

# KIT\_PSE84\_AI - PSOC™ Edge E84 AI Board

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## Drawing Numbers

PCBA	121-60751-01
PCB	600-60751-01
FAB DRW	610-60751-01
ASSY DRW	620-60751-01
SCH DRW	630-60751-01

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**SCH Title : PSOC™ Edge E84 AI Board**

**Page Title: Title Page**

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A4	<b>630-60751-01</b>	<b>Vamsi</b>	<b>Ronak</b>	<b>03</b>
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# Functional Block Diagram

## Legend

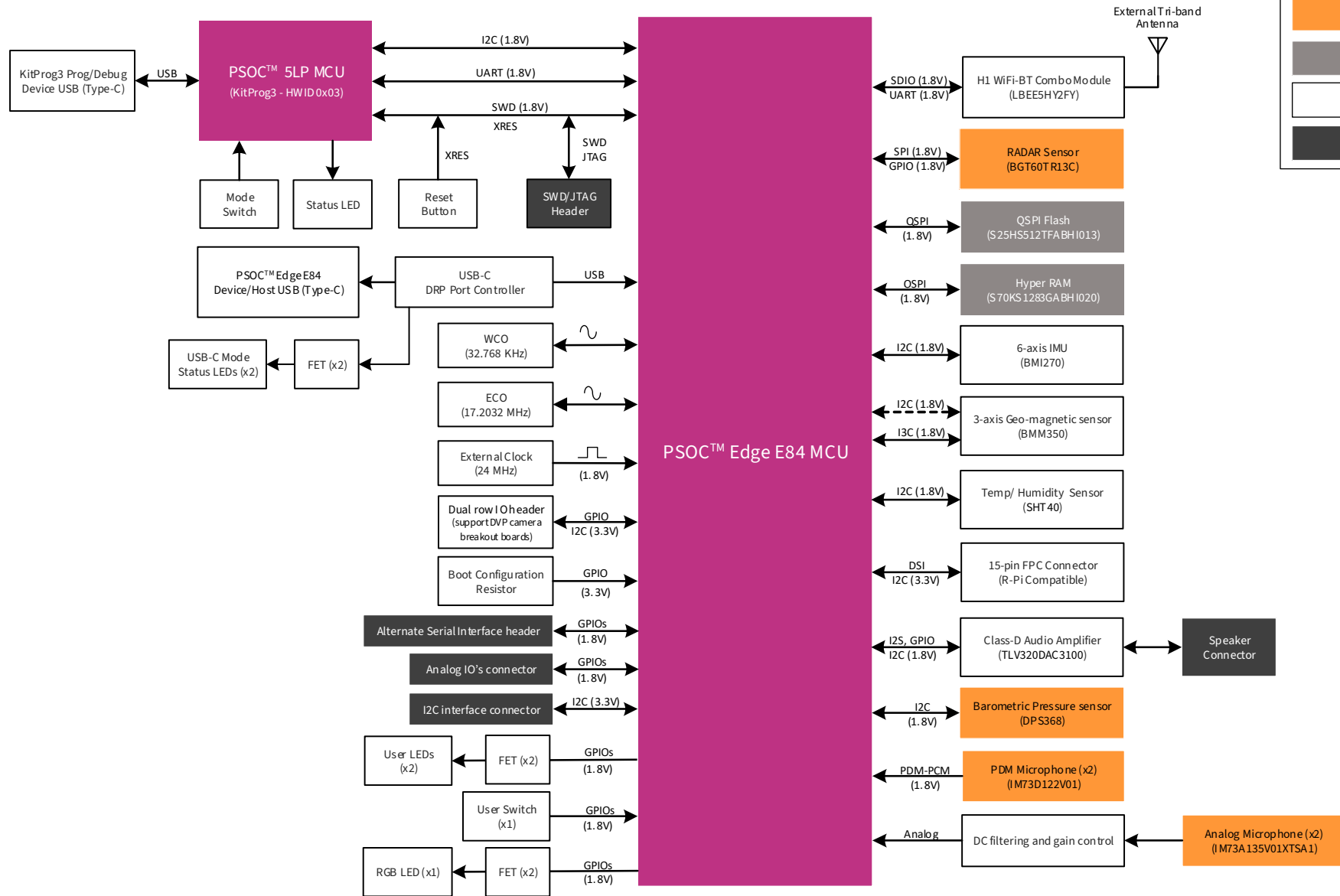
Microcontroller

Sensors

Memory

Non-IFX parts

No-Load



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SCH Title : PSoC™ Edge E84 AI Board

Page Title: Functional Block Diagram

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# Power Block Diagram

## Legend

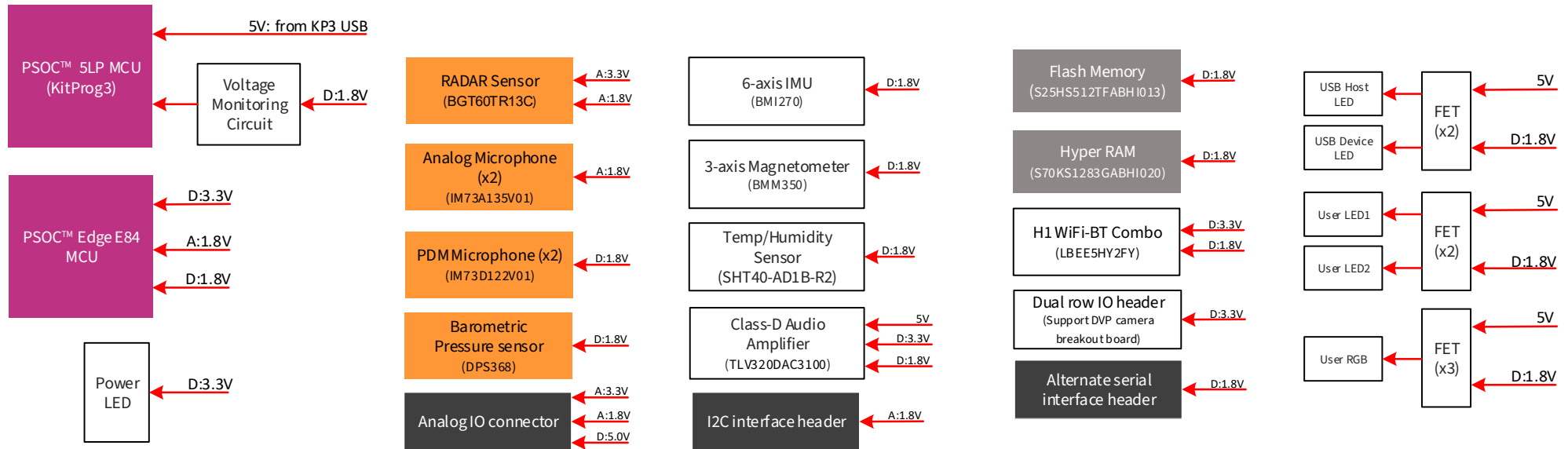
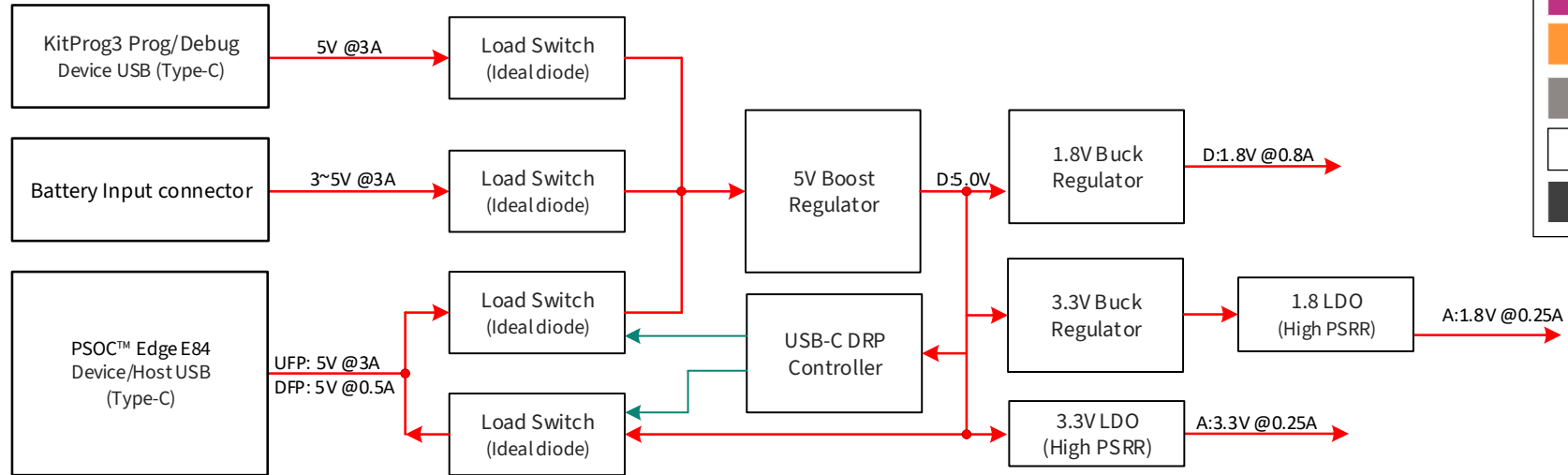
Microcontroller

Sensors

Memory

Non-IFX parts

No-Load



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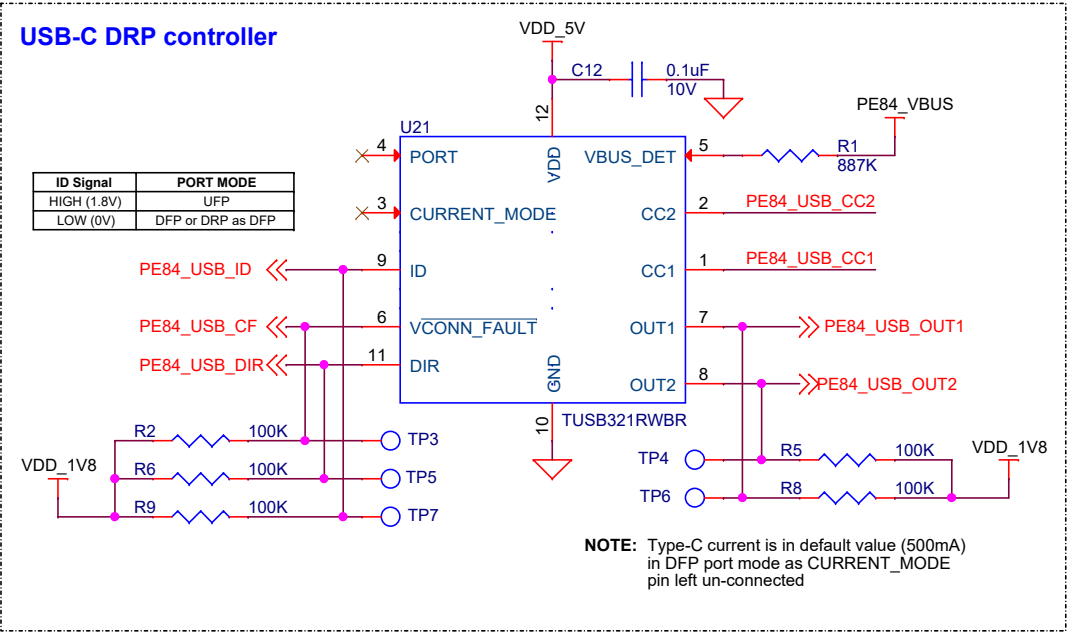
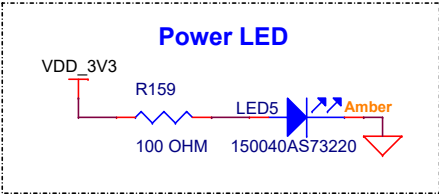
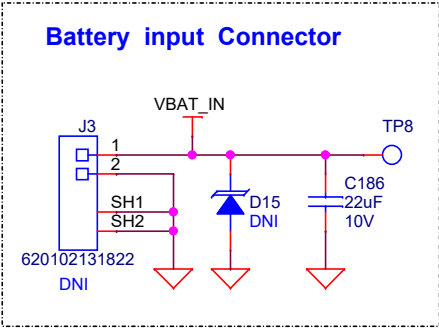
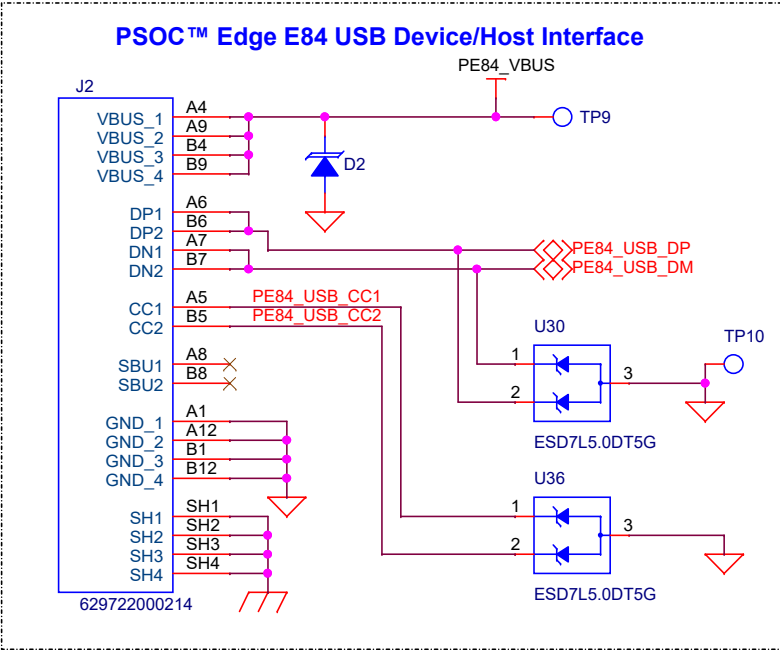
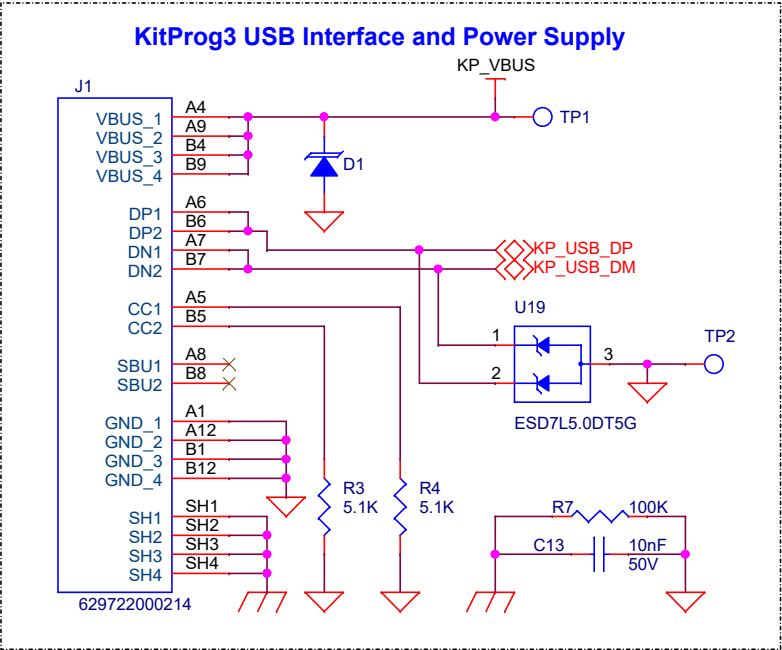
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Page Title : Power Block Diagram

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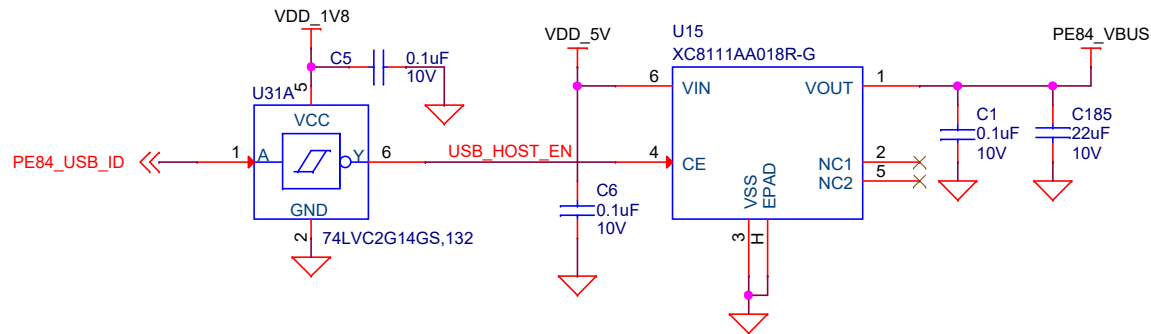


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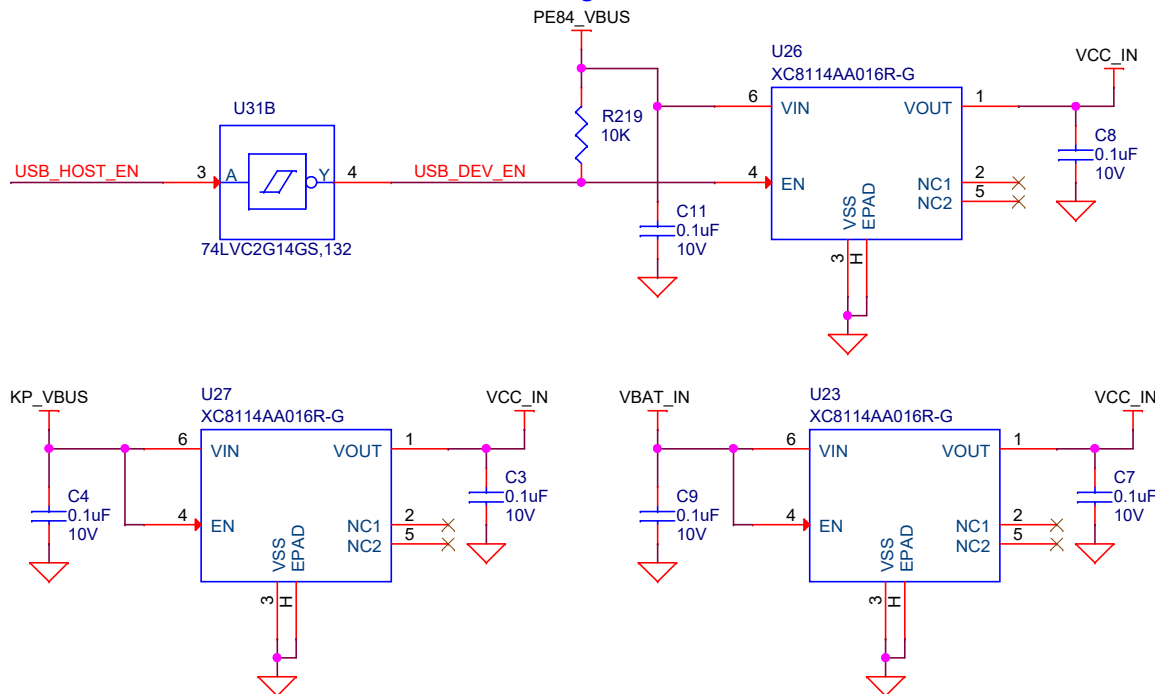


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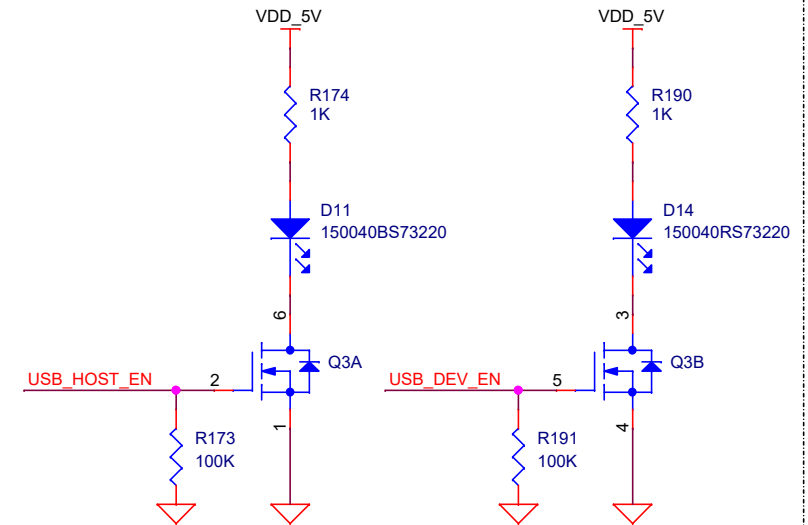
**USB-C Host enable**



## USB-C device enable and Ideal Diode Power OR'ing



## USB-C Host/Device Status LED's



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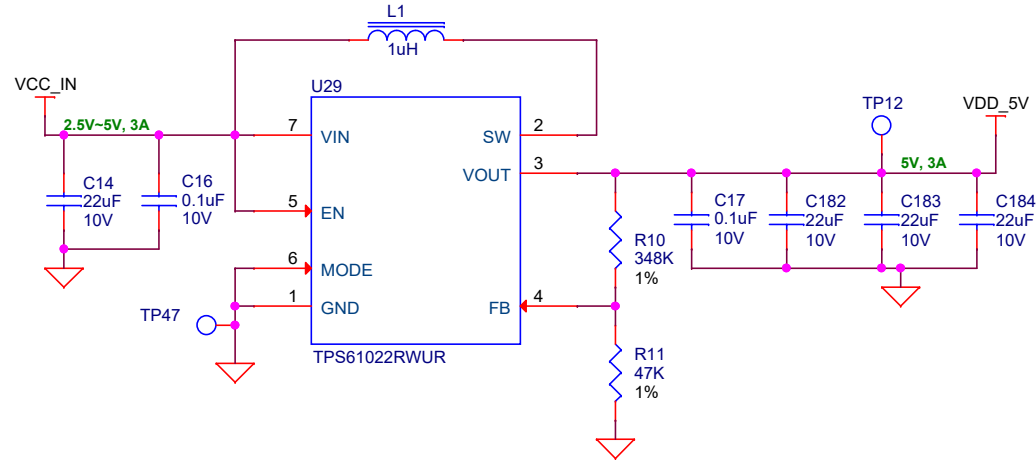


SCH Title : PSOC™ Edge E84 AI Board

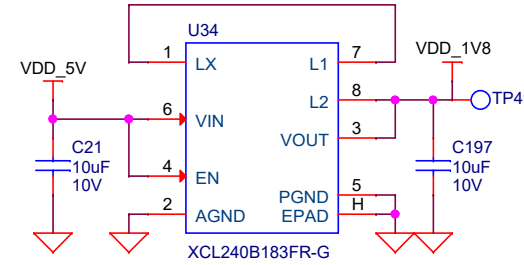
Page Title: USB Host &amp; Device supply switch and Power OR'ing

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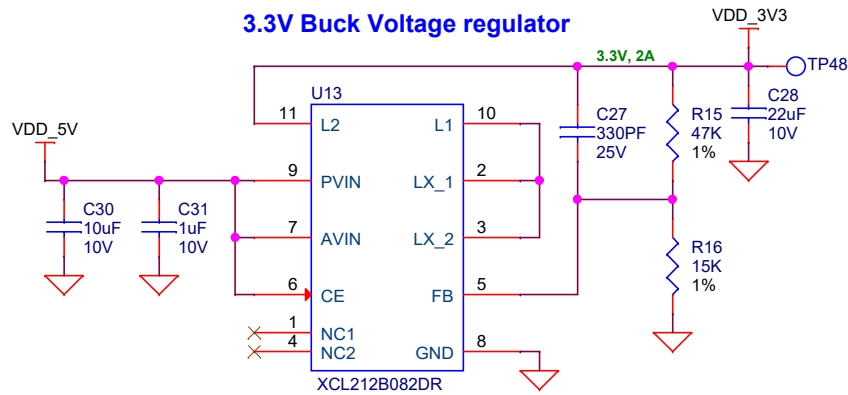
### 5V Boost Voltage Regulator



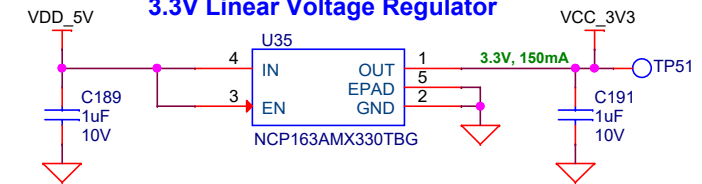
### 1.8V Buck Voltage Regulator



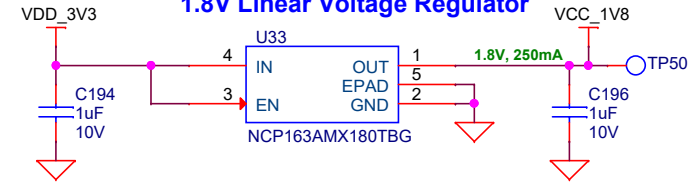
### 3.3V Buck Voltage regulator



### 3.3V Linear Voltage Regulator



### 1.8V Linear Voltage Regulator



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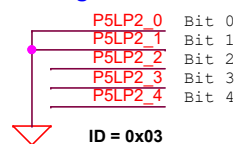
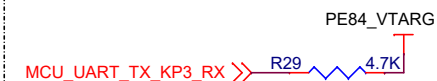
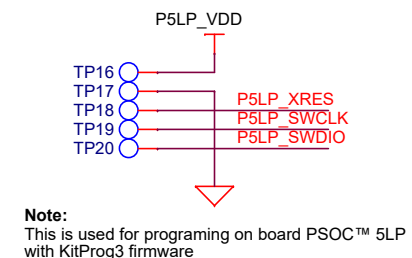
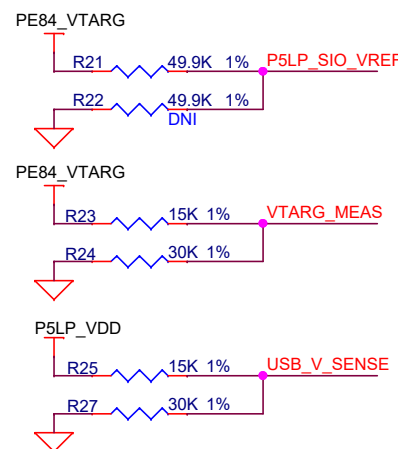
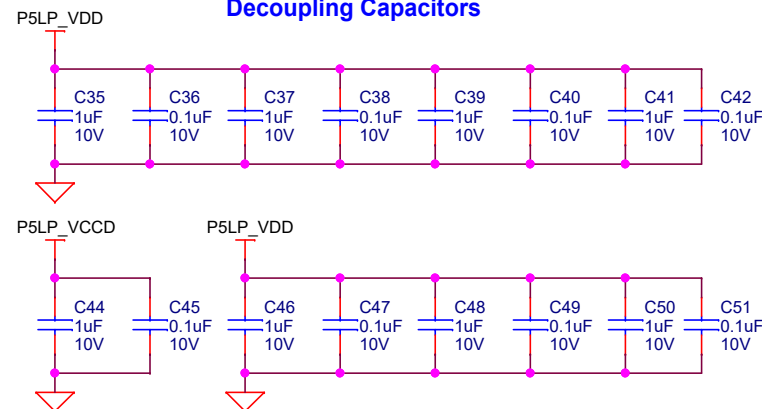
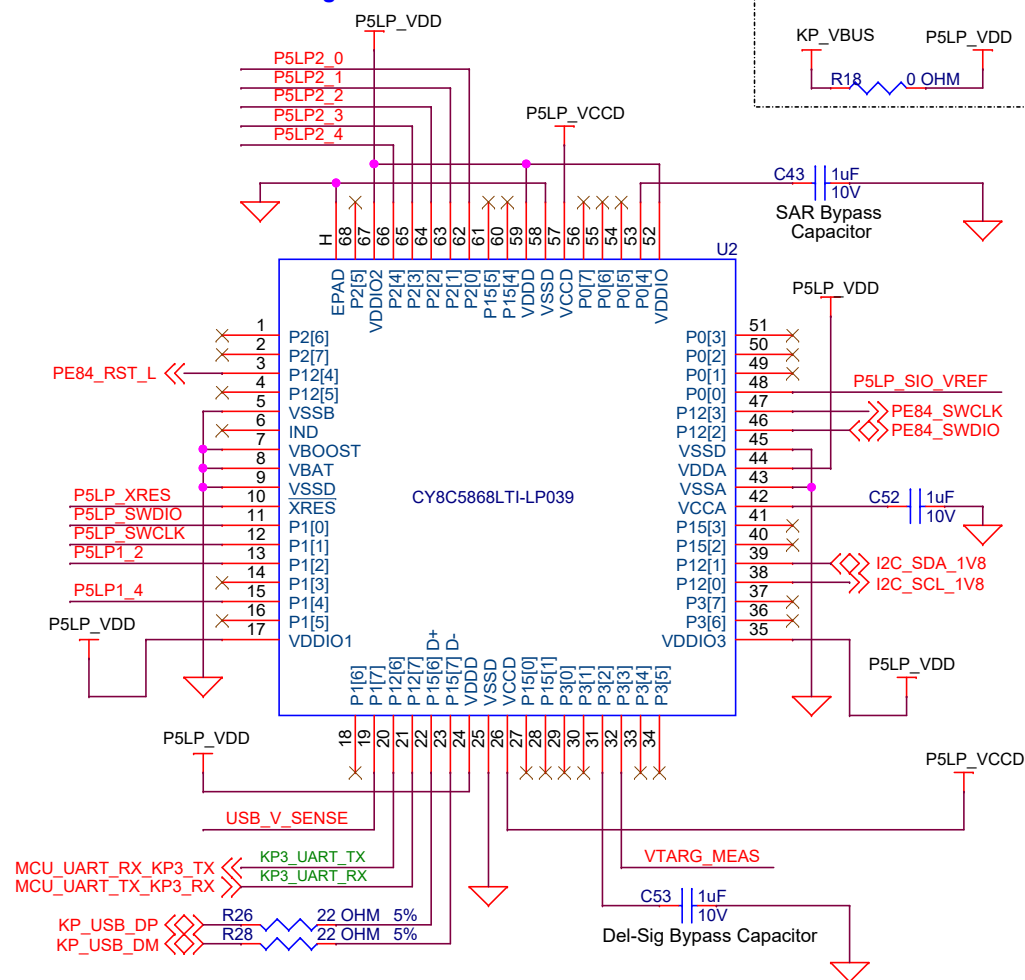
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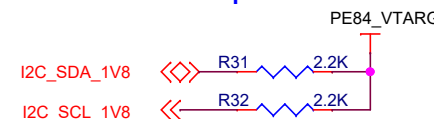
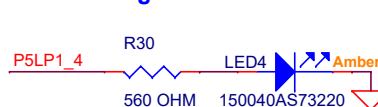
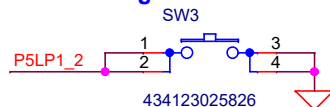
SCH Title : PSOC™ Edge E84 AI Board

Page Title : Regulated Voltage Supply

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



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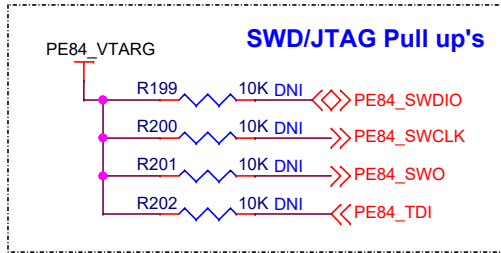
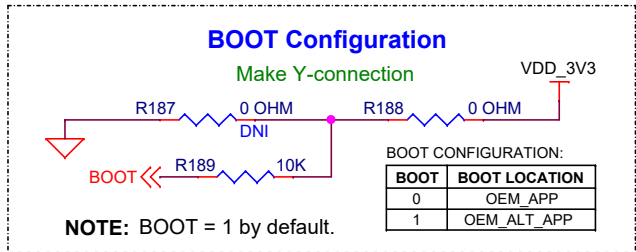
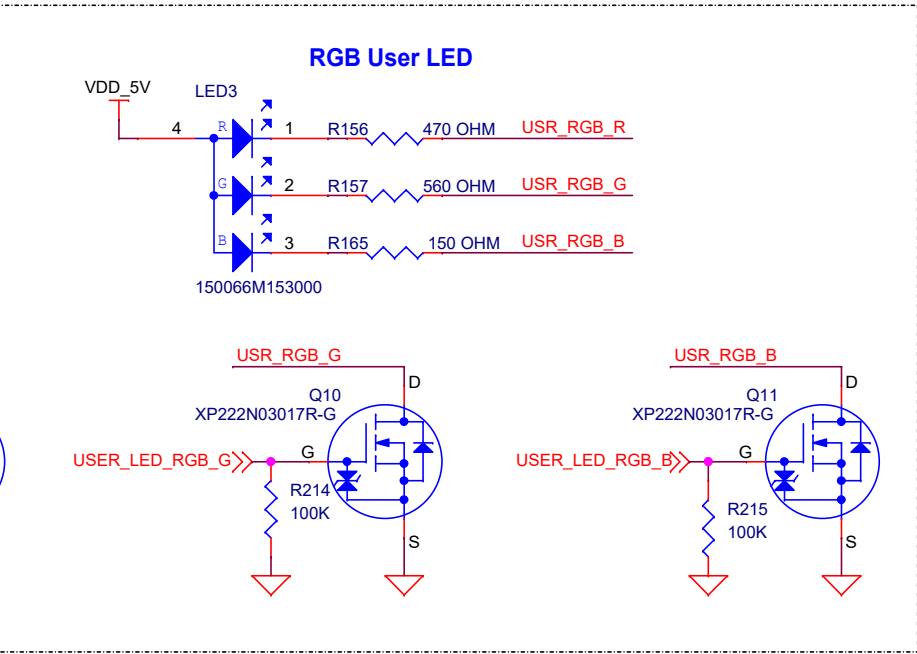
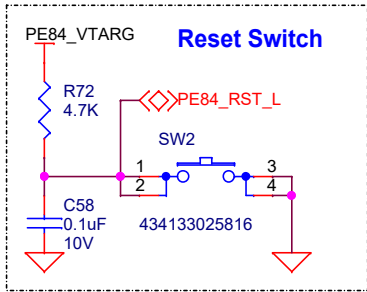
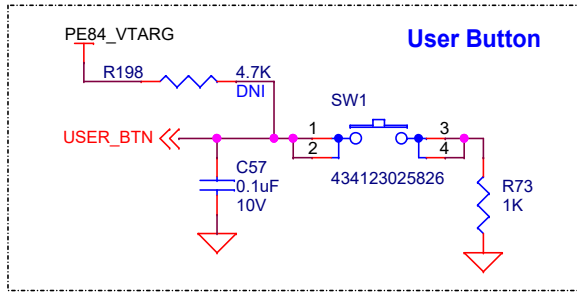
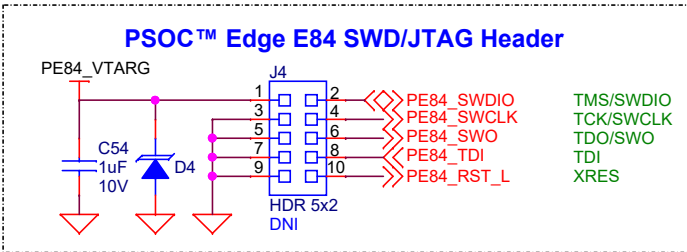
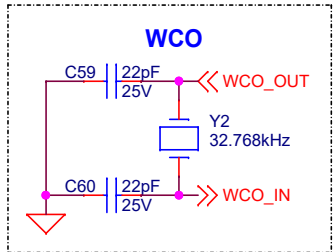
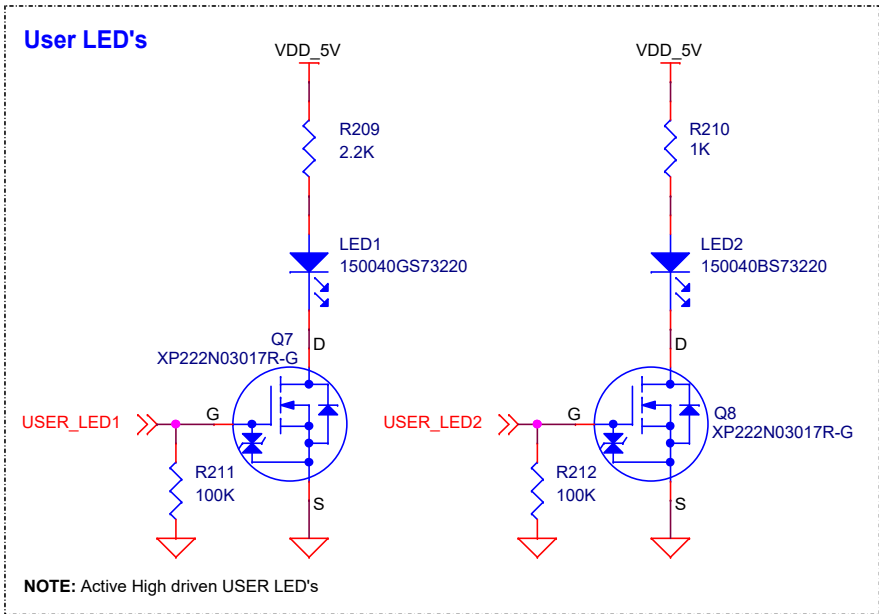
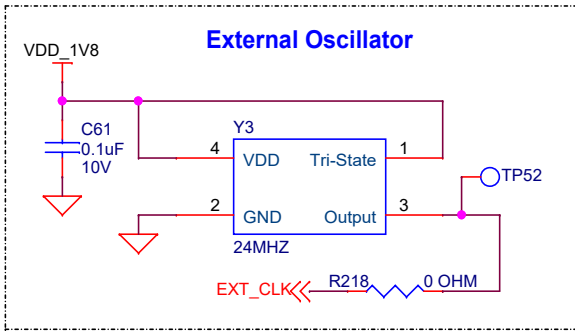
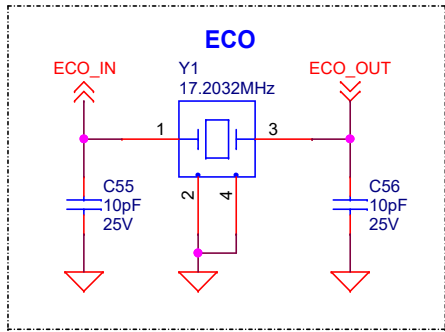
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SCH Title : PSOC™ Edge E84 AI Board

Page Title: KitProg3 Interface

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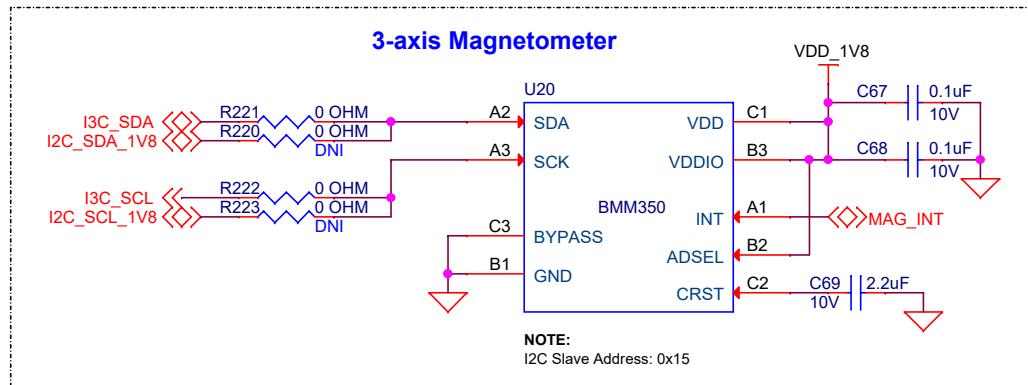
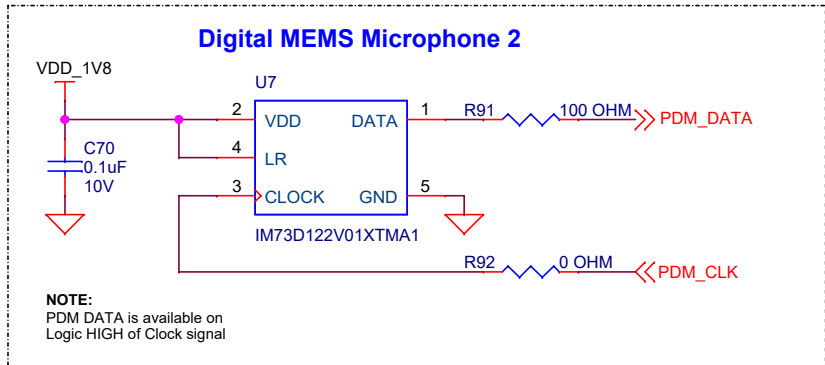
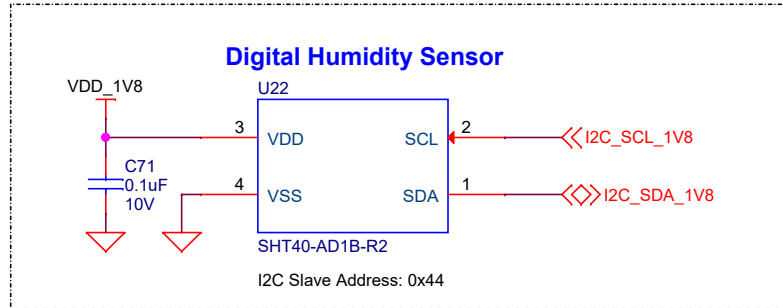
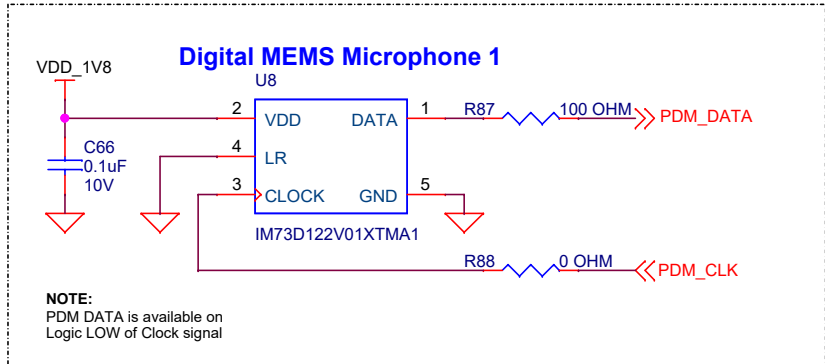
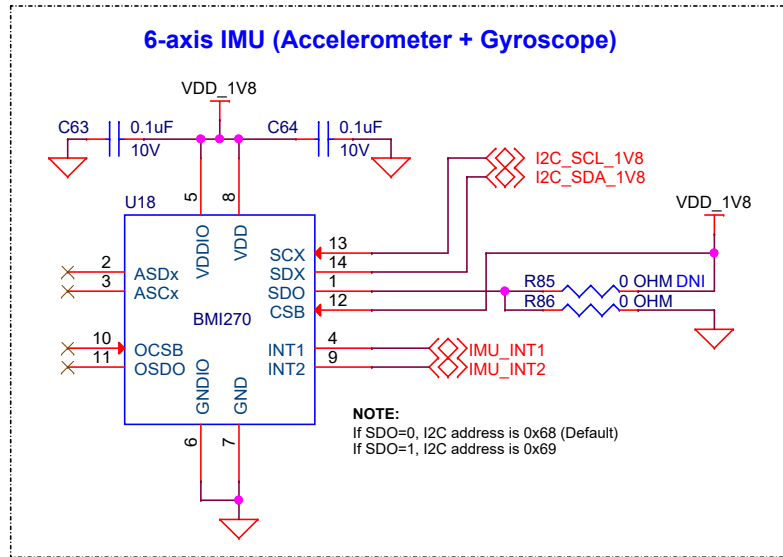
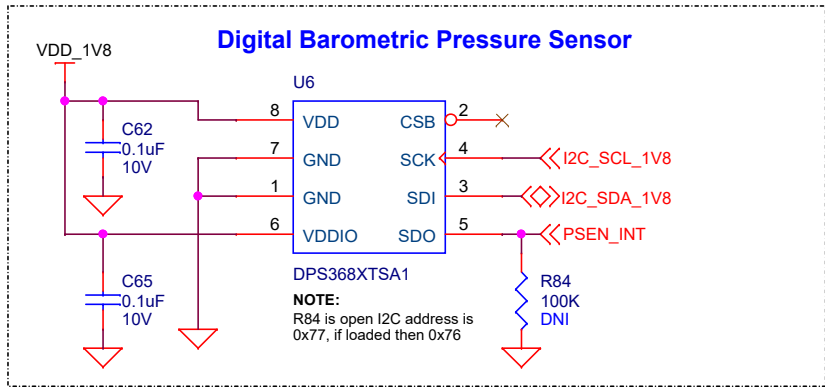
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**Page Title : On-board Peripherals**

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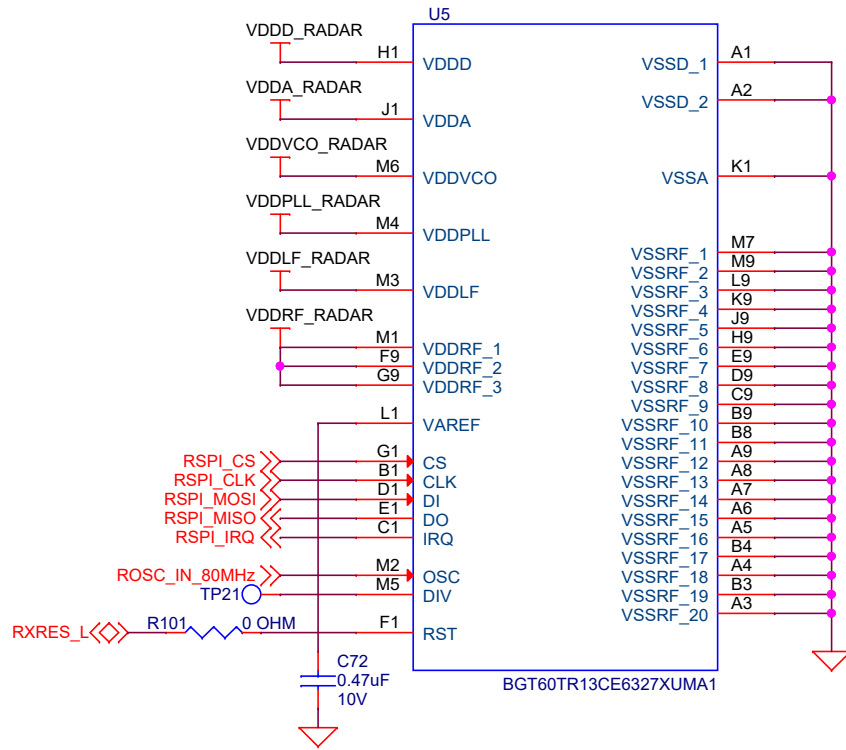


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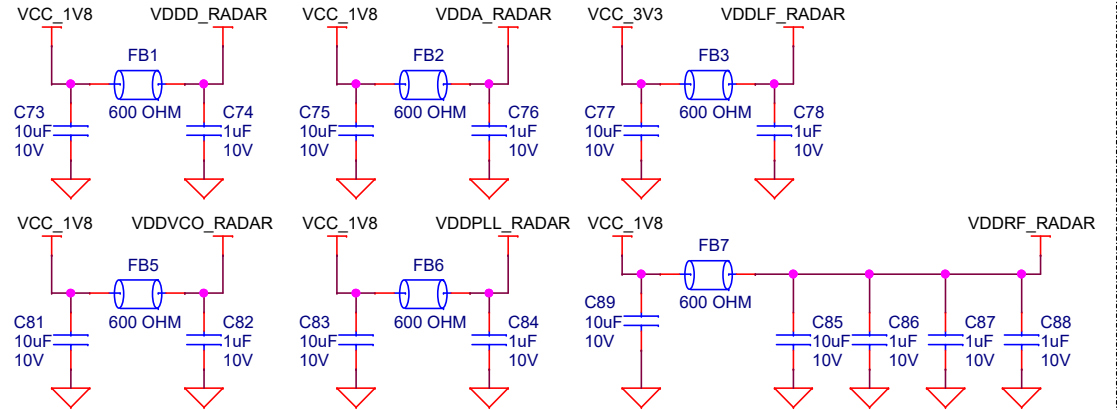
**Page Title : On board sensors**

Size	Document Number	Drawn By	Approved By	Rev
A4	630-60751-01	Vamsi	Ronak	03
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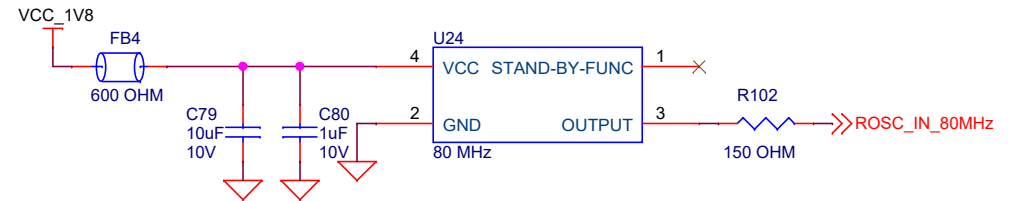
## BGT60TR13C RADAR Sensor



## Supply for RADAR Sensor



## Crystal Oscillator - RADAR Clock Source



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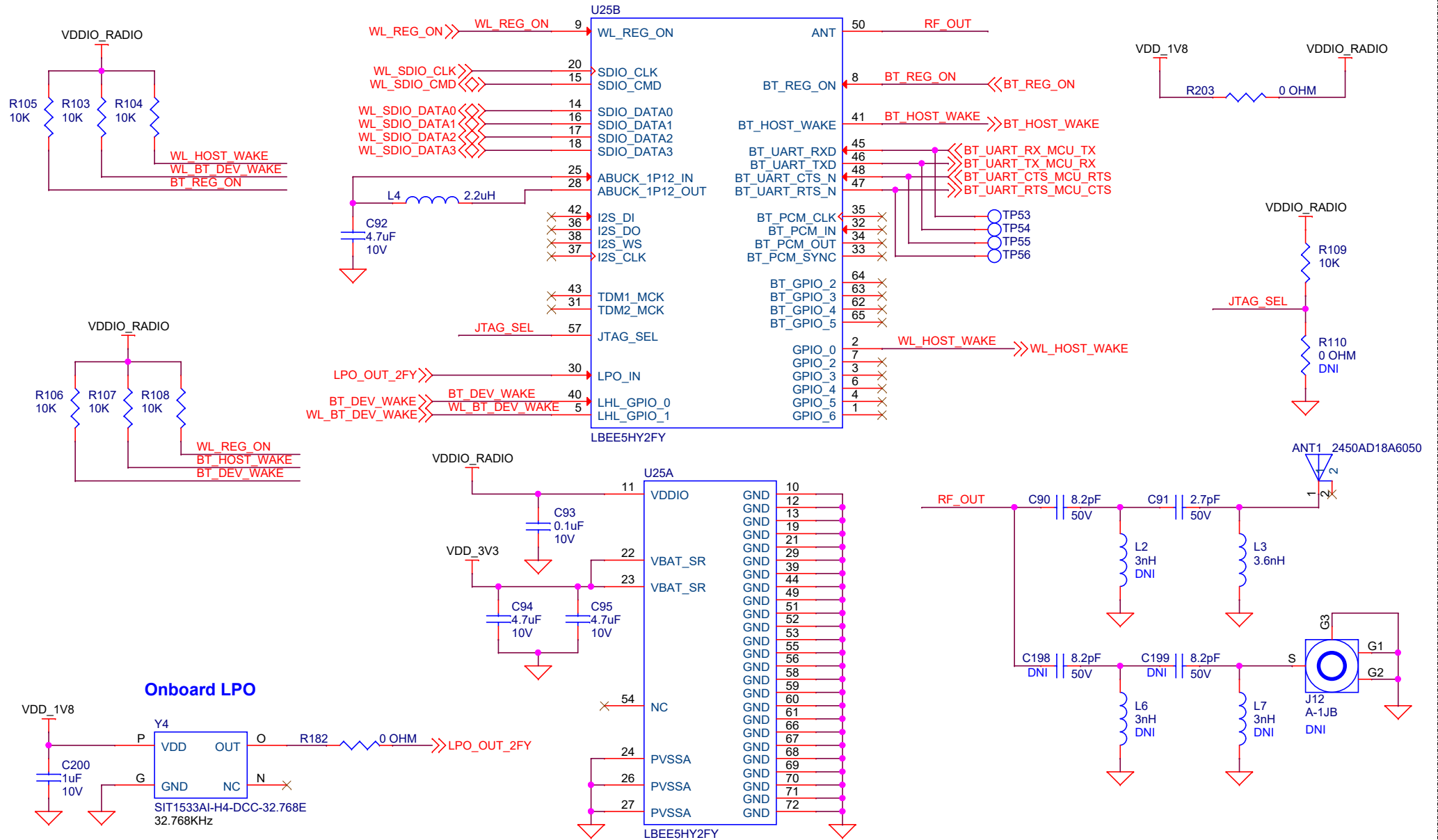


SCH Title : PSOC™ Edge E84 AI Board

Page Title : RADAR Sensor interface

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# Onboard Hatchet-1 2FY Radio



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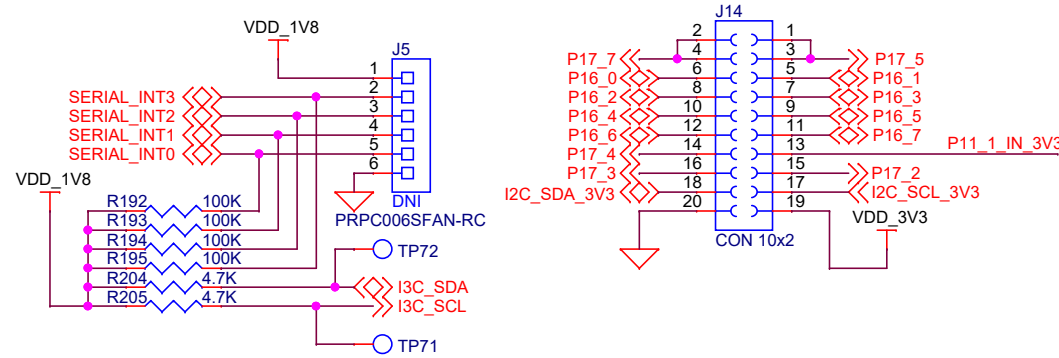


SCH Title : PSOC™ Edge E84 AI Board

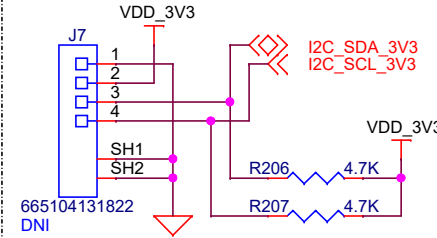
Page Title : 2FY Module Interface (Wi-Fi & BLE)

Size	Document Number	Drawn By	Approved By	Rev
A4	630-60751-01	Vamsi	Ronak	03
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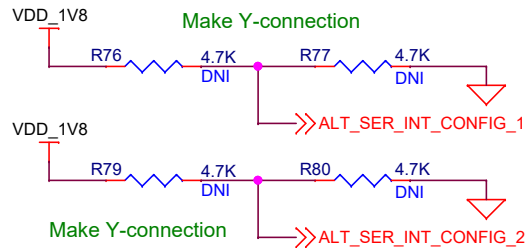
## Expansion IO Header



## QWIIC interface



## Alternative Serial Interface Configuration



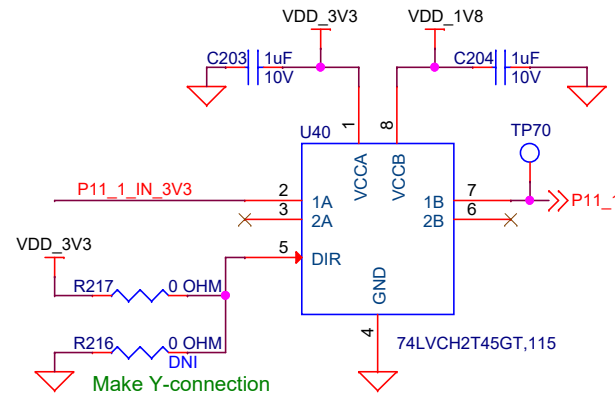
	R76, R77: DNI	R76: MOUNT; R77: DNI	R76: DNI; R77: MOUNT
R79, R80: DNI	N/A*	N/A*	N/A*
R79: MOUNT; R80: DNI	RFU**	UART	RFU**
R79: DNI; R80: MOUNT	SPI	I2C	SPI

\* This feature is not supported on this board.

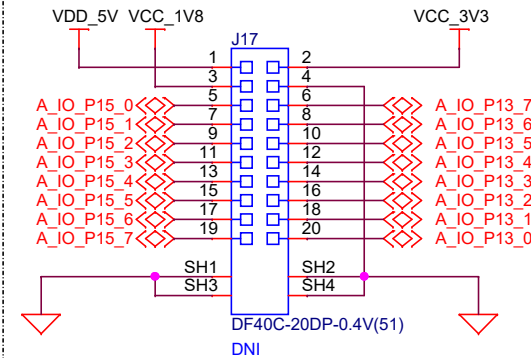
\*\* RFU: Reserved for future use

**NOTE:** Alternate serial interface is not supported by default.

## PCLK Level translator



## Analog Expansion IO connector



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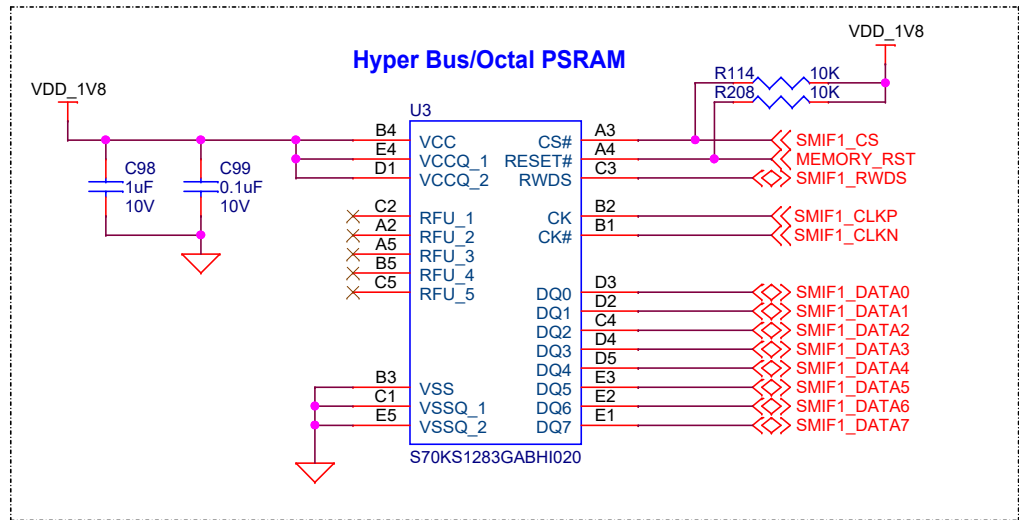
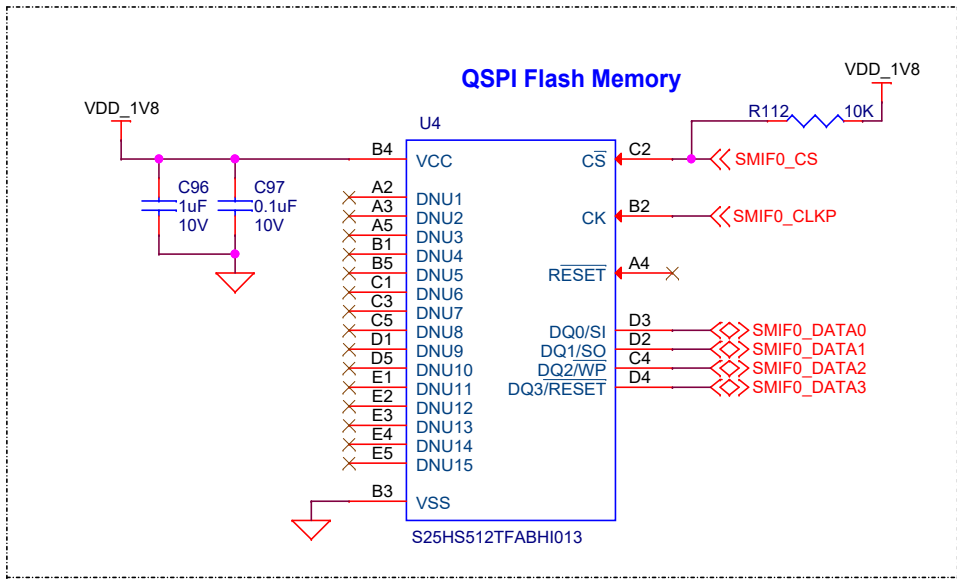
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**SCH Title : PSOC™ Edge E84 AI Board**

**Page Title: IO Expansion, QWIIC and Headers**

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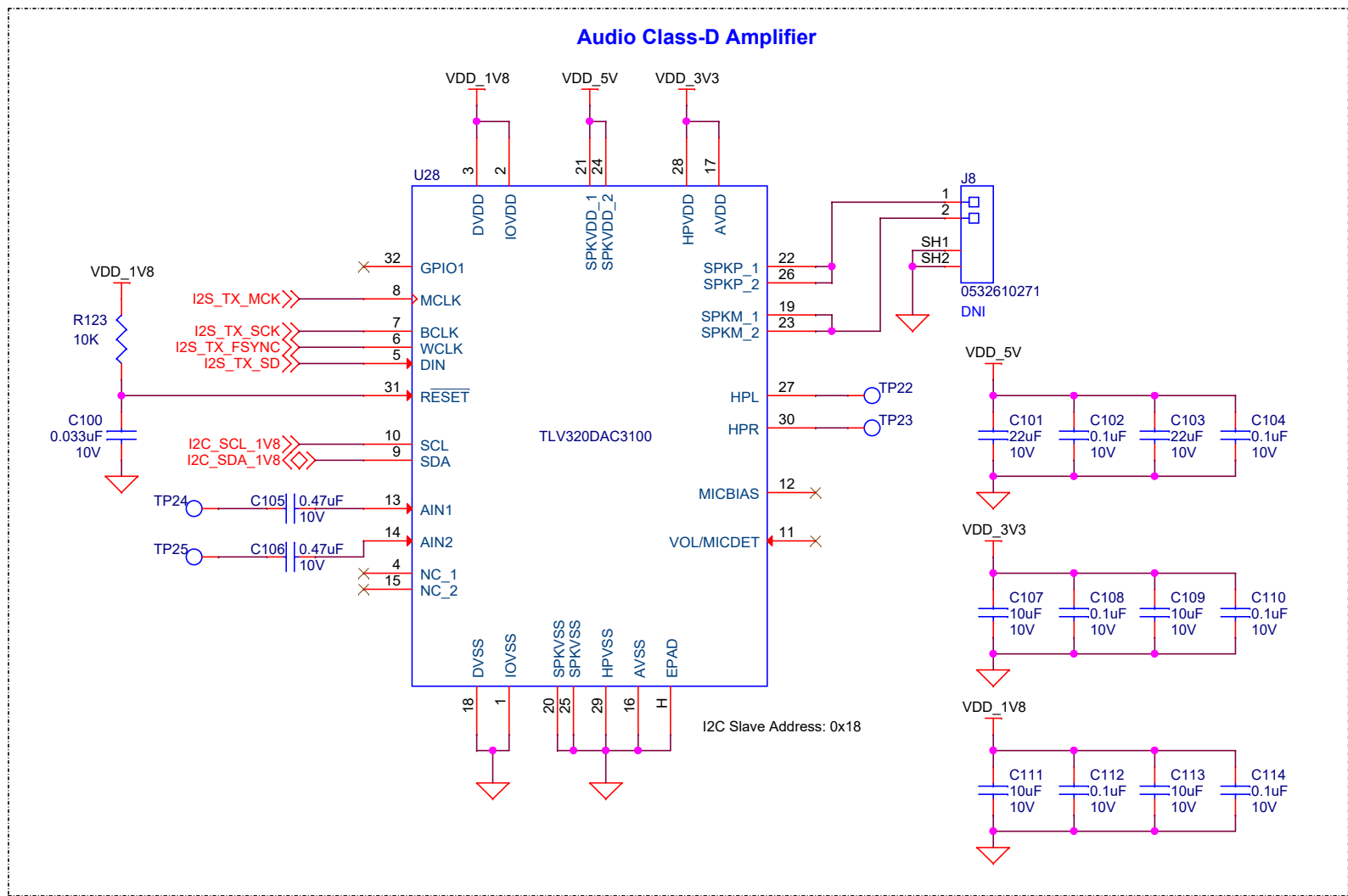
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**SCH Title : PSOC™ Edge E84 AI Board**

**Page Title: Flash memory and RAM interface**

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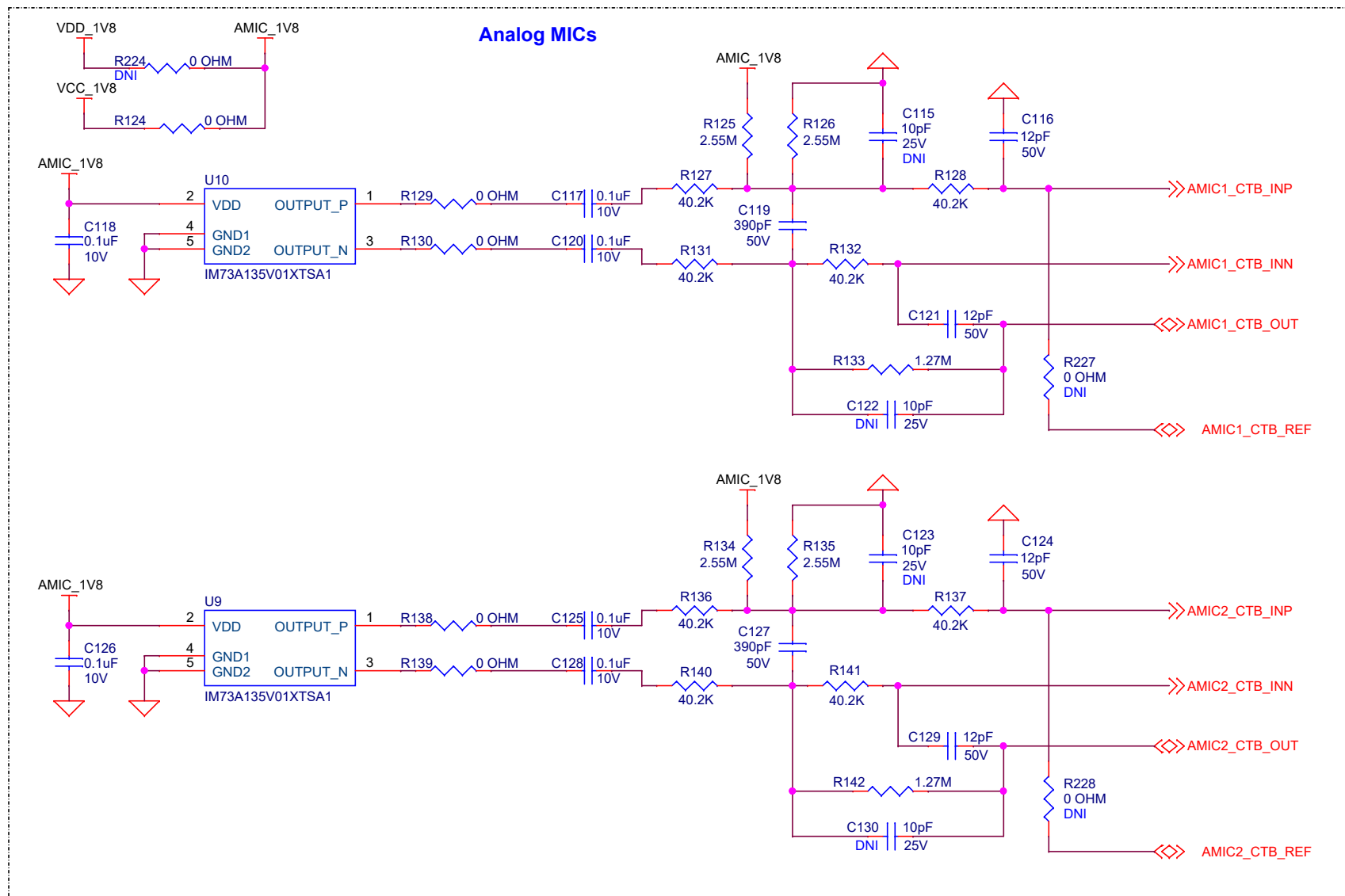
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**Page Title : Audio Class-D amplifier interface**

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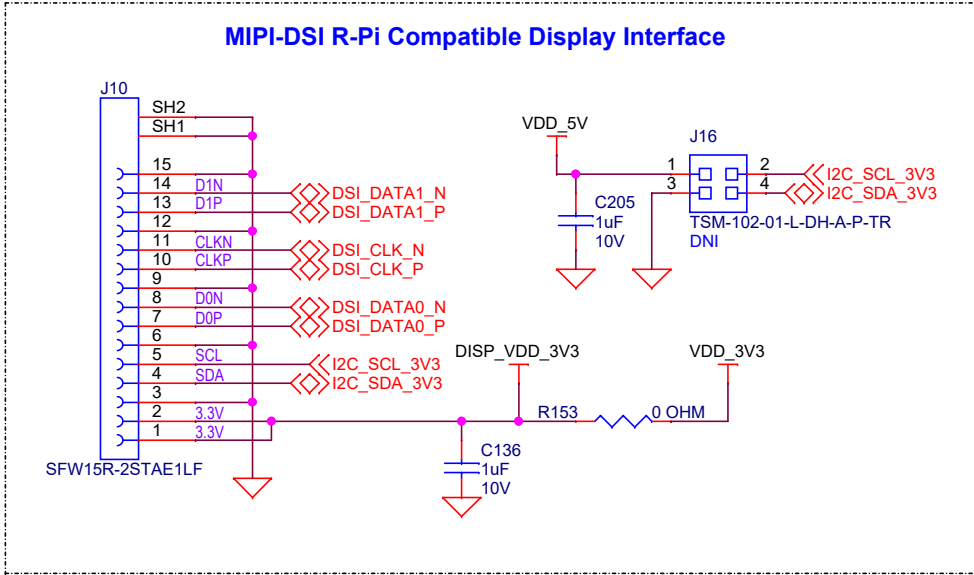
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**Page Title: Analog Mic's interface**

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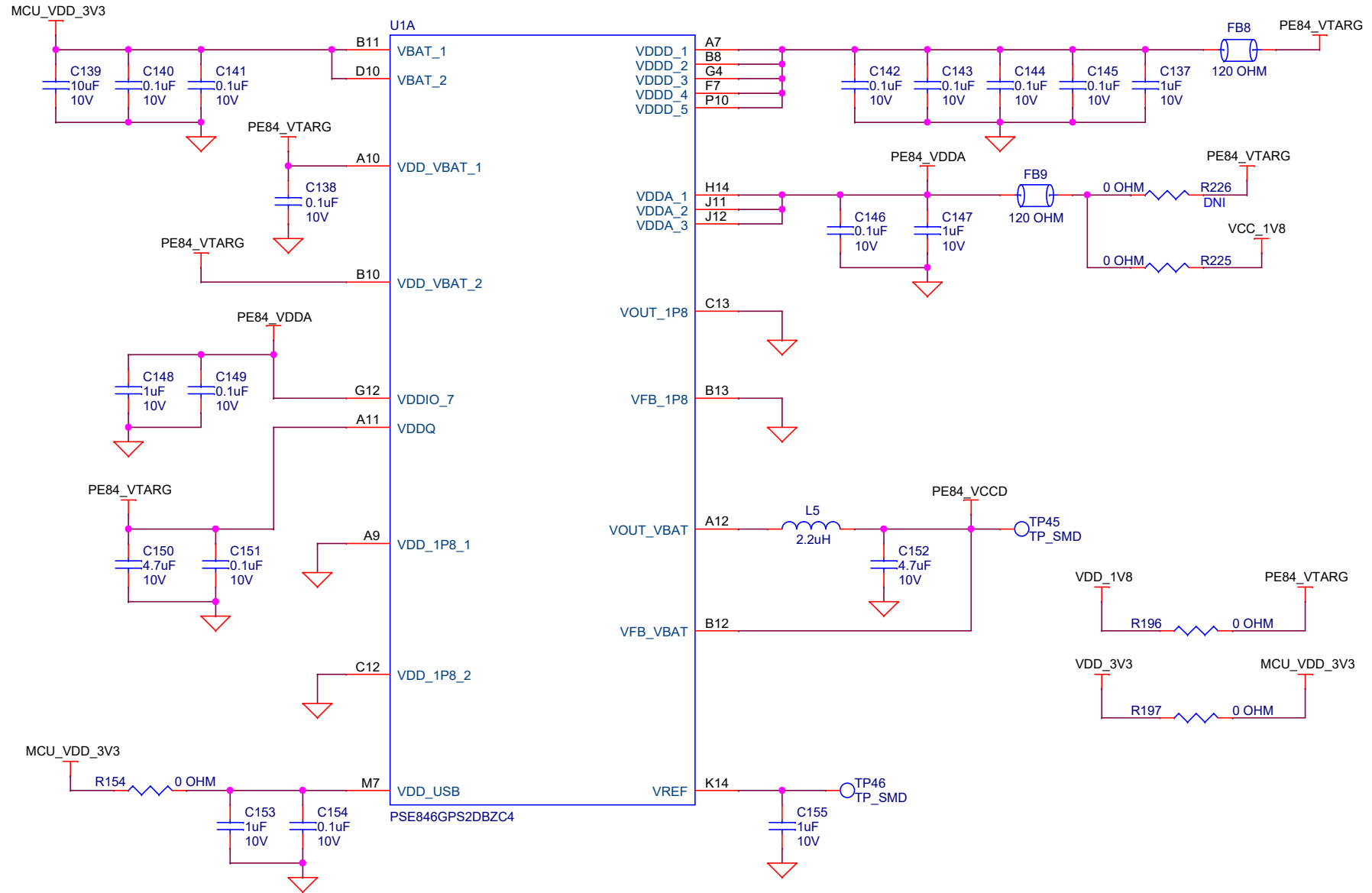


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## PSOC Edge E84 Power 1



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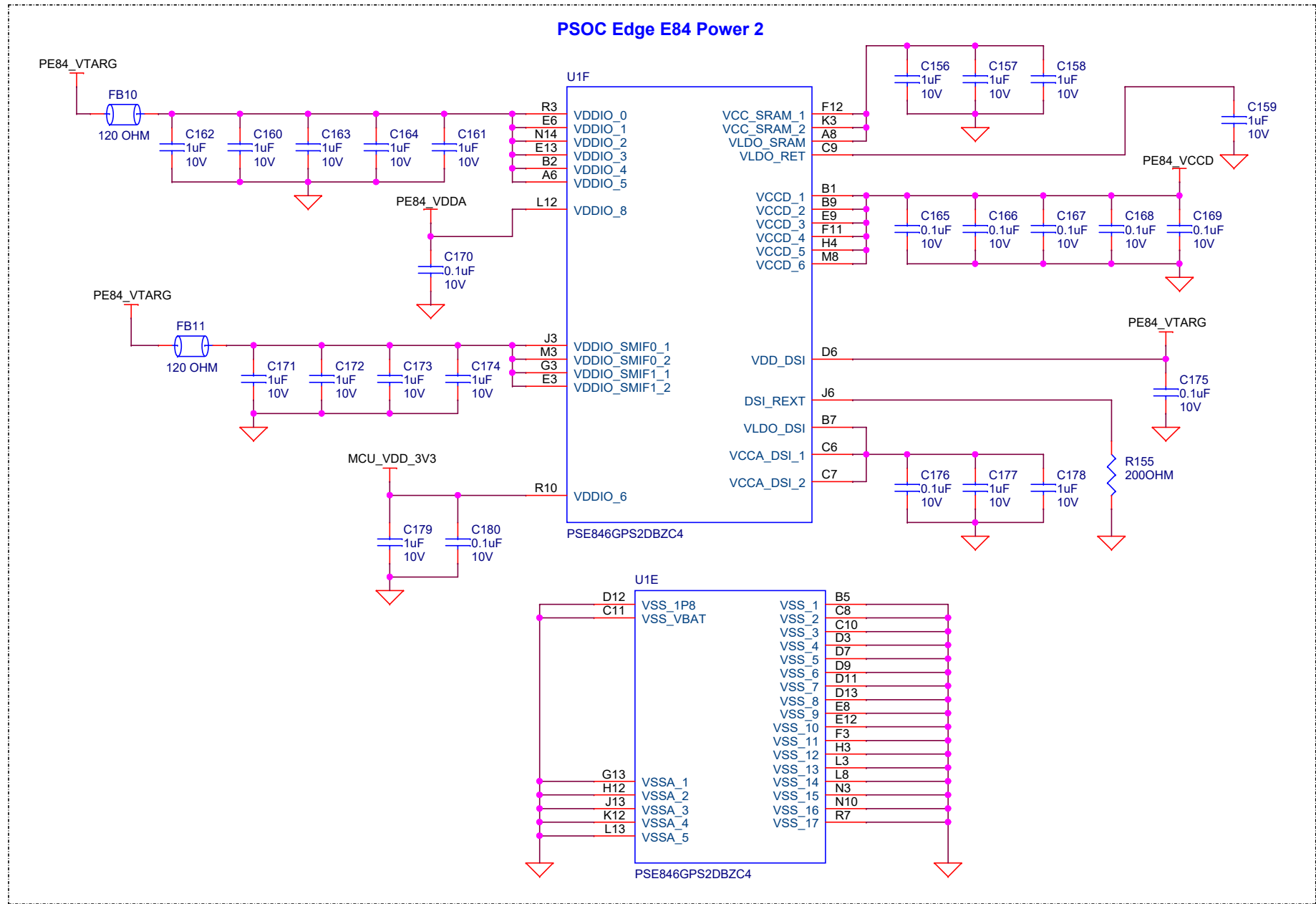
## Ronak

## 03

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# PSOC Edge E84 Power 2



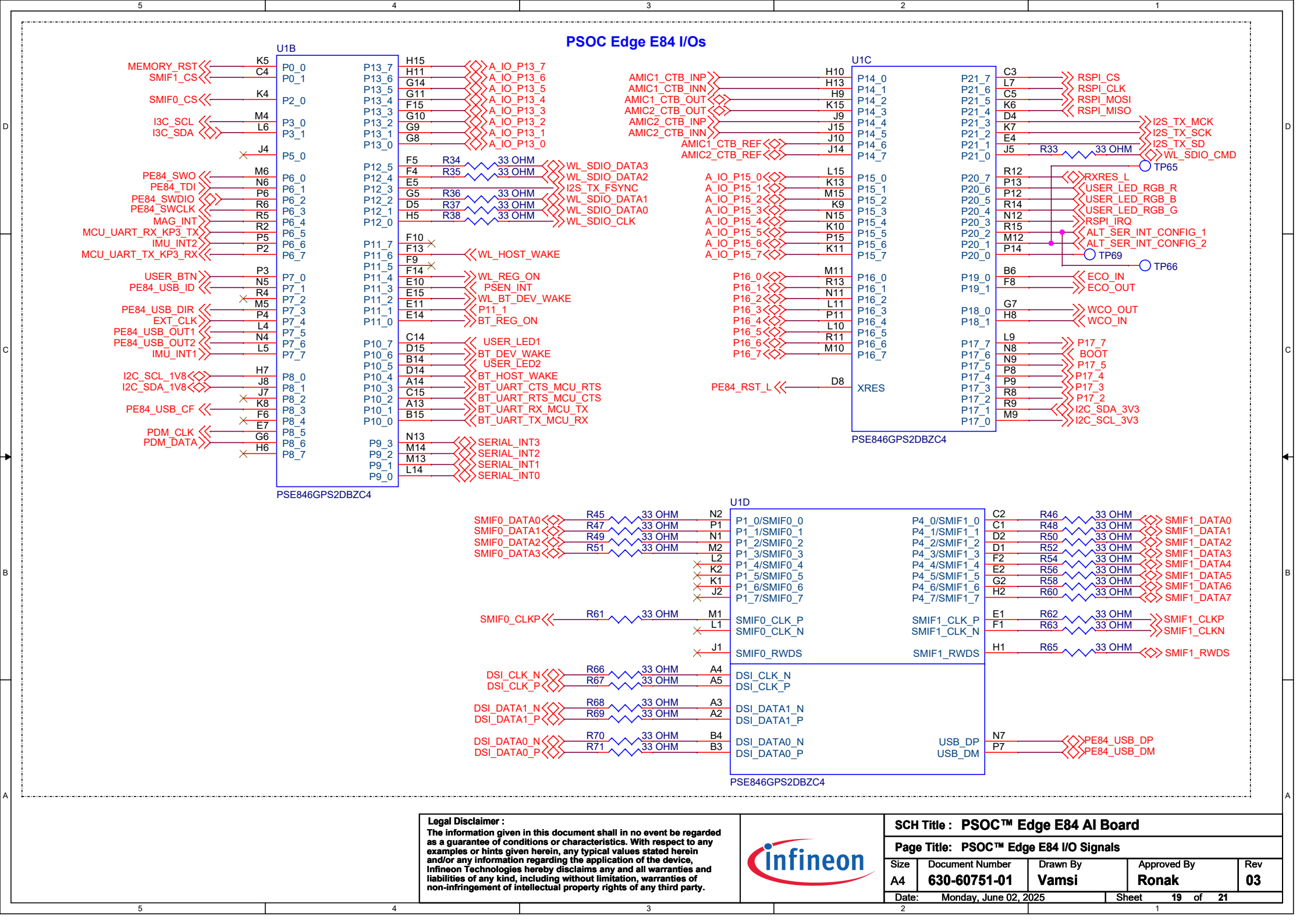
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# Accessories

## QR Code

899-60373-01



ACC10

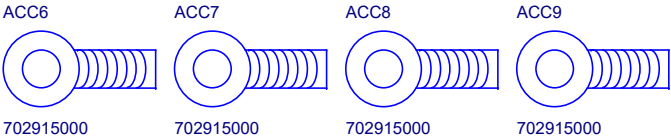
## PCBA Label

PCA Label



ACC11

## Nylon Standoffs



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REVISION HISTORY		
REV	DESCRIPTION OF CHANGE	DATE
0.01	Initial darft schematic	03-12-2024
0.02	Initial pin assignment feasibility and open net fixes	26-12-2024
0.03	Updated power rails and added pull resistor provision for input signals	07-01-2024
0.04	Update of DVP connector pin assignment	24-01-2024
0.05	added the Pressure sensor interrupt	24-01-2024
0.06	VBAT suuply for 2FY module fixed and added pullup for MEMORY RESET signal	27-01-2024
0.07	Updated IO pin assignment	30-01-2024
0.08	Updated IO pin assignment and added resistor for external Clock	10-02-2024
01	Initial release	12-02-2024
1.01	Updated with UART Fix and Pull up for the load switch	12-02-2024
1.02	Updated I3C provision for BMM350	12-02-2024
1.03	Updated the LED series resistor and LED2 colour	12-03-2025
1.04	LED series resistor are updated for USB device and Host LED	13-03-2025
1.05	Combined the analog ground and digital grounds, Added analog IO Expansion connector, Updated the Pin assignment	02-04-2025
1.06	optimized pin assignments for layout feasibility	07-04-2025
1.07	added test points for I3C interface	09-04-2025
02	Rev02 release	11-04-2025
03	Rev03 release: updated QSPI flash and RF Matching circuit	20-05-2025

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**Page Title: Revision History**

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