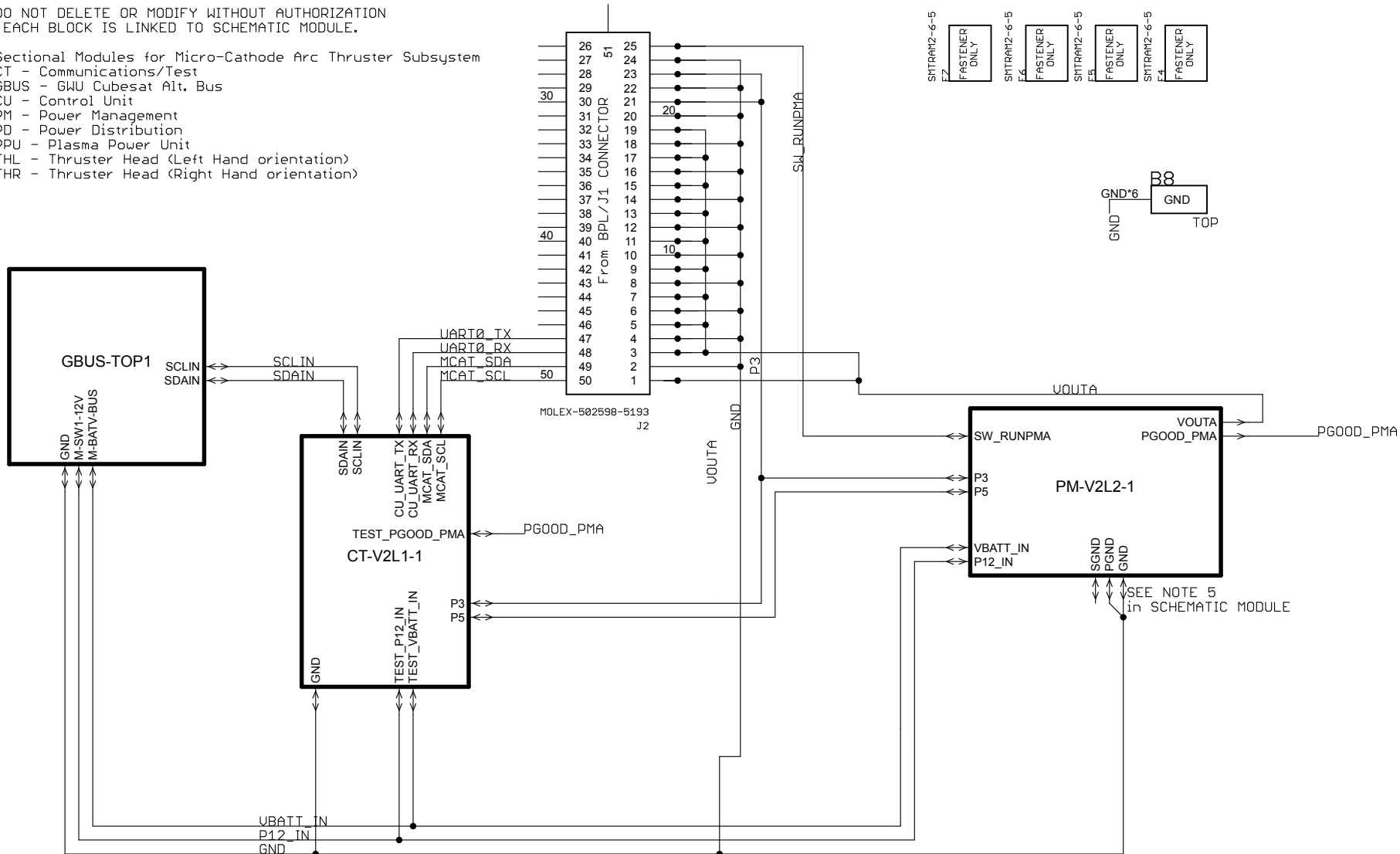


FOR REFERENCE ONLY

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

Sectional Modules for Micro-Cathode Arc Thruster Subsystem
CT - Communications/Test
GBUS - GWU Cubesat Alt. 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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SECTION:			MCAT SUBSYSTEM CANUYAL TOP PCB	
TITLE:			MCAT-CANYVAL-TOP-5X	
Date Code:		Author:	REV:	
20150302102847		SH, N3RDX	5X	
Date: 3/8/2015 2:55:36 PM			Sheet: 1/1	

Design: Samudra Haque, N3RDX, 2014
 Ph.D Candidate (Aerospace Engineering)
 Dept. of Mechanical and Aerospace Engineering
 The George Washington University
 (202) 812-3325

A

B

C

D

E

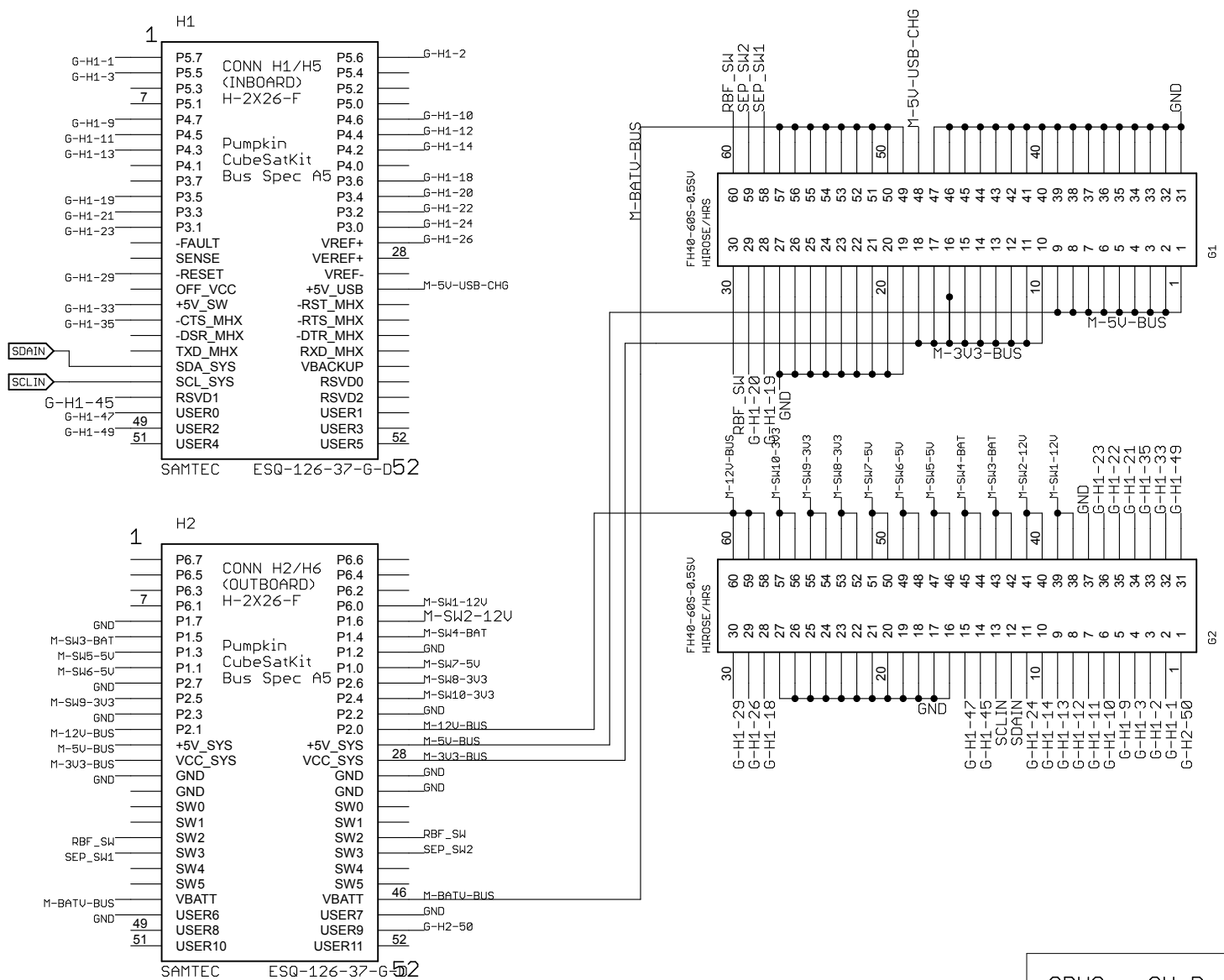
A

B

C

D

E



GBUS - GW Bus / Cubesat Kit Bus	
TITLE: MCAT-CANYVAL-TOP-5X	
Document Number: 20150302102847	REV:
Date: 3/8/2015 2:55:36 PM	Sheet: 1/1

Design: Samudra Haque, N3RDX, 2014
Ph.D Candidate (Aerospace Engineering)
Dept. of Mechanical and Aerospace Engineering
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Input Filter Network

From EPS BATTUBUS
Power I/P
6.11-8.26VDC @4.5A Max, SHARED

Shielded Power Inductor
L1
33uH
COILCRAFT
MSS1048T-333ML

Switching Power Regulation

$f = 400 \text{ kHz}$

Input = BATTUBUS (Clydespace EPS 3rd Generation)

Output = 18.04VDC (@17.82VDC, 1.1154A, max.)

Discontinuous Current Mode (DCM) w/Constant Frequency

U1
LTM4609MPU#PBF

Switching Power Regulation

Output Filter Network

Shielded Power Inductor
L2
68uH
COILCRAFT
MSS1048T-672NL

Shielded Power Inductor
L3
10uH
PANASONIC
ELL6PS100M

NOTE 3:
PGOOD_PMA
signal unmonitored in this rev.

RUN_PMA is Inhibit
controlled by MTCU SW of CU as
commanded by spacecraft C&DH

KOA SPEER
RN731ETTP2001B2

UISHAY
WSLP0805R0270FEA

TE Connectivity/Holsworthy
RN73C134K64BTDG

U2
LT3030MPFE#PBF

To PD
Ch. 1-4, L/H

NOTE 5

SGND connected to PGND near/at output capacitor point

PM (Version: 2L2, Canyval)

TITLE: MCAT-CANYVAL-TOP-5X

Document Number: 20150302102847

REV:
5X

Date: 3/8/2015 2:55:36 PM

Sheet: 1/1