



EFM8SB2 Sleepy Bee STK	
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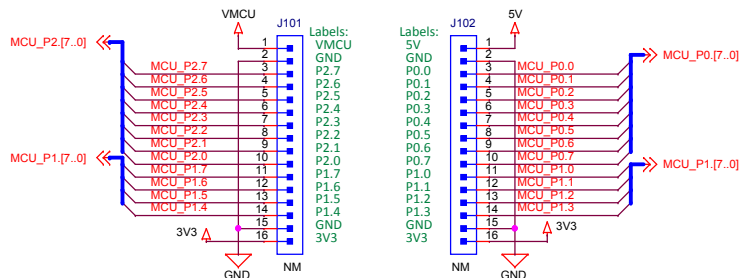
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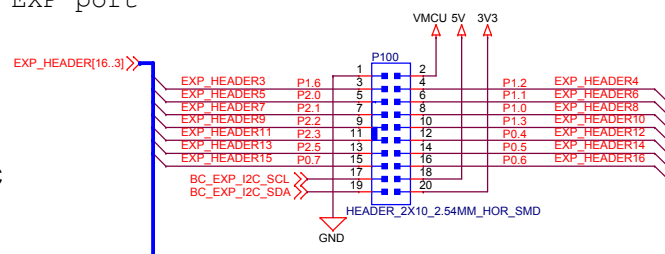
Revision History	
Rev.	Description
A00	Initial release for production.
A01	Removed ST1 and J103 from the BOM.
A02	Updated PCB revision.
A03	Updated EFM8 to Rev B. Un-mounted D801.
A04	Changed joystick to L-KLS7-MT-03

/ STK			
		Schematic Title	
SILICON LABS		EFM8SB2 Sleepy Bee STK	
Designed: MRW		Page Title	
Approved: JNO		Title Page	
Size: A3		Document number	
BOM Doc No:		BRD5100A	
Design Created Date: Wednesday, December 03, 2008		Sheet Created Date: Thursday, May 15, 2014	Revision: A04
		Sheet Modified Date: Wednesday, October 30, 2019	Sheet 1 of 11

Breakout Connections



EXP port



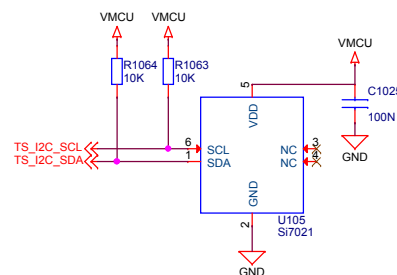
EXP-Header Functionality

** Indicates potential STK hardware conflicts

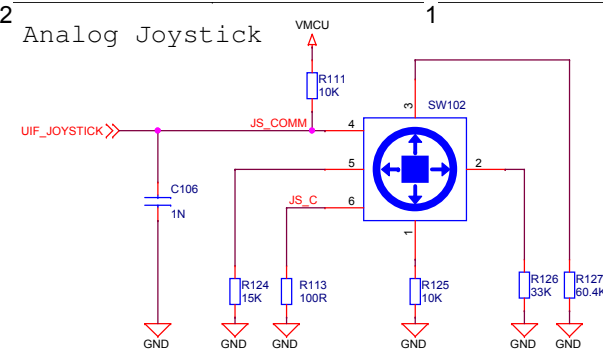
1	GND			
3	P1.6		CMP_P7/ADC0.14	** STK LED0
5	P2.0		CMP_P8/ADC0.16	** STK LED1
7	P2.1		CMP_P9/ADC0.17	** STK LED2
9	P2.2		CMP_P10/ADC0.18	
11	P2.3		CMP_P11/ADC0.19	
13	P2.5		CMP_P12/ADC0.21	
15	P0.7		CMP_P13/ADC0.7	
17			Reserved for EXP Board Identification	
19			Reserved for EXP Board Identification	

2	VMCU			
4	P1.2	SPI0_MOSI	CMP_P5/ADC0.10	
6	P1.1	SPI0_MISO	CMP_P4/ADC0.9	
8	P1.0	SPI0_SCK	CMP_P3/ADC0.8	
10	P1.3	SPI0_NSS	CMP_P2/ADC0.11	
12	P0.4	UART0_TX	CMP_P1/ADC0.4	
14	P0.5	UART0_RX	CMP_P0/ADC0.5	
16	P0.6	I2C0_SDA	CMP_P13/ADC0.6	
18	5V			
20	3V3			

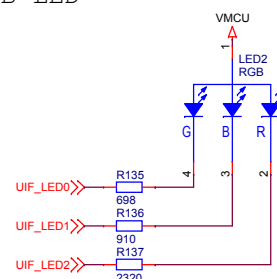
Temperature & Relative Humidity Sensor



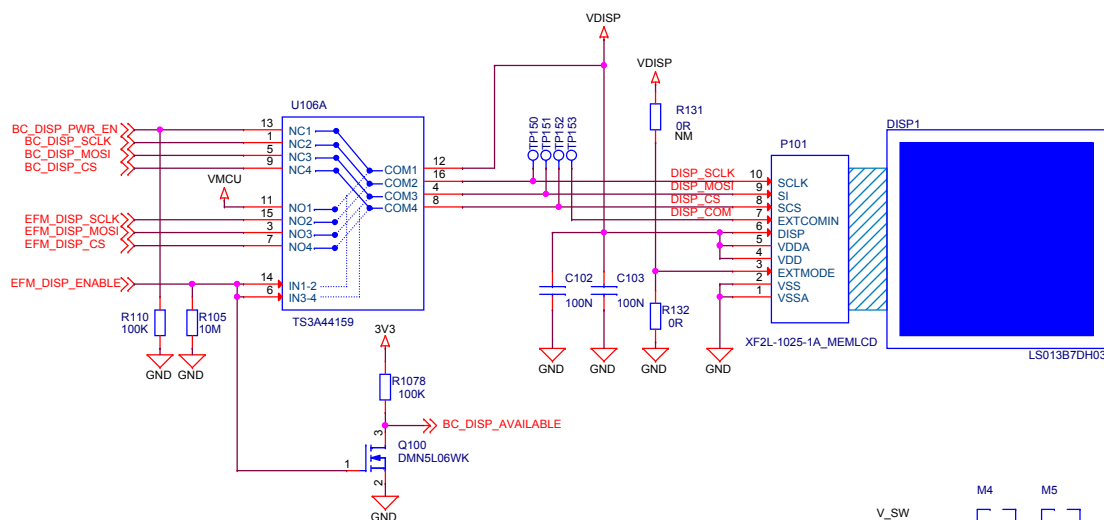
Analog Joystick



RGB LED



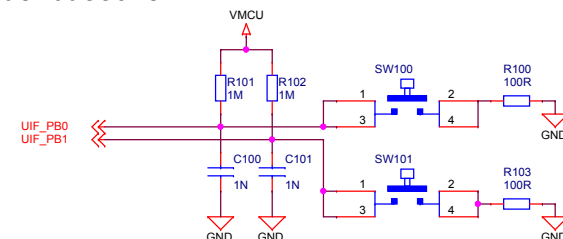
Memory LCD-TFT Display & Multiplexer



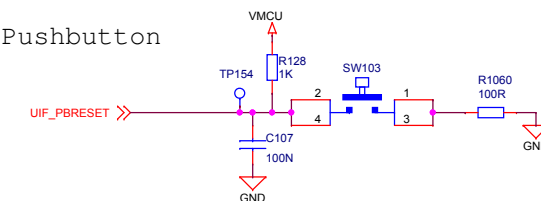
The EFM8 always controls ownership of the display using the EFM_DISP_ENABLE signal.

EFM_DISP_ENABLE	DISP_CTRL	VDISP
0	BC	BC_DISP_PWR_EN
1	EFM	VMCU

User pushbuttons

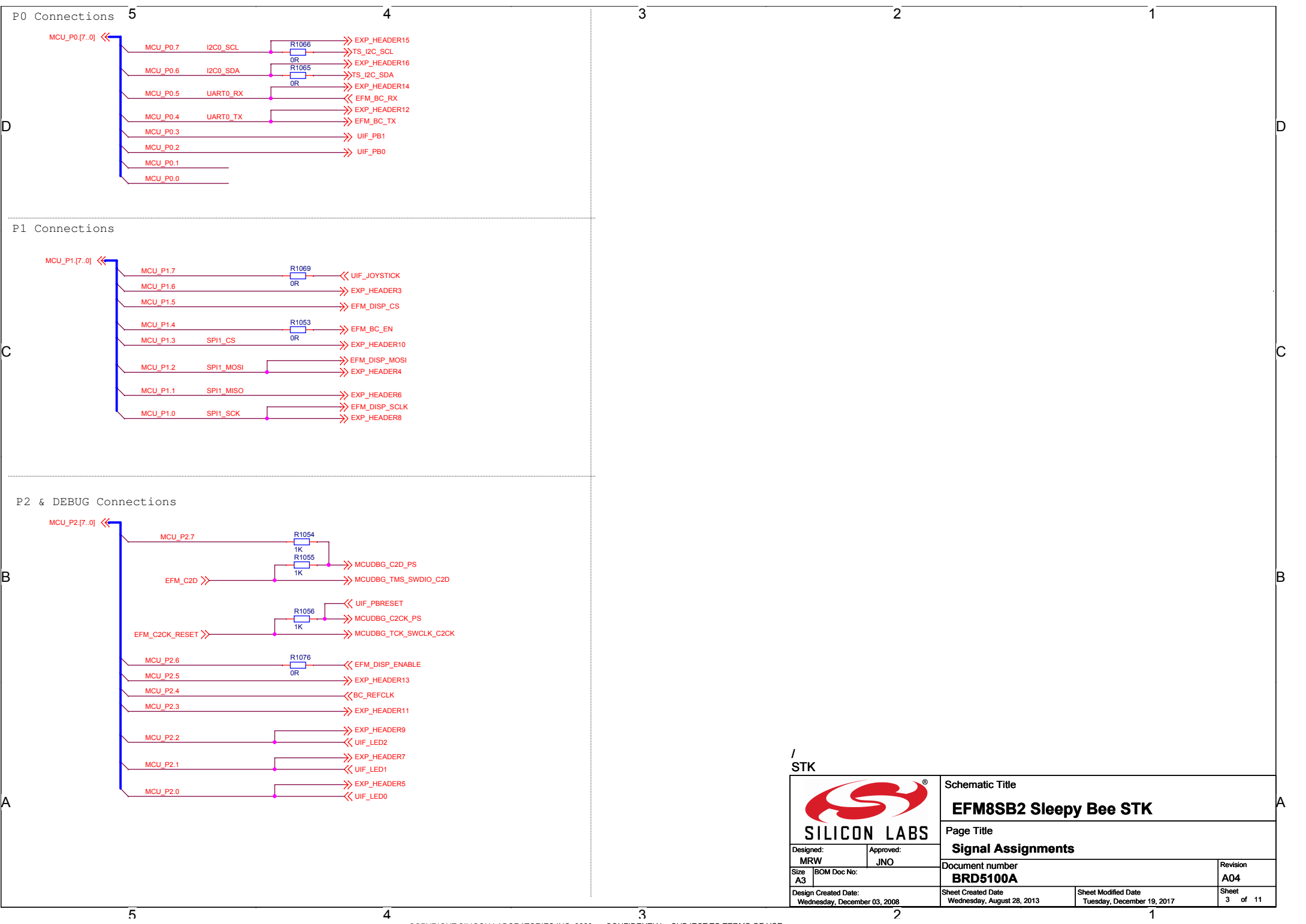


RESET Pushbutton



/ STK

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		EFM8SB2 Sleepy Bee STK	
Designed: MRW Size: A3 BOM Doc No:		Page Title	
		User Interfaces	
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/ STK

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D

C

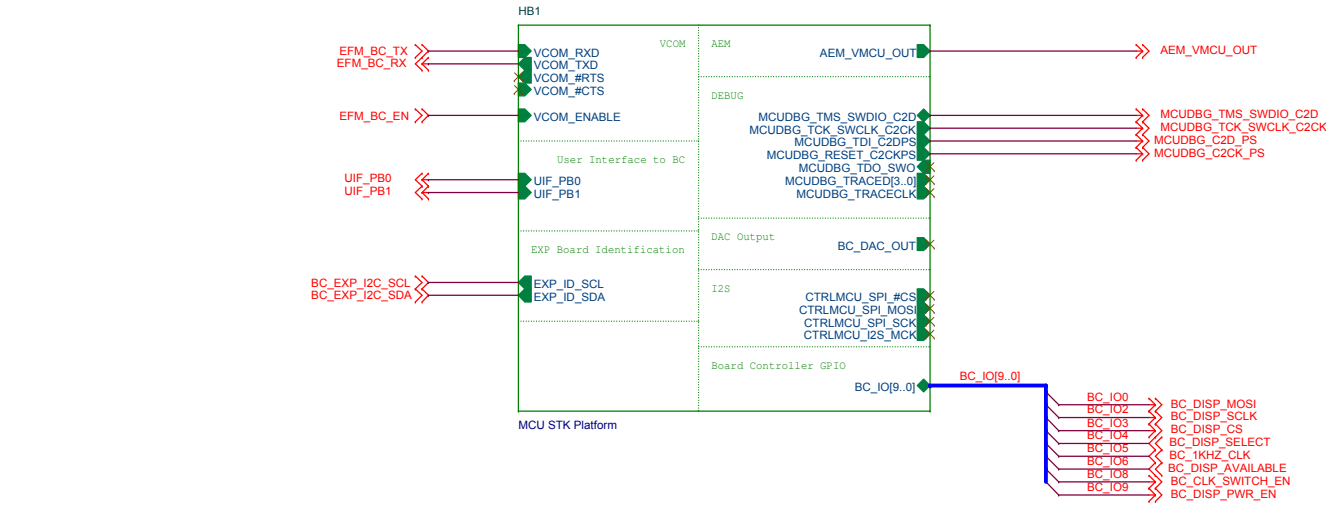
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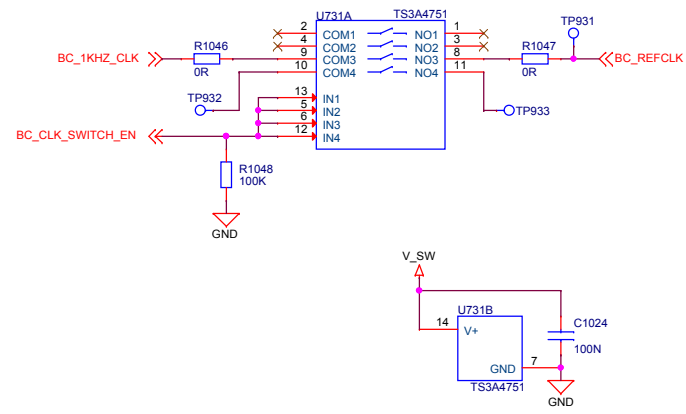
3



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Analog Switch





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Schematic Title

EFM8SB2 Sleepy Bee STK

Page Title

STK Common Platform

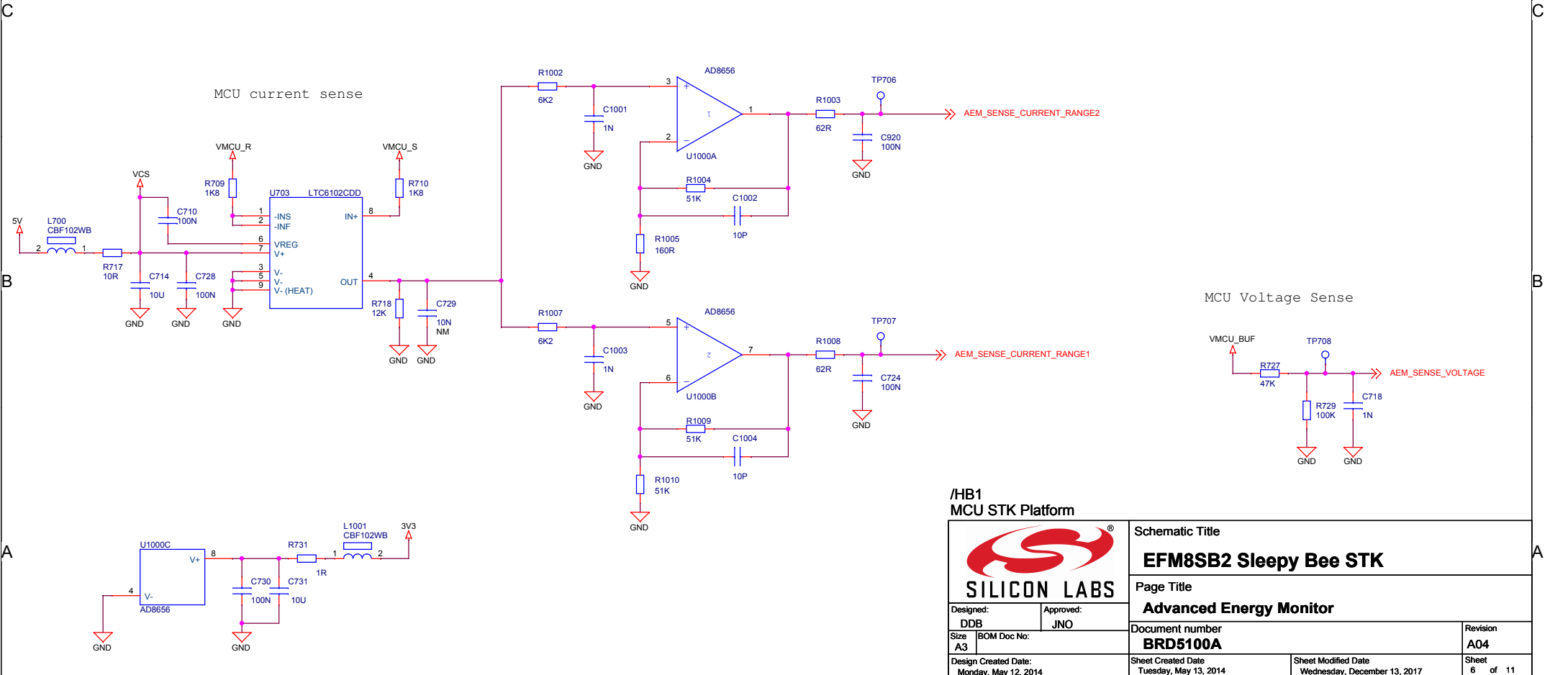
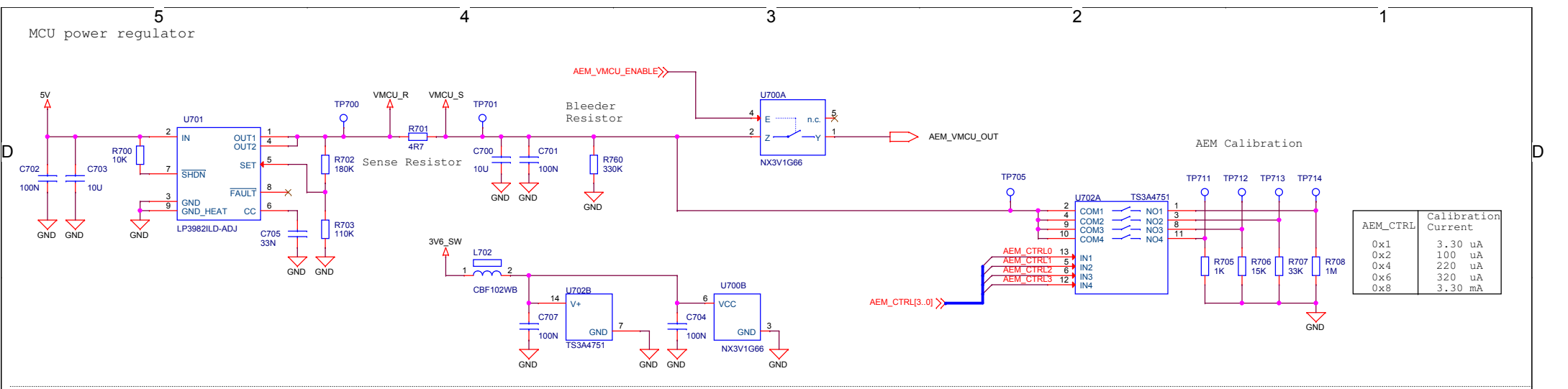
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/HB1
MCU STK Platform

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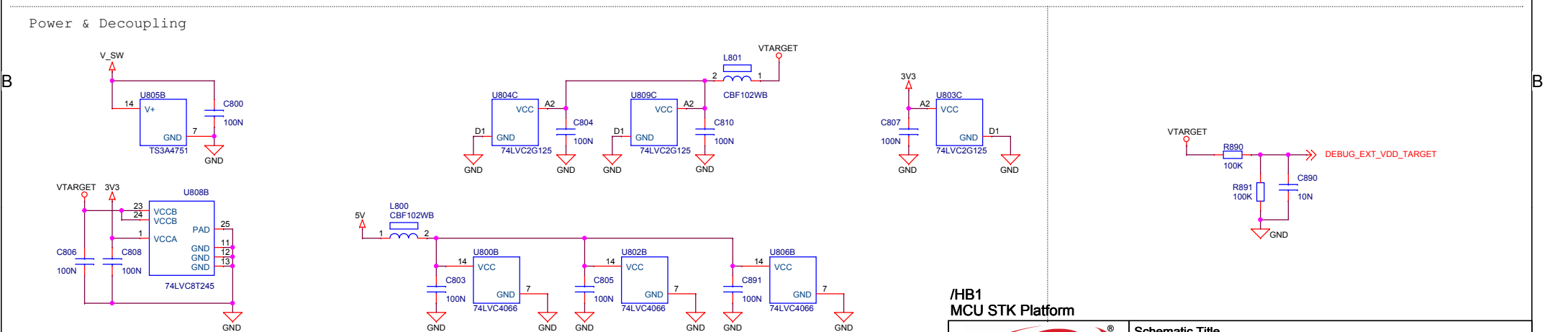
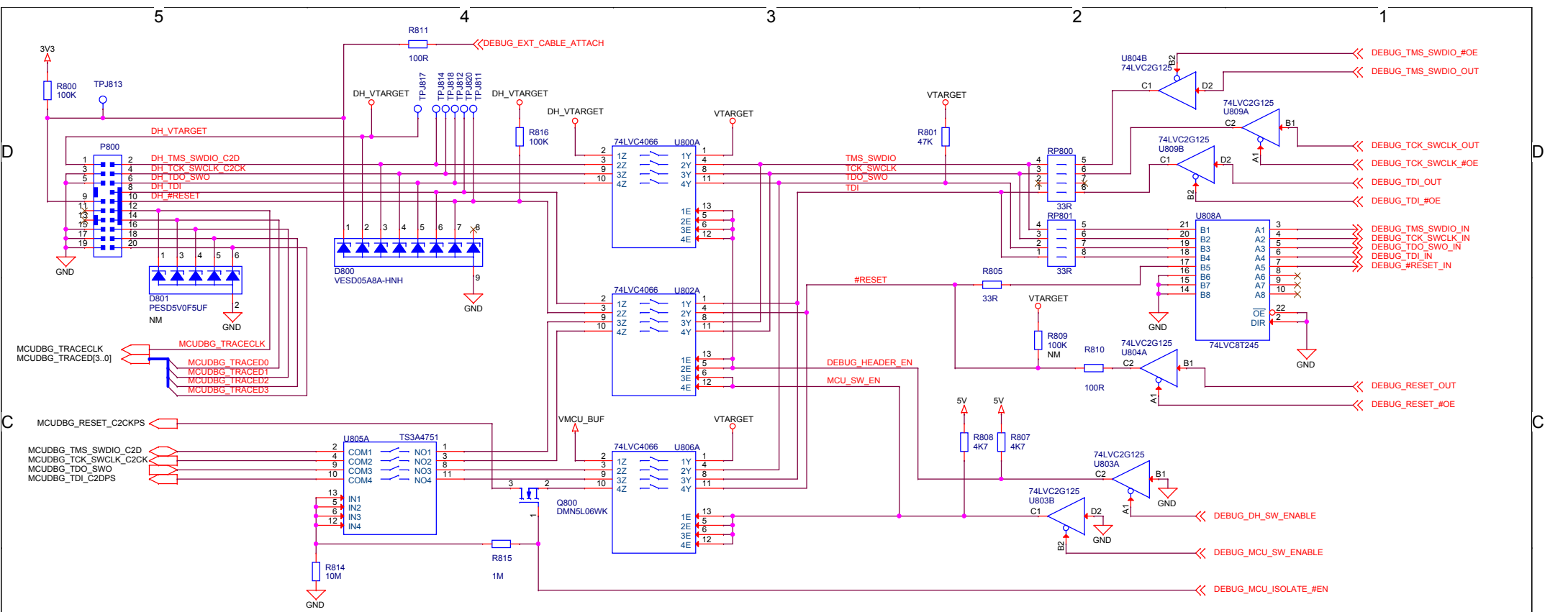
Schematic Title
EFM8SB2 Sleepy Bee STK

Page Title
Advanced Energy Monitor

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BRD5100A

Revision
A04

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Mode	DEBUG_MCU_SW_ENABLE	DEBUG_DH_SW_ENABLE	DEBUG_BUF_#OE	ISOLATE_#EN	DH_VTARGET	VTARGET
Debug Out	0	1	0	0	External voltage	External voltage
MCU Debug	1	0	0	1	Disconnected	VMCU
Debug In	1	1	1	1	VMCU	VMCU
Debug Off	1	1	1	0	-	-



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Schematic Title
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Page Title
Debug Interface

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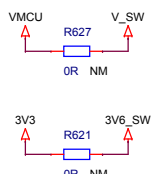
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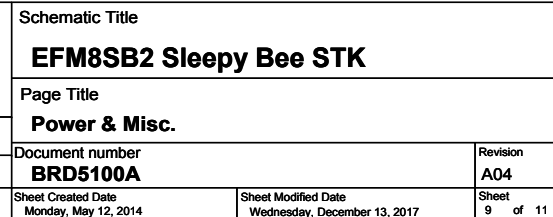
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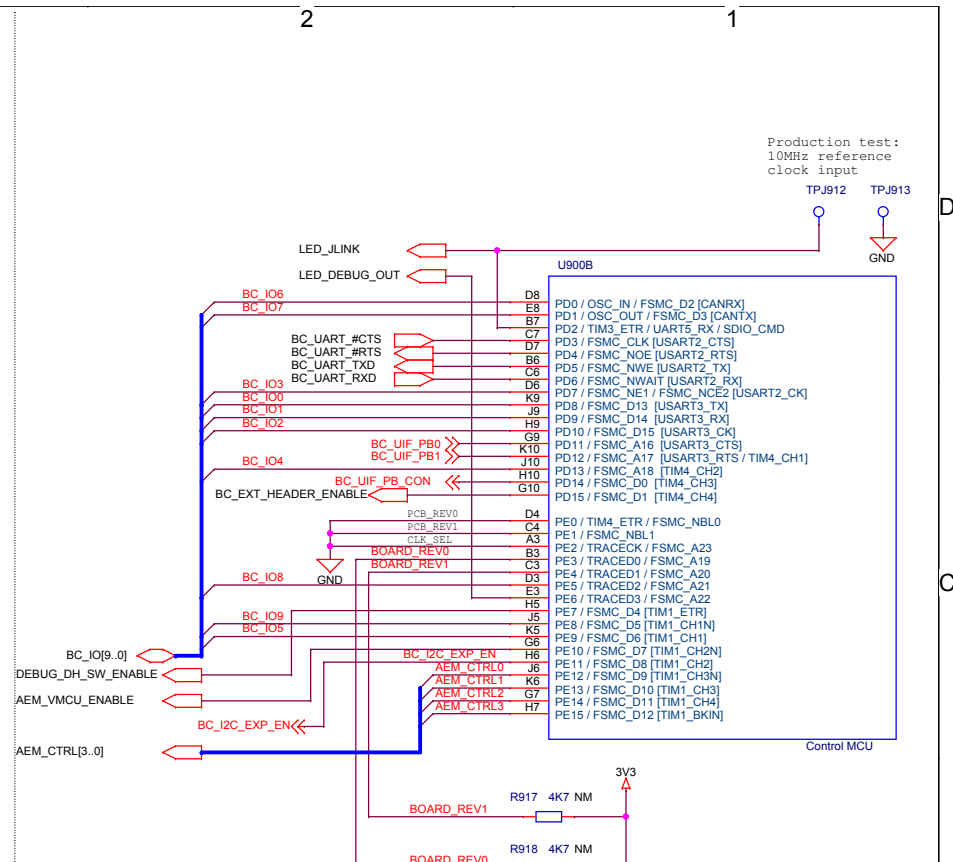
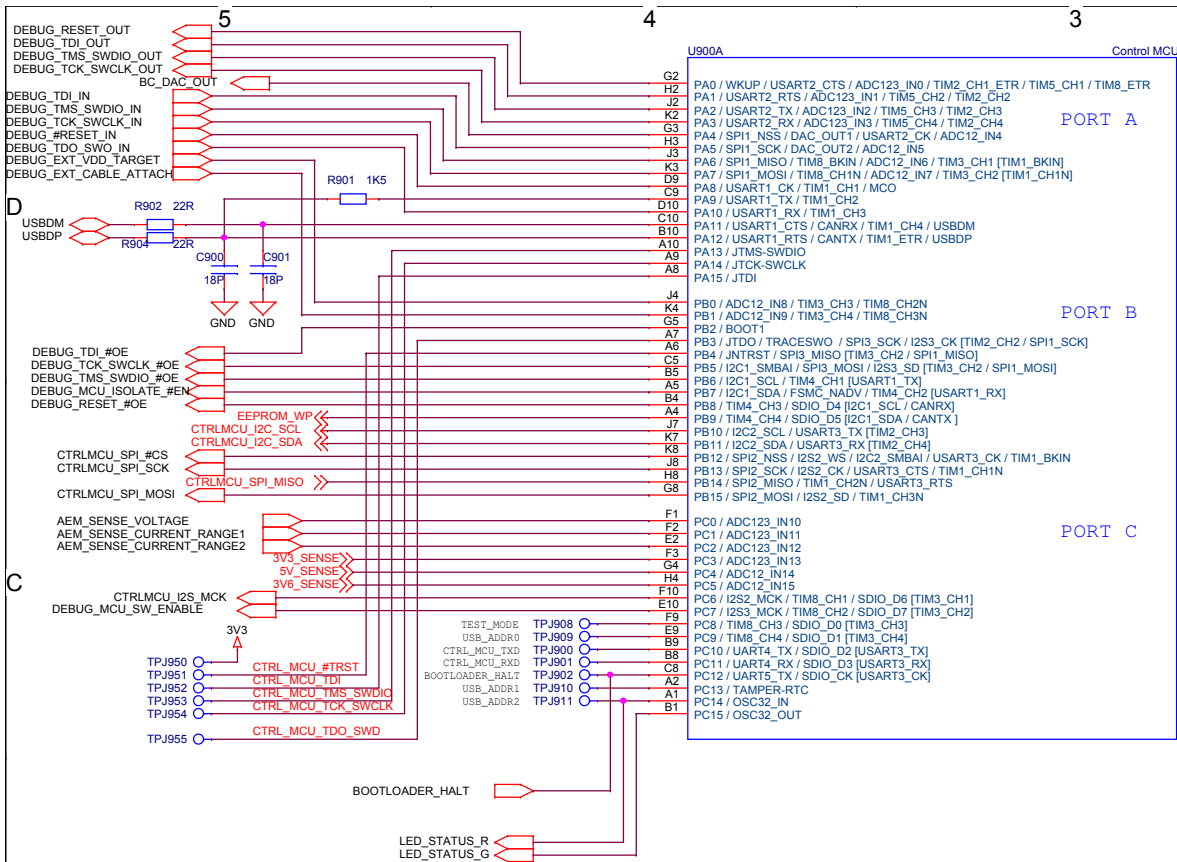


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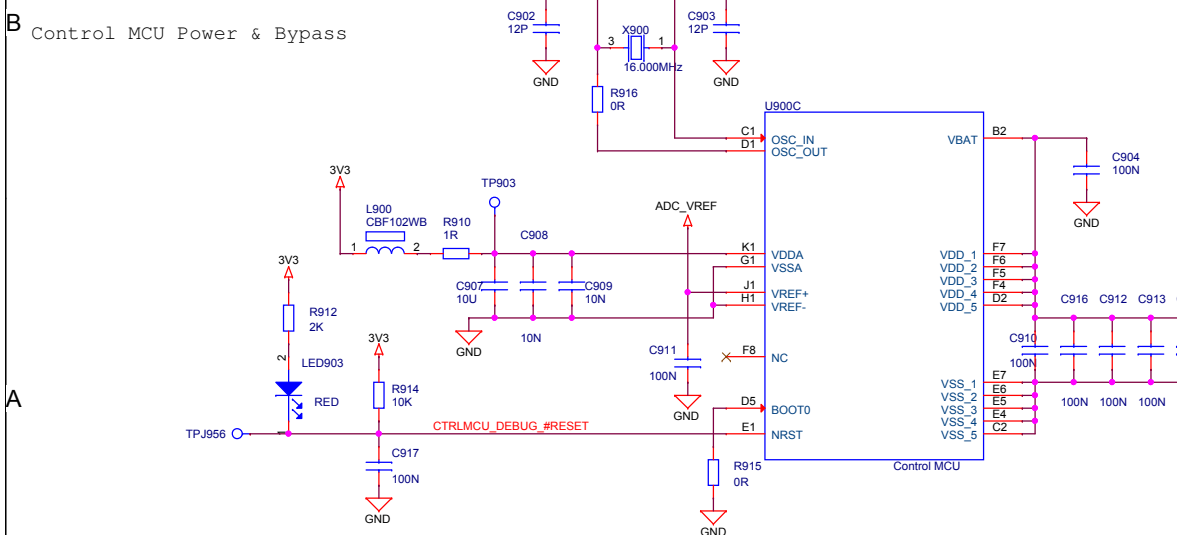


2





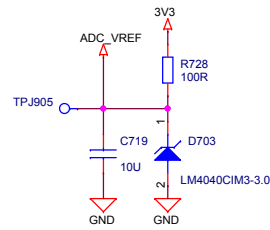
B Control MCU Power & Bypass



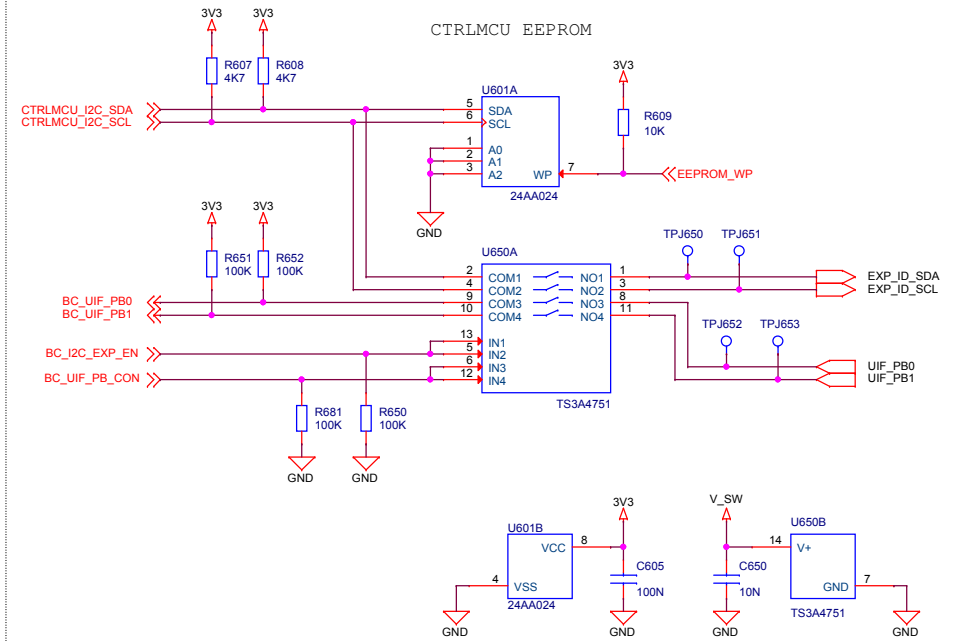
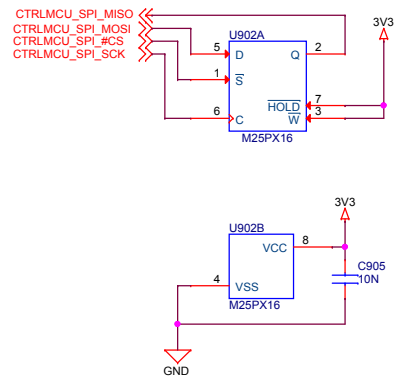
/HB1/CMCU1 Control MCU

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Designed: ANB Size: A3		Page Title	
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Approved: JNO Design Created Date: Monday, May 12, 2014		Document number BRD5100A	Revision A04
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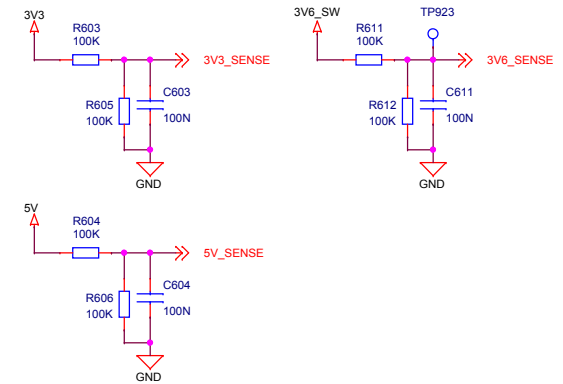
ADC reference voltage



CTRLMCU SERIAL FLASH



POWER SENSE



/HB1/CMCU1
Control MCU

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Approved: JNO		Control MCU Misc.	
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