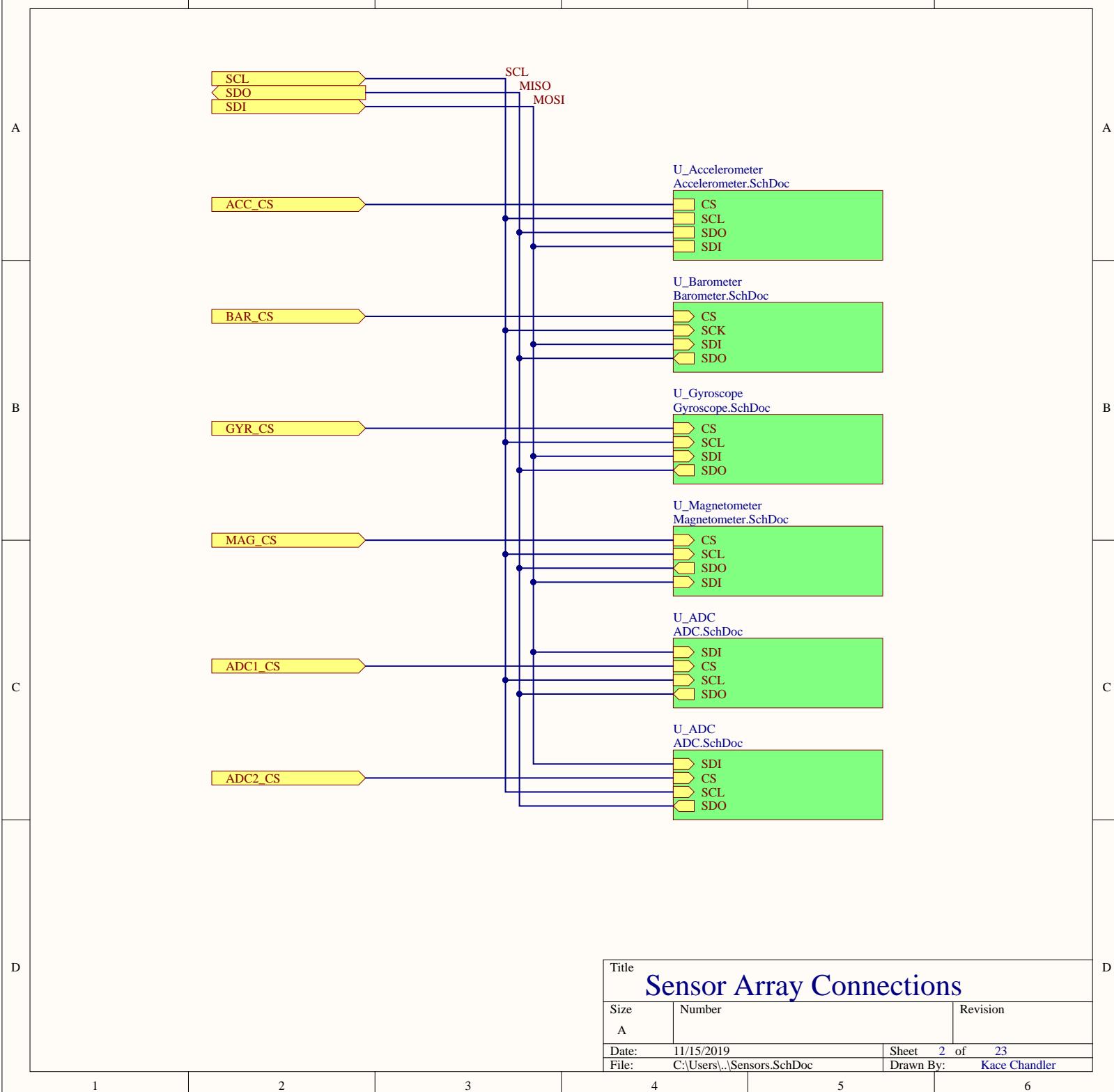
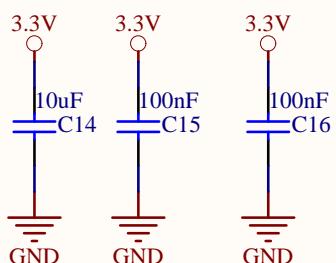


Title: Raspberry Pi - Top Level Schematic		
Size	Number	Revision
C		
Date: 11/15/2019	Sheet 1 of 23	Drawn By: Kace Chandler
File: C:\Users\...\Main.SchDoc		

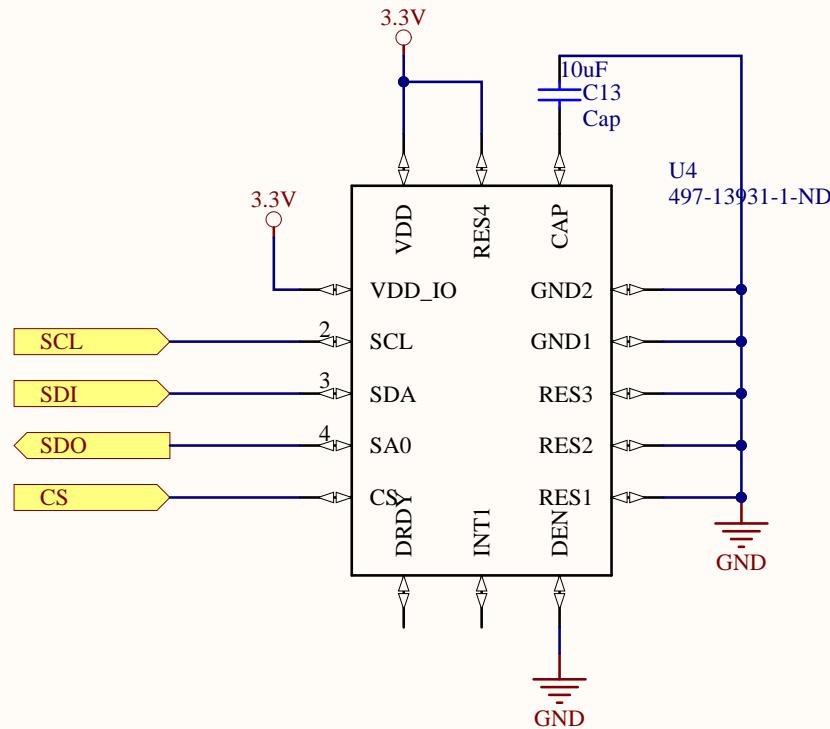


1 2 3 4 5 6

A



B



C

D

Title		
<h1>Gyroscope</h1>		
Size		Number
A		
Date:		11/15/2019
File:		C:\Users\...\Gyroscope.SchDoc
Sheet 3 of 23		Drawn By: Kace Chandler

1 2 3 4 5 6

1 2 3 4 5 6

A

B

C

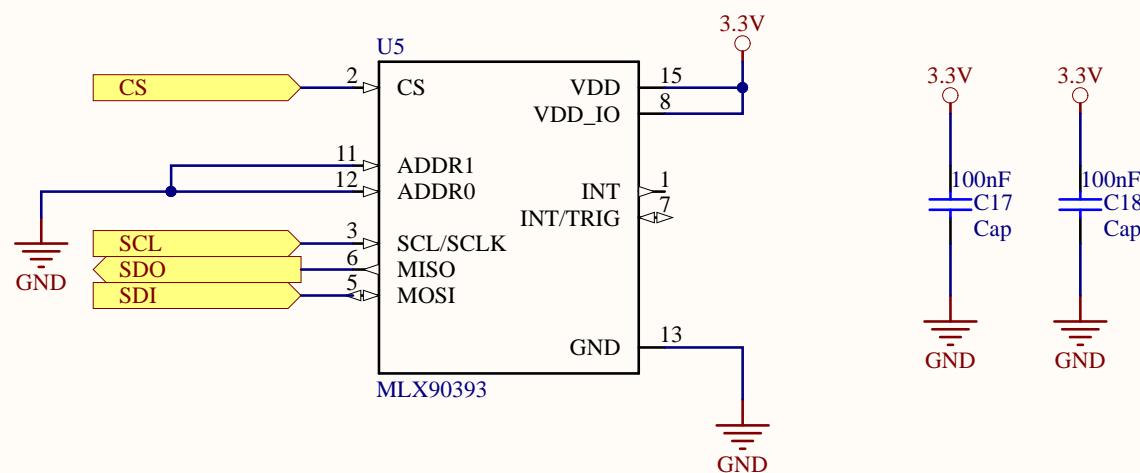
D

A

B

C

D



Title

Magnetometer

Size

A

Number

Revision

Date: 11/15/2019

Sheet 4 of 23

File: C:\Users...\Magnetometer.SchDoc

Drawn By: Kace Chandler

1 2 3 4 5 6

1

2

3

4

5

6

A

A

B

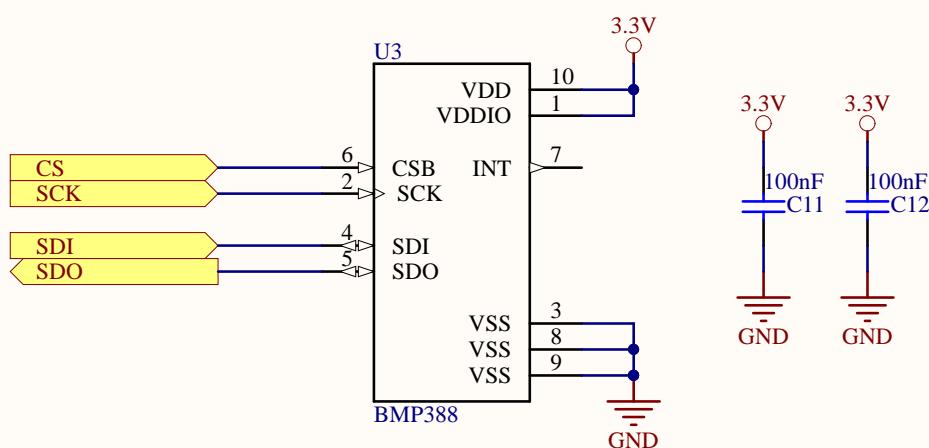
B

C

C

D

D



Title

Barometer

Size

A

Number

Revision

Date: 11/15/2019

Sheet 5 of 23

File: C:\Users\...\Barometer.SchDoc

Drawn By: Kace Chandler

1

2

3

4

5

6

A

A

B

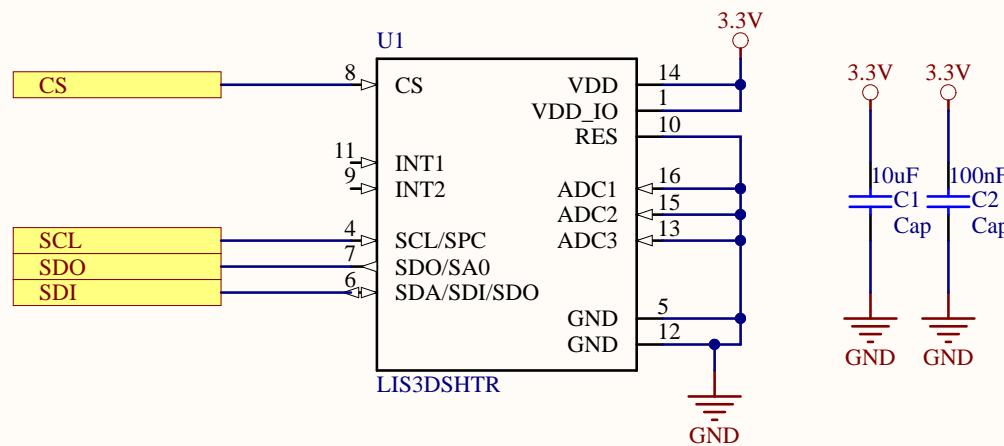
B

C

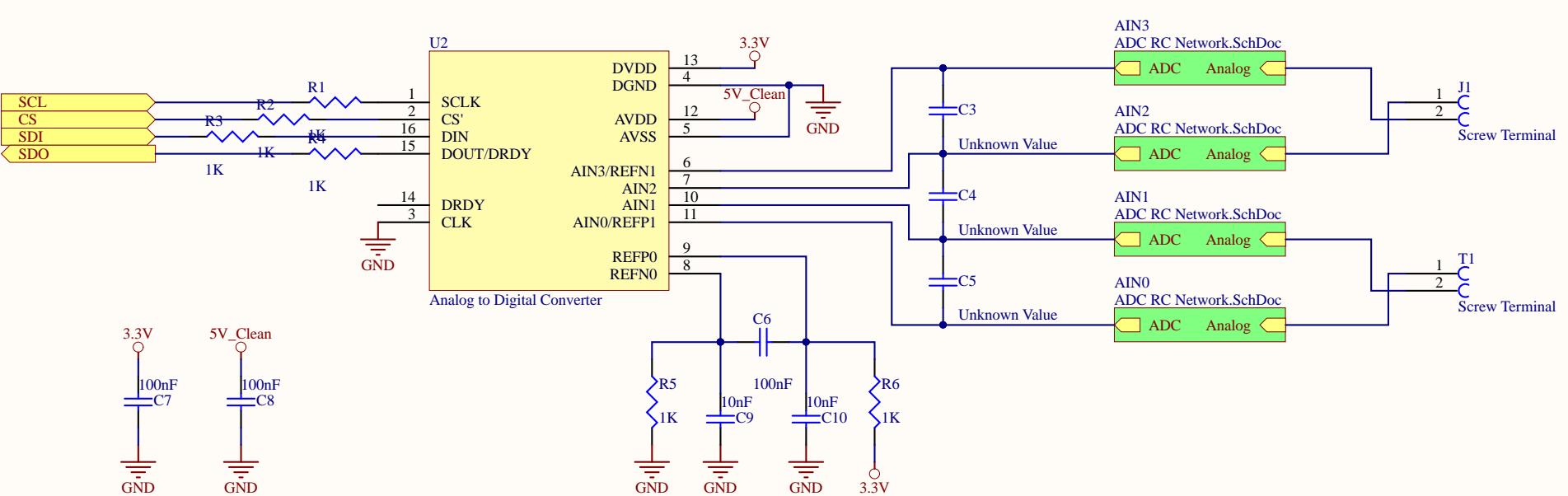
C

D

D



Title Accelerometer		
Size A	Number	Revision
Date: 11/15/2019	Sheet 6 of 23	
File: C:\Users\...\Accelerometer.SchDoc	Drawn By: Kace Chandler	



Title		
Size	Number	Revision
A		
Date: 11/15/2019	Sheet 7 of 23	Drawn By: Kace Chandler
File: C:\Users..\ADC.SchDoc		

1 2 3 4 5 6

1 2 3 4 5 6

A

B

C

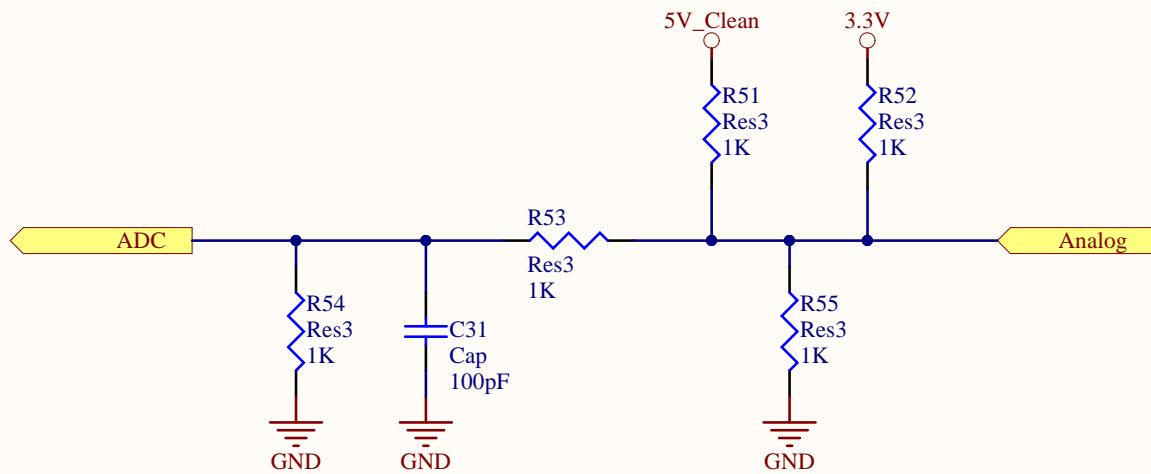
D

A

B

C

D



Title

ADC Input Network

Size	Number	Revision
A		
Date:	11/15/2019	Sheet 8 of 23
File:	C:\Users\...\ADC RC Network.SchDoc	Drawn By: Kace Chandler

1 2 3 4 5 6

1	2	3	4	5	6
---	---	---	---	---	---

A

A

B

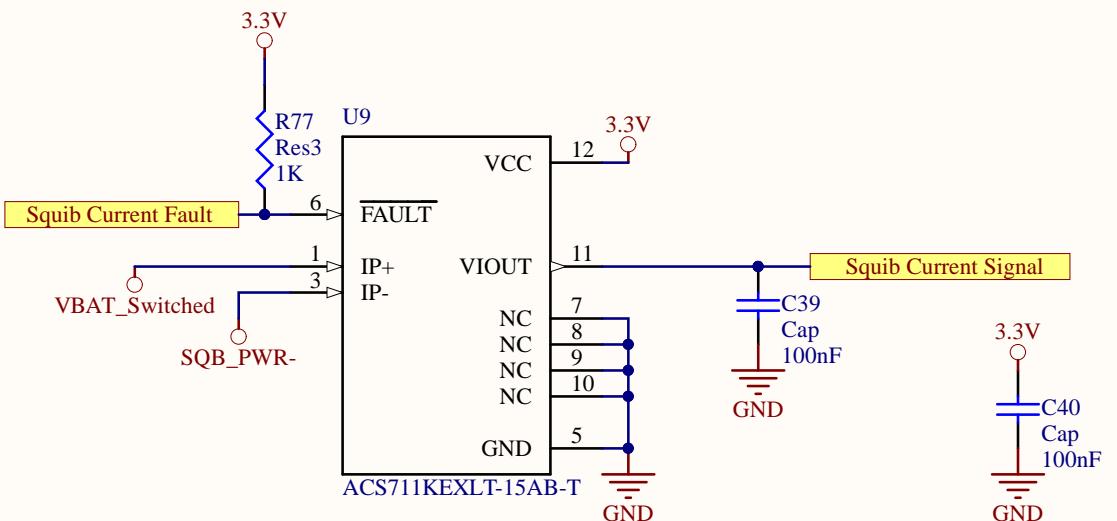
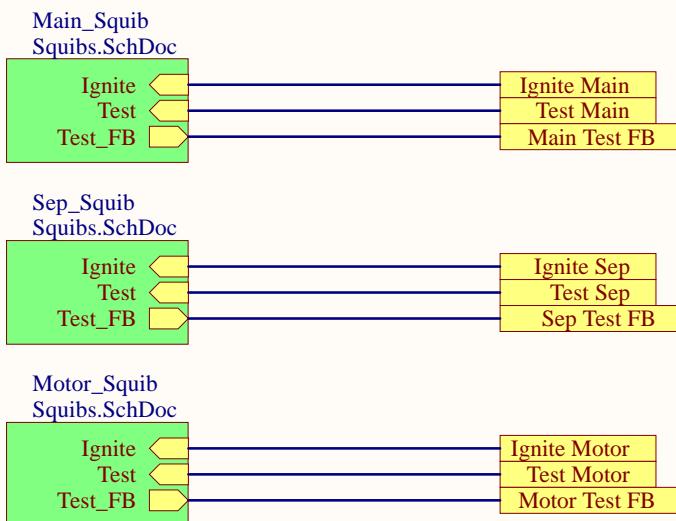
B

C

C

D

D



Title

Squib Management

Size	Number	Revision
A		
Date: 11/15/2019	Sheet 9 of 23	
File: C:\Users\...\Squib_Managment.SchDoc	Drawn By: Kace Chandler	

1	2	3	4	5	6
---	---	---	---	---	---

1 2 3 4 5 6

A

A

B

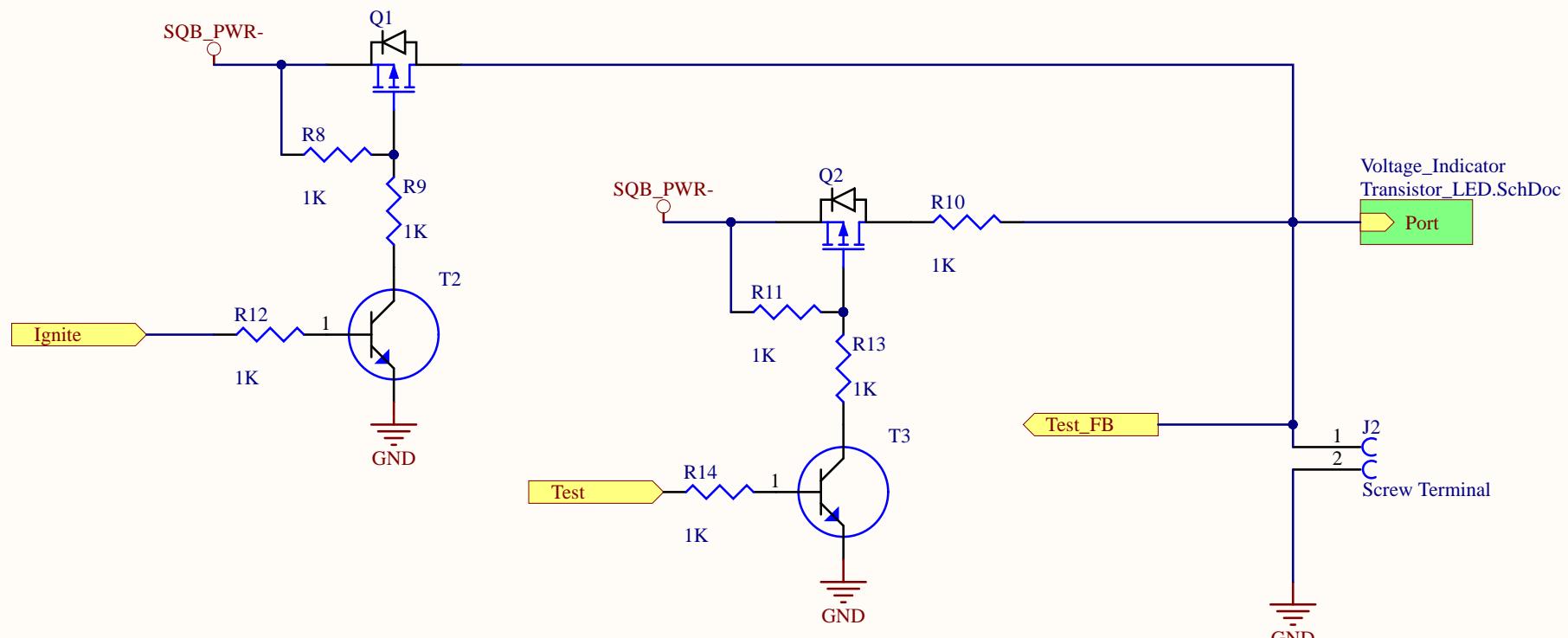
B

C

C

D

D



Title

Single Squib Connection

Size

A

Number

Revision

Date:

11/15/2019

Sheet

10 of 23

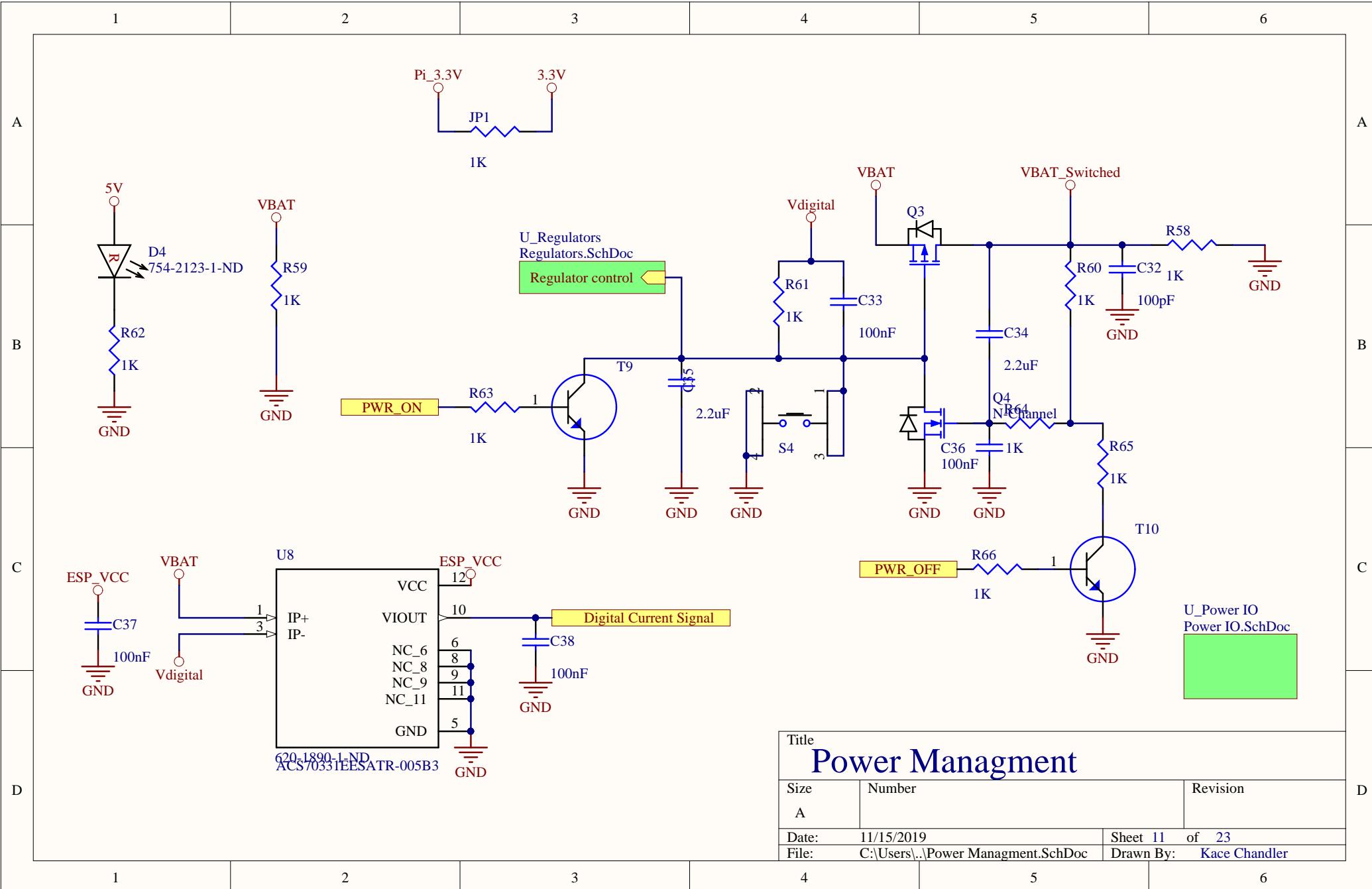
File:

C:\Users\...\Squibs.SchDoc

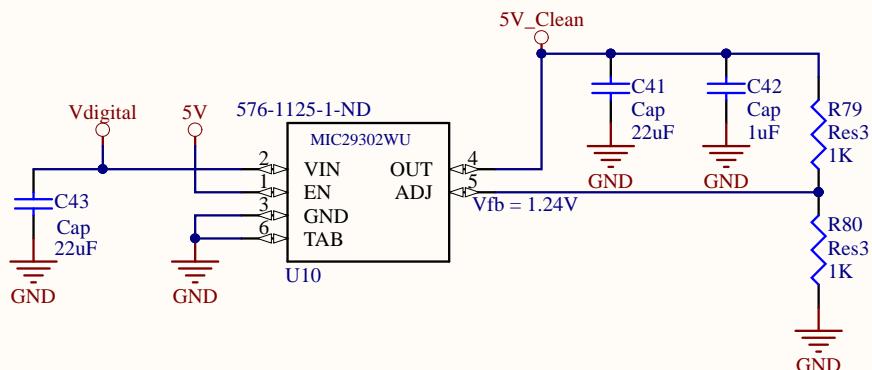
Drawn By:

Kace Chandler

1 2 3 4 5 6

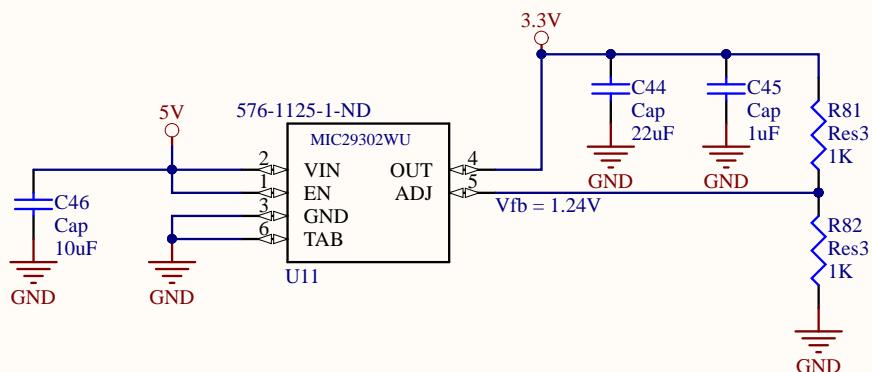


A



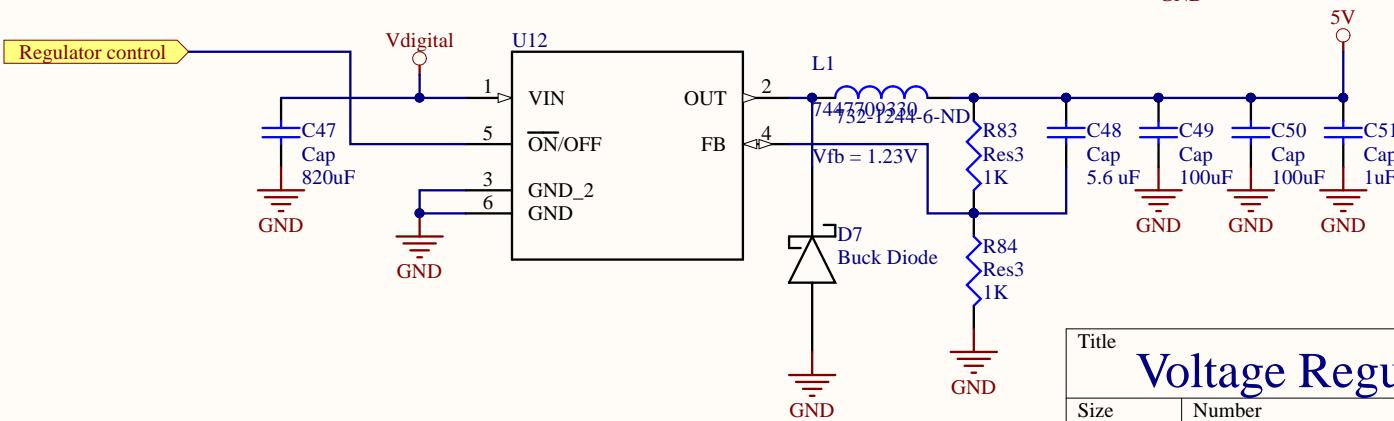
A

B



B

C



C

D

Title Voltage Regulators

Size	Number	Revision
A2		
Date:	11/15/2019	Sheet 12 of 23
File:	C:\Users\.\Regulators.SchDoc	Drawn By: Kace Chandler

1 2 3 4 5 6

A

A

B

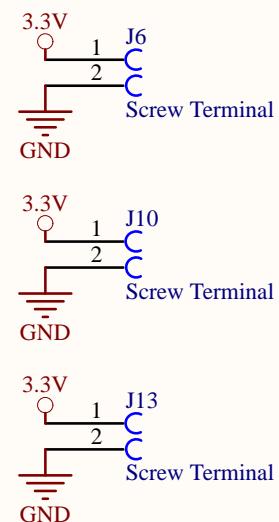
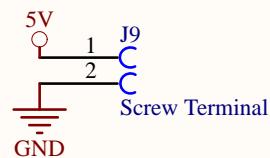
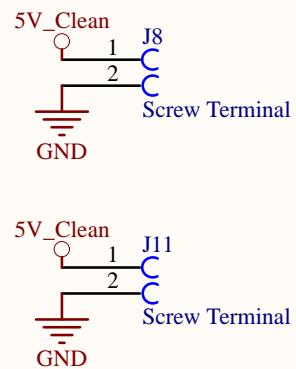
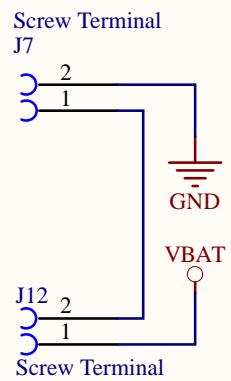
B

C

C

D

D

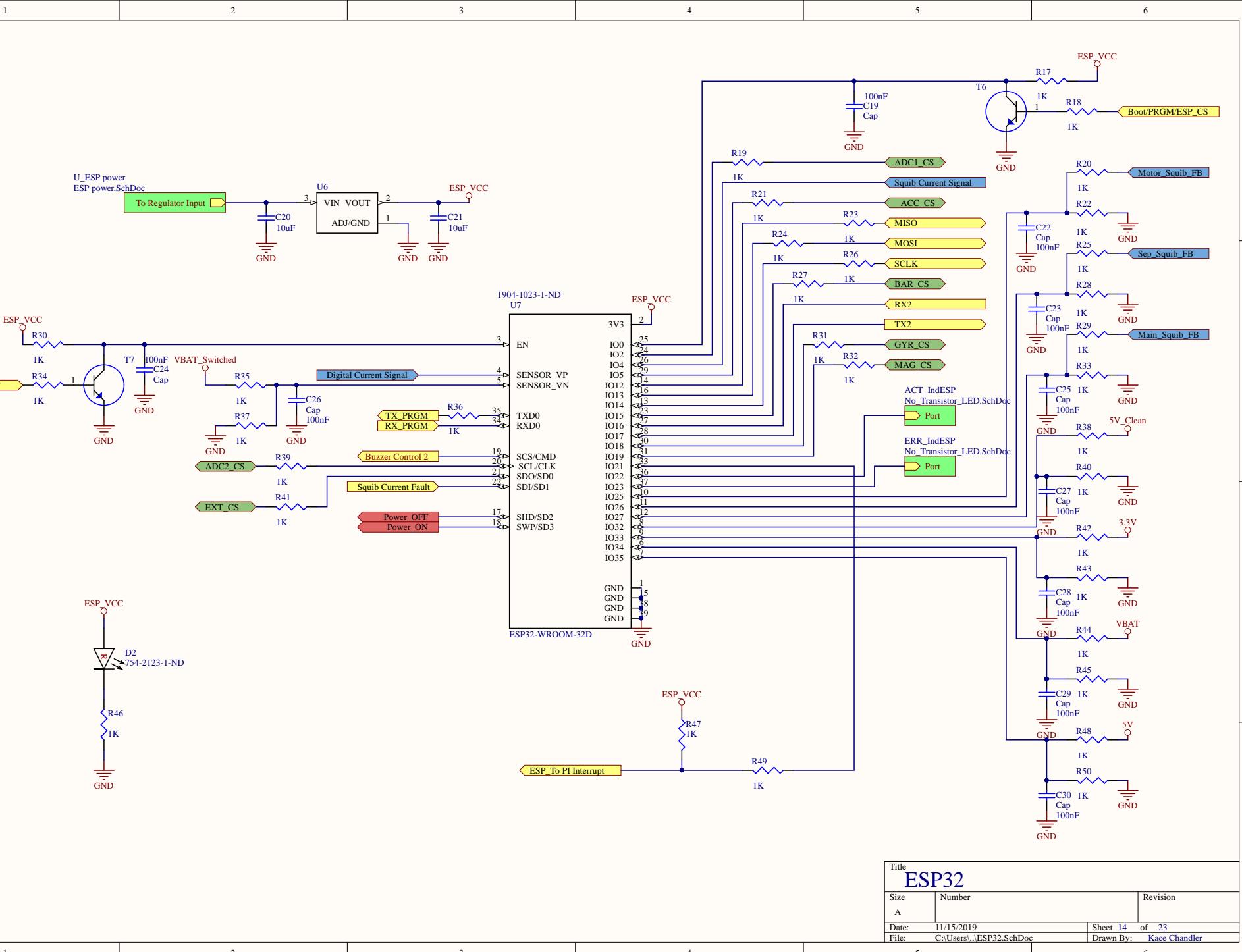


Title

Power Input/Output

Size	Number	Revision
A2		
Date:	11/15/2019	Sheet 13 of 23
File:	C:\Users\...\Power IO.SchDoc	Drawn By: Kace Chandler

1 2 3 4 5 6



Title		
Size	Number	Revision
A		
Date: 11/15/2019	Sheet 14 of 23	Drawn By: Kace Chandler
File: C:\Users\...\ESP32.SchDoc		

1 2 3 4 5 6

A

A

B

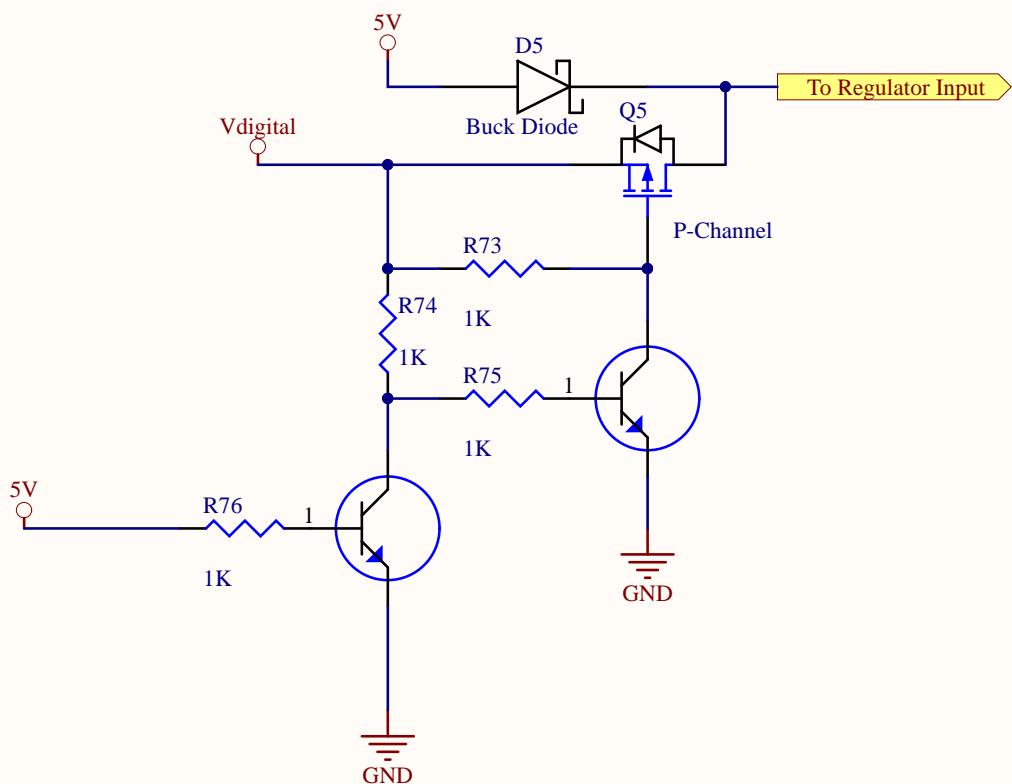
B

C

C

D

D



Title ESP Power Management		
Size A	Number	Revision
Date: 11/15/2019	Sheet 15 of 23	
File: C:\Users...\ESP power.SchDoc	Drawn By: Kace Chandler	

1 2 3 4 5 6

A

A

B

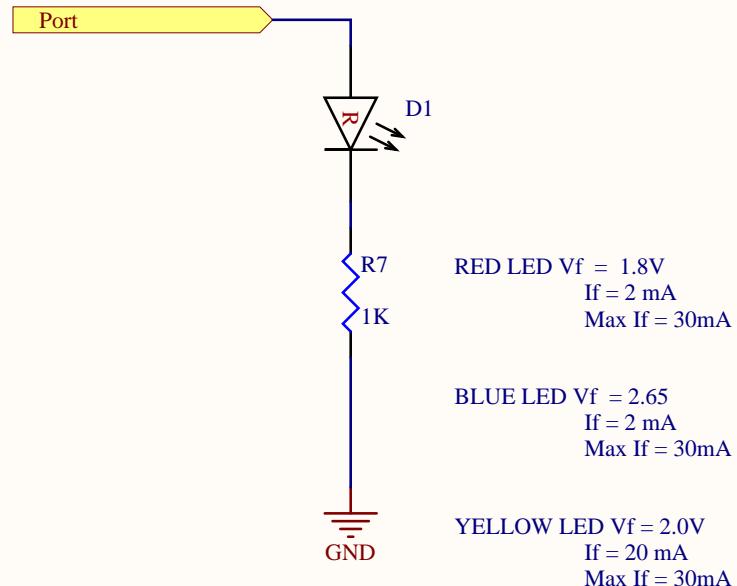
B

C

C

D

D



Title

LED

Size

A

Number

Revision

Date: 11/15/2019

Sheet 16 of 23

File: C:\Users\...\No_Transistor_LED.SchDoc Drawn By: Kace Chandler

1 2 3 4 5 6

A

A

B

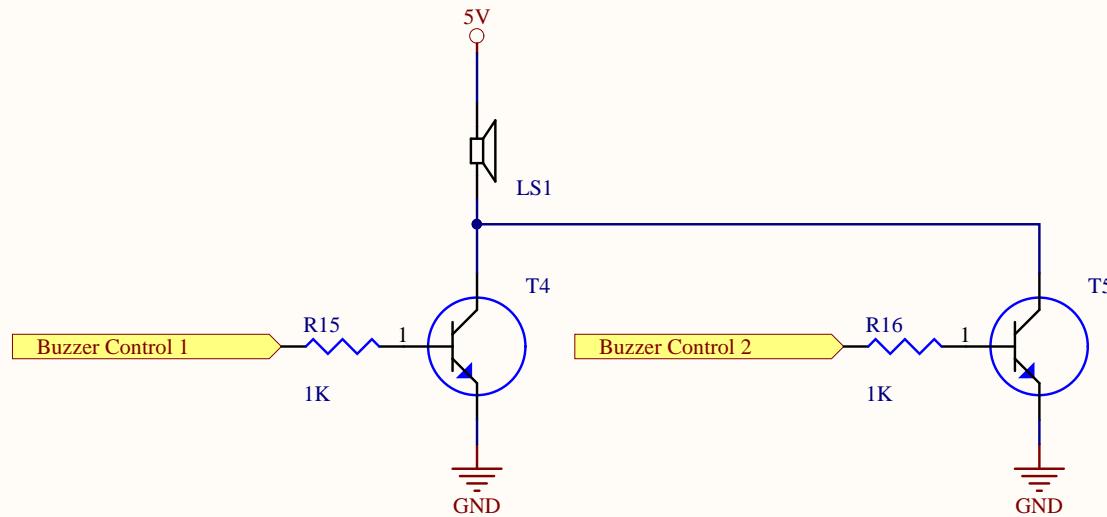
B

C

C

D

D



Title		
Size	Number	Revision
A		
Date: 11/15/2019	Sheet 17 of 23	Drawn By: Kace Chandler
File: C:\Users\...\Buzzer.SchDoc		

1 2 3 4 5 6

A

A

B

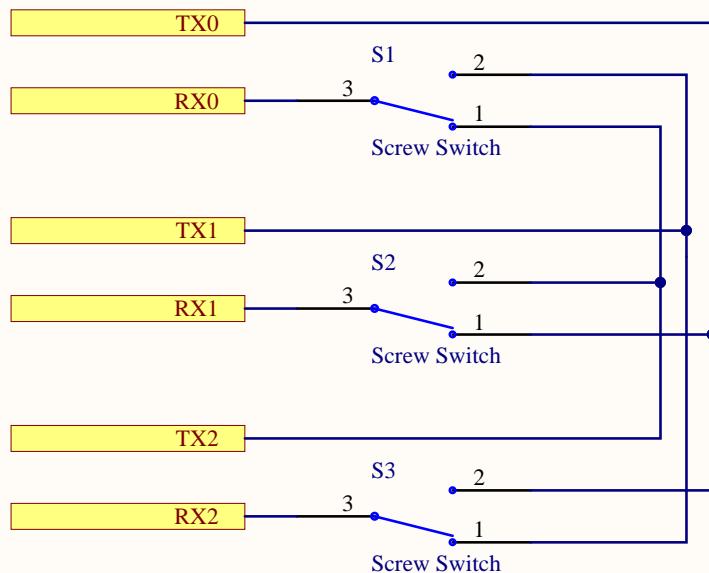
B

C

C

D

D



Title

UART Switching

Size

A

Number

Revision

Date: 11/15/2019

Sheet 18 of 23

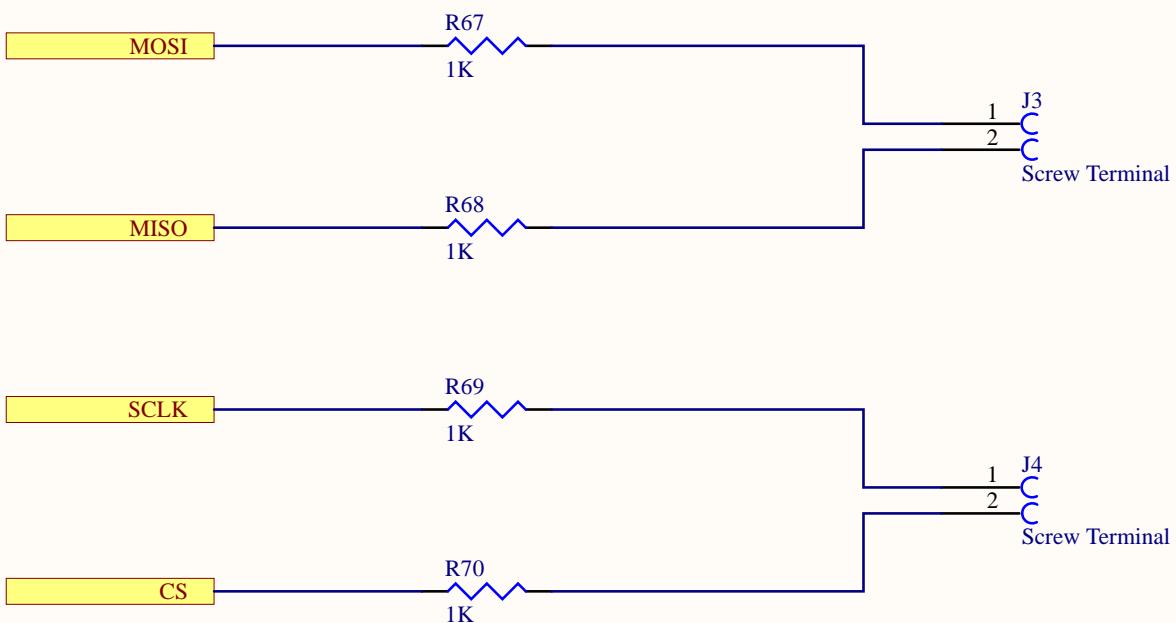
File: C:\Users\...\3 way uart switch.SchDoc

Drawn By: Kace Chandler

1 2 3 4 5 6

A

A



B

B

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C

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D

Title		
Size	Number	Revision
A		
Date: 11/15/2019	Sheet 19 of 23	Drawn By: Kace Chandler
File: C:\Users\...\SPI Output.SchDoc		

1 2 3 4 5 6

1	2	3	4	5	6
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A

B

C

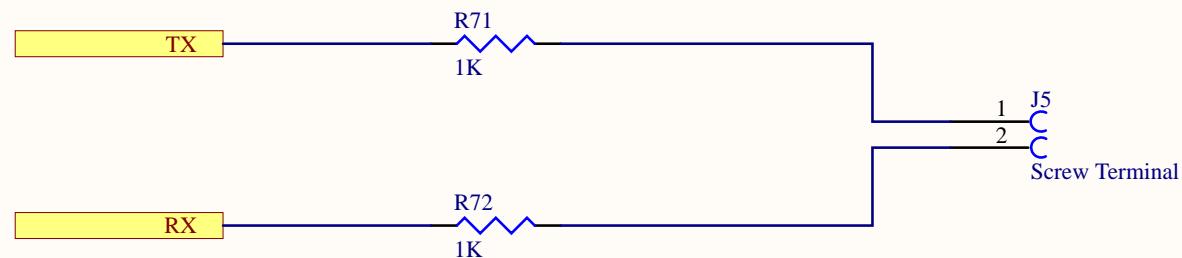
D

A

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D



Title		
Size	Number	Revision
A		
Date: 11/15/2019	Sheet 20 of 23	File: C:\Users\..\UART Output.SchDoc Drawn By: Kace Chandler

1	2	3	4	5	6
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A

B

C

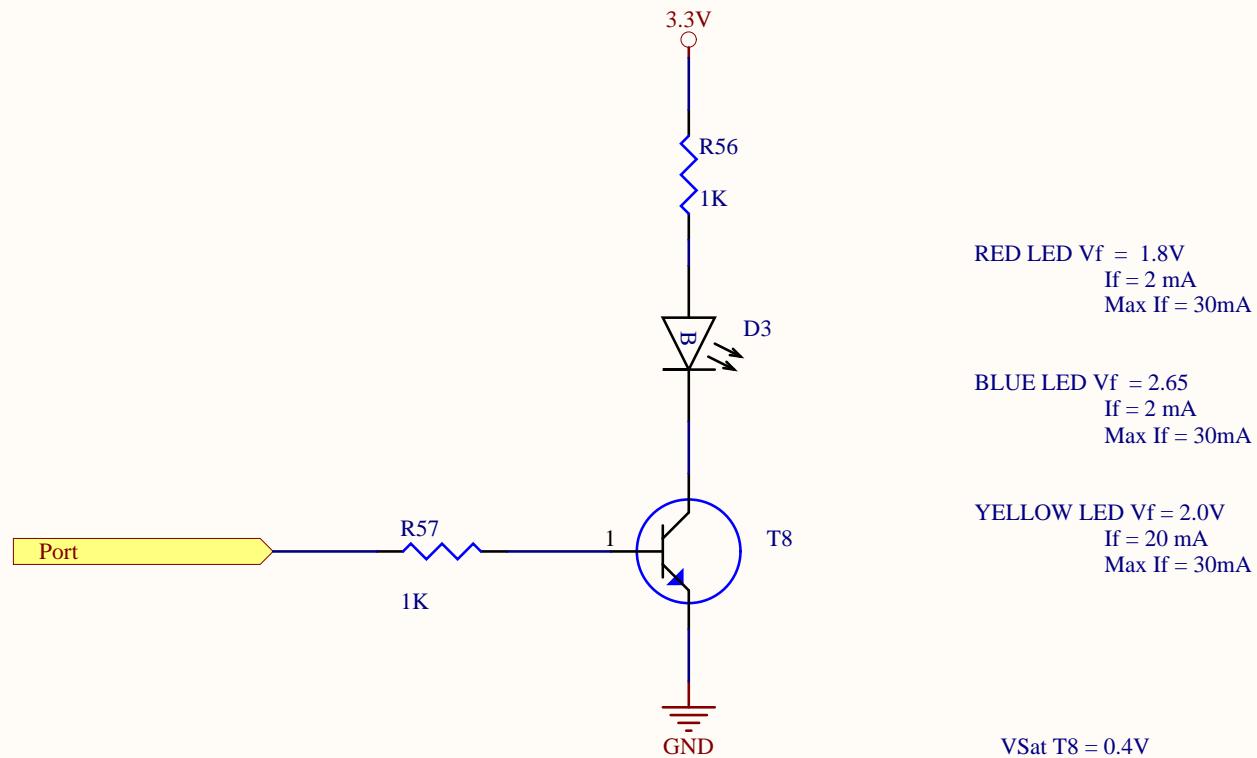
D

A

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D



Title

LED with Transistor

Size

A

Number

Revision

Date: 11/15/2019

Sheet 21 of 23

File: C:\Users..\Transistor_LED.SchDoc

Drawn By: Kace Chandler

1	2	3	4	5	6
---	---	---	---	---	---

A

B

C

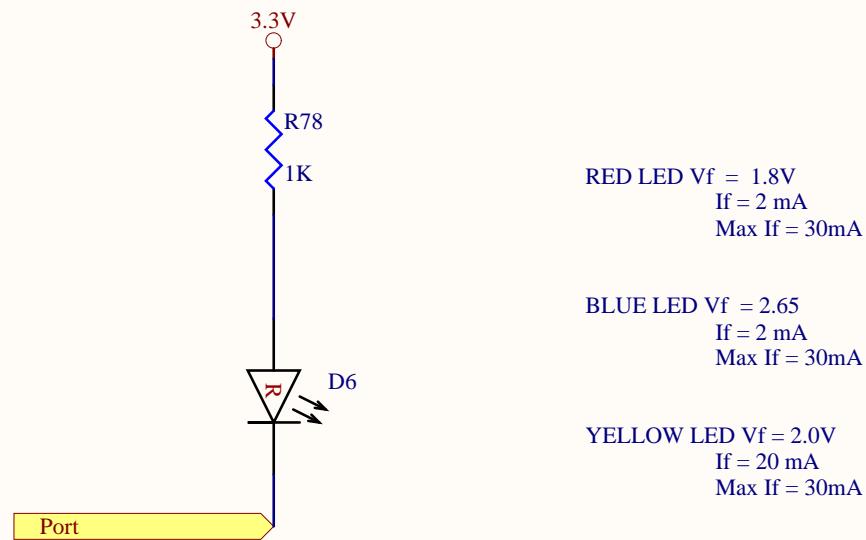
D

A

B

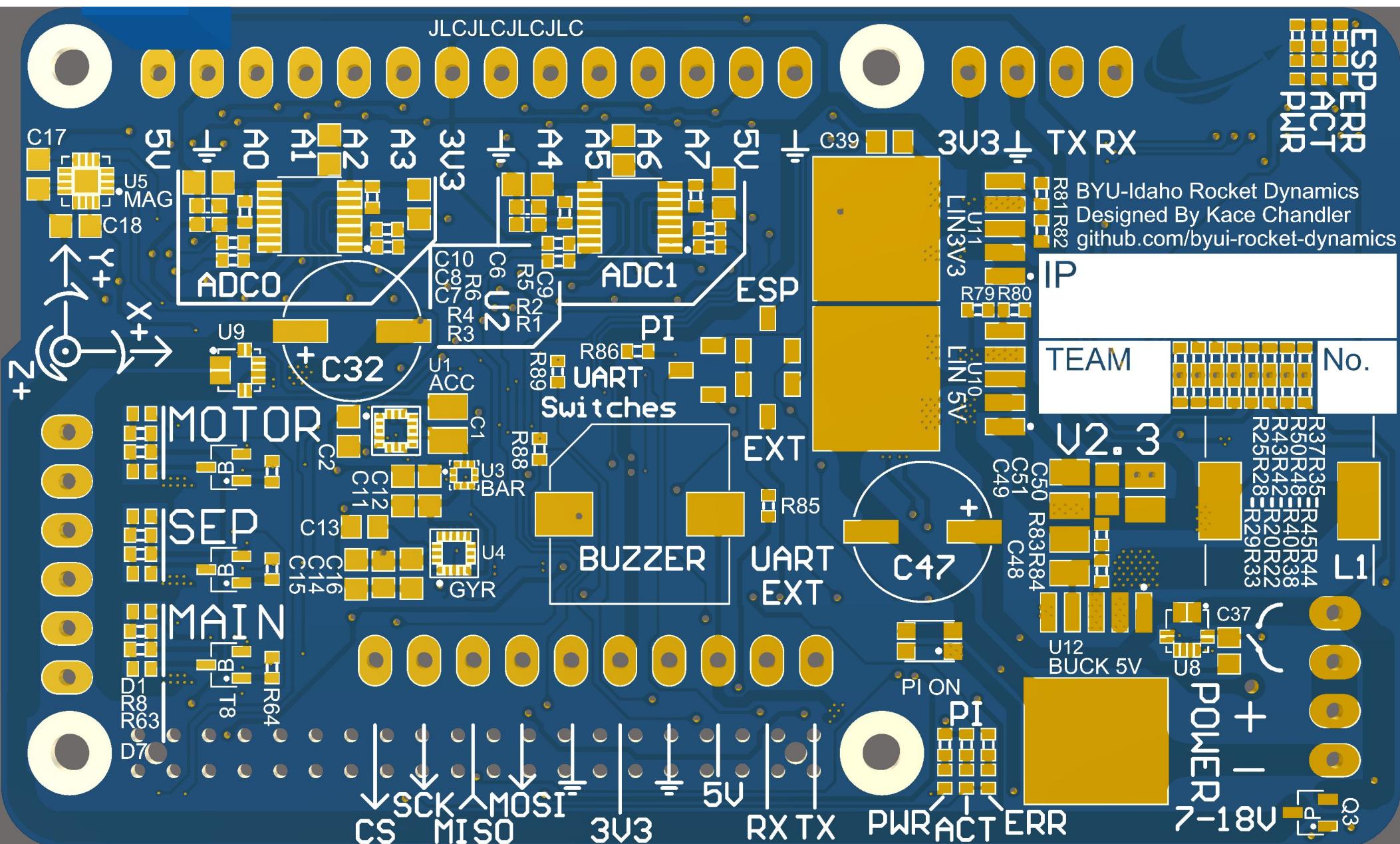
C

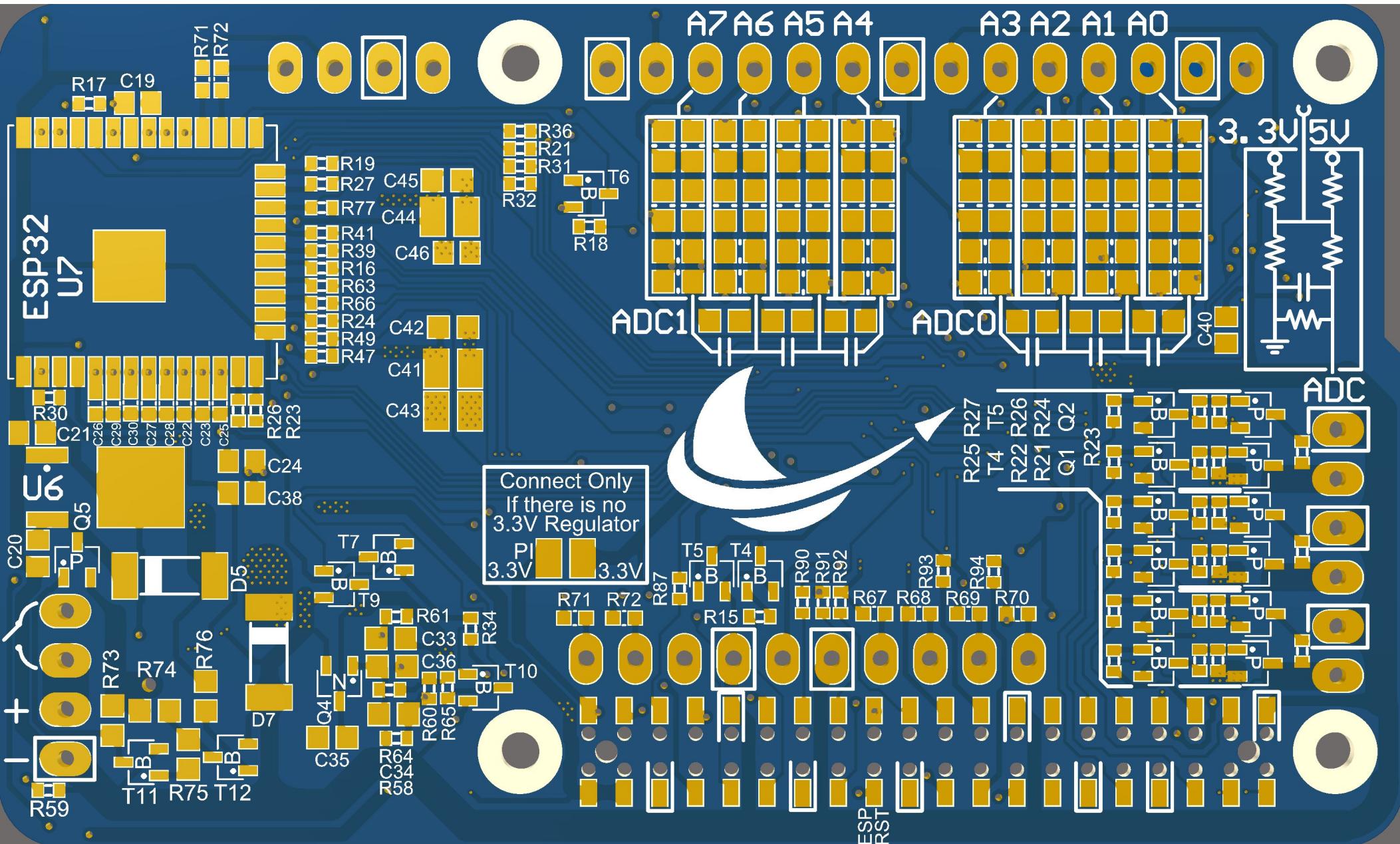
D



Title Inverted LED		
Size A	Number	Revision
Date: 11/15/2019	Sheet 22 of 23	
File: C:\Users\...\No_Transistor_LED_INV.Sch	Drawn By:	Kace Chandler

1	2	3	4	5	6
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F
S
P
E
R
A
C
T
R

BYU-Idaho Rocket Dynamics
Designed By Kace Chandler
github.com/byui-rocket-dynamics

No.

R37 R35 R45 R44

R50 R48 R40 R38

R25 R28 R20 R22

R29 R33

PI ON
PI
PWR ACT ERR
7-18V

TX RX

IP

TEAM

V2.3

C51 C50 R52 R84

Q251 Q250

R82 R84

U2 U1

C37 T18

U2 U1

C37 T18

RX TX

5V

3V3

5V

SCK MISO CS MOSI

3V3

A0 A1 A2 A3 A4 A5 A6 A7

5V 3V3 5V

C17 C18 U5 MAG C10 C8 C7 R6 R4 R3 U2 ADC1 PI

R5 R9 R2 R1 R86 R89 U1 ACC C1 R88 BAR

C12 C11 C13 U4 GYR

MOTOR SEP MAIN

D1 R8 R63 T8 R64

C1 C2 C12 C11 C13 C14 C15 C16 C17 C18

U3 BAR U4 GYR

U5 MAG U2 ADC1

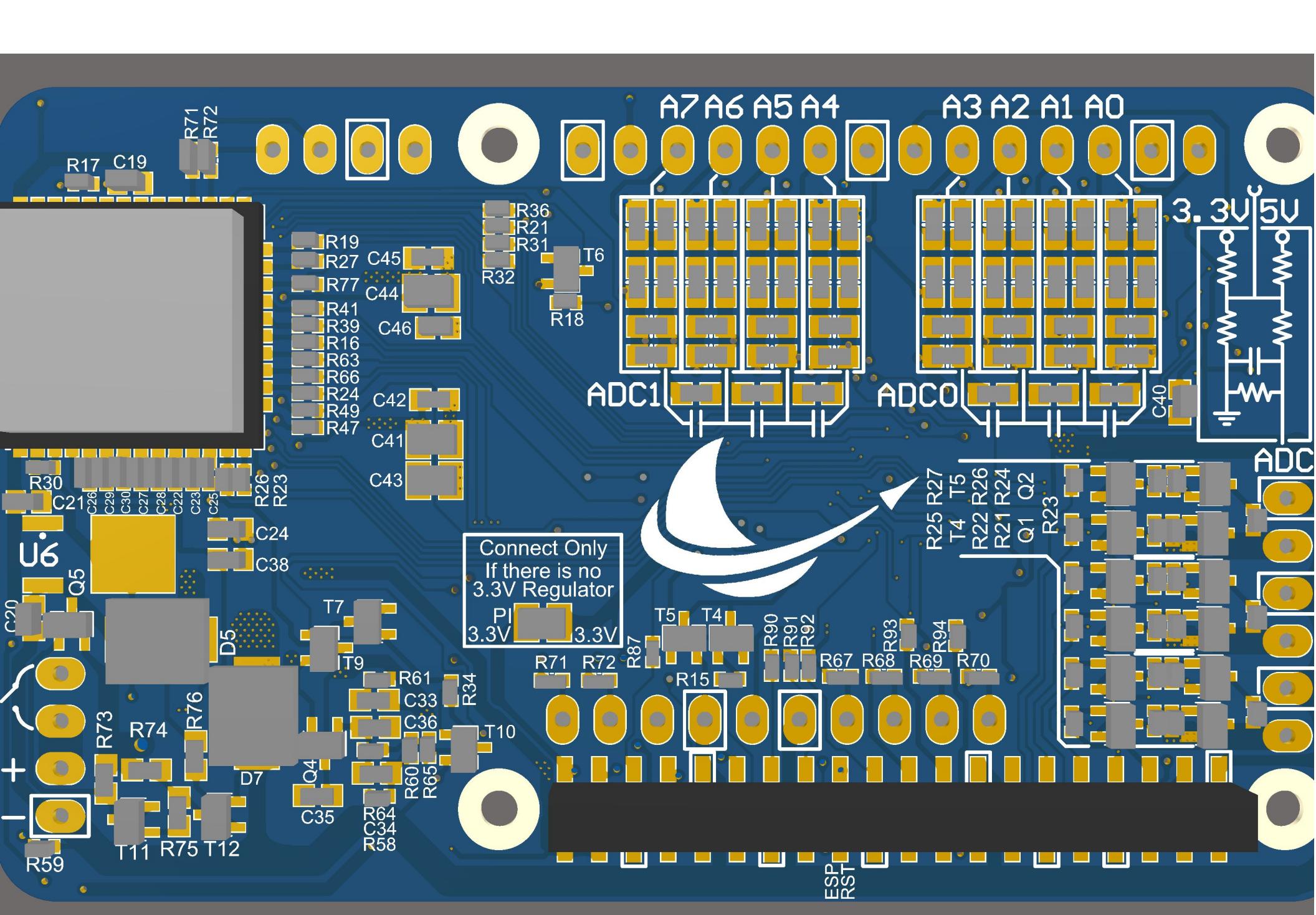
U1 ACC R88 BAR

R5 R9 R2 R1 R86 R89

U4 GYR C1 C2 C12 C11 C13 C14 C15 C16 C17 C18

U5 MAG U2 ADC1

U1 ACC R88 BAR



ESP
ERR
ACT
PWR

3V3 TX RX

BYU-Idaho Rocket Dynamics
Designed By Kace Chandler
github.com/byui-rocket-dynamics

No.

R37 R35 R45 R44
R50 R48 R40 R38
R43 R42 R20 R22
R25 R28 R29 R33

1
+ -
POWER 7-18V

PI ON PI PWR ACT ERR

5V RX TX

3V3

SCK MOSI CS MISO

MAIN [q] T8 R64
D1 R8 R63 D7

SEP [q]

MOTOR [q]

ADC0 U5 MAG C17 C18
C32 U9 ACC U1
A1 A2 A3 A4 A5 A6 A7
5V 3V3 5V

JLC JLC JLC JLC

ADC1 U2
PI
UART
Switches

BUZZER
EXT

UART
EXT

C47
+ -

U2.3

IP
TEAM

LIN 3V3
LIN 5V

3V3 TX RX

ESP
ERR
ACT
PWR

Z+

X+ Y+

