



EFM8SB2 Sleepy Bee STK

Board Function	Page
Title Page	1
User Interfaces	2
Signal Assignments	3
EFM8 I/O	4
STK Common Platform	5
Advanced Energy Monitor	6
Board Controller	7
Debug Interface	8
Power & Misc	9

Revision History

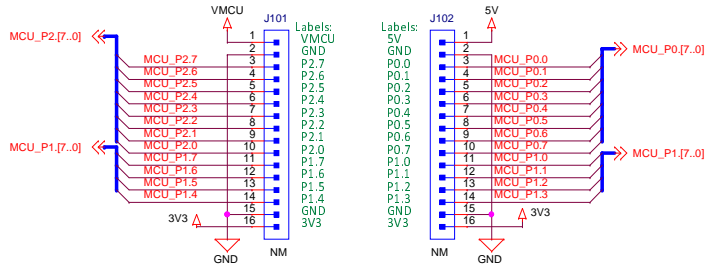
Rev.	Description
A00	Initial release for production.
A01	Removed ST1 and J103 from the BOM.
A02	Updated PCB revision.



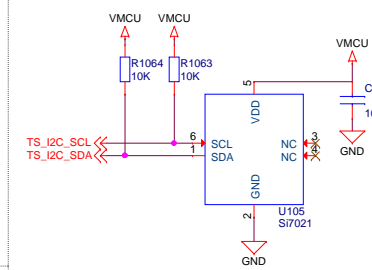
STK

		Schematic Title	
		EFM8SB2 Sleepy Bee Starter Kit	
Page Title		Revision	
Title Page		A02	
Designed: MRW	Approved: JNO	Document number	Sheet
Size A3	BOM Doc No:	BRD5100A	1 of 9
Design Created Date: Wednesday, December 03, 2008	Sheet Created Date Thursday, May 15, 2014	Sheet Modified Date Monday, March 23, 2015	

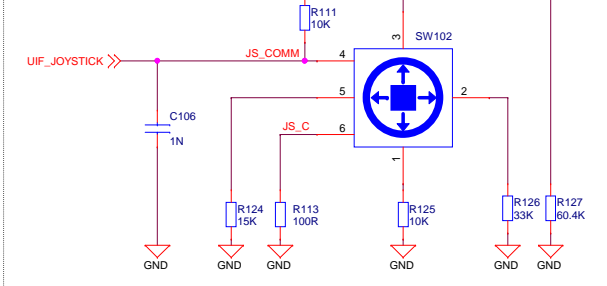
Breakout Connections



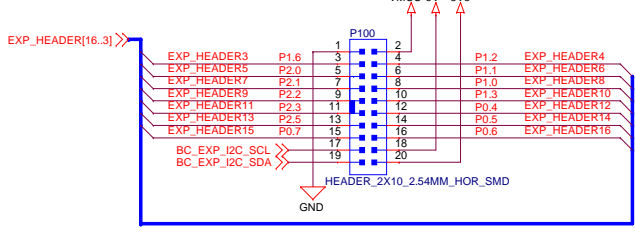
Temperature & Relative Humidity Sensor



Analog Joystick



EXP port



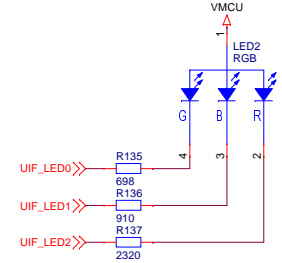
EXP-Header Functionality

** Indicates potential STK hardware conflicts

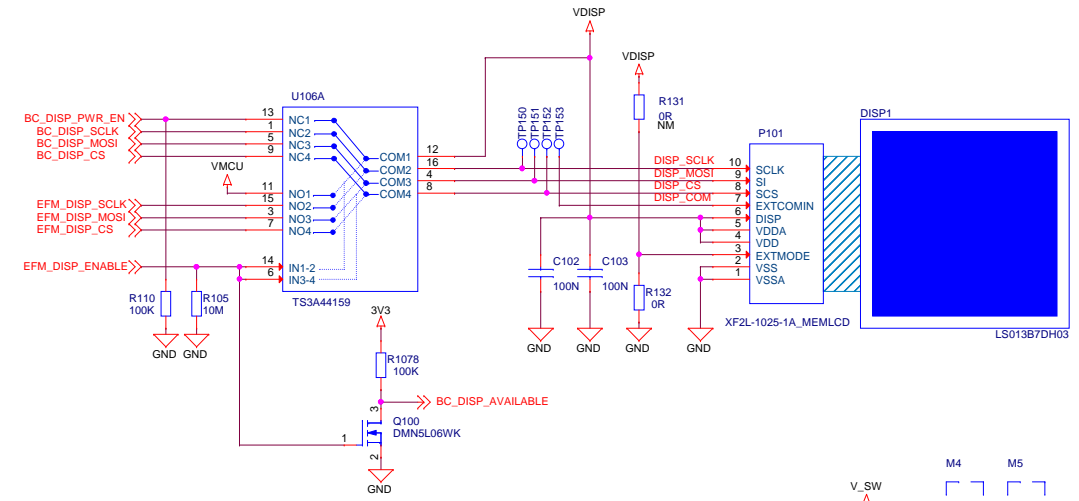
1	GND			
3	P1.6	CMPP_7/ADC0.14		STK LED0
5	P2.0	CMPP_8/ADC0.16		STK LED1
7	P2.1	CMPN_8/ADC0.17		STK LED2
9	P2.2	CMPP_9/ADC0.18		
11	P2.3	CMPN_9/ADC0.19		
13	P2.5	CMPN_10/ADC0.21		
15	P0.7	I2C0_SCL	CMPN_3/ADC0.7	
17		Reserved for EXP Board Identification		
19				

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



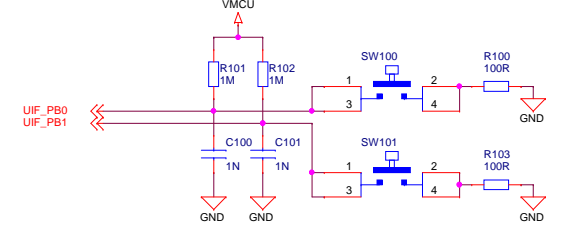
Memory LCD-TFT Display & Multiplexer



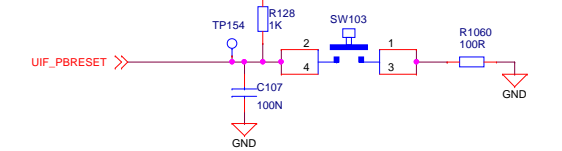
The EFM8 always controls ownership of the display using the EFM_DISP_ENABLE signal.

EFM_DISP_ENABLE	DISP_CTRL	VDISP
0	BC	BC_DISP_PWR_EN
1	EFM	VMCU

User pushbuttons

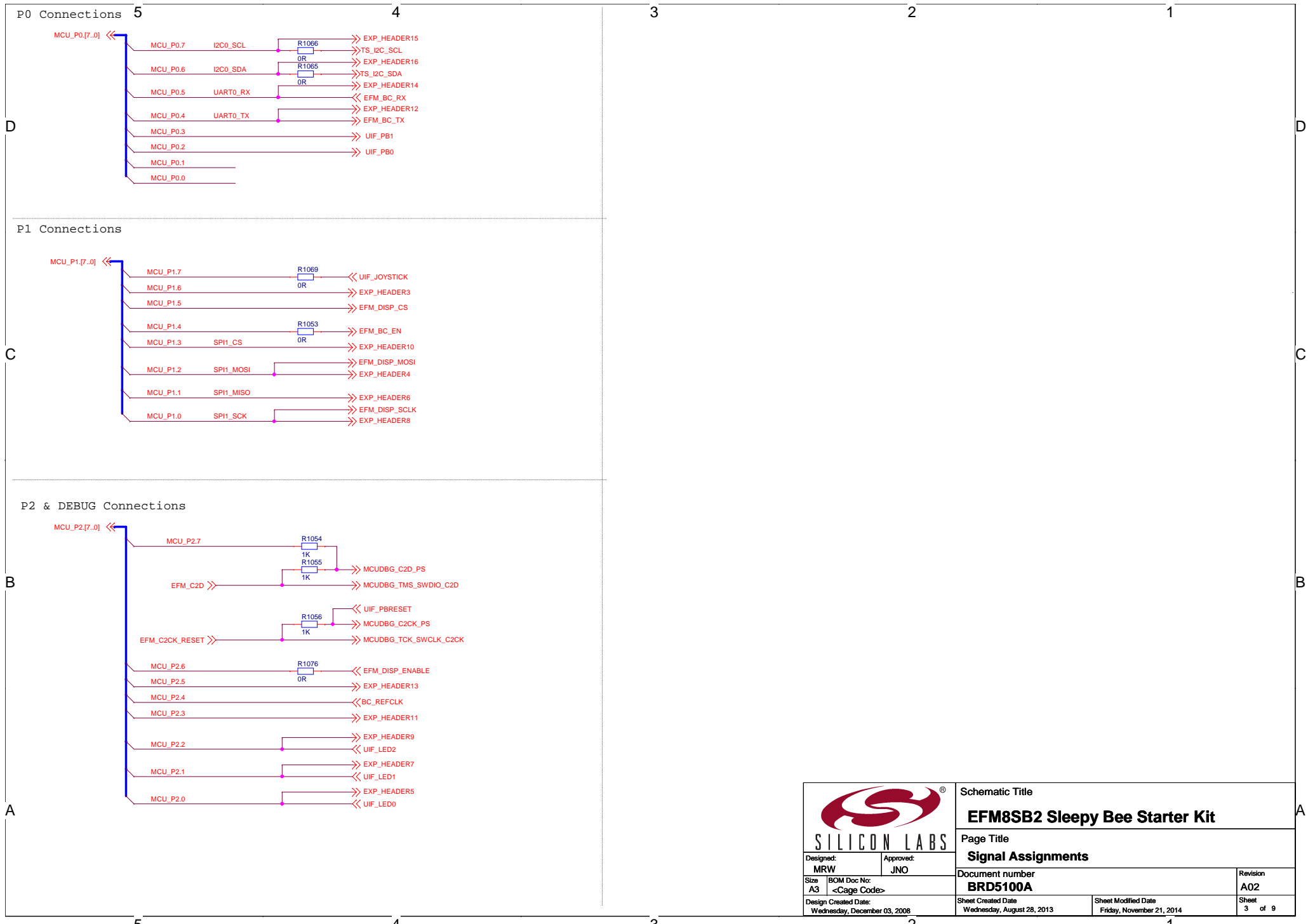


RESET Pushbutton



STK

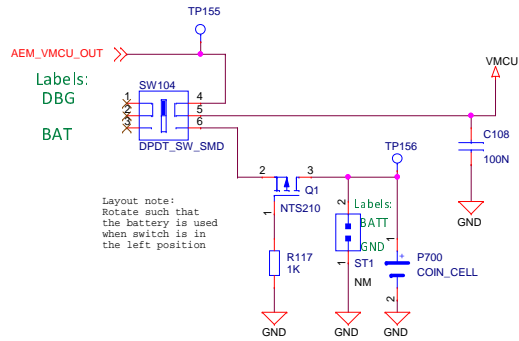
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		EFM8SB2 Sleepy Bee Starter Kit	
Designed: MRW Approved: JNO		Page Title	
		User Interfaces	
Design Created Date: Wednesday, December 03, 2008		Document number BRD5100A	
Sheet Created Date: Wednesday, August 28, 2013		Sheet Modified Date: Thursday, February 12, 2015	
Sheet Size: A3		Revision A02	
Sheet 2 of 9			



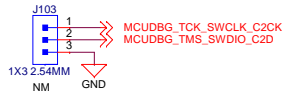
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Page Title		Signal Assignments	
Designed: MRW	Approved: JNO	Document number	Revision
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BOM Doc No: <Cage Code>		Sheet Created Date	Sheet Modified Date
Design Created Date: Wednesday, December 03, 2008		Wednesday, August 28, 2013	Friday, November 21, 2014
		Sheet	Sheet
		3	of 9

Power Switch

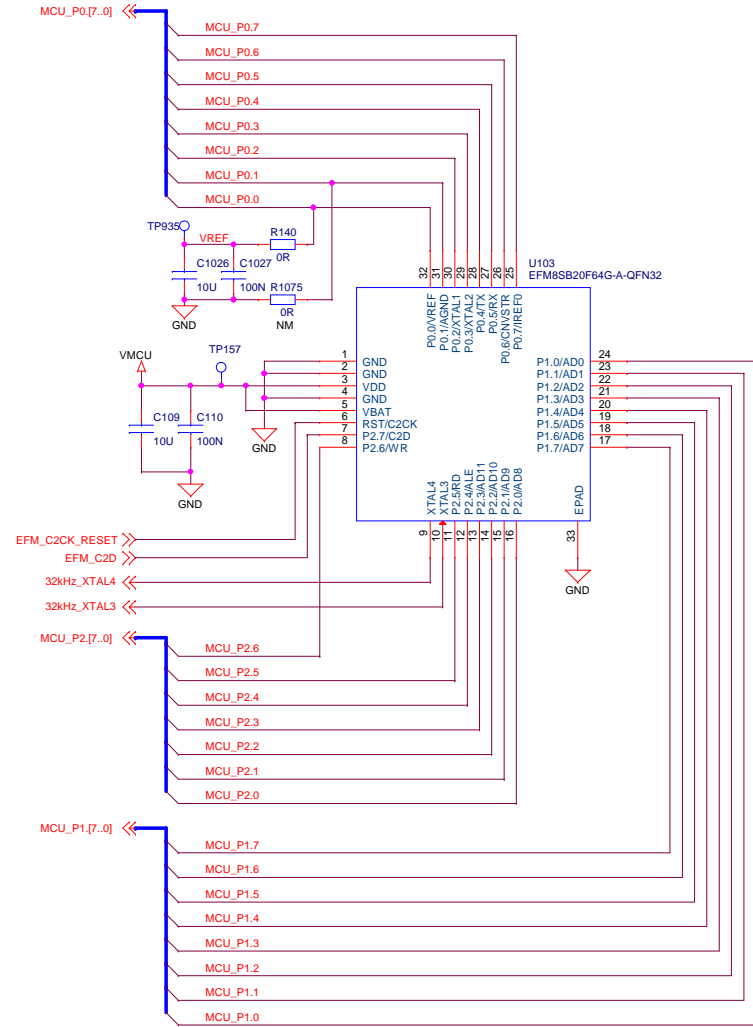
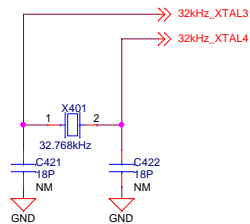
SWITCH POS	MODE DESCRIPTION
DBG	AEM Enabled, VMCU sourced from external 3.3V LDO powered by BC USB 5V supply
BAT	AEM Disabled, VMCU sourced from external coin-cell battery or external power supply




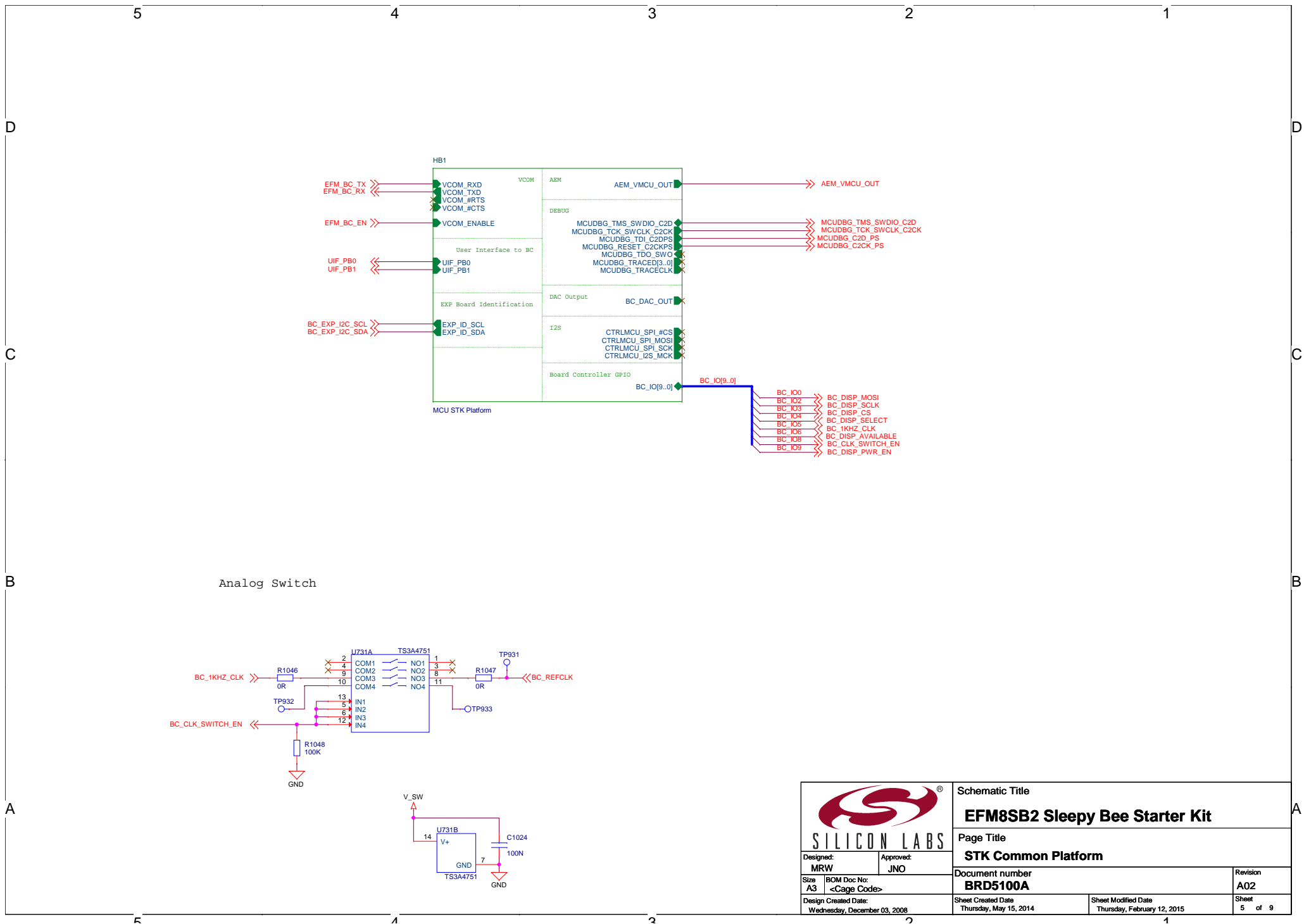
C2 Debug Header




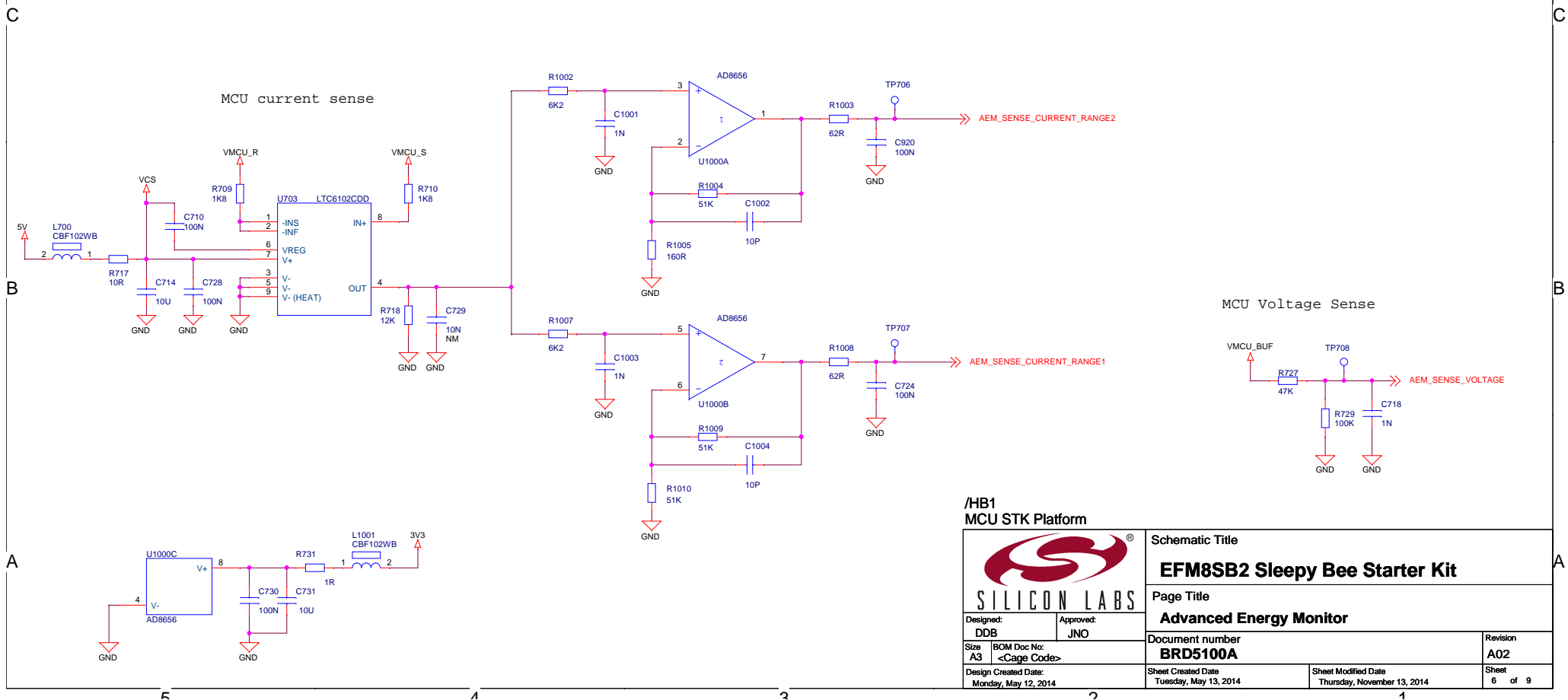
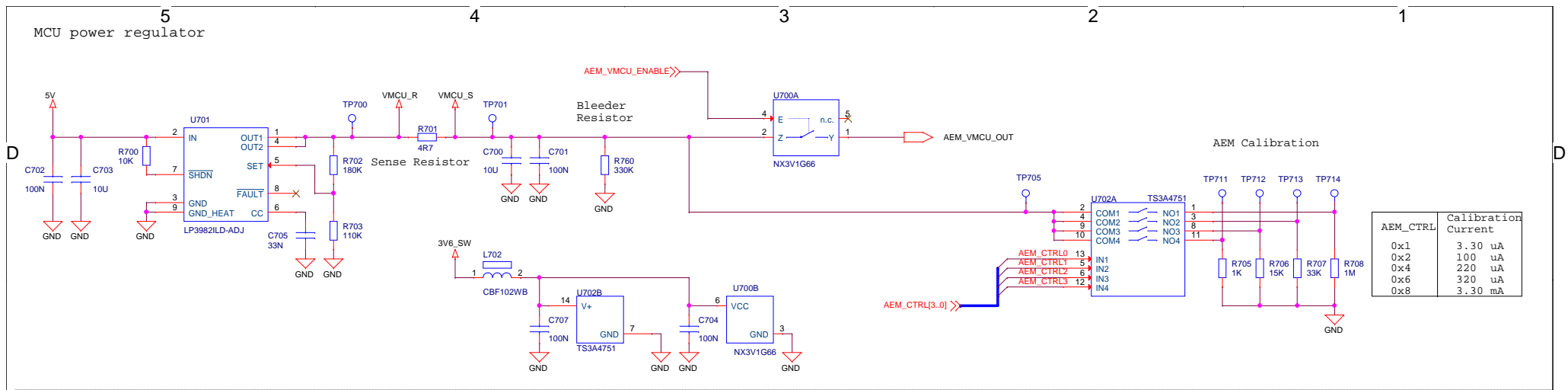
Low Frequency Clock



		Schematic Title	
		EFM8SB2 Sleepy Bee Starter Kit	
Designed: MRW Approved: JNO		Page Title	
		EFM8 I/O	
Size A3	BOM Doc No: <Cage Code>	Document number	Revision
Design Created Date: Wednesday, December 03, 2008		BRD5100A	A02
	Sheet Created Date: Wednesday, August 28, 2013	Sheet Modified Date: Thursday, February 12, 2015	Sheet 4 of 9



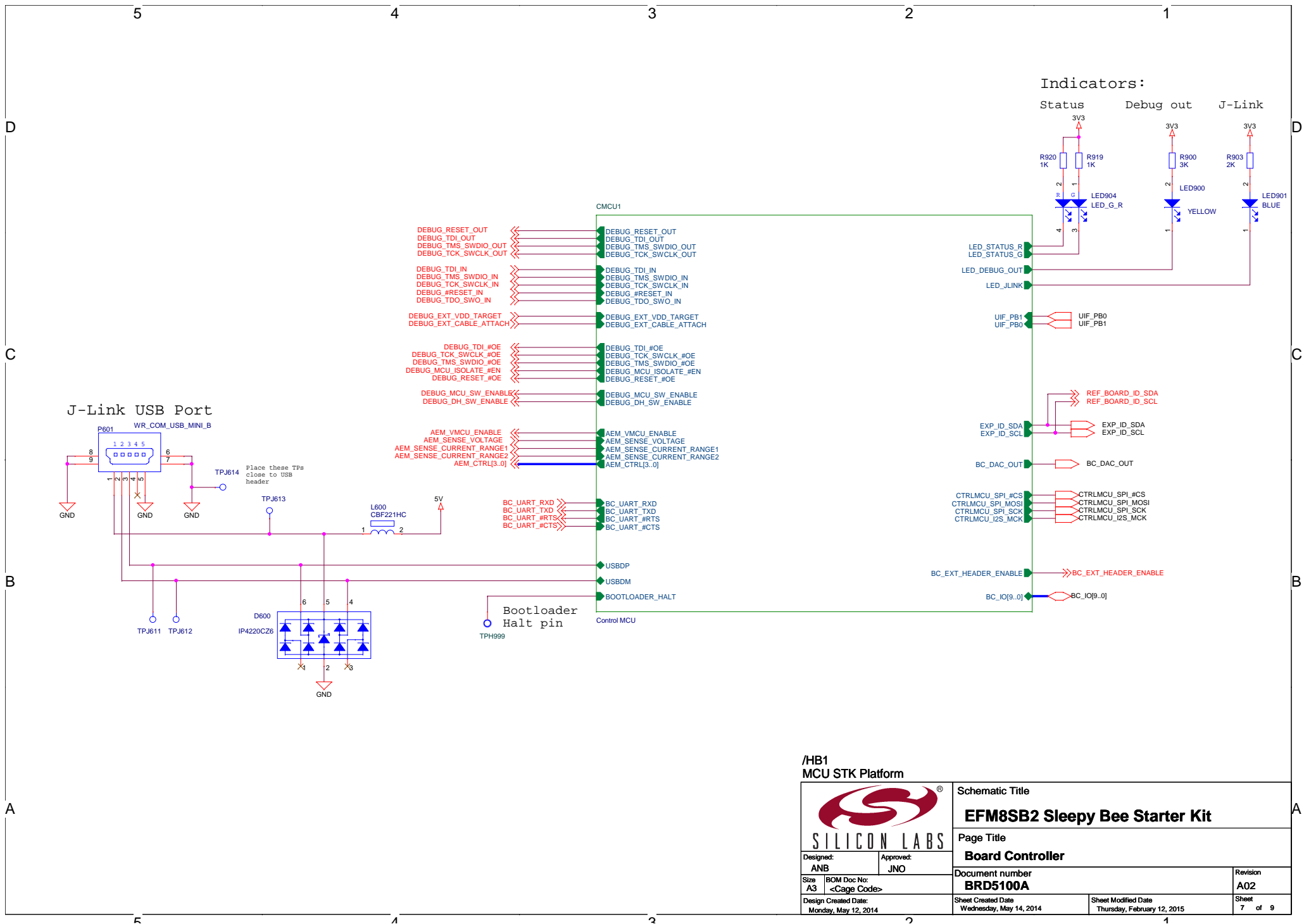
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Designed: MRW Size: A3 Design Created Date: Wednesday, December 03, 2008		Page Title		
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Approved: JNO BOM Doc No: <Cage Code>		Document number		
		BRD5100A		
Design Created Date: Wednesday, December 03, 2008		Sheet Created Date Thursday, May 15, 2014	Sheet Modified Date Thursday, February 12, 2015	Revision A02 Sheet 5 of 9




/HB1
MCU STK Platform

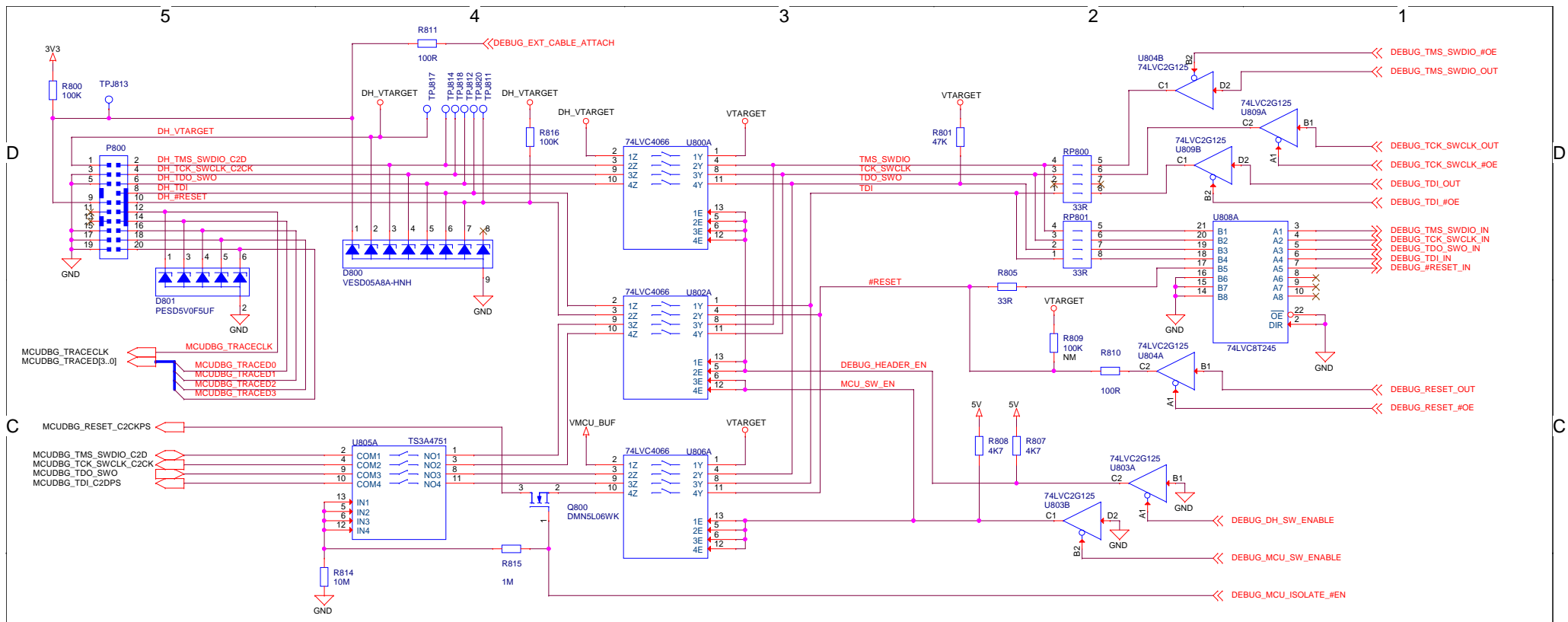


Schematic Title		EFM8SB2 Sleepy Bee Starter Kit	
Page Title		Advanced Energy Monitor	
Designed: DDB	Approved: JNO	Document number BRD5100A	Revision A02
Size A3	BOM Doc No: <Cage Code>	Sheet Created Date Tuesday, May 13, 2014	Sheet Modified Date Thursday, November 13, 2014
Design Created Date: Monday, May 12, 2014		Sheet	6 of 9

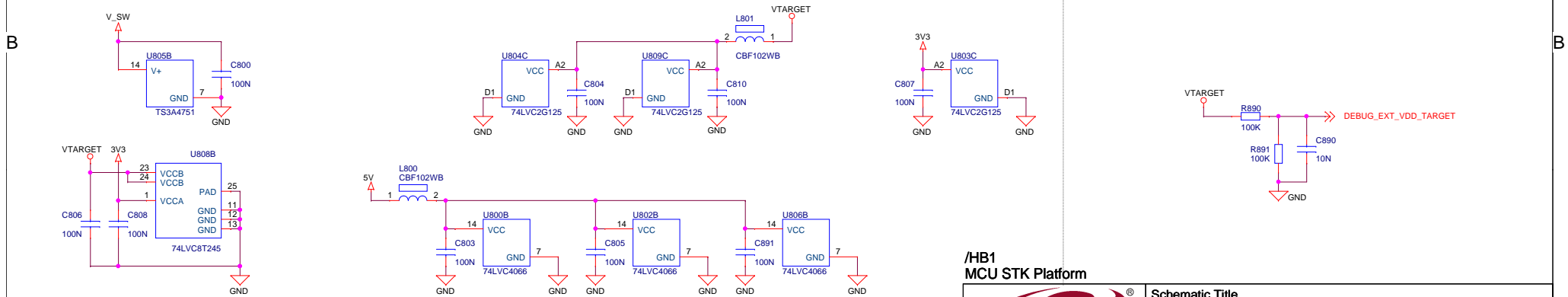


/HB1
MCU STK Platform

		Schematic Title	
		EFM8SB2 Sleepy Bee Starter Kit	
Designed: ANB Approved: JNO		Page Title	
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Size A3	BOM Doc No: <Cage Code>	Document number BRD5100A	Revision A02
Design Created Date: Monday, May 12, 2014		Sheet Created Date Wednesday, May 14, 2014	Sheet Modified Date Thursday, February 12, 2015
		Sheet	7 of 9



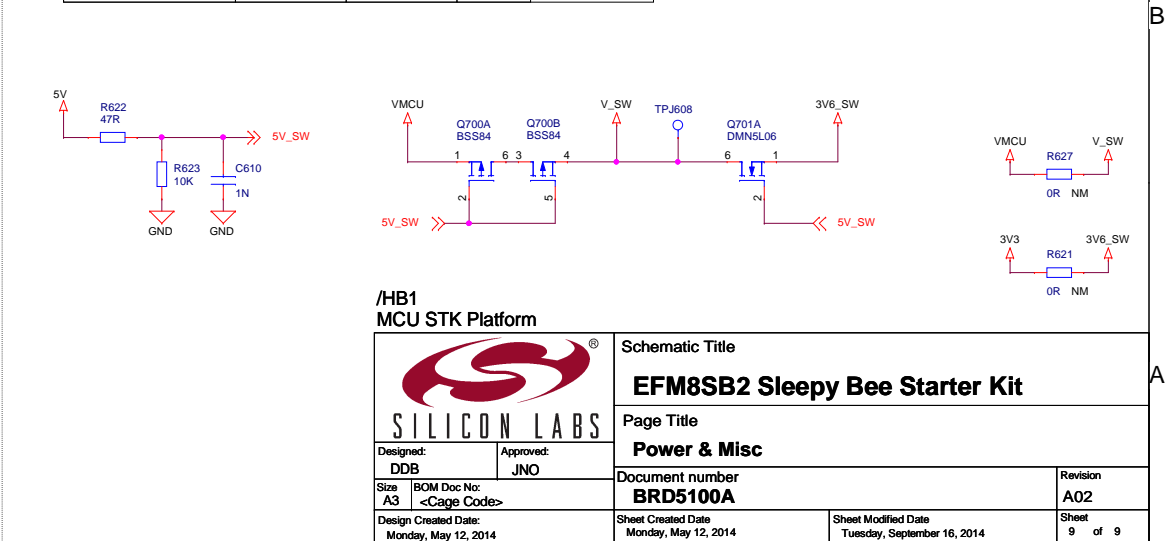
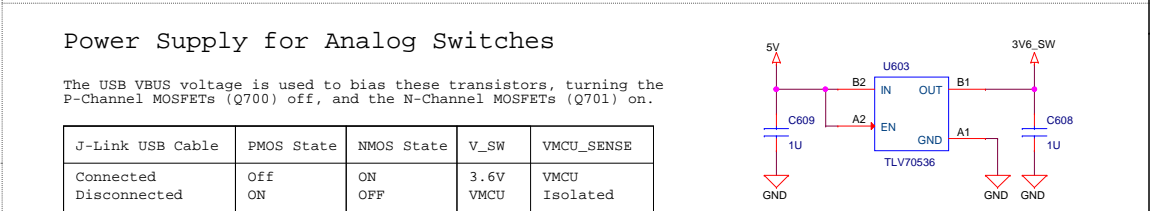
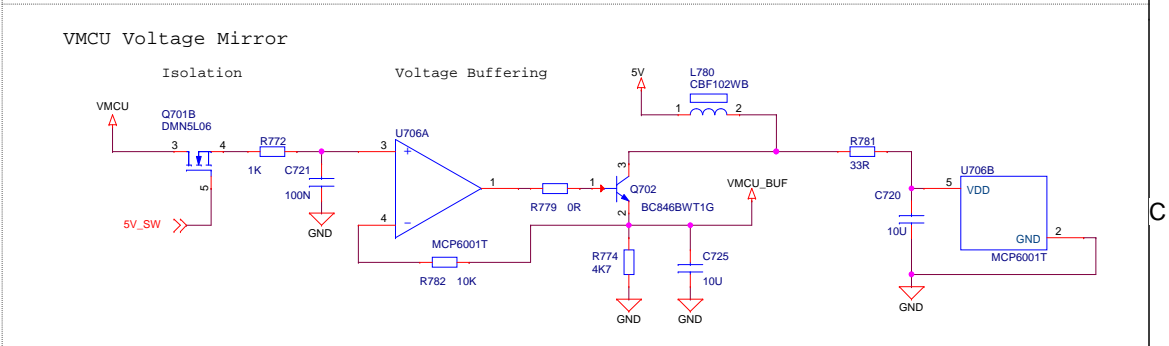
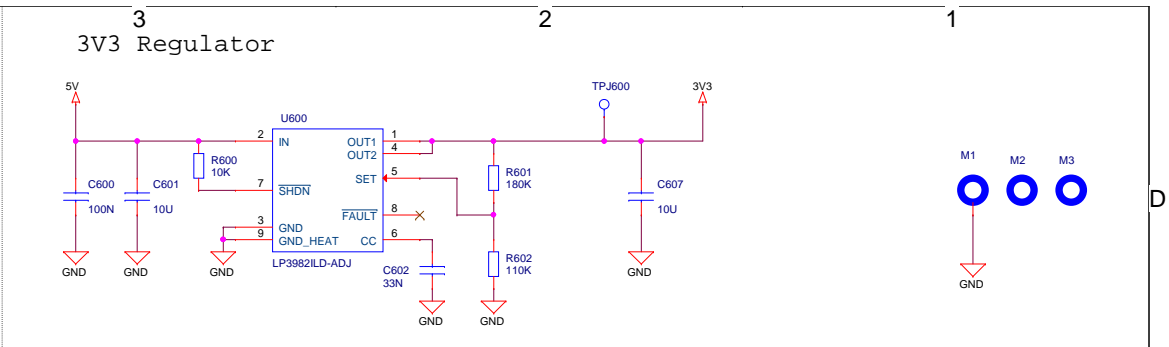
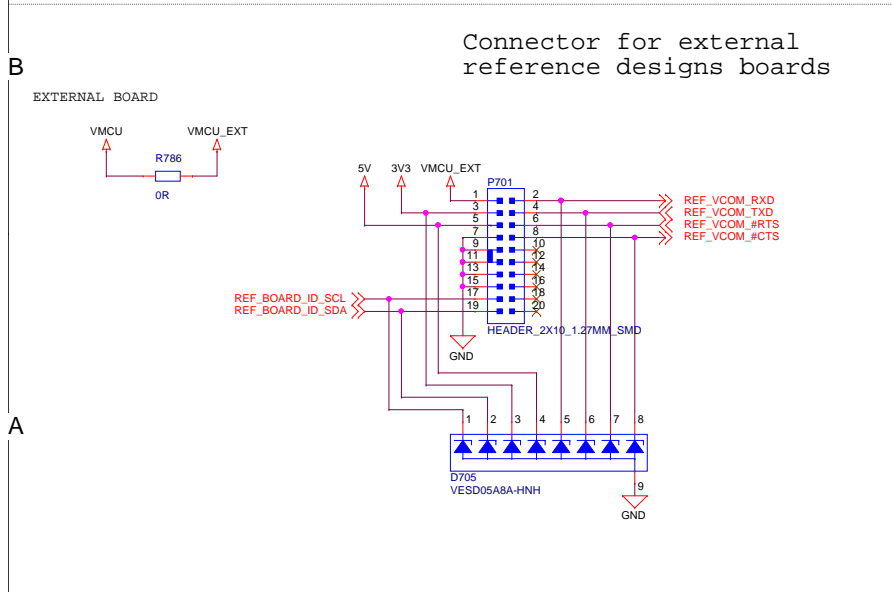
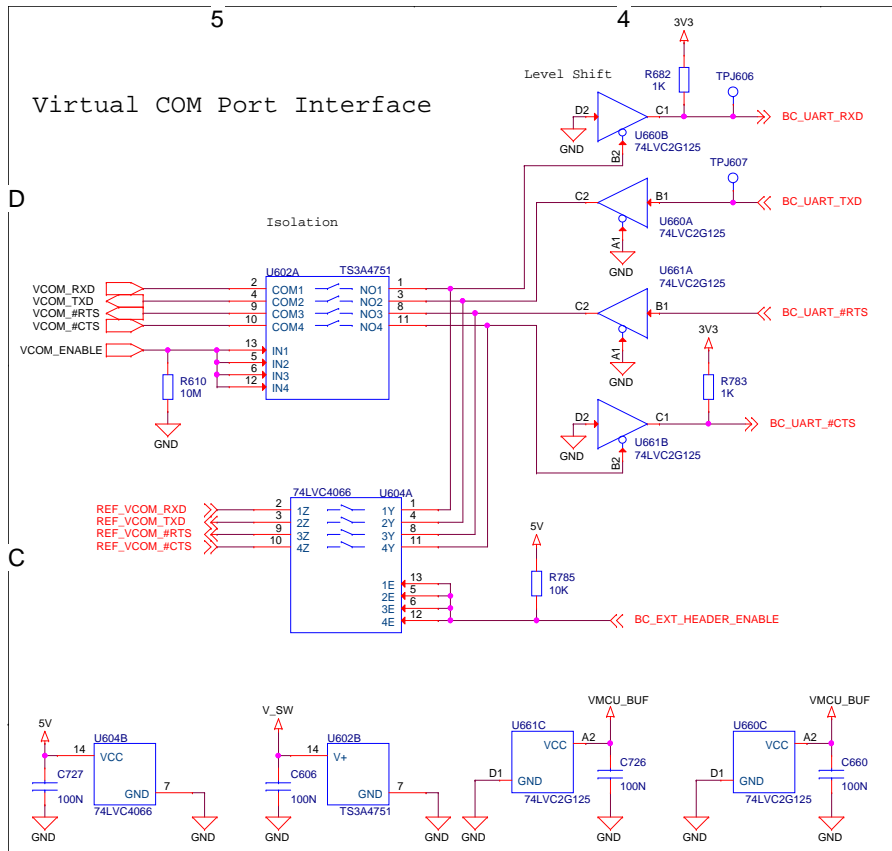
Power & Decoupling



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	-	-

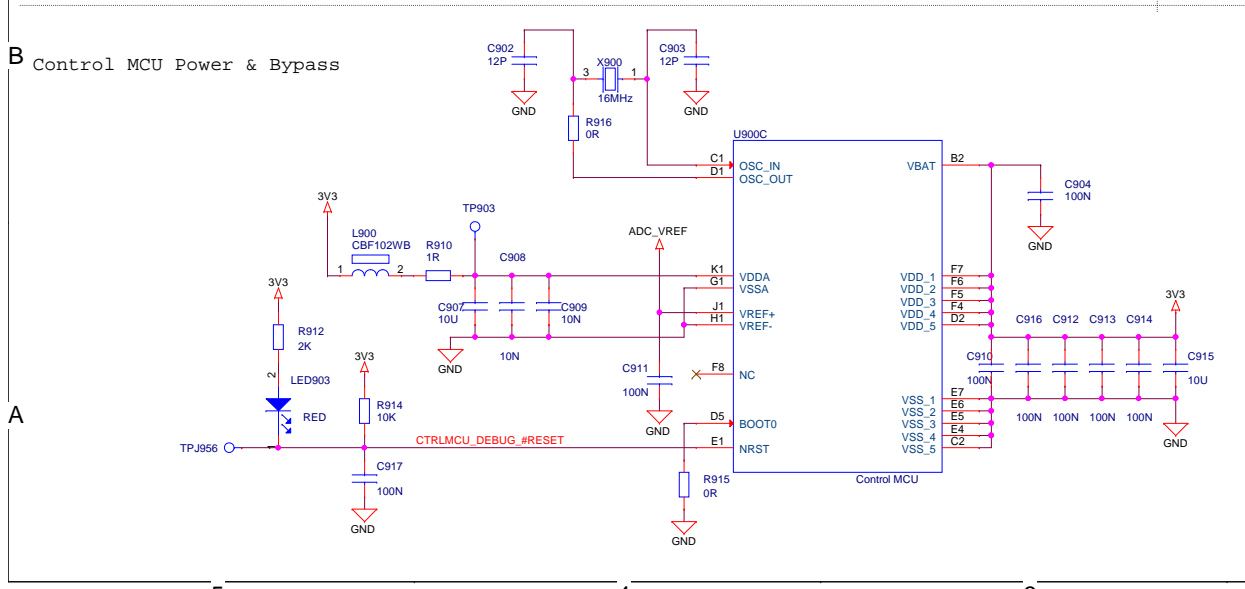
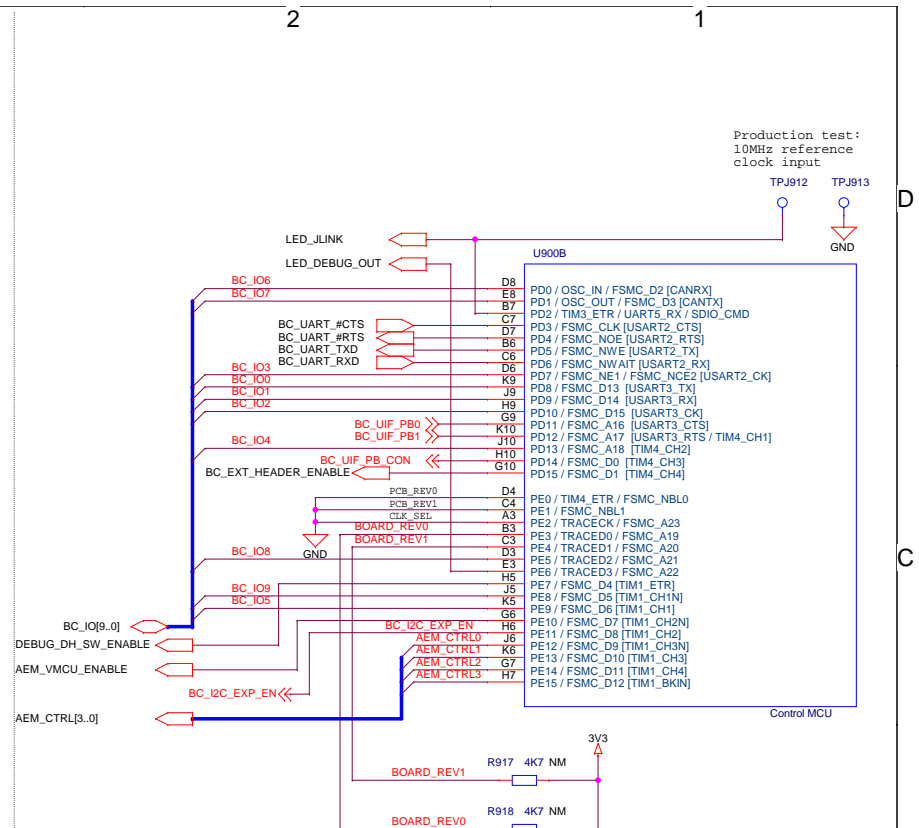
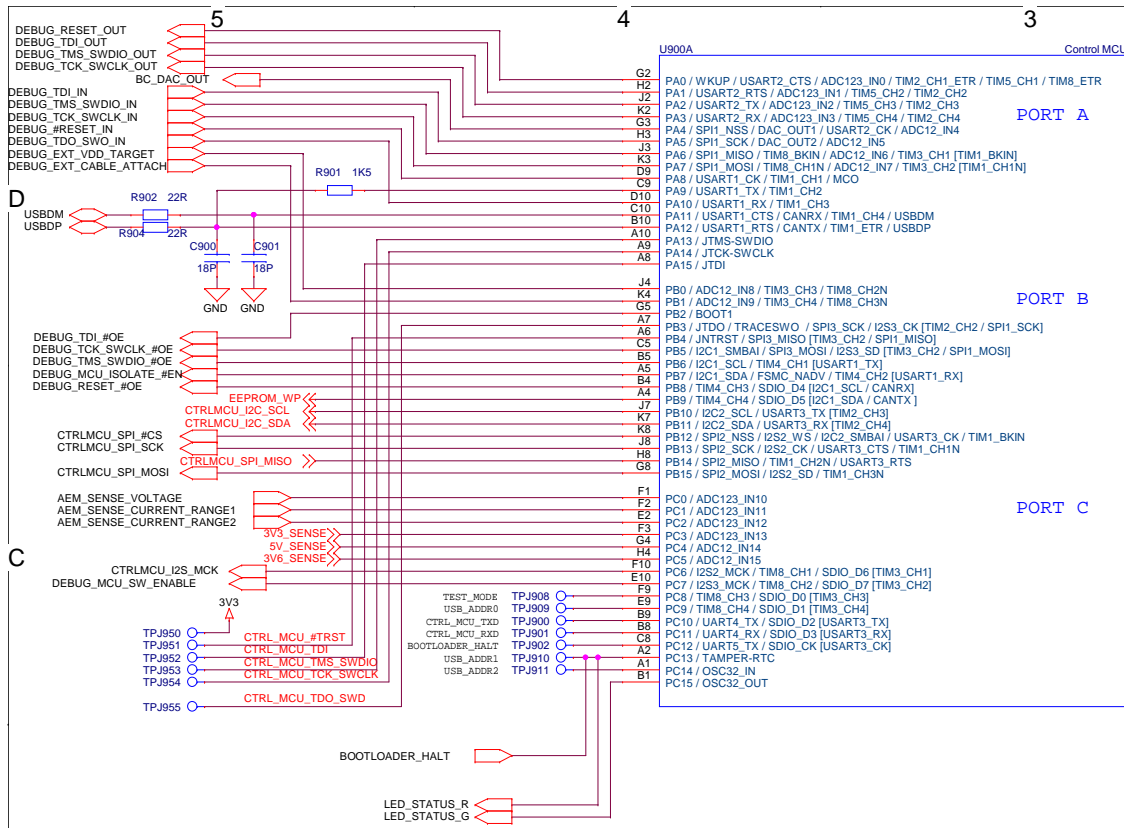
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MCU STK Platform

		Schematic Title	
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Designed: DDB Approved: JNO		Page Title	
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Size: A3	BOM Doc No: <Cage Code>	Document number	Revision
Design Created Date: Monday, May 12, 2014		BRD5100A	A02
Sheet Created Date: Monday, May 12, 2014	Sheet Modified Date: Wednesday, October 22, 2014	Sheet	8 of 9



/HB1
MCU STK Platform

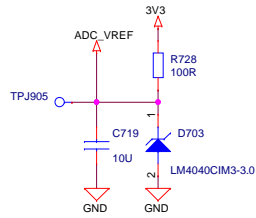
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Page Title		Power & Misc	
Designed: DDB	Approved: JNO	Document number BRD5100A	Revision A02
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Design Created Date: Monday, May 12, 2014		Sheet 9	of 9



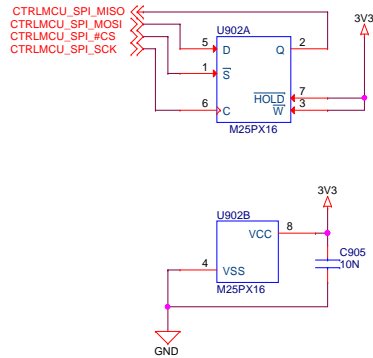
/HB1/CMCU1 Control MCU

Schematic Title		EFM8SB2 Sleepy Bee Starter Kit	
Page Title		Control MCU	
Designed: ANB	Approved: JNO	Document number	Revision
Size A3	BOM Doc No: <Cage Code>	BRD5100A	A02
Design Created Date: Monday, May 12, 2014	Sheet Created Date: Wednesday, February 11, 2015	Sheet Modified Date: Wednesday, February 11, 2015	Sheet 10 of 9

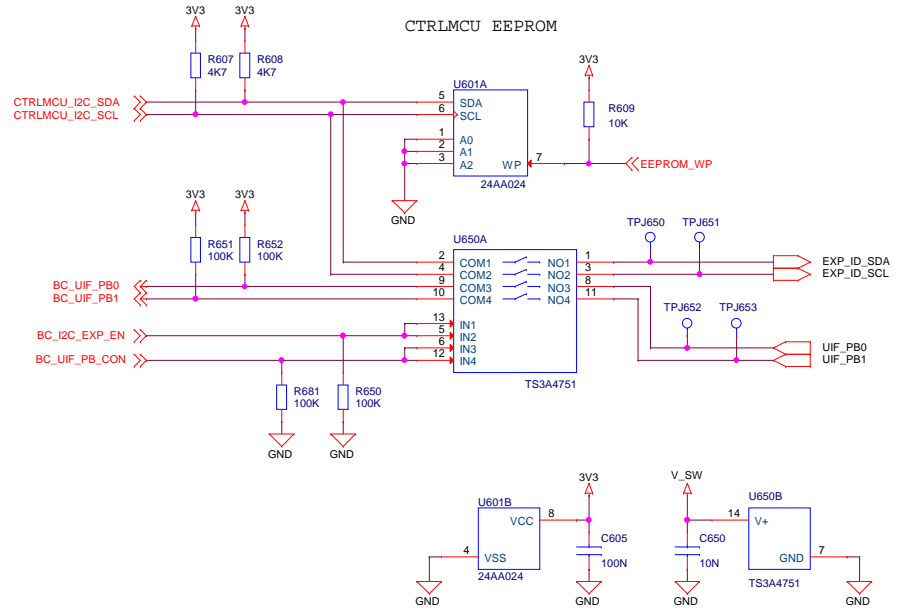
ADC reference voltage



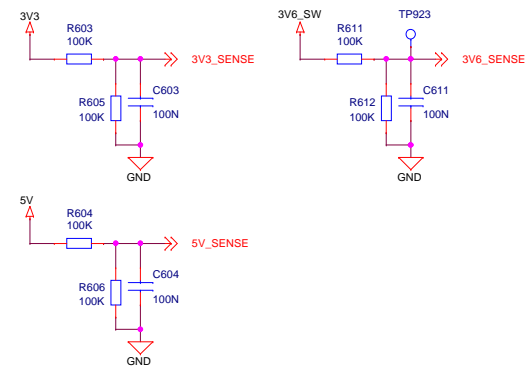
CTRLMCU SERIAL FLASH




CTRLMCU EEPROM



POWER SENSE



/HB1/CMCU1
Control MCU

		Schematic Title	
		EFM8SB2 Sleepy Bee Starter Kit	
Designed: ANB Approved: JNO		Page Title	
		Control MCU Misc	
Size A3	BOM Doc No: <Cage Code>	Document number BRD5100A	Revision A02
Design Created Date: Monday, May 12, 2014	Sheet Created Date Wednesday, February 11, 2015	Sheet Modified Date Wednesday, February 11, 2015	Sheet 11 of 9