CY8CKIT-062S4 PSoC 62S4 Pioneer Kit

CONTENTS

PAGE	DESCRIPTION
01	Title Table, Table of Contents, Drawing Numbers
02	Functional Block Diagram
03	Power Domain Block Diagram
04	Kit Power Supply and PSoC 6 MCU USB Detect
05	Onboard Regulators
06	PSoC 5LP Based KitProg3
07	PSoC 6 MCU
08	Multiplexed Pins & Crystals
09	KitProg3 Interface
10	Peripherals
11	Arduino & Extended Headers
12	Accessories
13	Revision History

Drawing Numbers

PCBA	121-60588-01
PCB	600-60588-01
FAB DRW	610-60588-01
ASSY DRW	620-60588-01
SCH DRW	630-60588-01

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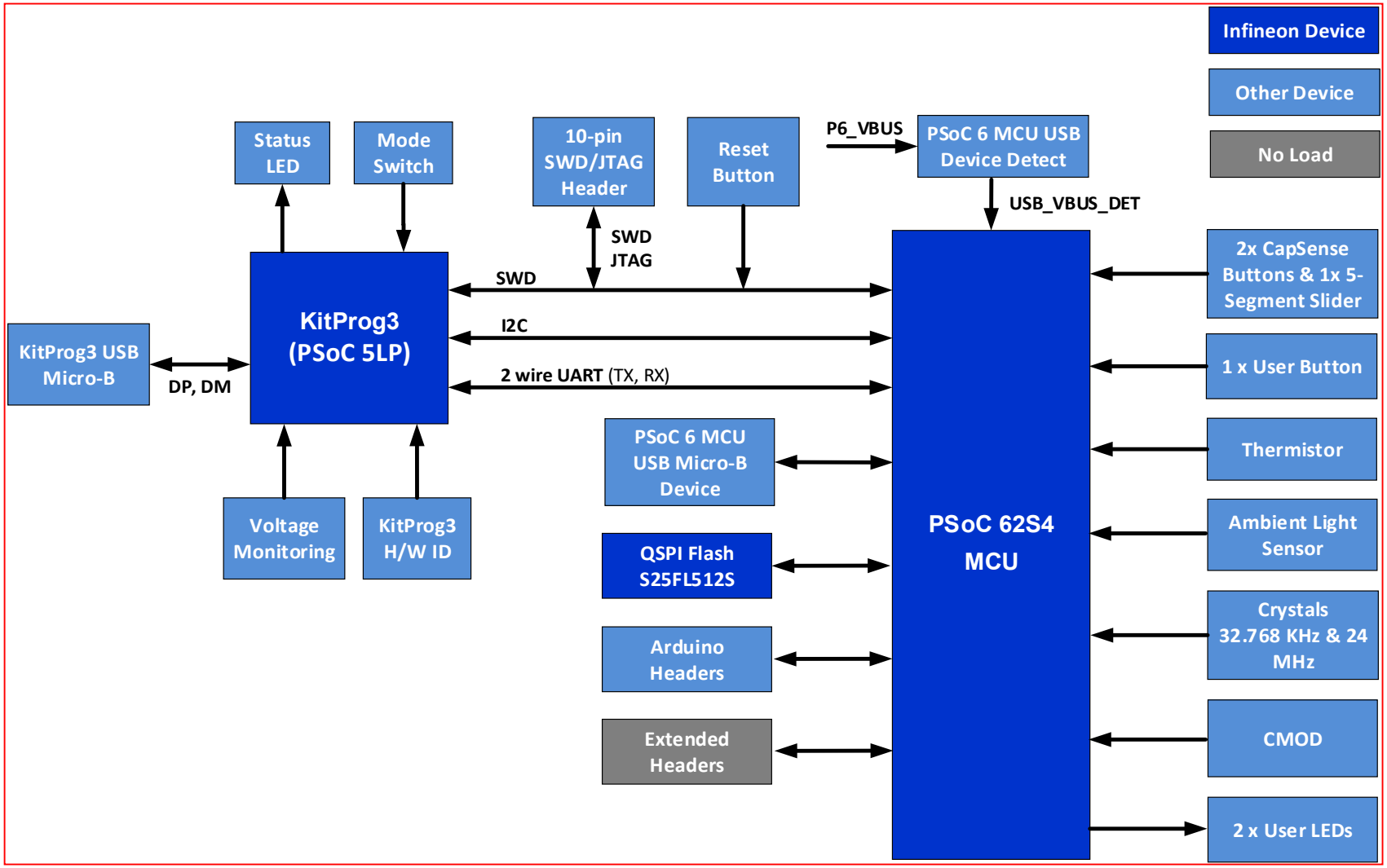
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Page Title : Title Page

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A4	630-60588-01	RISR	RKAD	03

Date: Wednesday, January 20, 2021 Sheet 1 of 13

FUNCTIONAL BLOCK DIAGRAM



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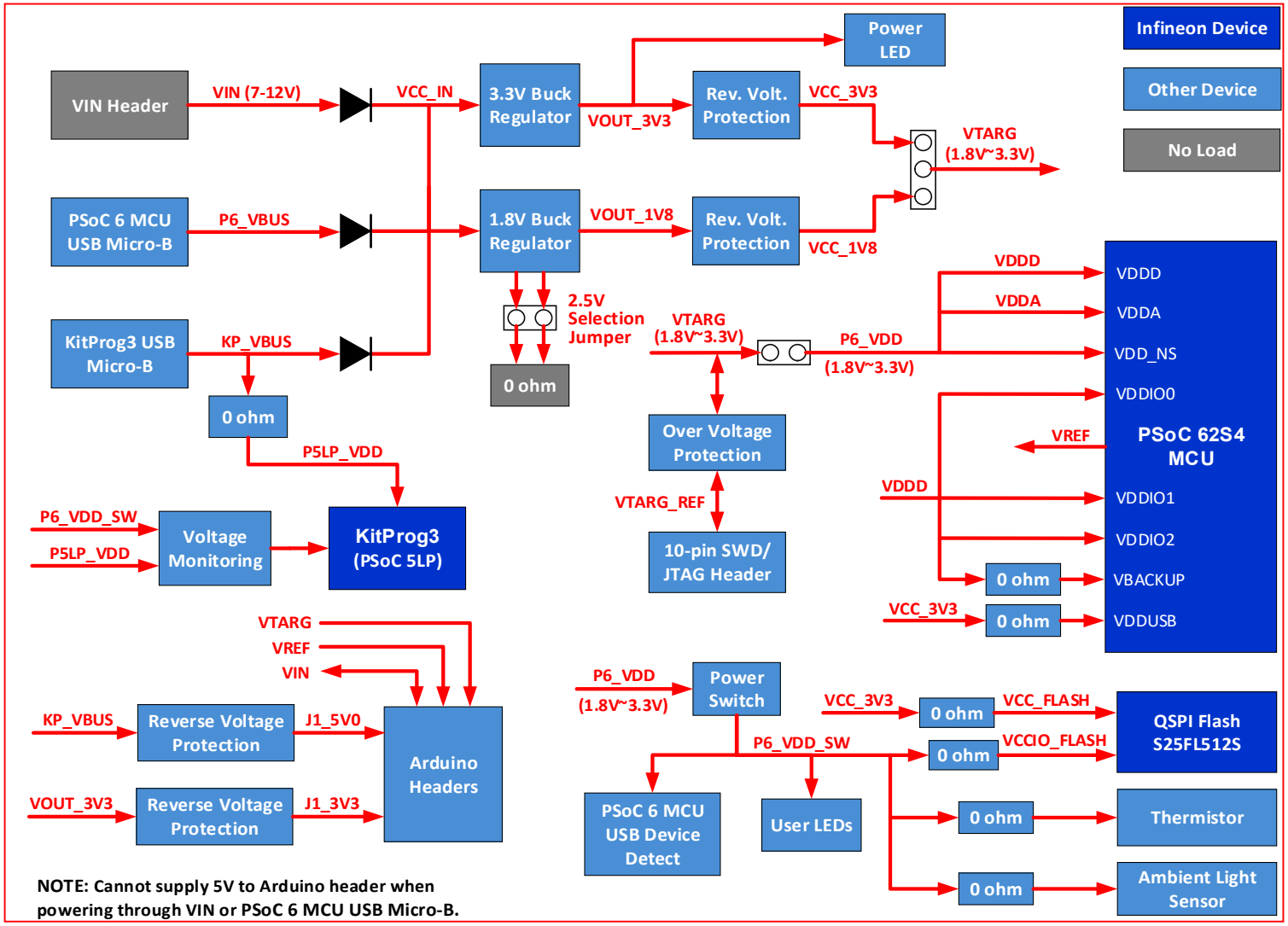
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Page Title :	Functional Block Diagram

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POWER DOMAIN BLOCK DIAGRAM



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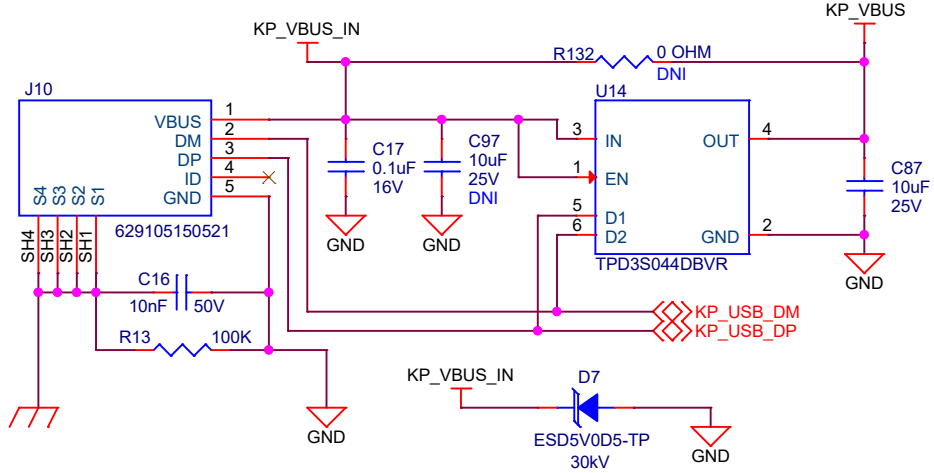
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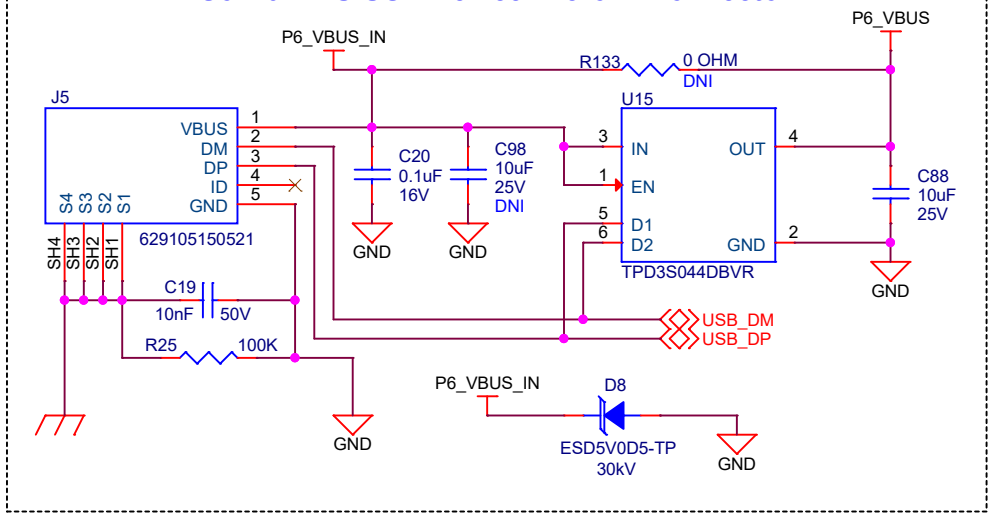
Date: Tuesday, February 02, 2021 Sheet 3 of 13

KIT POWER SUPPLY AND PSOC 6 MCU USB DETECT

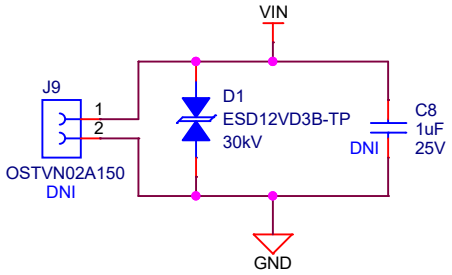
KitProg3 USB Micro-B Connector



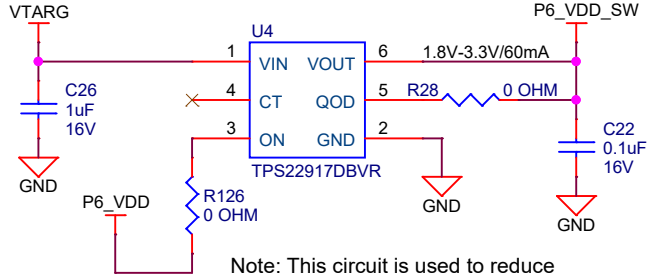
PSoC 6 MCU USB Device Micro-B Connector



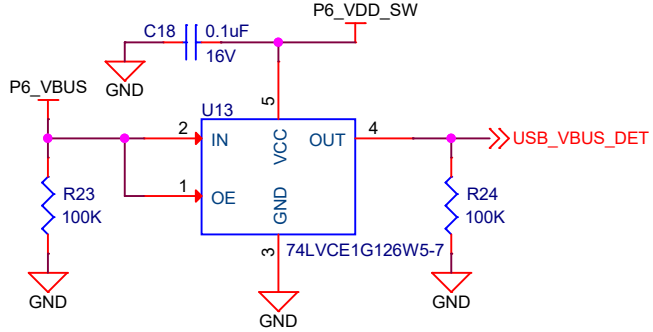
VIN Header



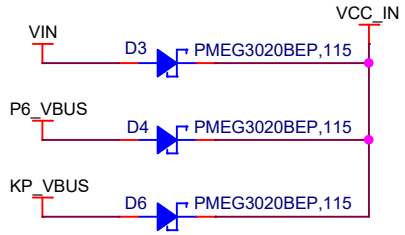
Power Switch



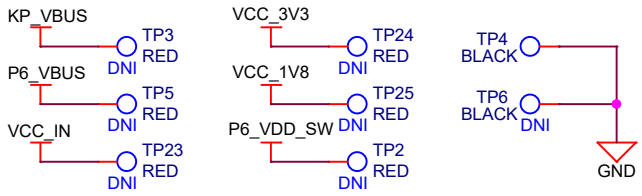
PSoC 6 MCU USB Device Detect



Power Supply 'OR'ing



Kit Power Test Points



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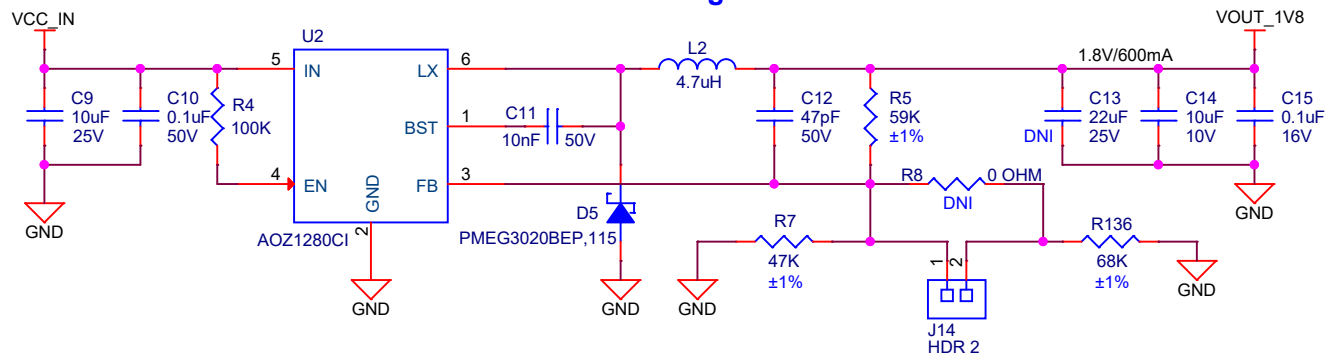
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Date: Friday, February 12, 2021 Sheet 4 of 13

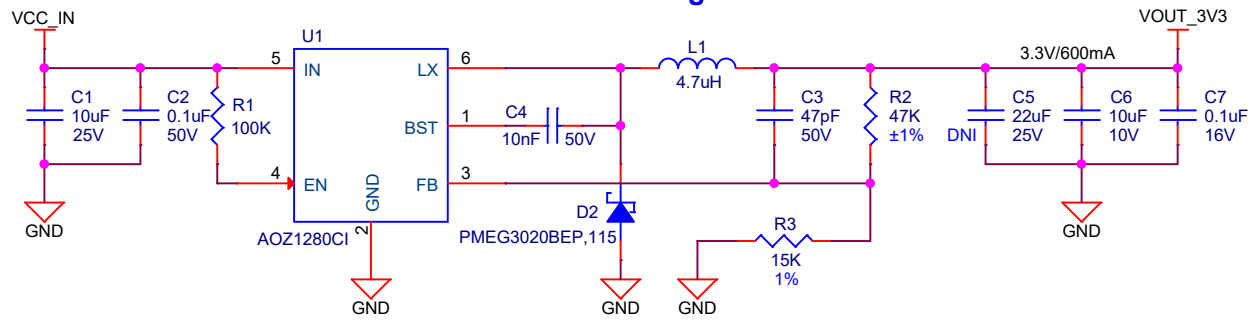
ONBOARD REGULATORS

1.8V Buck Regulator

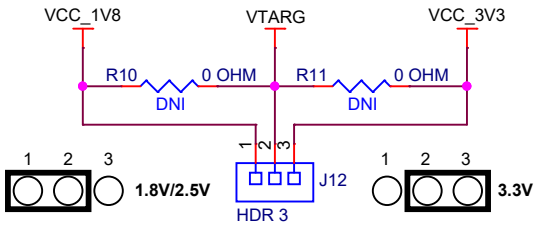


Note: Populate R8 or short J14 to change the voltage to 2.5V for e-Fuse programming.

3.3V Buck Regulator



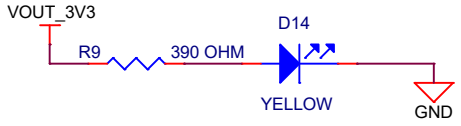
PSoC 6 MCU Power Selection Jumper



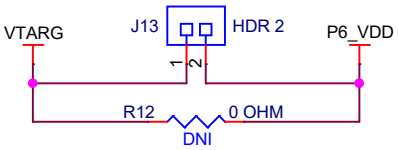
Note: Do not remove jumper when powered.

Connect to VCC_1V8 for e-Fuse programming. (Default jumper position is 3.3V). Populate R8 or short J14 to change the voltage to 2.5V for e-Fuse programming.

Power LED

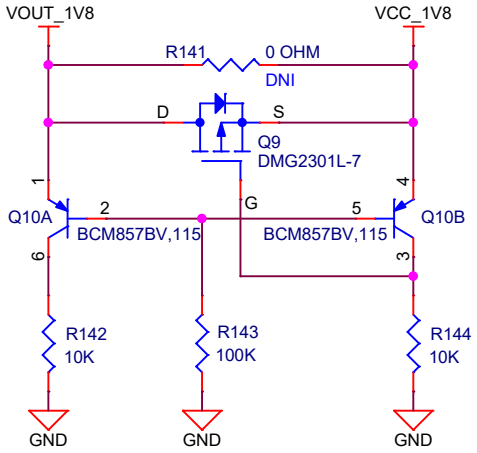


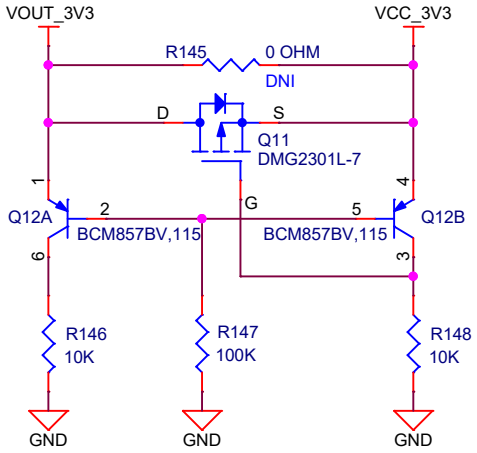
PSoC 6 MCU Current Measurement



Note: Do not remove jumper when powered.

Reverse Voltage Protection for Regulators





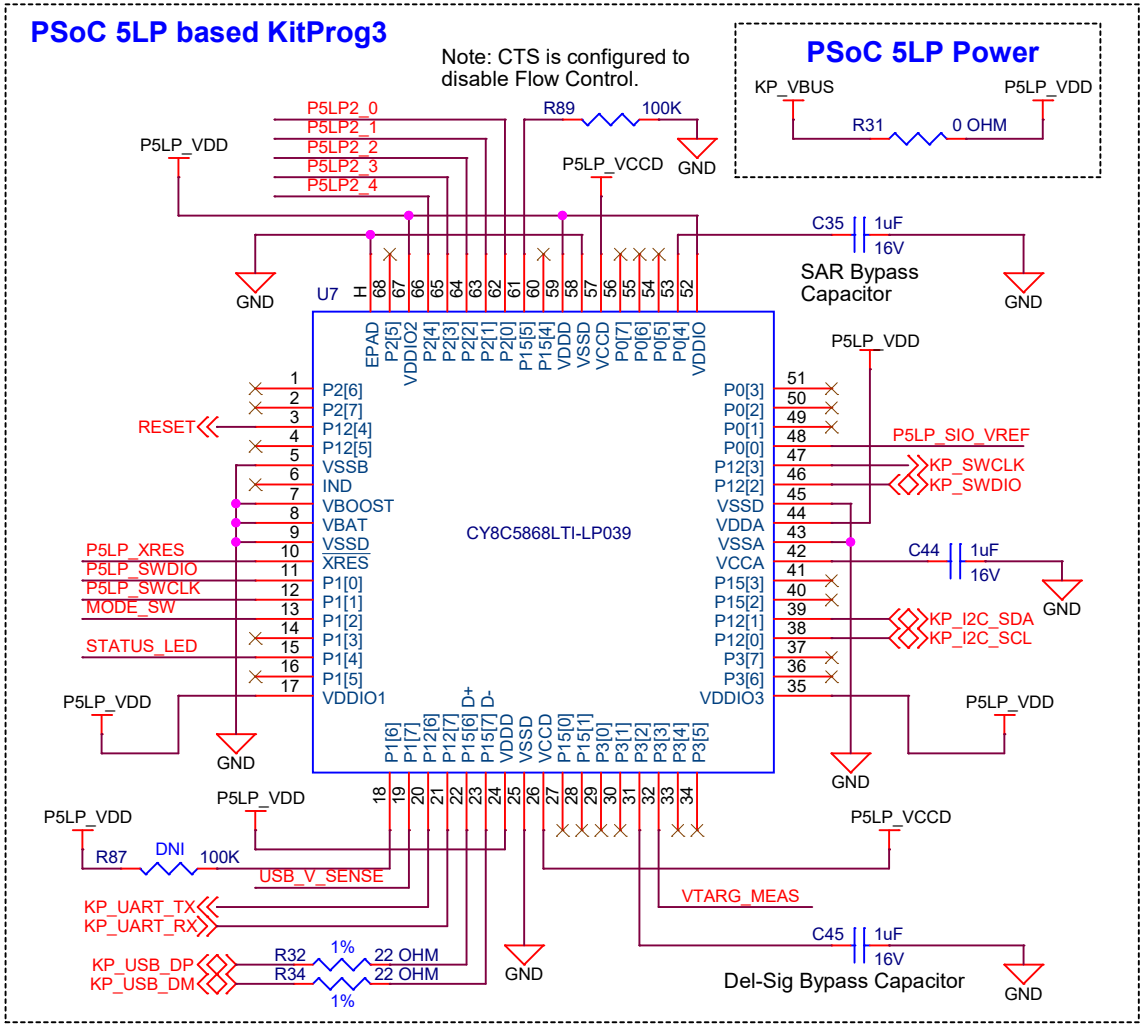
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Page Title : Onboard Regulators				
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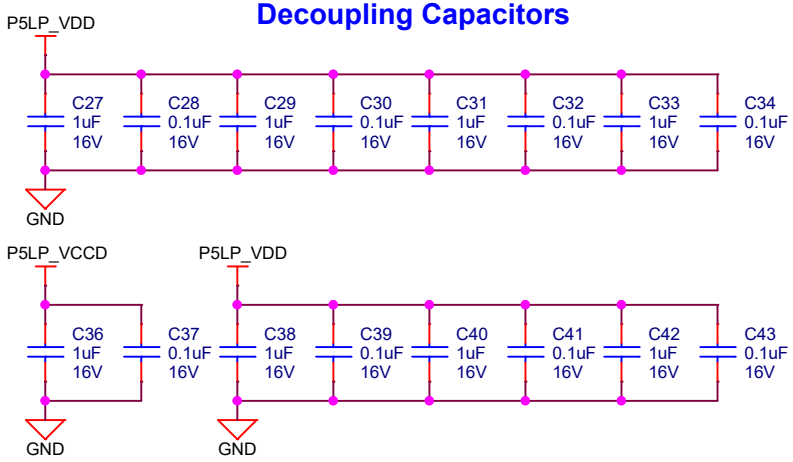
PSoC 5LP BASED KITPROG3

PSoC 5LP based KitProg3

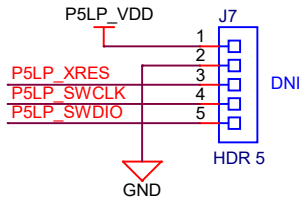


PSoC 5LP Power

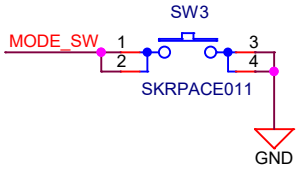
Decoupling Capacitors



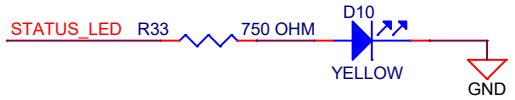
PSoC 5LP Programming Header



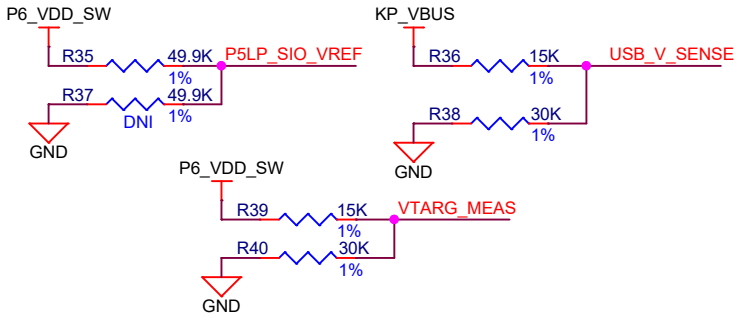
Mode Switch



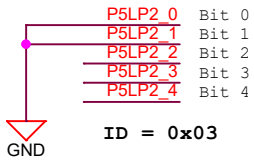
KitProg3 Status LED



Voltage Monitoring



KitProg3 H/W Revision



Note: GND is read as binary "1" and floating as "0".

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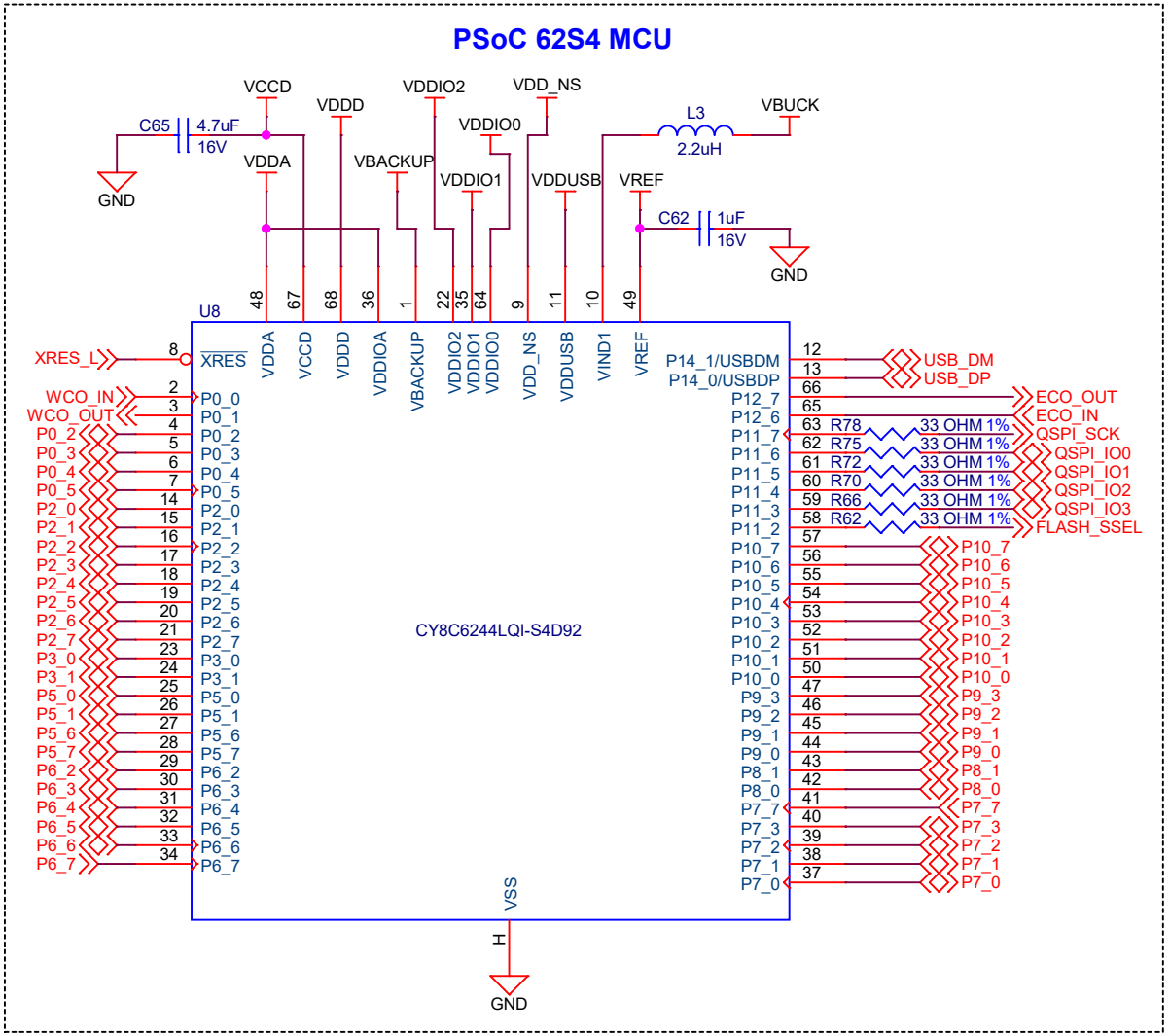
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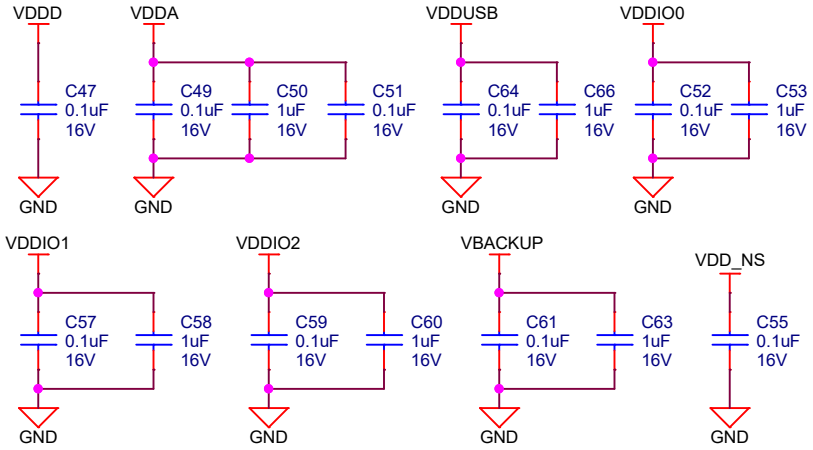
Date: Wednesday, January 20, 2021 Sheet 6 of 13

PSOC 6 MCU

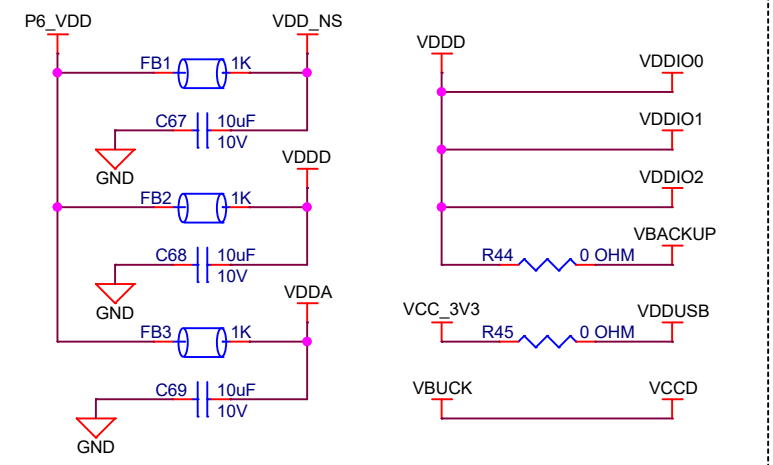
PSoC 62S4 MCU



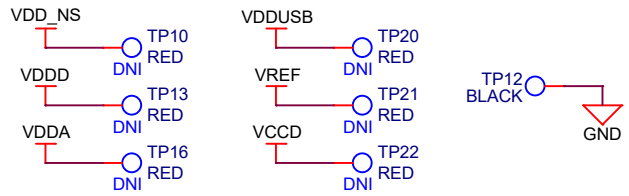
Decoupling Capacitors



PSoC 6 MCU Power In



PSoC 6 MCU Power Domain Test Points



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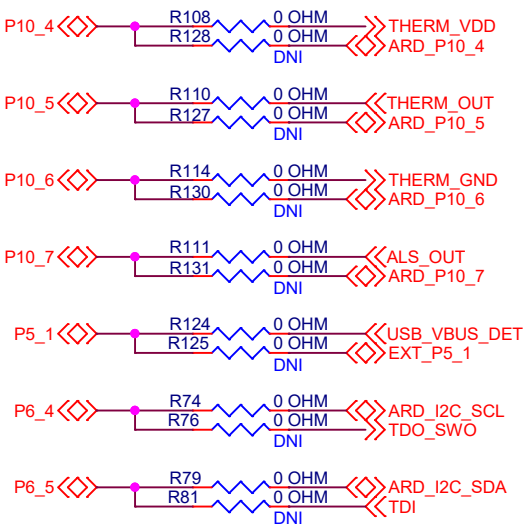
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Date: Wednesday, January 20, 2021 Sheet 7 of 13

MULTIPLEXED PINS & CRYSTALS

Additional Multiplexed Pins

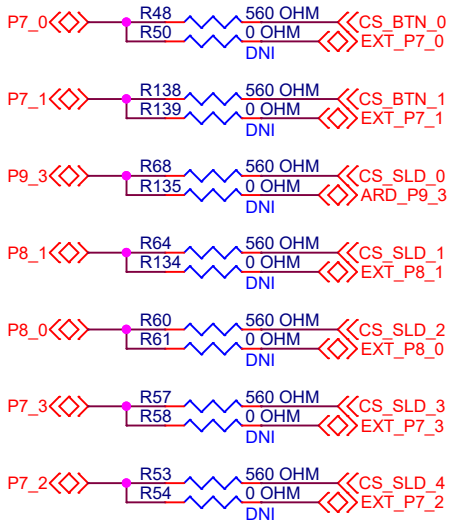


Note: Remove R74, R79 and mount R76, R81 for JTAG connection.

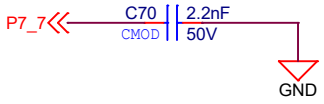
Note: Remove R108, R110, R111, R114 and populate R127, R128, R130, R131 for full functionality of the Arduino compatible shield.

Note: Port P6_5 defaults to logic high with internal pull-up on device reset. This can result in higher deep sleep and hibernate current when measured at header J13. If JTAG functionality is not being used, configure P6_5 drive mode to High-Z Analog in the project.

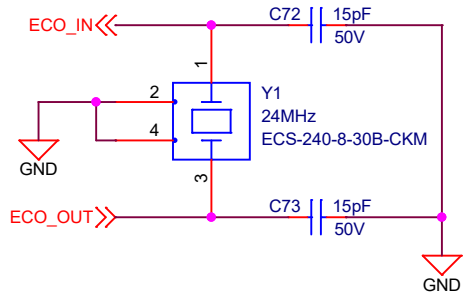
CapSense Multiplexed Pins



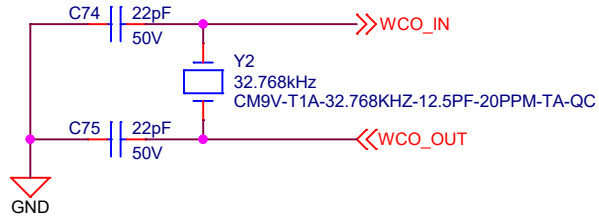
CMOD



ECO



WCO



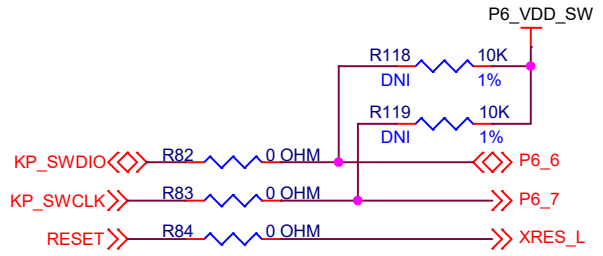
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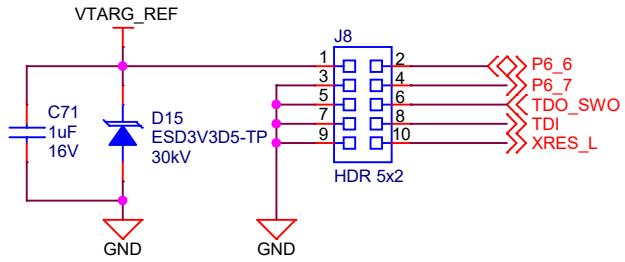
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Date: Wednesday, January 20, 2021		Sheet 8 of 13		

KITPROG3 INTERFACE

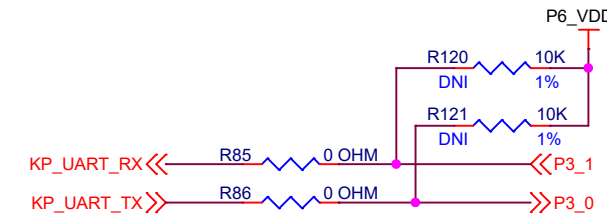
PSoC 6 MCU SWD KitProg3 Interface



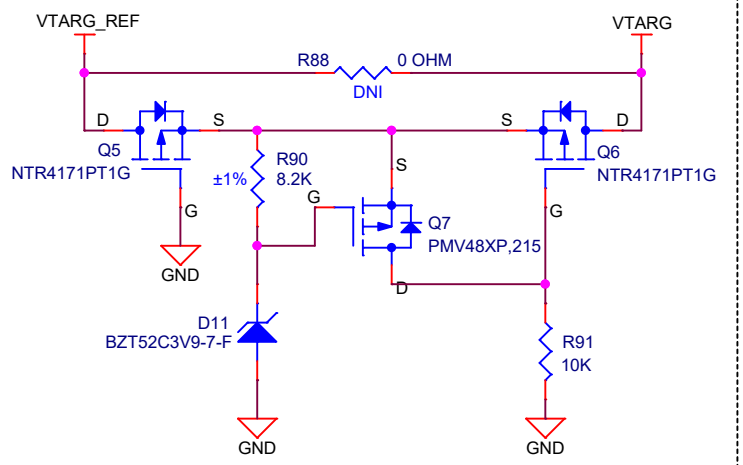
PSoC 6 MCU 10-pin SWD/JTAG Header



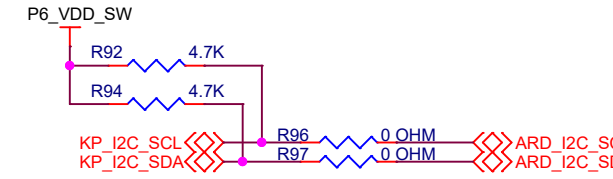
KitProg3 UART Interface



Over Voltage Protection for SWD/JTAG Header



KitProg3 I2C Interface



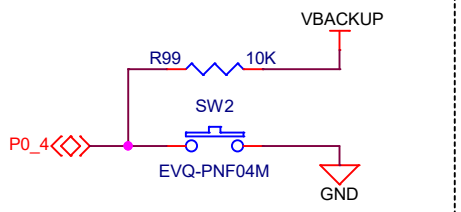
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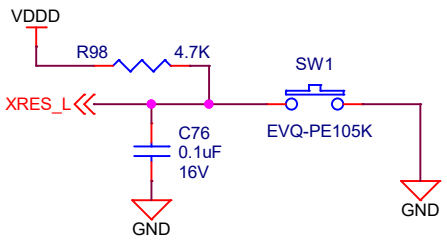
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Date: Wednesday, January 20, 2021		Sheet 9 of 13		

PERIPHERALS

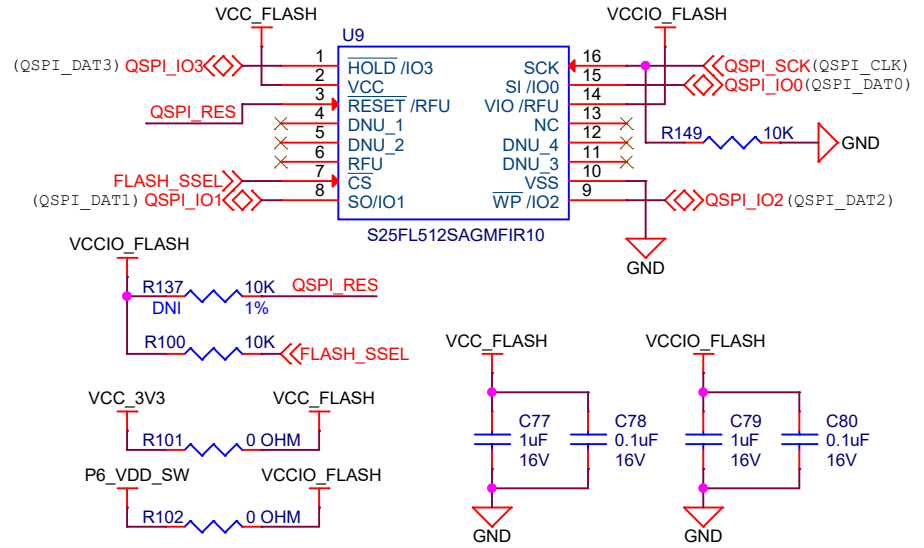
User Button/Hibernate Wakeup



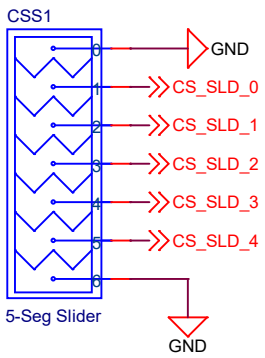
Reset Button



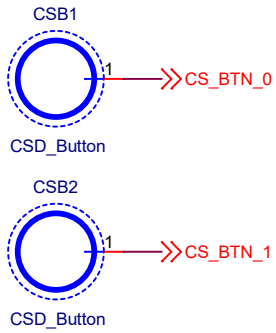
Quad SPI Flash Memory



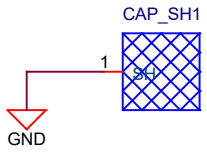
CapSense Slider



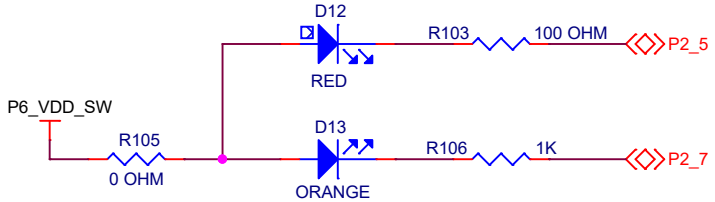
CapSense Buttons



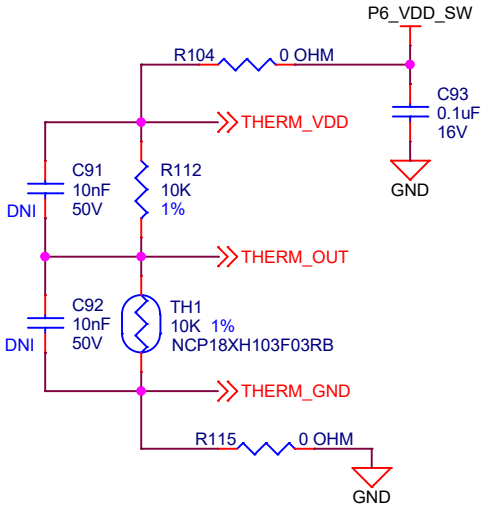
CapSense Shield



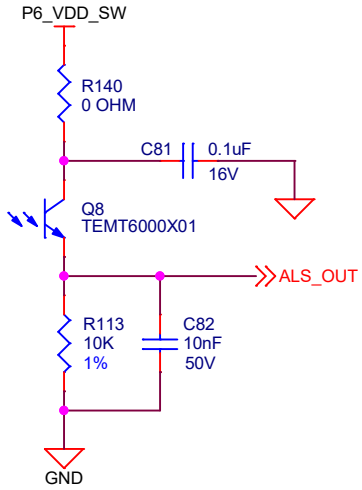
User LEDs



Thermistor



Ambient Light Sensor



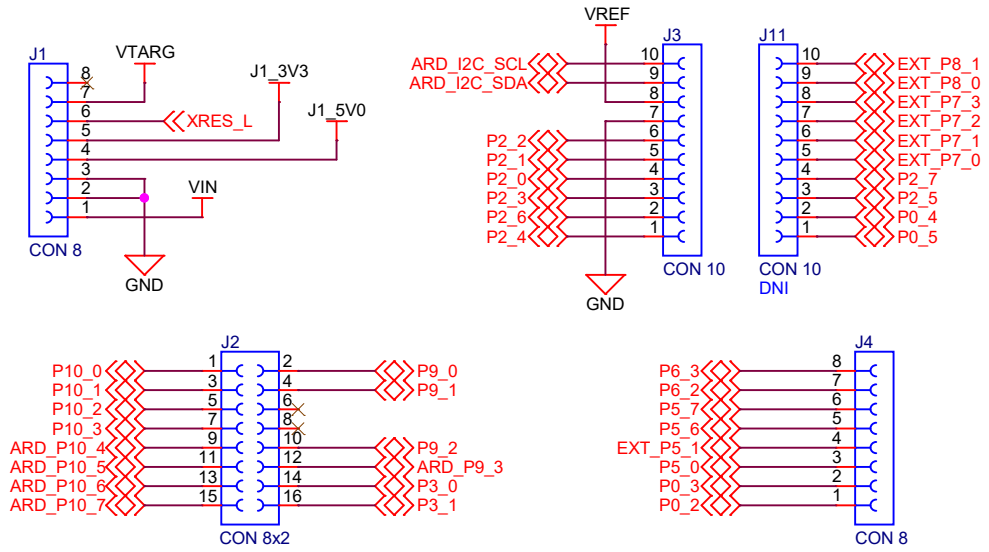
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SCH Title : CY8CKIT-062S4 PSoC 62S4 Pioneer Kit				
Page Title : Peripherals				
Size	Document Number	Drawn By	Approved By	Rev
A4	630-60588-01	RISR	RKAD	03
Date: Wednesday, January 20, 2021		Sheet 10 of 13		

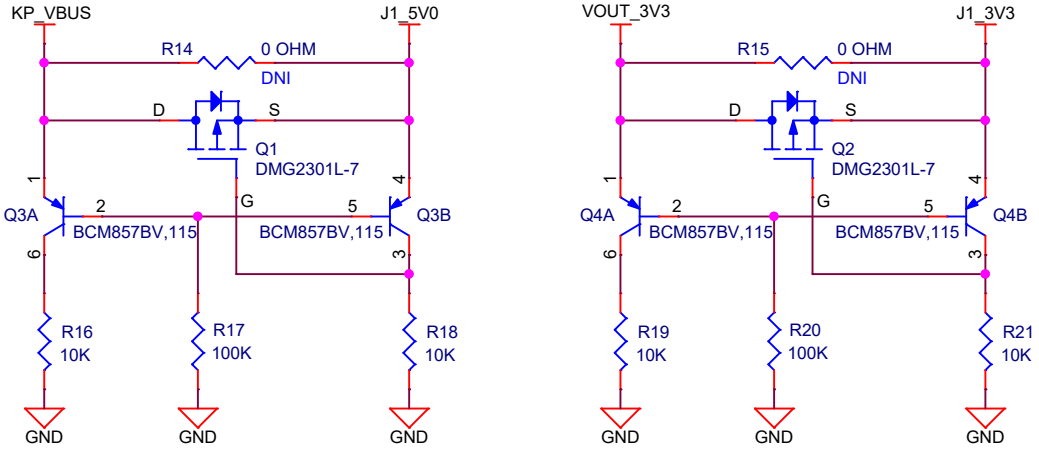
ARDUINO & EXTENDED HEADERS

Arduino & Extended Headers



Note: 5V on Arduino header will be present only when KitProg3 USB is connected.

Reverse Voltage Protection for Arduino Header



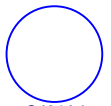
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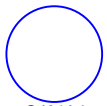
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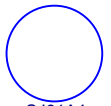
SCH Title : CY8CKIT-062S4 PSoC 62S4 Pioneer Kit				
Page Title : Arduino & Extended Headers				
Size	Document Number	Drawn By	Approved By	Rev
A4	630-60588-01	RISR	RKAD	03
Date: Wednesday, January 20, 2021		Sheet 11 of 13		

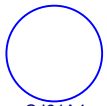
ACCESSORIES

Cylindrical Bump-ons


SJ61A4


SJ61A4


SJ61A4


SJ61A4

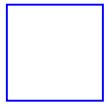
Acrylic Overlay

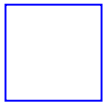
Overlay

Color: Clear, Transparent
Finish: Matt

Dimensions:
42.62mm - length
40.28mm - height
1mm - thickness

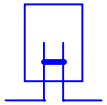
PCBA label


PCA Label

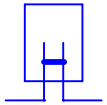

QR CODE Label

Jumper Shunts

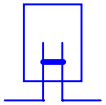
SPC02SYAN


ACC8

SPC02SYAN


ACC9

SPC02SYAN


ACC16

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Size	Document Number	Drawn By	Approved By	Rev
A4	630-60588-01	RISR	RKAD	03

Date: Wednesday, January 20, 2021 Sheet 12 of 13

REVISION HISTORY

REV	DESCRIPTION OF CHANGE	ORIG. OF CHANGE	DATE
01	Initial Release	RISR	11/06/2020
02	1) Test points 'TP4' and 'TP12' are mounted by default. 2) Single ended mode sensing changed to differential mode sensing for thermistor by default. 3) Reference designators changed for switches SW1, SW2, SW3 4) QSPI Chip select net name is 'FLASH_SSEL'.	RISR	20/07/2020
03	1) Block Diagrams updated 2) U14, U15 updated with TPD3S044DBVR 3) U4 updated with TPS22917DBVR 4) CSB2, R140 added 5) Reverse Voltage Protection circuit added for Buck Regulators 6) R149 pulldown resistor added; Multiplexing resistors removed for P10_3 7) ALS supply changed to P6_VDD_BUF 8) VBUCK & VCCD shorted by reoving R46; C56 removed 9) Drawing nos made not DNI; JMP1 & JMP2 removed; P6_VDD_BUF renamed as P6_VDD_SW	RISR	14/11/2020

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Page Title : Revision History

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A4	630-60588-01	RISR	RKAD	03

Date: Wednesday, January 20, 2021 | Sheet 13 of 13