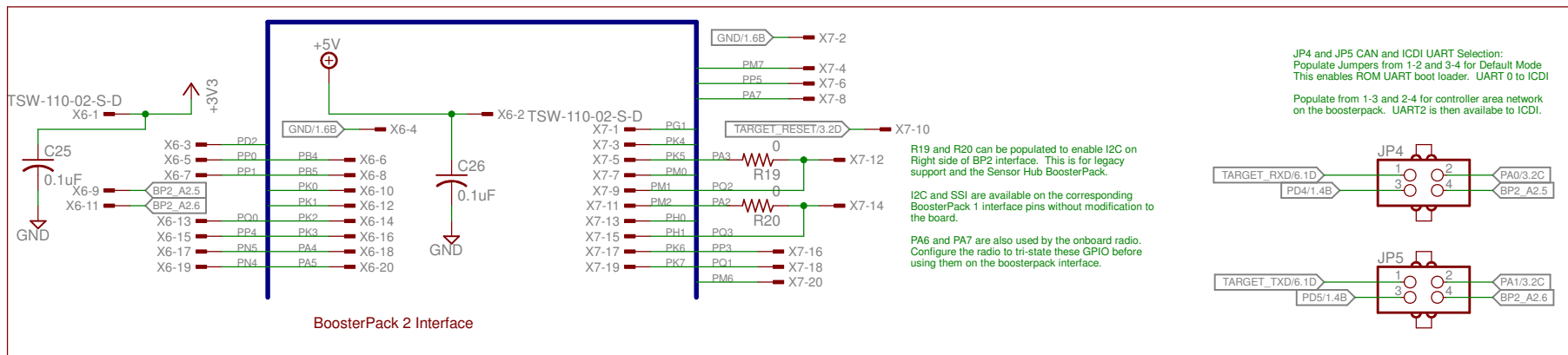
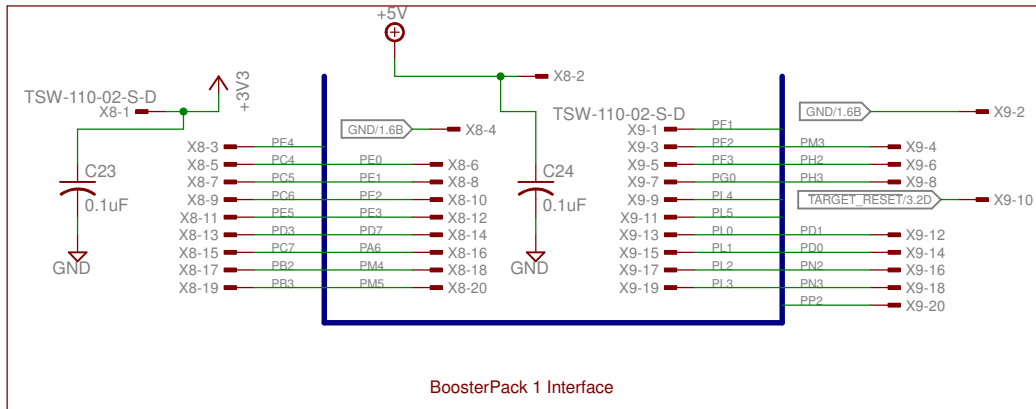


NOTE: TPD4S012 all protection circuits are identical. Connections chosen for simple routing.

TIDM-MINI-DC	
TITLE: EK-TM4C1294XL REV D	
Document Number:	REV:
Date: 1/24/2014 4:55:11 PM	Sheet: 1/6



TIDM-MINI-DC

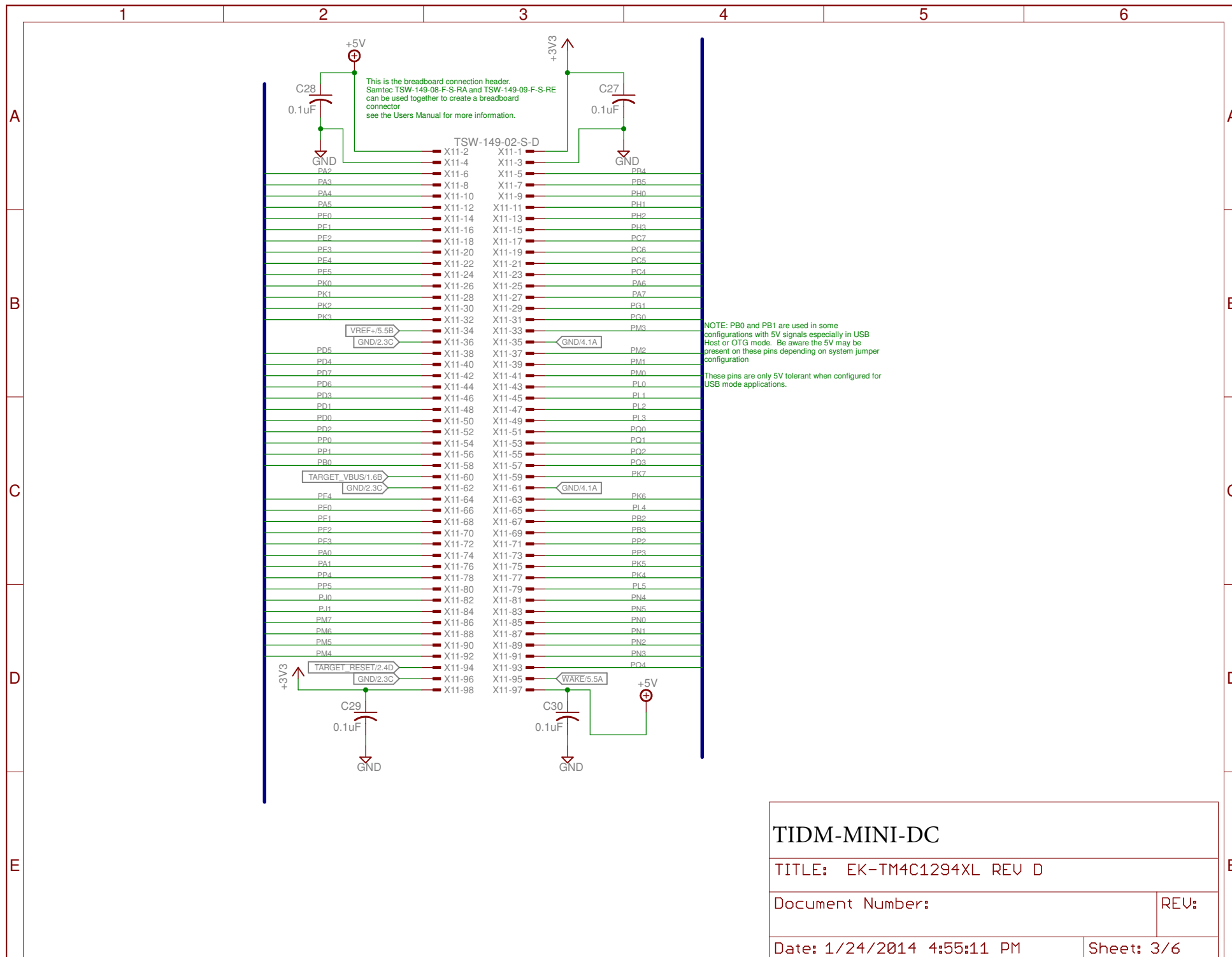
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REV:

Date: 1/24/2014 4:55:11 PM

Sheet: 2/6



TIDM-MINI-DC

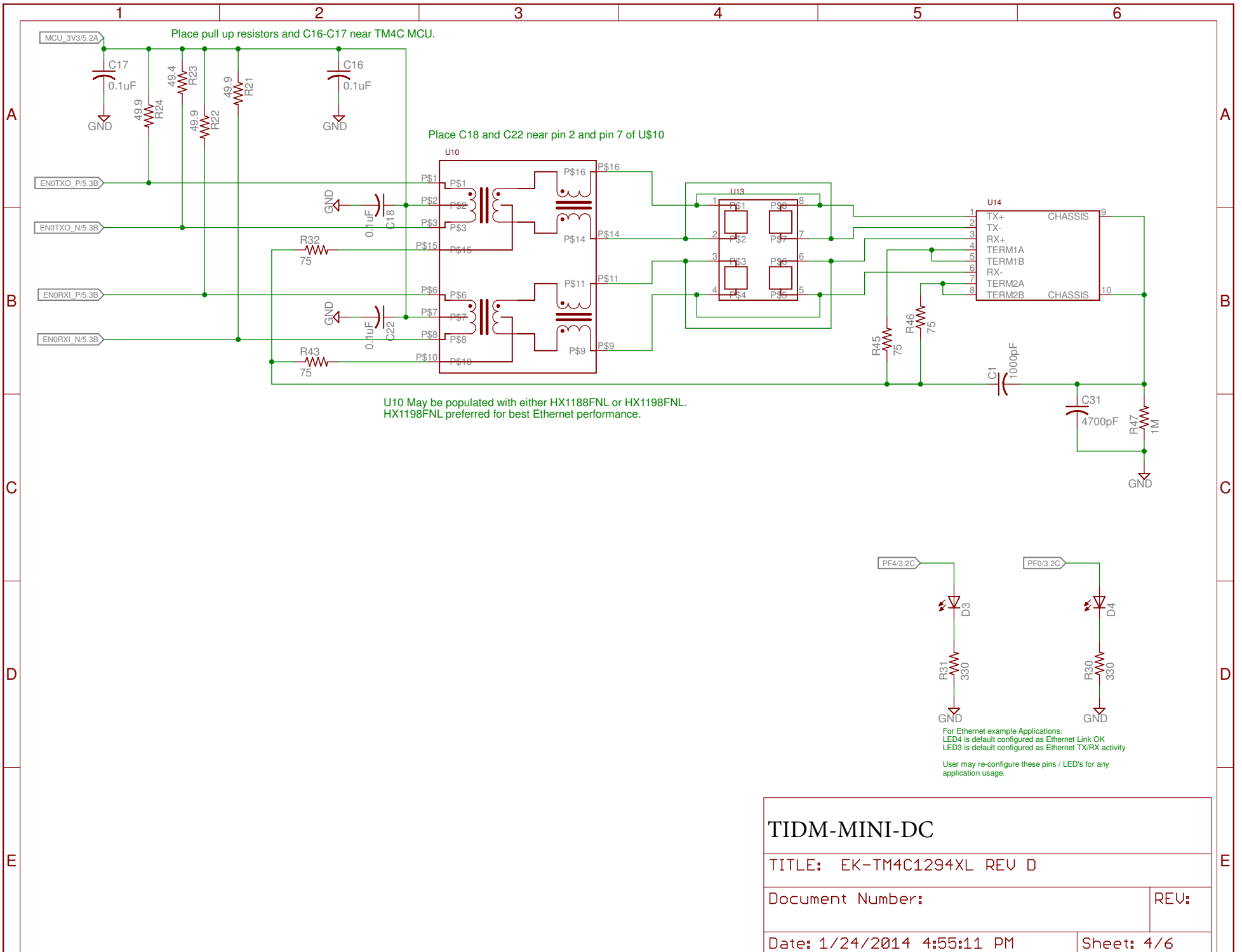
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Document Number:

REV:

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Sheet: 3/6



TIDM-MINI-DC

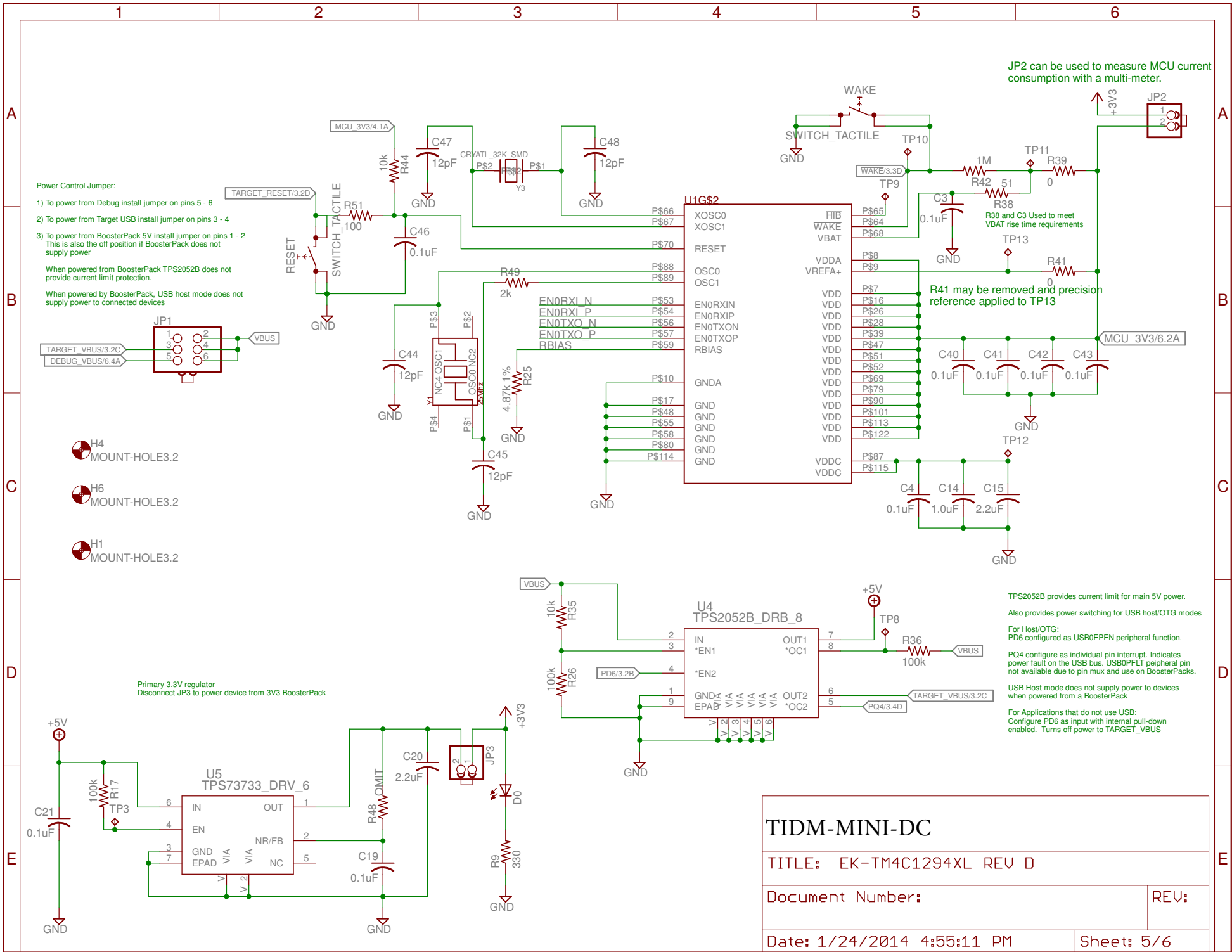
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Document Number:

REV:

Date: 1/24/2014 4:55:11 PM

Sheet: 4/6



Power Control Jumper:

- 1) To power from Debug install jumper on pins 5 - 6
- 2) To power from Target USB install jumper on pins 3 - 4
- 3) To power from BoosterPack 5V install jumper on pins 1 - 2
This is also the off position if BoosterPack does not supply power

When powered from BoosterPack TPS2052B does not provide current limit protection.

When powered by BoosterPack, USB host mode does not supply power to connected devices

JP2 can be used to measure MCU current consumption with a multi-meter.

R38 and C3 Used to meet VBAT rise time requirements

R41 may be removed and precision reference applied to TP13

TPS2052B provides current limit for main 5V power.

Also provides power switching for USB host/OTG modes

For Host/OTG:
PD6 configured as USB0EPEN peripheral function.

PQ4 configure as individual pin interrupt. Indicates power fault on the USB bus. USB0PFLT peripheral pin not available due to pin mux and use on BoosterPacks.

USB Host mode does not supply power to devices when powered from a BoosterPack

For Applications that do not use USB:
Configure PD6 as input with internal pull-down enabled. Turns off power to TARGET_VBUS

Primary 3.3V regulator
Disconnect JP3 to power device from 3V3 BoosterPack

TIDM-MINI-DC	
TITLE: EK-TM4C1294XL REV D	
Document Number:	REV:
Date: 1/24/2014 4:55:11 PM	Sheet: 5/6

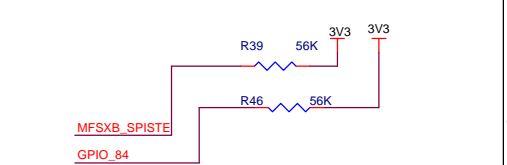
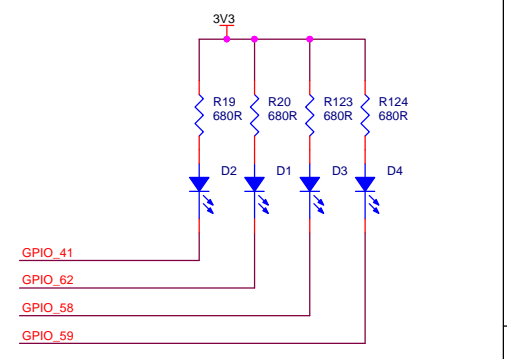
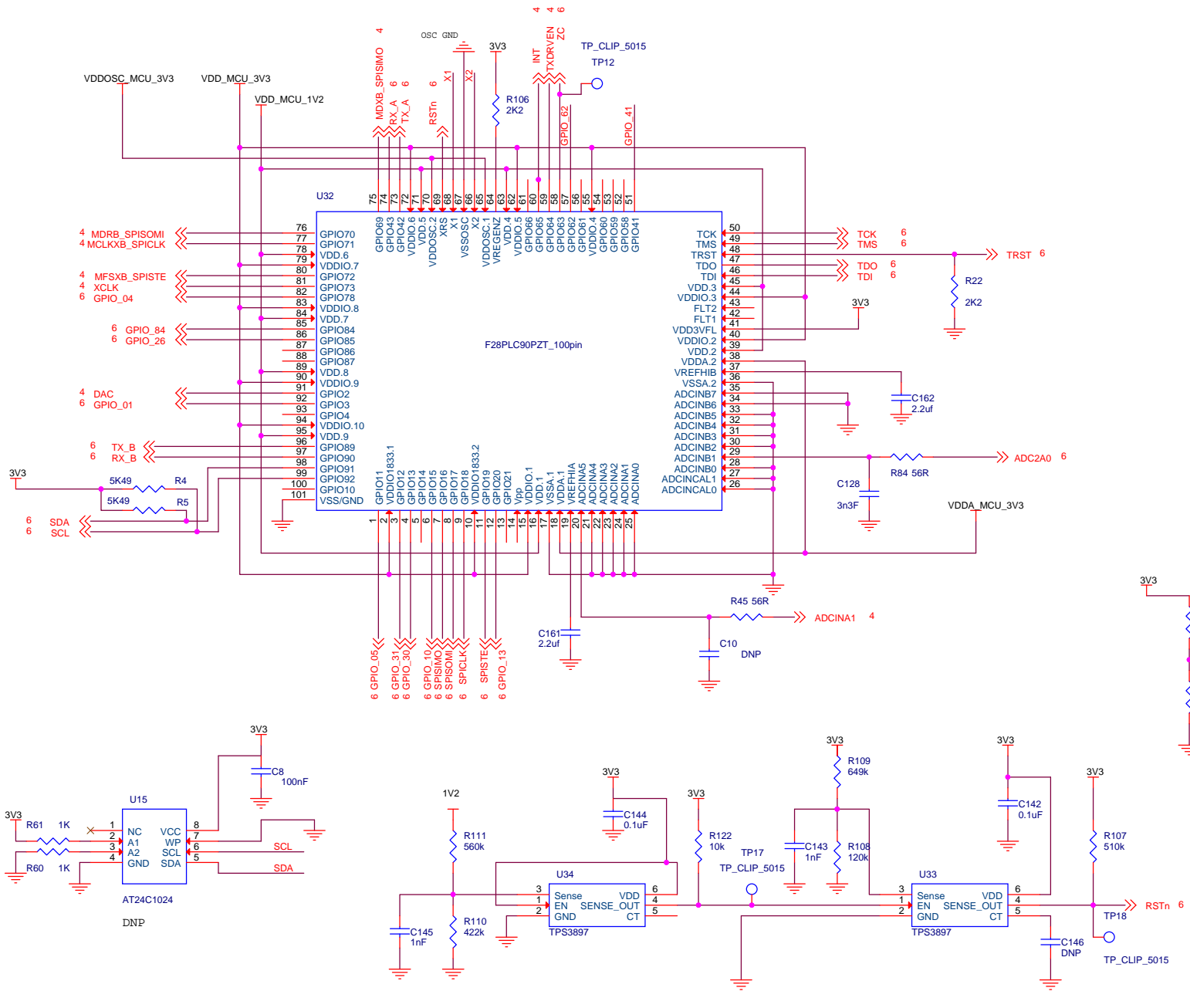
Notes/Revision Information

- V0.03 - 11/22/2013
- V0.04 - 2/21/2014
 - Updated U35 package to DSG
- V0.05 - 02/26/2014
 - p6
 - Reassigned pin10(Connector J1) ZC connection to GPIO_63(U32)
 - p4
 - Pin 39 of U17 tied to GND
 - Changed Pin 37 of U17 to floating
- V0.06 - 08/28/2014
 - p5
 - updated R100, L46, C140, C141, L45 Values
 - Added R121, L52, L53, C166, C167
 - p2
 - Tied unused ADC pins to GND
 - Added R122
 - Added LED's D3, D4

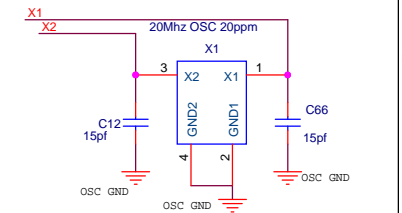
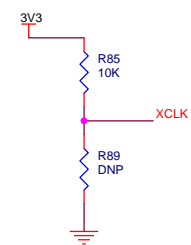
- 01 - Title Page
- 02 - F28PLC90PZT
- 03 - F28PLC90PZT Power
- 04 - AFE32
- 05 - BPF
- 06 - Connector

TIDM-MINI-DC

Title: F28PLC90PZT AFE032 SOM		TI
Page Contents: 01 - Title Page		
Size: B	<Doc>	Revision: 0.5
Date: Tuesday, September 16, 2014	Sheet 1 of	6

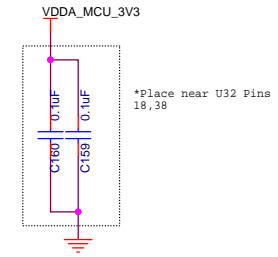
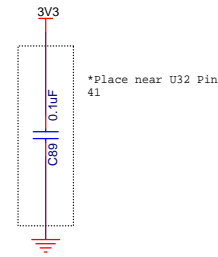
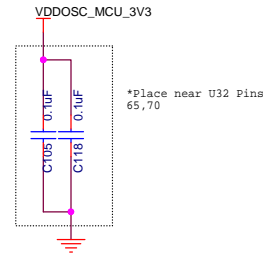
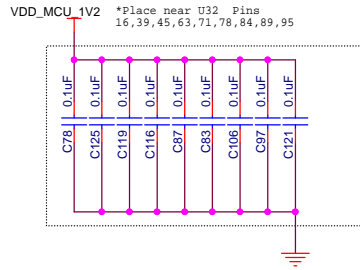
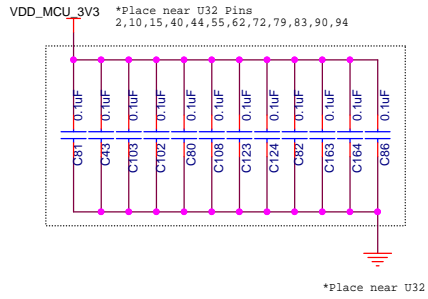
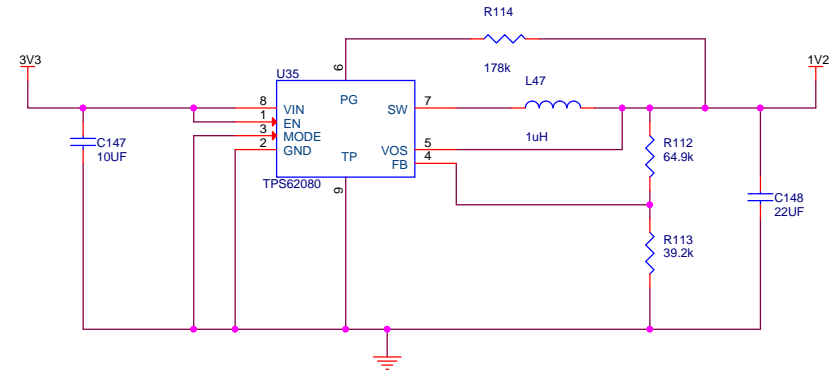
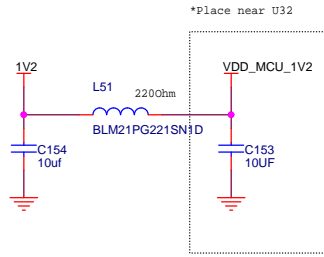
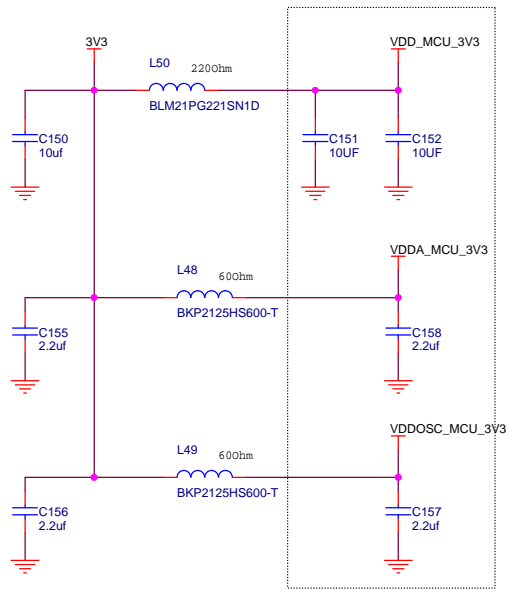


Default Bootmode Setting:
MFSXB_SPISTE:1
GPIO_84:1



TIDM-MINI-DC

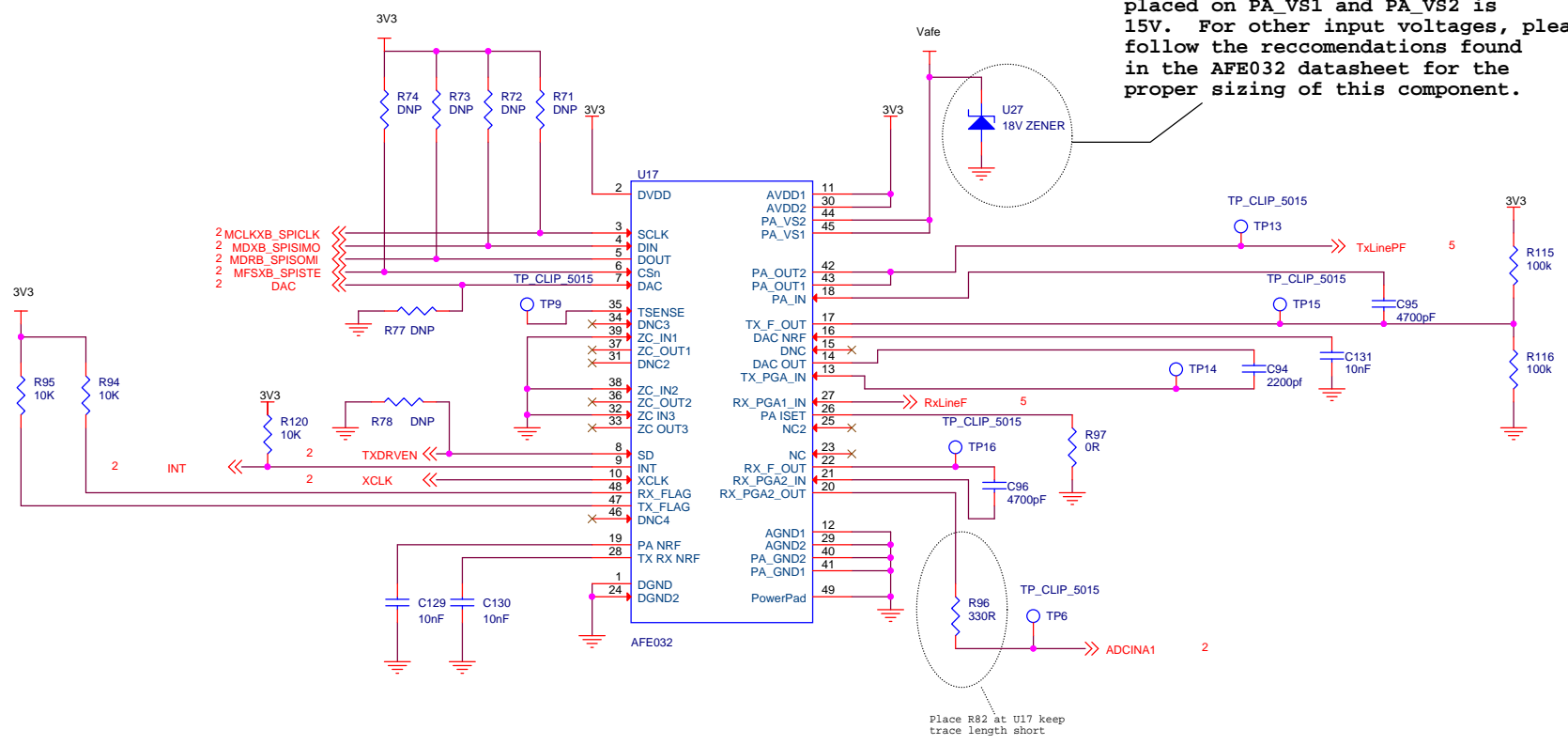
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Page Contents: 02 - F28PLC90PZT			
Size: B	<Doc>	Revision: 0.5	
Date: Tuesday, September 16, 2014	Sheet 2 of 6		



TIDM-MINI-DC

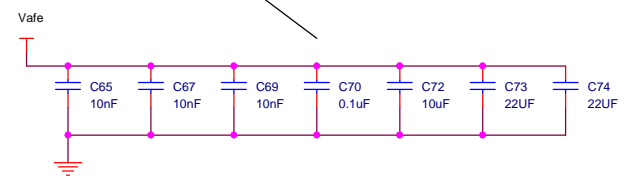
TI	
Title: F28PLC90PZT AFE032 SOM	
Page Contents: 03 - F28PLC90PZT Power	
Size: B	Revision: 0.5
Date: Tuesday, September 16, 2014	Sheet 3 of 6

NOTE: In this configuration the voltage placed on PA_VS1 and PA_VS2 is 15V. For other input voltages, please follow the recommendations found in the AFE032 datasheet for the proper sizing of this component.

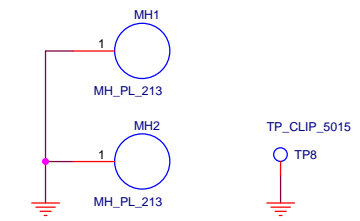
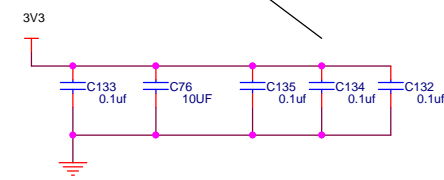


Place R82 at U17 keep trace length short

Place Near U17



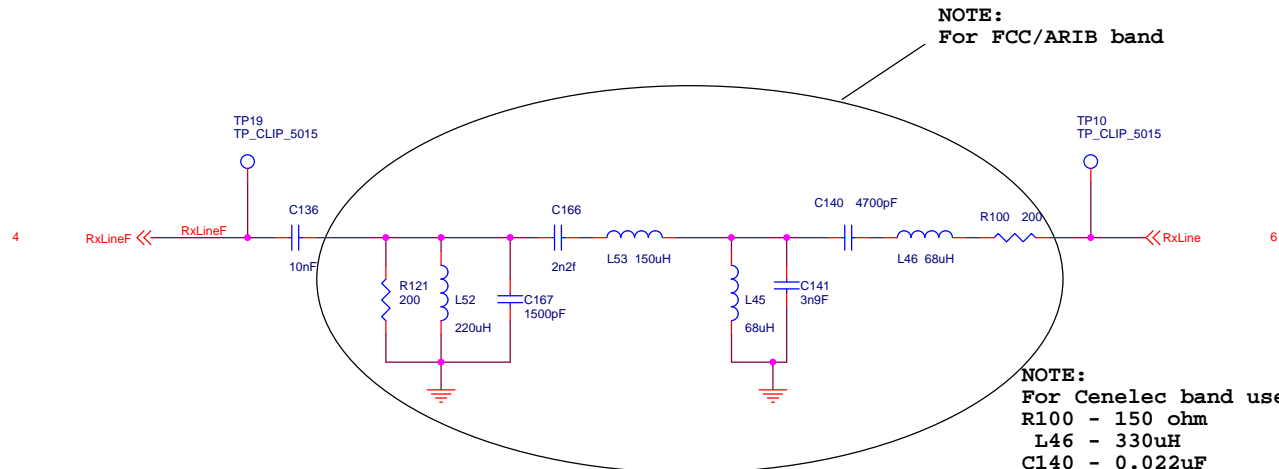
Place Near U17



TIDM-MINI-DC

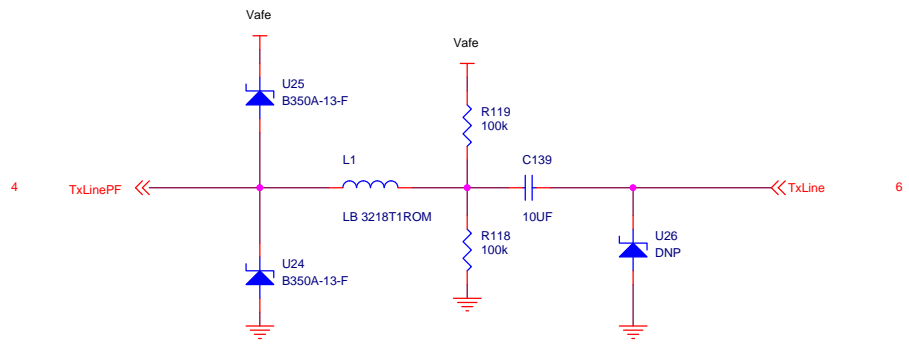
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Page Contents: 04 - AFE032		
Size: B	<Doc>	Revision: 0.5
Date: Tuesday, September 16, 2014	Sheet 4 of 6	



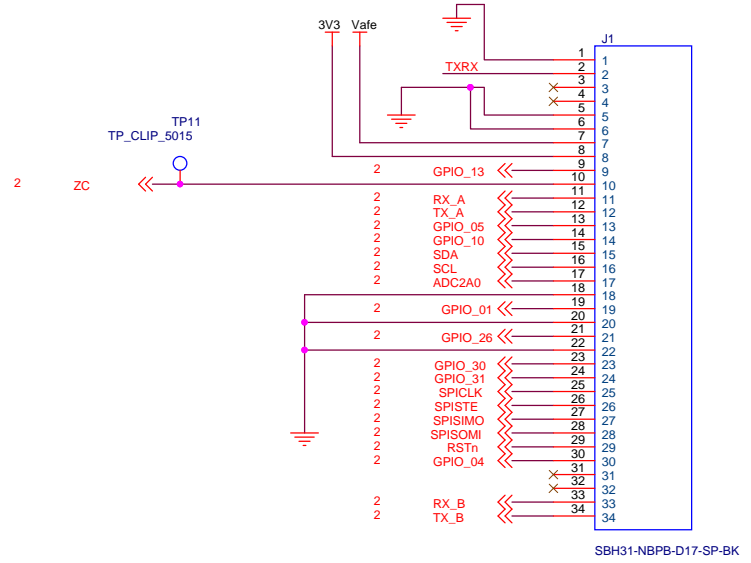
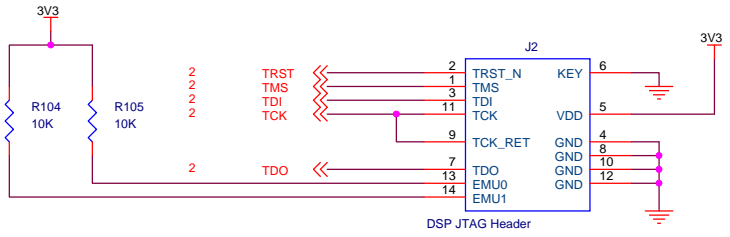
NOTE:
For FCC/ARIB band

NOTE:
For Cenelec band use values below:
 R100 - 150 ohm
 L46 - 330uH
 C140 - 0.022uF
 C141 - 0.033uF
 L45 - 180uH
 L53 - 1mH
 C166 - 8200pF
 C167 - 0.015uF
 L52 - 470uH
 R121 - 150 ohm



TIDM-MINI-DC

TI		
Title:		
Page Contents:		05 - BPF
Size: B	<Doc>	Revision: 0.5
Date:	Thursday, September 04, 2014	Sheet 5 of 6



TIDM-MINI-DC

TI	
Title: F28PLC90PZT AFE032 SOM	
Page Contents: 06 - Connector	
Size: B	Revision: 0.5
Date: Thursday, August 28, 2014	Sheet 6 of 6

Notes/Revision Information

V0.01 - Initial Release

V0.02 - 10/10/12

- p2
 - Changed C2 value
- p3
 - Added C29
 - Removed 5V rail
 - Changed LD1, LD2 to D6, D7 and connected to 3V3
- p4
 - Removed 5V power supply
 - Changed R35 to 1.87k

V0.03 - 10/18/12

- p4
 - Changed C23, C24 parts (BOM)
 - Changed symbol for M1 added multiple pins

V0.04 - 10/22/12

- p3
 - Updated part U5 Symbol

V0.05 - 11/12/12

- p4
 - Added MHL, 2, 3, 4
- p5
 - Added M2, M3
 - Added R36, TP1
 - Removed J5, J6 and J7

V0.06 - 12/05/12

- p2
 - Connected MHL to Earth GND
- p4
 - Removed Ground from MH4
- p5
 - Moved TP1 to the other side of R36
 - Changed M2 Part (BOM)

V0.07 - 12/07/12

- p5
 - Moved TP1 to the other side of R36 (again)

V0.08 - 01/14/13 (R2 Release)

- p2
 - Updated Part D1 (BOM)

V0.09 - 05/13/13 (R2 Release)

- p2
 - Changed C22 to DNP
 - Added C30

V0.10 - 12/5/13 (R2 Release)

- p2
 - Changed U1 to 10V

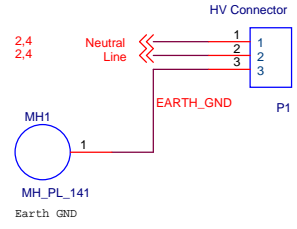
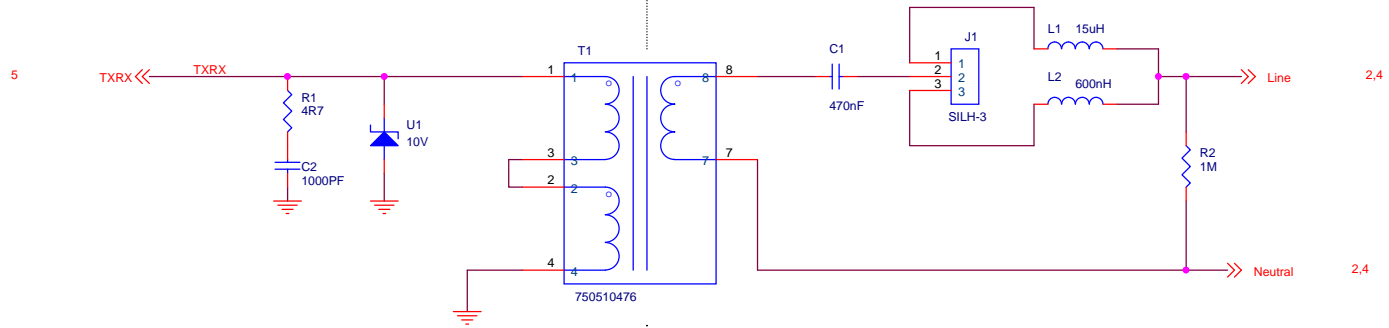
V0.11 - 2/26/14 (R5 Release)

- p2
 - Added U11
 - Added C31, C32

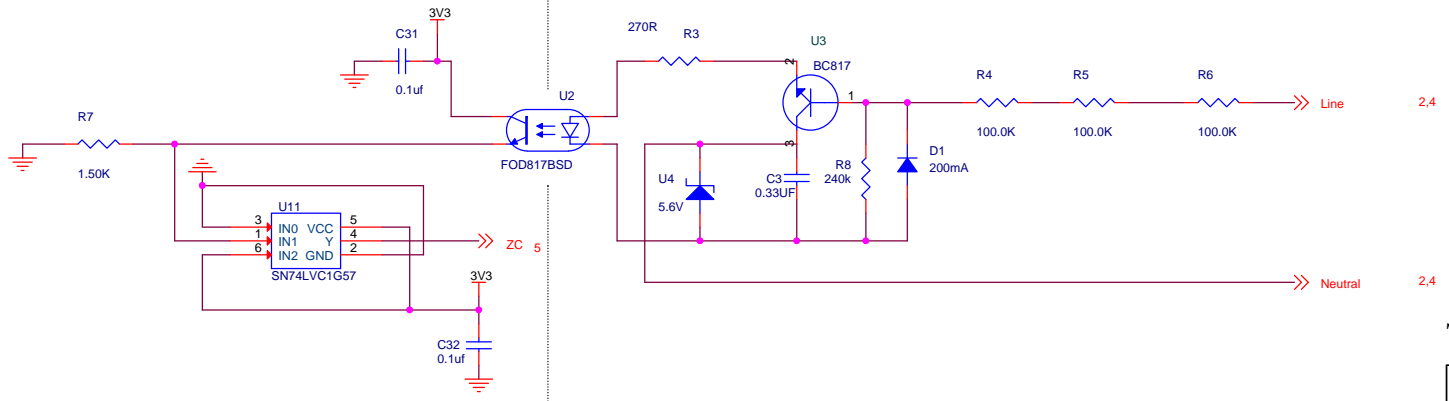
- 01 - Title / Notes
- 02 - Coupling Circuit
- 03 - USB JTAG/UART
- 04 - System Power
- 05 - Connectors

TIDM-MINI-DC

Title: SOMPLC-DOCKV1 R2		TI
Page Contents: 01 - Title / Notes		
Size: B	<Doc>	Revision: 0.8
Date: Wednesday, February 26, 2014	Sheet 1 of 5	

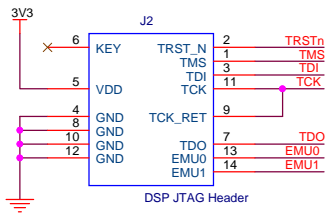


HIGH VOLTAGE !

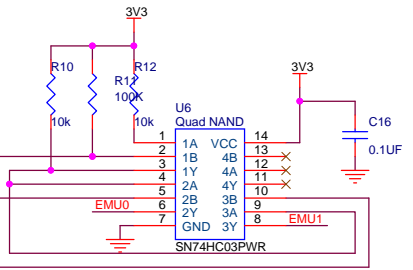
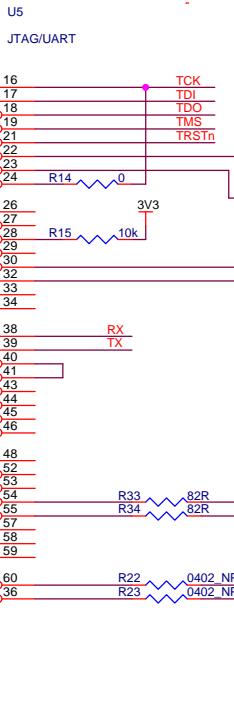
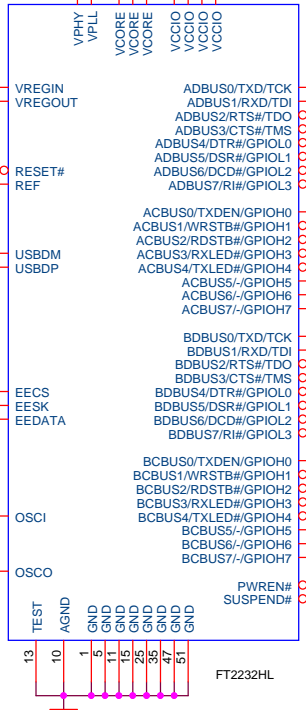
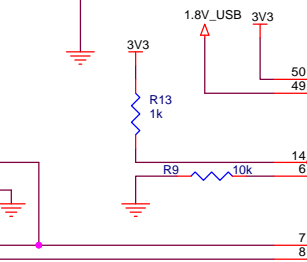
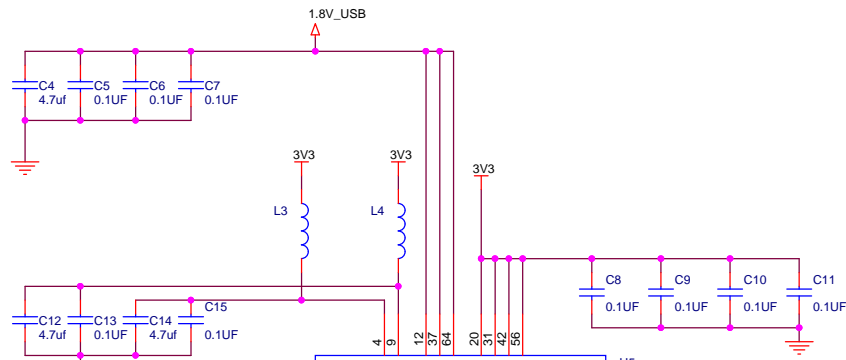
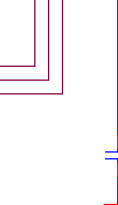
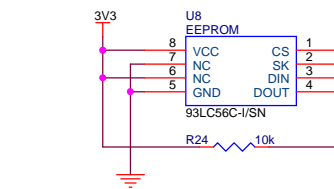
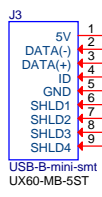
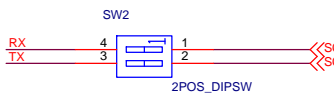
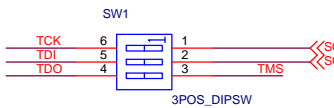


TIDM-MINI-DC

TI		
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Page Contents: 02 - Coupling Circuit		
Size: B	<Doc>	Revision: 0.8
Date: Wednesday, February 26, 2014		Sheet 2 of 5

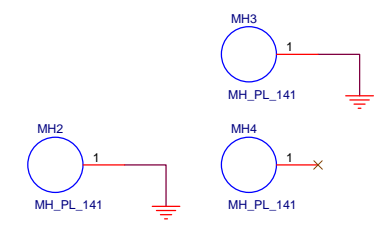
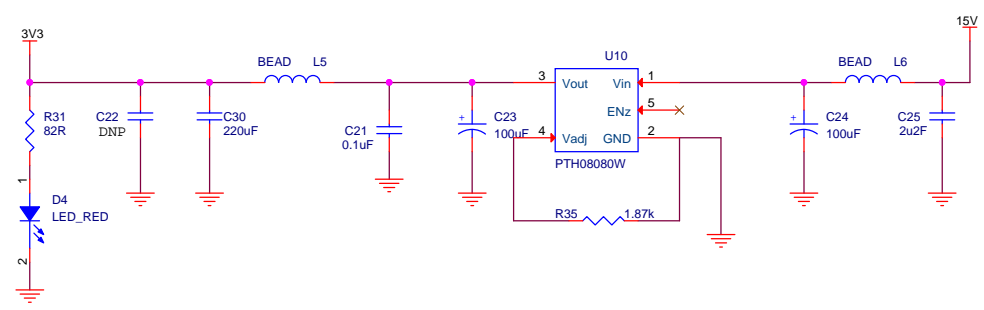
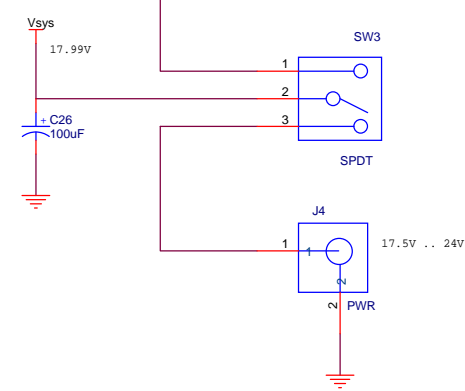
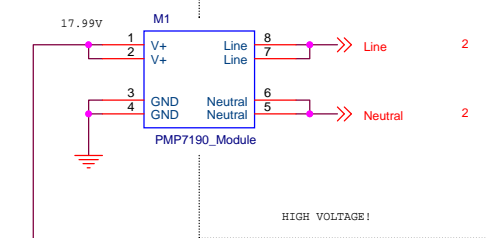
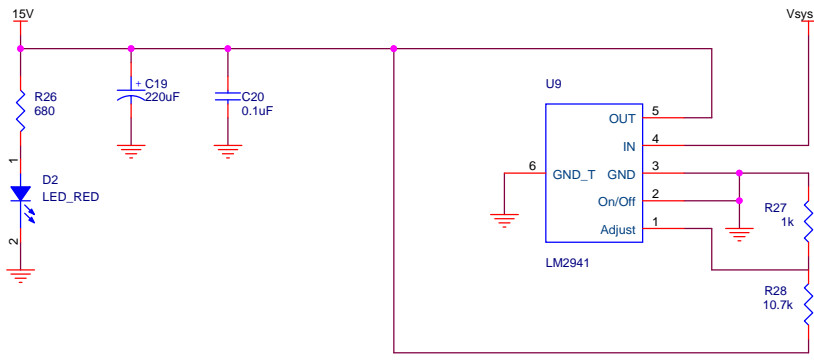


Switch Operation:
 SW1:
 1 ON, SCIB - USB; OFF, JTAG (SCIB EXT)
 2 ON, SCIB - USB; OFF, JTAG (SCIB EXT)
 3 ON, SCIB - USB; OFF, JTAG (SCIB EXT)
 SW2:
 1 ON, SCIA-USB; OFF, SCIA-EXT
 1 ON, SCIA-USB; OFF, SCIA-EXT



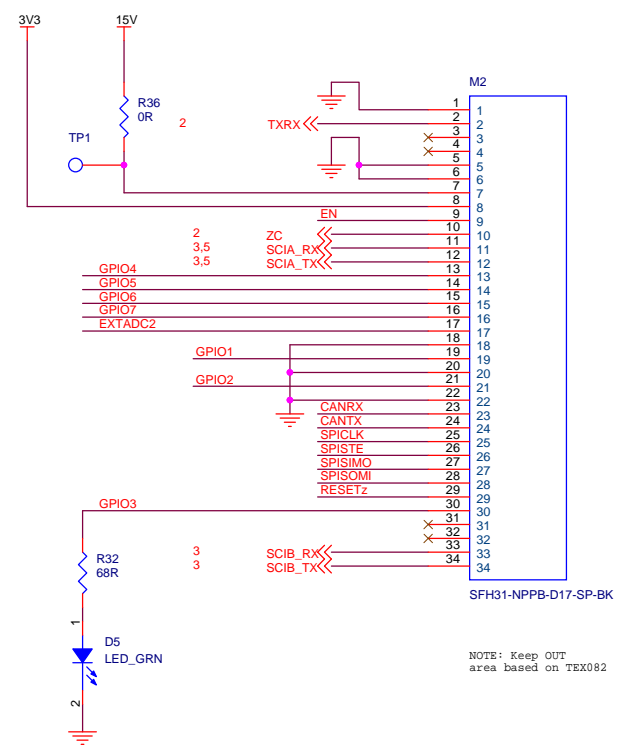
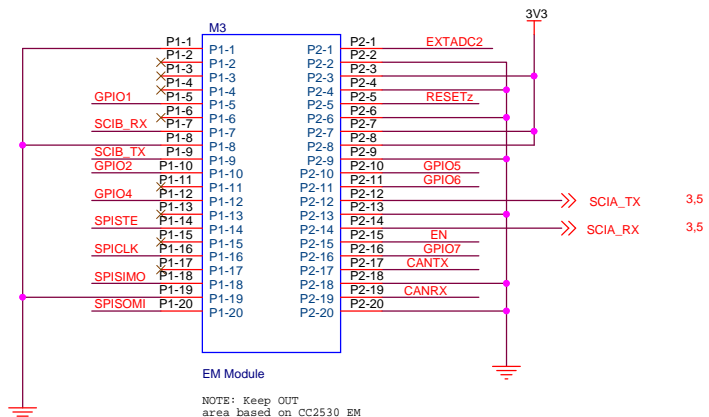
TIDM-MINI-DC

TI	
Title: SOMPLC-DOCKV1 R2	
Page Contents: 03 - USB JTAG/UART	
Size: B	Revision: 0.8
Date: Wednesday, February 26, 2014	Sheet 3 of 5



TIDM-MINI-DC

TI	
Title: SOMPLC-DOCKV1 R2	
Page Contents: 04 - System Power	
Size: B	Revision: 0.8
Date: Wednesday, February 26, 2014	Sheet 4 of 5



TIDM-MINI-DC

TI	
Title: SOMPLC-DOCKV1 R2	
Page Contents: 05 - Connectors	
Size: B	Revision: 0.8
Date: Wednesday, February 26, 2014	Sheet 5 of 5

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