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ZedBoard**Digilent**www.zedboard.org**Function****Sheet Number**

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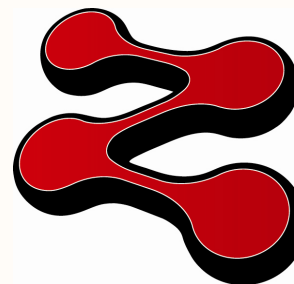
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Power Regulation

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Power Regulation

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**ZedBoard****13 Sep 2012**

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Doc#

500-248

Engineer EG

Author GMA

Date 6/20/2012

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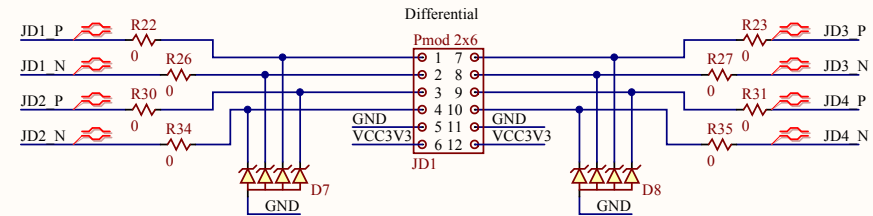
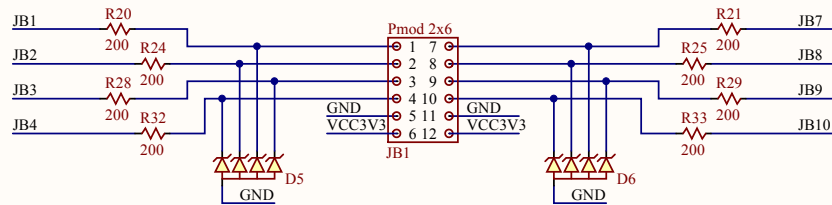
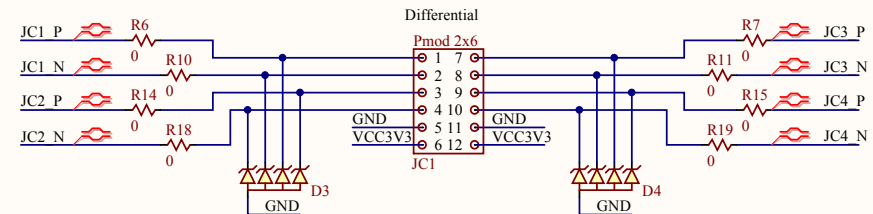
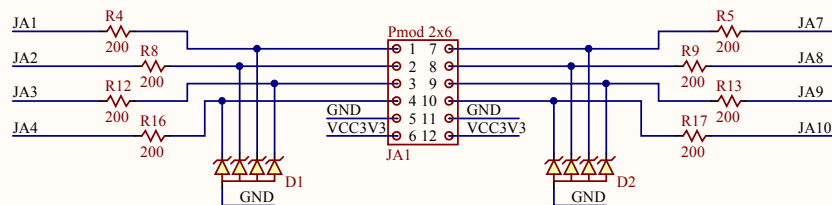
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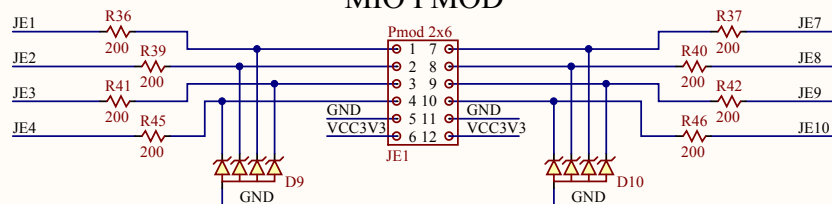
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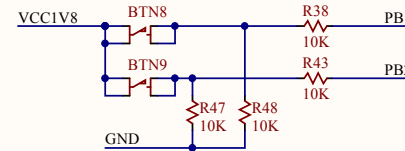
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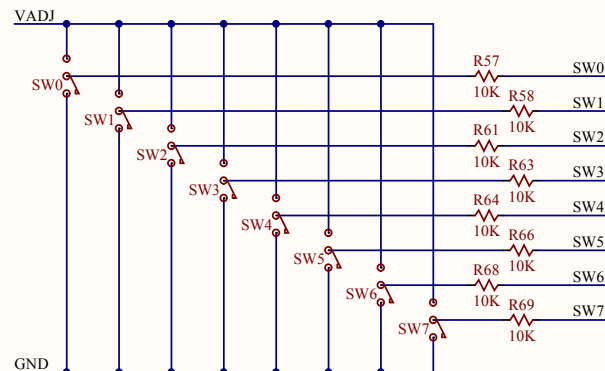
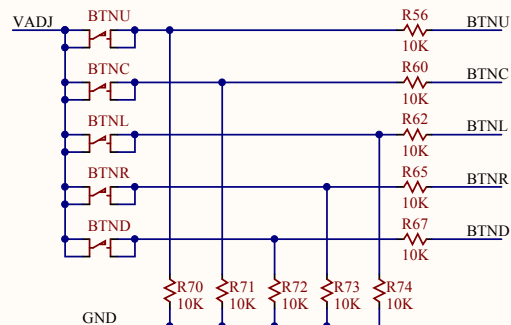
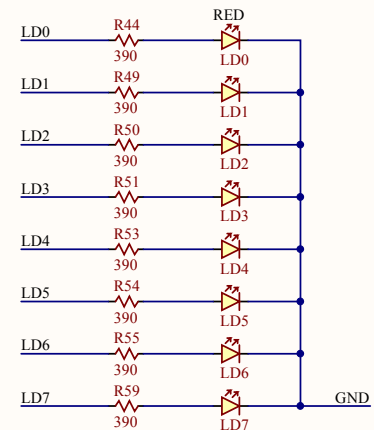
MIO PMOD



MIO BUTTON



MIO LED



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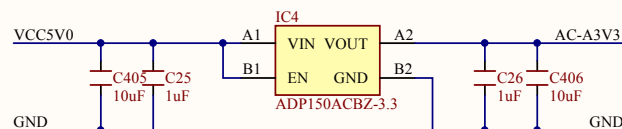
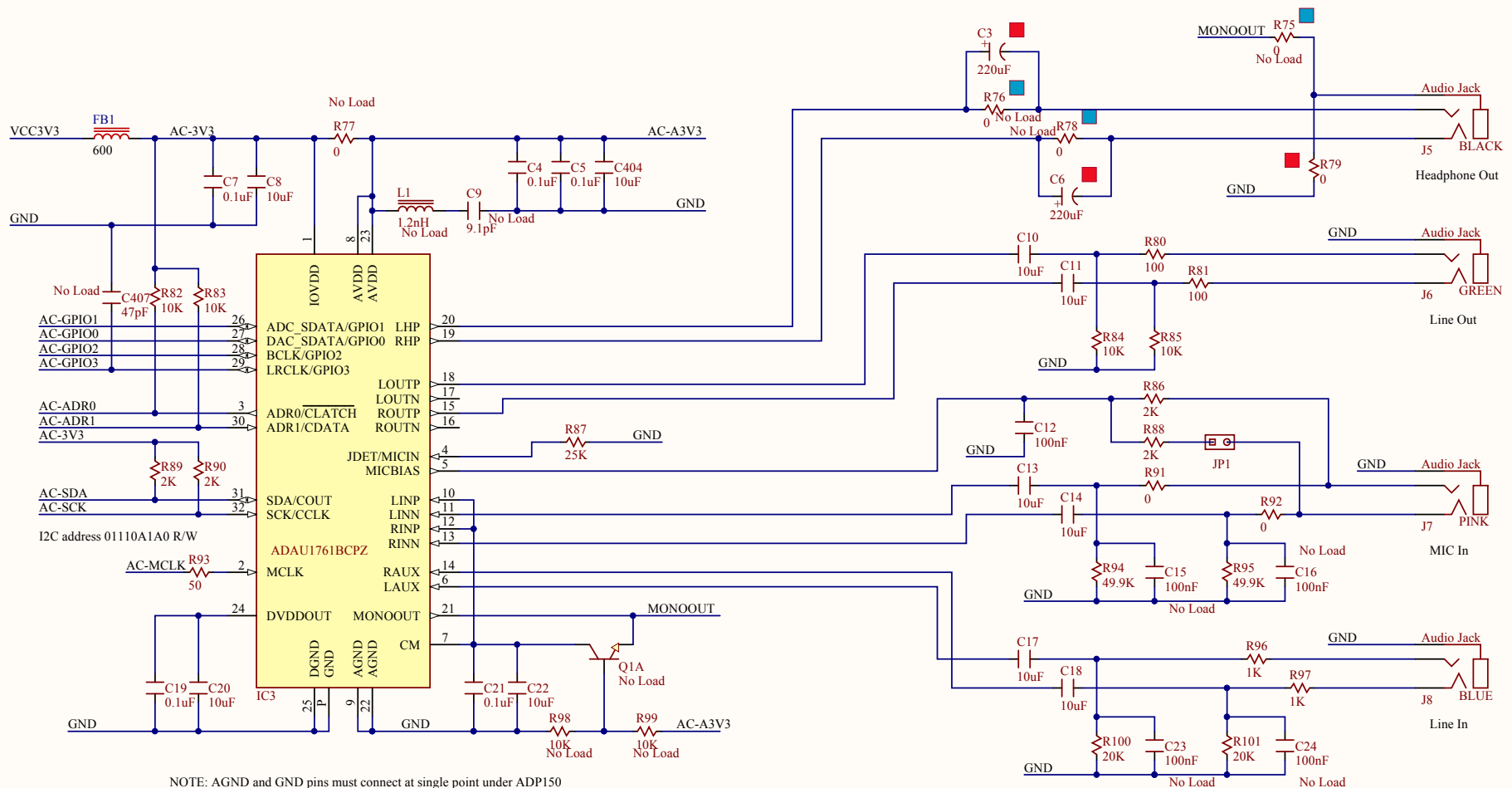
Load

No Load

Capless Headphone



AC-Coupled Headphone



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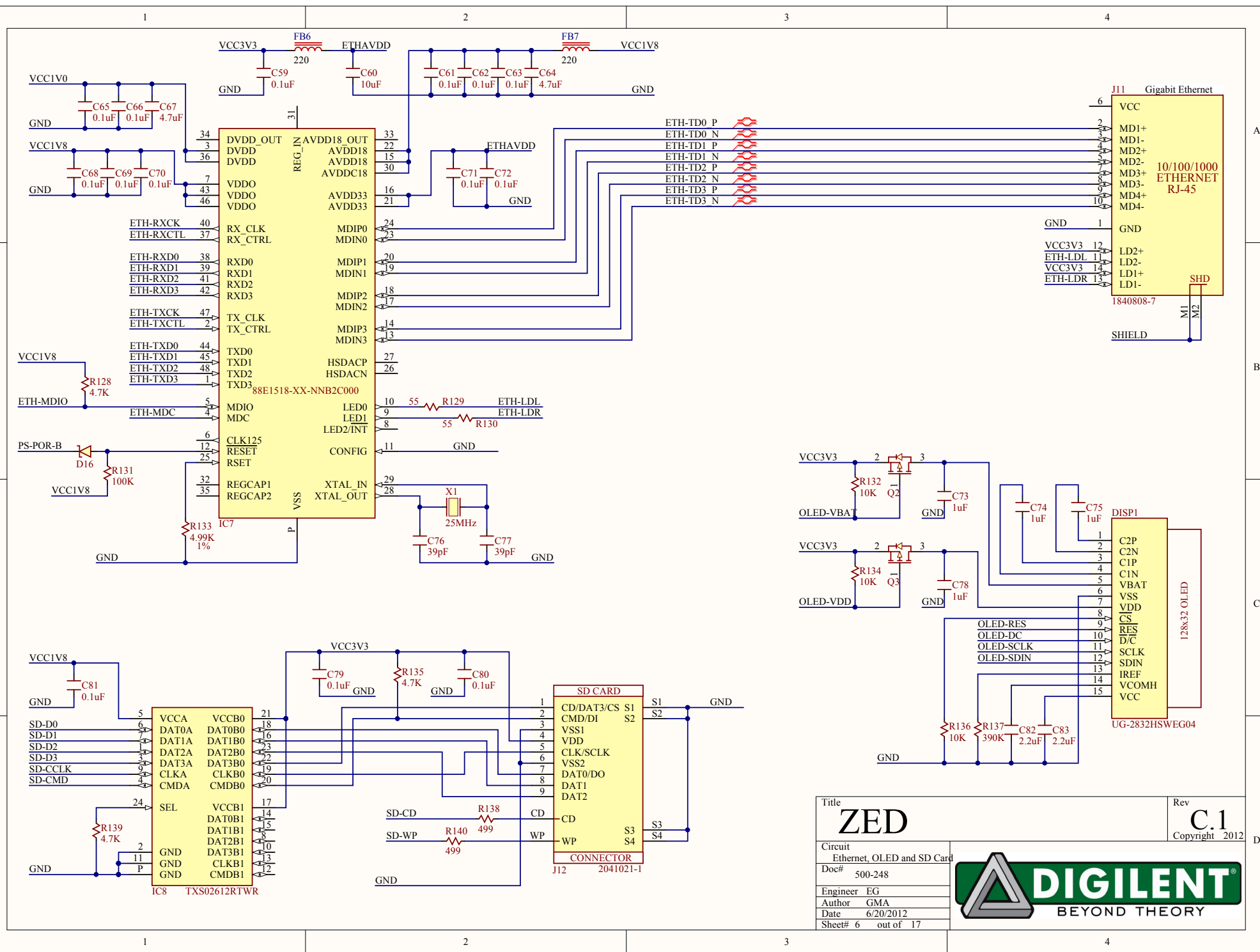
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A


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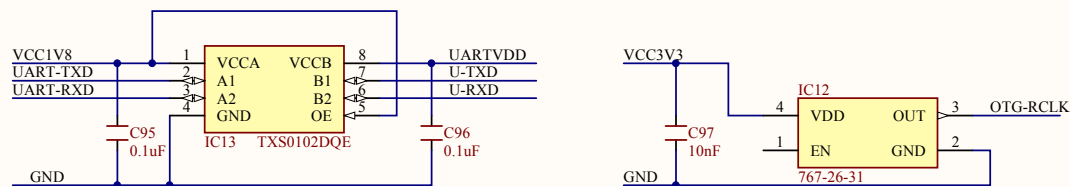
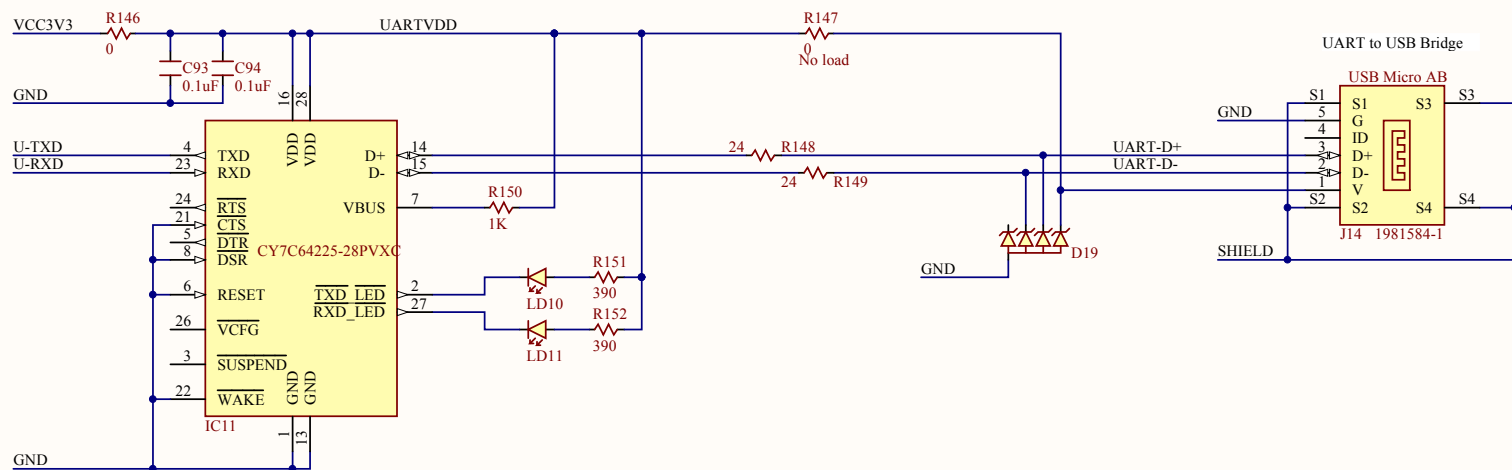
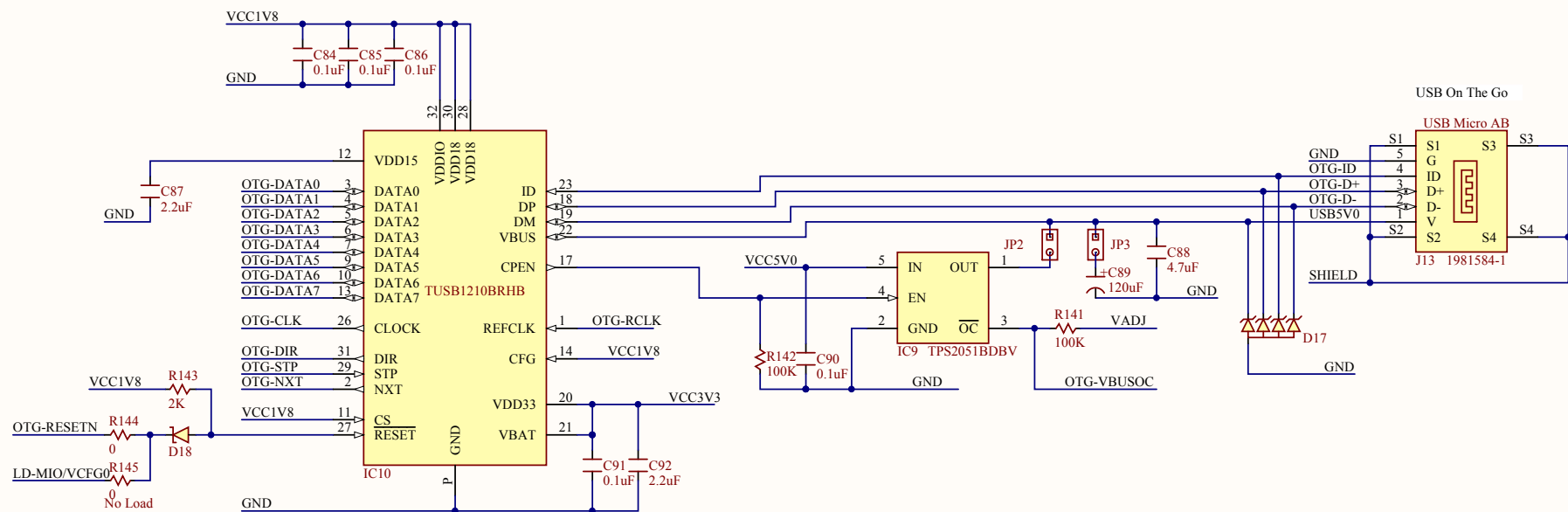
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| ZED | | C.1 |
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| Engineer | EG | |
| Author | GMA | |
| Date | 6/20/2012 | |
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| USB and UART | | | |
| Doc# | 500-248 | | |
| Engineer | EG | | |
| Author | GMA | | |
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VCC3V3

| | | |
|-----------------|------|-----------|
| BANK I3 | | |
| IO_0 | R7 | FMC-SCL |
| IO_25 | U7 | FMC-SDA |
| IO_L1N_T0 | V9 | JB9 |
| IO_L1P_T0 | V10 | JB3 |
| IO_L2N_T0 | W8 | JB4 |
| IO_L2P_T0 | W8 | JB10 |
| IO_L3N_T0_DQS | W10 | JB8 |
| IO_L3P_T0_DQS | W11 | JB2 |
| IO_L4N_T0 | W12 | JB1 |
| IO_L4P_T0 | V12 | JB7 |
| IO_L5N_T0 | U11 | OLED-VBAT |
| IO_L5P_T0 | U12 | OLED-VDD |
| IO_L6N_T0_VREF | U9 | OLED-RES |
| IO_L6P_T0 | U10 | OLED-DC |
| IO_L7N_T1 | AB12 | OLED-SCLK |
| IO_L7P_T1 | AA12 | OLED-SDIN |
| IO_L8N_T1 | AB11 | JA7 |
| IO_L8P_T1 | AA11 | JA2 |
| IO_L9N_T1_DQS | AB9 | JA9 |
| IO_L9P_T1_DQS | AB10 | JA8 |
| IO_L10N_T1 | Y10 | JA3 |
| IO_L10P_T1 | Y11 | JA1 |
| IO_L11N_T1_SRCC | AA8 | JA10 |
| IO_L11P_T1_SRCC | AA9 | JA4 |
| IO_L12N_T1_MRCC | Y8 | AC-GPIO0 |
| IO_L12P_T1_MRCC | Y9 | GCLK |
| IO_L13N_T2_MRCC | Y5 | AC-ADR1 |
| IO_L13P_T2_MRCC | Y6 | AC-GPIO3 |
| IO_L14N_T2_SRCC | AA6 | AC-GPIO2 |
| IO_L14P_T2_SRCC | AA7 | AC-GPIO1 |
| IO_L15N_T2_DQS | AB1 | AC-ADR0 |
| IO_L15P_T2_DQS | AB2 | AC-MCLK |
| IO_L16N_T2 | AB4 | AC-SCK |
| IO_L16P_T2 | AB5 | AC-SDA |
| IO_L17N_T2 | AB6 | JC1 N |
| IO_L17P_T2 | AB7 | JC1 P |
| IO_L18N_T2 | AA4 | JC2 N |
| IO_L18P_T2 | Y4 | JC2 P |
| IO_L19N_T3_VREF | Y6 | JC3 N |
| IO_L19P_T3 | Y6 | JC3 P |
| IO_L20N_T3 | U4 | JC4 N |
| IO_L20P_T3 | U4 | JC4 P |
| IO_L21N_T3_DQS | V4 | JD2 N |
| IO_L21P_T3_DQS | V5 | JD2 P |
| IO_L22N_T3 | U5 | JD4 N |
| IO_L22P_T3 | U6 | JD4 P |
| IO_L23N_T3 | W7 | JD1 N |
| IO_L23P_T3 | W7 | JD1 P |
| IO_L24N_T3 | W5 | JD3 N |
| IO_L24P_T3 | W6 | JD3 P |

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VCC3V3

| | | |
|-----------------|------|-----------|
| BANK 33 | | |
| IO_0 | U19 | LD6 |
| IO_25 | U14 | LD7 |
| IO_L1N_T0 | U21 | LD3 |
| IO_L1P_T0 | U21 | LD1 |
| IO_L2N_T0 | U22 | LD2 |
| IO_L2P_T0 | U22 | LD0 |
| IO_L3N_T0_DQS | W22 | LD5 |
| IO_L3P_T0_DQS | W22 | LD4 |
| IO_L4N_T0 | W21 | |
| IO_L4P_T0 | W20 | |
| IO_L5N_T0 | U20 | VGA-R1 |
| IO_L5P_T0 | U19 | VGA-R2 |
| IO_L6N_T0_VREF | V18 | VGA-R4 |
| IO_L6P_T0 | AB22 | VGA-G1 |
| IO_L7N_T1 | AA22 | VGA-G2 |
| IO_L7P_T1 | AB21 | VGA-G3 |
| IO_L8N_T1 | AA21 | VGA-G4 |
| IO_L8P_T1 | U21 | VGA-B1 |
| IO_L9N_T1_DQS | U20 | VGA-B2 |
| IO_L9P_T1_DQS | AB20 | VGA-B3 |
| IO_L10N_T1 | AB19 | VGA-B4 |
| IO_L10P_T1 | AA19 | VGA-GS |
| IO_L11N_T1_SRCC | Y19 | VGA-VS |
| IO_L11P_T1_SRCC | AA18 | HD-SCL |
| IO_L12N_T1_MRCC | Y18 | HD-SPDIFO |
| IO_L12P_T1_MRCC | W18 | HD-CLK |
| IO_L13N_T2_MRCC | W17 | HD-VSYN |
| IO_L13P_T2_MRCC | Y16 | HD-SDA |
| IO_L14N_T2_SRCC | W16 | HD-INT |
| IO_L14P_T2_SRCC | U16 | HD-DE |
| IO_L15N_T2_DQS | U15 | HD-SPDIF |
| IO_L15P_T2_DQS | V17 | HD-HSYN |
| IO_L16N_T2 | U17 | HD-D13 |
| IO_L16P_T2 | AB17 | HD-D7 |
| IO_L17N_T2 | AA17 | HD-D8 |
| IO_L17P_T2 | AB16 | HD-D5 |
| IO_L18N_T2 | AA16 | HD-D6 |
| IO_L18P_T2 | V15 | HD-D12 |
| IO_L19N_T3_VREF | U14 | HD-D14 |
| IO_L19P_T3 | W13 | HD-D10 |
| IO_L20N_T3 | V13 | HD-D15 |
| IO_L20P_T3 | Y15 | HD-D9 |
| IO_L21N_T3_DQS | W15 | HD-D11 |
| IO_L21P_T3_DQS | AA14 | HD-D2 |
| IO_L22N_T3 | Y14 | HD-D3 |
| IO_L22P_T3 | AA13 | HD-D1 |
| IO_L23N_T3 | Y13 | HD-D0 |
| IO_L23P_T3 | AB15 | HD-D4 |
| IO_L24N_T3 | AB14 | FMC-PRSN |
| IO_L24P_T3 | | |

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VADJ

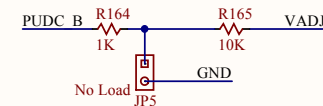
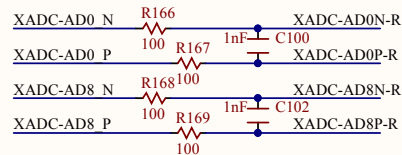
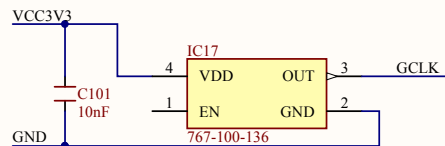
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|-----------------|-----|---------------|
| BANK 34 | | |
| IO_0 | H15 | XADC-GIO0 |
| IO_25 | R15 | XADC-GIO1 |
| IO_L1N_T0 | K15 | XADC-GIO2 |
| IO_L1P_T0 | M15 | XADC-GIO3 |
| IO_L2N_T0 | U17 | FMC-LA15_N |
| IO_L2P_T0 | U16 | FMC-LA15_P |
| IO_L3N_T0_DQS | U16 | OTG-VBUSOC |
| IO_L3P_T0_DQS | K16 | PUDC B |
| IO_L4N_T0 | M17 | FMC-LA13_N |
| IO_L4P_T0 | L17 | FMC-LA13_P |
| IO_L5N_T0 | N18 | FMC-LA11_N |
| IO_L5P_T0 | N17 | FMC-LA11_P |
| IO_L6N_T0_VREF | M16 | FMC-VREF |
| IO_L6P_T0 | M15 | SW7 |
| IO_L7N_T1 | K18 | FMC-LA05_N |
| IO_L7P_T1 | L18 | FMC-LA05_P |
| IO_L8N_T1 | U22 | FMC-LA08_N |
| IO_L8P_T1 | U21 | FMC-LA08_P |
| IO_L9N_T1_DQS | K21 | FMC-LA16_N |
| IO_L9P_T1_DQS | U20 | FMC-LA16_P |
| IO_L10N_T1 | U22 | FMC-LA06_N |
| IO_L10P_T1 | L21 | FMC-LA06_P |
| IO_L11N_T1_SRCC | K20 | FMC-LA14_N |
| IO_L11P_T1_SRCC | K19 | FMC-LA14_P |
| IO_L12N_T1_MRCC | L19 | FMC-CLK0_N |
| IO_L12P_T1_MRCC | L18 | FMC-CLK1_P |
| IO_L13N_T2_MRCC | M20 | FMC-LA00_CC_N |
| IO_L13P_T2_MRCC | M19 | FMC-LA00_CC_P |
| IO_L14N_T2_SRCC | N20 | FMC-LA01_CC_N |
| IO_L14P_T2_SRCC | N19 | FMC-LA01_CC_P |
| IO_L15N_T2_DQS | M22 | FMC-LA04_N |
| IO_L15P_T2_DQS | M21 | FMC-LA04_P |
| IO_L16N_T2 | P22 | FMC-LA03_N |
| IO_L16P_T2 | N22 | FMC-LA03_P |
| IO_L17N_T2 | R21 | FMC-LA09_N |
| IO_L17P_T2 | R20 | FMC-LA09_P |
| IO_L18N_T2 | U21 | FMC-LA12_N |
| IO_L18P_T2 | U20 | FMC-LA12_P |
| IO_L19N_T3_VREF | P15 | FMC-VREF |
| IO_L19P_T3 | N15 | BTNL |
| IO_L20N_T3 | P18 | FMC-LA02_N |
| IO_L20P_T3 | P17 | FMC-LA02_P |
| IO_L21N_T3_DQS | T17 | FMC-LA07_N |
| IO_L21P_T3_DQS | U16 | FMC-LA07_P |
| IO_L22N_T3 | T19 | FMC-LA10_N |
| IO_L22P_T3 | R19 | FMC-LA10_P |
| IO_L23N_T3 | T18 | BTNU |
| IO_L23P_T3 | R18 | BTNR |
| IO_L24N_T3 | R16 | BTND |
| IO_L24P_T3 | P16 | BTNC |

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VADJ

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|----------------------|-----|---------------|
| BANK 35 | | |
| IO_0 | H17 | SW6 |
| IO_25 | H18 | SW5 |
| IO_L1N_T0_AD0N | E16 | XADC-AD0N-R |
| IO_L1P_T0_AD0P | F16 | XADC-AD0P-R |
| IO_L2N_T0_AD8N | D17 | XADC-AD8N-R |
| IO_L2P_T0_AD8P | D16 | XADC-AD8P-R |
| IO_L3N_T0_DQS_AD1N | D15 | FMC-LA23_N |
| IO_L3P_T0_DQS_AD1P | E15 | FMC-LA23_P |
| IO_L4N_T0 | G16 | FMC-LA19_N |
| IO_L4P_T0 | G15 | FMC-LA19_P |
| IO_L5N_T0_AD9N | E18 | FMC-LA26_N |
| IO_L5P_T0_AD9P | F18 | FMC-LA26_P |
| IO_L6N_T0_VREF | F17 | FMC-VREF |
| IO_L6P_T0 | G17 | OTG-RESETN |
| IO_L7N_T1_AD2N | B15 | FMC-LA30_N |
| IO_L7P_T1_AD2P | C15 | FMC-LA30_P |
| IO_L8N_T1_AD10N | B17 | FMC-LA31_N |
| IO_L8P_T1_AD10P | B16 | FMC-LA31_P |
| IO_L9N_T1_DQS_AD3N | A17 | FMC-LA28_N |
| IO_L9P_T1_DQS_AD3P | A16 | FMC-LA28_P |
| IO_L10N_T1_AD11N | A19 | FMC-LA24_N |
| IO_L10P_T1_AD11P | A18 | FMC-LA24_P |
| IO_L11N_T1_SRCC | C18 | FMC-LA29_N |
| IO_L11P_T1_SRCC | C17 | FMC-LA29_P |
| IO_L12N_T1_MRCC | C19 | FMC-CLK1_N |
| IO_L12P_T1_MRCC | D18 | FMC-CLK1_P |
| IO_L13N_T2_MRCC | B20 | FMC-LA17_CC_N |
| IO_L13P_T2_MRCC | B19 | FMC-LA17_CC_P |
| IO_L14N_T2_AD4N_SRCC | C20 | FMC-LA18_CC_N |
| IO_L14P_T2_AD4P_SRCC | D20 | FMC-LA18_CC_P |
| IO_L15N_T2_DQS_AD12N | A22 | FMC-LA32_N |
| IO_L15P_T2_DQS_AD12P | A21 | FMC-LA32_P |
| IO_L16N_T2 | C22 | FMC-LA25_N |
| IO_L16P_T2 | D22 | FMC-LA25_P |
| IO_L17N_T2_AD5N | D21 | FMC-LA27_N |
| IO_L17P_T2_AD5P | E21 | FMC-LA27_P |
| IO_L18N_T2_AD13N | B22 | FMC-LA33_N |
| IO_L18P_T2_AD13P | B21 | FMC-LA33_P |
| IO_L19N_T3_VREF | H20 | FMC-VREF |
| IO_L19P_T3 | H19 | SW4 |
| IO_L20N_T3_AD6N | F19 | FMC-LA22_N |
| IO_L20P_T3_AD6P | G19 | FMC-LA22_P |
| IO_L21N_T3_DQS_AD14N | E20 | FMC-LA21_N |
| IO_L21P_T3_DQS_AD14P | E19 | FMC-LA21_P |
| IO_L22N_T3_AD7N | G21 | FMC-LA20_N |
| IO_L22P_T3_AD7P | G20 | FMC-LA20_P |
| IO_L23N_T3 | F22 | SW0 |
| IO_L23P_T3 | F21 | SW3 |
| IO_L24N_T3_AD15N | G22 | SW1 |
| IO_L24P_T3_AD15P | H22 | SW2 |

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A

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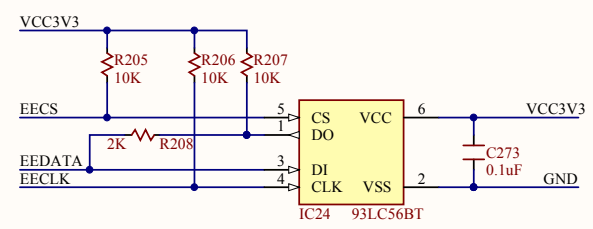
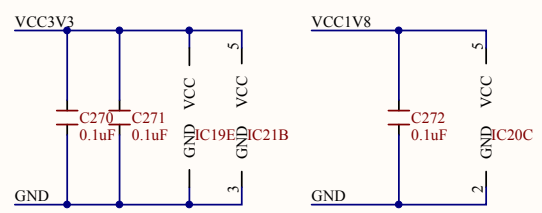
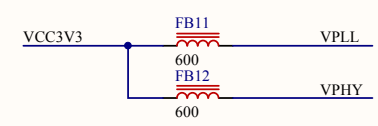
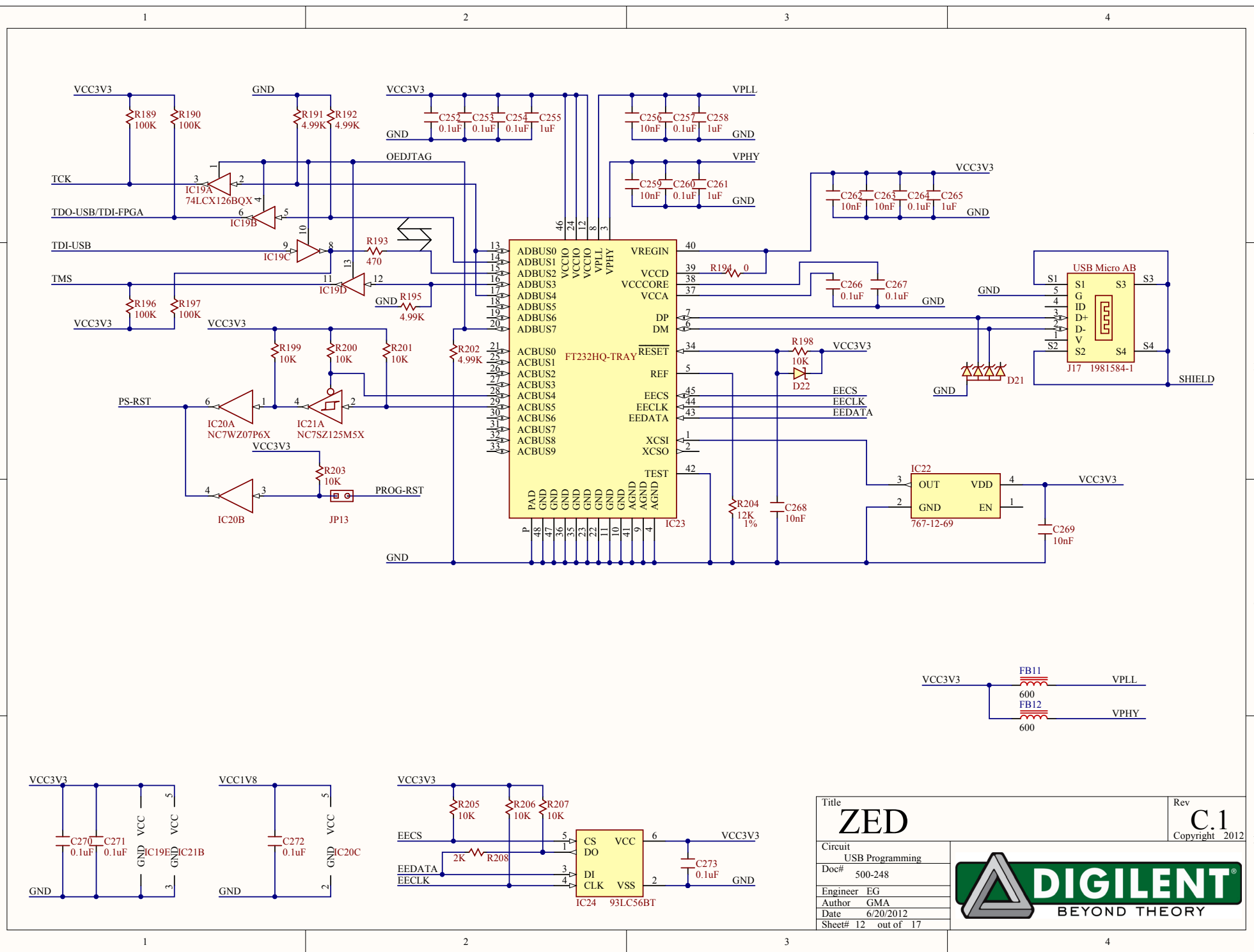
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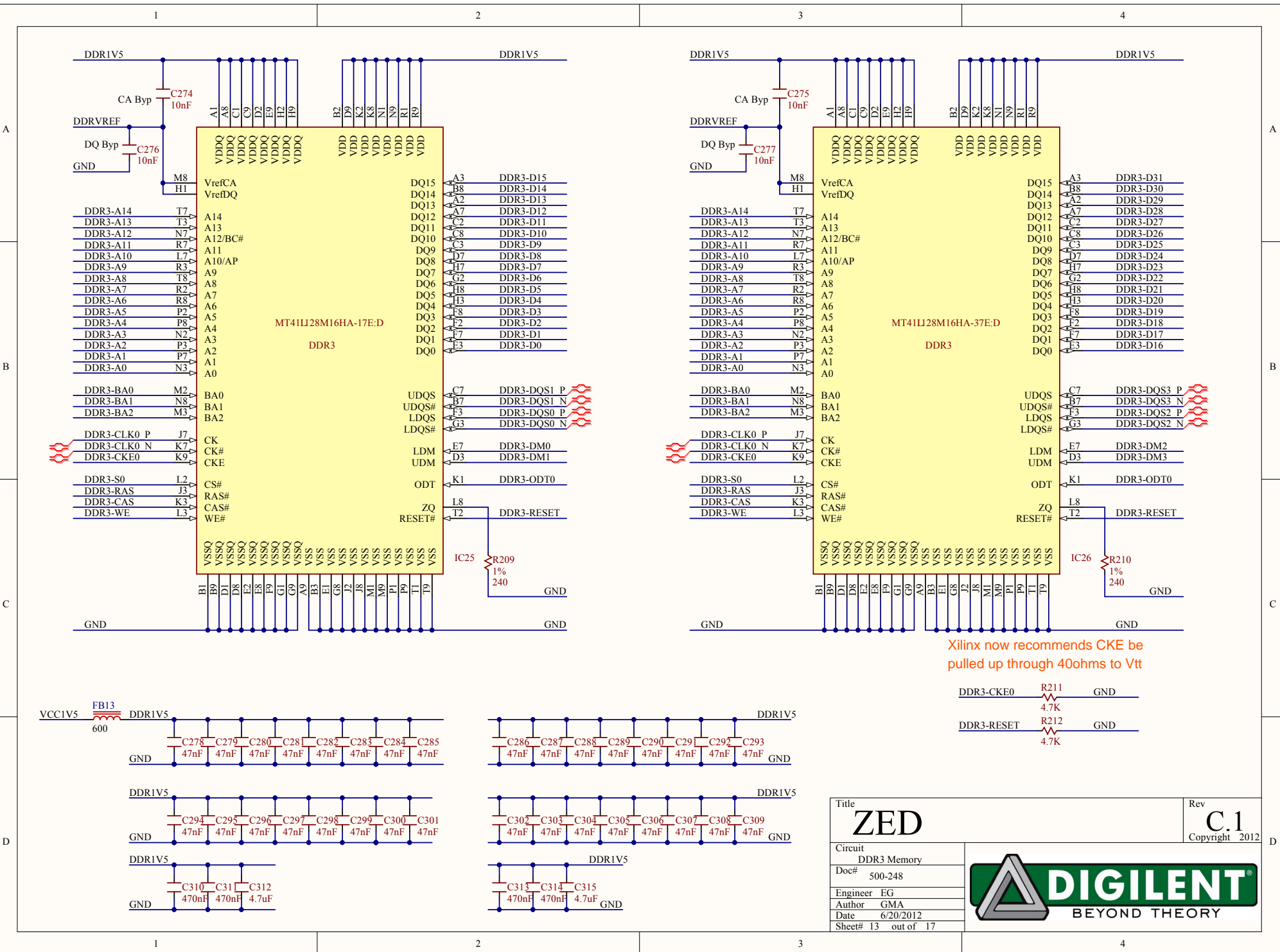
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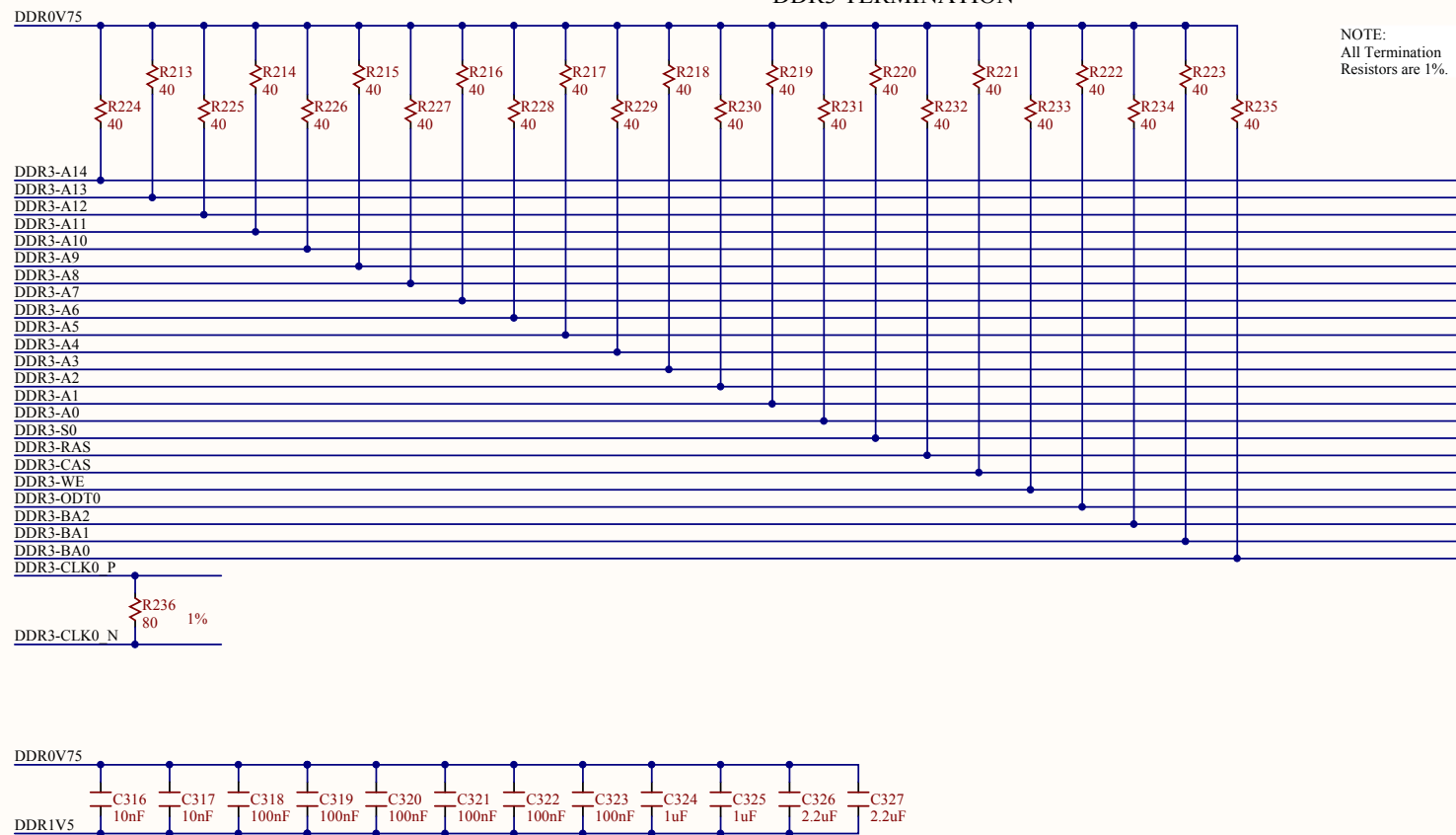



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| Author GMA | | |
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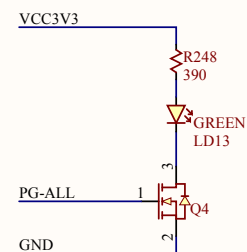
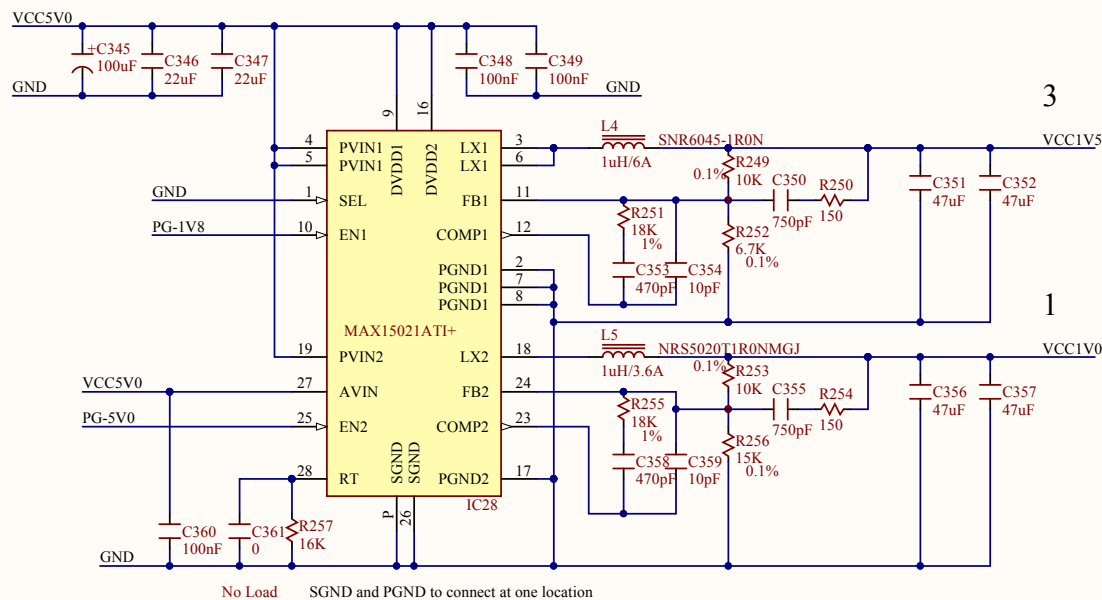
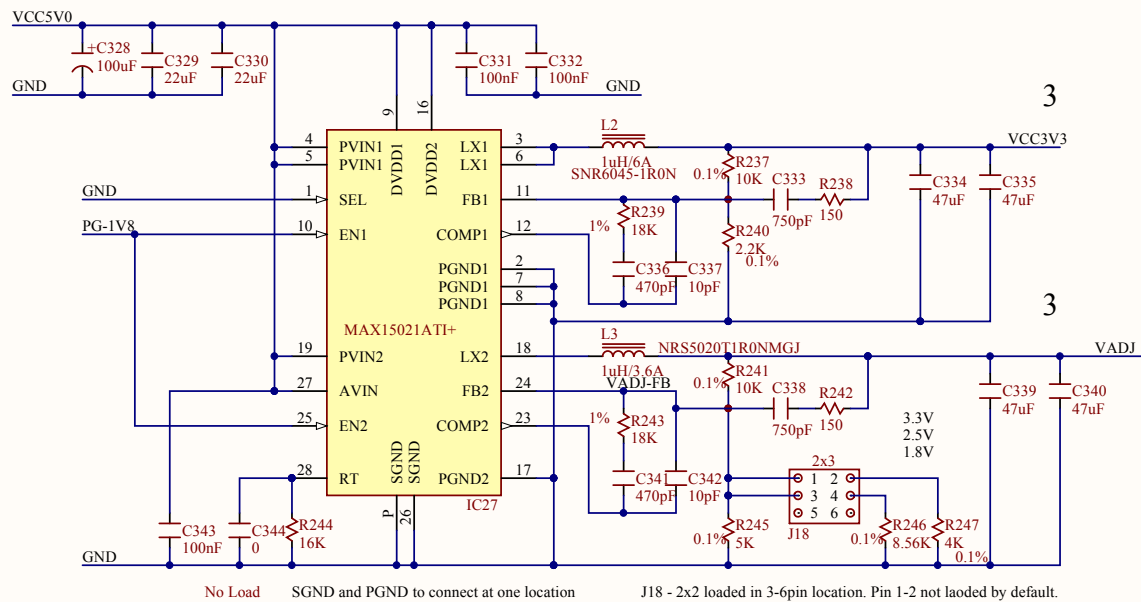
**DIGILENT**
BEYOND THEORY



DDR3 TERMINATION

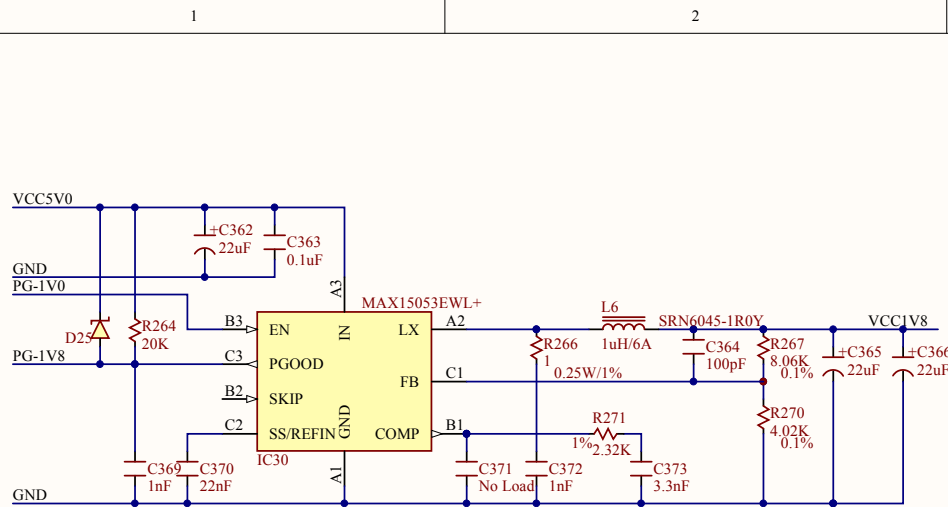


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| Title ZED | | Rev C.1 Copyright 2012 |
| Circuit DDR3 Termination |  | |
| Doc# 500-248 | | |
| Engineer EG | | |
| Author GMA | | |
| Date 6/20/2012 | | |
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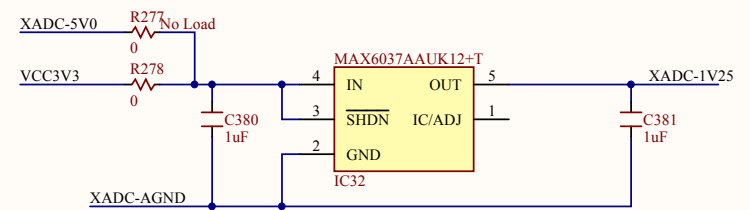
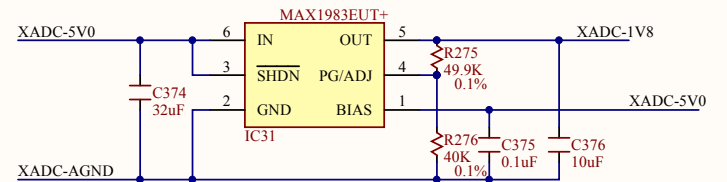
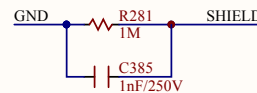
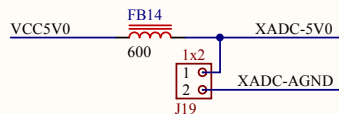
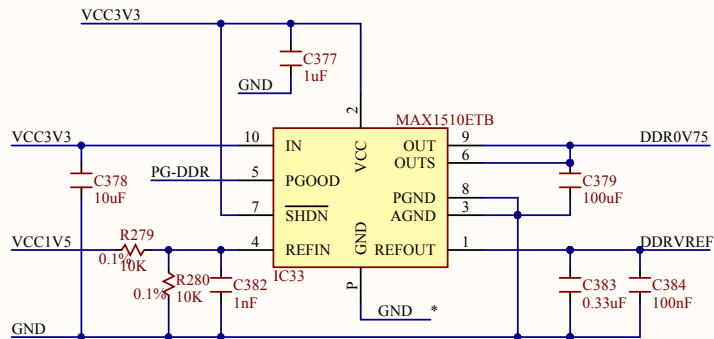
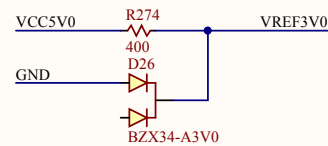
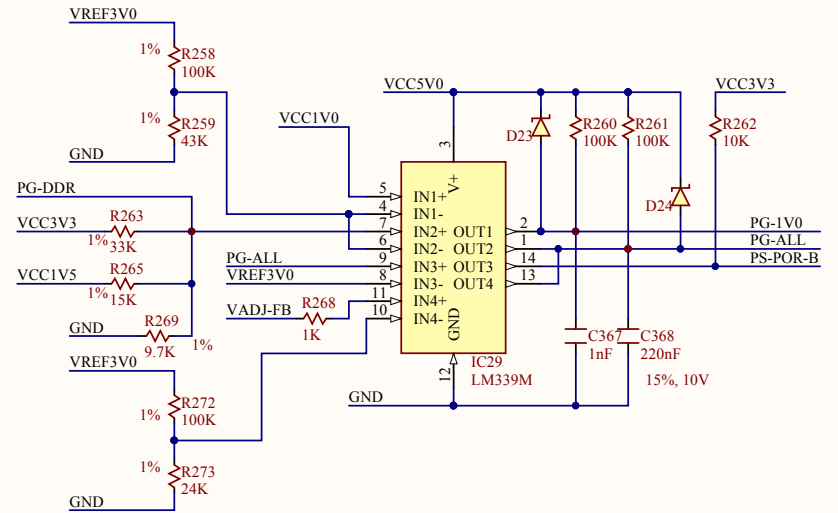


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| Title | | Rev |
| ZED | | C.1 |
| Circuit | | Power Regulation |
| Doc# | | 500-248 |
| Engineer | | EG |
| Author | | GMA |
| Date | | 6/20/2012 |
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| ZED | | C.1 |
| Circuit | | Copyright 2012 |
| Power Regulation | | |
| Doc# | | 500-248 |
| Engineer | | EG |
| Author | | GMA |
| Date | | 6/20/2012 |
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Revision History

13 Sep 2012

- Sheet 1: Corrected ZedBoard and Digilent typos
- Sheet 13: Modified IC25, IC26 part number to MT41J128M16HA-15E:D to match BOM
- Sheet 13: Added note regarding new CKE pull-up recommendation
- Sheet 16: Modified C374 capacitor value to be 10uF to match BOM