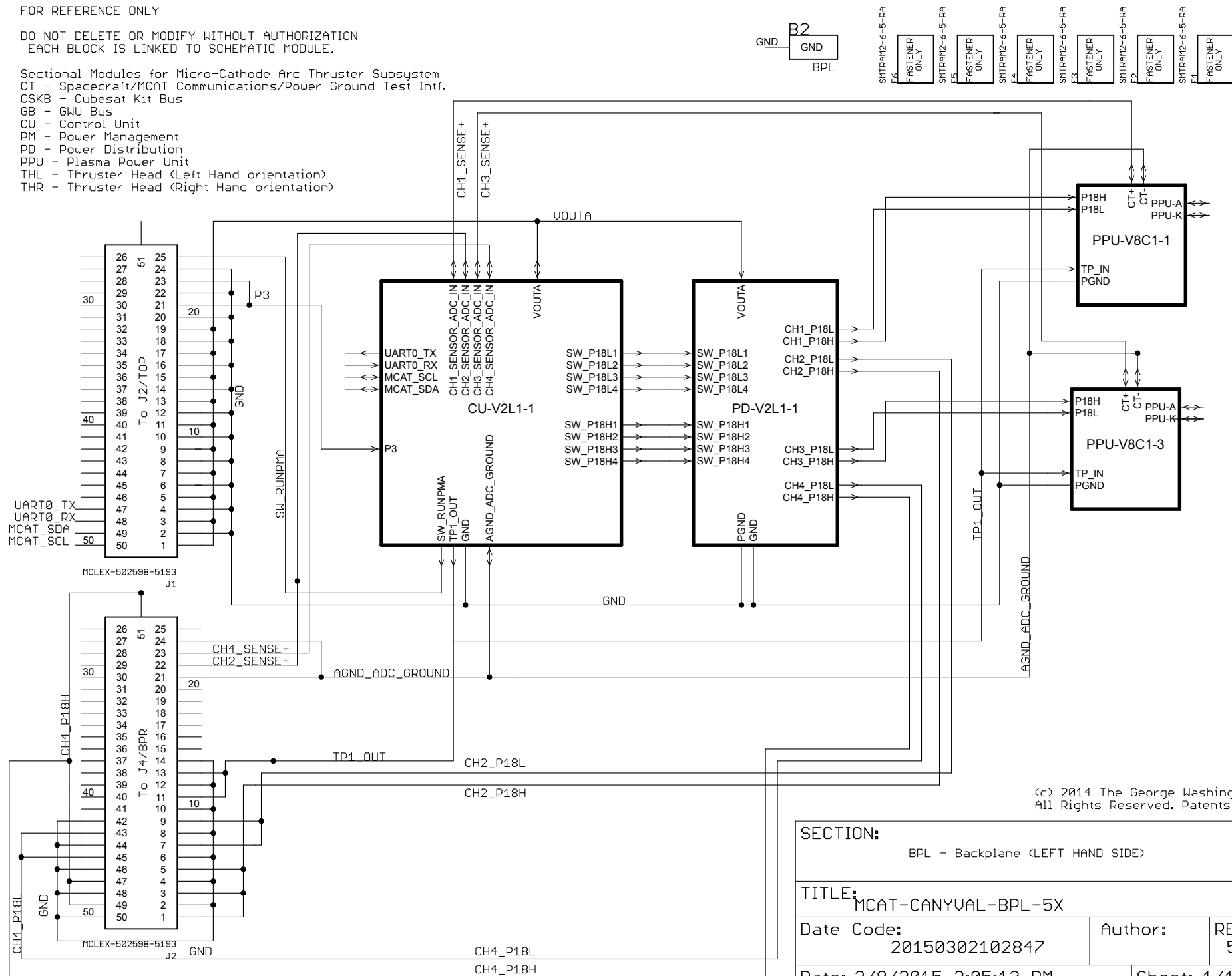


DO NOT DELETE OR MODIFY WITHOUT AUTHORIZATION
EACH BLOCK IS LINKED TO SCHEMATIC MODULE.

Sectional Modules for Micro-Cathode Arc Thruster Subsystem
 CT - Spacecraft/MCAT Communications/Power Ground Test Intf.
 CSKB - Cubesat Kit Bus
 GB - GWU Bus
 CU - Control Unit
 PM - Power Management
 PD - Power Distribution
 PPU - Plasma Power Unit
 THL - Thruster Head (Left Hand orientation)
 THR - Thruster Head (Right Hand orientation)



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BPL - Backplane (LEFT HAND SIDE)

TITLE: MCAT-CANYVAL-BPL-5X

Date Code:	20150302102847
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Author:	REV: 5X
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Date: 3/8/2015 3:05:12 PM

Sheet: 1/1

Design: Samudra Haque, N3RDX, 2014
Ph.D Candidate (Aerospace Engineering)
Dept. of Mechanical and Aerospace Engineering
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Microcontroller Module (GPIO Control Line Assignment)

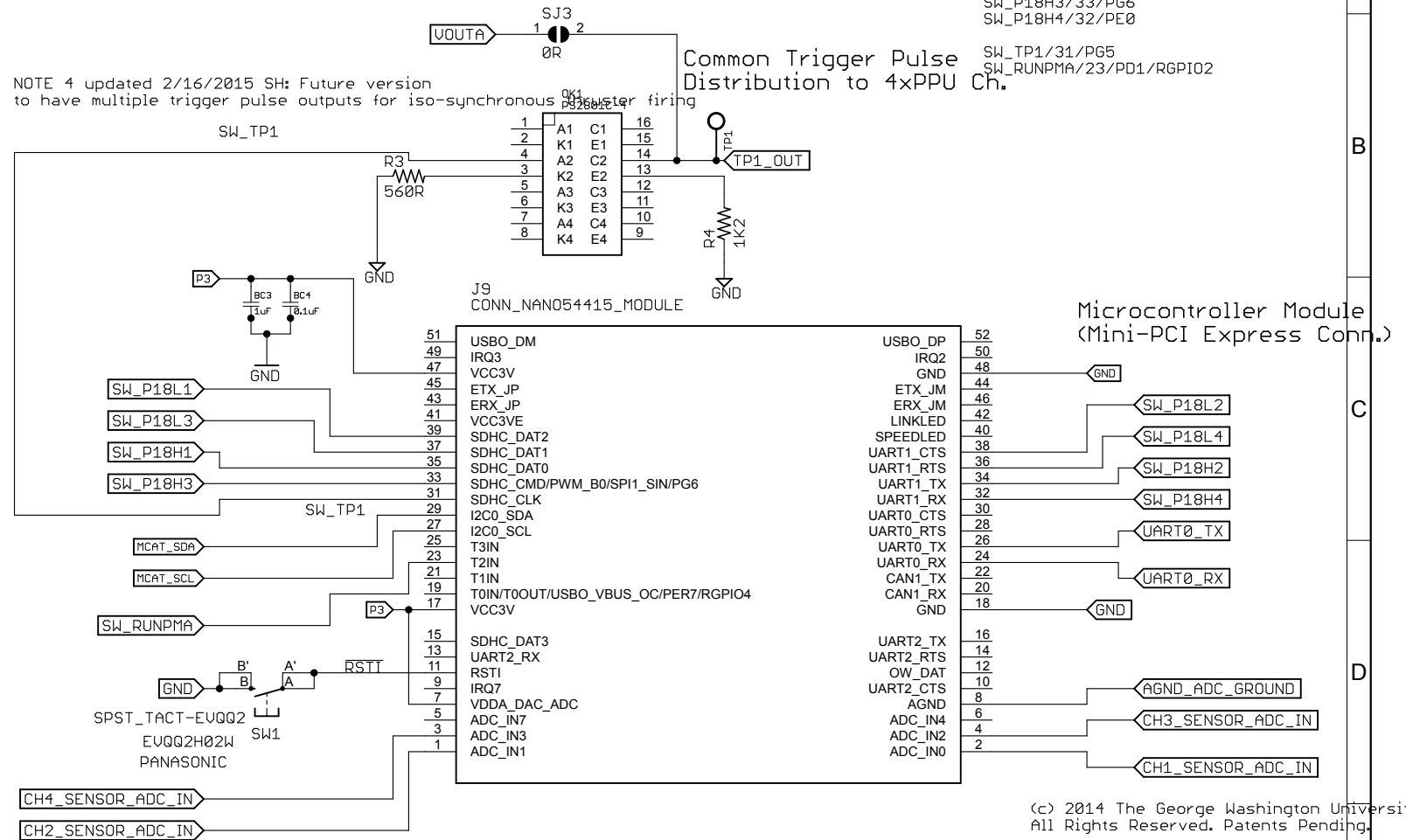
MCAT 4 Channel Configuration (2014)
SW_P18L1/39/PF1
SW_P18L2/38/PE2/RGPIO7
SW_P18L3/37/PF0
SW_P18L4/36/PE1/RGPIO8

SW_P18H1/35/PG7
SW_P18H2/34/PF7
SW_P18H3/33/PG6
SW_P18H4/32/PE0

SW_TP1/31/PG5
SW_RUNPMA/23/PD1/RGPIO2

NOTE 4 updated 2/16/2015 SH: Future version
to have multiple trigger pulse outputs for iso-synchronous master firing

Common Trigger Pulse Distribution to 4xPPU Ch.



COMPULSORY ITEM
DO NOT DELETE THIS PART
USE FOR CONN_NAN055415_MODULE

LATCH FOR
MINIPCI-E
CONN; USE IN PAIRS

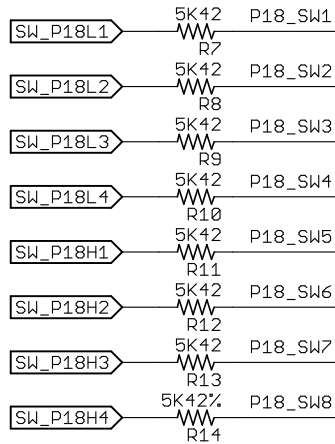
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SECTION: CU - Control Unit Section (Version: 2L2)		
TITLE: MCAT-CANYVAL-BPL-5X		
Date Code: 20150302102847	Author:	REV: 5X
Date: 3/8/2015 3:05:12 PM	Sheet: 1/1	

Design: Samudra Haque, N3RDX, 2014
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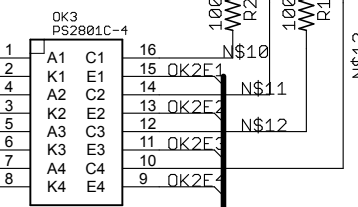
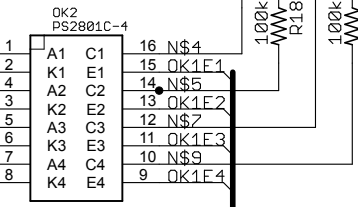
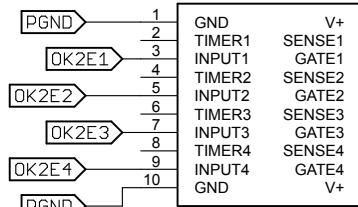
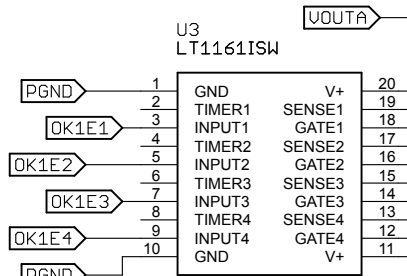
R7, R8, R9, R10, R11, R12, R13
SUBST. 3/2/2015 SEH with ERA-2AEB5491X
Thin Film Resistor
SMD 0402 5K49 0.1% 1/16W

From CU



NOTE 1
Current Limit functionality (SENSEx)
for LT1161 channels CHnnnnH
not implemented in this revision pending
determination of over current limit

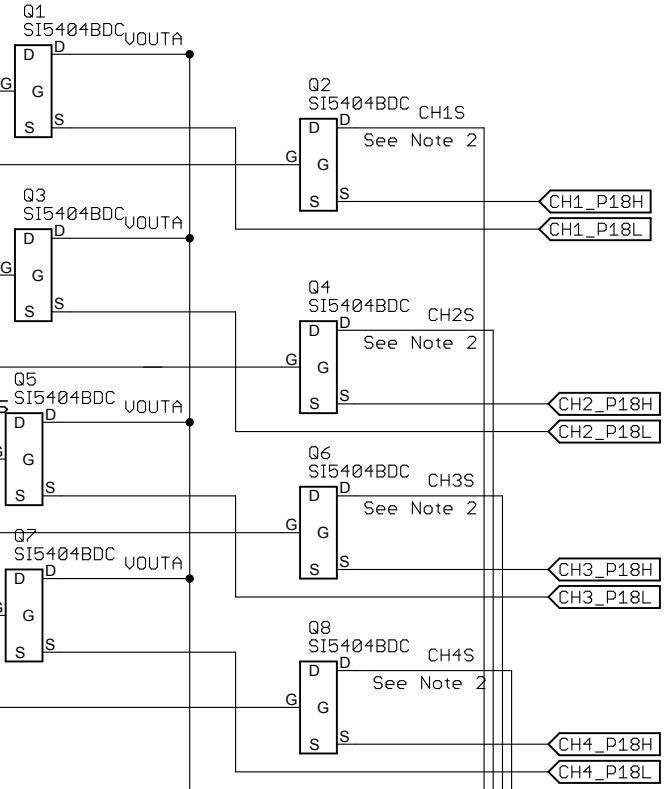
NOTE 2
dv/dt control network for LT1161 gates
not implemented pending further review



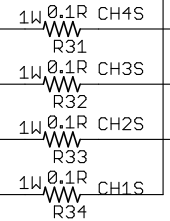
Necessary for isolating
the inputs to High Side MOSFET Driver

To PD
Gate Drives
Ch. 1/2

To PD
Gate Drives
Ch. 3/4



To PD
High Current
Supply for
Ch1-4 P18H



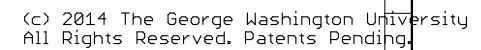
PD- Power Distribution Section (Version: 2L1)

TITLE: MCAT-CANYVAL-BPL-5X

Document Number: 20150302102847 REV: 5X

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Sheet: 1/1



Sheet: 1/1