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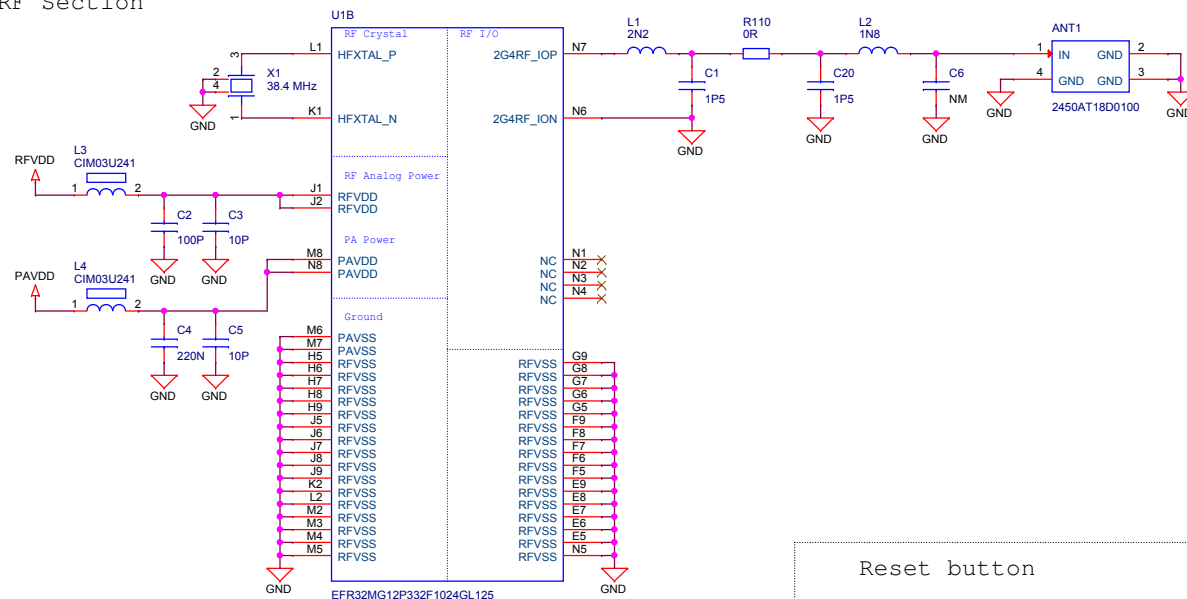


Revision History	
Rev.	Description
A00	Initial prototype version.
B00	Updated EFR32 and debugger IC revisions. Replaced analog microphone with an I2S-based digital one.

SCHEMATIC1			
		Schematic Title	
Designed: DDB		Approved: JNO	
Size: A3		BOM Doc No: <Cage Code>	
Design Created Date: Wednesday, November 30, 2016		Sheet Created Date: Wednesday, November 30, 2016	
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		Revision: B00	
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RF Section

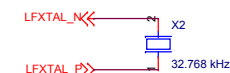
2.4 GHz matching network



Mounting Holes



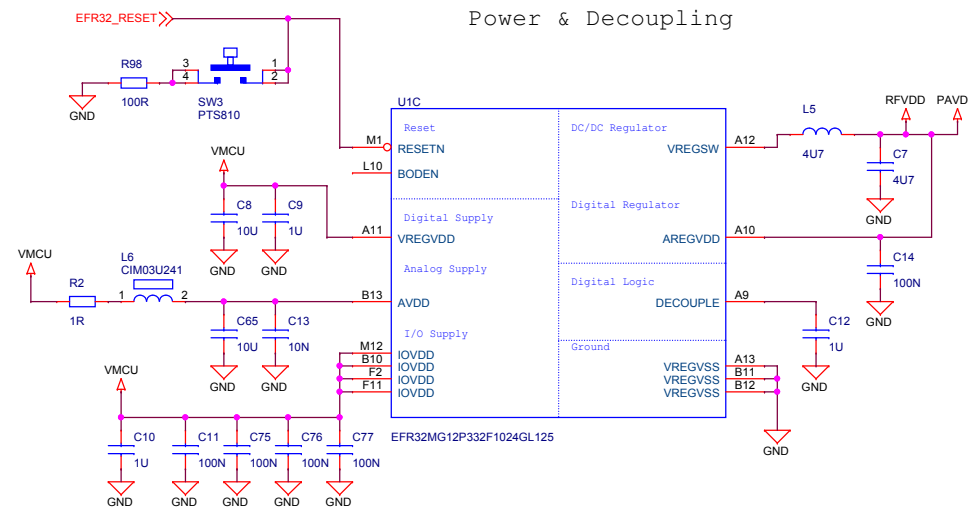
Low Frequency Crystal



GPIO Pins



Reset button



Power & Decoupling

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Wednesday, November 30, 2016

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September 30, 2016

Schematic Title

Thunderboard Sense 2

Page Title

EFR32 - RF, power & IO

Document number

BRD4166A

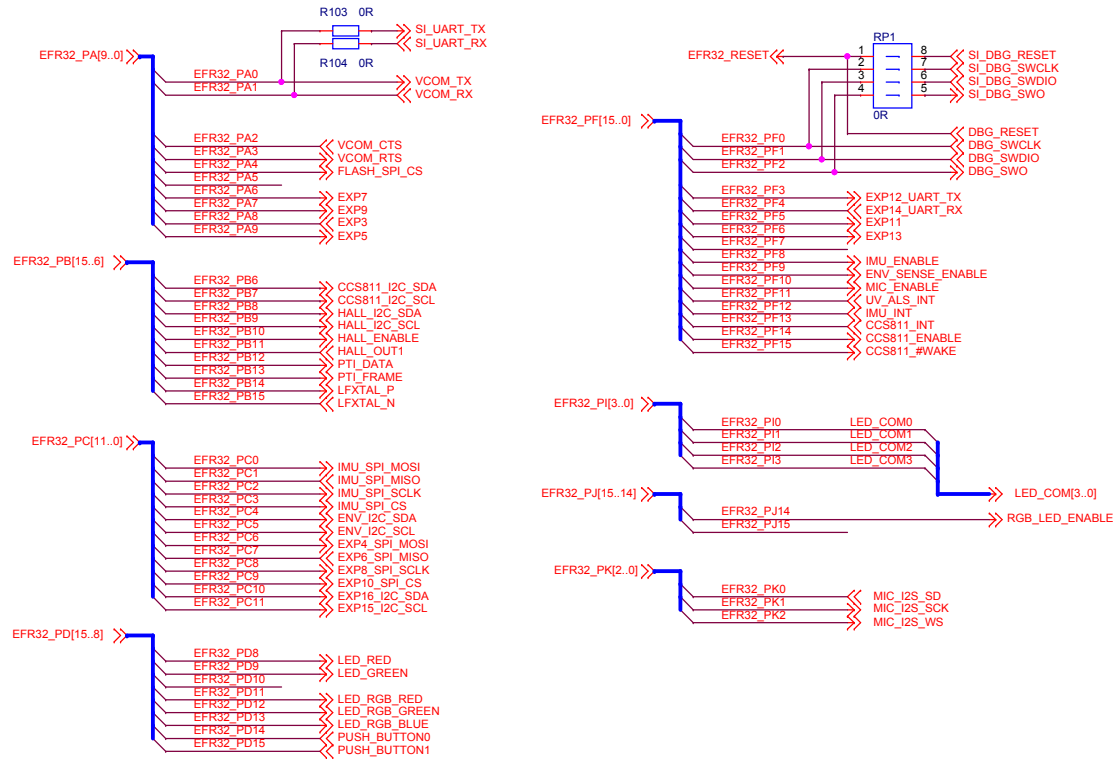
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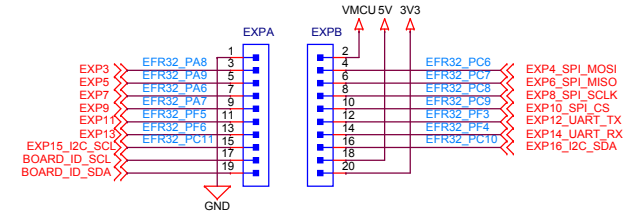
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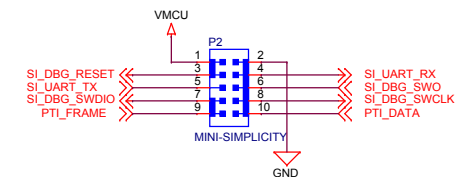
EFR32 I/O Connections



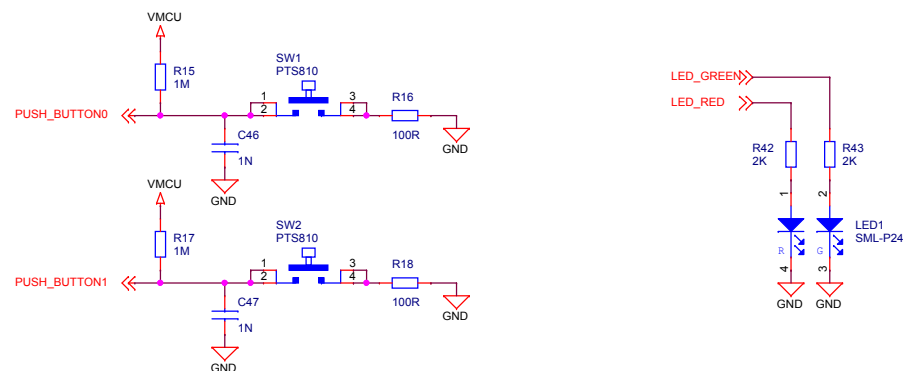
Breakout Pads - EXP Header



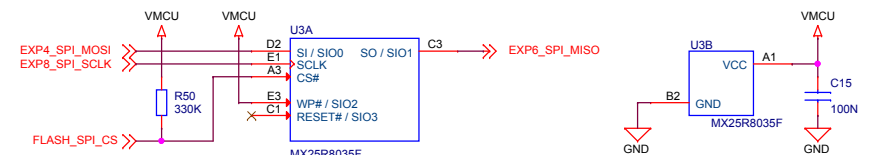
Mini Simplicity Connector



Push Buttons & LEDs



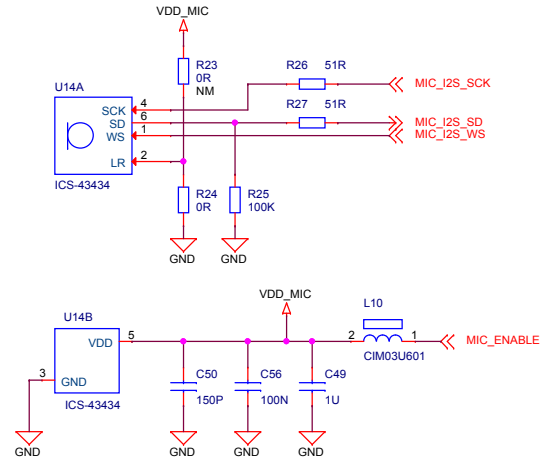
SPI Flash



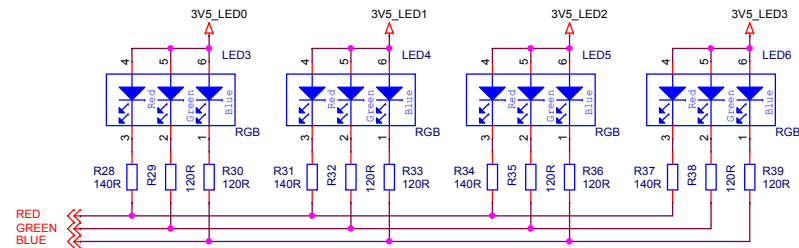
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Designed: DDB Size: A3 Design Created Date: Wednesday, November 30, 2016				Page Title EFR32 connections & interfaces	
Approved: JNO BOM Doc No: <Cage Code>				Document number	Revision
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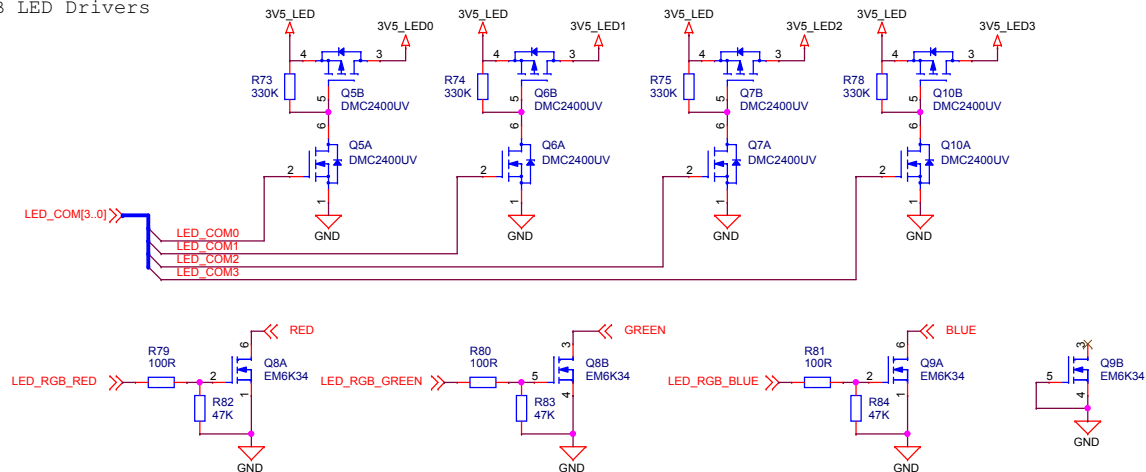
MEMS Microphone



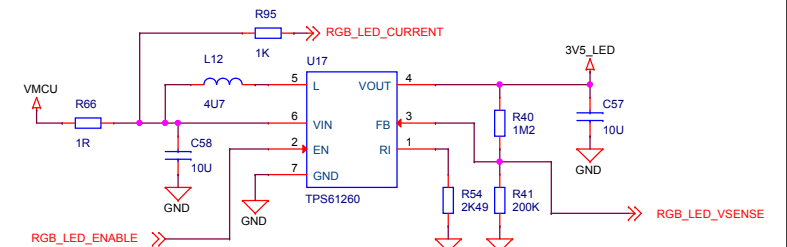
RGB LEDs



RGB LED Drivers



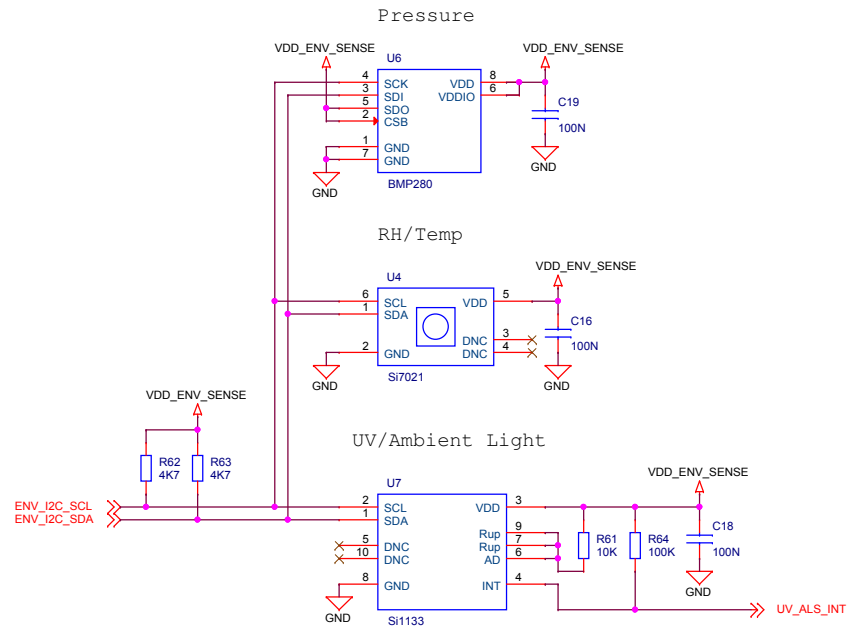
RGB LED power supply



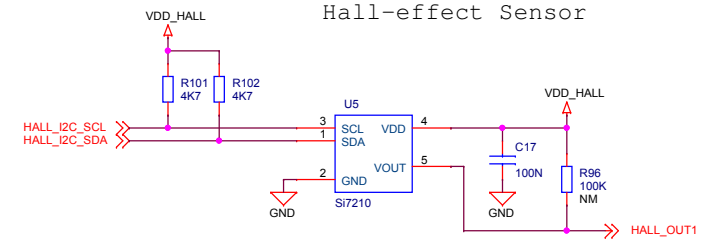
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Size A3		MEMS Microphone & RGB LEDs	
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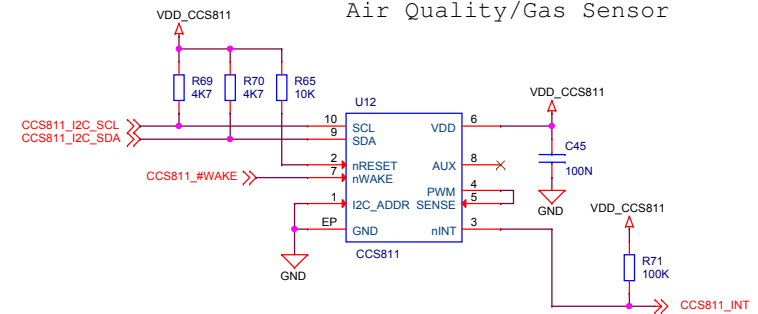
Environmental Sensors



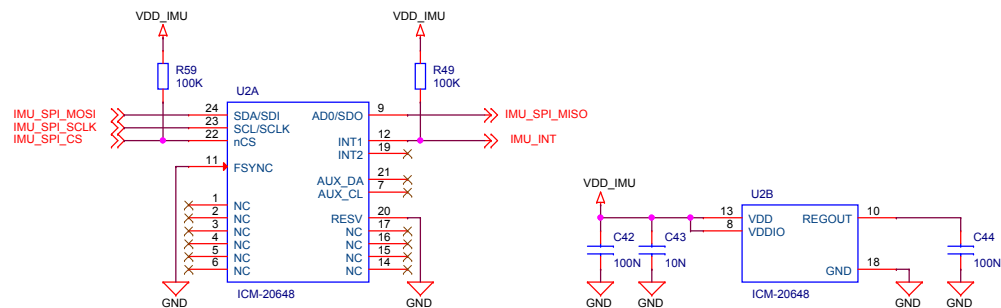
Hall-effect Sensor



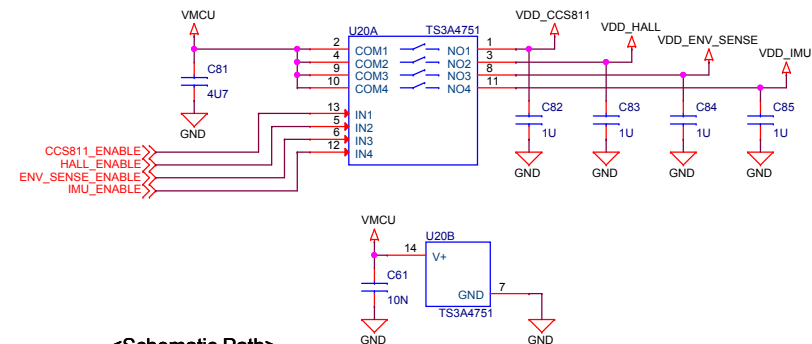
Air Quality/Gas Sensor



6-axis inertial sensor



Sensor Power Control



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Thunderboard Sense 2

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I2C & SPI Sensors

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Debug MCU Connections to Mini Simplicity Header

RP2

DBGMCU_SWDIO <-> 1 8 <-> SI_DBG_SWDIO

DBGMCU_SWCLK <-> 2 7 <-> SI_DBG_SWCLK

DBGMCU_SWO <-> 3 6 <-> SI_DBG_SWO

DBGMCU_RESET <-> 4 5 <-> SI_DBG_RESET

OR

NM

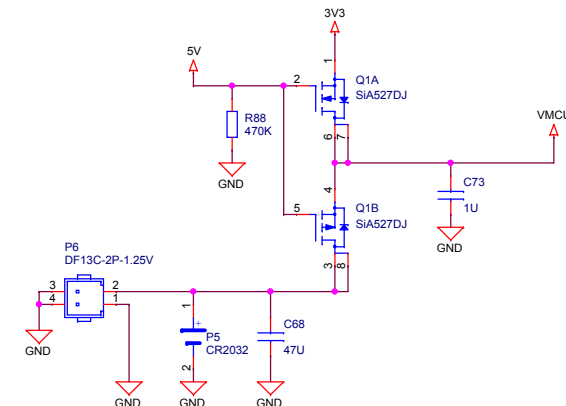
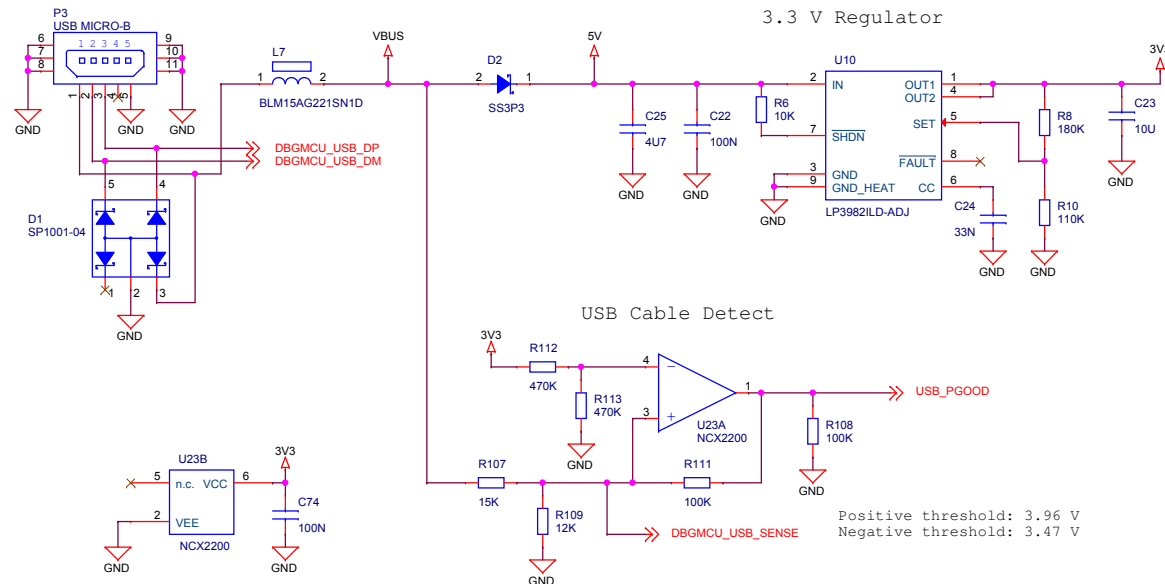
R105 OR NM

DBGMCU_TXD <-> SI_UART_TX

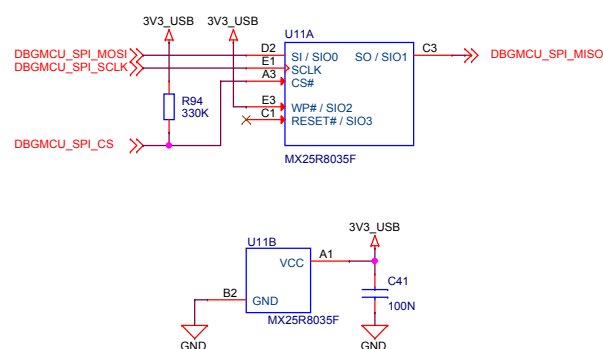
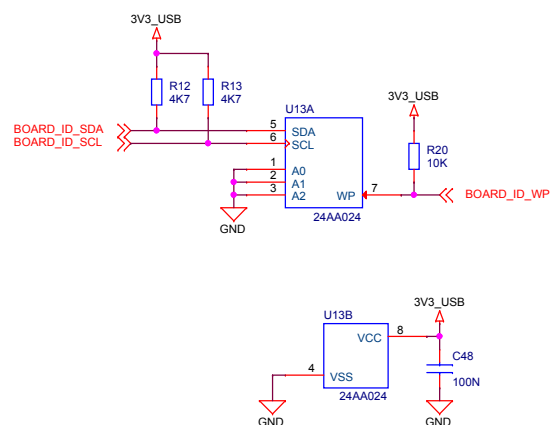
DBGMCU_RXD <-> SI_UART_RX

R106 OR NM

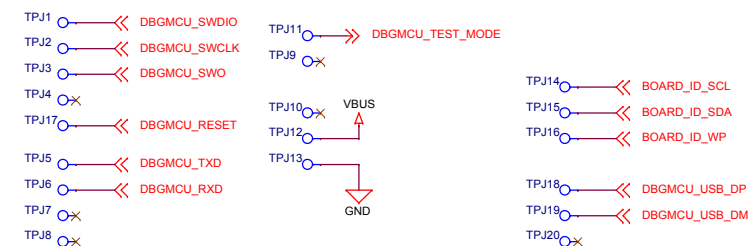
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		Page Title Debug MCU	
Designed: DDB	Approved: JNO	Document number BRD4166A	Revision B00
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Additionally, the Mini Simplicity Debug connector can supply power directly to the target voltage domain.



Test Points



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