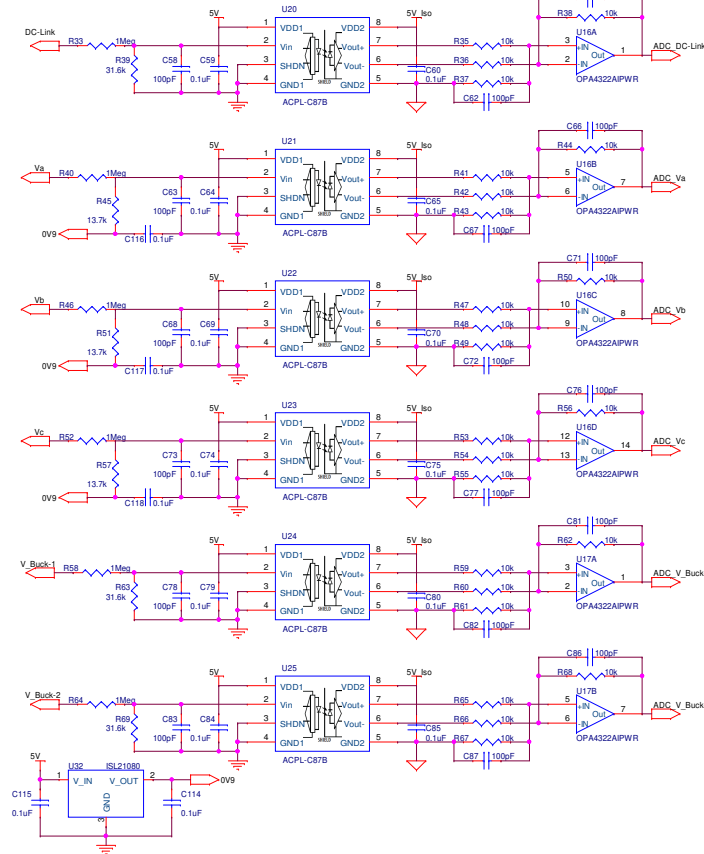
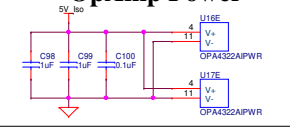


Isolated Voltage Sensing

Scale : (R39, R45, R51, R57, R63, and R69)
 66V = 2V for 31.6k Resistor (RK73H1JTTD3162F)
 400V = 2V for 4.99k Resistor (RK73H1JTTD4991D)
 +/-66V = 2V for 13.7k Resistor (RK73H1JTTD1372F)



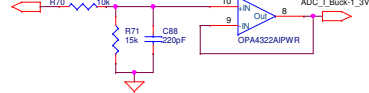
OpAmp Power



Voltage Scaling for DSP ADC

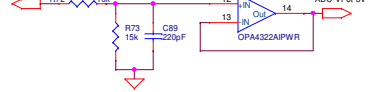
Scale : 5V = 3V

fc = 72.3 kHz

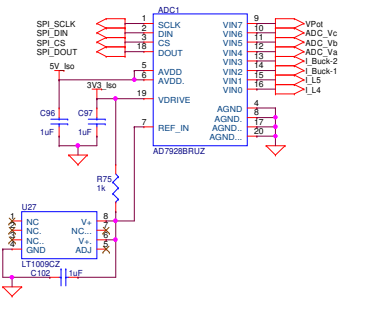


Scale : 5V = 3V

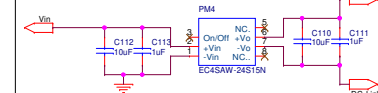
fc = 72.3 kHz



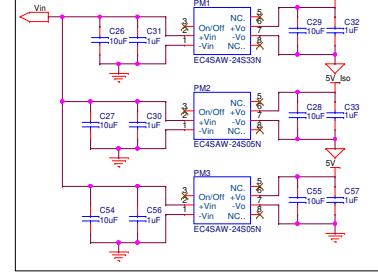
SPI ADC - 5V Input, 3.3V I/O



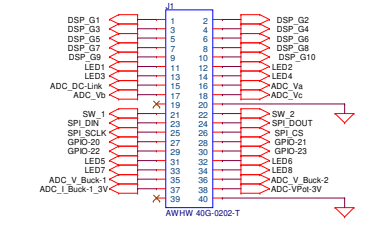
SCR Upper Isolated Supply



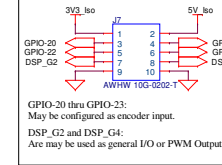
Isolated 3.3V/5V Supplies



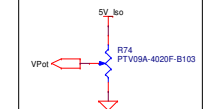
DSP Connection



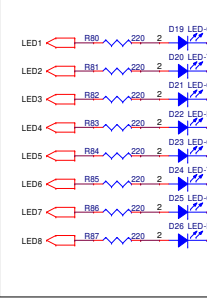
External Interface



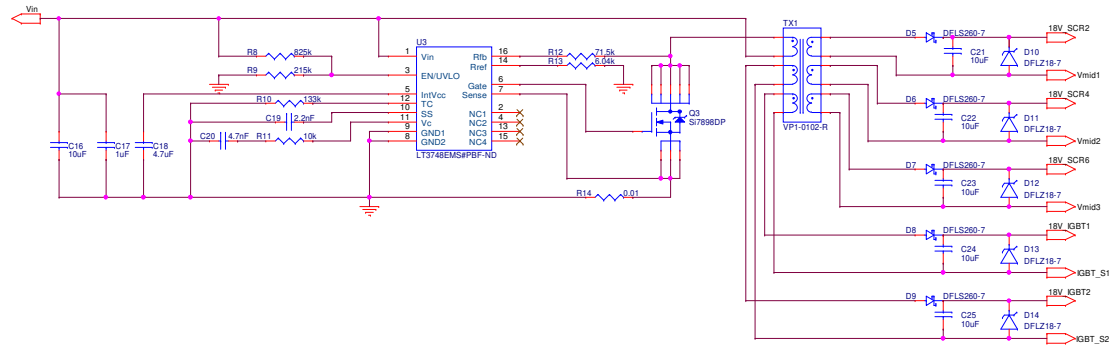
Pot Interface



Status LEDs

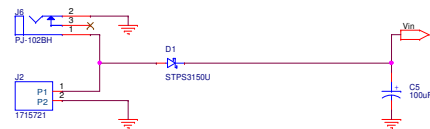


Vin to Isolated Gate Voltage Converter

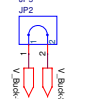


UNIVERSITY OF ARKANSAS COLLEGE OF ENGINEERING		NCREPT NATIONAL CENTER FOR RELIABLE ELECTRIC POWER TRANSMISSION	
Organization	University of Arkansas (NCREPT)	Address	700 W. Research Center Blvd Fayetteville, AR 72701
Title	HQ PE-Eval PCB	Size	Document Number C000
Rev	1.1	Engineer(s)	Chris Farrell
Date	Thursday, June 27, 2019	Sheet	1 of 2

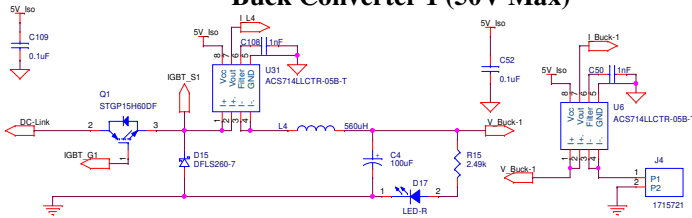
DC Power Entry (9V-36V)



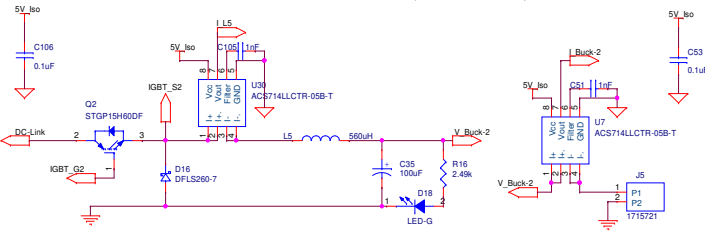
Buck Output Interconnect



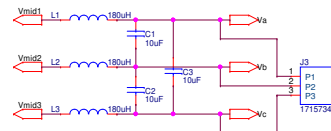
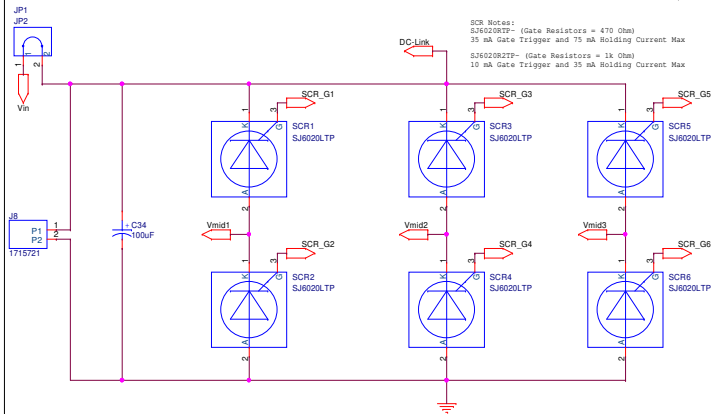
Buck Converter 1 (50V Max)



Buck Converter 2 (50V Max)

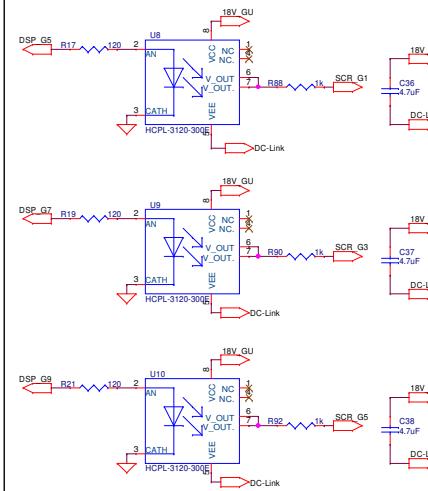


3-Phase Converter (SCR)

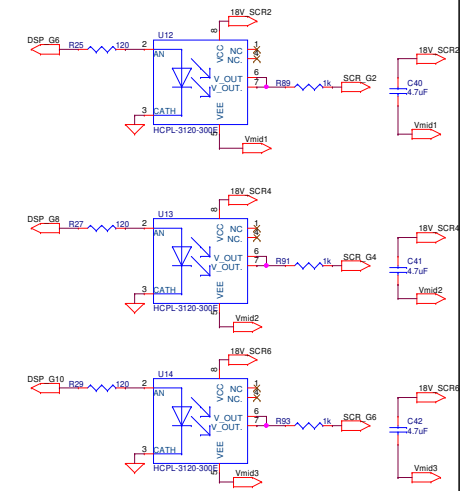


SCR Drivers

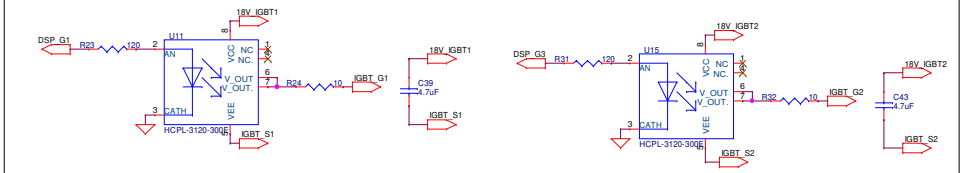
High-Side



Low-Side

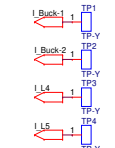


IGBT Drivers (Buck Converters)

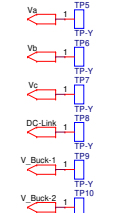


TestPoints

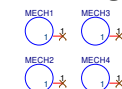
Current



Voltage



Mounting



Organization	University of Arkansas (NCREPT)	Address	700 W. Research Center Blvd Fayetteville, AR 72701
Title	HQ3 PE-Eval PCB	Rev	1.1
Size	Document Number	Rev	Engineer(s)
C	<doc>	1.1	Chris Farnell
Date:	Thursday, June 27, 2019	Sheet	2 of 2