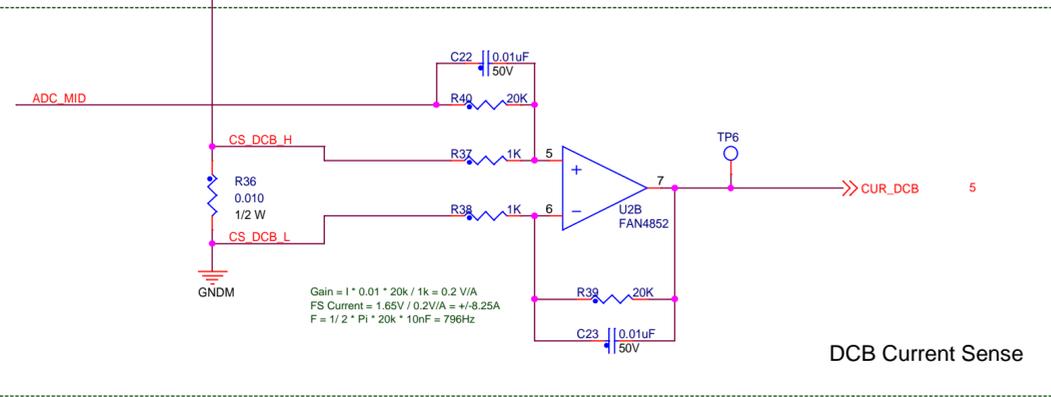
MOSFET Gate Drivers



Driver Power Stage

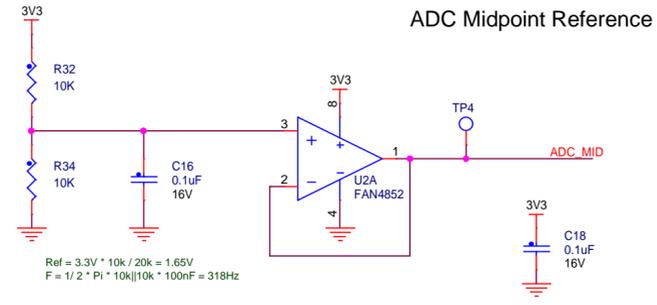


Motor Output

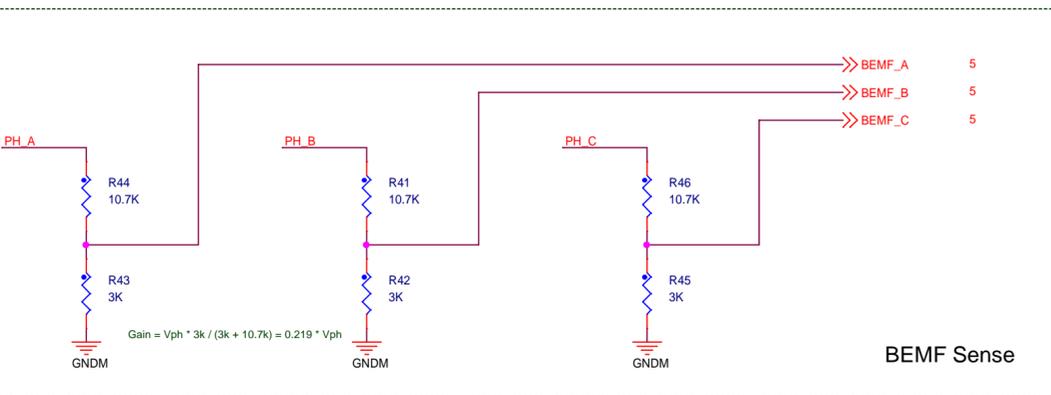
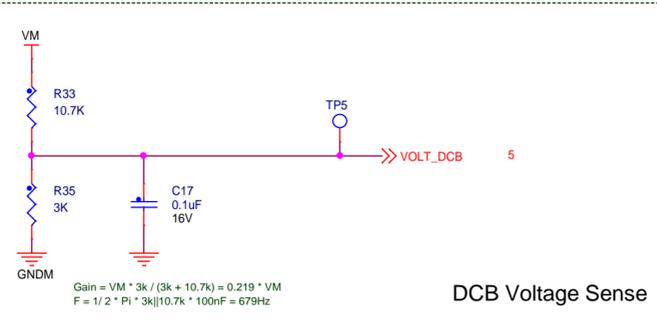


DCB Current Sense

ADC Midpoint Reference



DCB Voltage Sense



BEMF Sense



