CY8CPROTO-040T PSoC™ 4000T CAPSENSE™ Prototyping Kit

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Drawing Numbers

PCBA	121-60682-01
PCB	600-60682-01
FAB DRW	610-60682-01
ASSY DRW	620-60682-01
SCH DRW	630-60682-01

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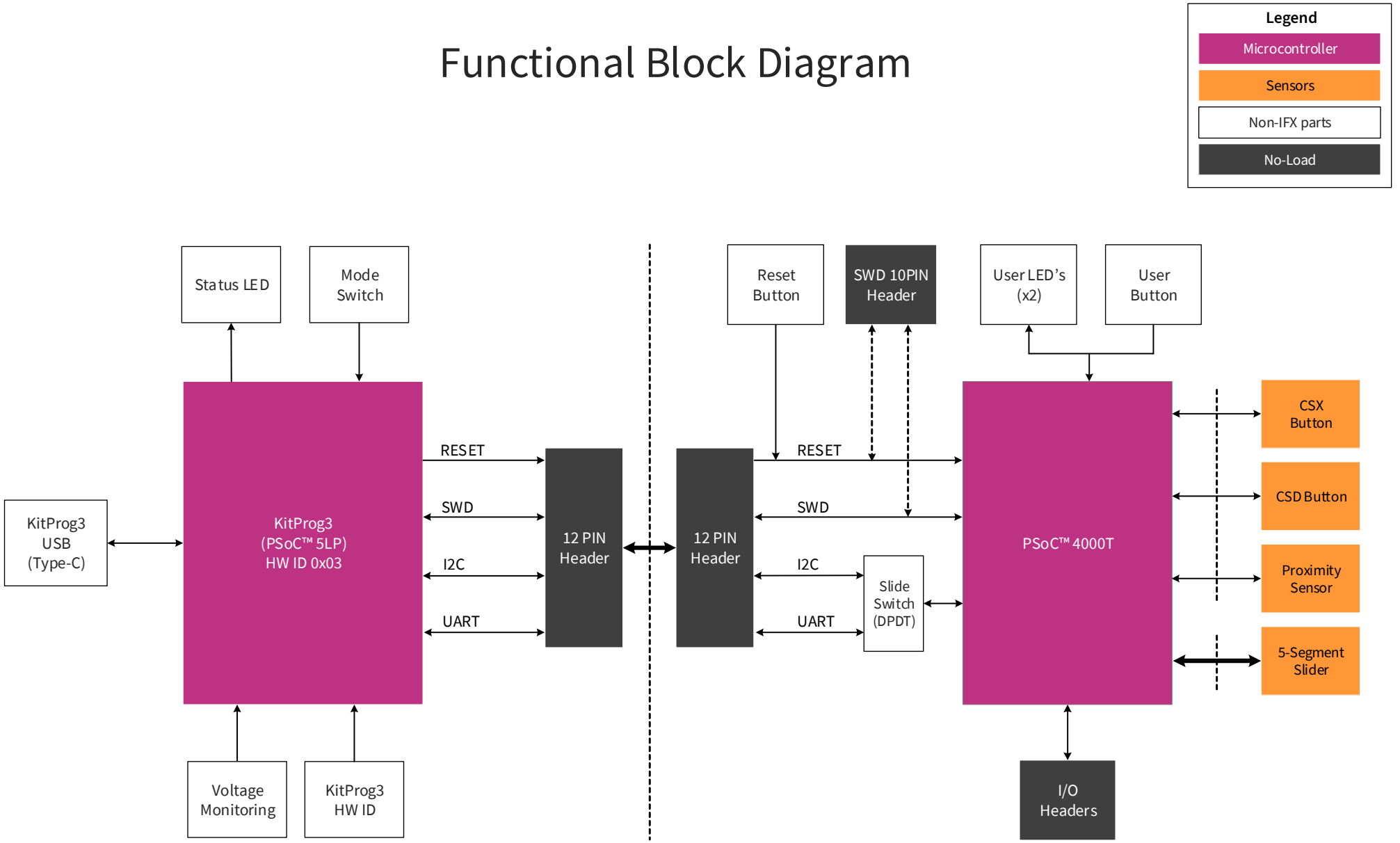
SCH Title : PSoC™ 4000T CAPSENSE™ Prototyping Kit

Page Title: Title Page

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Functional Block Diagram



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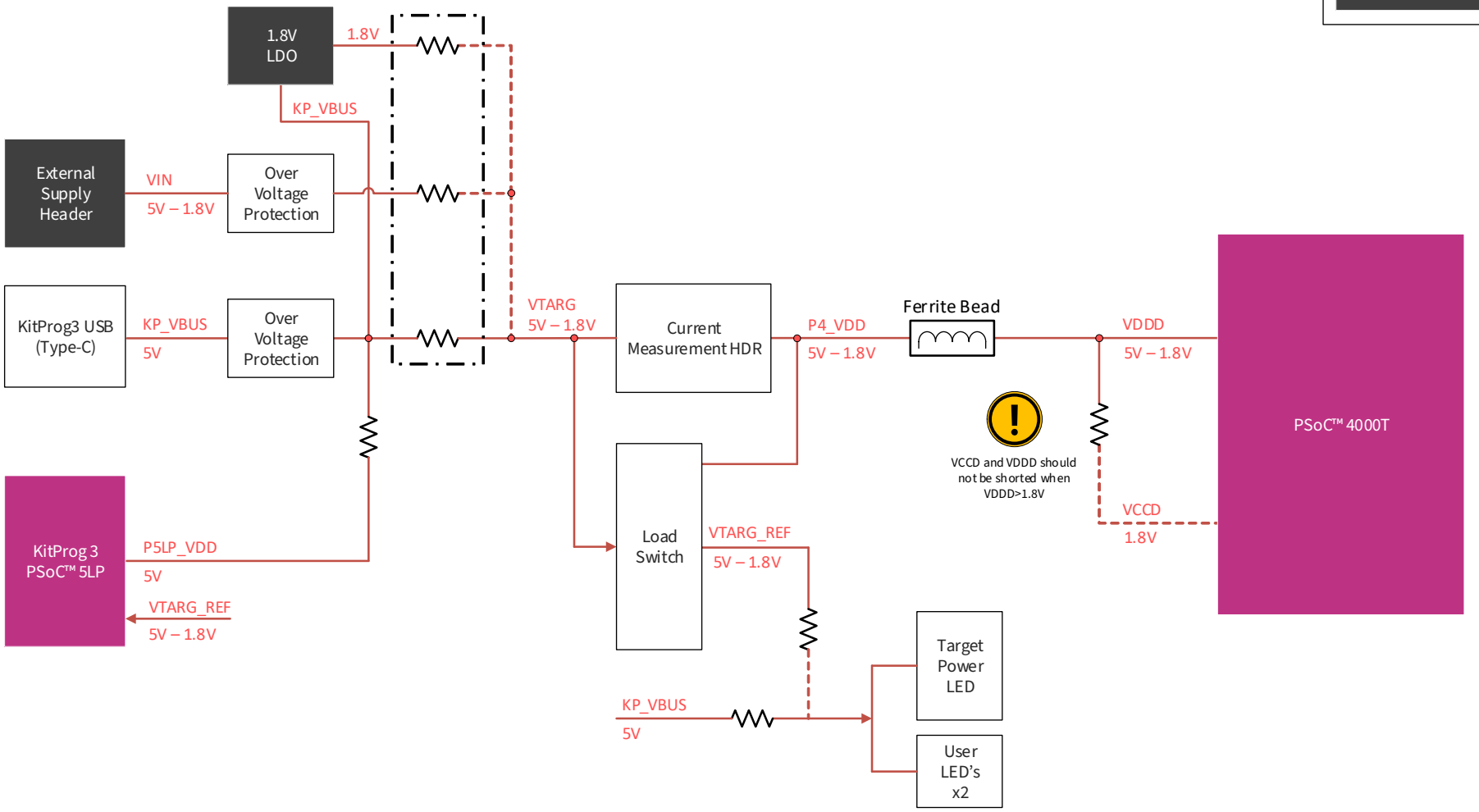
SCH Title : PSoC™ 4000T CAPSENSE™ Prototyping Kit

Page Title: Functional Block Diagram

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Power Block Diagram



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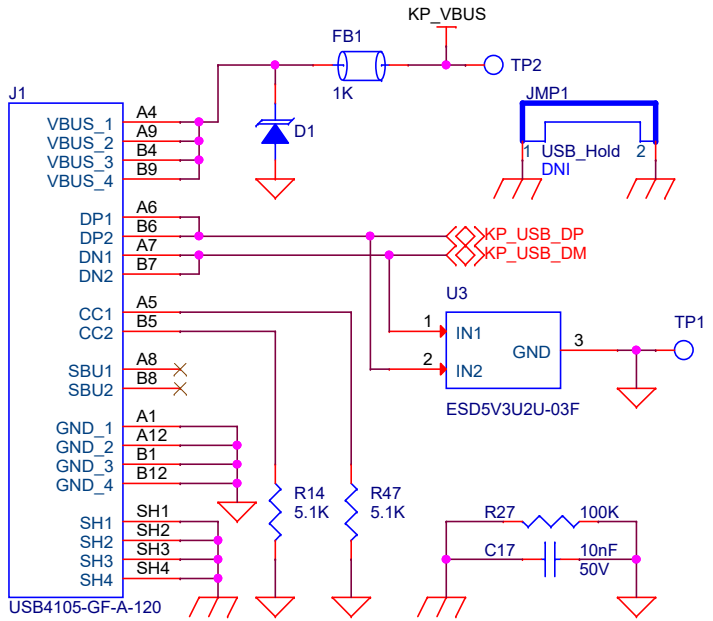
SCH Title : PSoC™ 4000T CAPSENSE™ Prototyping Kit

Page Title: Power supply Block Diagram

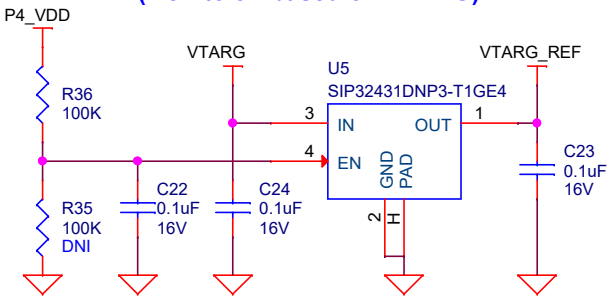
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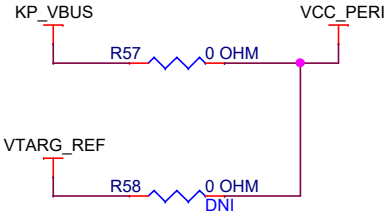
USB Power Supply and Interface



VTARG Reference Voltage (1.8V to 5V based on VTARG)

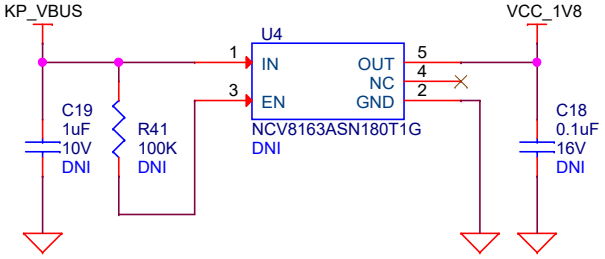


Voltage supply for Peripherals

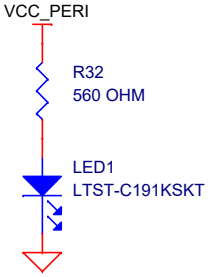


Note:
Unmount the R57 and mount R58 to select VTARG_REF as peripheral supply voltage

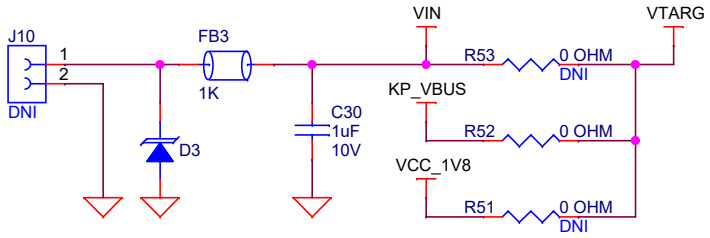
1.8V Voltage regulator



Power LED



Target Voltage Supply

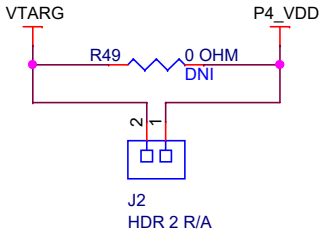


Note:
External supply should be minimum of 1.8V to maximum of 5V. For external supply of 1.8V, populate resistor R45 to short VDDD and VCCD

Note:
1. Unmount the R52 and mount R53 to select external supply as Target voltage

2. Unmount the R52 and mount R51 to select 1.8V supply from onboard LDO as Target voltage

Current Measurement Header



Note:
This header is used for mesuring current consumed by the PSoC™ 4000T MCU

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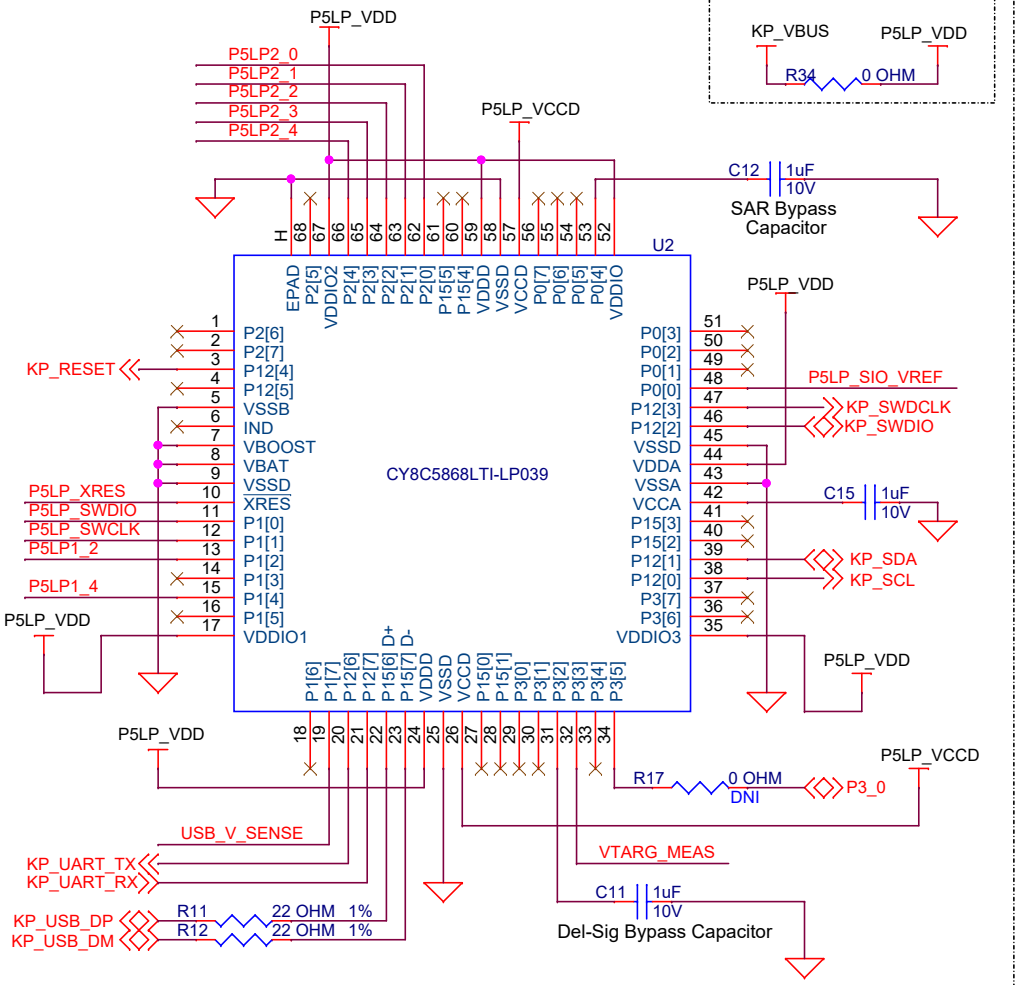
SCH Title : PSoC™ 4000T CAPSENSE™ Prototyping Kit

Page Title: USB Interface and Power Supply

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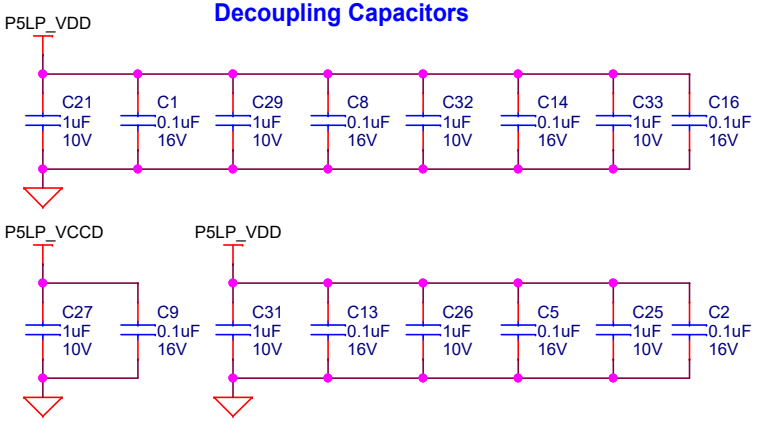
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PSoC™ 5LP based KitProg3

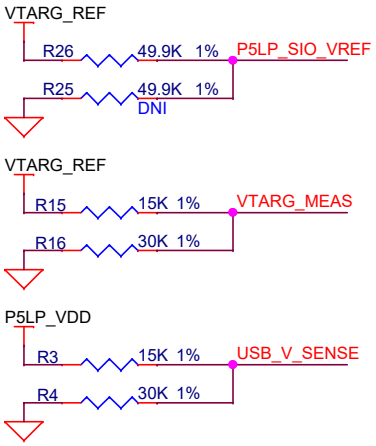


PSoC™ 5LP Power

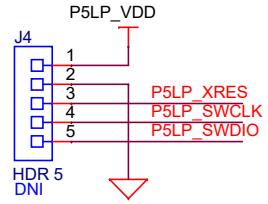
Decoupling Capacitors



Voltage Monitoring

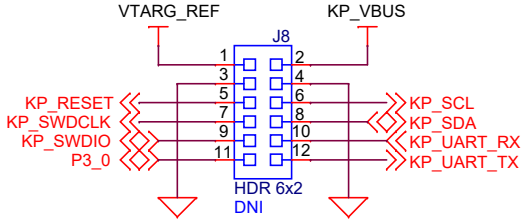


PSoC™ 5LP Programming Header

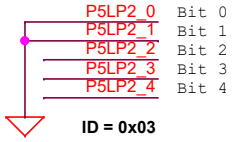


Note:
This is used for programing on board PSoC5LP with KitProg3 firmware

KitProg3 breakout header



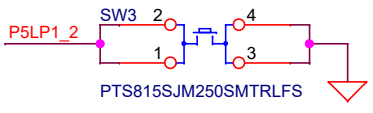
KitProg3 H/W Revision



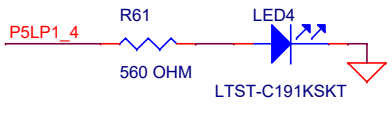
ID = 0x03

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

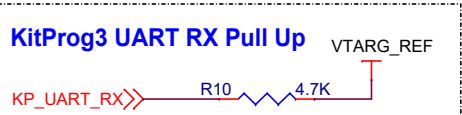
KitProg3 Mode Switch



KitProg3 Status LED



KitProg3 UART RX Pull Up



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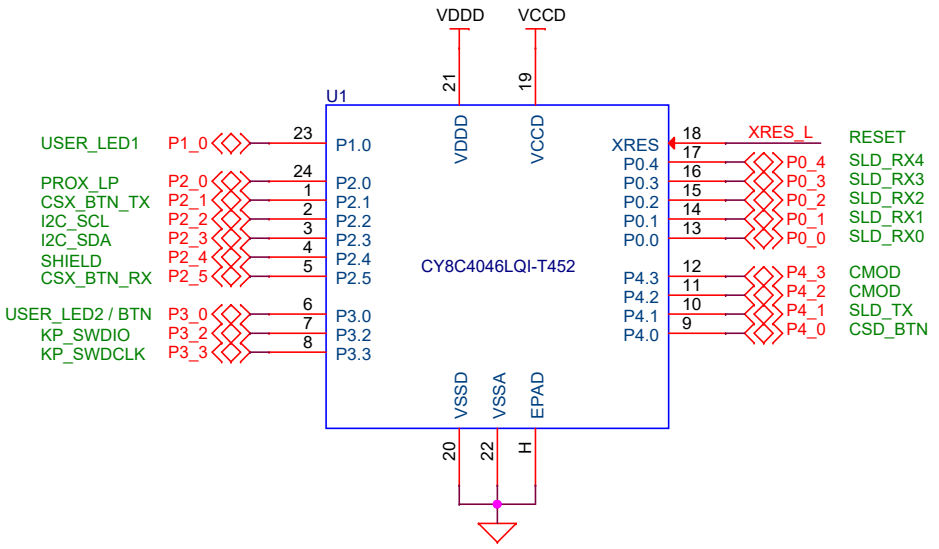
SCH Title : PSoC™ 4000T CAPSENSE™ Prototyping Kit

Page Title: KitProg3 Interface

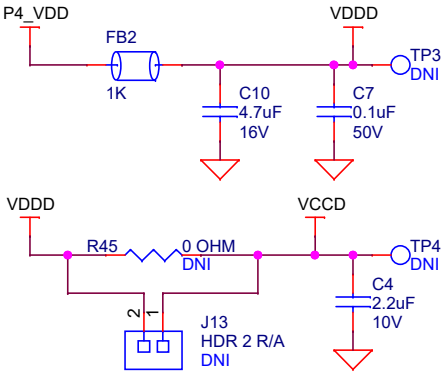
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PSoC™ 4000T Device IOs

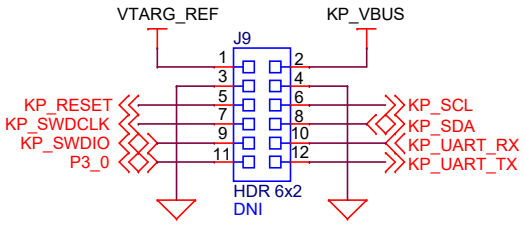


PSoC™ 4000T Device Power

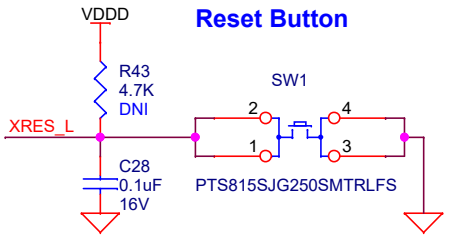


Note:
R45 should be populated when VDDD is 1.8V.

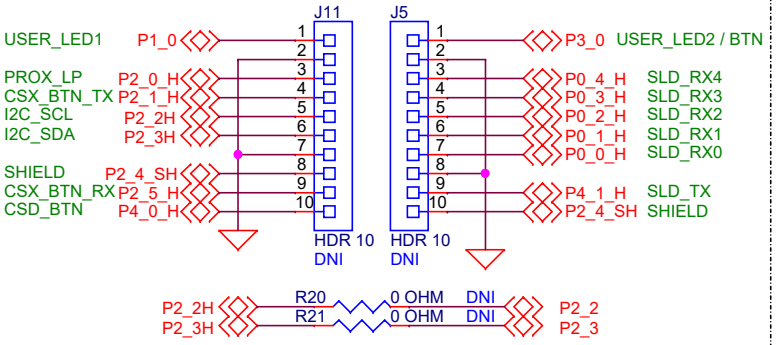
PSoC™ 4000T breakout header



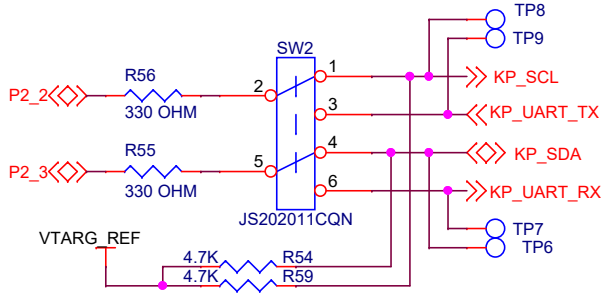
Reset Button



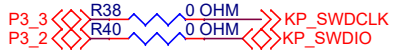
PSoC™ 4000T IO header



KitProg3 I2C and UART Interface Switch

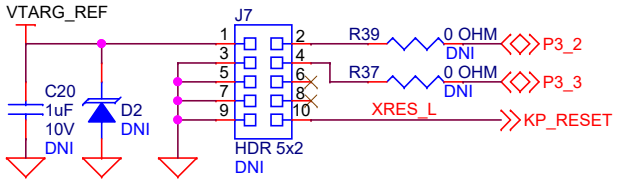


KitProg3 SWD interface



Note:
Unmount the R38, R40 and mount R39, R37 for External programmer interface

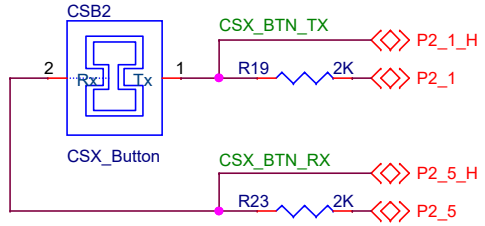
PSoC™ 4000T SWD Programming/Debugging Header



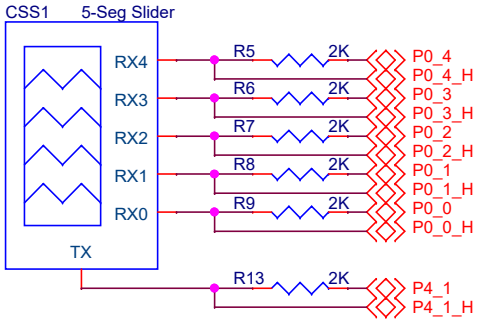
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Page Title: PSoC™ 4000T Device Interface				
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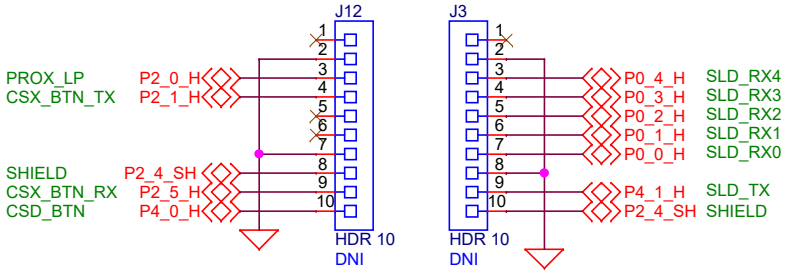
CAPSENSE™ CSX Button



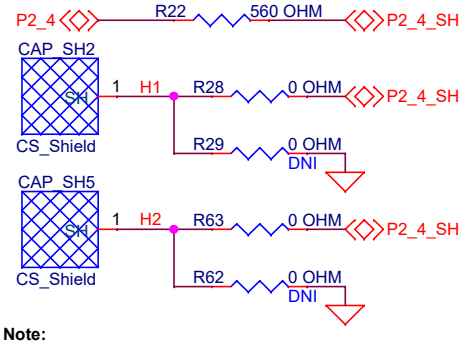
CAPSENSE™ Slider



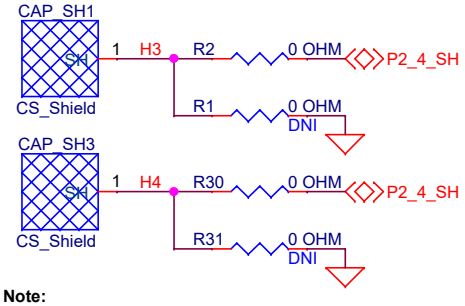
PSoC™ 4000T CAPSENSE™ Expansion header



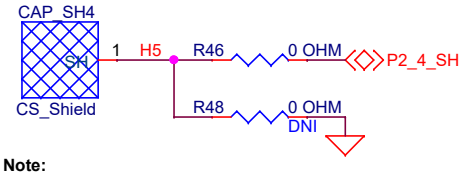
CAPSENSE™ Shield



Note:
Hatch pattern around the CAPSENSE button and Proximity sensor on top and bottom plain of PCB and connected to driven shield by default as R28 and R63 are mounted. if both hatches to be connected to GND mount R29 and R62.

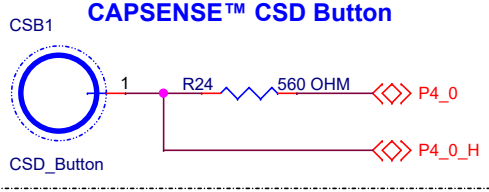


Note:
Hatch pattern around the CAPSENSE Slider on top and bottom plain of PCB and connected to driven shield by default as R2, and R30 are mounted. if both hatches to be connected to GND mount R1 and R31.

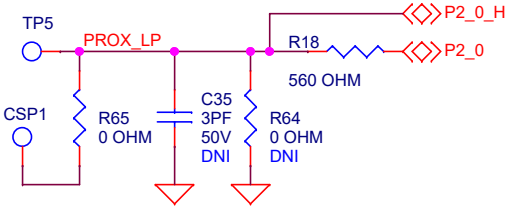


Note:
Hatch pattern around the CAPSENSE sensor lines on main PCB and connected to driven shield by default as R46 is mounted. if this hatch to be connected to GND mount R48.

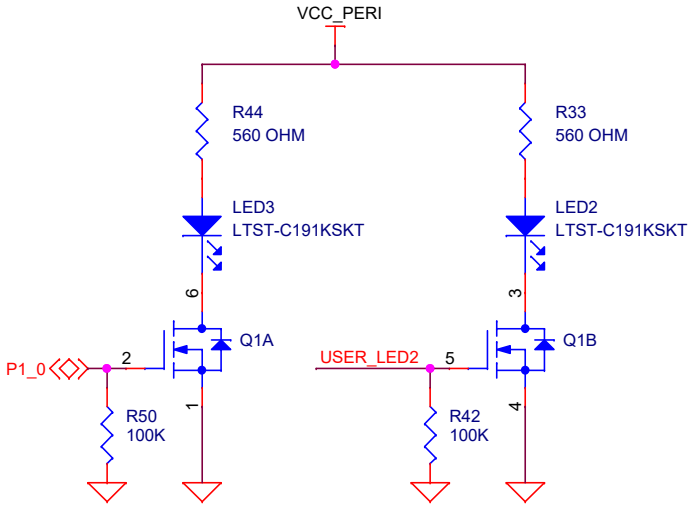
CAPSENSE™ CSD Button



CAPSENSE™ Proximity Sensor



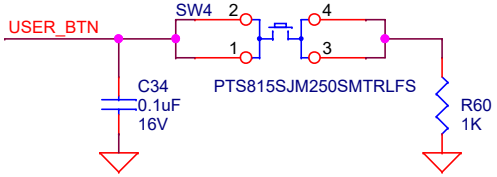
User LED's



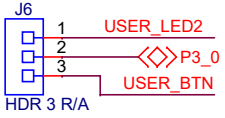
CMOD Capacitors



User Button



User LED / User Button selection jumper



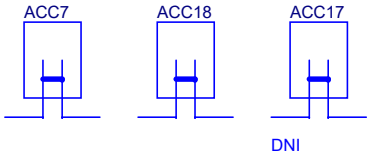
Note:
Use jumper to short J6.1 and J6.2 to enable user_LED2, short J6.2 and J6.3 to enable User_Button

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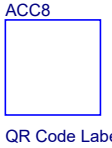
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Page Title: **Capacitive sensor's and onboard Peripherals**				
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Accessories

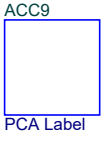
Jumper Shunt



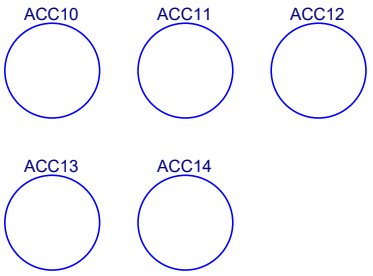
QR Code Label



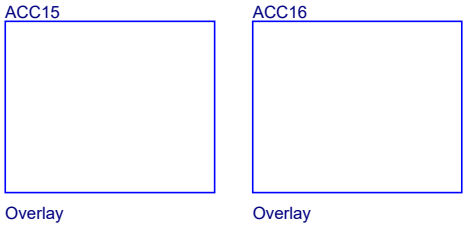
PCBA Label



Bumpons



CAPSENSE Overlay's



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Page Title: On-board Peripherals and Accessories

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REVISION HISTORY

REV	DESCRIPTION OF CHANGE	DATE
01	Initial release	2023/08/04
02	1. Updated the MCU pin assignment 2. Update expansion IO header pin assignment 3. Added jumper for selection of the User LED and button	2023/09/26

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