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8	T2080 SYSTEM LOGIC INTERFACE
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10	T2080 USB INTERFACE
11	USB_HUB
12	KEYBOARD INTERFACE
13	KB_LED_AND_LED
14	T2080 DUART and I2C DEVICE INTERFACE
15	CPLD WRAPPER AND IO EXPANDER
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35	SYSTEM CLOCK GENERATORs
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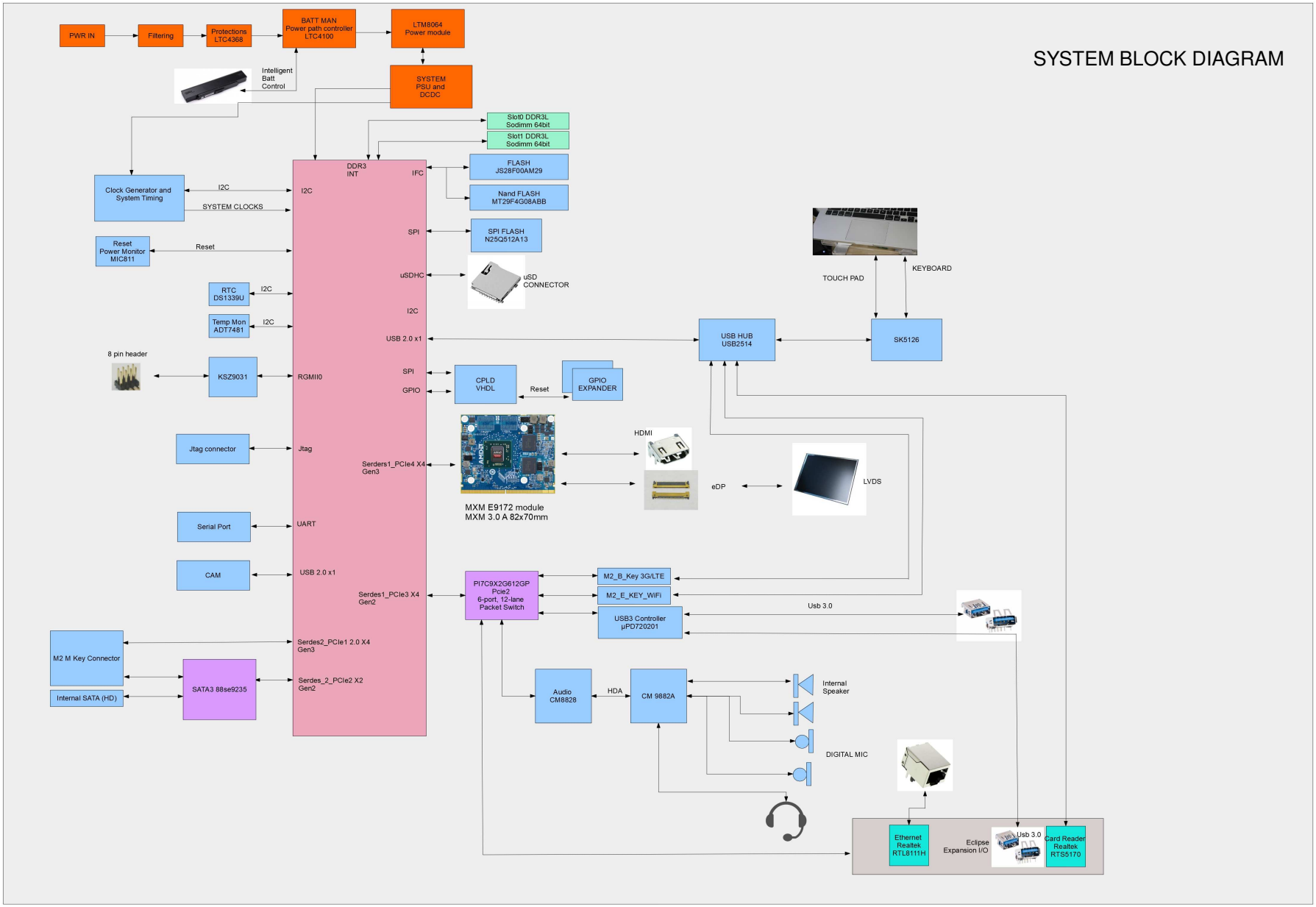
Version Control

Version	Date	Modifications
V0.1	2018/12	First release of Schematics
V0.2	2019/09	Second release of Schematics
V0.3	2020/04	Third release of Schematics
V0.4	2020/05	Fourth release of Schematics
V0.5	2020/06	Fifth release of Schematics
V0.6	2020/08	Sixth release of Schematics

<Variant Name>

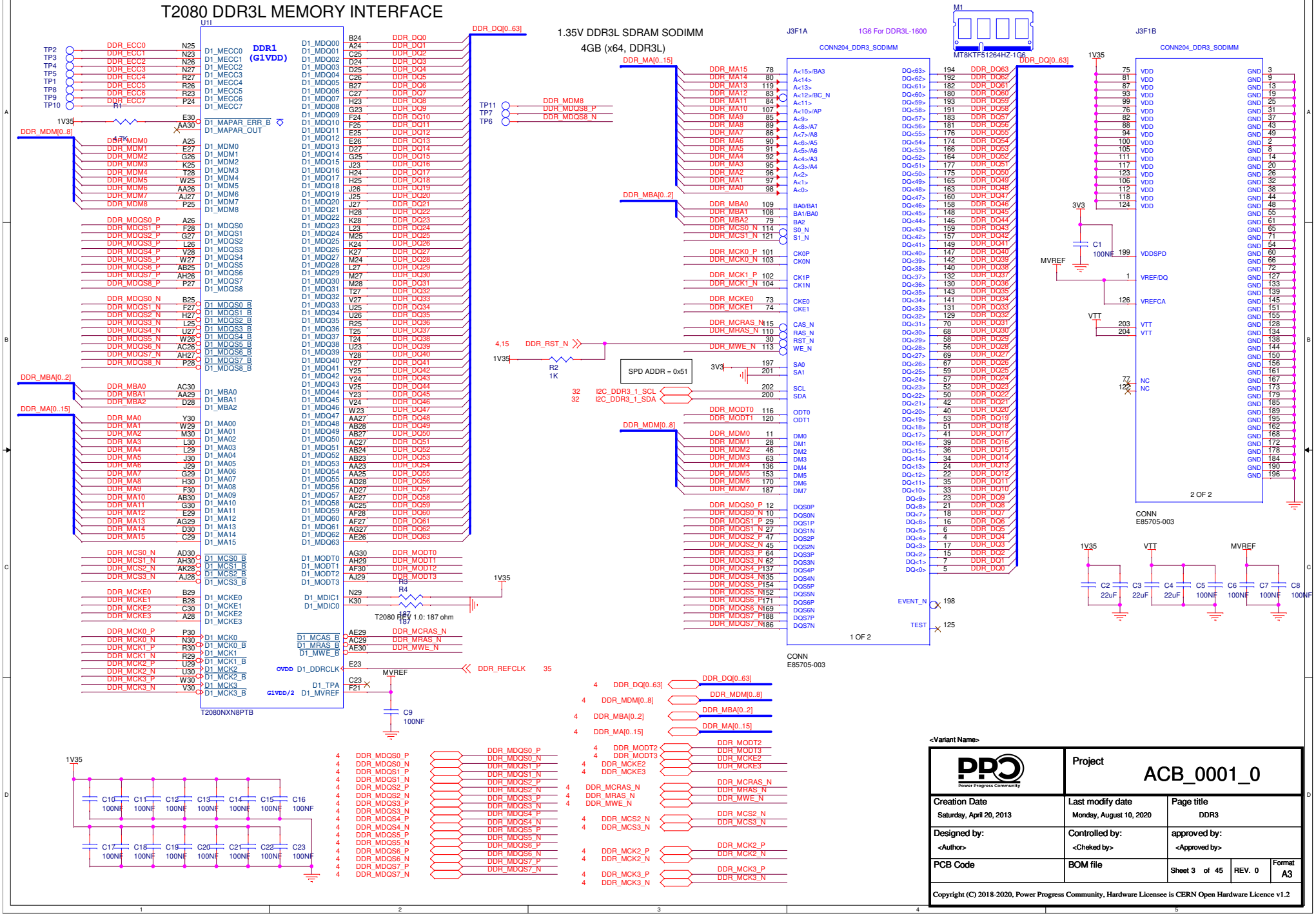
PPC Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, September 28, 2020	Last modify date	Page title: PAGE LISTING
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 1 of 45 / REV. 0 / Format B

SYSTEM BLOCK DIAGRAM



PRO	Project: ACB_0001_0	
Creation Date: Monday, August 10, 2020	Last modify date:	Page title: BLOCK DIAGRAM
Designed by:	Controlled by:	approved by:
PCB Code:	MCM file:	Sheet: 2 of 26 Rev: A Size: A4

T2080 DDR3L MEMORY INTERFACE



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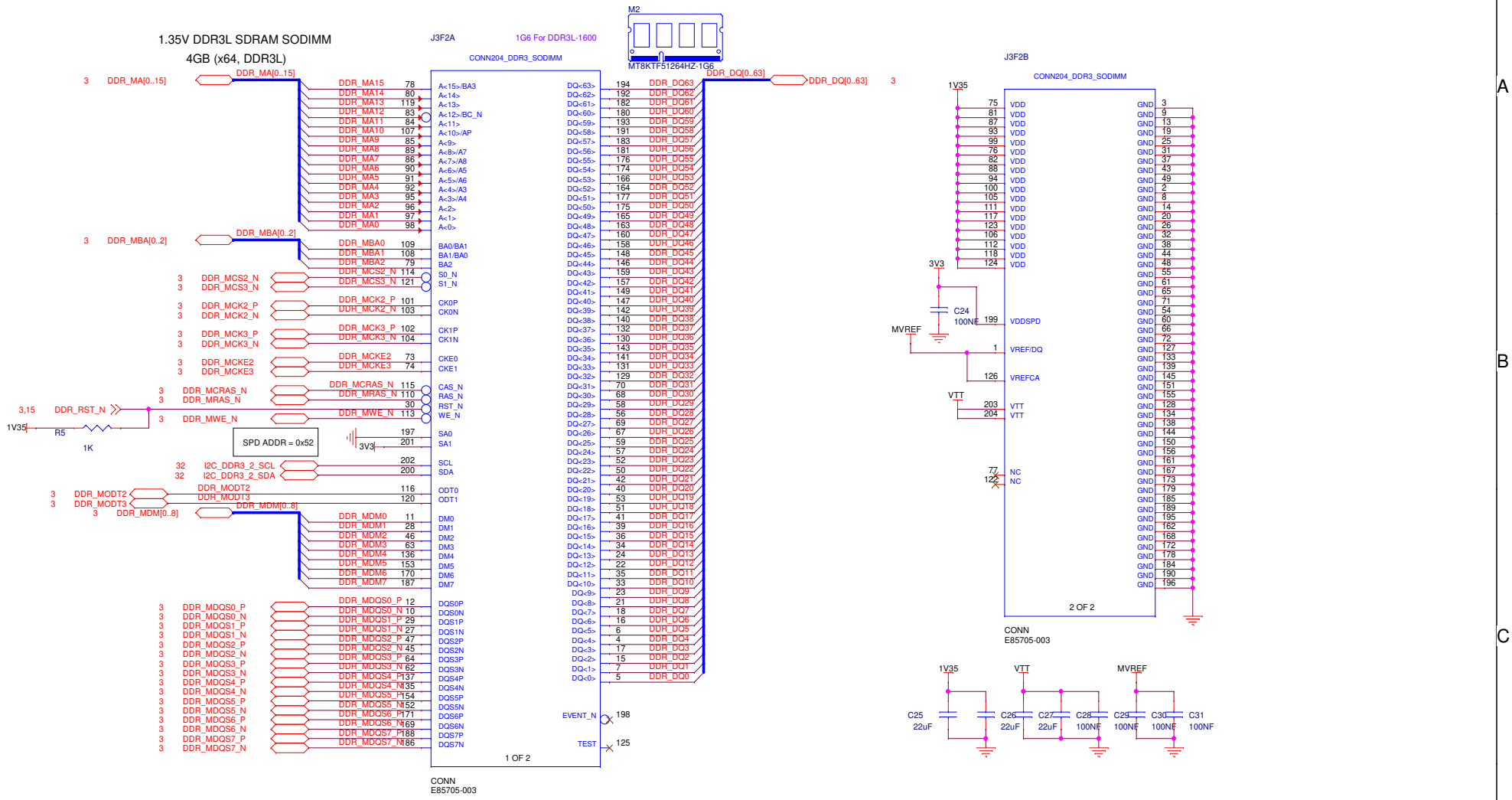
Designed by: <Author>	Controlled by: <Cheked by>	approved by: <Approved by>
PCB Code	BOM file	Sheet 3 of 45 / REV. 0 / Format A3



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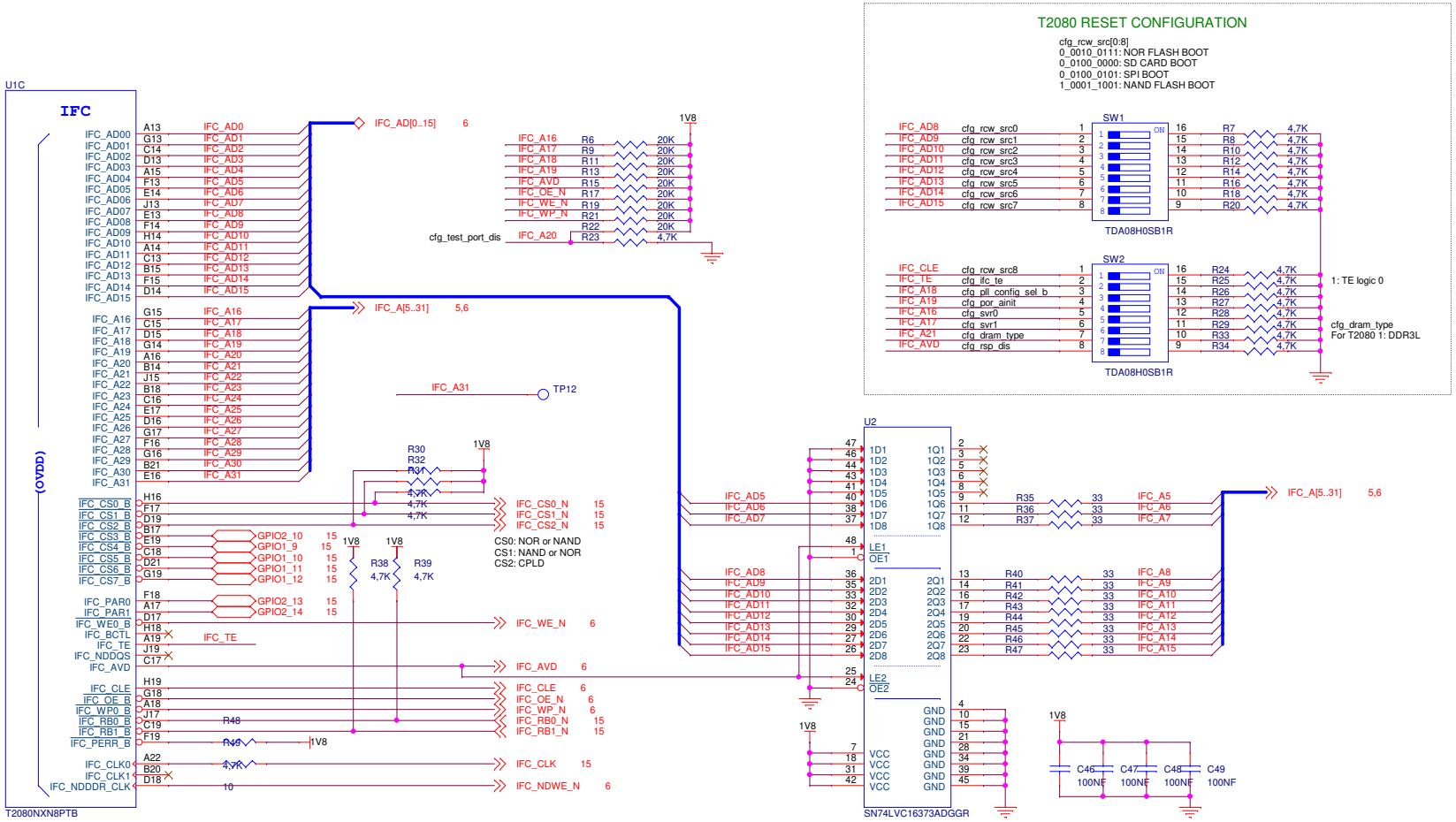
Designed by: <Author>	Controlled by: <Cheked by>	approved by: <Approved by>
PCB Code	BOM file	Sheet 4 of 45 / REV. 0 / Format A3

T2080 IFC INTERFACE



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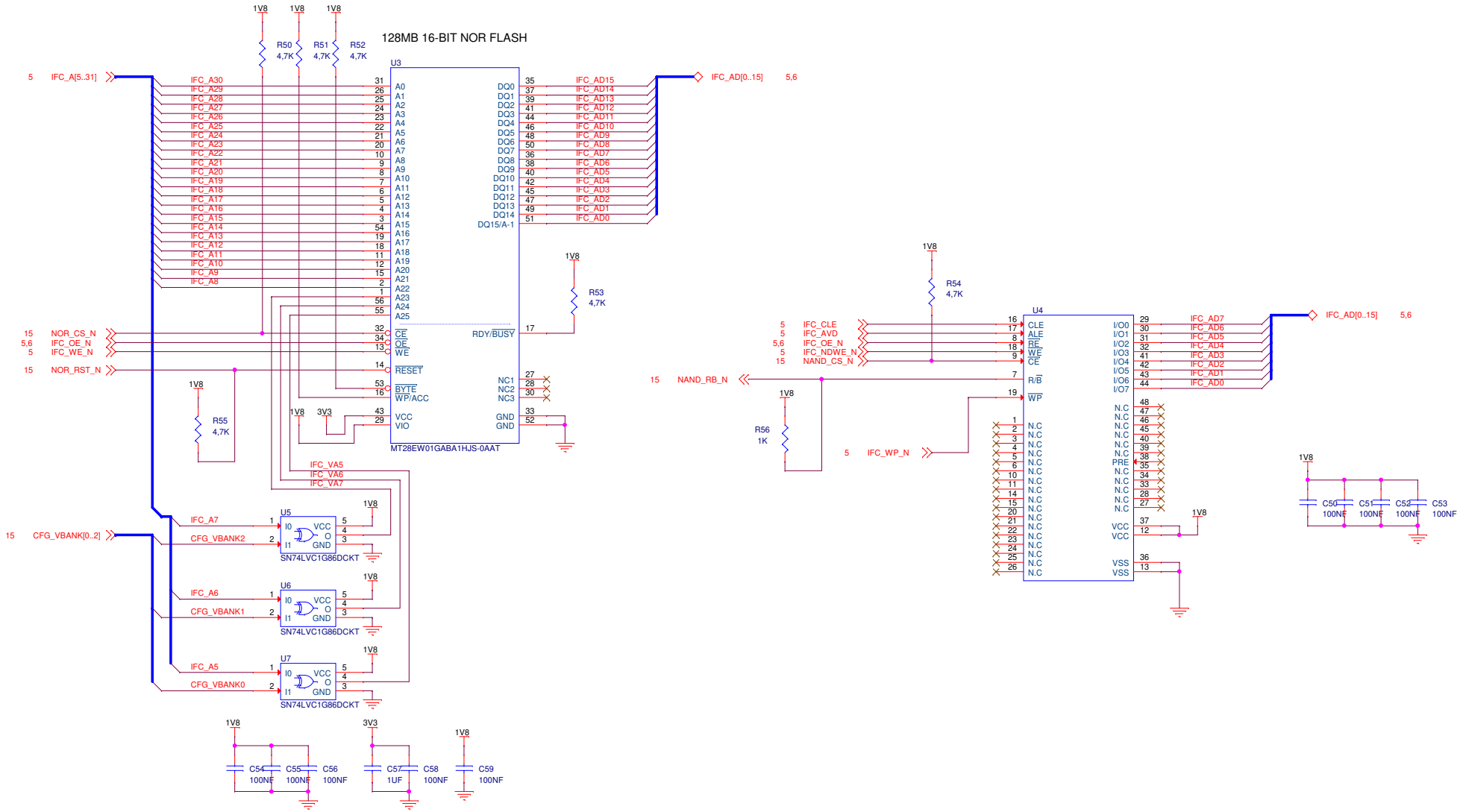
PPC Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, August 10, 2020	Last modify date:	Page title: IFC
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 5 of 45 / REV. 0 / Format A3

T2080 NOR and NAND FLASH INTERFACE



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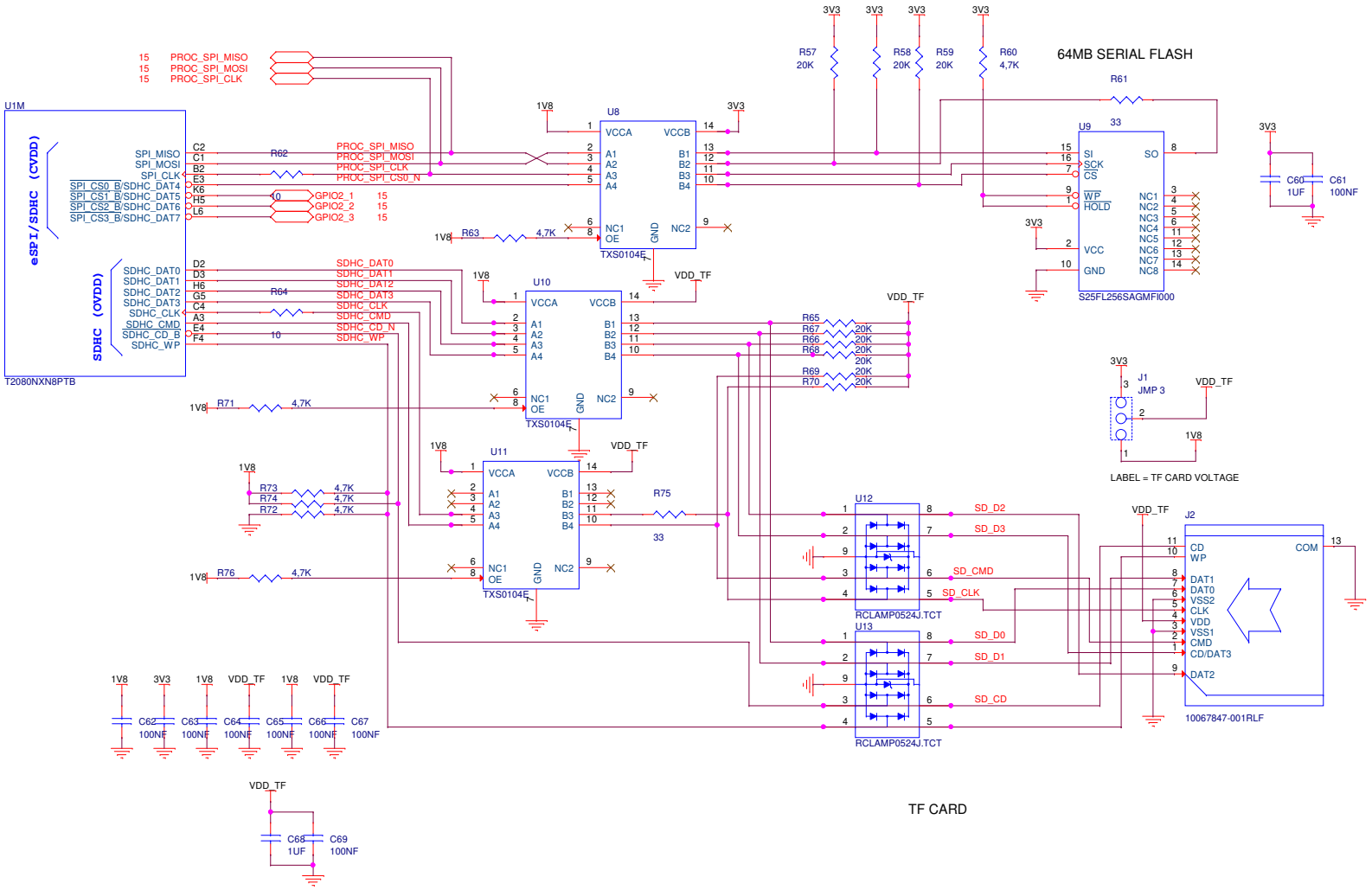
PPC Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, August 10, 2020	Last modify date:	Page title: FLASH
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 6 of 45 / REV. 0 / Format A3

T2080 SPI FLASH and SDHC INTERFACE



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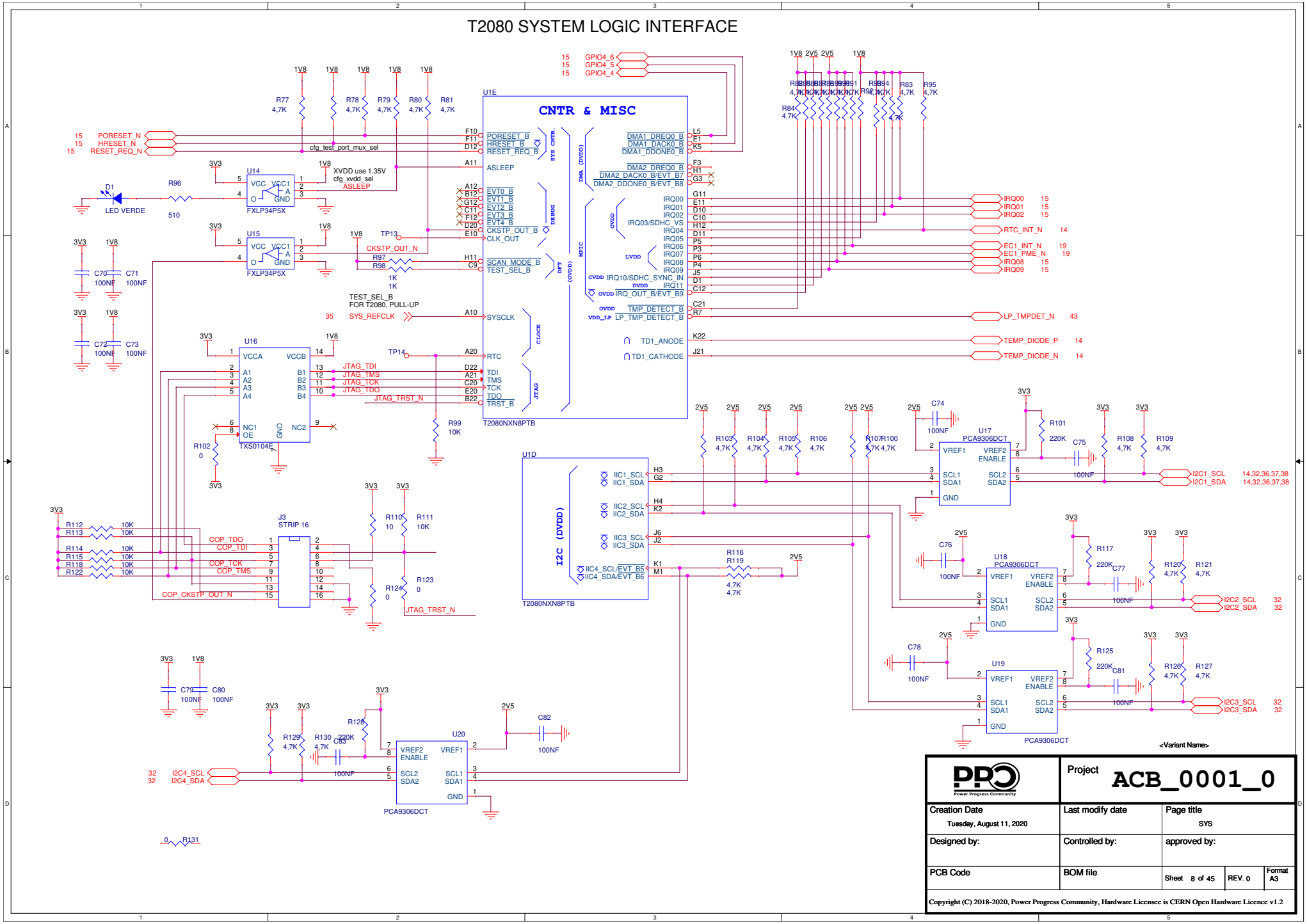
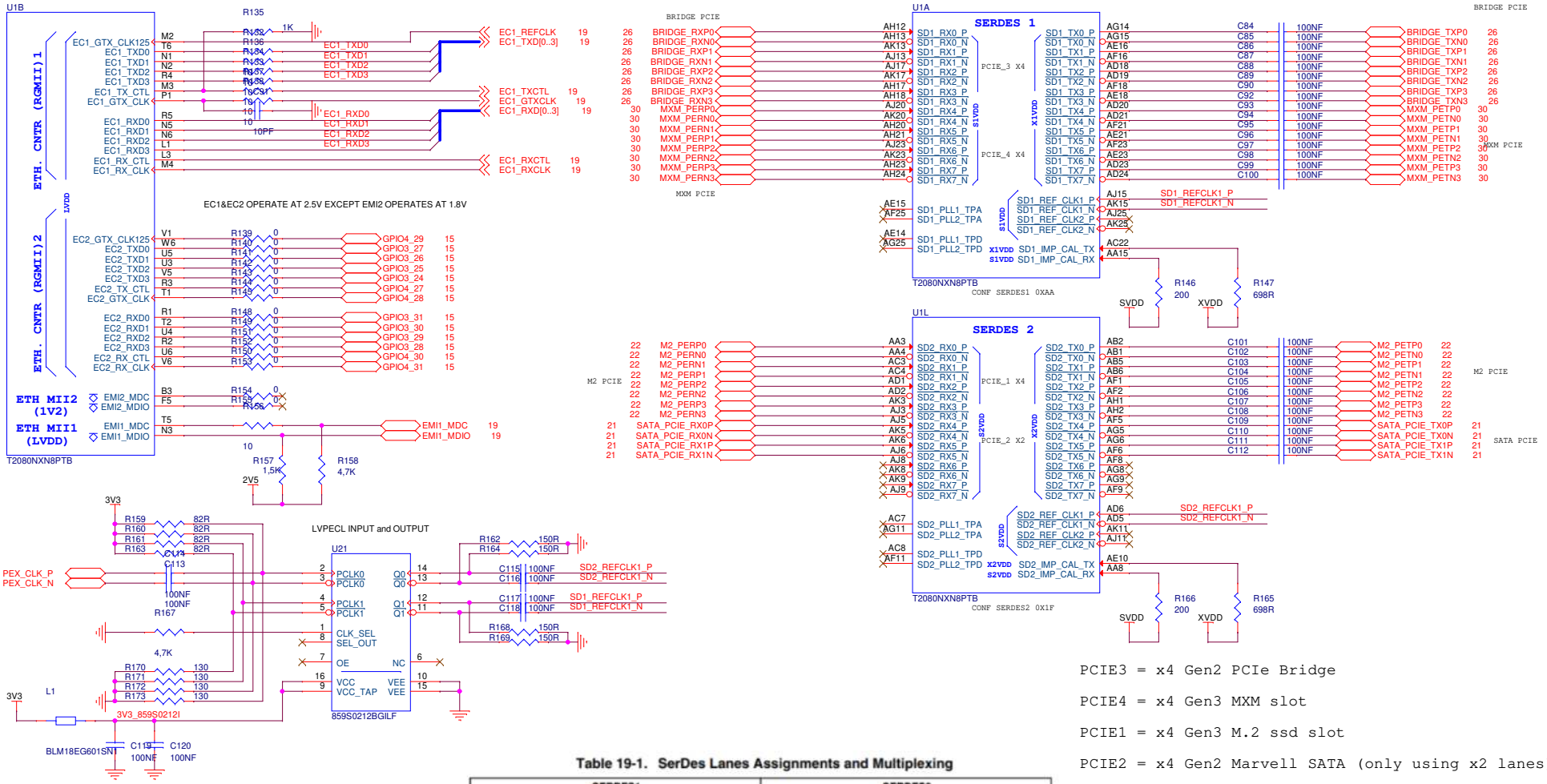
PPC Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, August 10, 2020	Last modify date	Page title: SPI&SDHC
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 7 of 45 / REV. 0 / Format A3

T2080 SYSTEM LOGIC INTERFACE



T2080 ETHERNET and SERDES INTERFACE



PCIE3 = x4 Gen2 PCIe Bridge

PCIE4 = x4 Gen3 MXM slot

PCIE1 = x4 Gen3 M.2 ssd slot

PCIE2 = x4 Gen2 Marvell SATA (only using x2 lanes)

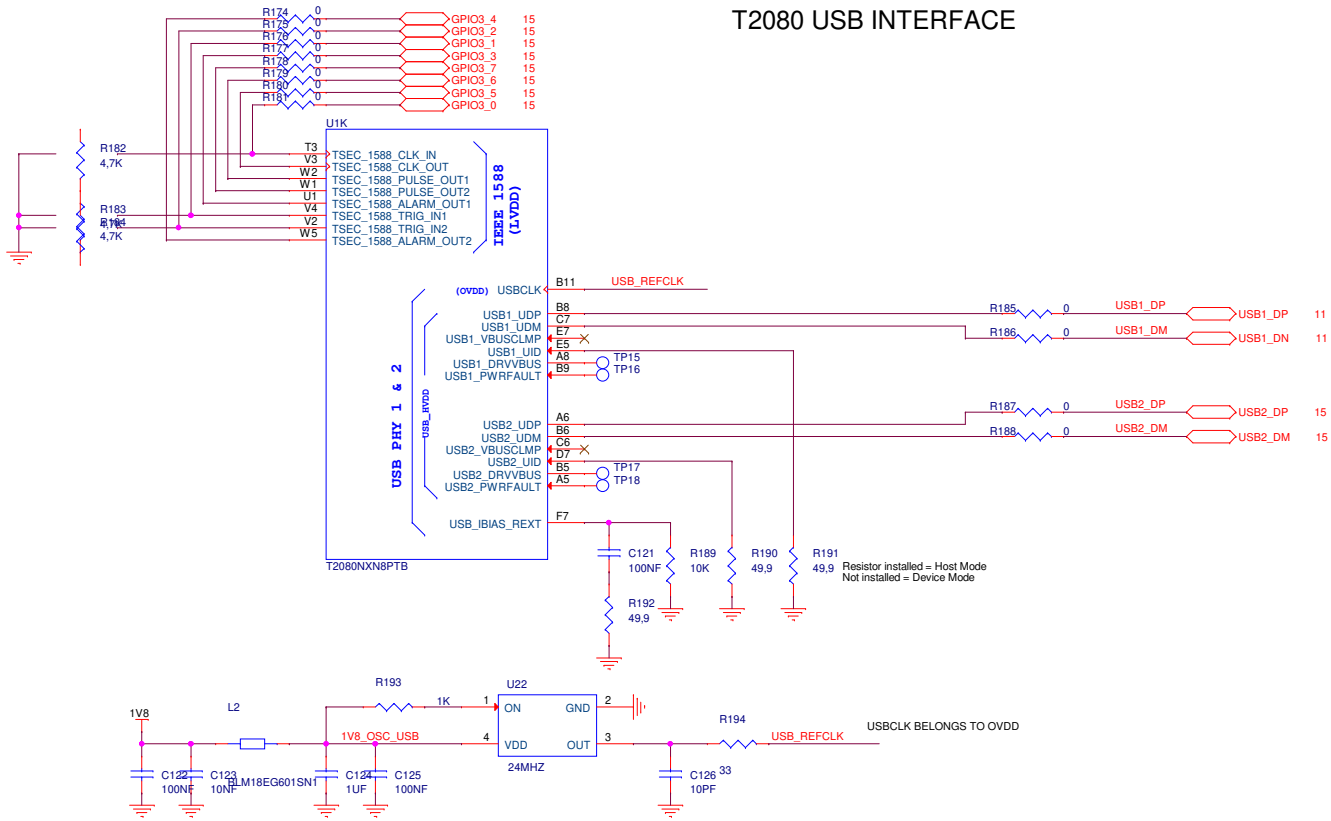
Table 19-1. SerDes Lanes Assignments and Multiplexing

	SERDES1									SERDES2								
SRDS_PRTCL_S1	A	B	C	D	E	F	G	H	Per Lane PLL Mapping	SRDS_PRTCL_S2	A	B	C	D	E	F	G	H	Per Lane PLL Mapping
AA	PCIe3				PCIe4				1111 1111	1F[1]	PCIe1				PCIe2				1111 2222

<Variant Name>

Project: ACB_0001_0		
Creation Date	Last modify date	Page title: EC&SD
Designed by: Monday, August 10, 2020	Controlled by:	approved by:
PCB Code	BOM file	Sheet 9 of 45 / REV. 0 / Format A3

T2080 USB INTERFACE



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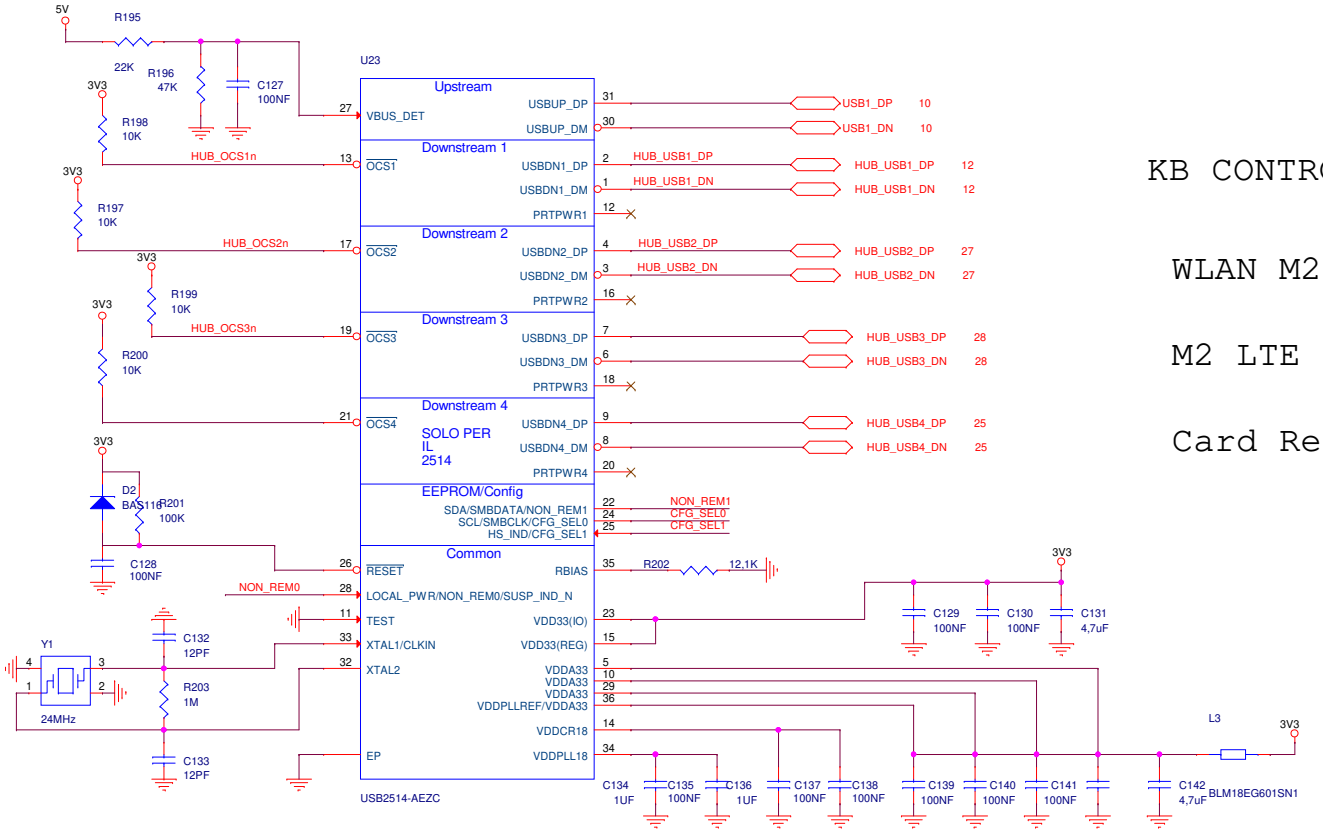
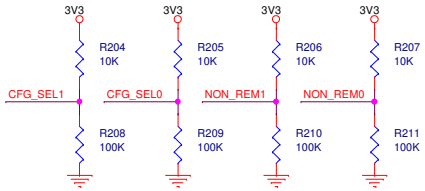
PPC Power Progress Community	Project **ACB_0001_0**	
Creation Date	Last modify date	Page title: USB
Designed by: Tuesday, August 11, 2020	Controlled by:	approved by:
PCB Code	BOM file	Sheet 10of 45 / REV. 0 / Format A3

HUB USB





KB CONTROLLER

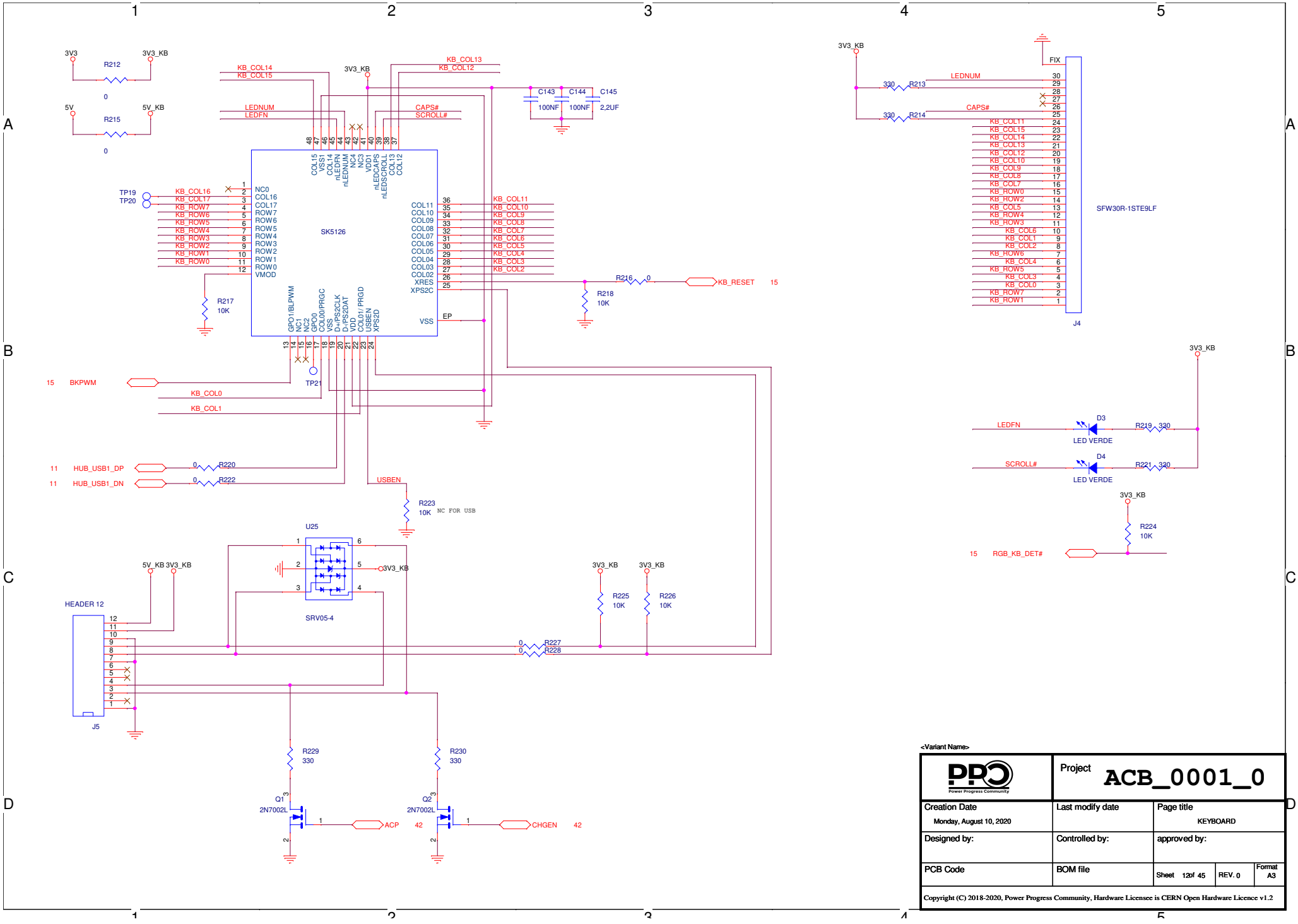
WLAN M2

M2 LTE

Card Reader

<Variant Name>

PPC Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, August 10, 2020	Last modify date	Page title: USB HUB
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 11of 45 / REV. 0 / Format A3



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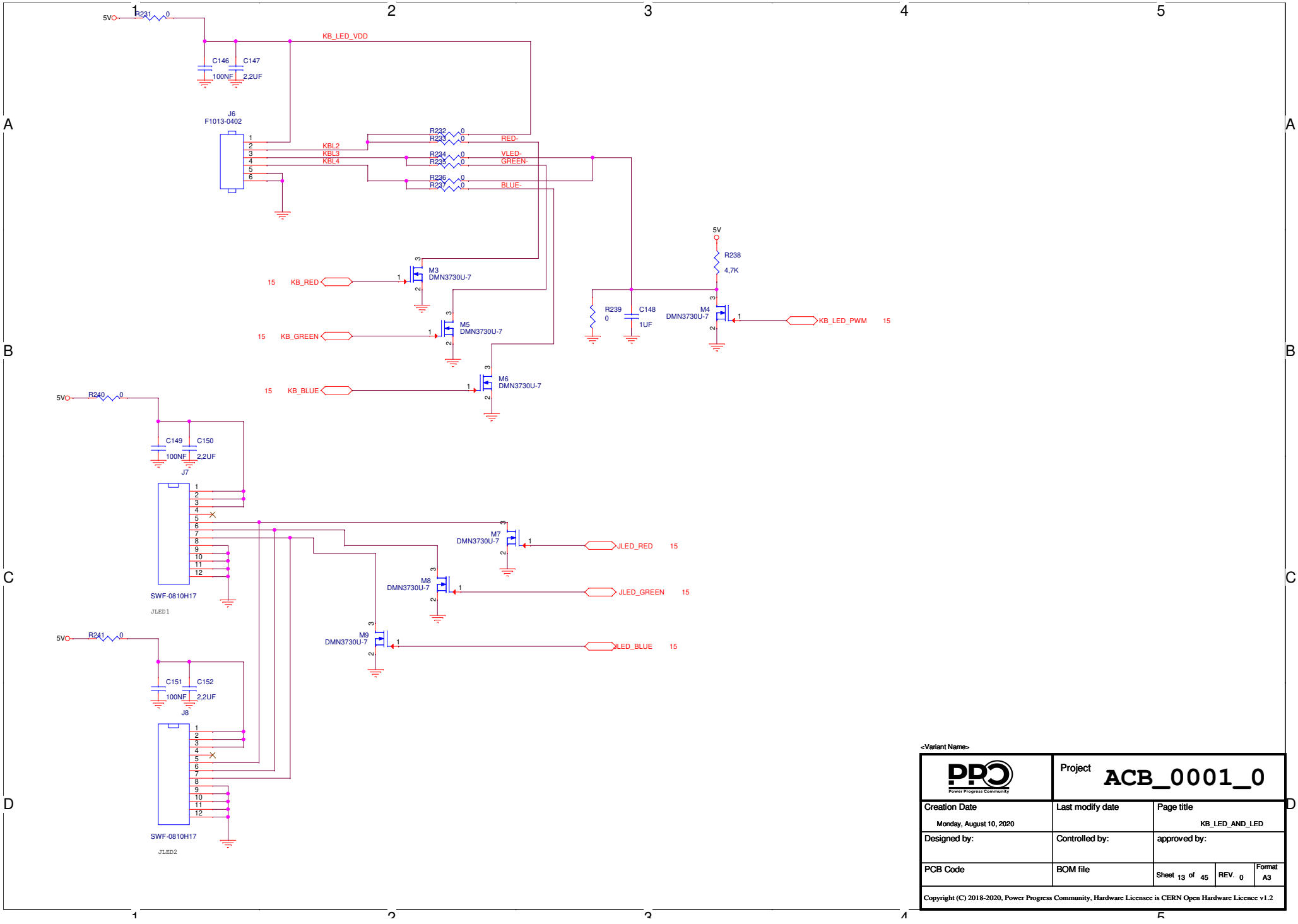
Project ACB_0001_0		
Creation Date: Monday, August 10, 2020	Last modify date	Page title: KEYBOARD
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 12of 45 / REV. 0 / Format A3



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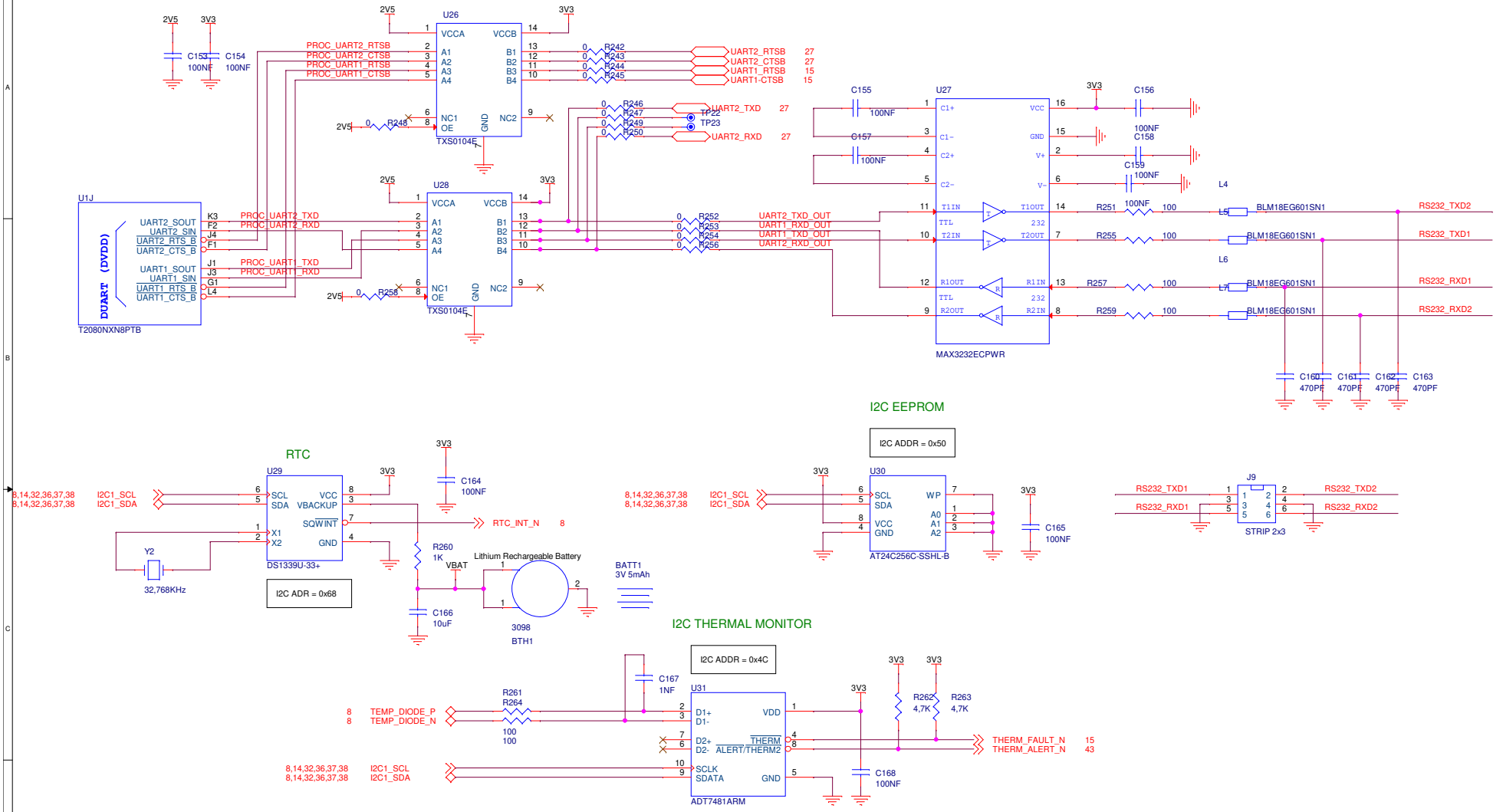
PPC Power Progress Community	Project ACB_0001_0	
Creation Date: Monday, August 10, 2020	Last modify date	Page title: KB_LED_AND_LED
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 13 of 45 / REV. 0 / Format A3

T2080 DUART and I2C DEVICE INTERFACE



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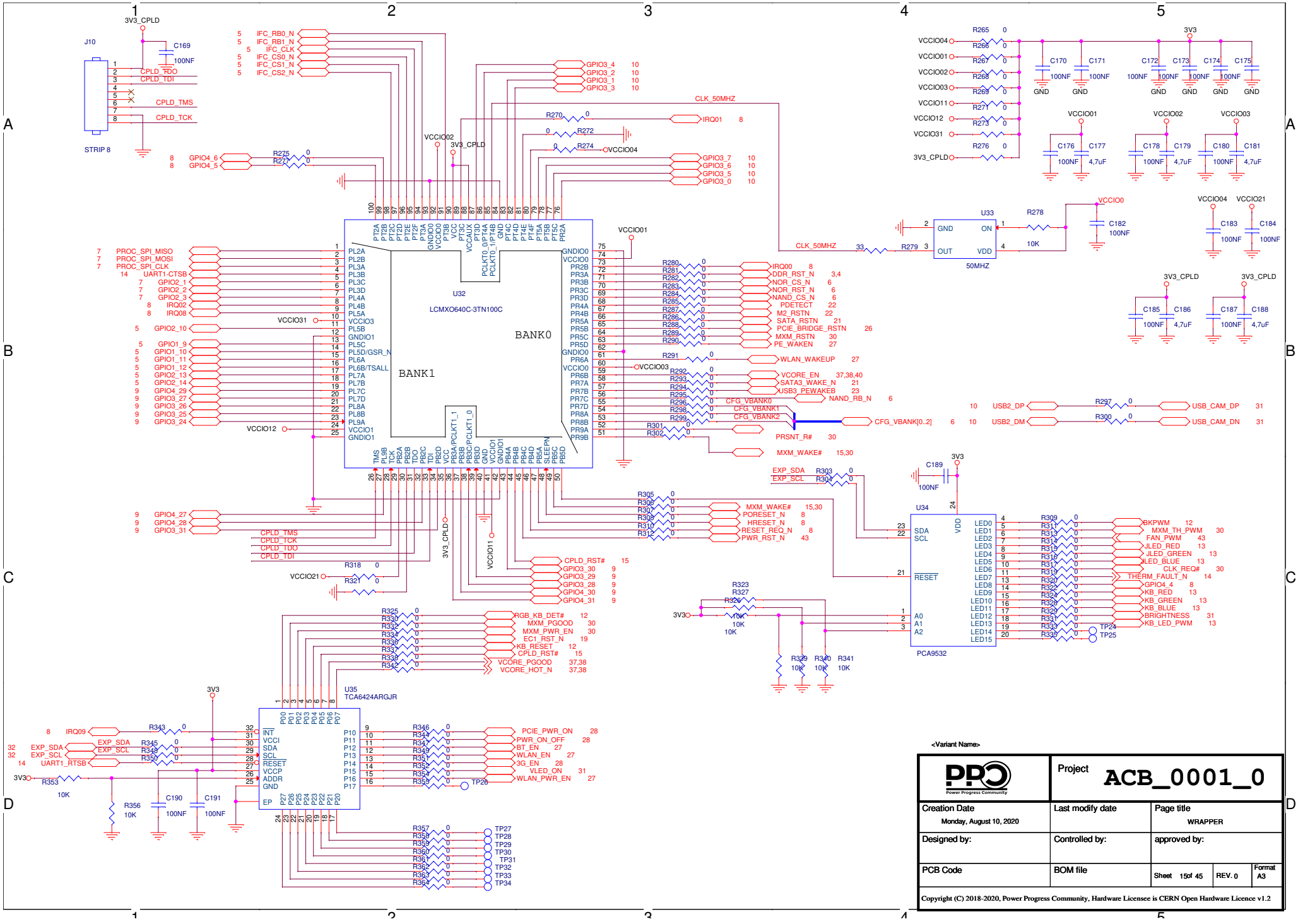
Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, August 10, 2020	Last modify date:	Page title: UART&I2C
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 14of 45 / REV. 0 / Format A3



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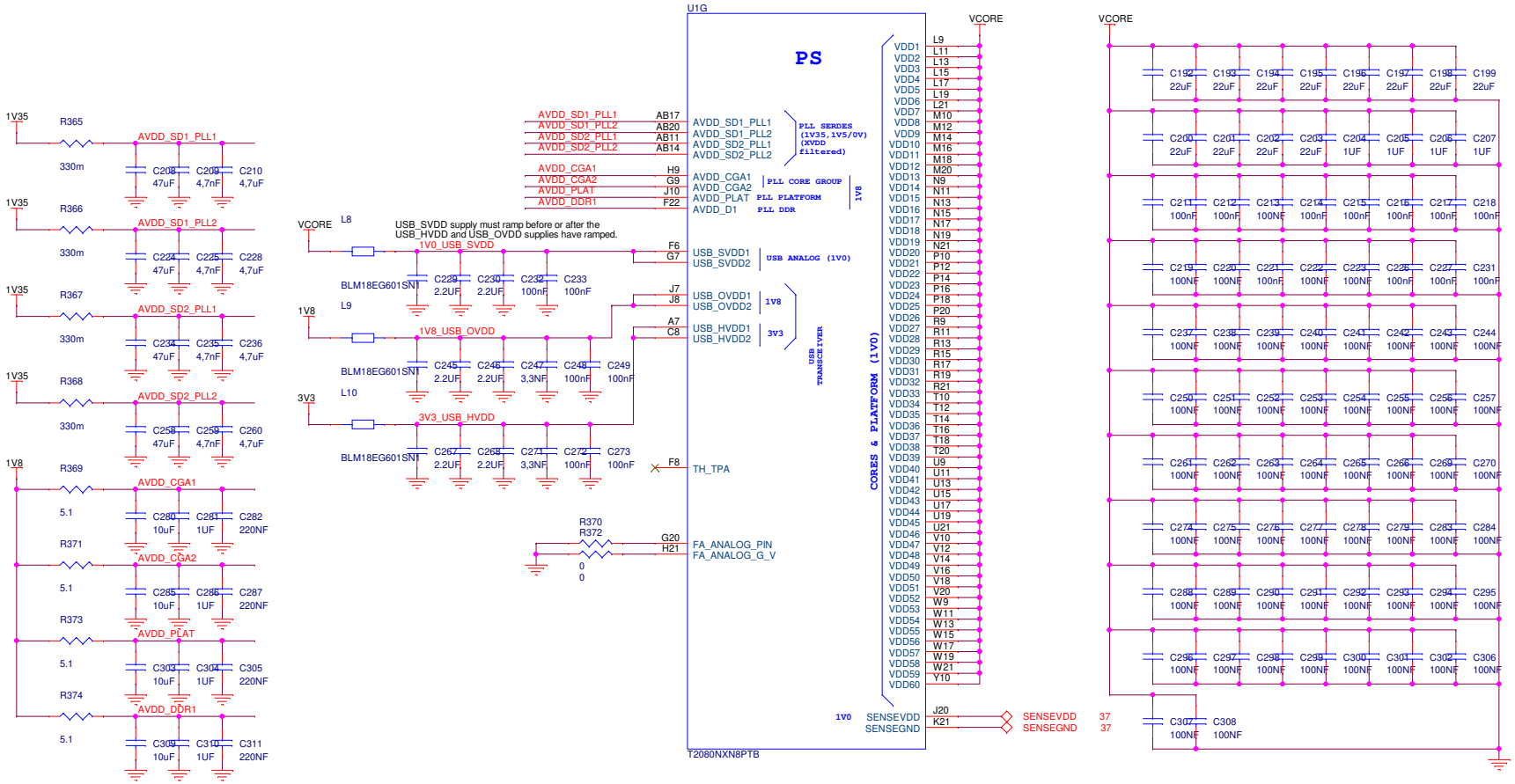
PRO Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, August 10, 2020	Last modify date	Page title: WRAPPER
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 15of 45 · REV. 0 · Format A3

T2080 POWER SUPPLY



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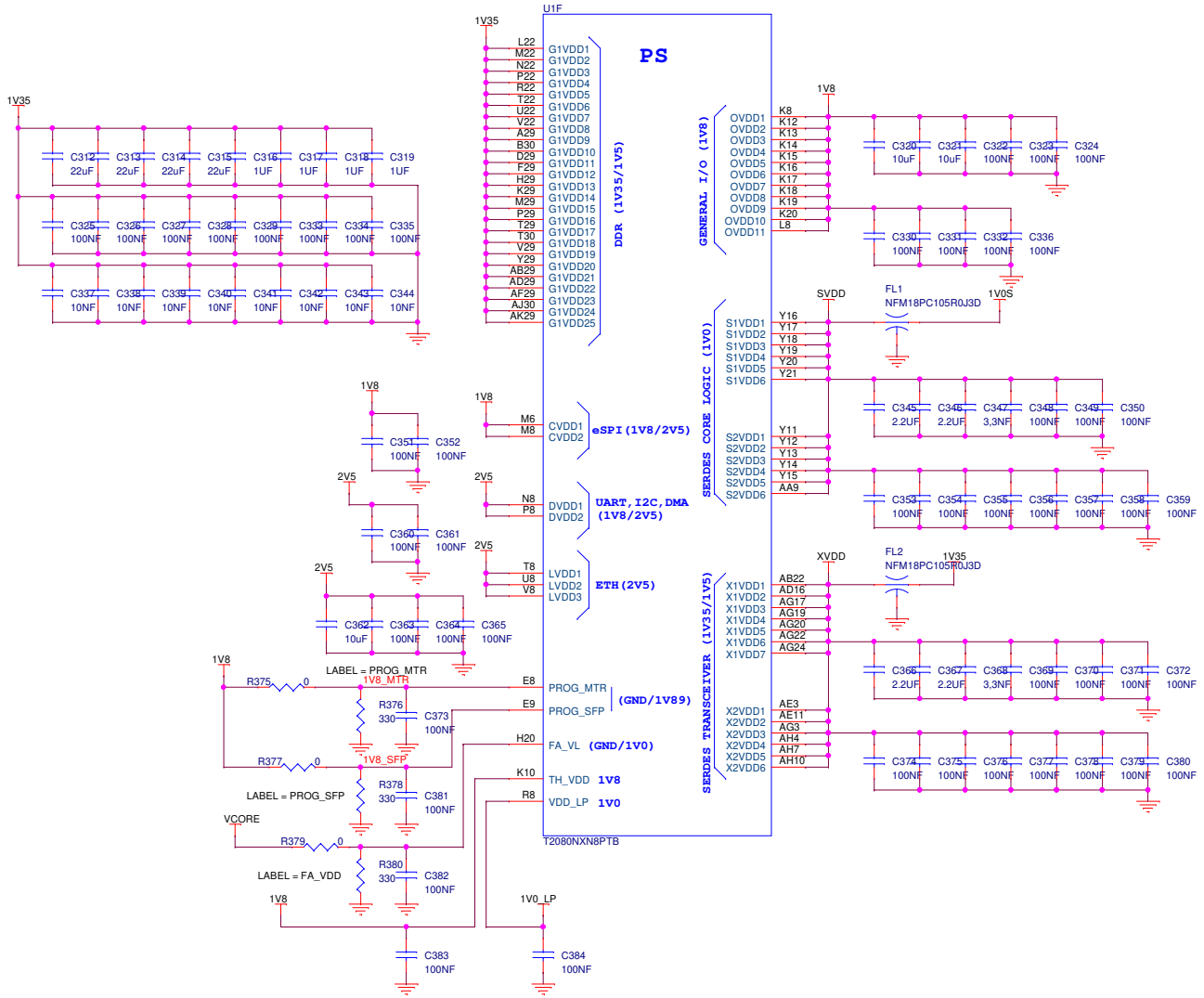
PPC Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, August 10, 2020	Last modify date	Page title: PROC PWR1
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 16of 45 / REV. 0 / Format A3

T2080 POWER SUPPLY (cont.)



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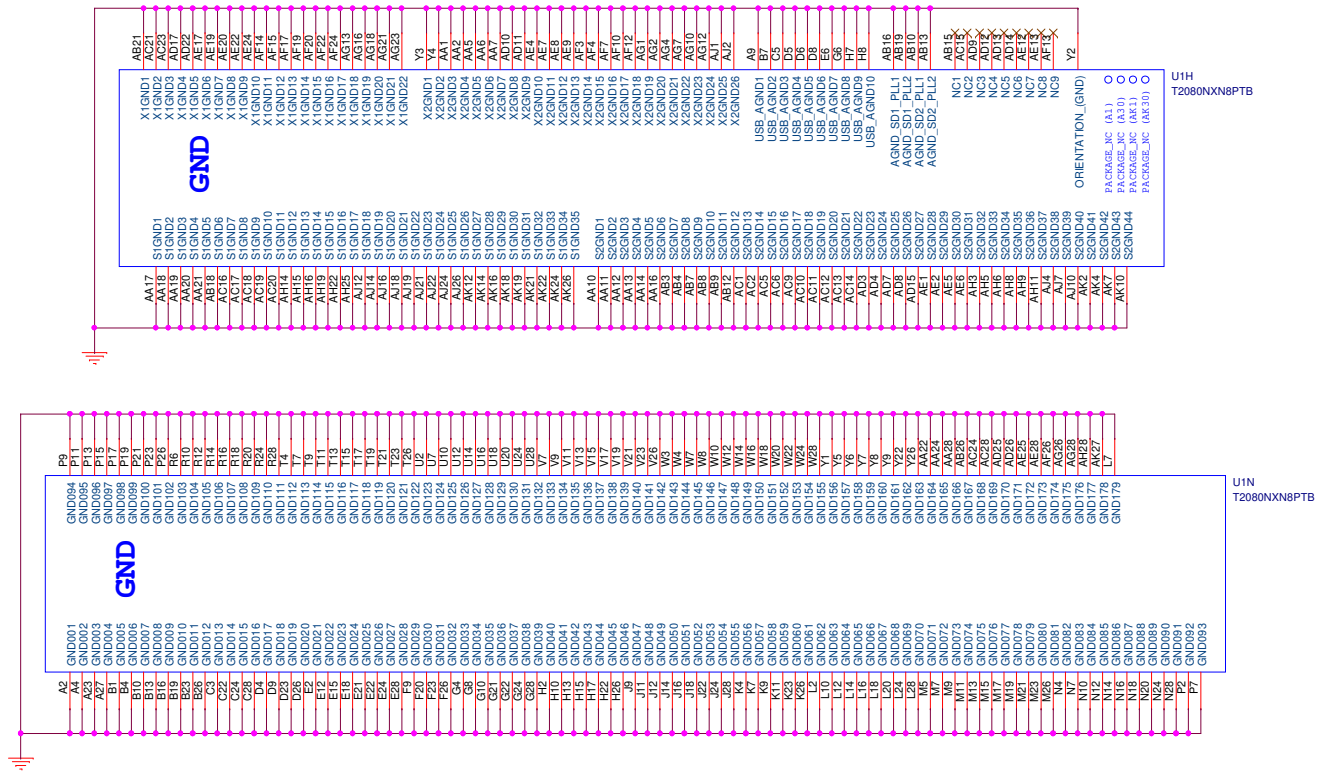
Creation Date: Monday, August 10, 2020	Last modify date:	Page title: PROC PWR2
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet17 of 45 / REV. 0 / Format A3

T2080 GROUND



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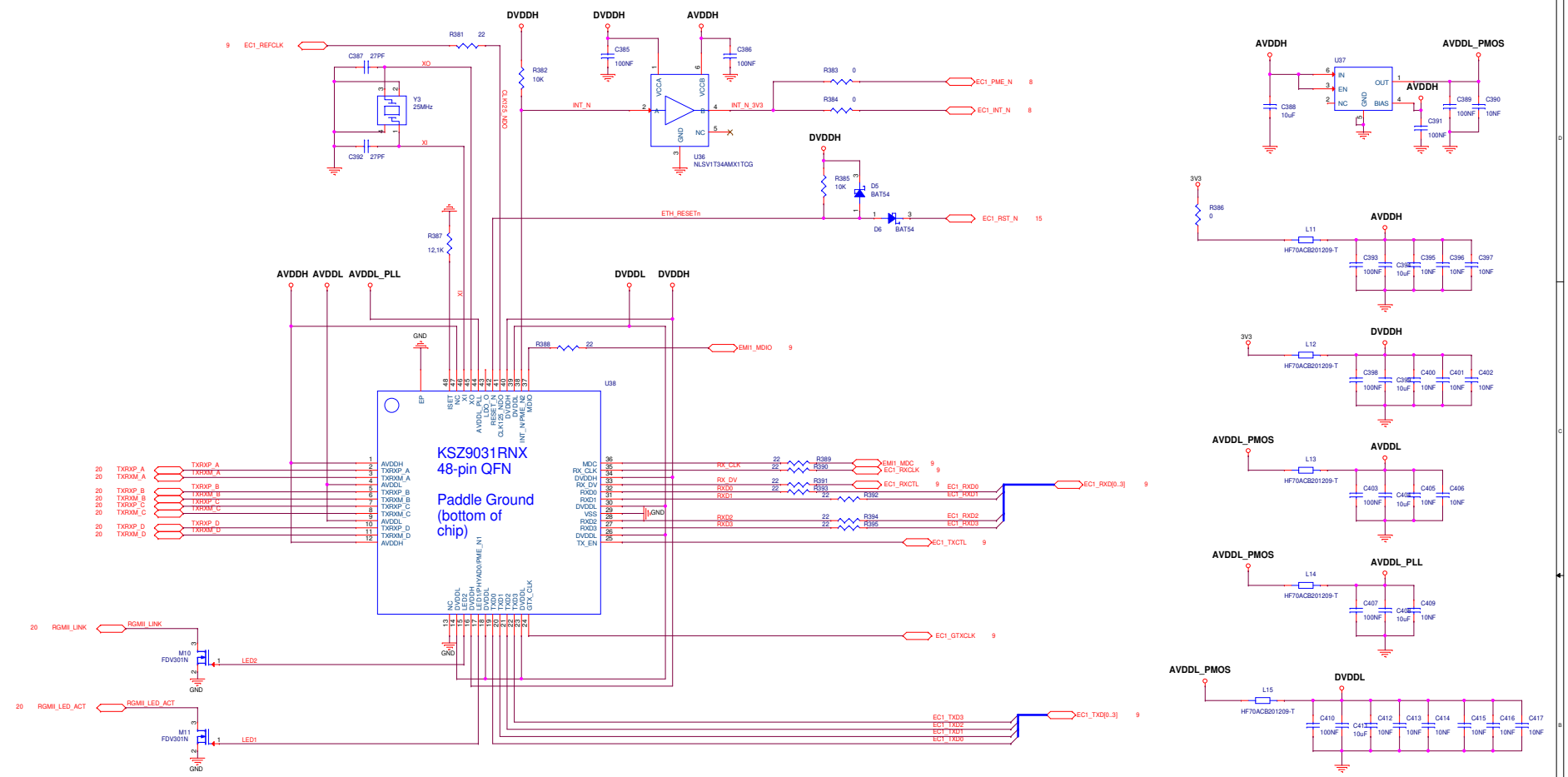
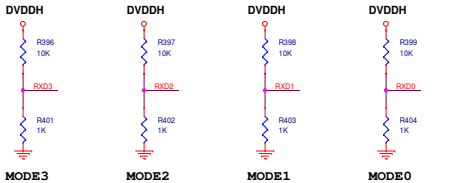
Creation Date: Monday, August 10, 2020	Last modify date	Page title: PROC GND
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 18 of 45 / REV. 0 / Format A3



Strapping Pins



MODE[3:0]	Description
0000	reserved
0001	reserved
0010	reserved
0011	reserved
0100	NAND Tree mode
0101	reserved
0110	reserved
0111	Chip Power Down

MODE[3:0]	Description
1000	reserved
1001	reserved
1010	reserved
1011	reserved
1100	Advertise 1000BT full-duplex only (RGMII)
1101	Advertise 1000BT full- and half-duplex only (RGMII)
1110	Advertise all capabilites, except 1000BT half-duplex (RGMII)
1111	Advertise all capabilites (RGMII)

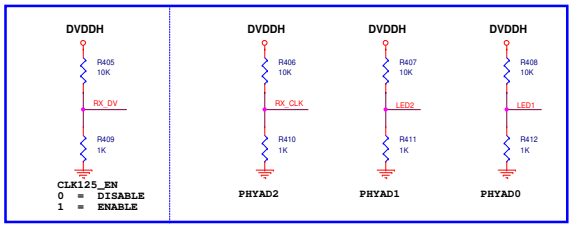
Strapping Pin

Single LED Mode

Single LED Mode

Pin	Description
LED2	1 : Link off 0 : Link on (any speed), solid color
LED1	Blinking : Activity (RX, TX)

Strapping Pins



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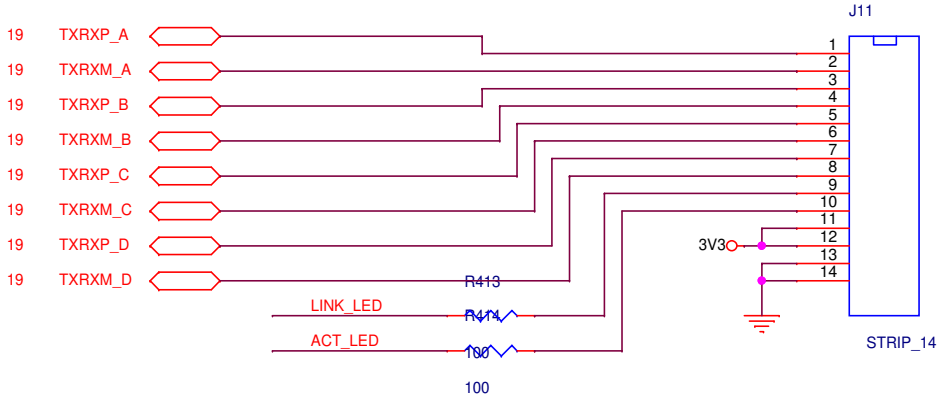
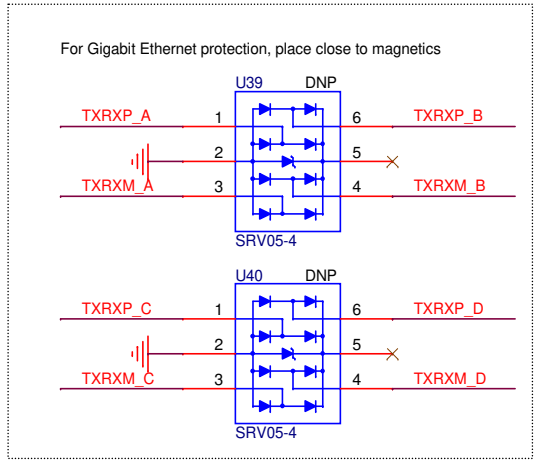
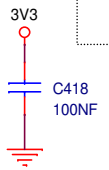
Creation Date: Friday, August 17, 2018	Last modify date: Monday, August 10, 2020	Page title: EC1 PHY
Designed by: <Author>	Controlled by: <Cheked by>	approved by: <Approved by>
PCB Code	BOM file	Sheet 19 of 45 / REV. 0 / Format A2

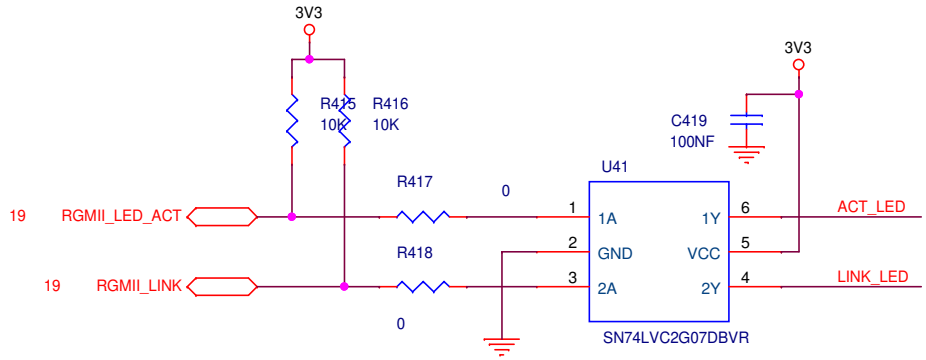
Gigabit Ethernet







Led Ethernet Buffer



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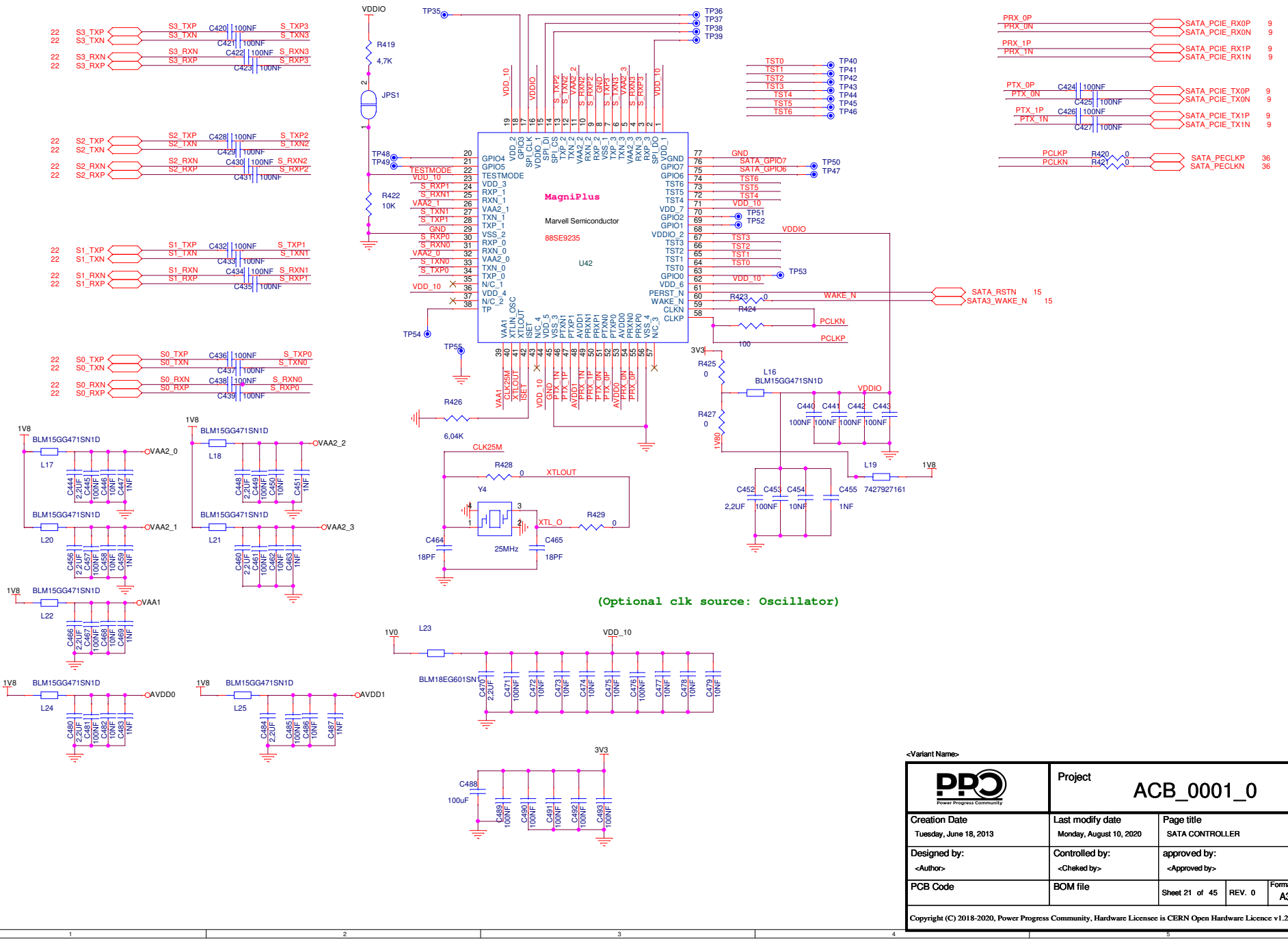
Designed by: <Author>	Controlled by: <Cheked by>	approved by: <Approved by>	
PCB Code	BOM file	Sheet 20 of 45 / REV. 0	Format A4

MagniPlus -SATA Interface



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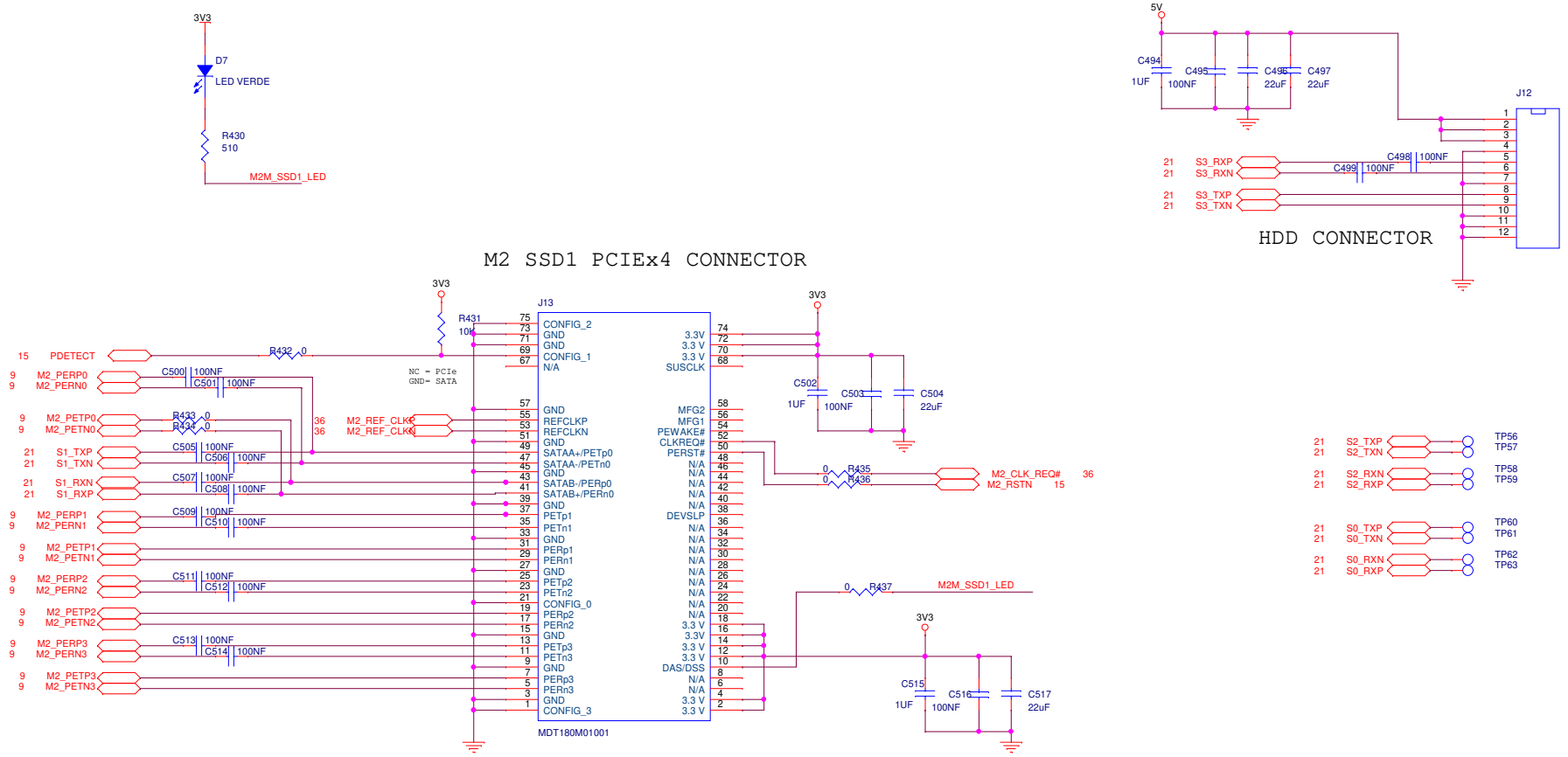
Creation Date: Tuesday, June 18, 2013	Last modify date: Monday, August 10, 2020	Page title: SATA CONTROLLER
Designed by: <Author>	Controlled by: <Cheked by>	approved by: <Approved by>
PCB Code	BOM file	Sheet 21 of 45 / REV. 0 / Format A3



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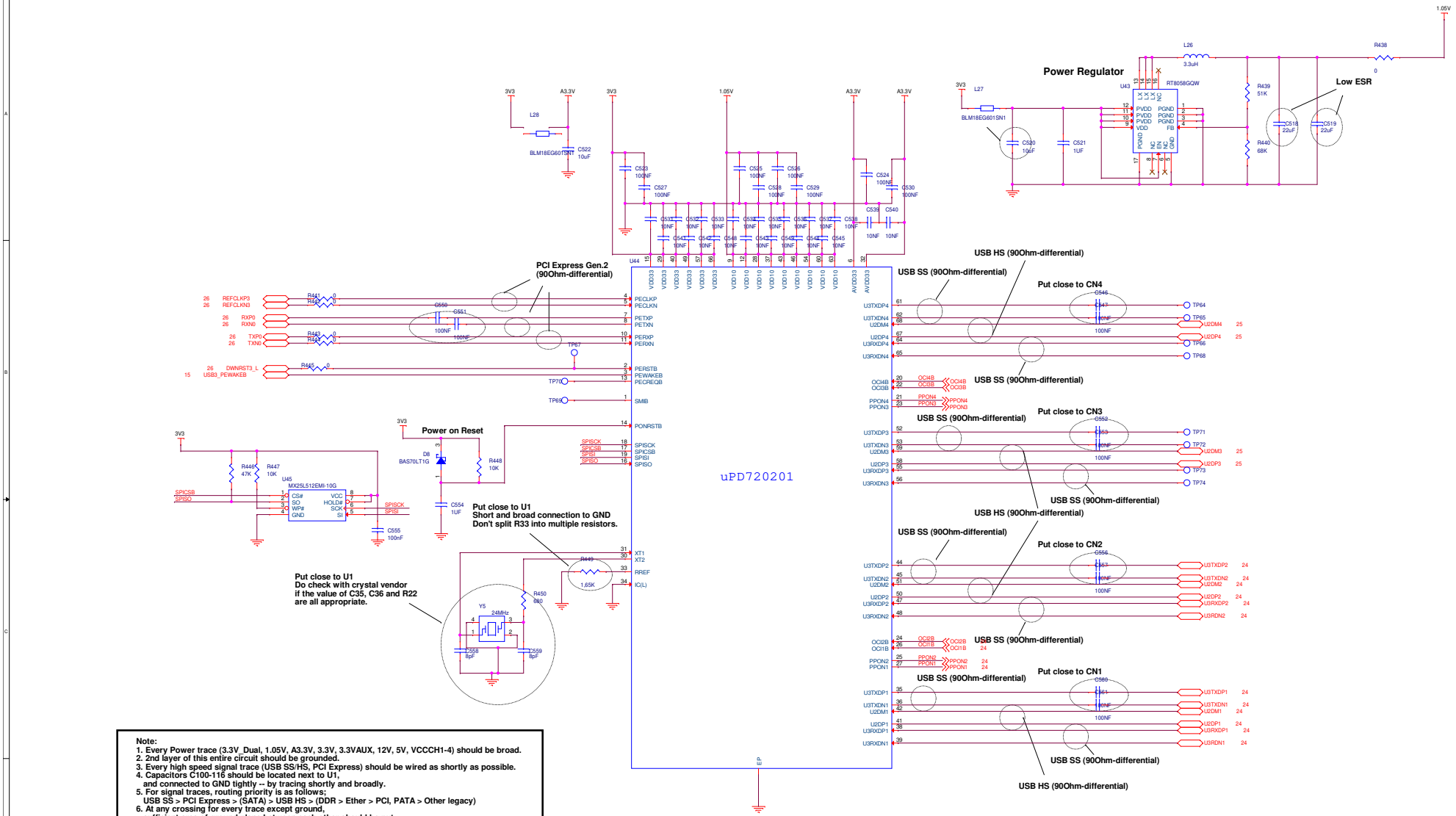
Power Progress Community	Project: ACB_0001_0	
Creation Date: Friday, November 30, 2018	Last modify date: Monday, August 10, 2020	Page title: SATA CONNECTOR
Designed by: <Author>	Controlled by: <Cheked by>	approved by: <Approved by>
PCB Code	BOM file	Sheet 22 of 45 / REV. 0 / Format A3

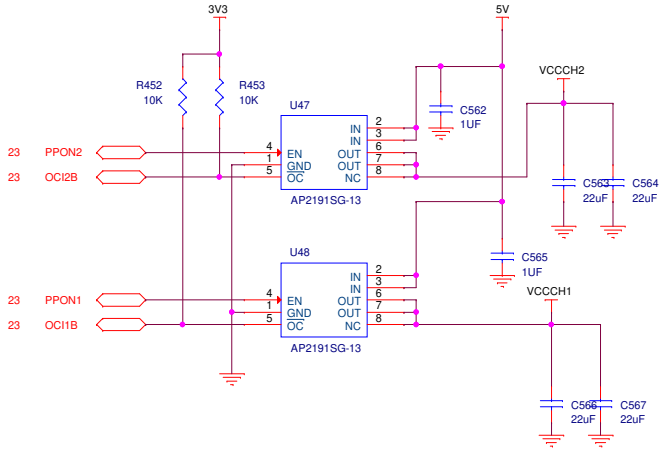


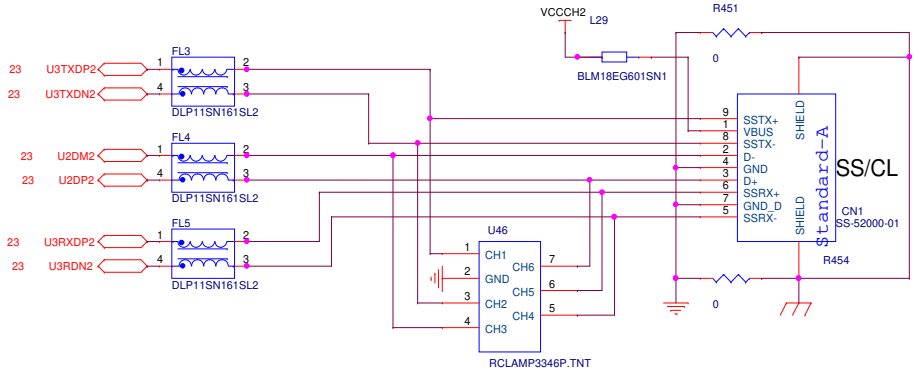
Note:

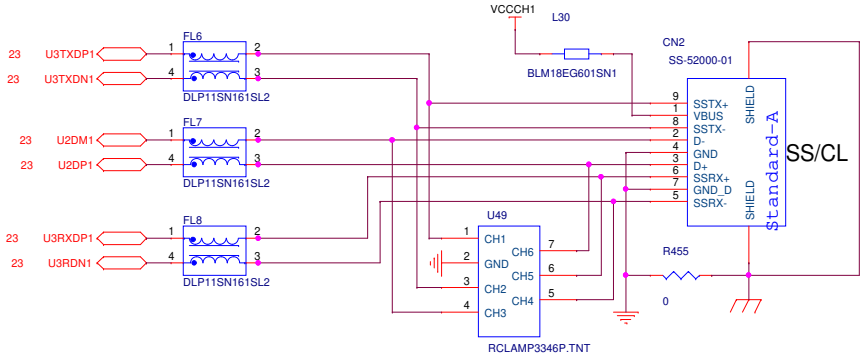
1. Every Power trace (3.3V_Dual, 1.05V, A3.3V, 3.3V, 3.3VAUX, 12V, 5V, VCCCH1-4) should be broad.
2. 2nd layer of this entire circuit should be grounded.
3. Every high speed signal trace (USB SS/HS, PCI Express) should be wired as shortly as possible.
4. Capacitors C100-116 should be located next to U1,
   and connected to GND tightly -- by tracing shortly and broadly.
5. For signal traces, routing priority is as follows;
   USB SS > PCI Express > (SATA) > USB HS > (DDR > Ether > PCI, PATA > Other legacy)
6. At any crossing for every trace except ground,
   sufficient area of ground plane between each other should be put.
7. Follow the basic of transmission trace pair when routing any signal trace.
   > Remove any impairment or discontinuity.
   > Keep same length by each other.
   > Keep same width and spacing.
8. The differential impedance of nominal value is as follows.
   > USB 3.0 / 2.0 --- 90ohm
   > PCI express Gen 1.(2.5GT/s) --- 100ohm PCI express Gen 2.(5GT/s) --- 85ohm
   PCB trace impedance would be a non-continues value by its design rules.
   The differential impedance adopt the nearest value that can be manufactured at PCB
   For more information please refer to 'USB3.0 Board Design Guide' in design kit.

<Variant Name>

PPO Power Progress Community	Project: ACB_0001_0	
Creation Date: Monday, August 10, 2020	Last modify date:	Page title: USB3 CONTROLLER
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 23 of 45 / REV. 0 / Format A2

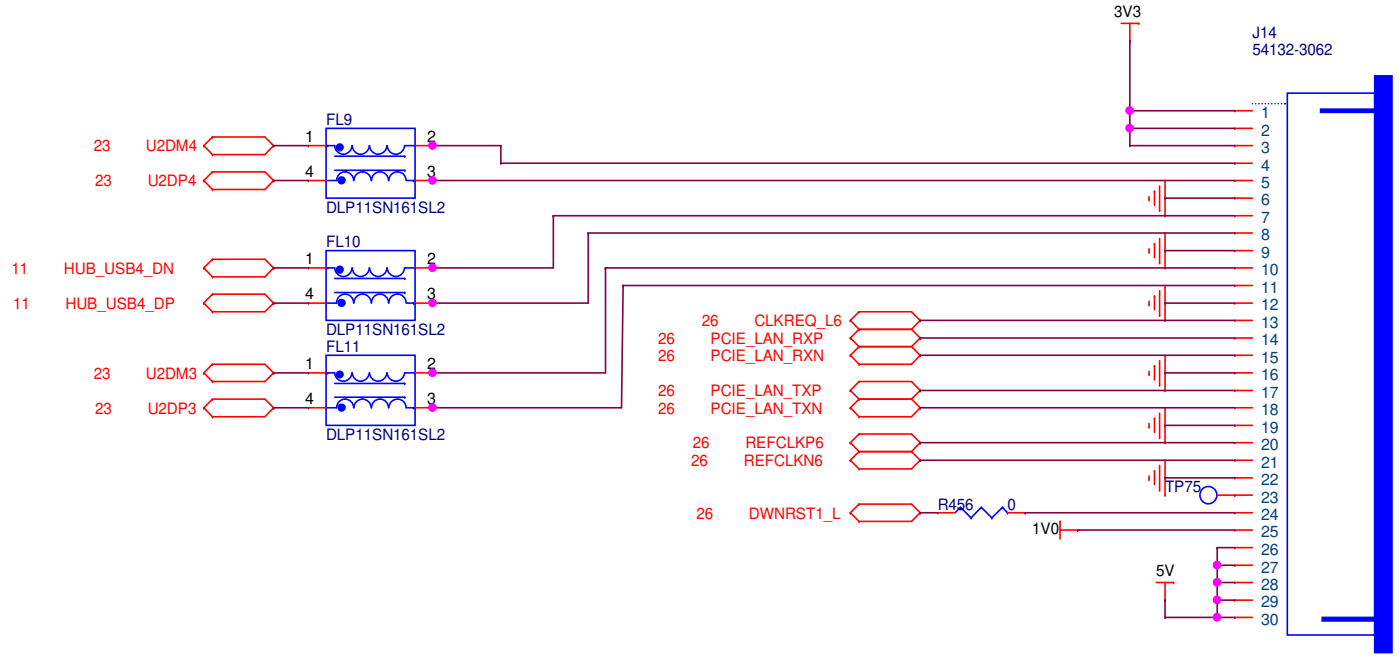






<Variant Name>

PPC Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, August 10, 2020	Last modify date:	Page title: USB3 PORTS
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 24of 45 / REV. 0 / Format A3



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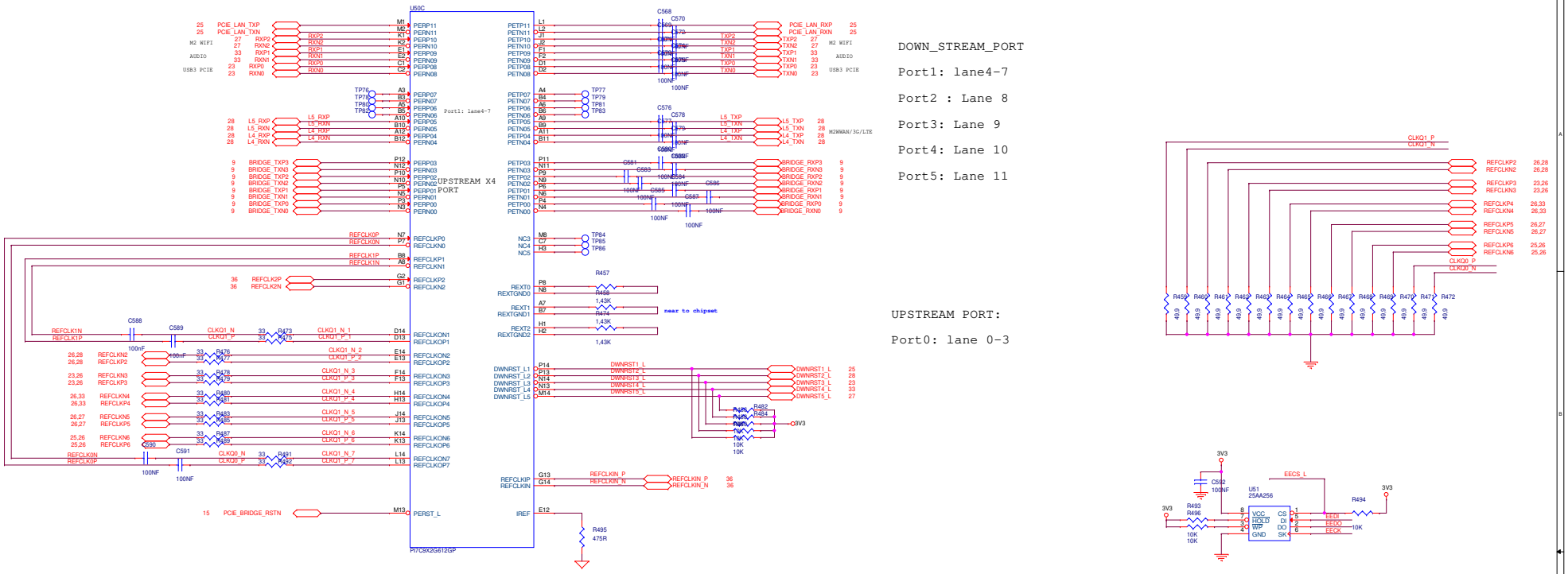
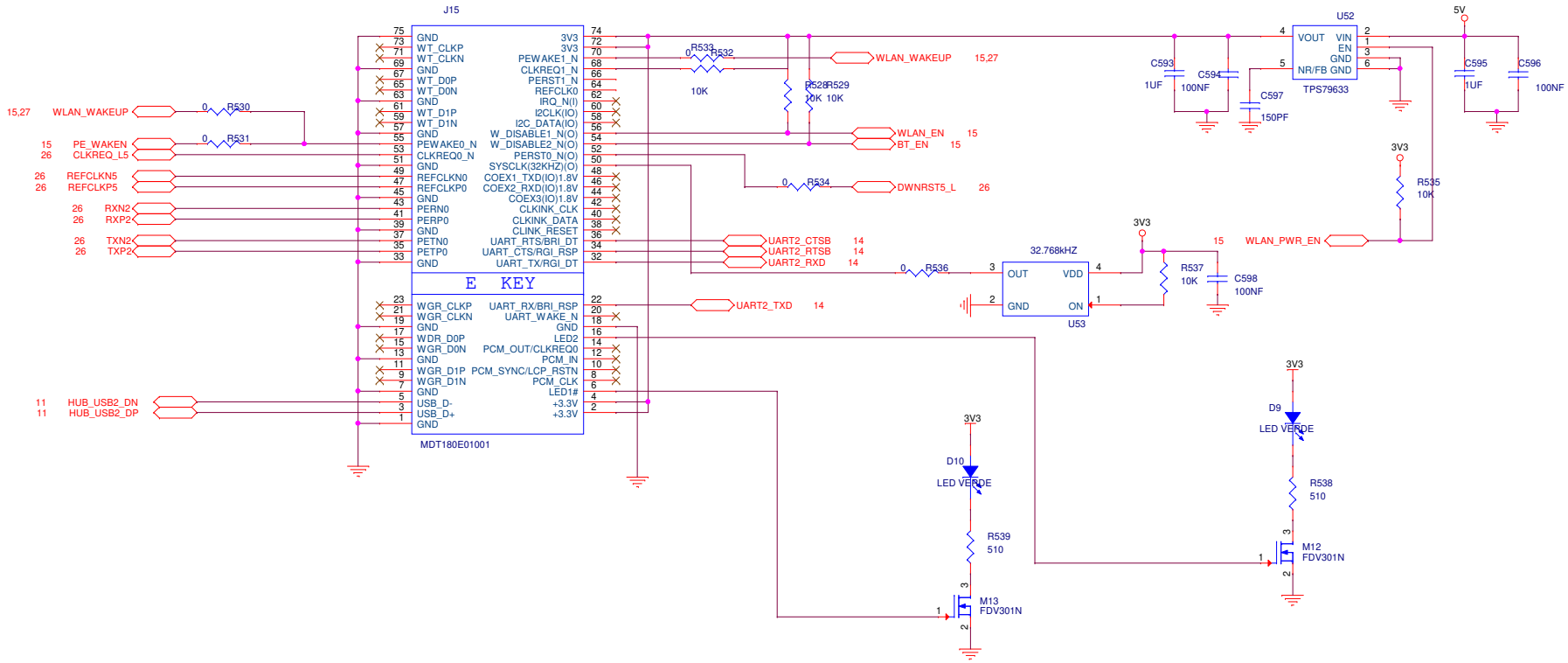
PPO Power Progress Community	Project ACB_0001_0			
Creation Date Monday, August 10, 2020	Last modify date	Page title ETHERNET_CARD		
Designed by:	Controlled by:	approved by:		
PCB Code	BOM file	Sheet 25 of 45	REV. 0	Format A4



<Variant Name>

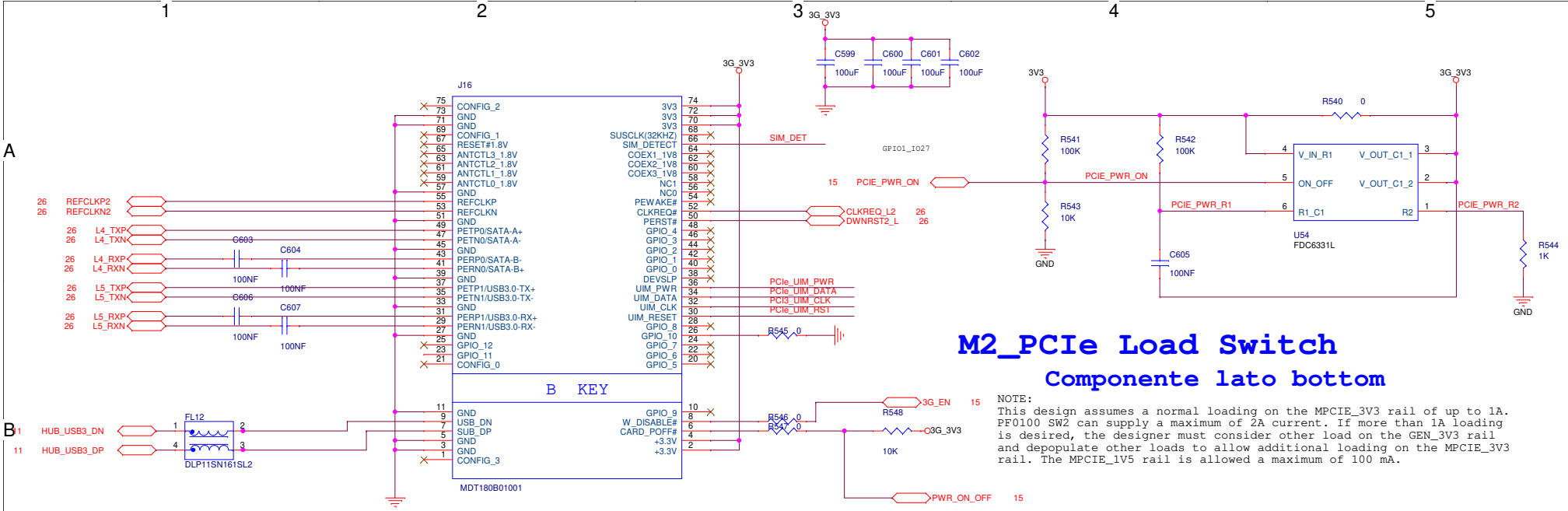
PPC Power Progress Community	Project: ACB_0001_0	
Creation Date: Tuesday, June 25, 2013	Last modify date: Monday, August 10, 2020	Page title: PCIE BRIDGE
Designed by: <Author>	Controlled by: <Cheked by>	approved by: <Approved by>
PCB Code	BOM file	Sheet 26 of 45 | REV. 0 | Format A2

M2 WLAN+BT PCIEx1 CONNECTOR



<Variant Name>

PPC Power Progress Community	Project ACB_0001_0		
Creation Date: Friday, December 28, 2018	Last modify date: Monday, August 10, 2020	Page title: M2.WLAN CONNECTOR	
Designed by: <Author>	Controlled by: <Cheked by>	approved by: <Approved by>	
PCB Code	BOM file	Sheet 27 of 45 / REV. 0	Format A3

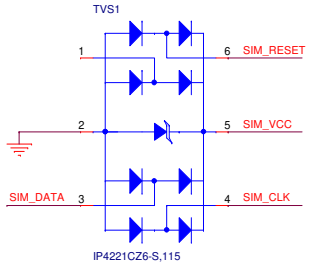


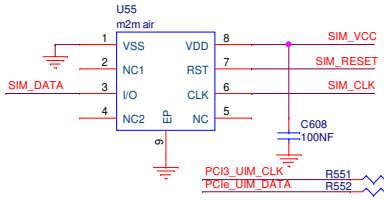
M2_PCIe Load Switch

Componente lato bottom

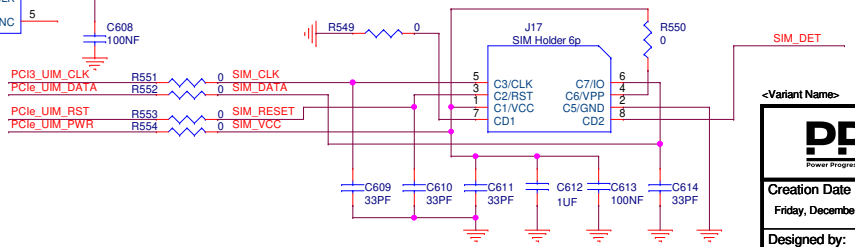
NOTE:
This design assumes a normal loading on the MPCIE_3V3 rail of up to 1A. PF0100 SW2 can supply a maximum of 2A current. If more than 1A loading is desired, the designer must consider other load on the GEN_3V3 rail and depopulate other loads to allow additional loading on the MPCIE_3V3 rail. The MPCIE_1V5 rail is allowed a maximum of 100 mA.

SIM ON CHIP



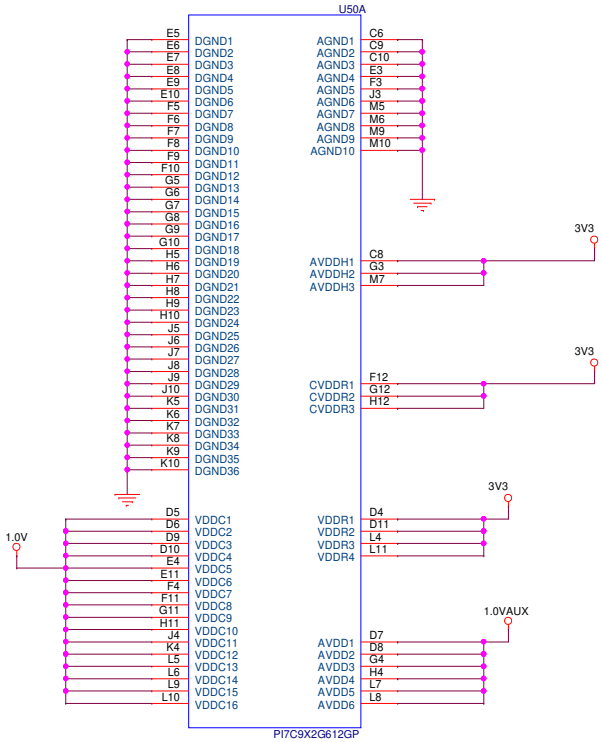


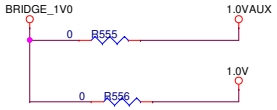
SIM HOLDER

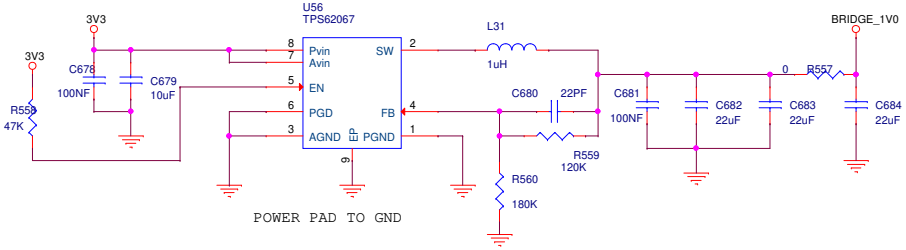


<Variant Name>

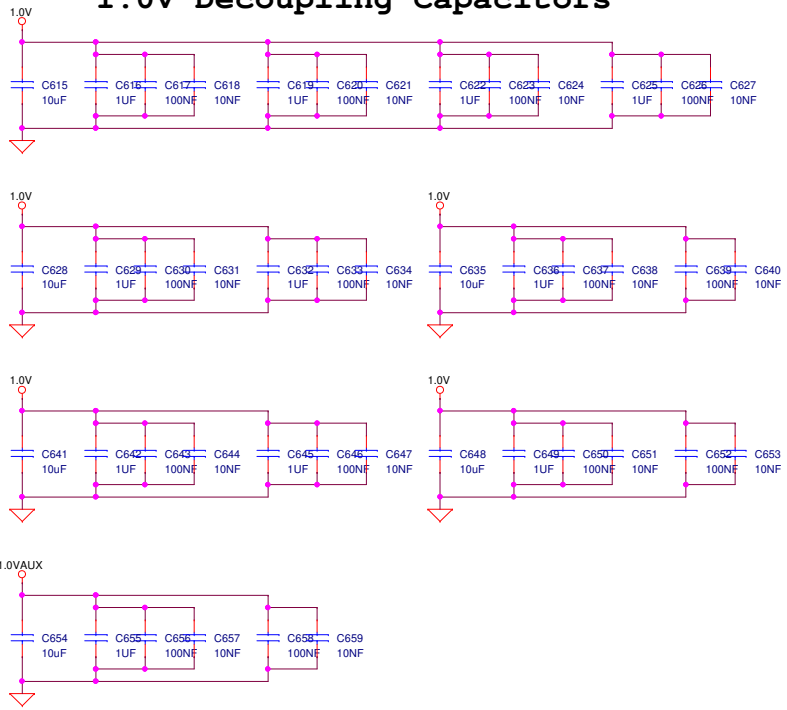
PRO Power Progress Community	Project	ACB_0001_0		
Creation Date: Friday, December 28, 2018	Last modify date: Monday, August 10, 2020	Page title: 3G/LTE MODEM		
Designed by: <Author>	Controlled by: <Cheked by>	approved by: <Approved by>		
PCB Code	BOM file	Sheet 28 of 45	REV. 0	Format A3



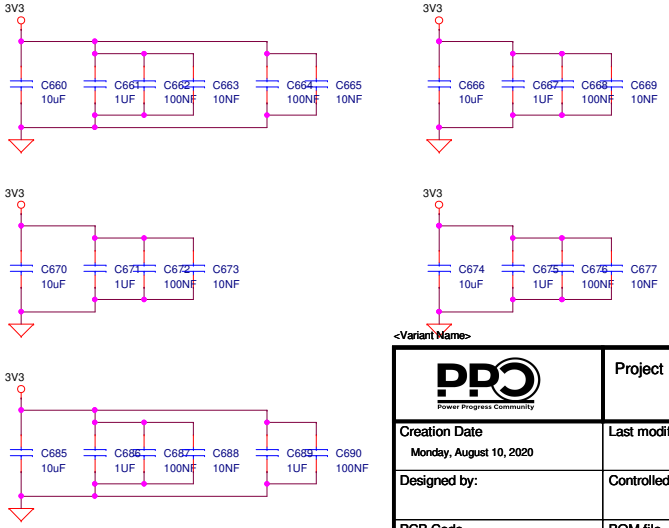




1.0V Decoupling Capacitors

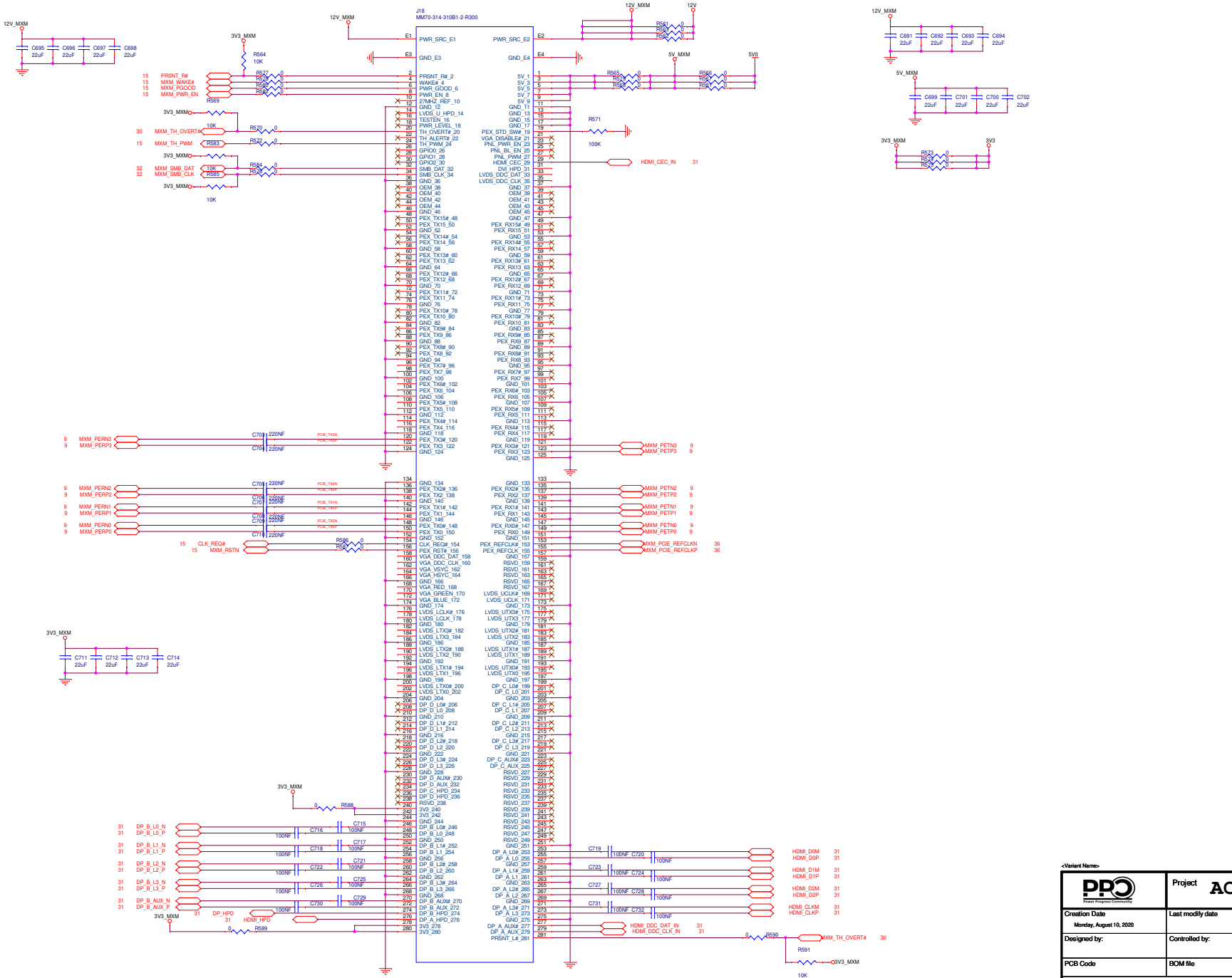


3.3V Decoupling Capacitors



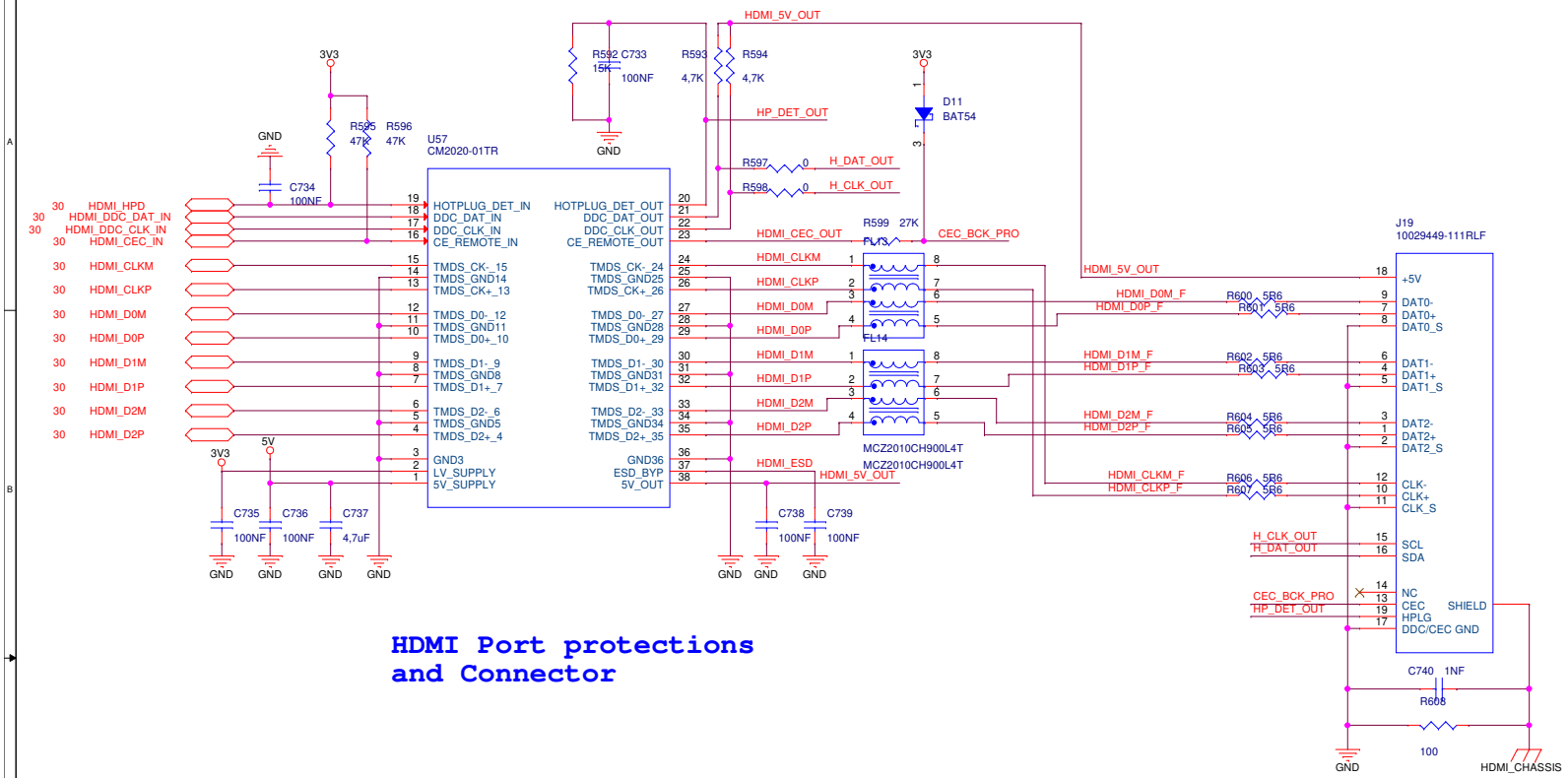
<Variant Name>

PPC Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, August 10, 2020	Last modify date	Page title: PCIE BRIDGE POWER
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 29 of 45 / REV. 0 / Format A3

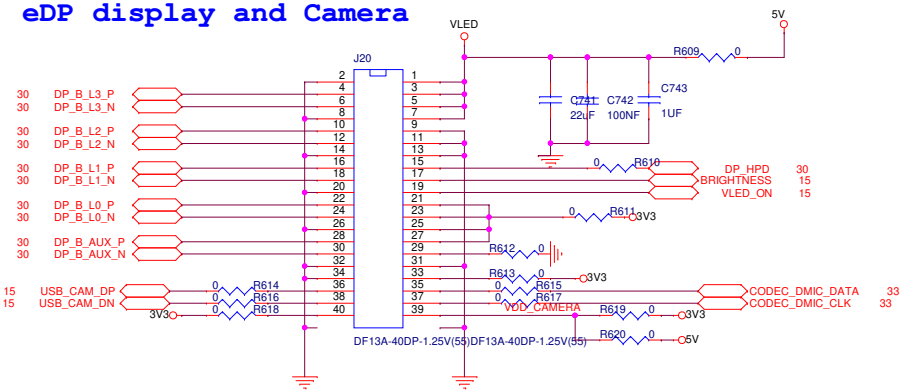


<Variant Name>

PPC Power Progress Community	Project ACB_0001_0	
Creation Date: Monday, August 10, 2020	Last modify date	Page title: MXM PCIE
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 30 of 45 / REV. 0 / Format A2

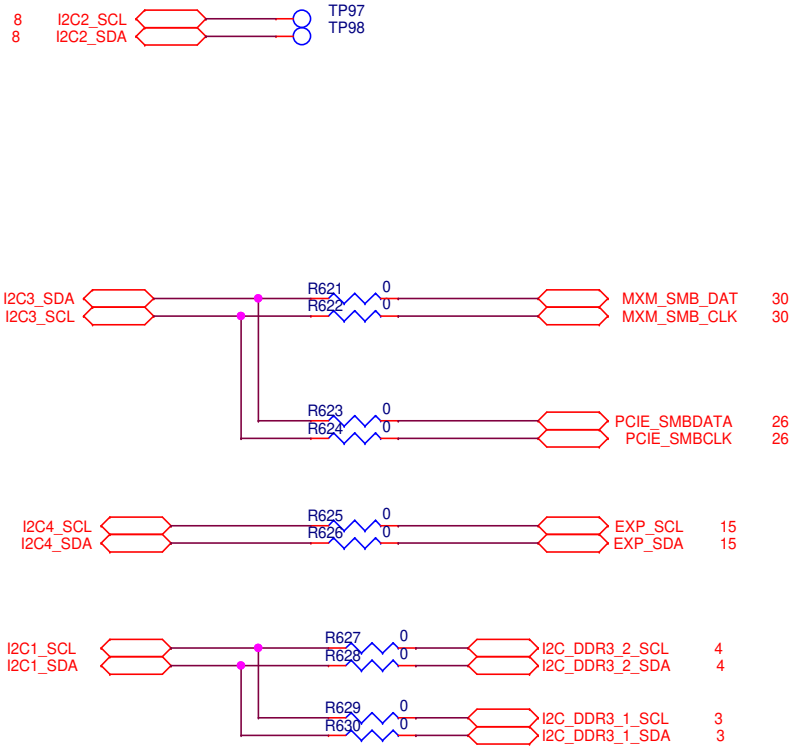


HDMI Port protections and Connector



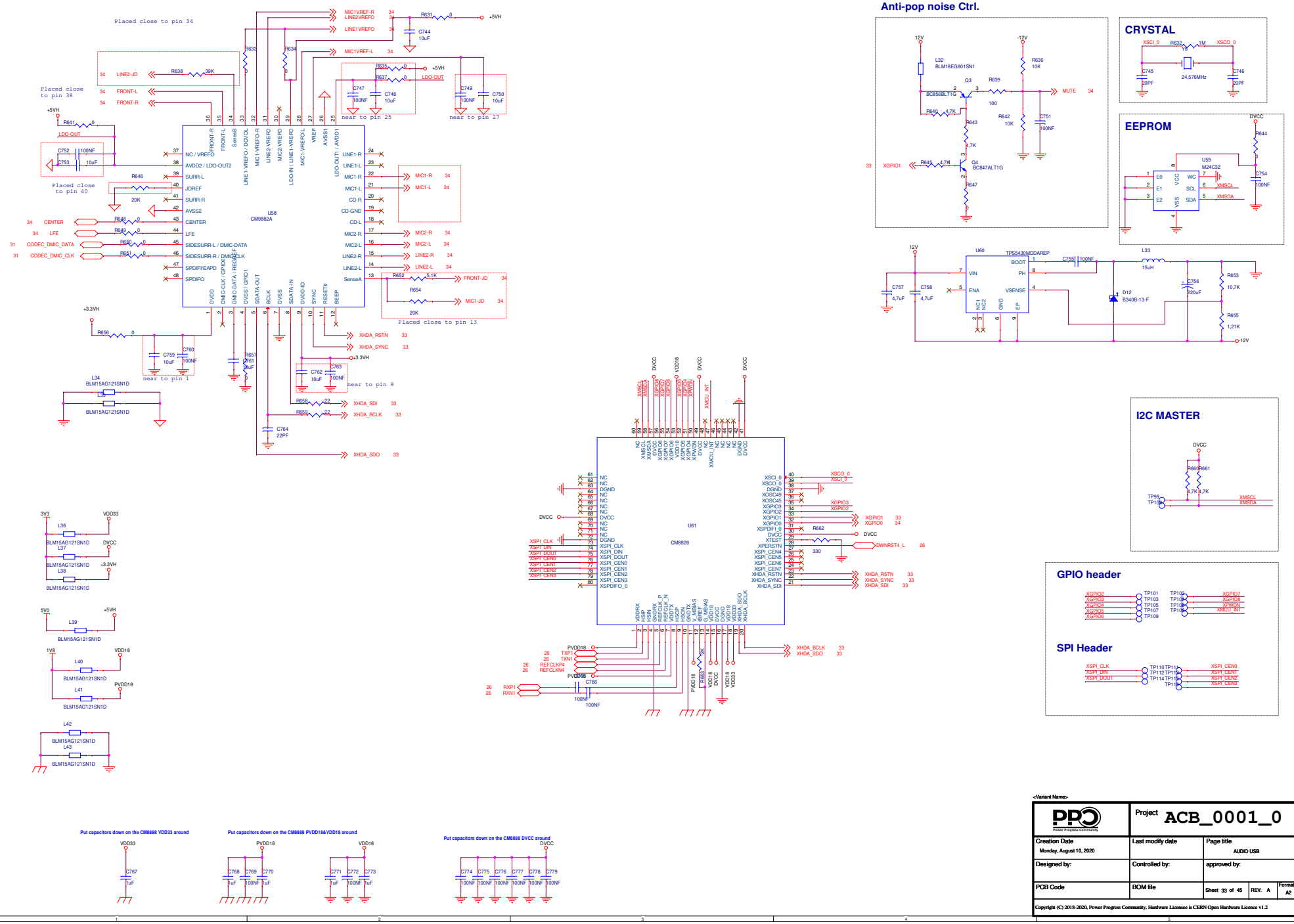
<Variant Name>

Project ACB_0001_0		
Creation Date: Monday, August 10, 2020	Last modify date	Page title: MXM VIDEO OUT
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 31 of 45 / REV. A / Format A3



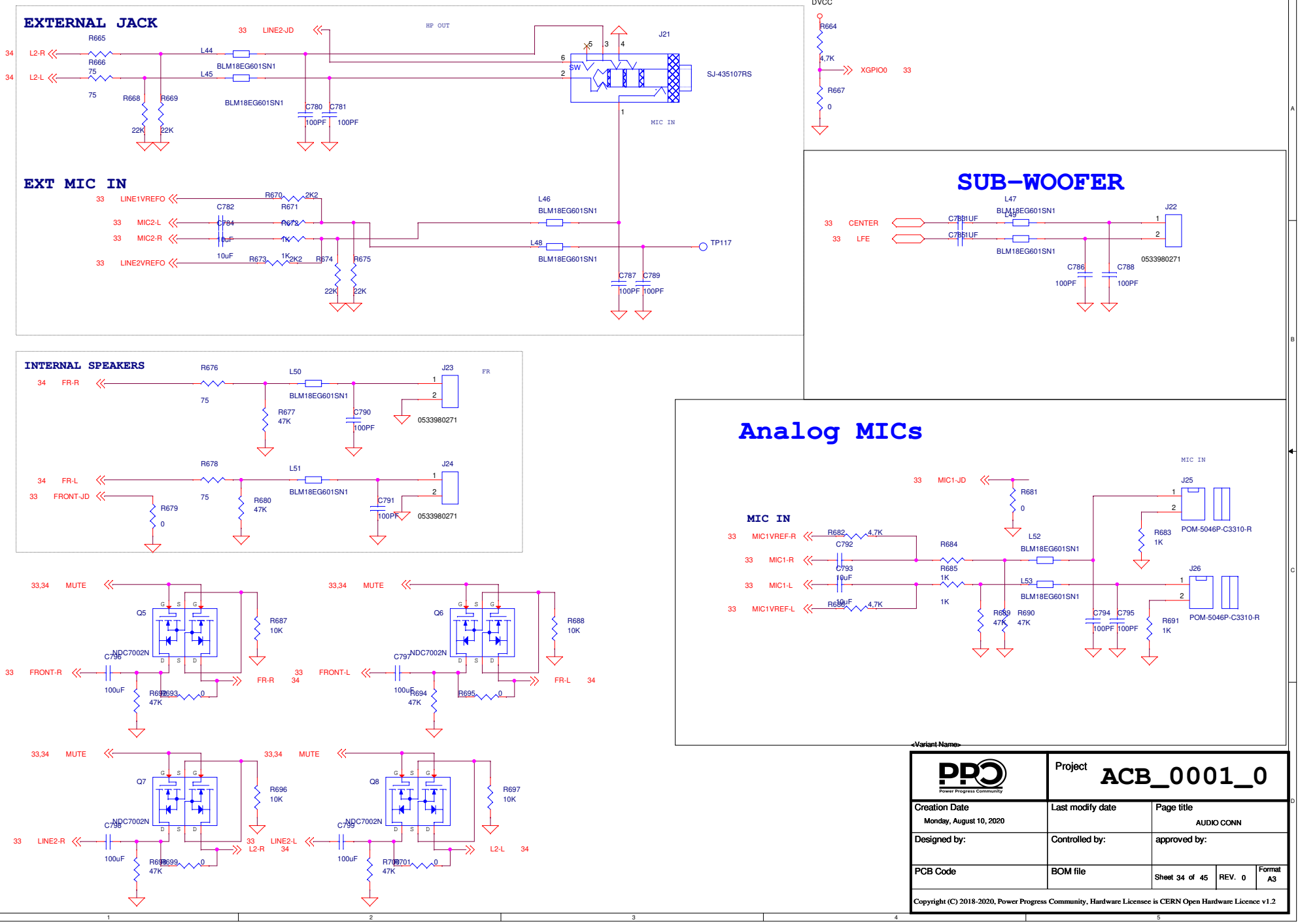
<Variant Name>

Power Progress Community	Project			
Creation Date Monday, August 10, 2020	Last modify date	Page title I2C WRAP		
Designed by:	Controlled by:	approved by:		
PCB Code	BOM file	Sheet 32 of 45	REV. 0	Format A4



<Variant Name>

PPC Power Progress Community	Project ACB_0001_0	
Creation Date: Monday, August 10, 2020	Last modify date	Page title: AUDIO USB
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 33 of 45 / REV. A / Format A2



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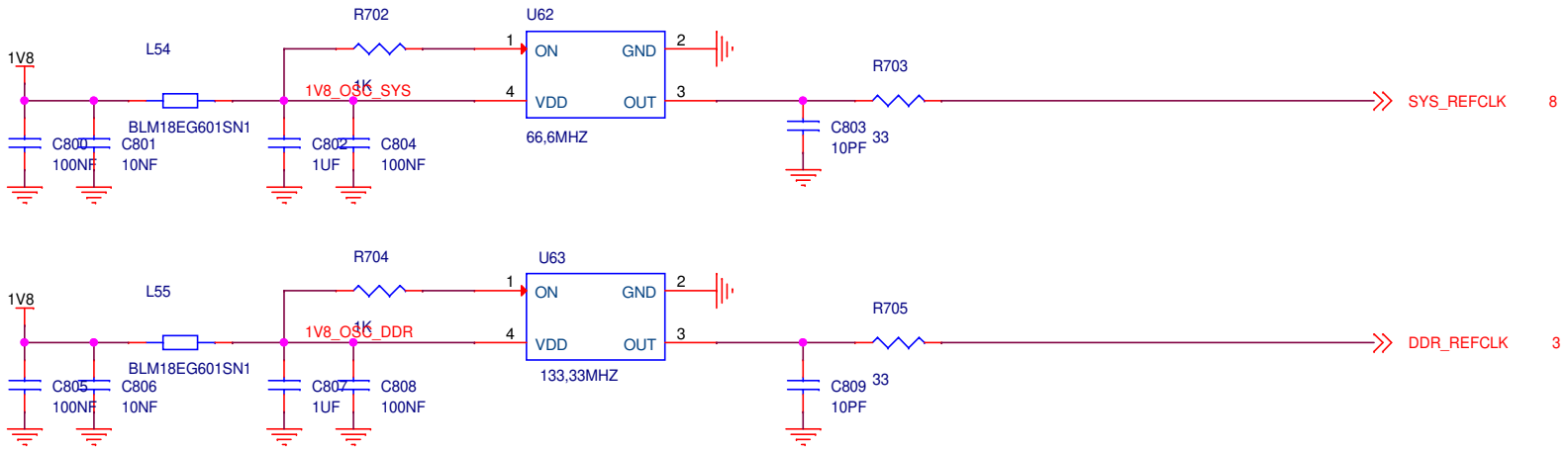
Project ACB_0001_0		
Creation Date: Monday, August 10, 2020	Last modify date	Page title: AUDIO CONN
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 34 of 45 / REV. 0 / Format A3

SYSTEM CLOCK GENERATORs



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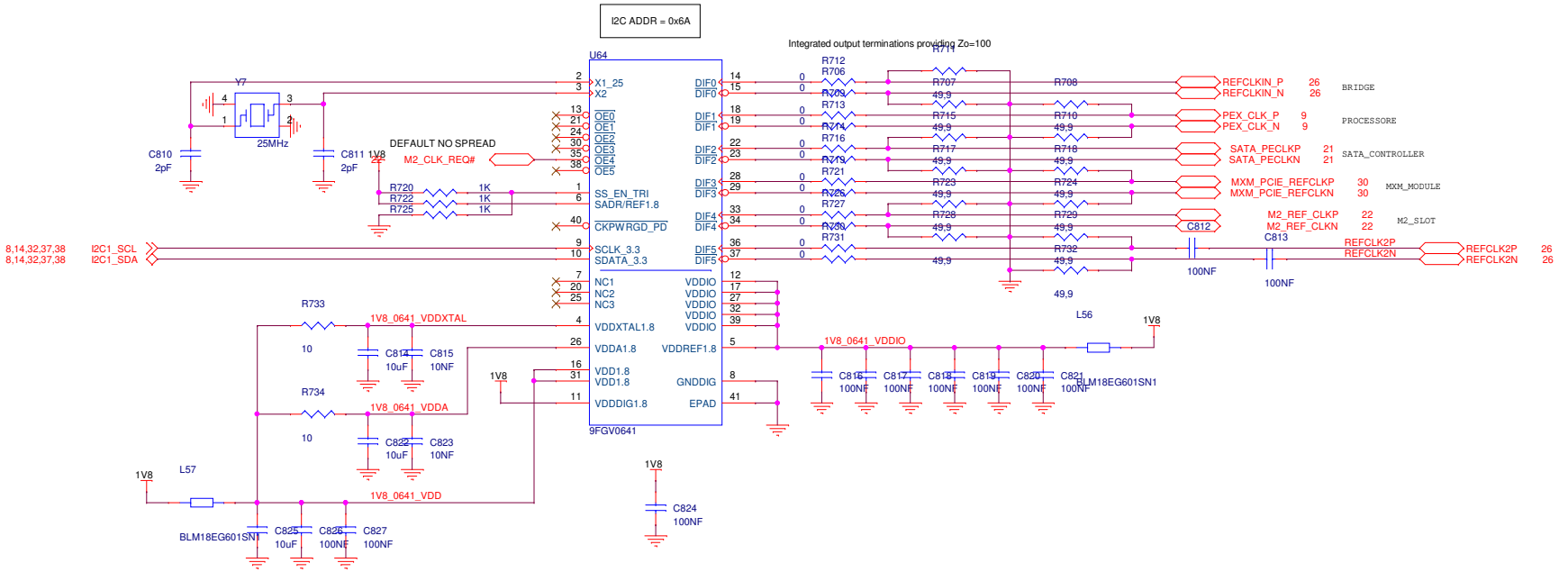
PPC Power Progress Community	Project ACB_0001_0		
Creation Date: Monday, August 10, 2020	Last modify date	Page title: CLOCK 1	
Designed by:	Controlled by:	approved by:	
PCB Code	BOM file	Sheet 35 of 45 / REV. 0	Format A4

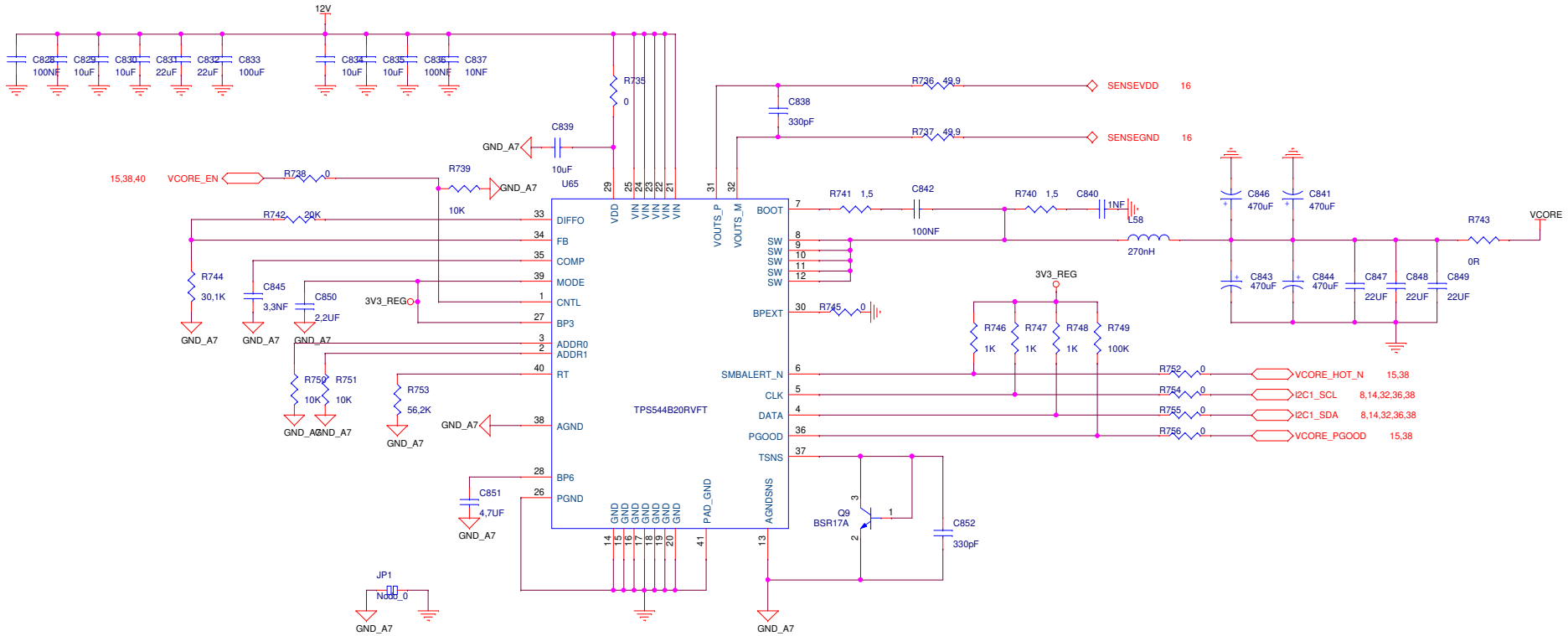
SYSTEM CLOCK GENERATORs (cont.)



<Variant Name>

PPC Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, August 10, 2020	Last modify date	Page title: CLOCK 2
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 36 of 45 / REV. 0 / Format A3

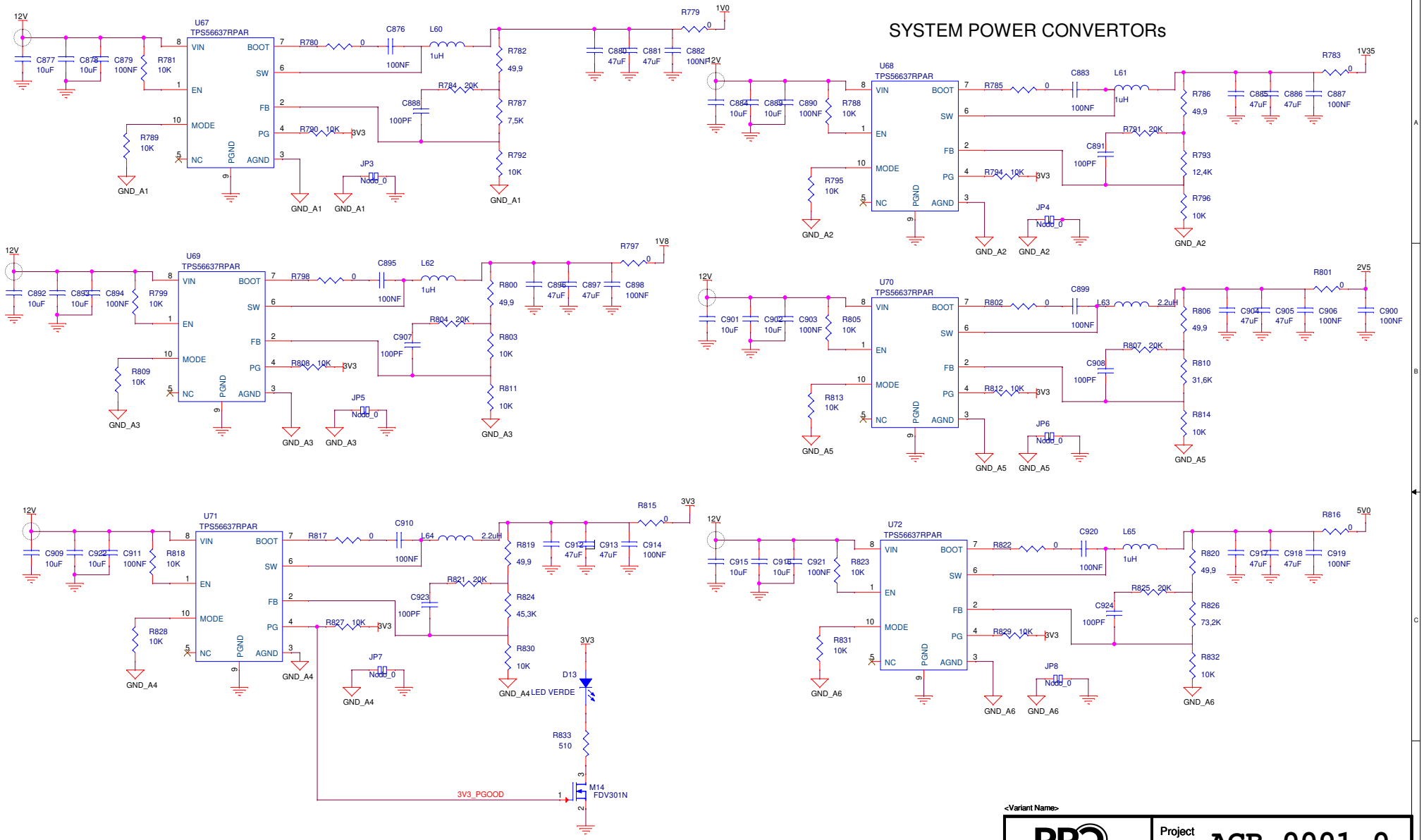
T2080 CORE POWER CONVERTOR



<Variant Name>

PPC Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, August 10, 2020	Last modify date	Page title: CORE PWR
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 37 of 45 / REV. 0 / Format A3

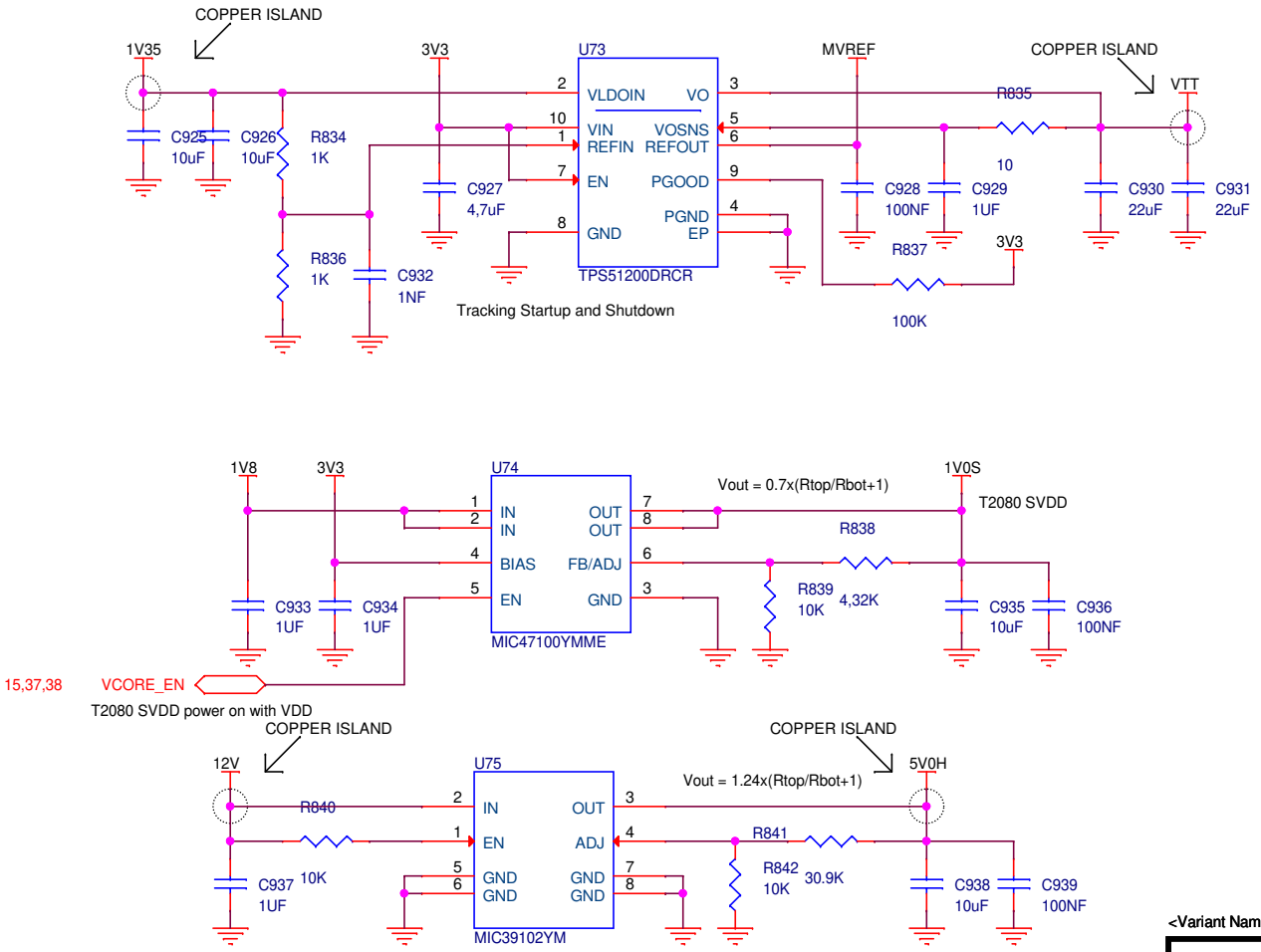
SYSTEM POWER CONVERTORs



<Variant Name>

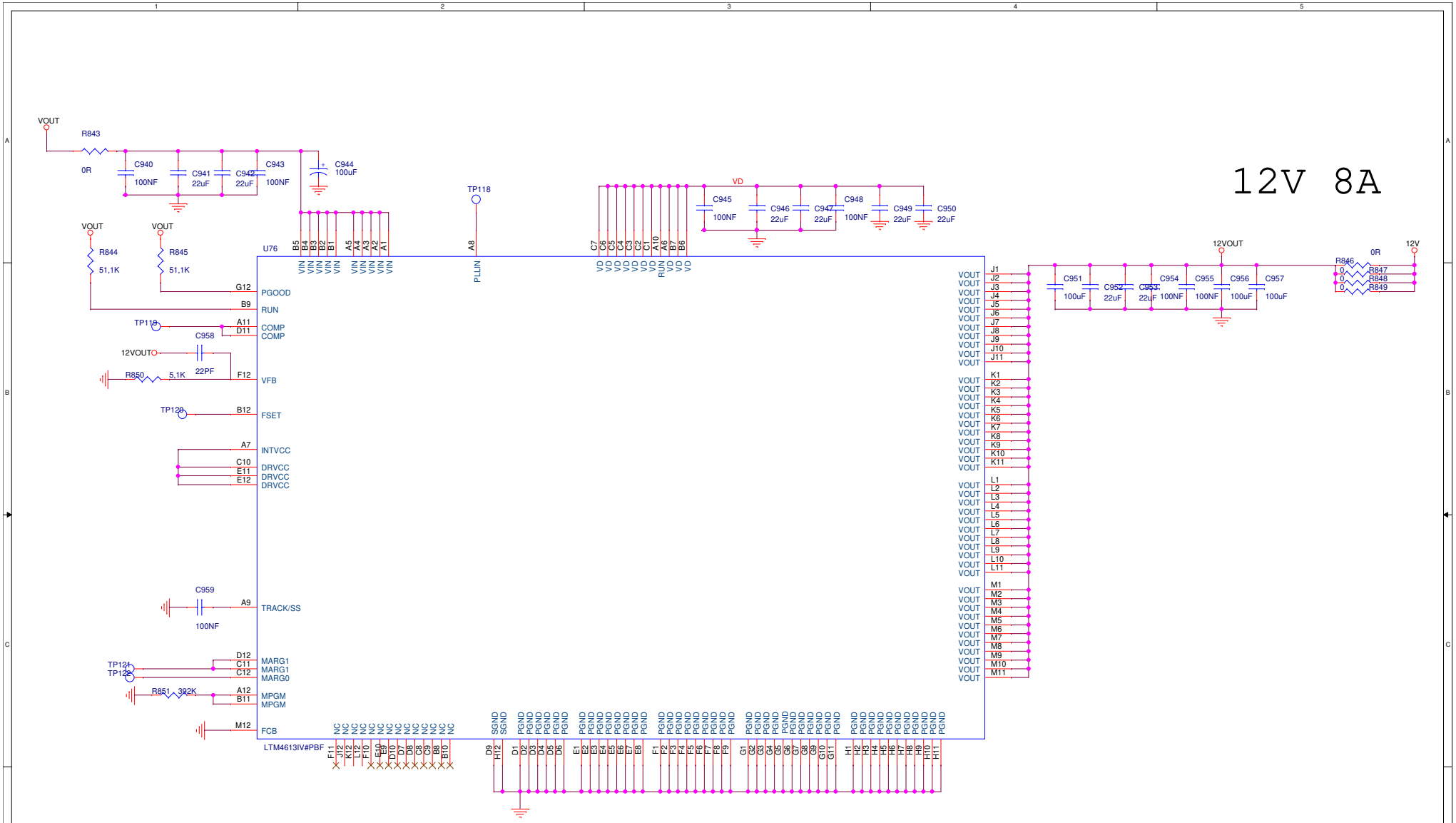
PPC Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, August 10, 2020	Last modify date	Page title: OTHER PWR1
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 39 of 45 / REV. 0 / Format A3

SYSTEM POWER CONVERTORs (cont.)



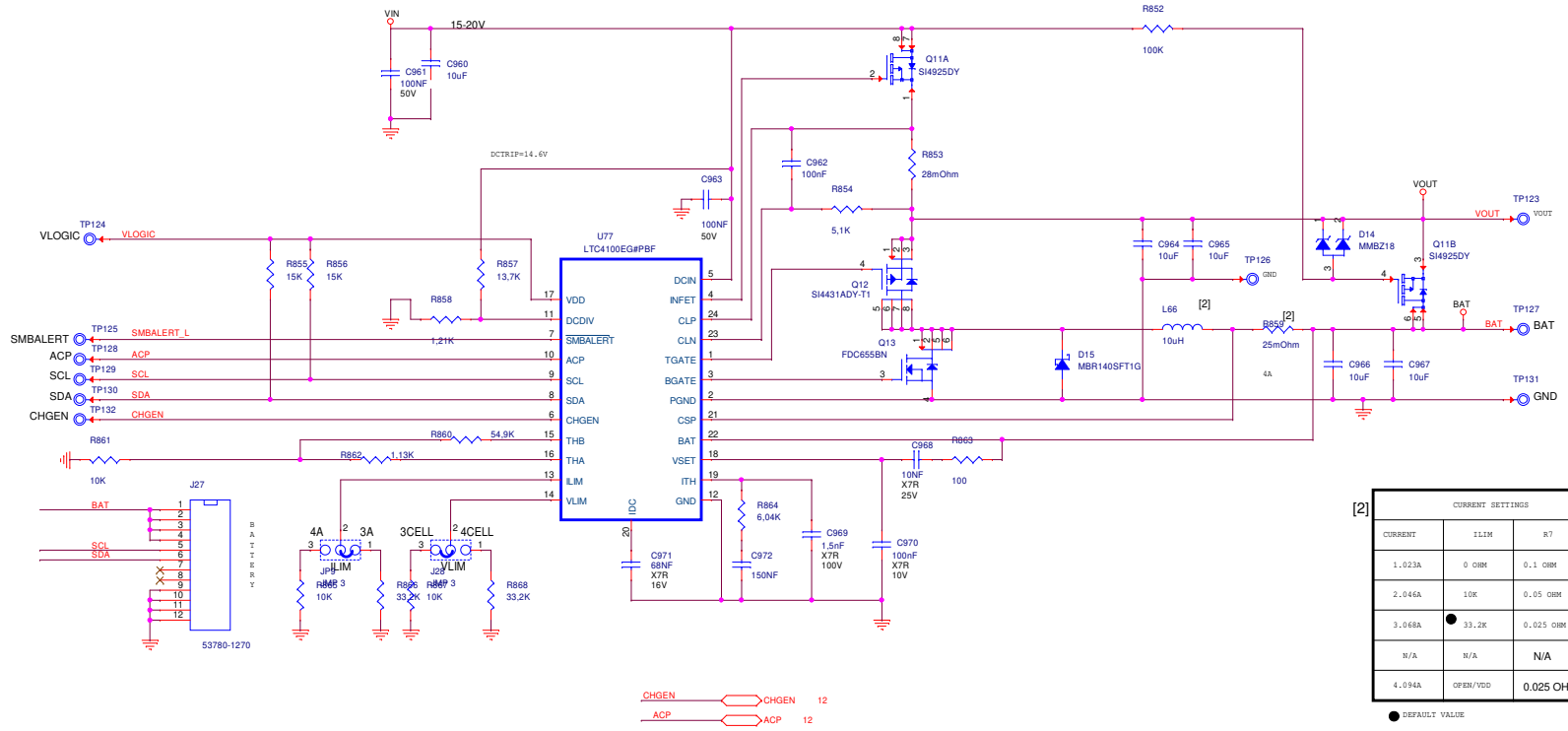
<Variant Name>

PPC Power Progress Community	Project **ACB_0001_0**			
Creation Date: Monday, August 10, 2020	Last modify date:	Page title: OTHER PWR2		
Designed by:	Controlled by:	approved by:		
PCB Code	BOM file	Sheet 40 of 45	REV. 0	Format A4



<Variant Name>

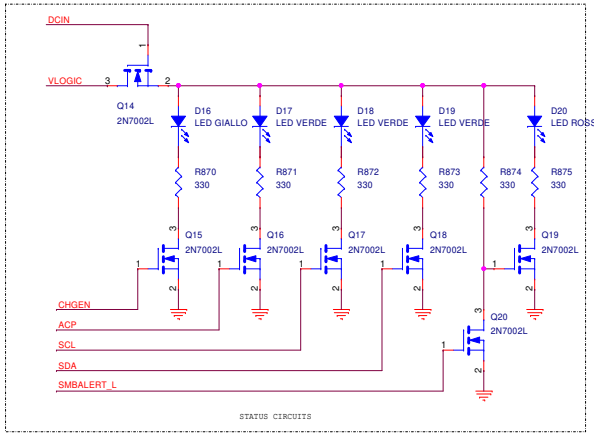
PPC Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, August 10, 2020	Last modify date:	Page title: MAIN POWER
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 41 of 45 / REV. 0 / Format A3

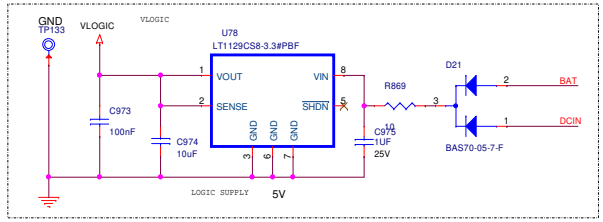


[2]

CURRENT SETTINGS				VOLTAGE SETTINGS	
CURRENT	ILIM	R7	L1	VOLTAGE	VLIM
1.023A	0 OHM	0.1 OHM	40uH	8.438V	0 OHM
2.046A	10K	0.05 OHM	20uH	12.646V	● 10K
3.068A	● 33.2K	0.025 OHM	10uH	16.870V	33.2K
N/A	N/A	N/A	N/A	21.062V	100K
4.094A	OPEN/VDD	0.025 OHM	10uH	32.758V	OPEN/VDD

● DEFAULT VALUE

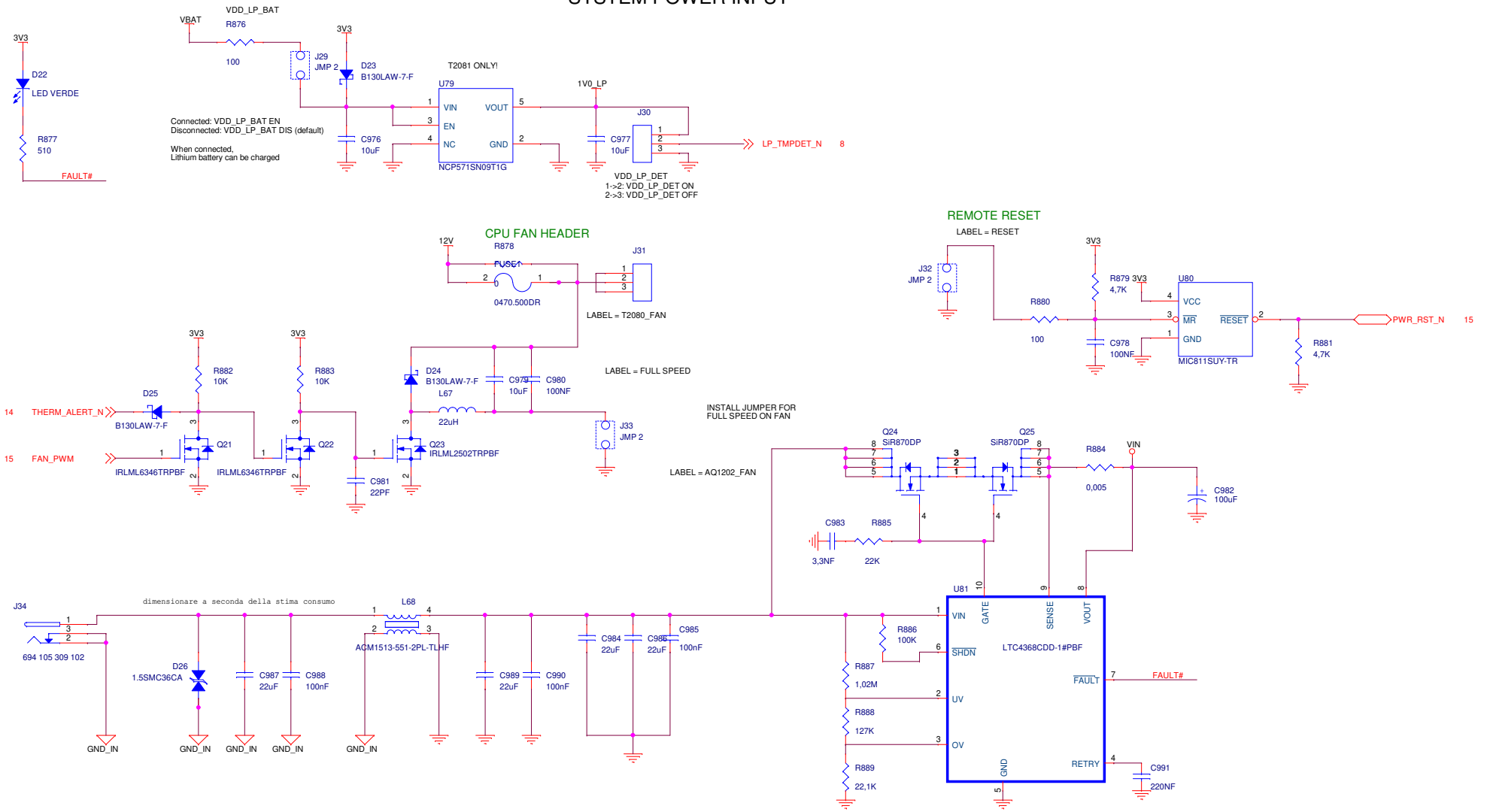




<Variant Name>

PPC Power Progress Community	Project ACB_0001_0	
Creation Date: Wednesday, August 08, 2018	Last modify date: Monday, August 10, 2020	Page title: BATTERY CHARGE
Designed by: <Author>	Controlled by: <Cheked by>	approved by: <Approved by>
PCB Code	BOM file	Sheet 42 of 45 / REV. 0 / Format Custom

SYSTEM POWER INPUT



<Variant Name>

PPC Power Progress Community	Project **ACB_0001_0**	
Creation Date: Monday, August 10, 2020	Last modify date	Page title: PWR IN
Designed by:	Controlled by:	approved by:
PCB Code	BOM file	Sheet 43 of 45 / REV. 0 / Format A3

<Variant Name>

PPC Power Progress Community	Project **ACB_0001_0**			
Creation Date Monday, August 10, 2020	Last modify date	Page title MECANICAL		
Designed by:	Controlled by:	approved by:		
PCB Code	BOM file	Sheet of	REV. 0	Format B

CHANGE LIST

<Variant Name>

PPC Power Progress Community	Project **ACB_0001_0**			
Creation Date Monday, August 10, 2020	Last modify date	Page title CHANGE LIST		
Designed by:	Controlled by:	approved by:		
PCB Code	BOM file	Sheet 45 of 45	REV. 0	Format B