



EFM8SB2 Sleepy Bee STK

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Revision History

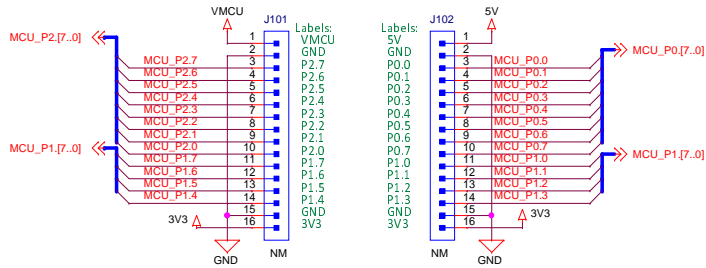
Rev.	Description
A00	Initial release for production.
A01	Removed ST1 and J103 from the BOM.



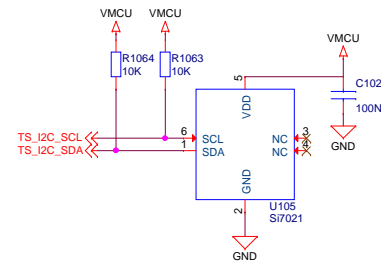
STK

		Schematic Title	
EFM8SB2 Sleepy Bee Starter Kit		Page Title	
Title Page		Document number	
BRD5100A		Revision	
A01		Sheet Modified Date	
Design Created Date:		Sheet Created Date	
Wednesday, December 03, 2008		Thursday, May 15, 2014	
		Sheet Modified Date	
		Wednesday, January 14, 2015	
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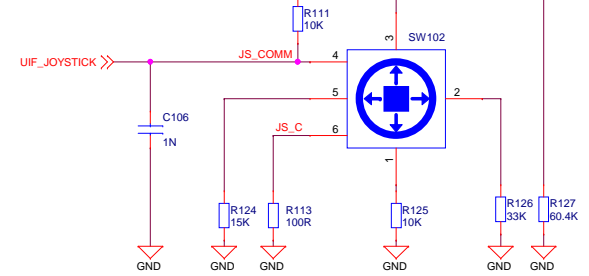
Breakout Connections



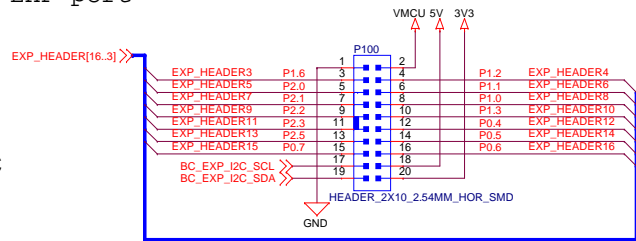
Temperature & Relative Humidity Sensor



Analog Joystick



EXP port



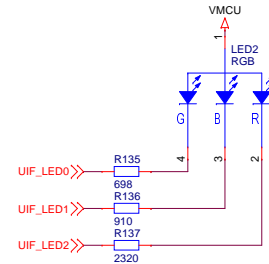
EXP-Header Functionality

** Indicates potential STK hardware conflicts

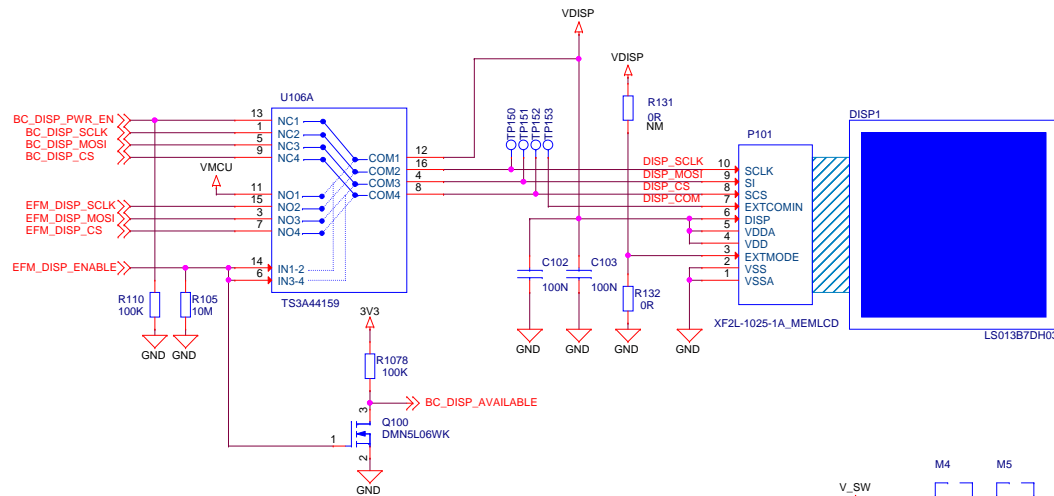
1	GND			
3	P1.6	CMPP.7/ADC0.14		STK LED0
5	P2.0	CMPP.8/ADC0.16		STK LED1
7	P2.1	CMPN.8/ADC0.17		STK LED2
9	P2.2	CMPP.9/ADC0.18		
11	P2.3	CMPN.9/ADC0.19		
13	P2.5	CMPN.10/ADC0.21		
15	P0.7	I2C0_SCL	CMPN.3/ADC0.7	
17		Reserved for EXP Board Identification		
19		Reserved for EXP Board Identification		

2	VMCU			
4	P1.2	SPI0_MOSI	CMPP.5/ADC0.10	
6	P1.1	SPI0_MISO	CMPN.4/ADC0.9	
8	P1.0	SPI0_SCK	CMPP.4/ADC0.8	
10	P1.3	SPI0_NSS	CMPP.5/ADC0.11	
12	P0.4	UART0_TX	CMPP.2/ADC0.4	
14	P0.5	UART0_RX	CMPP.2/ADC0.5	
16	P0.6	I2C0_SDA	CMPN.3/ADC0.6	
18	5V			
20	3V3			

RGB LED



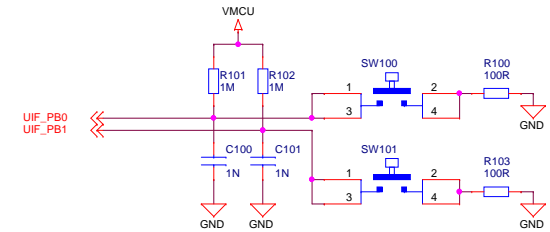
Memory LCD-TFT Display & Multiplexer



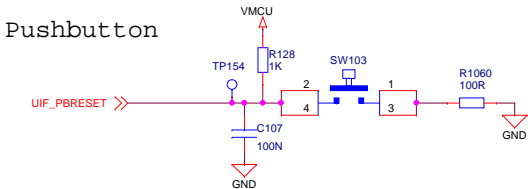
The EFM8 always controls ownership of the display using the EFM_DISP_ENABLE signal.

EFM_DISP_ENABLE	DISP_CTRL	VDISP
0	BC	BC_DISP_PWR_EN
1	EFM	VMCU

User pushbuttons

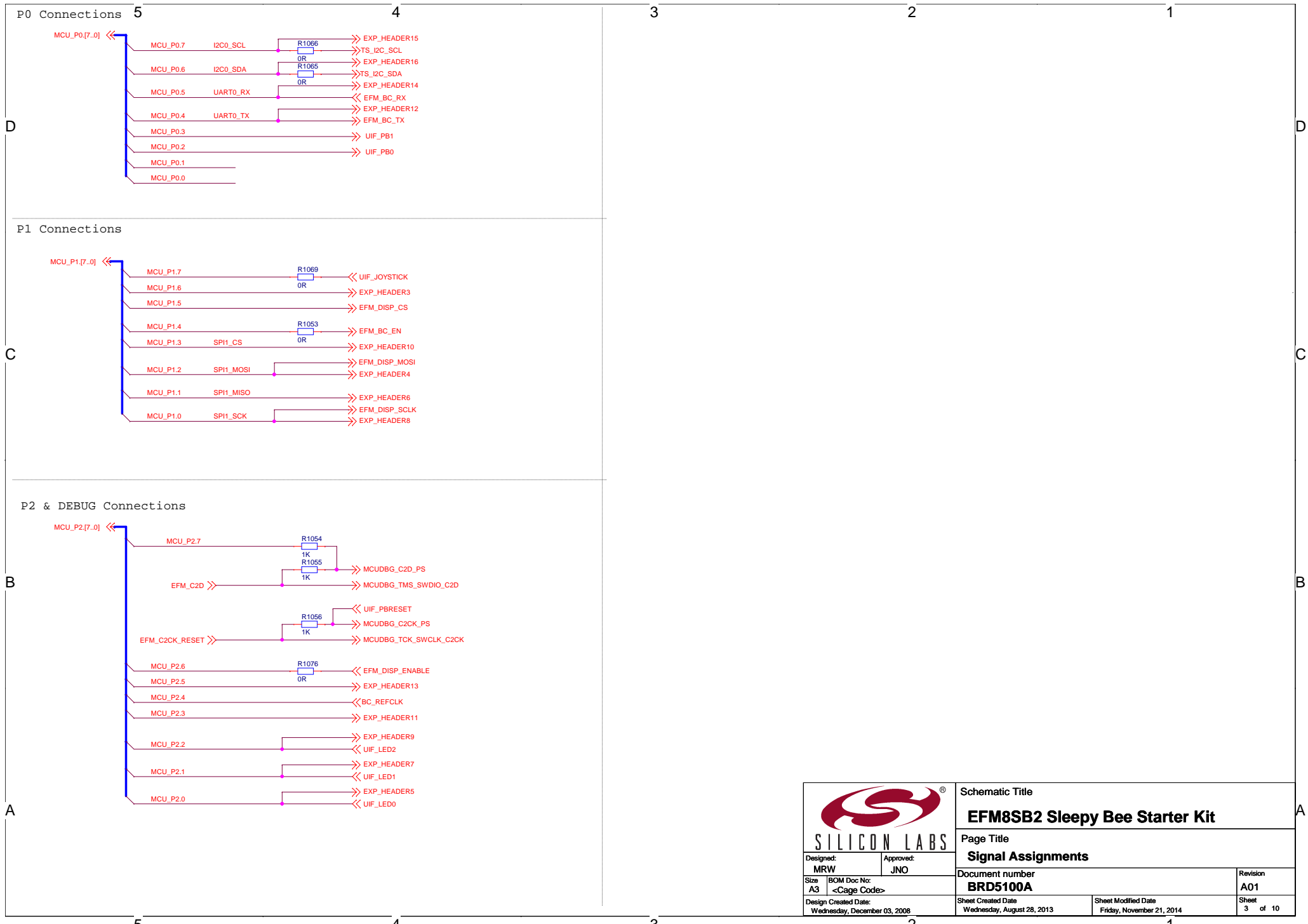



RESET Pushbutton



STK

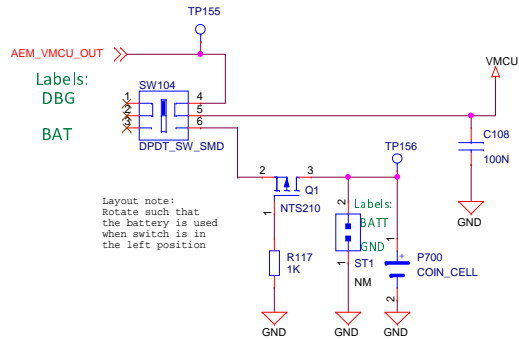
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		EFM8SB2 Sleepy Bee Starter Kit	
Designed: MRW Approved: JNO		Page Title	
		User Interfaces	
Size A3	BOM Doc No:	Document number	Revision
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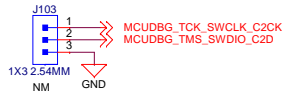
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Designed: MRW Approved: JNO		Page Title	
		Signal Assignments	
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Power Switch

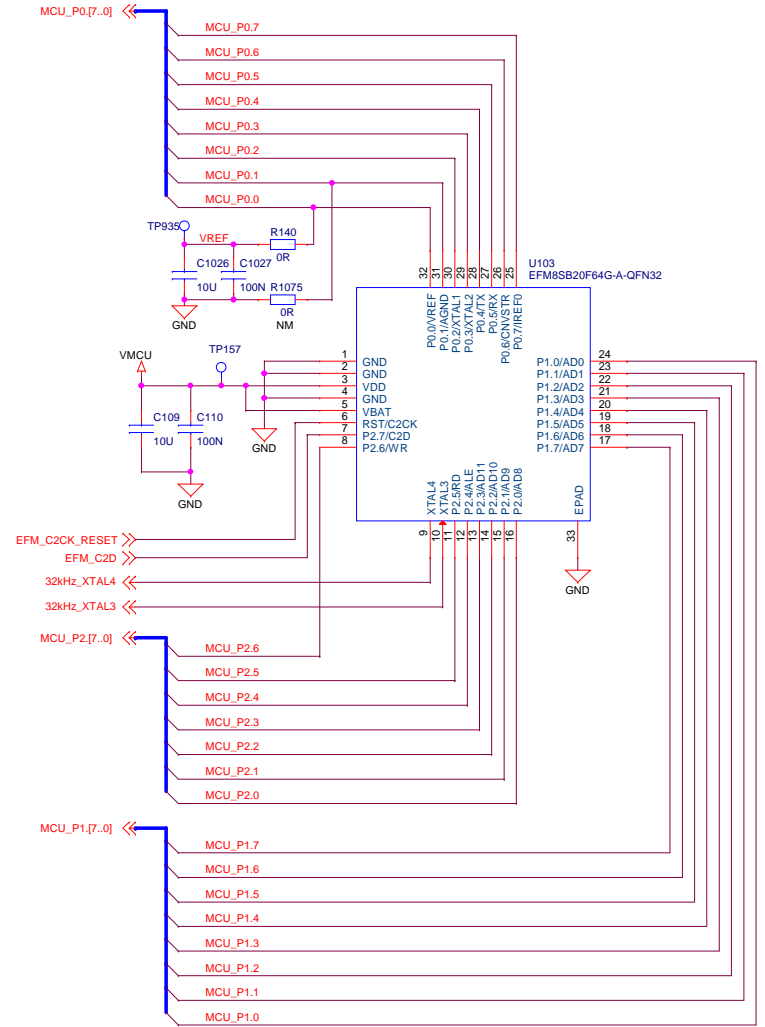
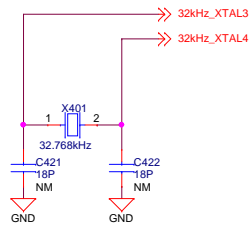
SWITCH POS	MODE DESCRIPTION
DBG	AEM Enabled, VMCU sourced from external 3.3V LDO powered by BC USB 5V supply
BAT	AEM Disabled, VMCU sourced from external coin-cell battery or external power supply




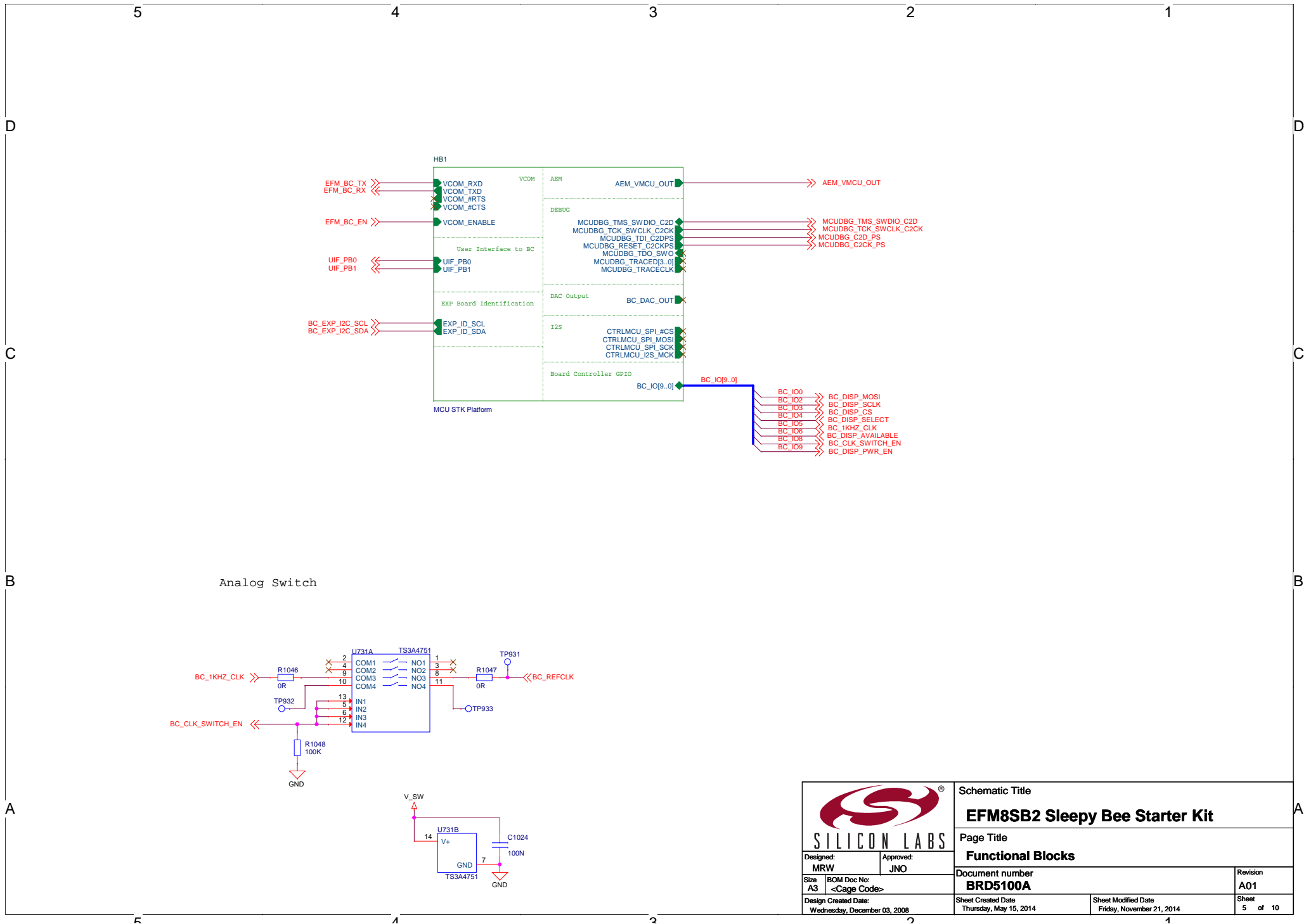
C2 Debug Header

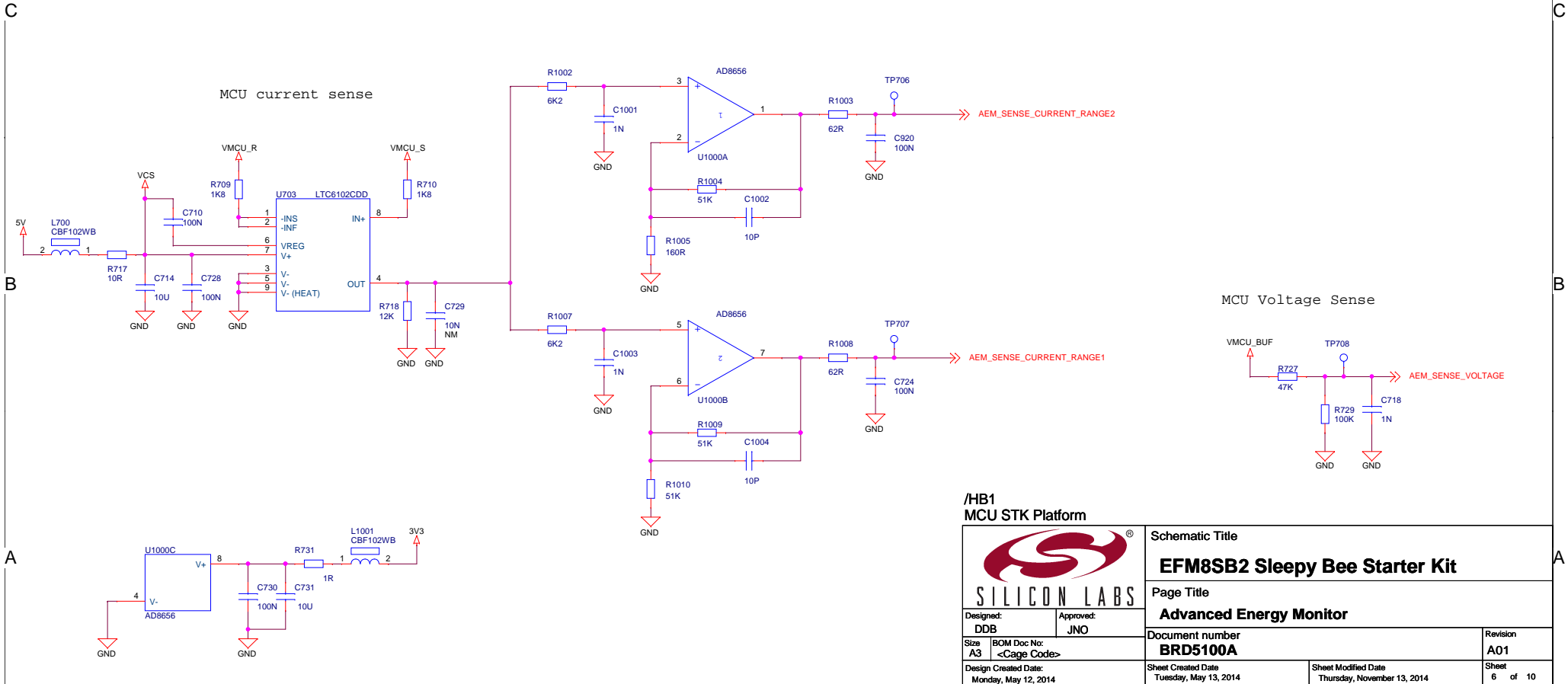
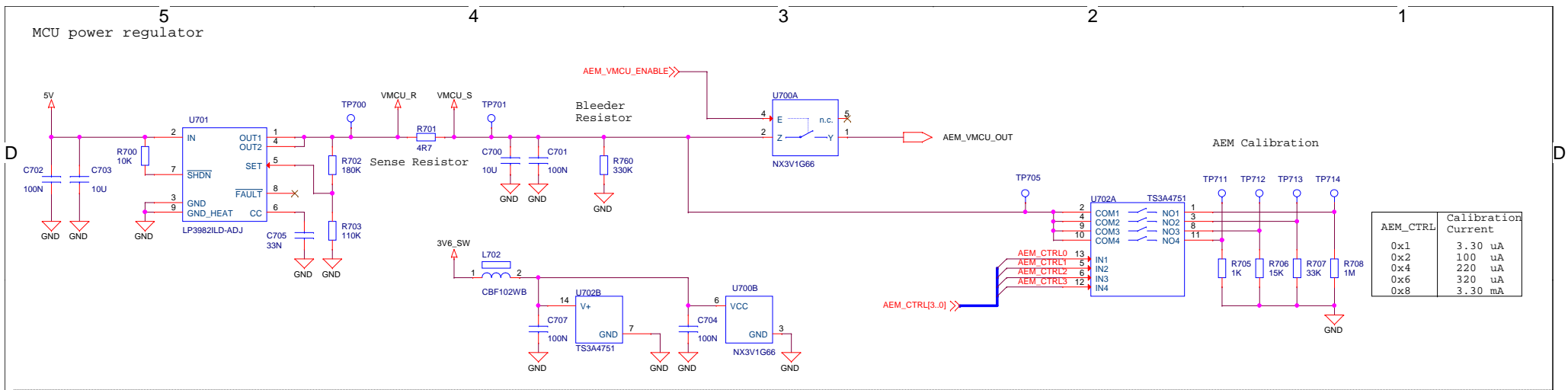


Low Frequency Clock



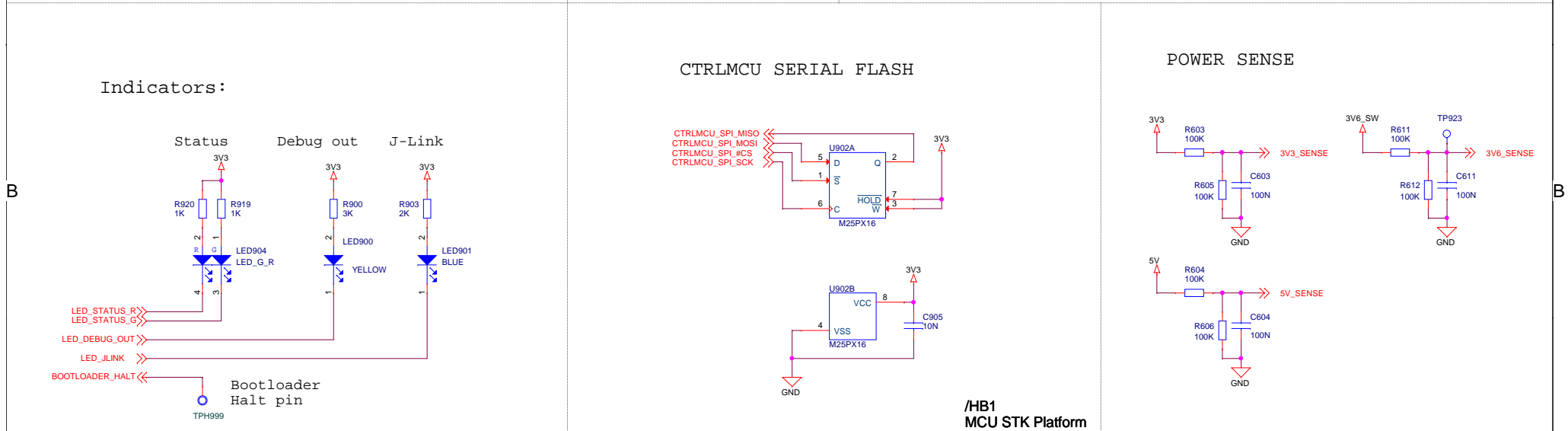
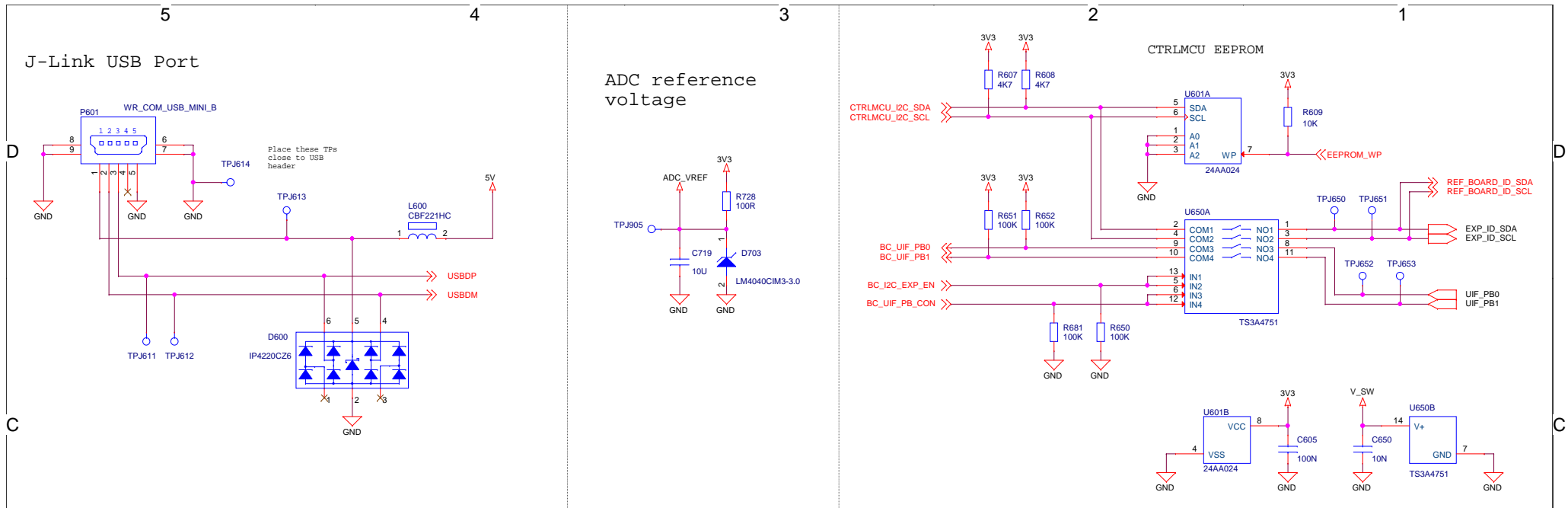
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Designed: MRW Approved: JNO		Page Title	
		EFM8 I/O	
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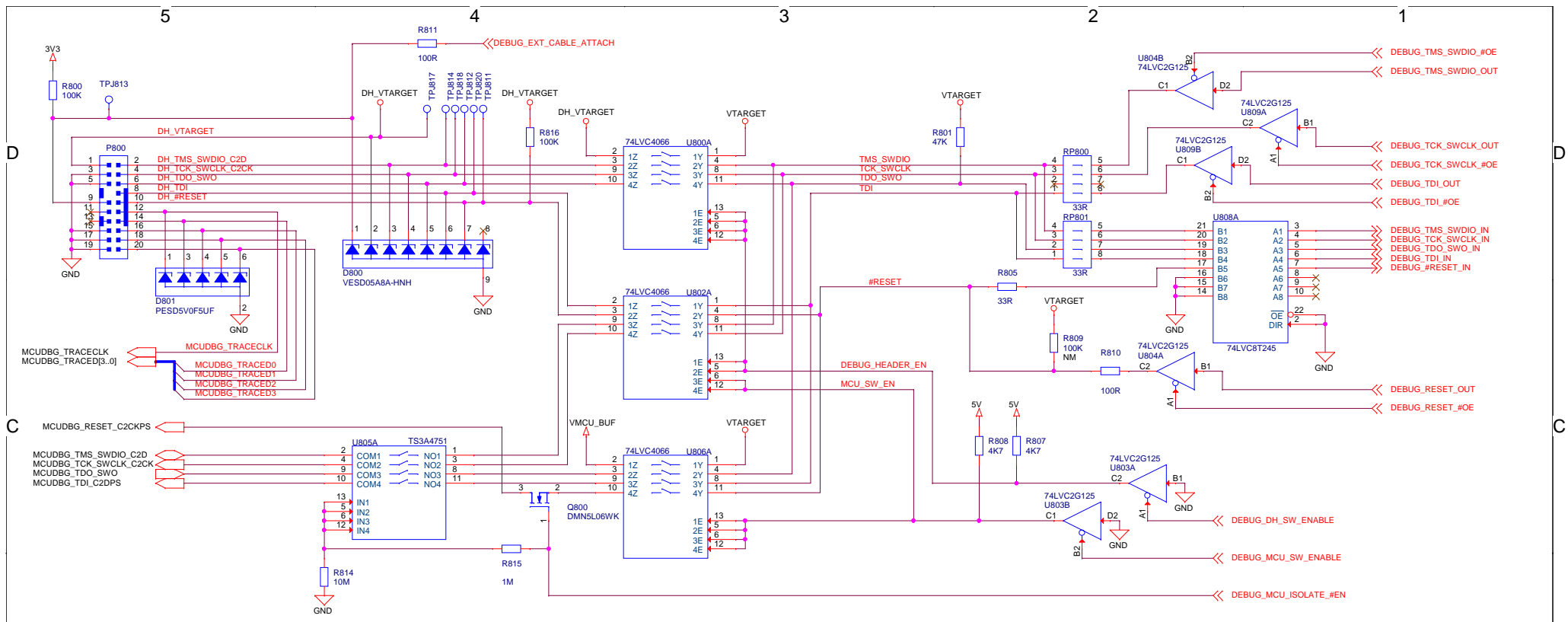


/HB1
MCU STK Platform

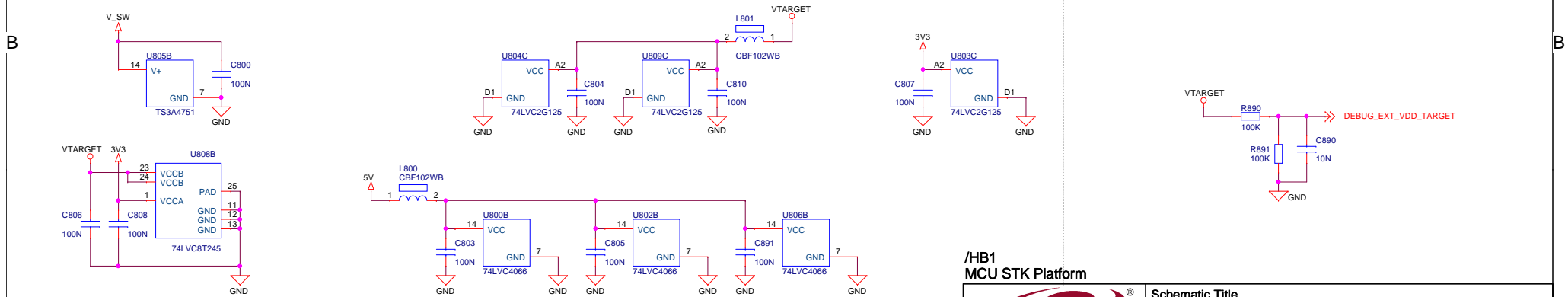
Schematic Title		EFM8SB2 Sleepy Bee Starter Kit	
Page Title		Advanced Energy Monitor	
Designed: DDB		Approved: JNO	
Size A3	BOM Doc No: <Cage Code>	Document number	Revision
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		EFM8SB2 Sleepy Bee Starter Kit	
Designed: ANB Approved: JNO		Page Title	
		Board Controller Misc	
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		BRD5100A	A01
Design Created Date: Monday, May 12, 2014	Sheet Created Date: Wednesday, May 14, 2014	Sheet Modified Date: Tuesday, September 16, 2014	Sheet 7 of 10



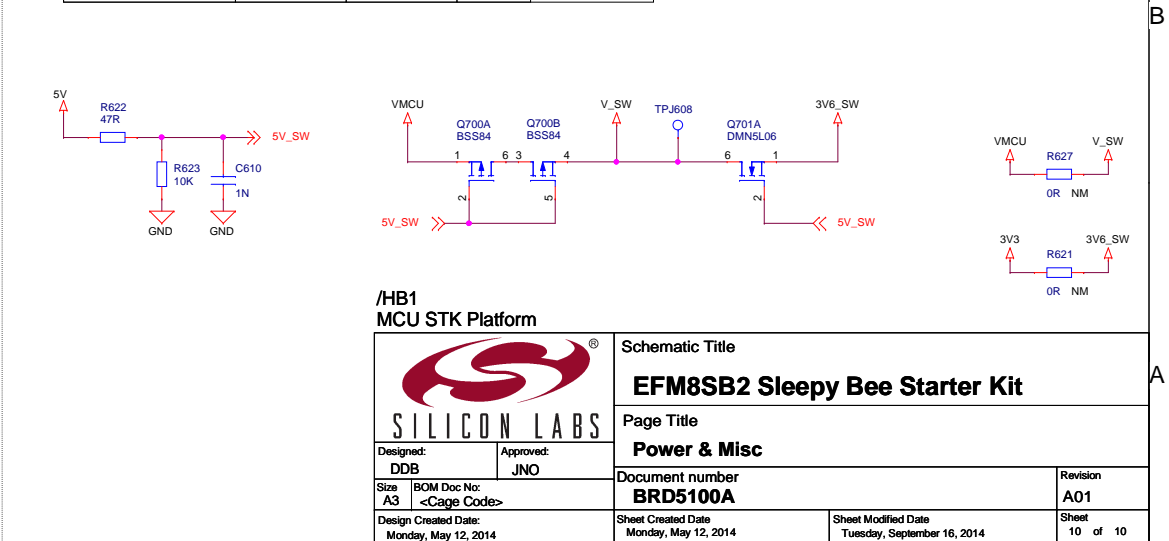
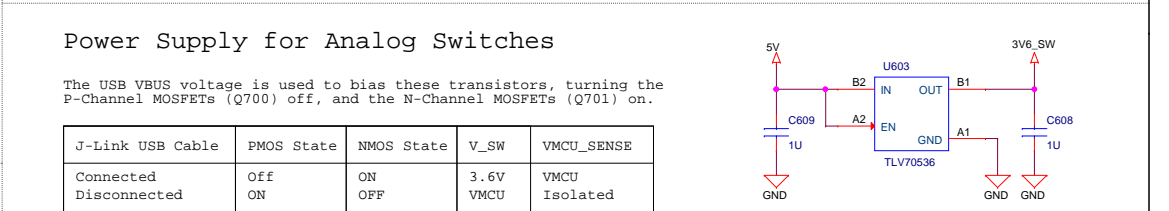
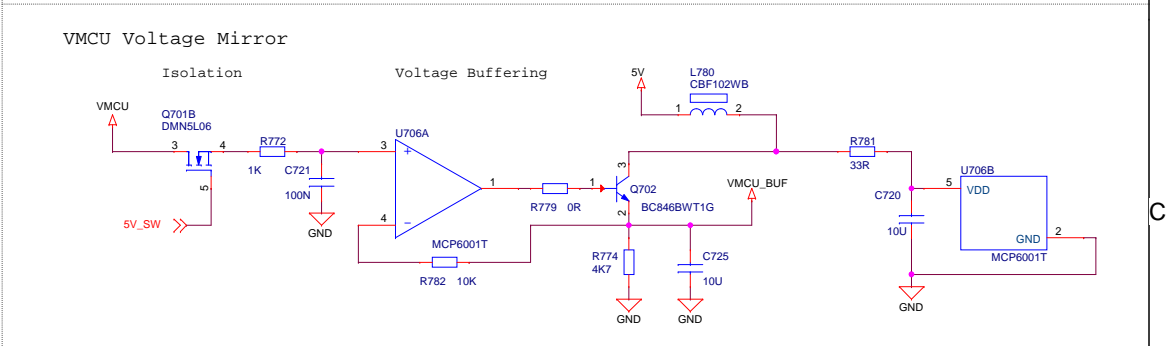
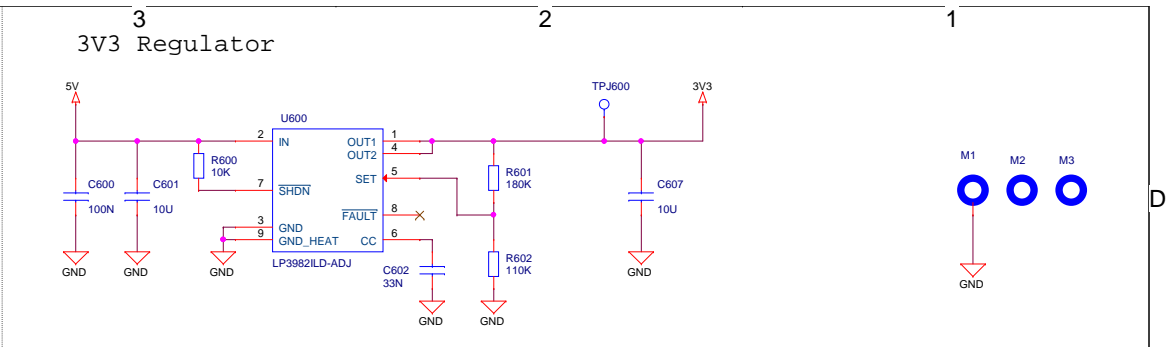
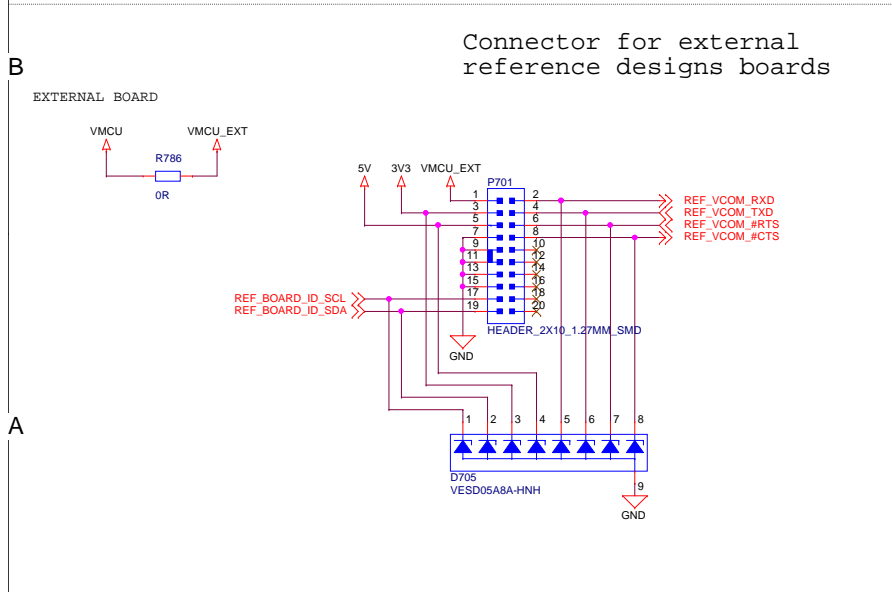
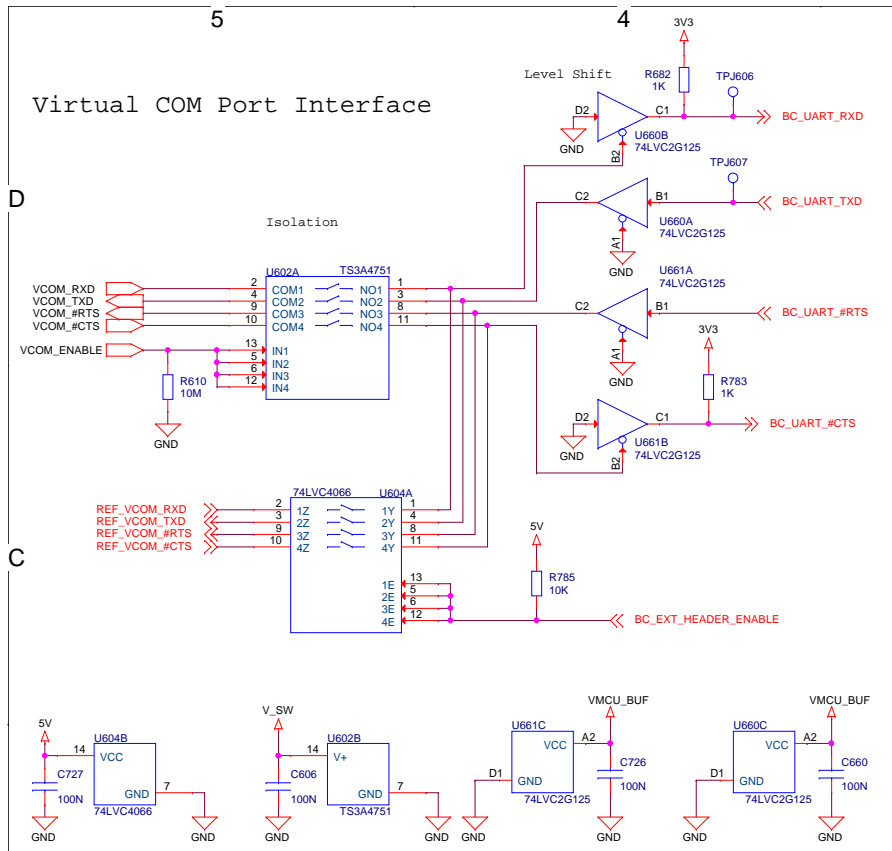
Power & Decoupling



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	-	-

/HB1
MCU STK Platform

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Designed: DDB Approved: JNO		Page Title	
		Debug Interface	
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/HB1
MCU STK Platform

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Designed: DDB	Approved: JNO	Document number BRD5100A	Revision A01
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