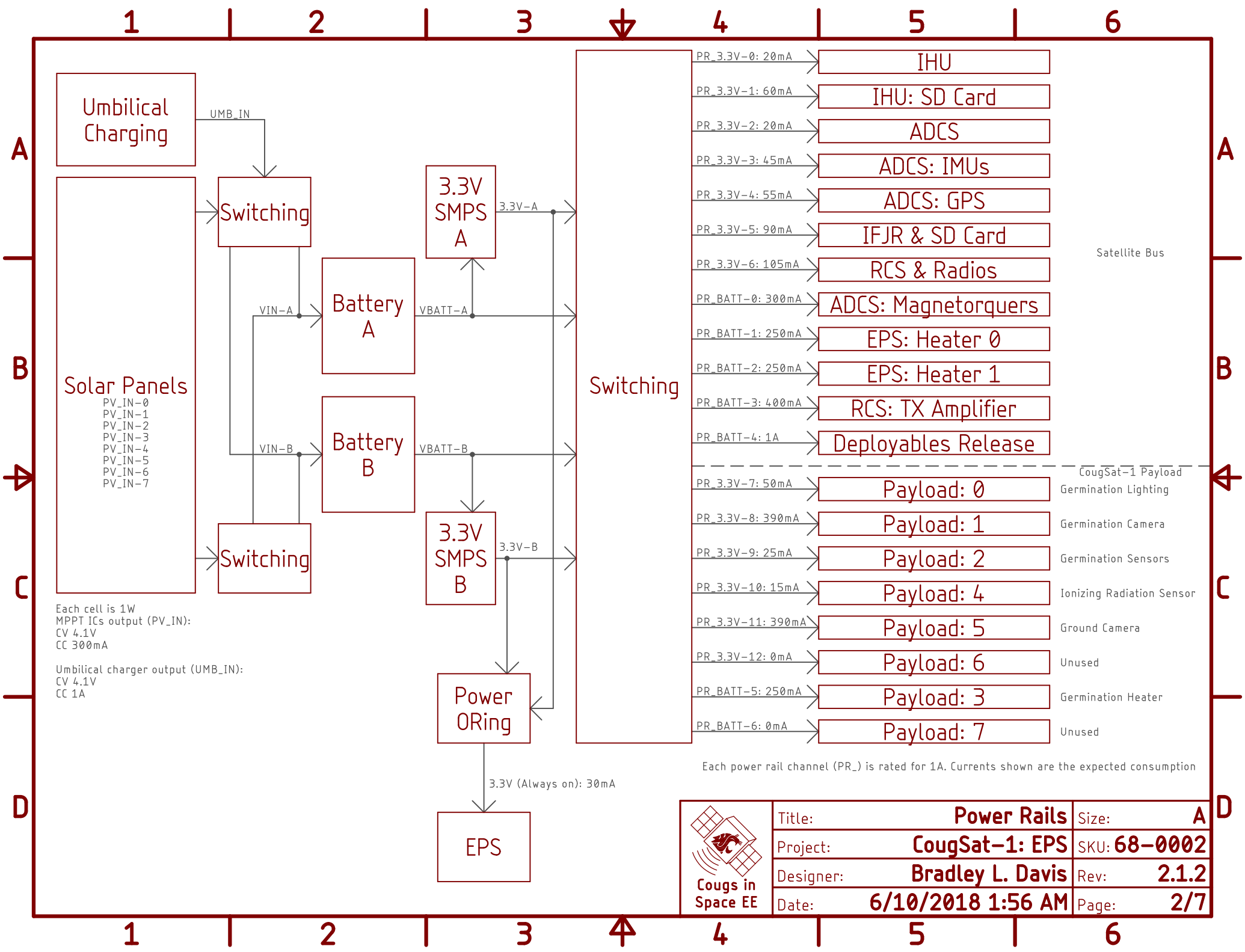
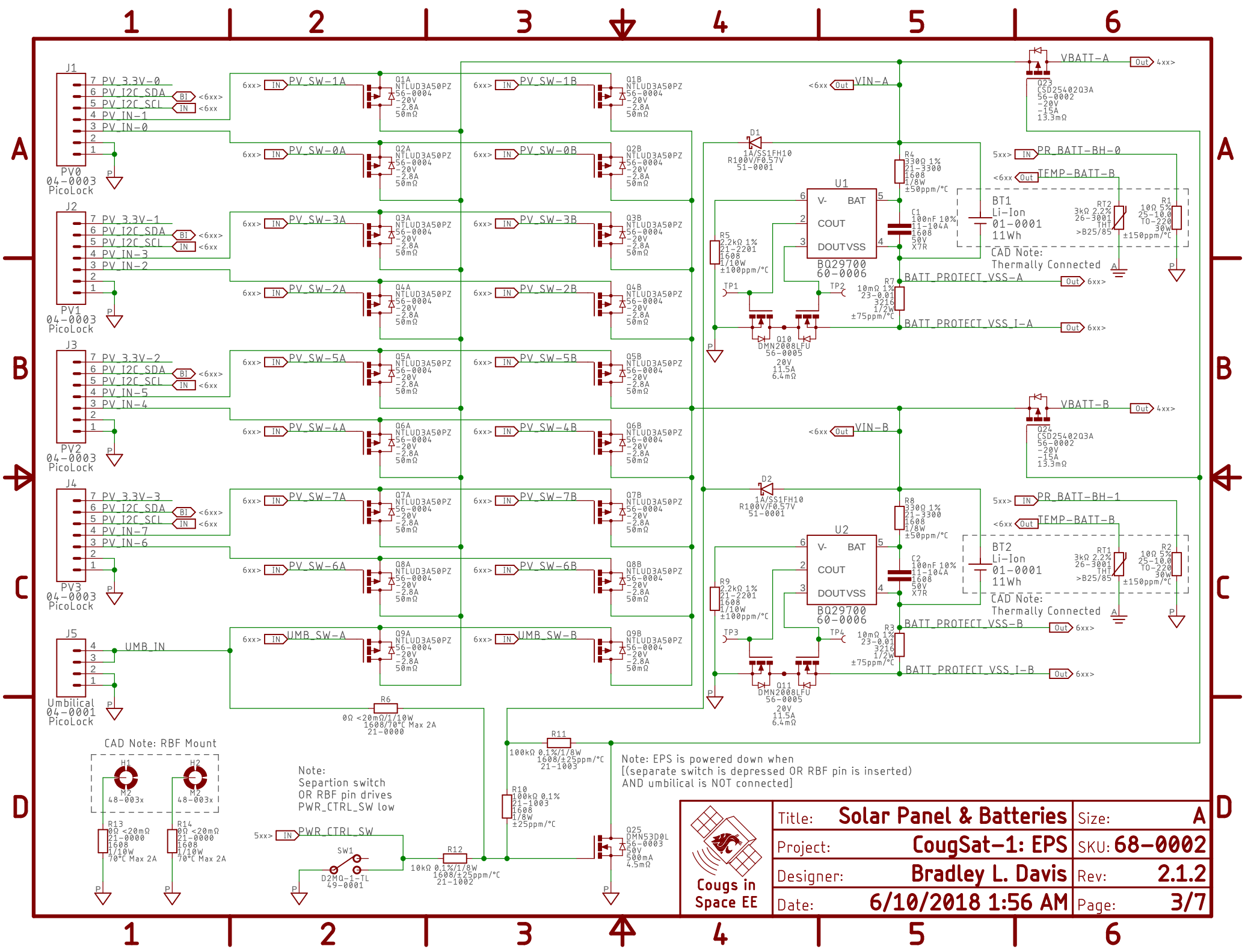


Page 1: Block Diagram  
Page 2: Power Rails  
Page 3: Solar Panel Inputs & Battery Charging  
Page 4: 3.3V Regulation  
Page 5: Power Channel Switching & Backplane Power Connections  
Page 6: PMIC & ADCs  
Page 7: Mechanical Layout



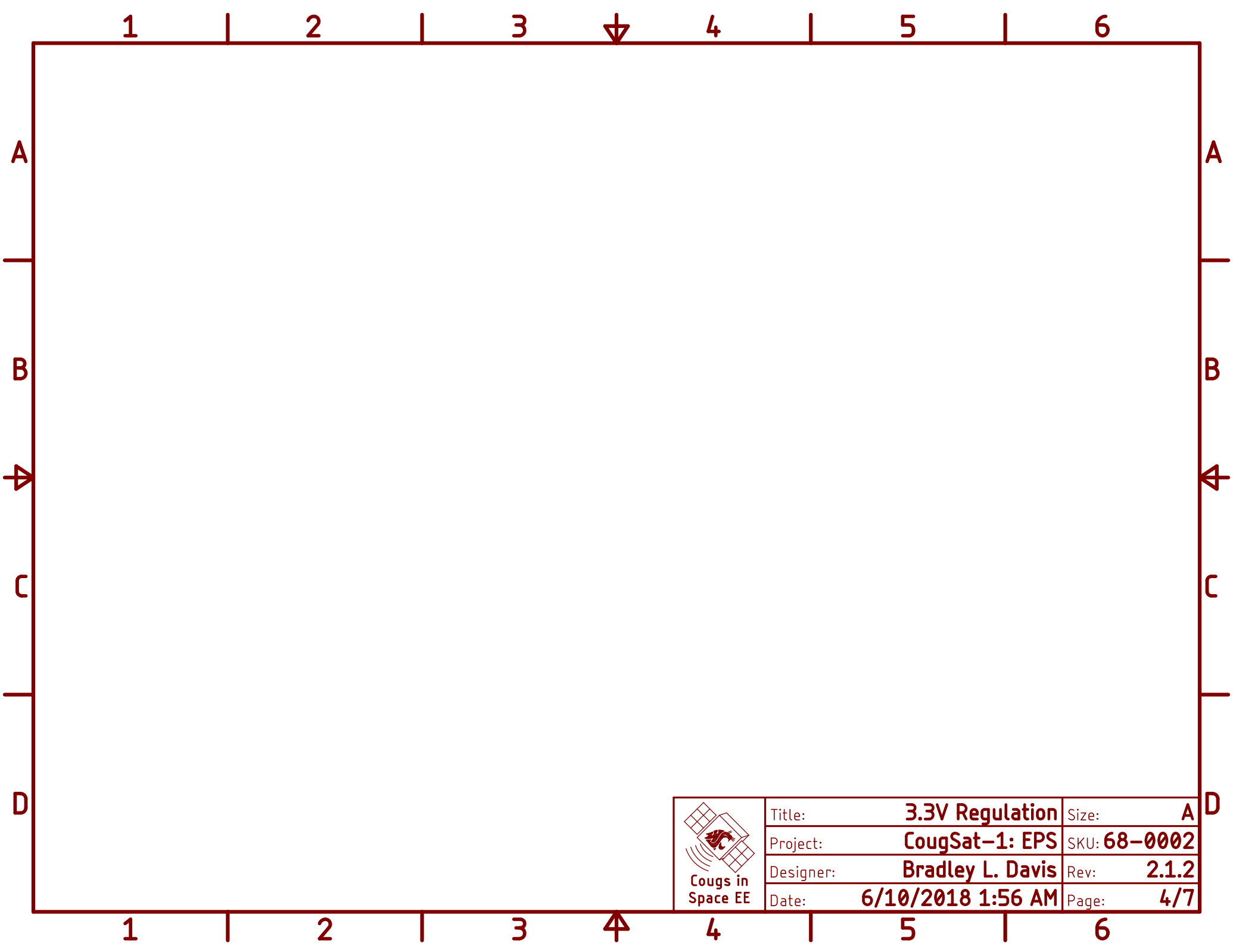
Title:	Block Diagram	Size:	A
Project:	CougSat-1: EPS	SKU:	68-0002
Designer:	Bradley L. Davis	Rev:	2.1.2
Date:	6/10/2018 1:56 AM	Page:	1/7



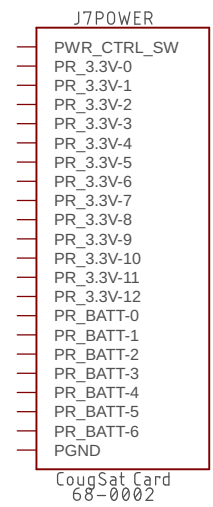
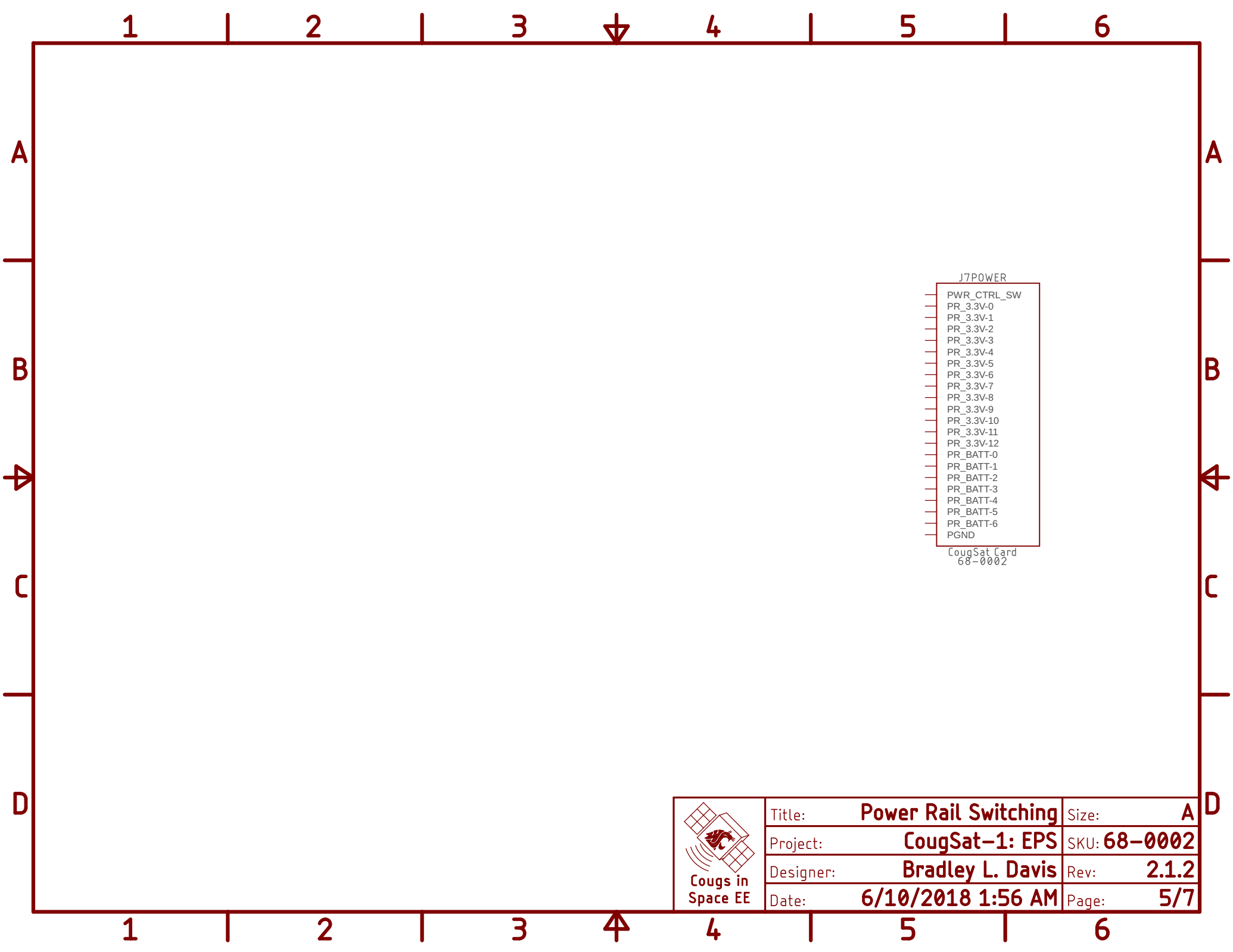



Cougs in  
Space EE

Title:	Solar Panel & Batteries	Size:	A
Project:	CougSat-1: EPS	SKU:	68-0002
Designer:	Bradley L. Davis	Rev:	2.1.2
Date:	6/10/2018 1:56 AM	Page:	3/7



Title:	<b>3.3V Regulation</b>	Size:	<b>A</b>
Project:	<b>CougSat-1: EPS</b>	SKU:	<b>68-0002</b>
Designer:	<b>Bradley L. Davis</b>	Rev:	<b>2.1.2</b>
Date:	<b>6/10/2018 1:56 AM</b>	Page:	<b>4/7</b>



 Cougs in Space EE	Title: <b>Power Rail Switching</b>	Size: <b>A</b>
	Project: <b>CougSat-1: EPS</b>	SKU: <b>68-0002</b>
	Designer: <b>Bradley L. Davis</b>	Rev: <b>2.1.2</b>
	Date: <b>6/10/2018 1:56 AM</b>	Page: <b>5/7</b>

1

2

3

4

4

5

6

A

B

C

D

A

B

C

D

J6

SWO	6
RST	5
SWDIO	4
DGND	3
SWCLK	2
VSENSE	1

SWD  
04-0004  
SMD-6-R

J7GPIO

GPIO-0
GPIO-1
GPIO-2
GPIO-3
GPIO-4
GPIO-5
GPIO-6
GPIO-7
GPIO-8
GPIO-9

CougSat Card  
68-0002

J7JTAG

BUS_JTAG_TCK
BUS_JTAG_TDI
BUS_JTAG_TDO
BUS_JTAG_TMS
BUS_JTAG_EN-0
BUS_JTAG_EN-1
BUS_JTAG_EN-2
BUS_JTAG_EN-3

CougSat Card  
68-0002

J7DATA

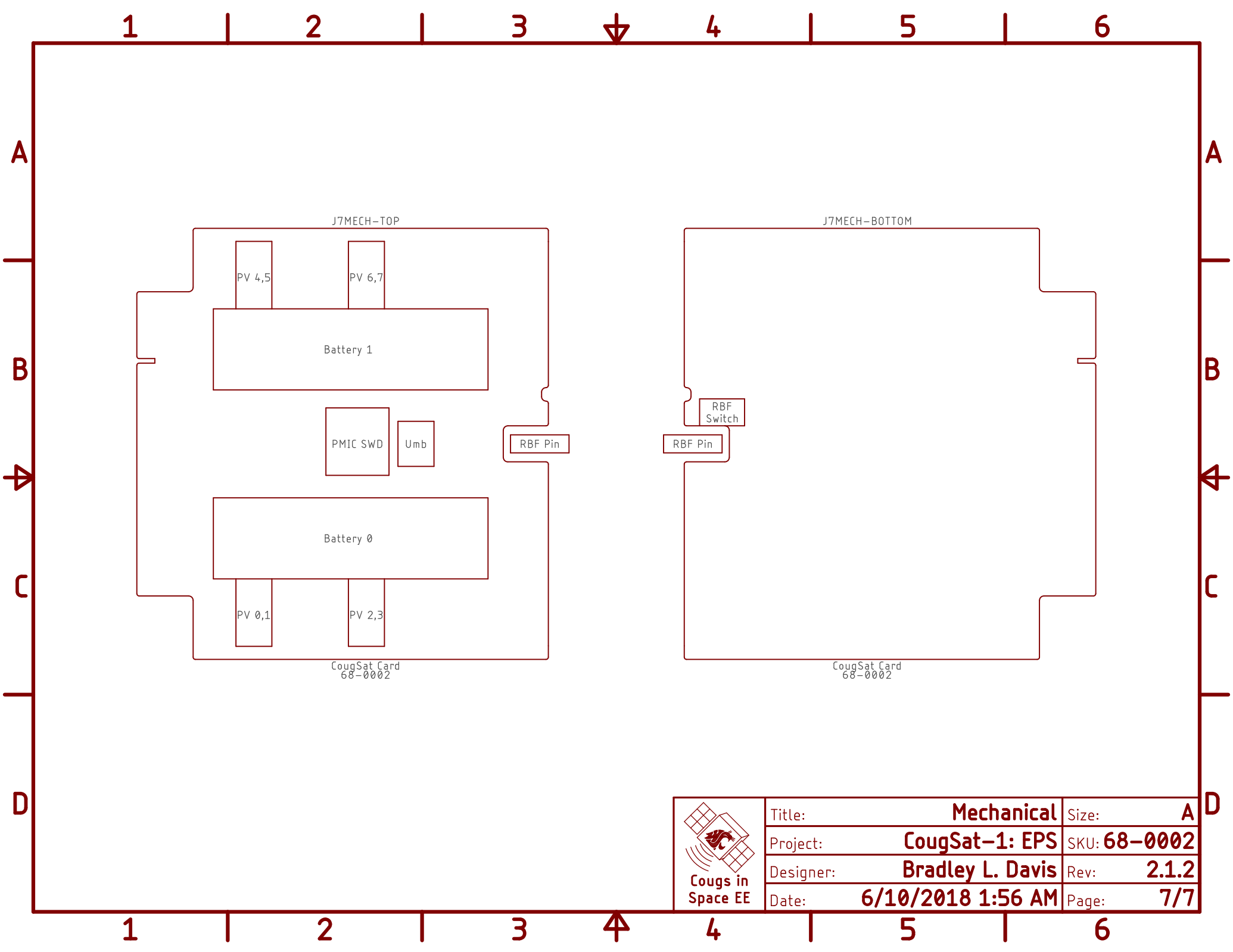
BUS_I2C0_SDA
BUS_I2C0_SCL
BUS_I2C0_IRQ
BUS_I2C1_SDA
BUS_I2C1_SCL
BUS_I2C1_IRQ
BUS_SPI_SCK
BUS_SPI_MISO
BUS_SPI_MOSI
CTRL_RESET
CTRL_SYNC
COM_USART_TX
COM_USART_RX
COM_USART_CLK
COM_USART_IRQ

CougSat Card  
68-0002

Differential ADC voltage reference is 1.024V  
At 16b, 7.81µV/LSB  
Maximum input is ±512mV



Title:	PMIC & ADCs	Size:	A
Project:	CougSat-1: EPS	SKU:	68-0002
Designer:	Bradley L. Davis	Rev:	2.1.2
Date:	6/10/2018 1:56 AM	Page:	6/7



Title:	Mechanical	Size:	A
Project:	CougSat-1: EPS	SKU:	68-0002
Designer:	Bradley L. Davis	Rev:	2.1.2
Date:	6/10/2018 1:56 AM	Page:	7/7