Buttons, Switches, LEDs
SHEET 2

DDR III
SHEET 3

FMC CONN
SHEET 4

ARRIA V I/O
SHEETS 5-12

FPGA Configuration
SHEETS 13

ARRIA High Speed Bank
SHEETS 14

ARRIA V POWER
SHEETS 15

ARRIA V GROUND
SHEETS 16

FPGA Decoupling
SHEET 17

USB
SHEET 18, 19

POWER SEQUENCER
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POWER SUPPLIES
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NOTE: DNI = DO NOT INSTALL COMPONENT.

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Title: TSW14J56

Drawn: L. NGUYEN
Engineer: J. SETON / E. DWOBENG

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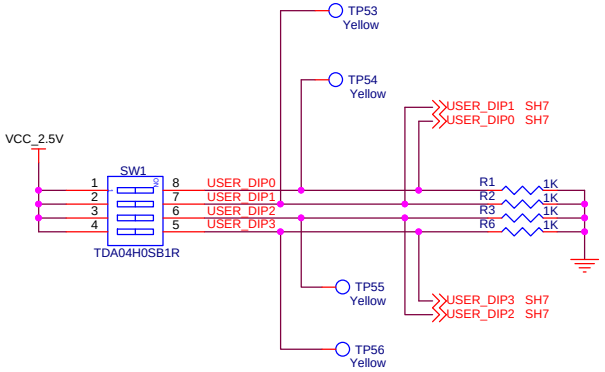
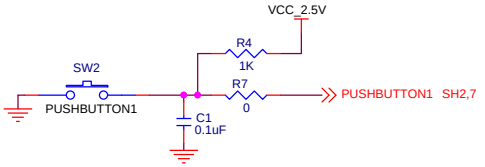
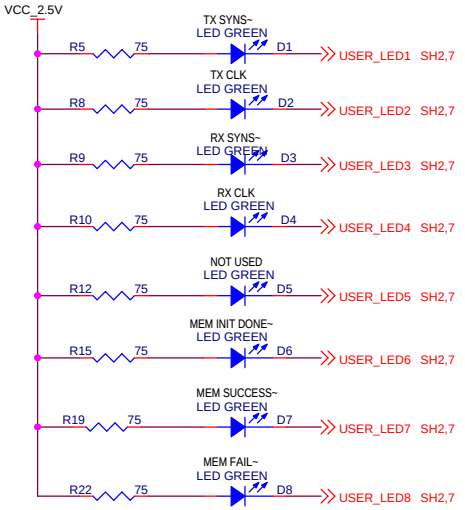
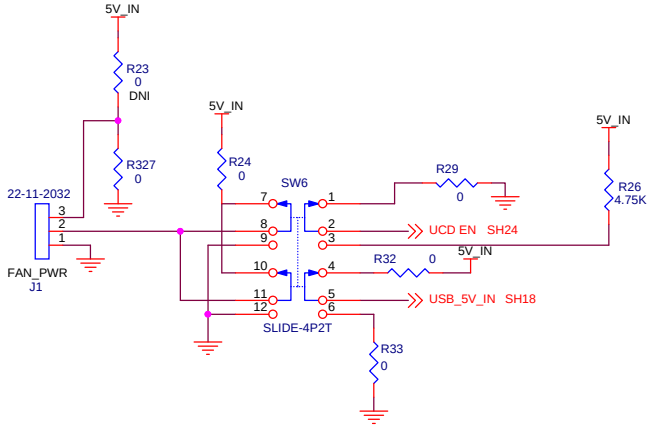
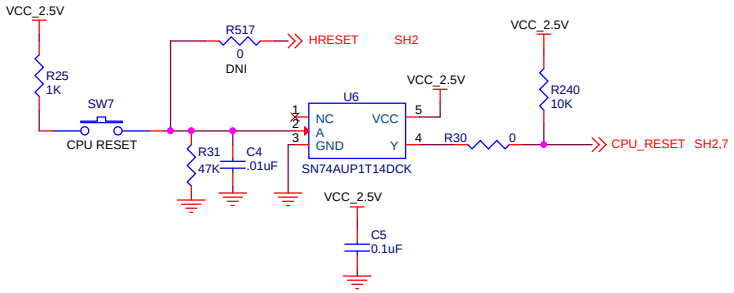
Buttons, Switches, LEDs

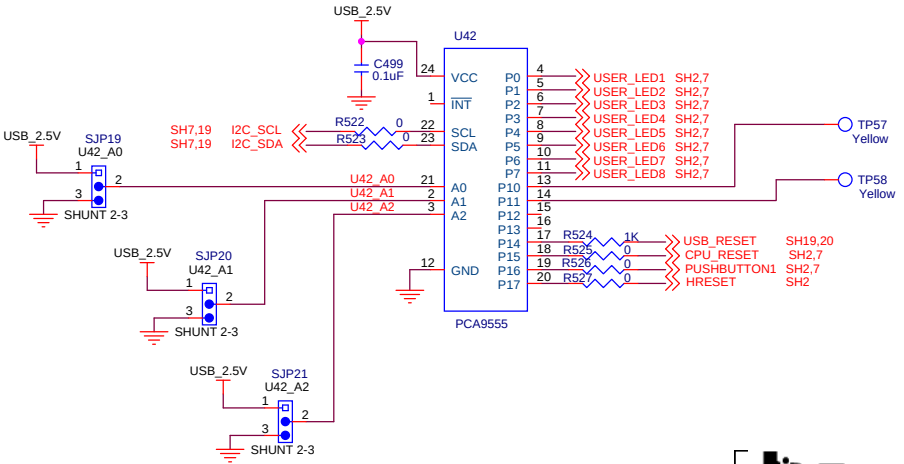












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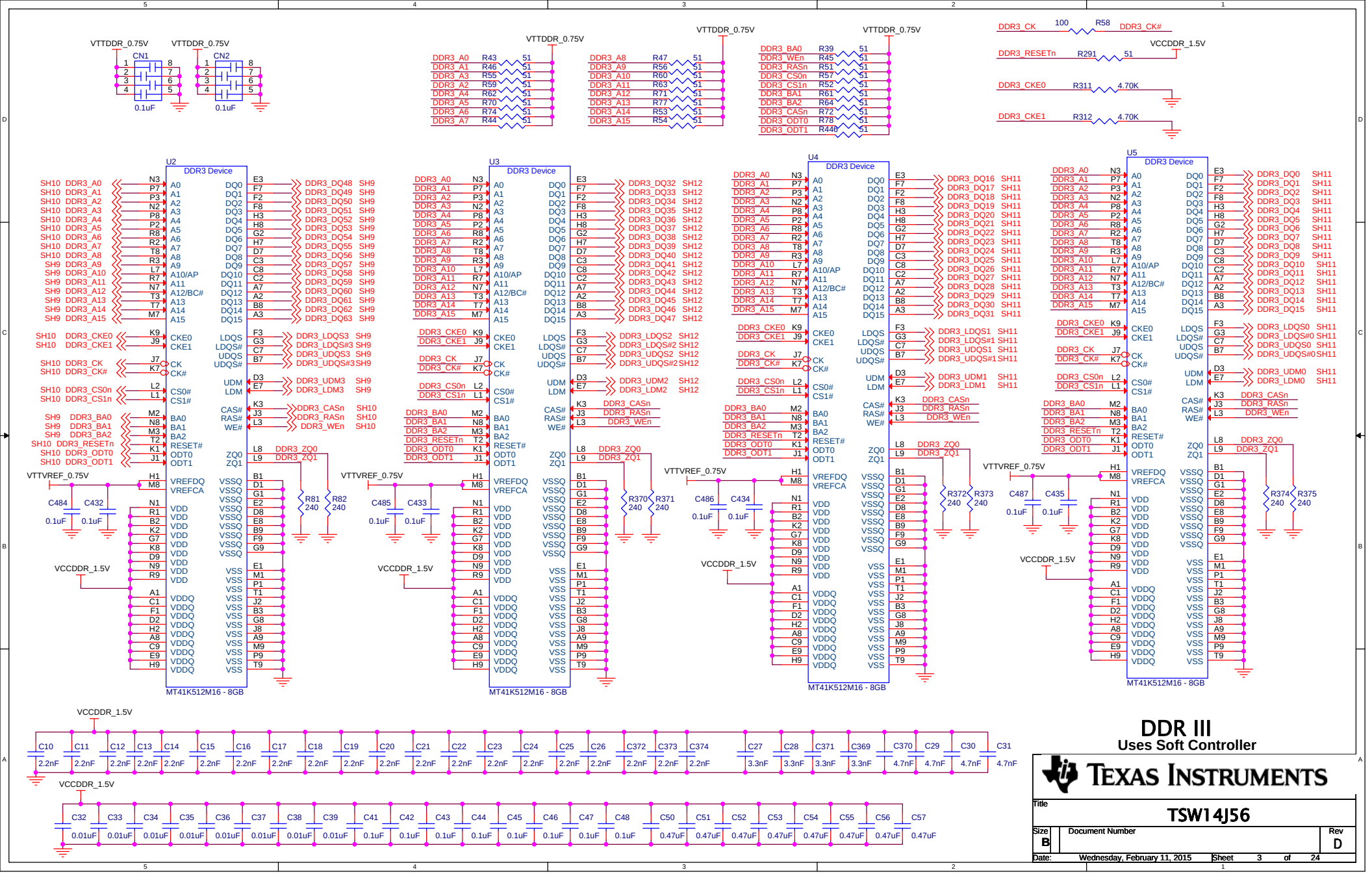

DDR III
Uses Soft Controller

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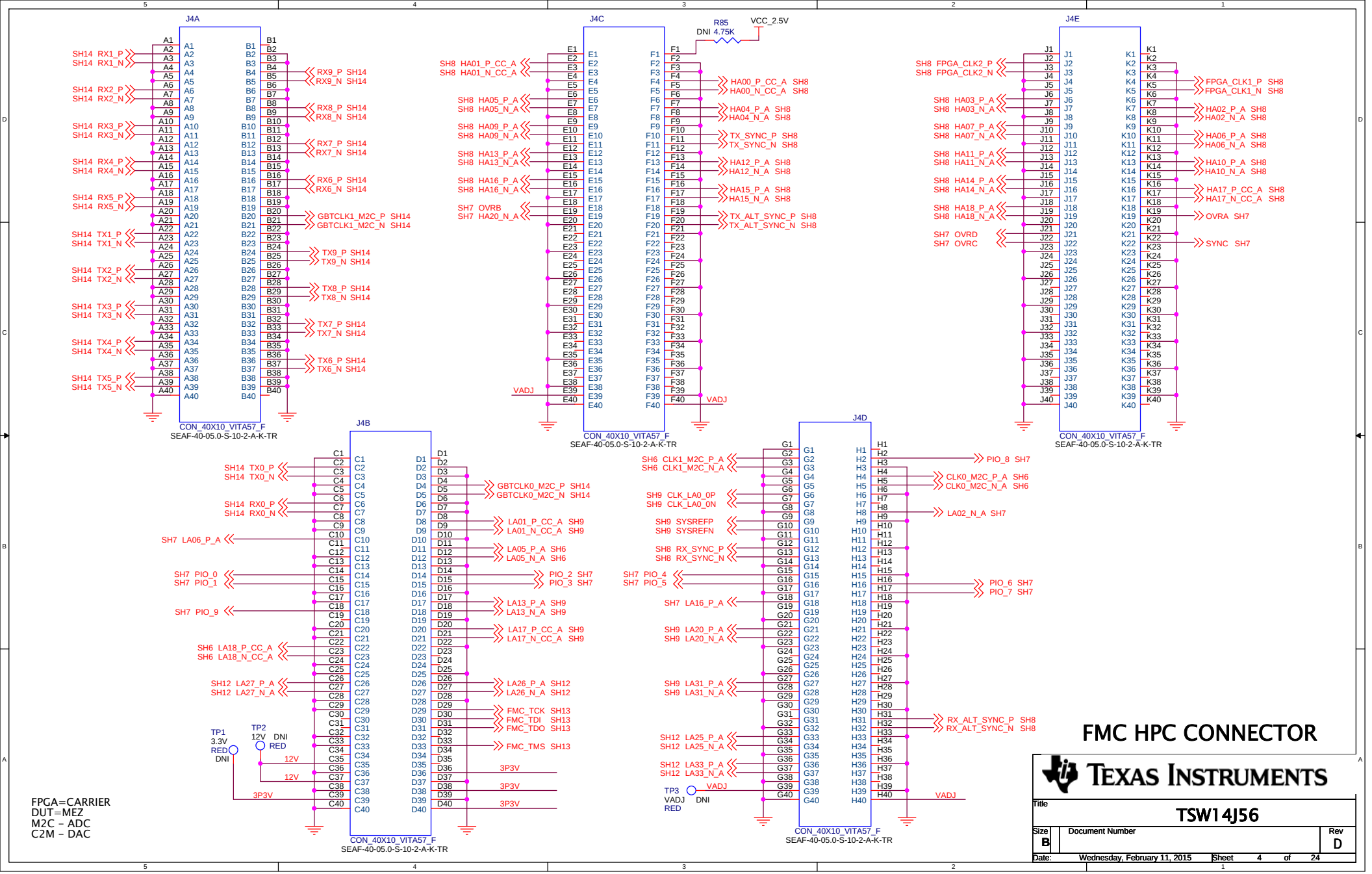
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SH14 RX1_N
SH14 RX2_P
SH14 RX2_N
SH14 RX3_P
SH14 RX3_N
SH14 RX4_P
SH14 RX4_N
SH14 RX5_P
SH14 RX5_N
SH14 TX1_P
SH14 TX1_N
SH14 TX2_P
SH14 TX2_N
SH14 TX3_P
SH14 TX3_N
SH14 TX4_P
SH14 TX4_N
SH14 TX5_P
SH14 TX5_N
RX9_P SH14
RX9_N SH14
RX8_P SH14
RX8_N SH14
RX7_P SH14
RX7_N SH14
RX6_P SH14
RX6_N SH14
GBTCLK1_M2C_P SH14
GBTCLK1_M2C_N SH14
TX9_P SH14
TX9_N SH14
TX8_P SH14
TX8_N SH14
TX7_P SH14
TX7_N SH14
TX6_P SH14
TX6_N SH14
CON_40X10_VITA57_F
SEAF-40-05.0-S-10-2-A-K-TR
J4C
R85
DNI 4.75K
VCC_2.5V
SH8 HA01_P_CC_A
SH8 HA01_N_CC_A
SH8 HA05_P_A
SH8 HA05_N_A
SH8 HA09_P_A
SH8 HA09_N_A
SH8 HA13_P_A
SH8 HA13_N_A
SH8 HA16_P_A
SH8 HA16_N_A
SH7 OVRB
SH7 HA20_N_A
VADJ
HA00_P_CC_A SH8
HA00_N_CC_A SH8
HA04_P_A SH8
HA04_N_A SH8
TX_SYNC_P SH8
TX_SYNC_N SH8
HA12_P_A SH8
HA12_N_A SH8
HA15_P_A SH8
HA15_N_A SH8
TX_ALT_SYNC_P SH8
TX_ALT_SYNC_N SH8
VADJ
CON_40X10_VITA57_F
SEAF-40-05.0-S-10-2-A-K-TR
J4E
SH8 FPGA_CLK2_P
SH8 FPGA_CLK2_N
SH8 HA03_P_A
SH8 HA03_N_A
SH8 HA07_P_A
SH8 HA07_N_A
SH8 HA11_P_A
SH8 HA11_N_A
SH8 HA14_P_A
SH8 HA14_N_A
SH8 HA18_P_A
SH8 HA18_N_A
SH7 OVRD
SH7 OVRC
FPGA_CLK1_P SH8
FPGA_CLK1_N SH8
HA02_P_A SH8
HA02_N_A SH8
HA06_P_A SH8
HA06_N_A SH8
HA10_P_A SH8
HA10_N_A SH8
HA17_P_CC_A SH8
HA17_N_CC_A SH8
OVRA SH7
SYNC SH7
CON_40X10_VITA57_F
SEAF-40-05.0-S-10-2-A-K-TR
J4B
SH14 TX0_P
SH14 TX0_N
SH14 RX0_P
SH14 RX0_N
SH7 LA06_P_A
SH7 PIO_0
SH7 PIO_1
SH7 PIO_9
SH6 LA18_P_CC_A
SH6 LA18_N_CC_A
SH12 LA27_P_A
SH12 LA27_N_A
TP1
3.3V
RED
DNI
TP2
12V DNI
RED
12V
12V
3P3V
GBTCLK0_M2C_P SH14
GBTCLK0_M2C_N SH14
LA01_P_CC_A SH9
LA01_N_CC_A SH9
LA05_P_A SH6
LA05_N_A SH6
PIO_2 SH7
PIO_3 SH7
LA13_P_A SH9
LA13_N_A SH9
LA17_P_CC_A SH9
LA17_N_CC_A SH9
LA26_P_A SH12
LA26_N_A SH12
FMC_TCK SH13
FMC_TDI SH13
FMC_TDO SH13
FMC_TMS SH13
3P3V
3P3V
3P3V
CON_40X10_VITA57_F
SEAF-40-05.0-S-10-2-A-K-TR
J4D
SH6 CLK1_M2C_P_A
SH6 CLK1_M2C_N_A
SH9 CLK_LA0_0P
SH9 CLK_LA0_0N
SH9 SYSREFP
SH9 SYSREFN
SH8 RX_SYNC_P
SH8 RX_SYNC_N
SH7 PIO_4
SH7 PIO_5
SH7 LA16_P_A
SH9 LA20_P_A
SH9 LA20_N_A
SH9 LA31_P_A
SH9 LA31_N_A
SH12 LA25_P_A
SH12 LA25_N_A
SH12 LA33_P_A
SH12 LA33_N_A
TP3
VADJ DNI
RED
VADJ
PIO_8 SH7
CLK0_M2C_P_A SH6
CLK0_M2C_N_A SH6
LA02_N_A SH7
PIO_6 SH7
PIO_7 SH7
RX_ALT_SYNC_P SH8
RX_ALT_SYNC_N SH8
VADJ
CON_40X10_VITA57_F
SEAF-40-05.0-S-10-2-A-K-TR
FPGA=CARRIER
DUT=MEZ
M2C - ADC
C2M - DAC
FMC HPC CONNECTOR
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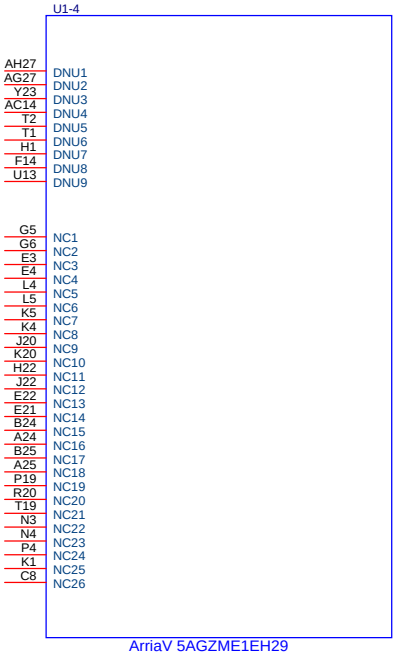
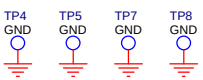
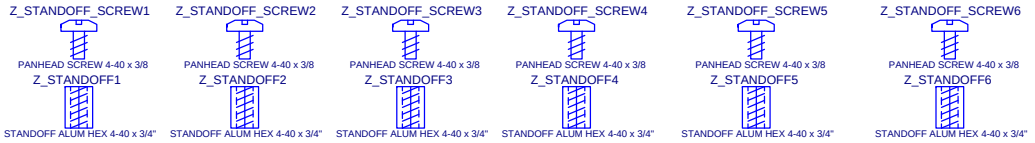




MECHANICAL PARTS



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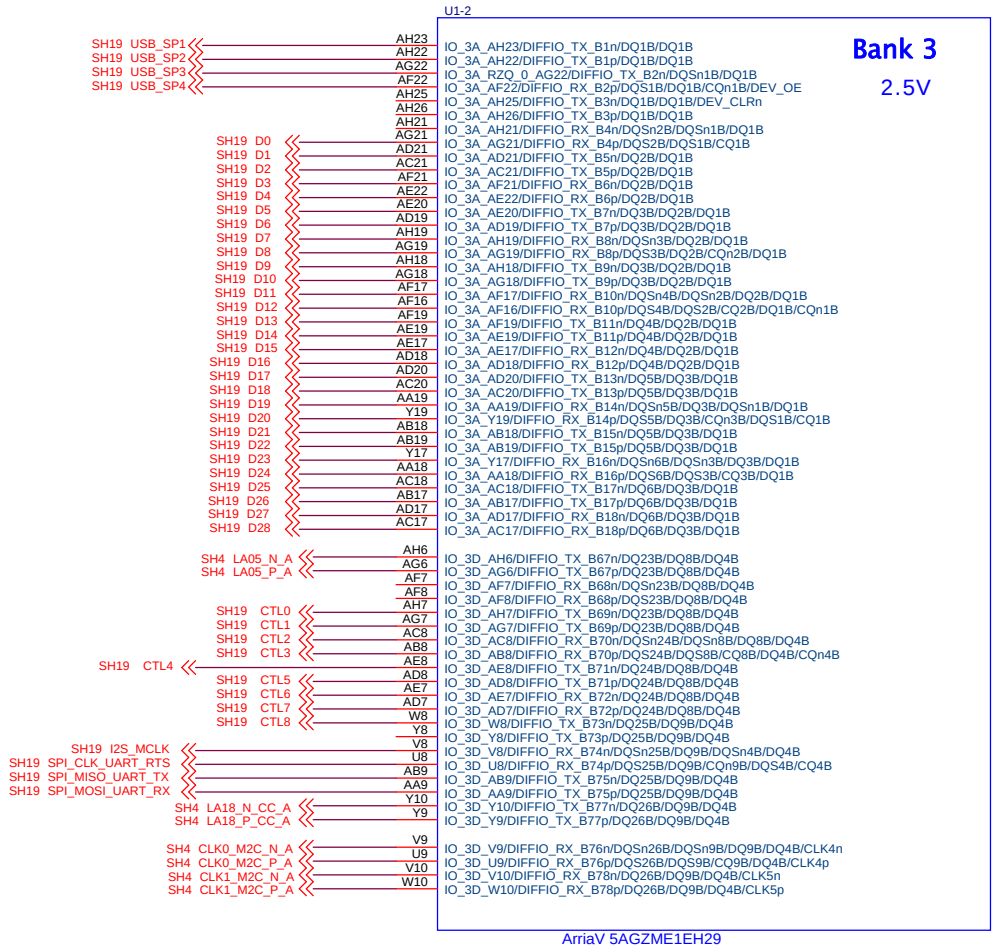

BANK 3

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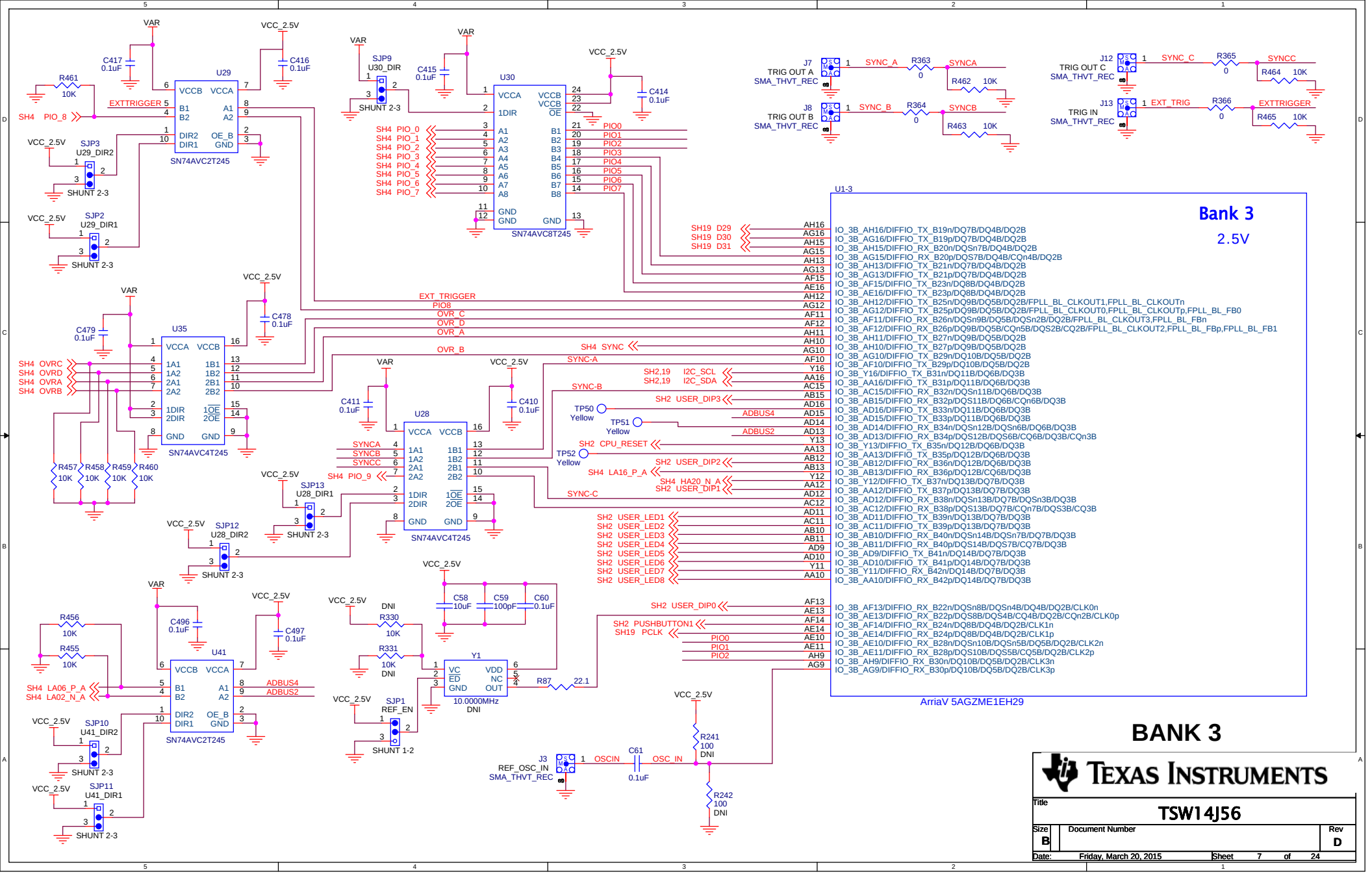
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SN74AVC2T245
U30
SN74AVC8T245
U35
SN74AVC4T245
U28
SN74AVC4T245
U41
SN74AVC2T245
U1-3
Bank 3
2.5V
ArriaV 5AGZME1EH29
J7
TRIG OUT A
SMA_THVT_REC
J8
TRIG OUT B
SMA_THVT_REC
J12
TRIG OUT C
SMA_THVT_REC
J13
TRIG IN
SMA_THVT_REC
J3
REF_OSC_IN
SMA_THVT_REC
Y1
10.0000MHz
DNI
TP50
TP51
TP52
Yellow
SJP1
SJP2
SJP3
SJP9
SJP10
SJP11
SJP12
SJP13
SHUNT 2-3
SHUNT 1-2
VCC_2.5V
VAR
EXT_TRIGGER
PIO8
OVR_C
OVR_D
OVR_A
OVR_B
SYNC-A
SYNC-B
SYNC-C
SH4 SYNC
SH2 CPU_RESET
SH2 USER_DIP0
SH2 USER_DIP1
SH2 USER_DIP2
SH2 USER_DIP3
SH2 PUSHBUTTON1
SH19 PCLK
SH2,19 I2C_SCL
SH2,19 I2C_SDA
SH4 LA16_P_A
SH4 HA20_N_A
SH2 USER_LED1
SH2 USER_LED2
SH2 USER_LED3
SH2 USER_LED4
SH2 USER_LED5
SH2 USER_LED6
SH2 USER_LED7
SH2 USER_LED8
ADBUS4
ADBUS2
SYNC_A
SYNC_B
SYNC_C
EXT_TRIG
OSCIN
OSC_IN
SYNCA
SYNCB
SYNCC
EXTTRIGGER
IO_3B_AH16/DIFFIO_TX_B19n/DQ7B/DQ4B/DQ2B
IO_3B_AG16/DIFFIO_TX_B19p/DQ7B/DQ4B/DQ2B
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IO_3B_AE11/DIFFIO_RX_B28p/DQS10B/DQS5B/CQ5B/DQ2B/CLK2p
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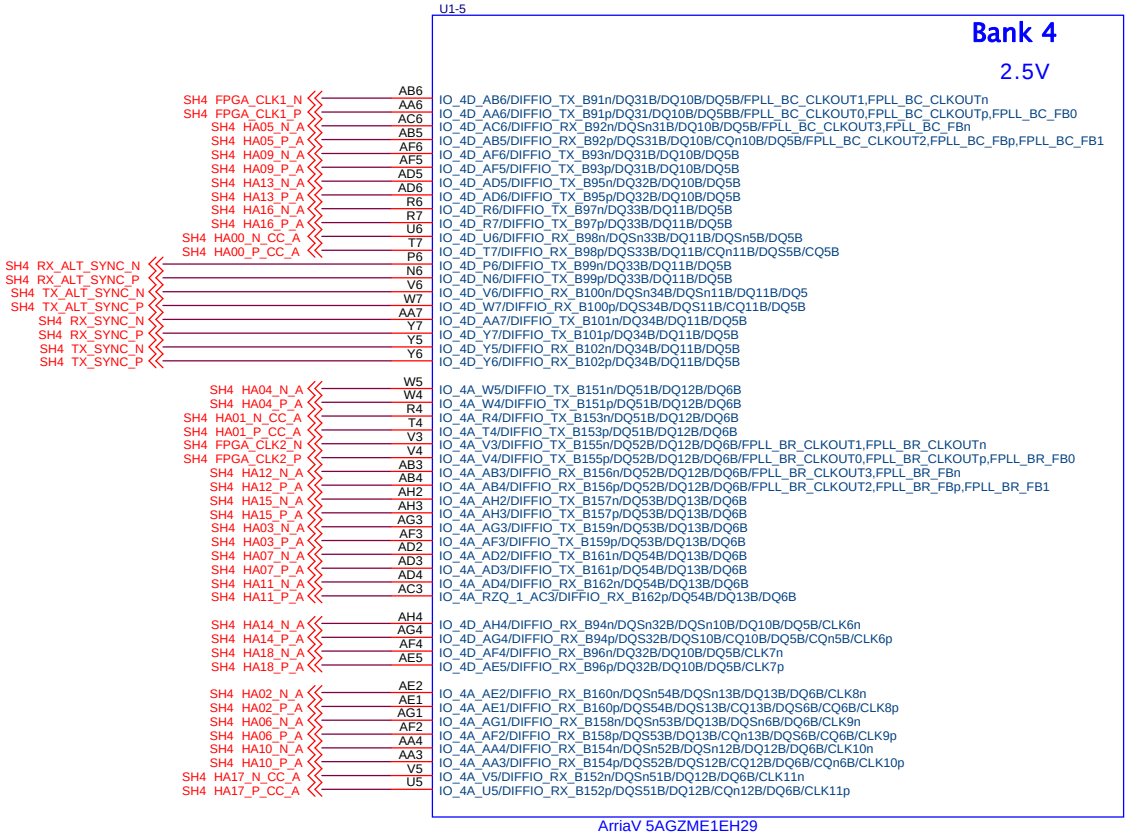

FPGA Bank 4

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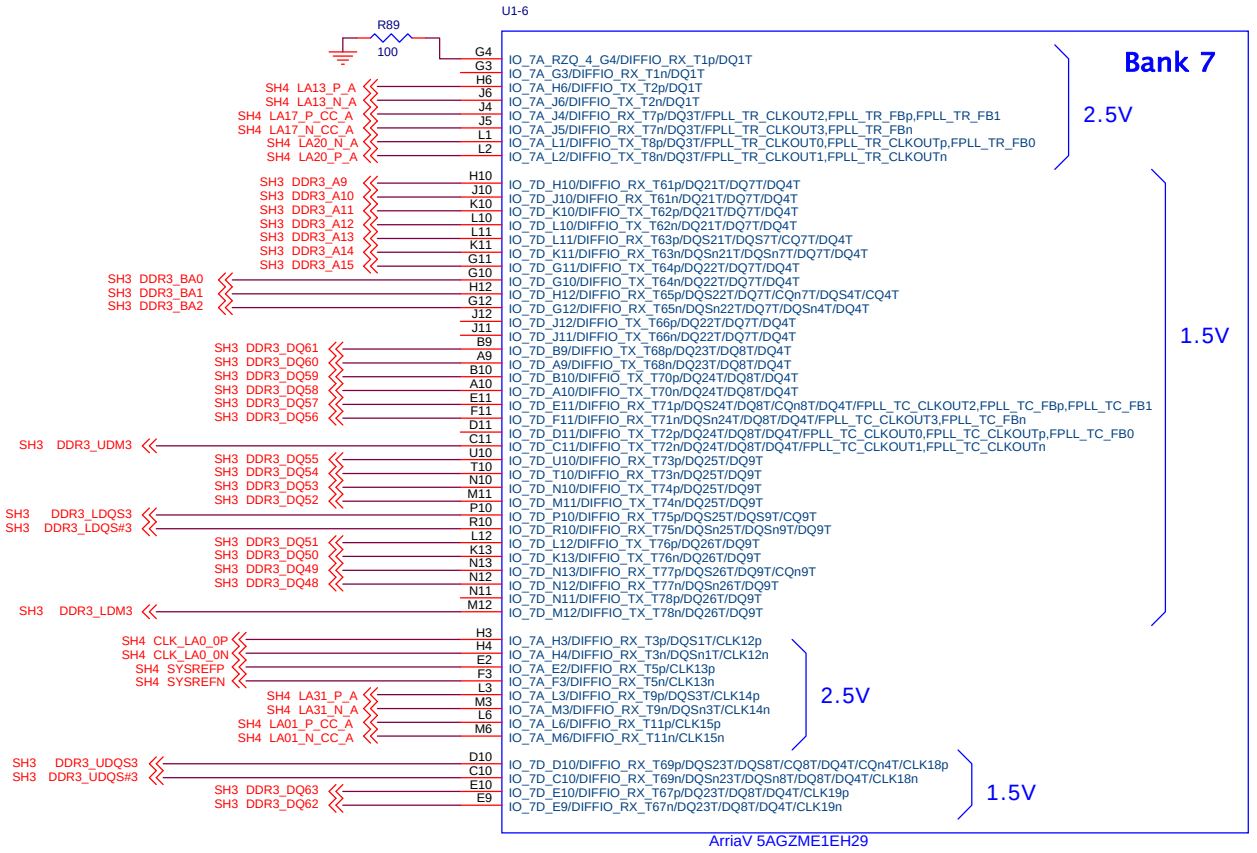

FPGA Bank 7

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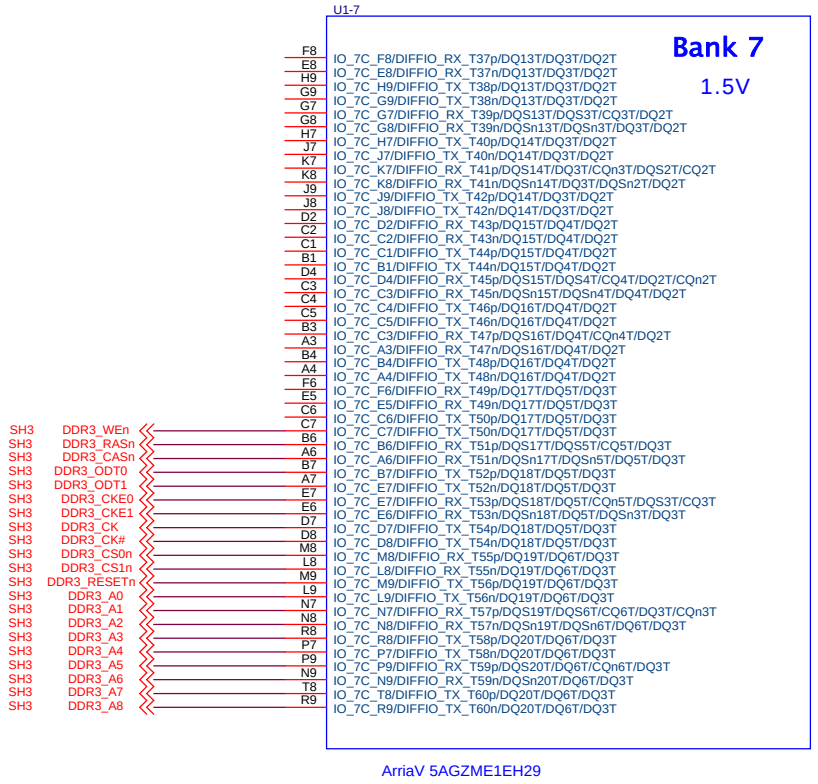

BANK 7

TEXAS INSTRUMENTS

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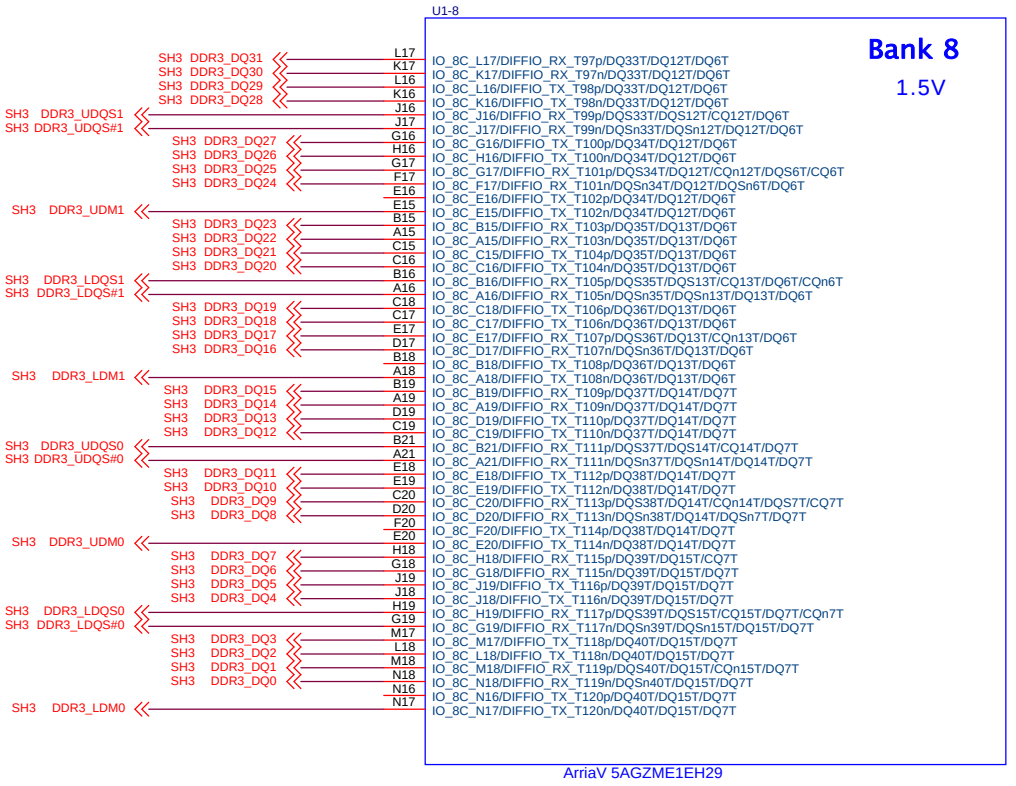

BANK 8

TEXAS INSTRUMENTS

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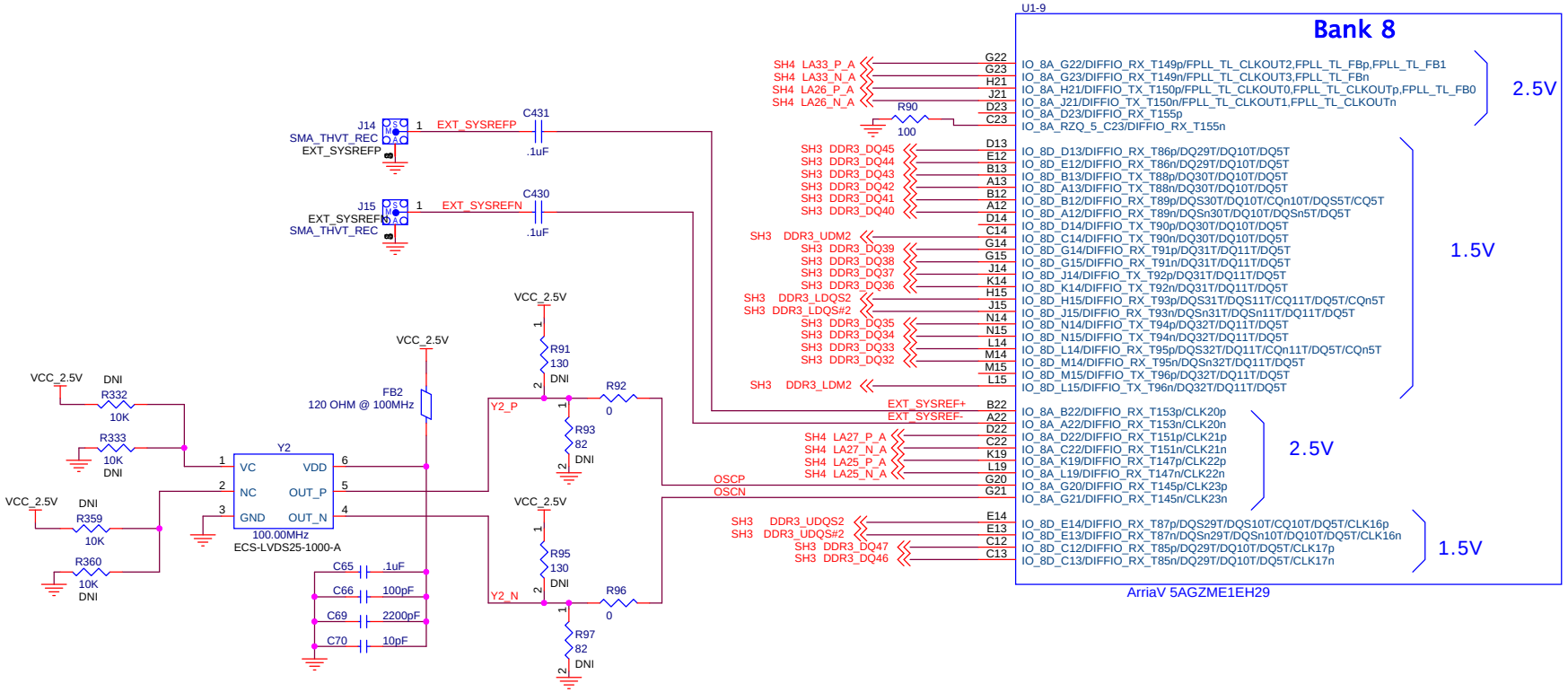

BANK 8

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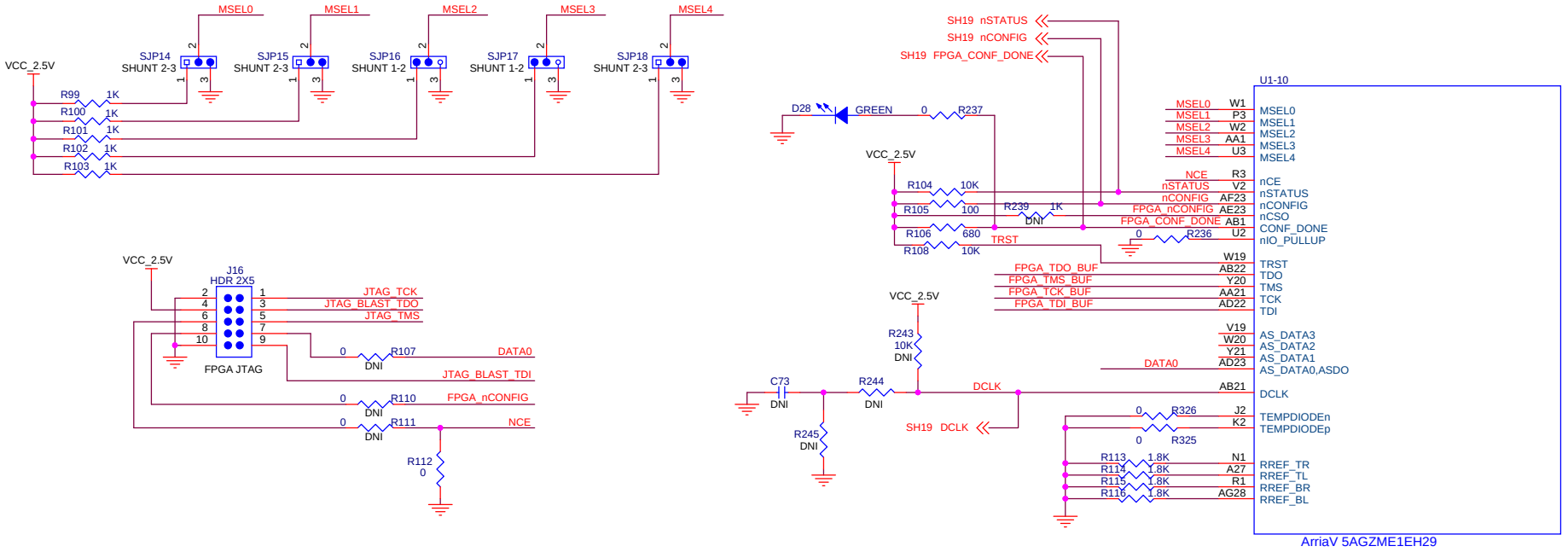

FPGA CONFIGURATION

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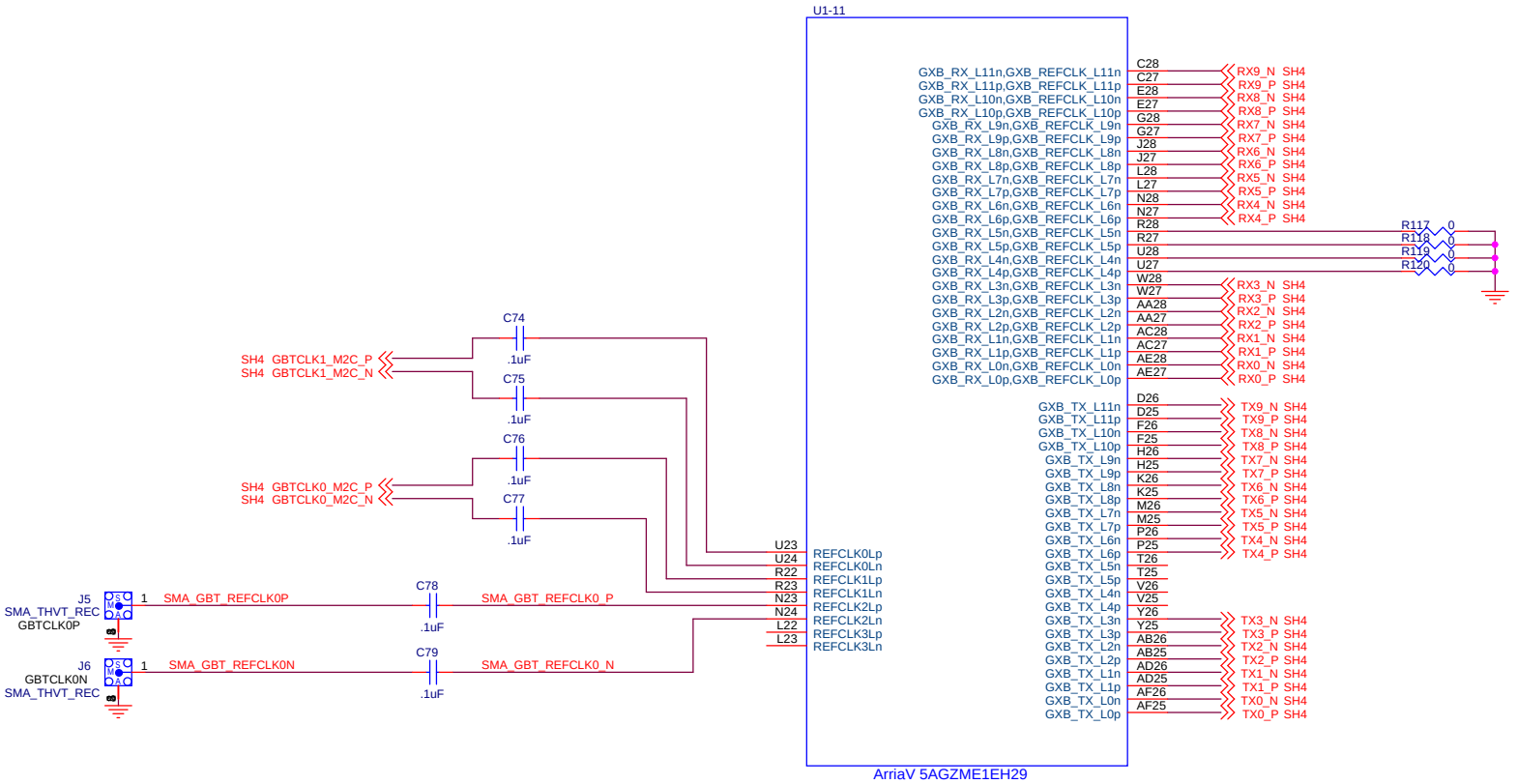

HIGH SPEED BANK

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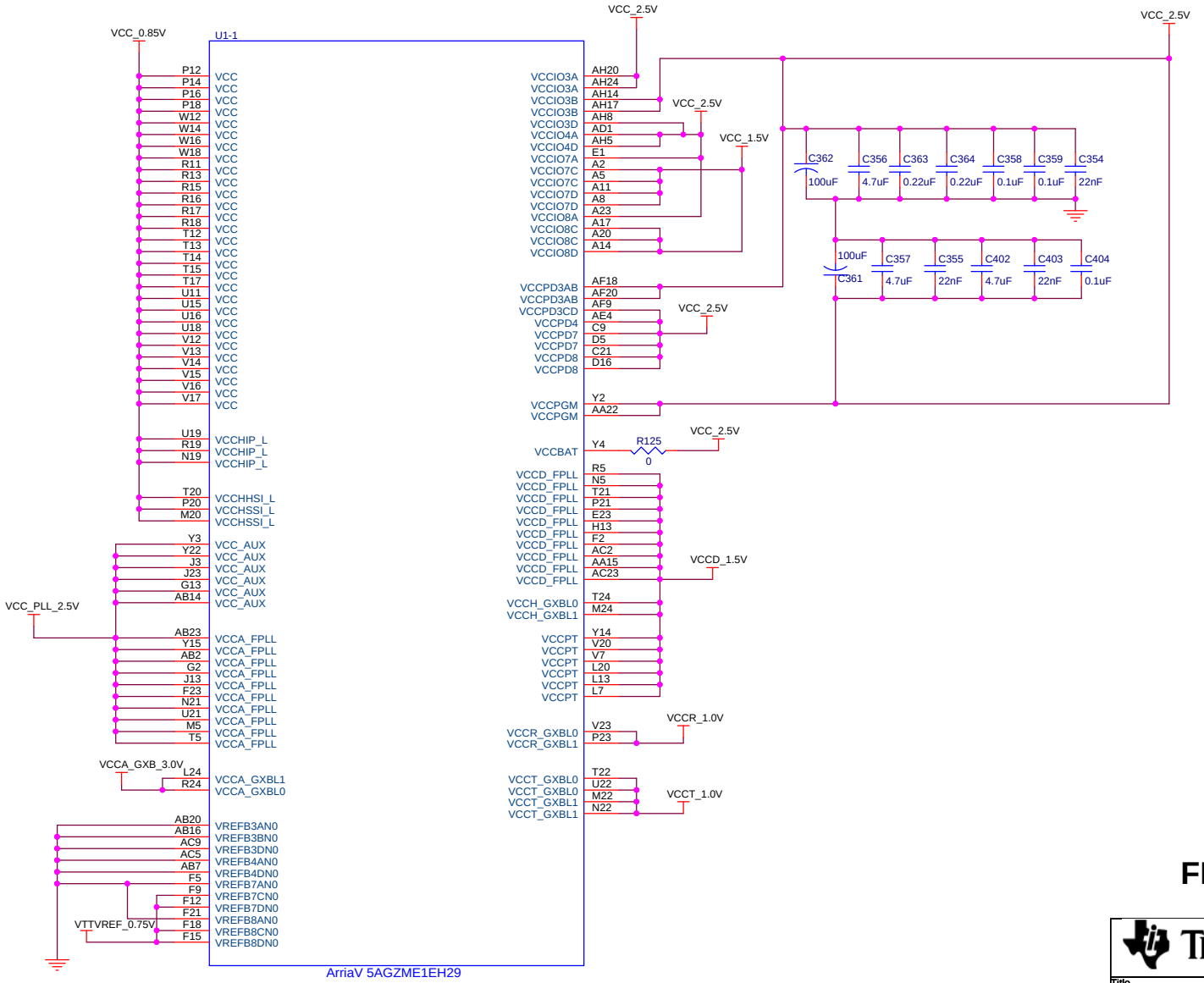

FPGA POWER

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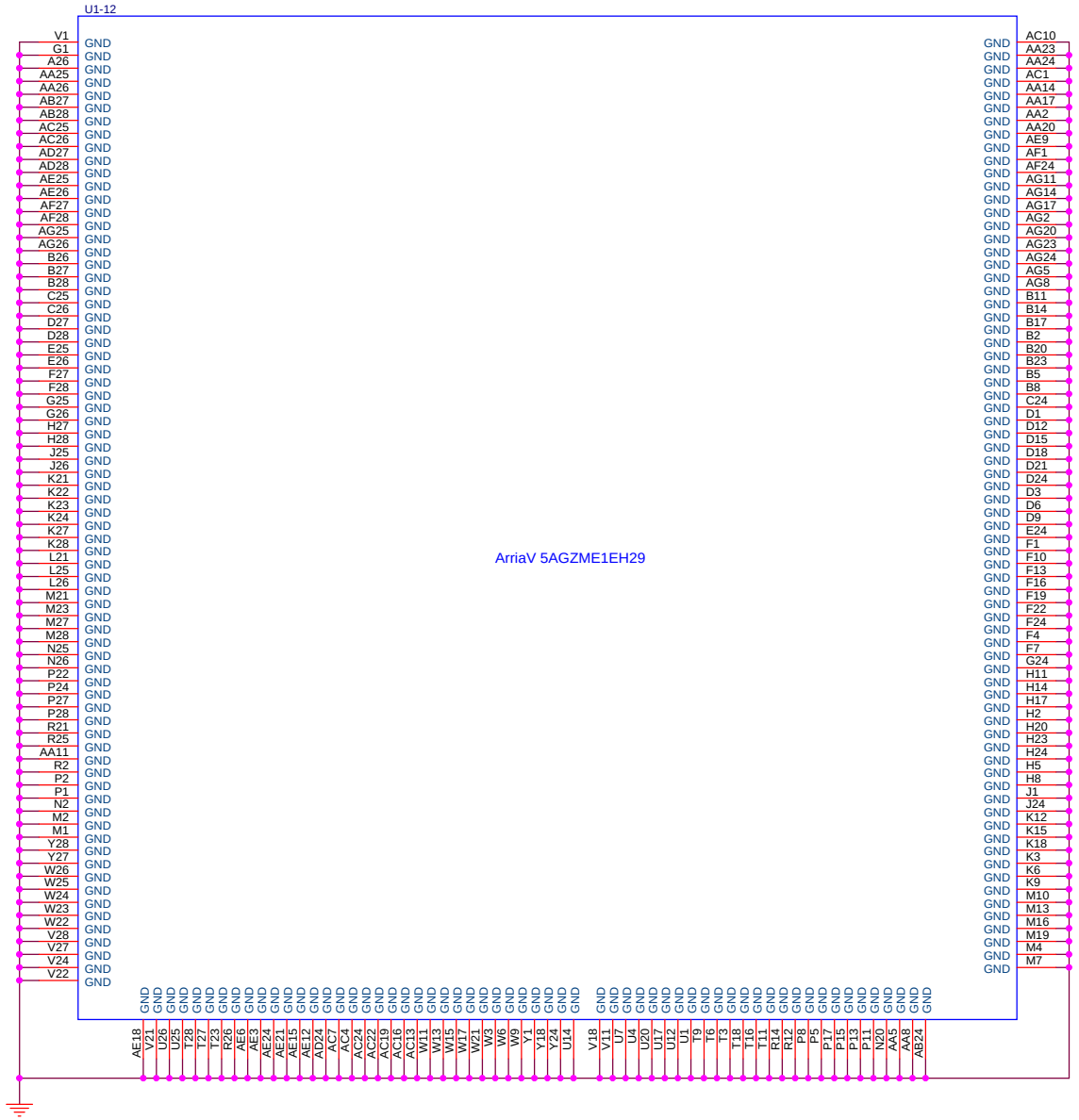

FPGA GROUND

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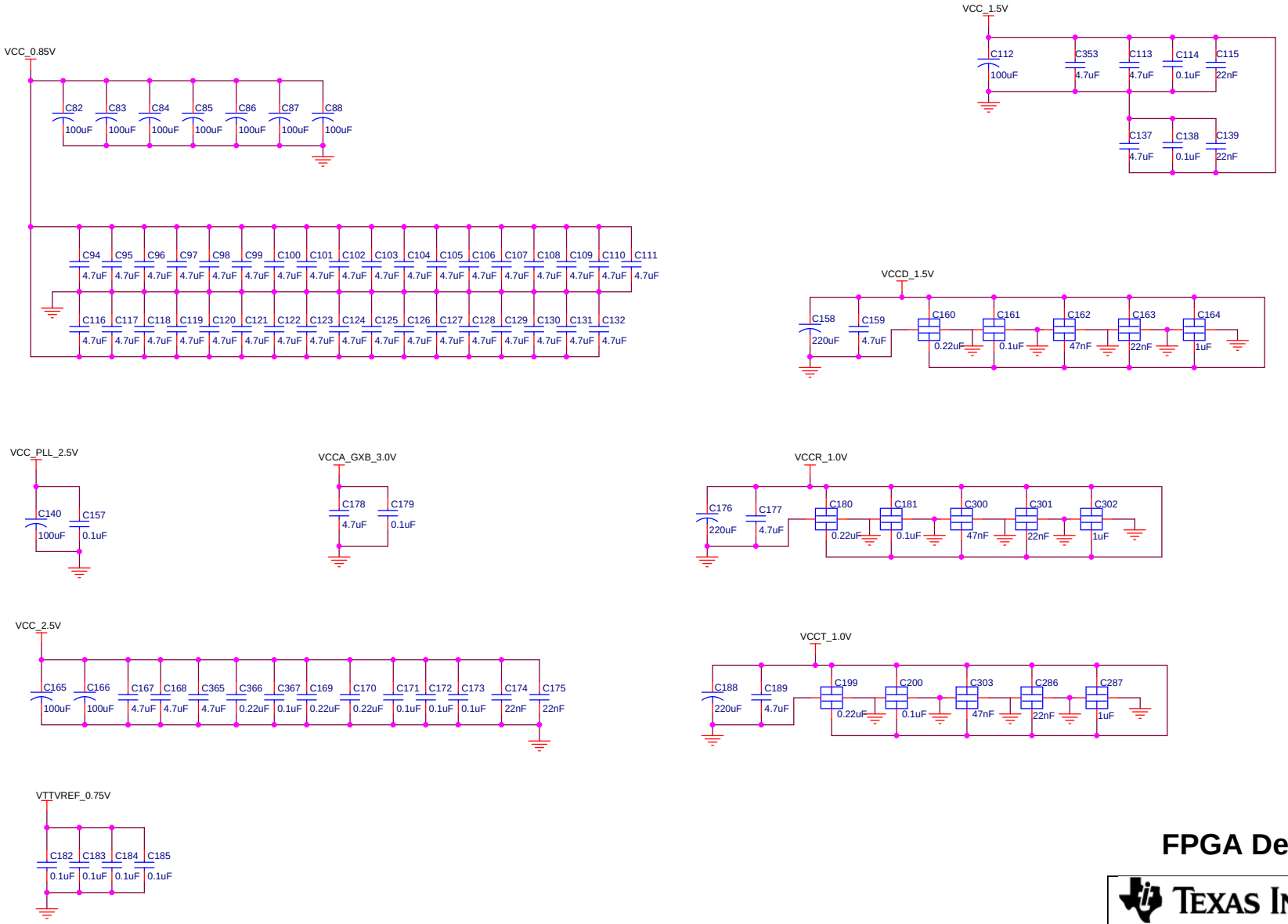

FPGA Decoupling

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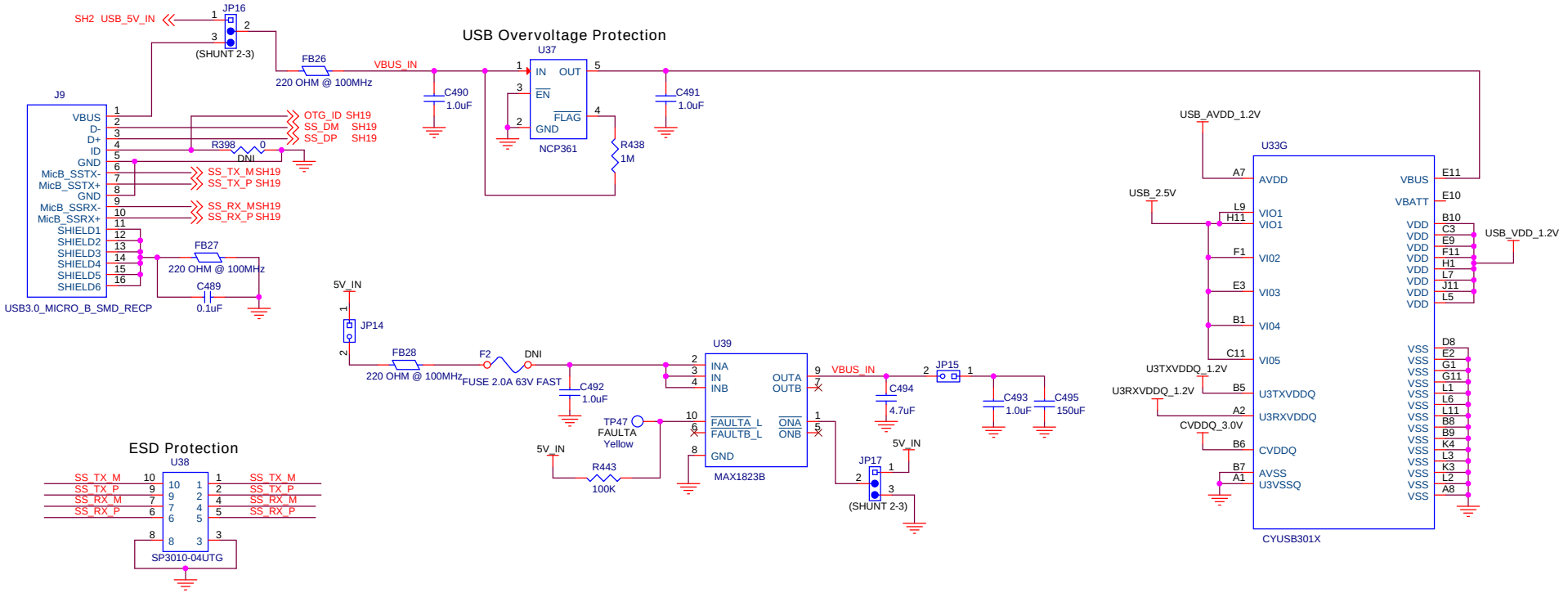

USB

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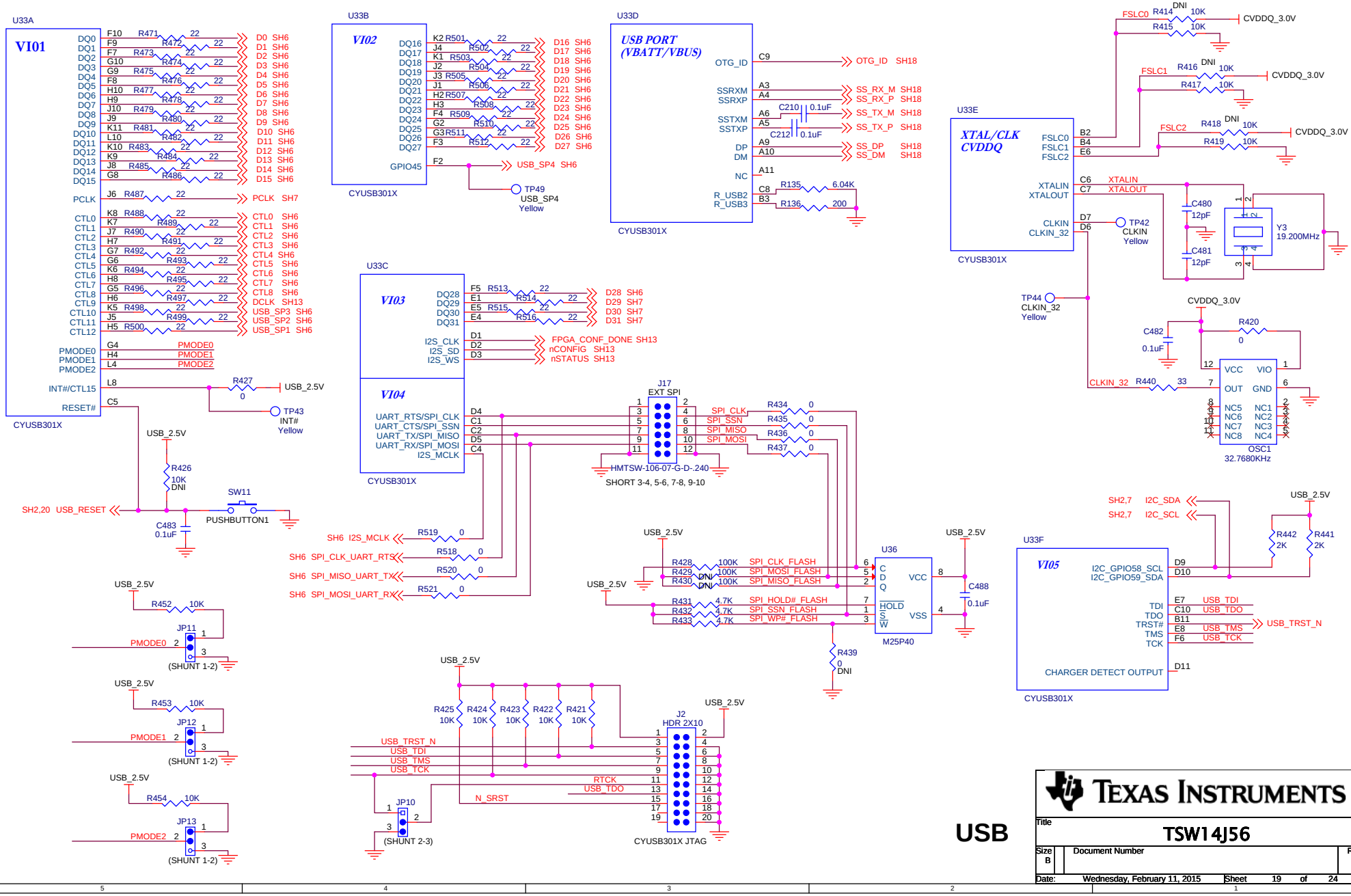
U33A
VI01
CYUSB301X
U33B
VI02
CYUSB301X
U33D
USB PORT (VBATT/VBUS)
CYUSB301X
U33E
XTAL/CLK CVDDQ
CYUSB301X
U33C
VI03
VI04
CYUSB301X
J17
EXT SPI
HMTSW-106-07-G-D-.240
SHORT 3-4, 5-6, 7-8, 9-10
U36
M25P40
U33F
VI05
CYUSB301X
CHARGER DETECT OUTPUT
J2
HDR 2X10
CYUSB301X JTAG
JP10
(SHUNT 2-3)
JP11
JP12
JP13
(SHUNT 1-2)
SW11
PUSHBUTTON1
TP43 INT# Yellow
TP44 CLKIN_32 Yellow
TP42 CLKIN Yellow
TP49 USB_SP4 Yellow
OSC1 32.7680KHz
Y3 19.200MHz
USB_2.5V
CVDDQ_3.0V
USB
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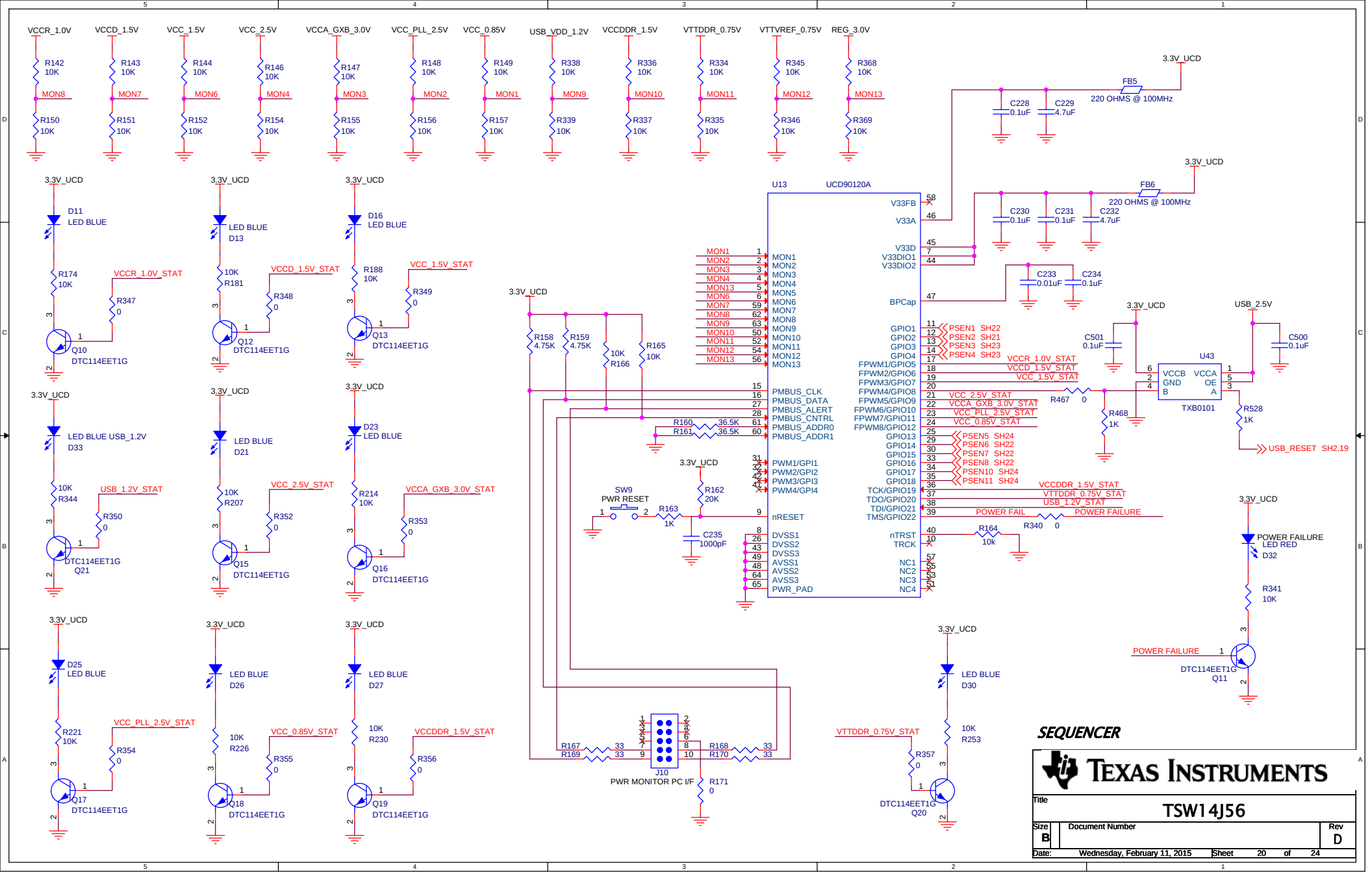
VCCR_1.0V
VCCD_1.5V
VCC_1.5V
VCC_2.5V
VCCA_GXB_3.0V
VCC_PLL_2.5V
VCC_0.85V
USB_VDD_1.2V
VCCDDR_1.5V
VTTDDR_0.75V
VTTVREF_0.75V
REG_3.0V
U13
UCD90120A
3.3V_UCD
USB_2.5V
FB5
FB6
220 OHMS @ 100MHz
U43
TXB0101
SW9
PWR RESET
J10
PWR MONITOR PC I/F
SEQUENCER
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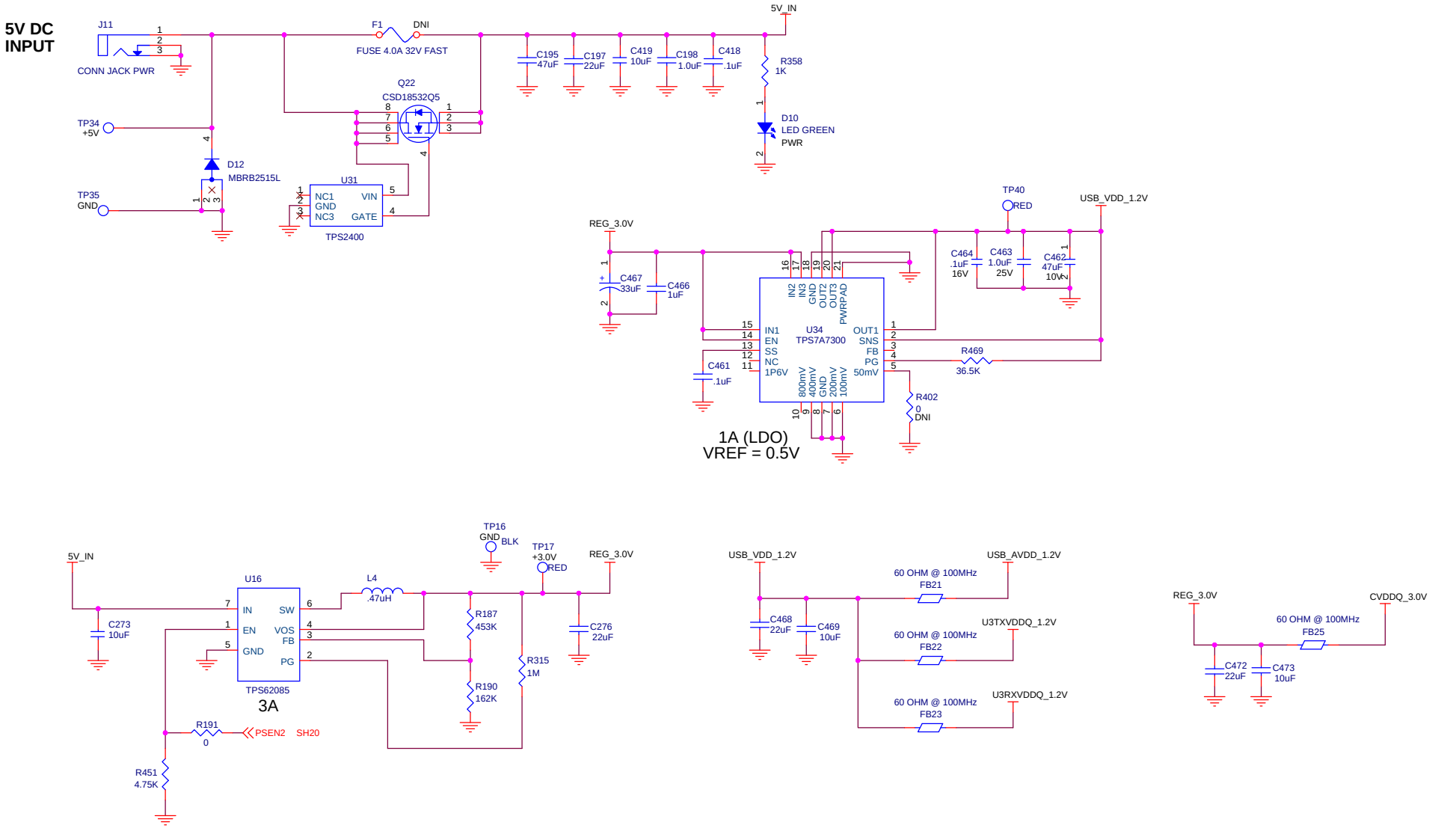
5V DC INPUT
J11
CONN JACK PWR
F1
DNI
FUSE 4.0A 32V FAST
5V_IN
C195 47uF
C197 22uF
C419 10uF
C198 1.0uF
C418 .1uF
R358 1K
D10 LED GREEN PWR
Q22 CSD18532Q5
TP34 +5V
D12 MBRB2515L
TP35 GND
U31 NC1 GND NC3 VIN GATE
TPS2400
TP40 RED
USB_VDD_1.2V
REG_3.0V
C467 33uF
C466 1uF
C464 .1uF 16V
C463 1.0uF 25V
C462 47uF 10V
U34 TPS7A7300
IN1 EN SS NC 1P6V
OUT1 SNS FB PG 50mV
IN2 IN3 GND OUT2 OUT3 PWRPAD
800mV 400mV GND 200mV 100mV
C461 .1uF
R469 36.5K
R402 0 DNI
1A (LDO)
VREF = 0.5V
TP16 GND BLK
TP17 +3.0V RED
U16
TPS62085
3A
L4 .47uH
C273 10uF
R187 453K
R190 162K
R315 1M
C276 22uF
R191 0
PSEN2 SH20
R451 4.75K
C468 22uF
C469 10uF
60 OHM @ 100MHz FB21
60 OHM @ 100MHz FB22
60 OHM @ 100MHz FB23
USB_AVDD_1.2V
U3TXVDDQ_1.2V
U3RXVDDQ_1.2V
CVDDQ_3.0V
C472 22uF
C473 10uF
60 OHM @ 100MHz FB25
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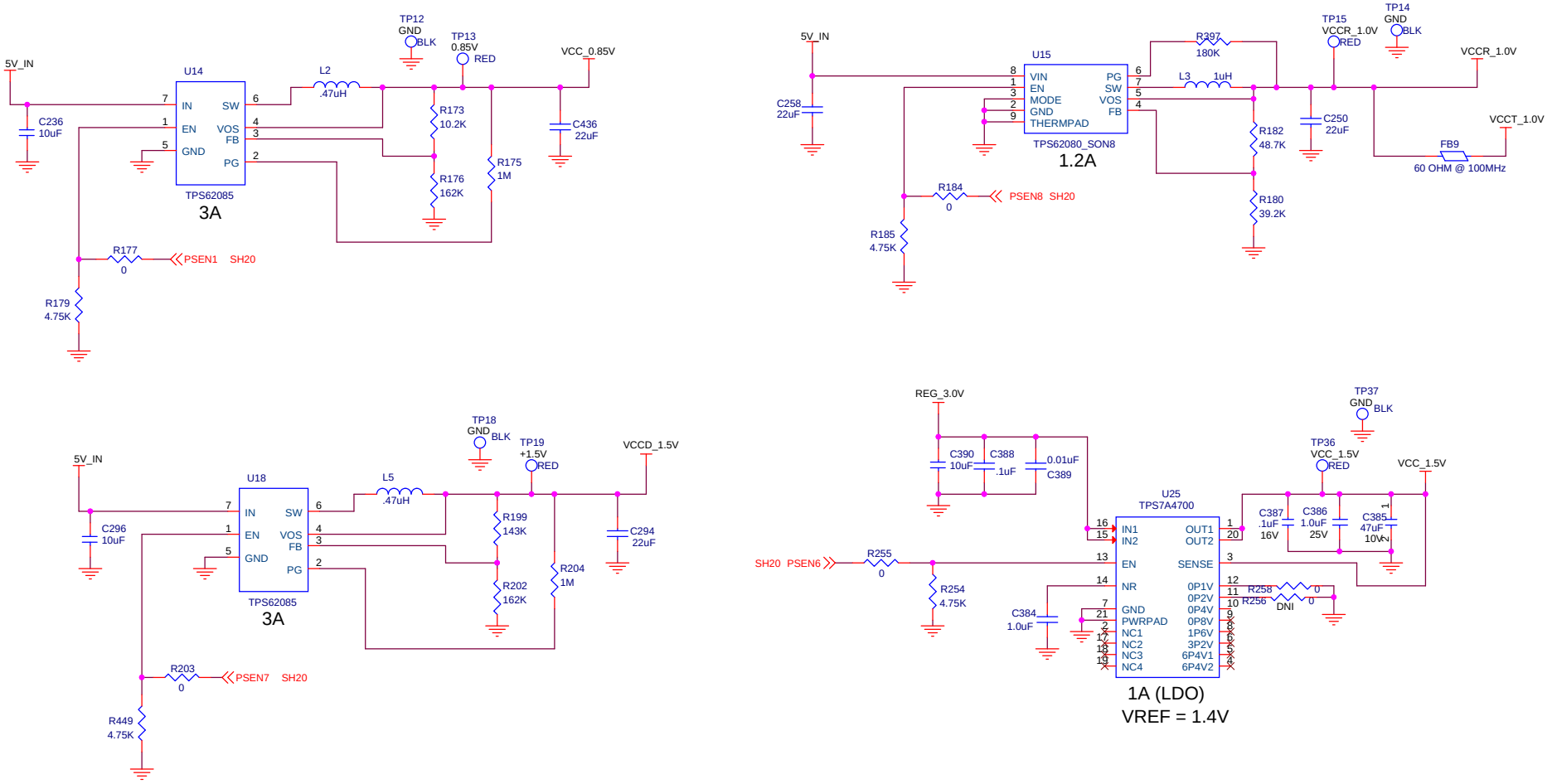

FPGA SUPPLIES

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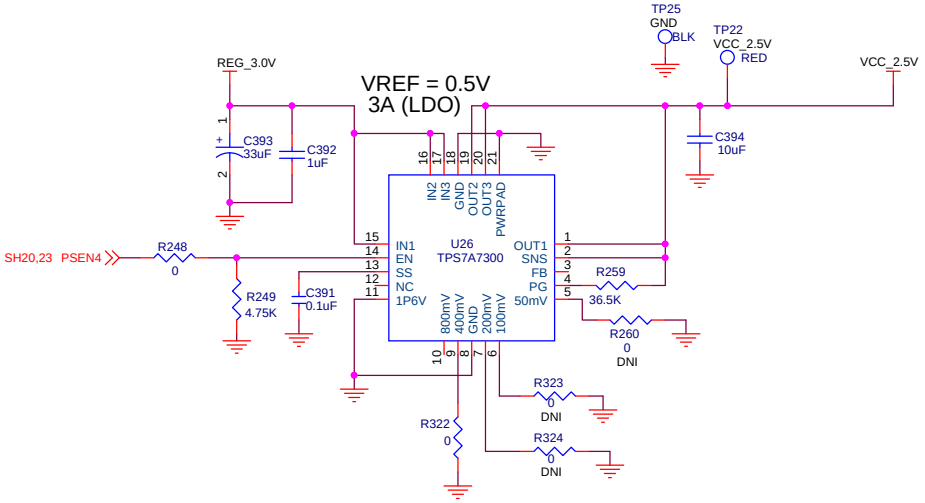

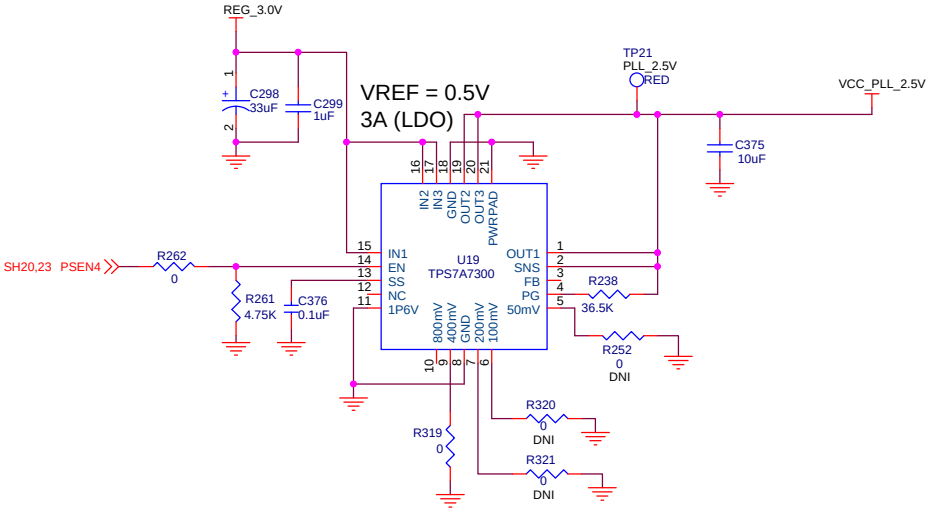

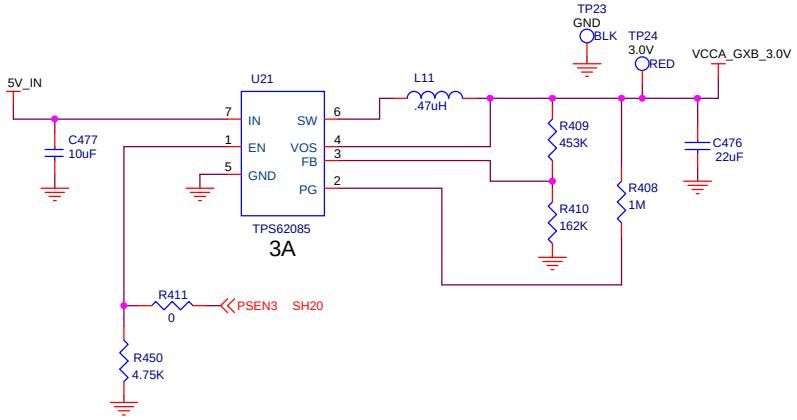

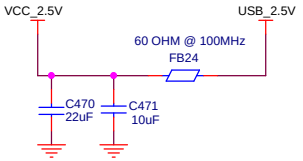

FPGA SUPPLIES

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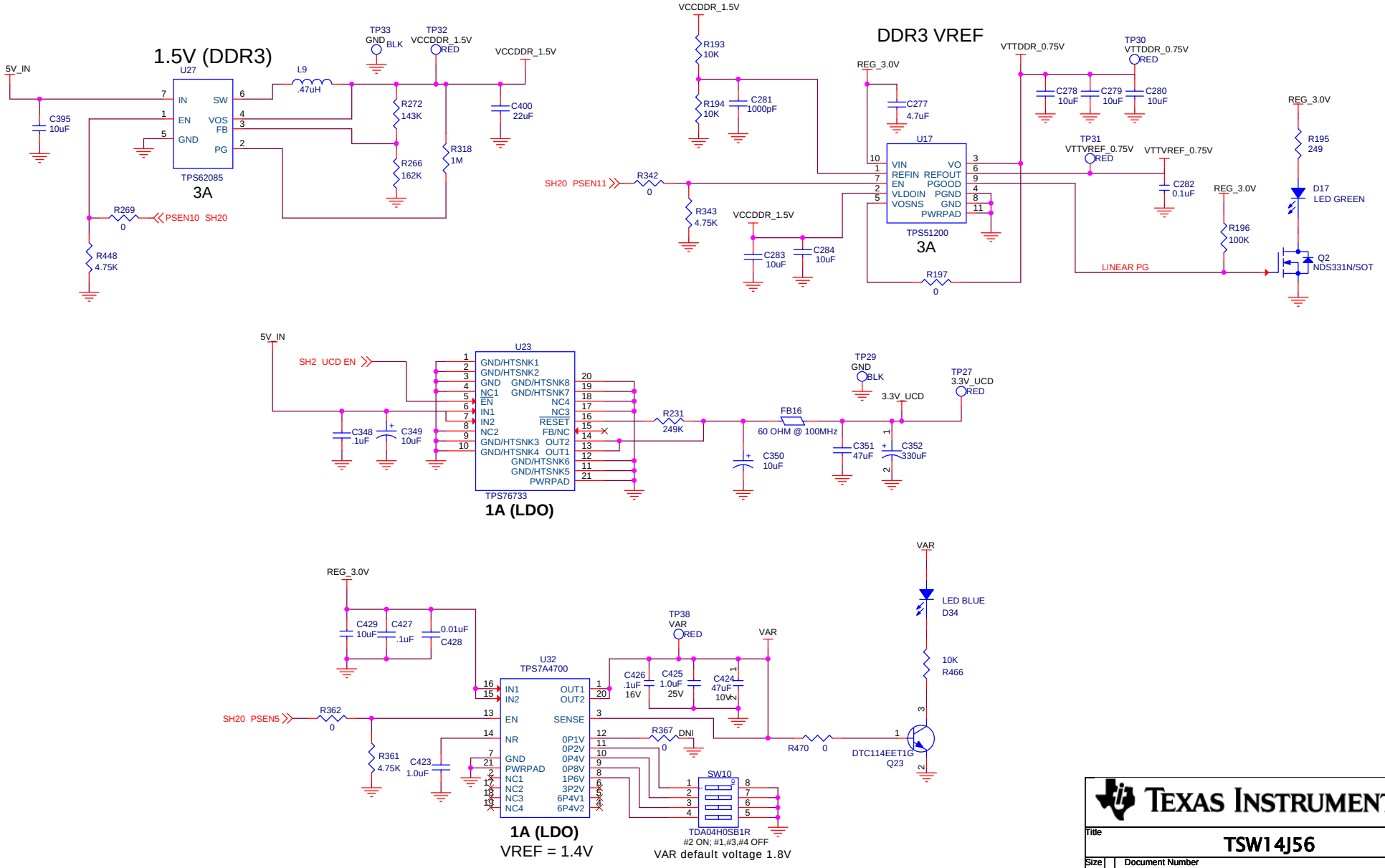

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