

Regarding the usage of our schematics and alike documentation for Trenz baseboard TE0703.

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Schematics and other handouts serve for informational purposes only!

Drawn by	ED
Checked by	MT
Assembly variant	Default
Created by	ED
Modified by	ED
Modified at	2023-09-07



Title: TE0703 – Legal Notices		
A4	Number: TE0703 Default	Rev. 07
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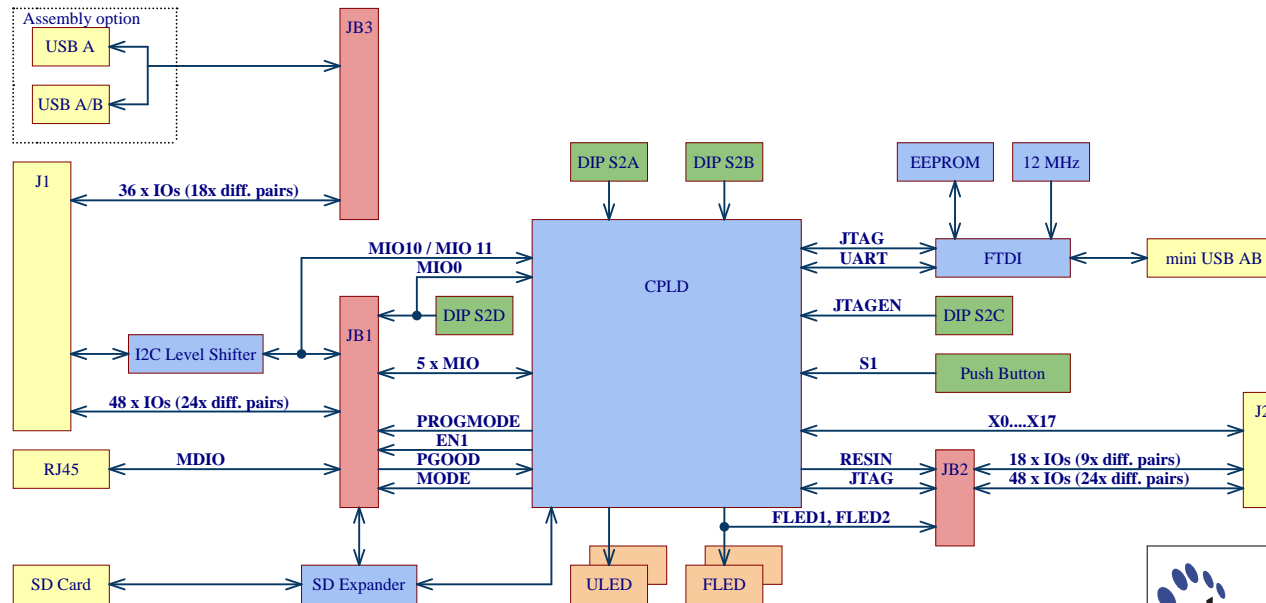
REV	DATE	Description	
-05	2017-11-23	<ol style="list-style-type: none"> <li>[J5] changed to 3 pin jumper to select 3.3V or 1.8V, added 3pin jumpers for each bank</li> <li>PWR connector type changed THT-&gt;SMD</li> <li>changed FT2232 different IC package (56pins)</li> <li>changed micro SD-card slot</li> <li>changed micro-USB</li> <li>added series resistors 10K to FLED0, FLED1 and connect to CPLD</li> <li>added serial number (traceability pad)</li> </ol>	
-06	2019-08-29 2022-05-04	<ol style="list-style-type: none"> <li>microSD card connector ([J3]) changed to industrial</li> <li>changed PB ([S1]) to industrial</li> <li>replaced input power protection</li> <li>added jumper ([J11]) to select SD level shifter voltage on FPGA side</li> <li>added power switch for SD level shifter supply voltages to ensure power sequencing of level shifter</li> <li>replaced [R5] and VBUS capacitors, add 00hm resistors to OTG-ID</li> <li>replaced jumpers by SMD versions, moved VBAT to other position</li> <li>routing length of diff pairs B34_L17, B34_L15, B34_L21, B34_L13, B34_L10, B34_L20 changed</li> <li>Replaced [R31] by 953K and [R25] by 147K</li> <li>Set S/N Track-it pad not fitted</li> </ol>	
-07	2023-09	<ol style="list-style-type: none"> <li>Changed DCDC EN6347QI ([U3]) to MPM3860GQW-Z.</li> <li>Changed load switch TPS27081ADDCR ([Q1]) to MP5077GG-Z.</li> <li>Changed clock SiT8008AI-73-XXS-12.000000E ([U6]) to SiT8008BI-73-XXS-12.000000E.</li> <li>Changed SD Card connector ([J3]) from 504077-1891 to MEM2052-00-195-00-A.</li> <li>Changed USB connector ([J12]) from 629105150521 to 629105150921.</li> <li>Changed pin header ([J7]) from two pins to three pins and added jumper [J20].</li> <li>Added testpoints [TP1]... [TP30].</li> <li>Changed voltage rating for 1 uF capacitors ([C38], [C39]) from 6.3 V to 16 V.</li> <li>Changed voltage rating for 47 uF capacitor ([C48]) from 6.3 V to 10 V and size from 1206 to 0805.</li> <li>Changed tolerance for 22 uF capacitor ([C22]) from 10 % to 20 % and size from 1206 to 0805.</li> <li>Changed resistor values for 10 kOhm resistors ([R10], [R14], [R24], [R27], [R37], [R38]) to 12 kOhm.</li> <li>Changed resistor values from 4.7 kOhm to 5.1 kOhm for resistors [R17]... [R20].</li> <li>Changed fiducials.</li> <li>Named [Q1] enable signal to "EN_3.3V_SD".</li> <li>Added decoupling capacitors: <ol style="list-style-type: none"> <li>[C55], [C57]... [C61] for U5.</li> <li>[C62]... [C64] for [J3].</li> <li>[C65] for [U1].</li> </ol> </li> <li>Added pull-up resistor [R43] for "USB_OC".</li> <li>Removed VG96 from BOM.</li> <li>Removed S/N Track-it pad.</li> <li>Added UKCA logo.</li> <li>Changed address on silkscreen.</li> <li>Updated components from library.</li> <li>Updated revision history.</li> <li>Updated documentation.</li> <li>Updated power overview.</li> </ol>	ED

	Title: TE0703 – Revision History		
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# Supported Voltage Ranges:

Power Rail	Direction*	Range	Tolerance	Description	Note
5VIN	IN/OUT	5.0 V	+/- 5 %	Baseboard Power	Baseboard Power Supply.
VCCIOA	IN/OUT	-	-	Micromodule Power	Dependent on baseboard/module combination, on baseboard settings and VG96 requirements.
VCCIOB	IN/OUT	-	-	Micromodule Power	Dependent on baseboard/module combination, on baseboard settings and VG96 requirements.
VCCIOC	IN/OUT	1.2 V - 3.3V	-	Micromodule Power	Range based on baseboard. Dependent on baseboard/module combination, on baseboard settings and VG96 requirements.
VCCIOD	IN/OUT	-	-	Micromodule Power	Dependent on baseboard/module combination, on baseboard settings and VG96 requirements.
VCCJTAG	IN	1.2 V - 3.3V	-	JTAG Reference	JTAG Reference Voltage from module. Consult module documentation.
M1.8VOUT	IN	1.8 V	+/- 3 %	Baseboard Power	Range based on baseboard. Consult module requirements.
M3.3VOUT	IN	3.3 V	+/- 3 %	Baseboard Power	Range based on baseboard. Consult module and VG96 requirements.
ETH-VCC	IN	-	-	RJ45 Power	Consult module requirements.
3.3V	OUT	3.3 V	+/- 3 %	Power for System	Range based on baseboard. Consult module and VG96 requirements.
VBAT	OUT	-	-	Power for Module.	Consult module requirements.

\* IN/OUT dependent on usage mode.



## I2C Address:

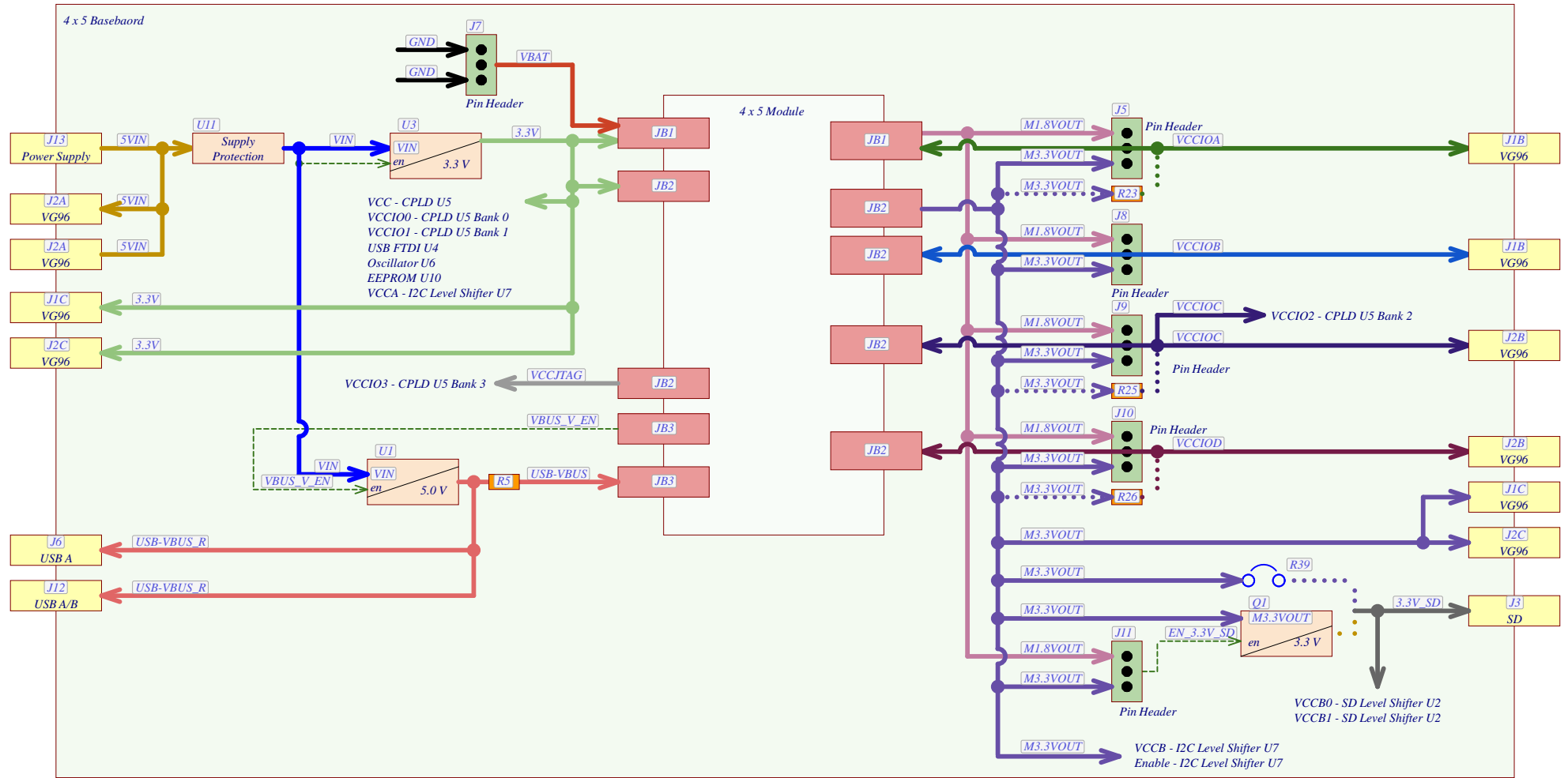
Device	I2C ADDR	Note
CPLD	USB	Firmware dependent.
VG96	J1A	Depends on connection.

## Legend:

- B2B Connector
- Connector
- LED Interface
- Switchable Interface
- On-board Components



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### Legend:

- 5VIN Net name
- Power bus
- Control signal
- B2B Connector
- Connector
- Pin Header
- Assembly Option
- On-Board Power Supply Device



Title: TE0703 – Power Overview			
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Special notes:

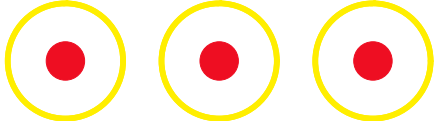
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FIDU-DOT - small FIDU-DOT - small FIDU-DOT - small



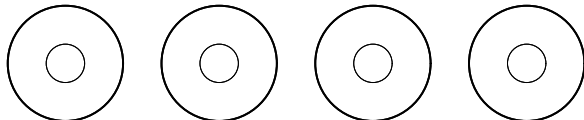
PM1 FIDU-DOT - small PM2 FIDU-DOT - small PM3 FIDU-DOT - small



PM4 PM5 PM6

Serial  
Serial  
Serialnumber 6,3 x 6.3mm  
MISC1  
Digilent Serialnumber  
Digilent\_SN

Mount.Hole 3.2mm Mount.Hole 3.2mm Mount.Hole 3.2mm Mount.Hole 3.2mm



GND GND GND GND

UKCA1

UKCA Logo on Top Overlay

UKCA-TOPOVERLAY

CE1

CE Logo on Top Overlay

CE-TOPOVERLAY

MECH10

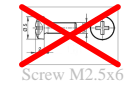
TE Address Overlay

LOGO ADDRESS

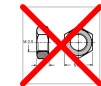
LOGO1

TE Logo PRINT Layer

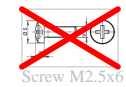
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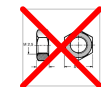
Screw M2.5x6



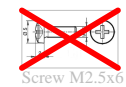
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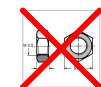
Screw M2.5x6



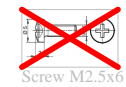
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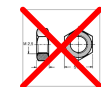
Screw M2.5x6



Nut M2.5 DIN934



Screw M2.5x6



Nut M2.5 DIN934



Title: TE0703 – Overview

A4

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A

A

B

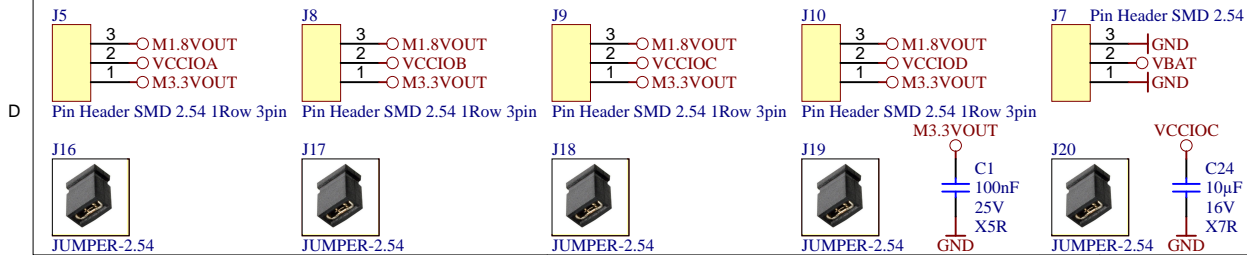
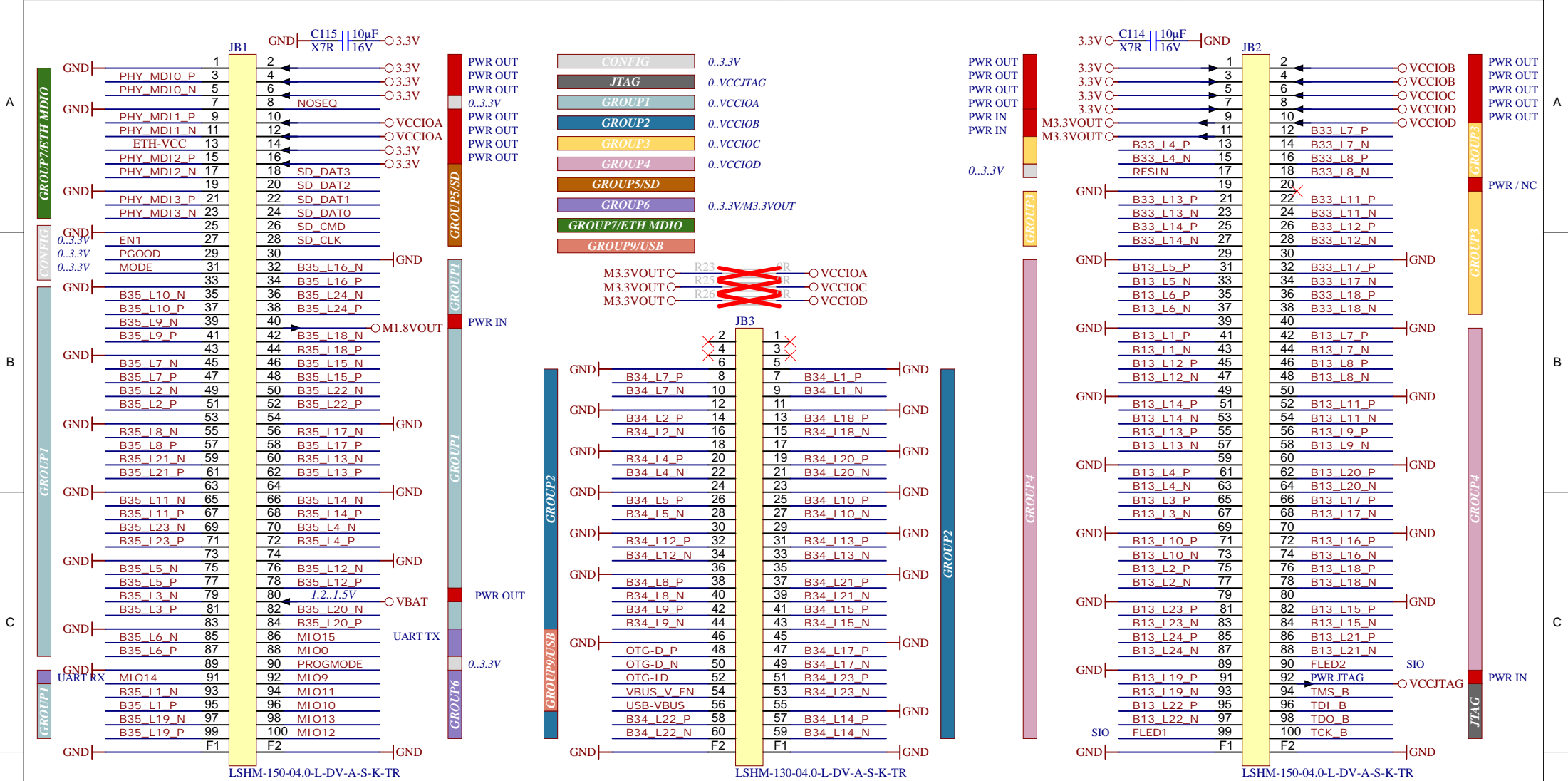
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C

C

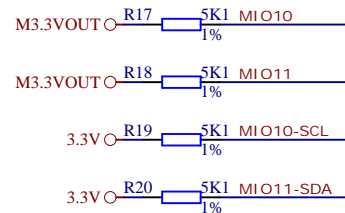
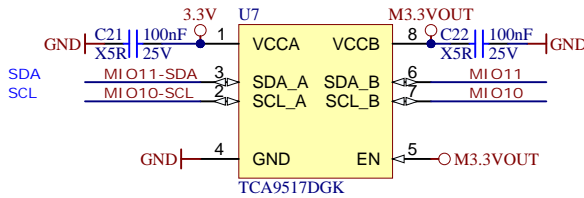
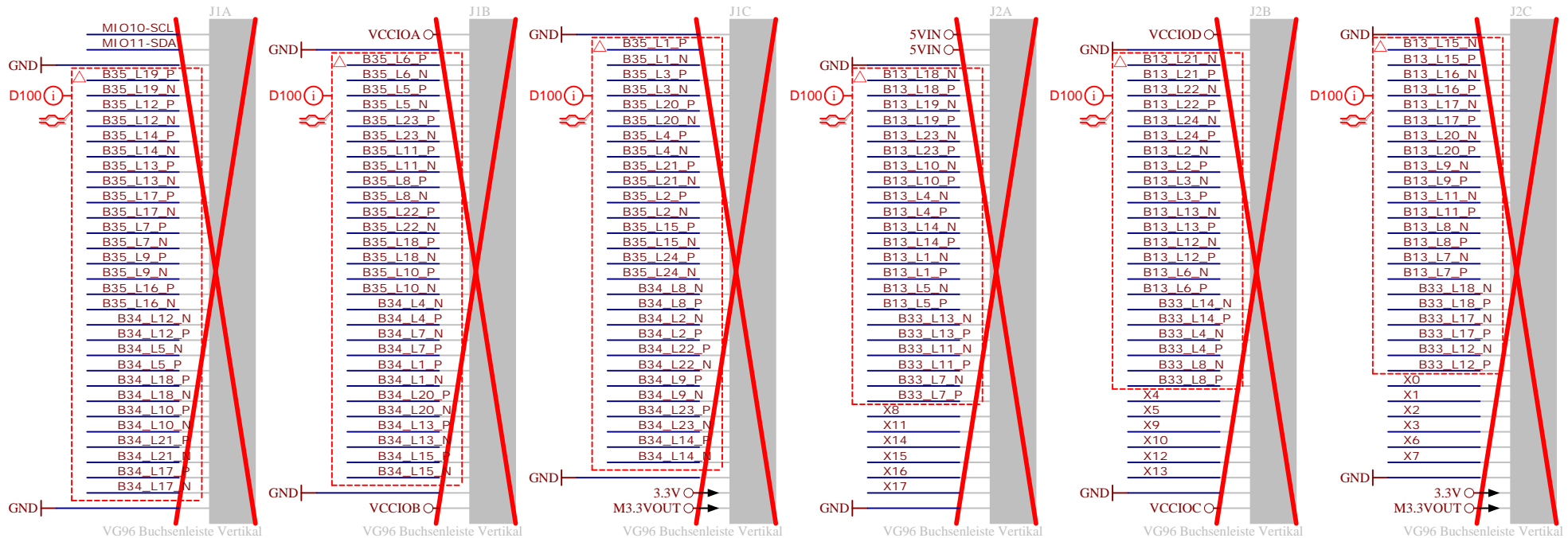
D

D



Title: <b>TE0703 – B2B Connector</b>		
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1

2

3

4

A

A

B

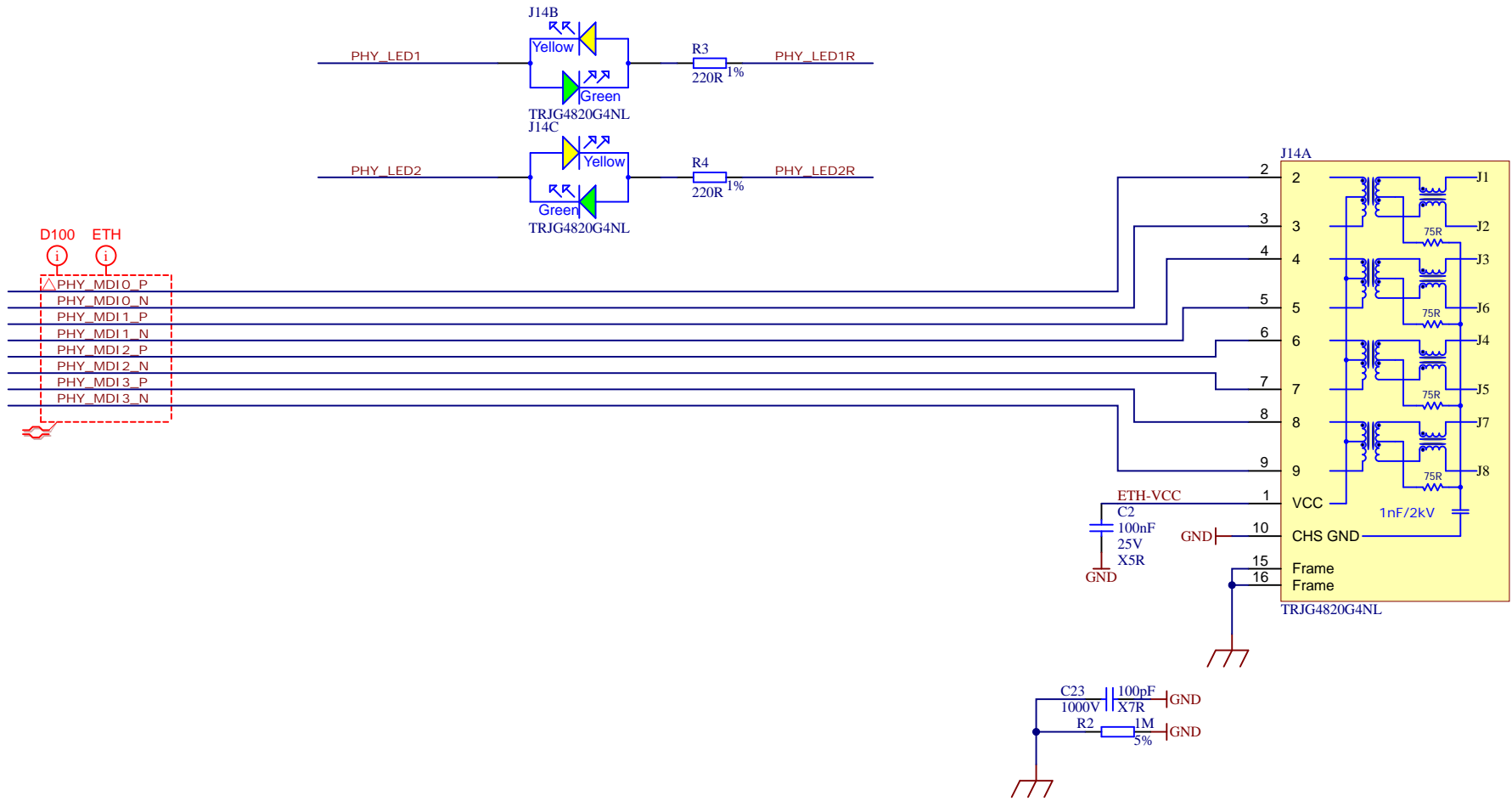
B

C

C

D

D



Title: TE0703 – Ethernet		
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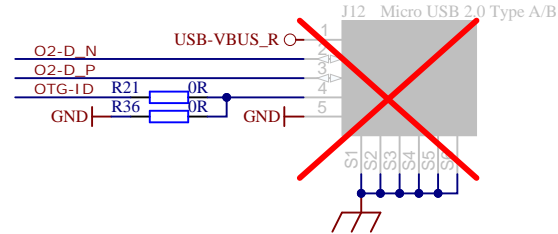
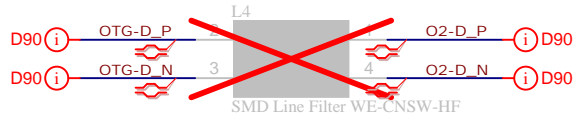
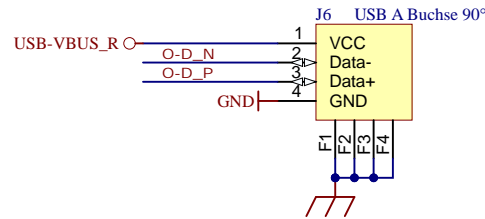
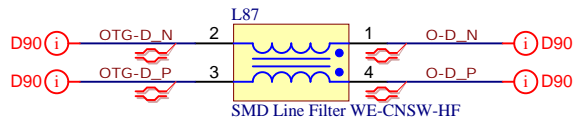
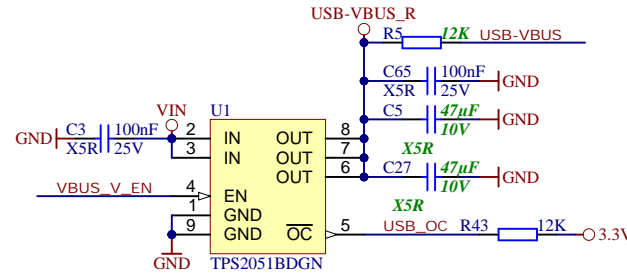
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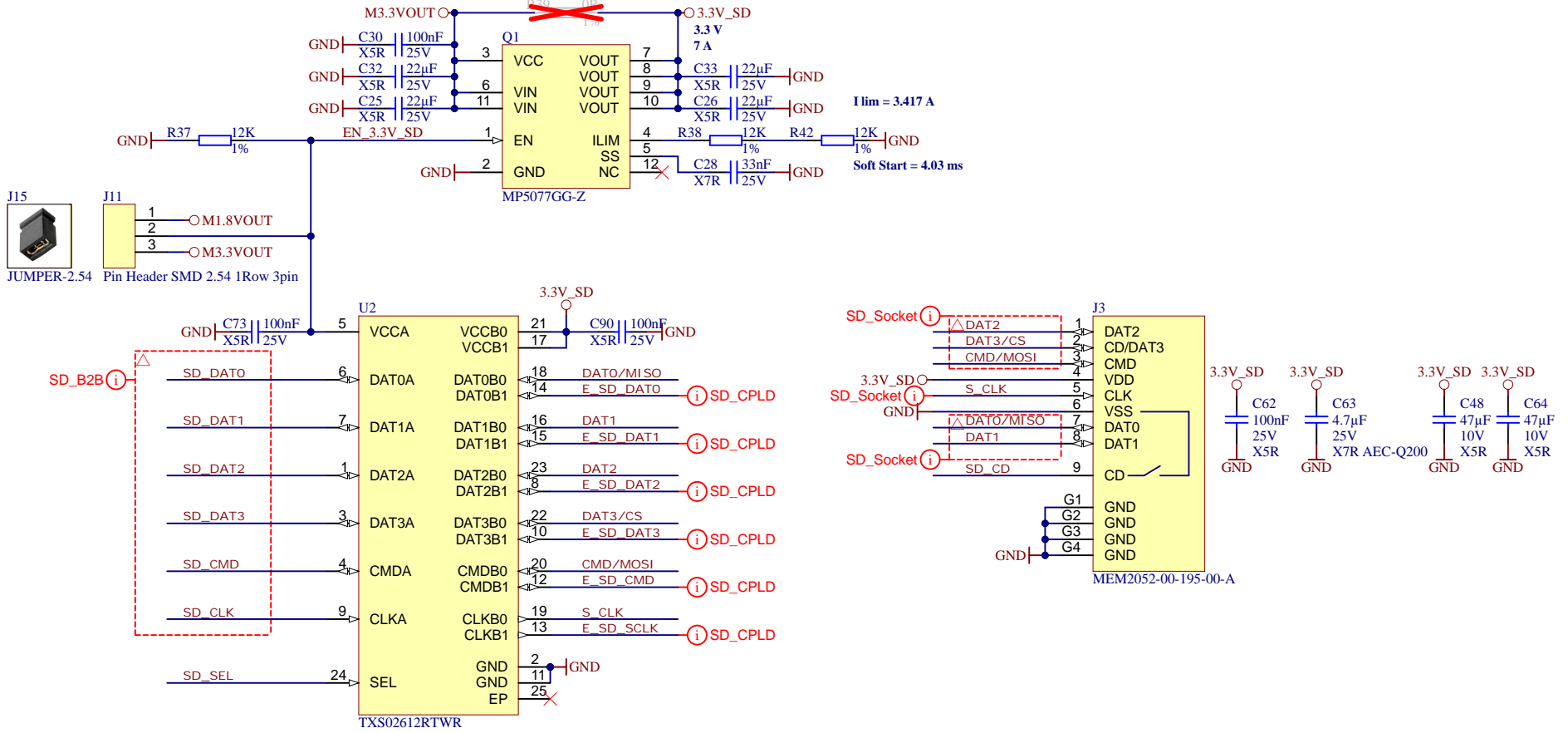
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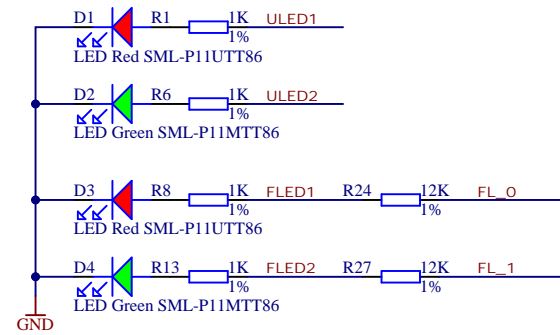
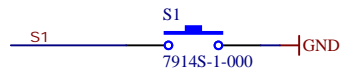
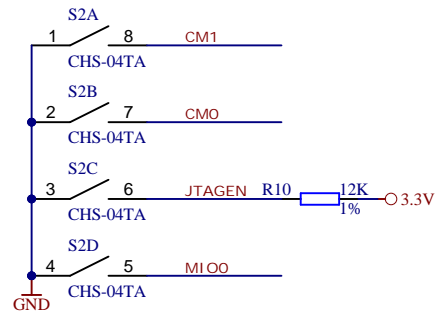
Variant	USB
Default	HOST
D	OTG



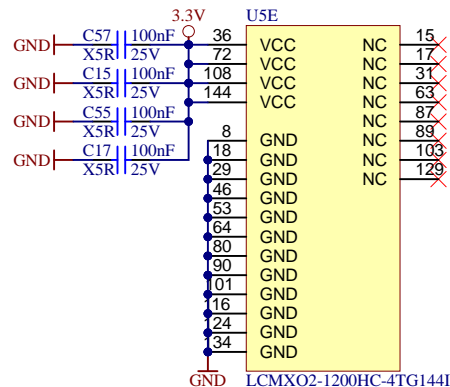
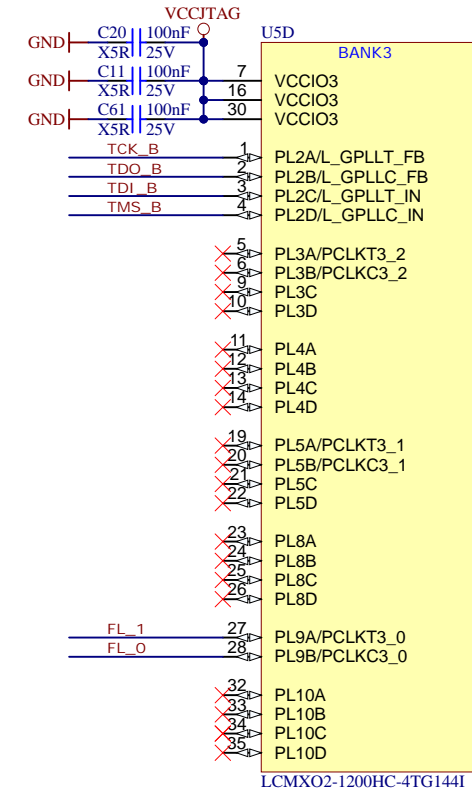
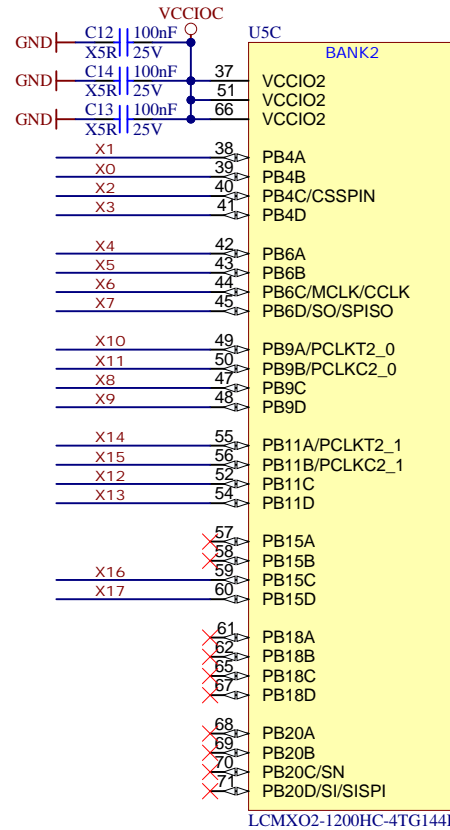
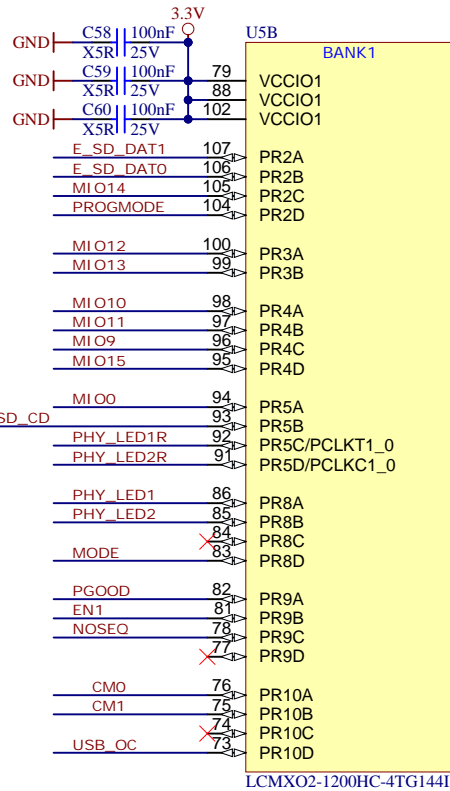
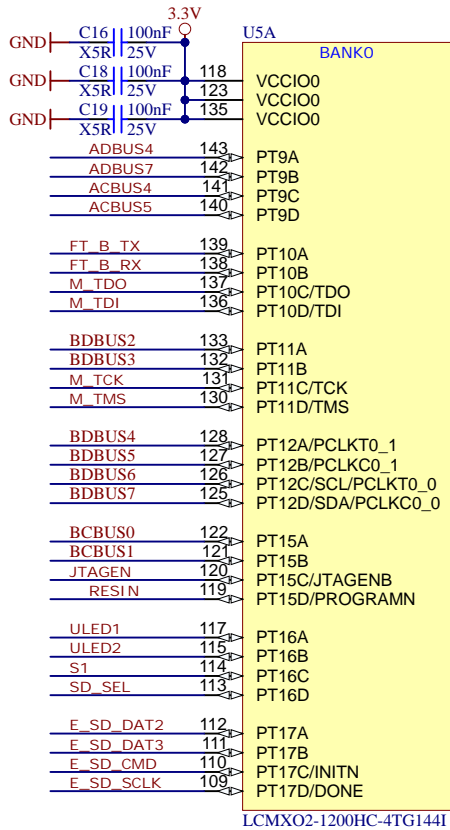
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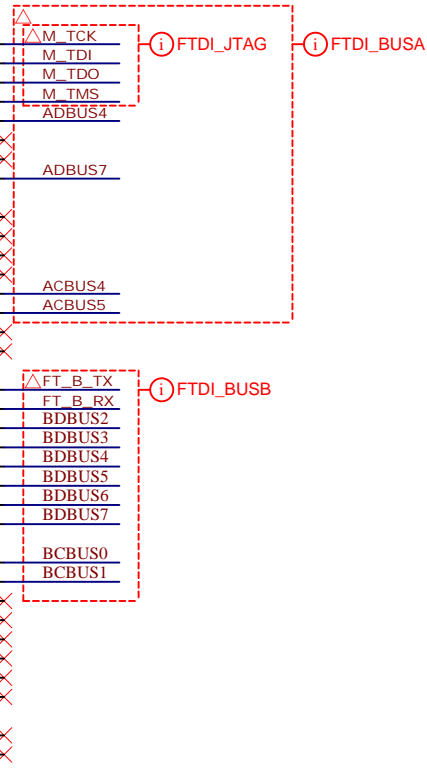
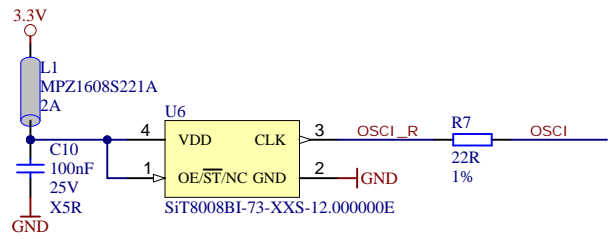
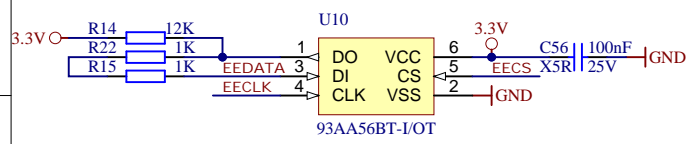
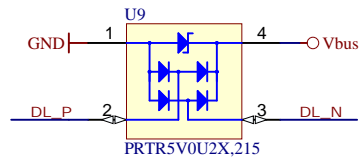
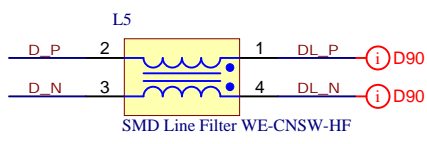
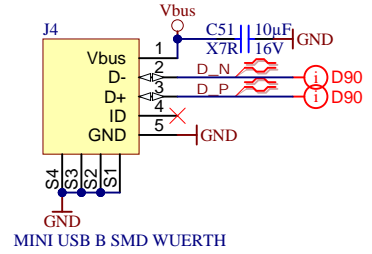
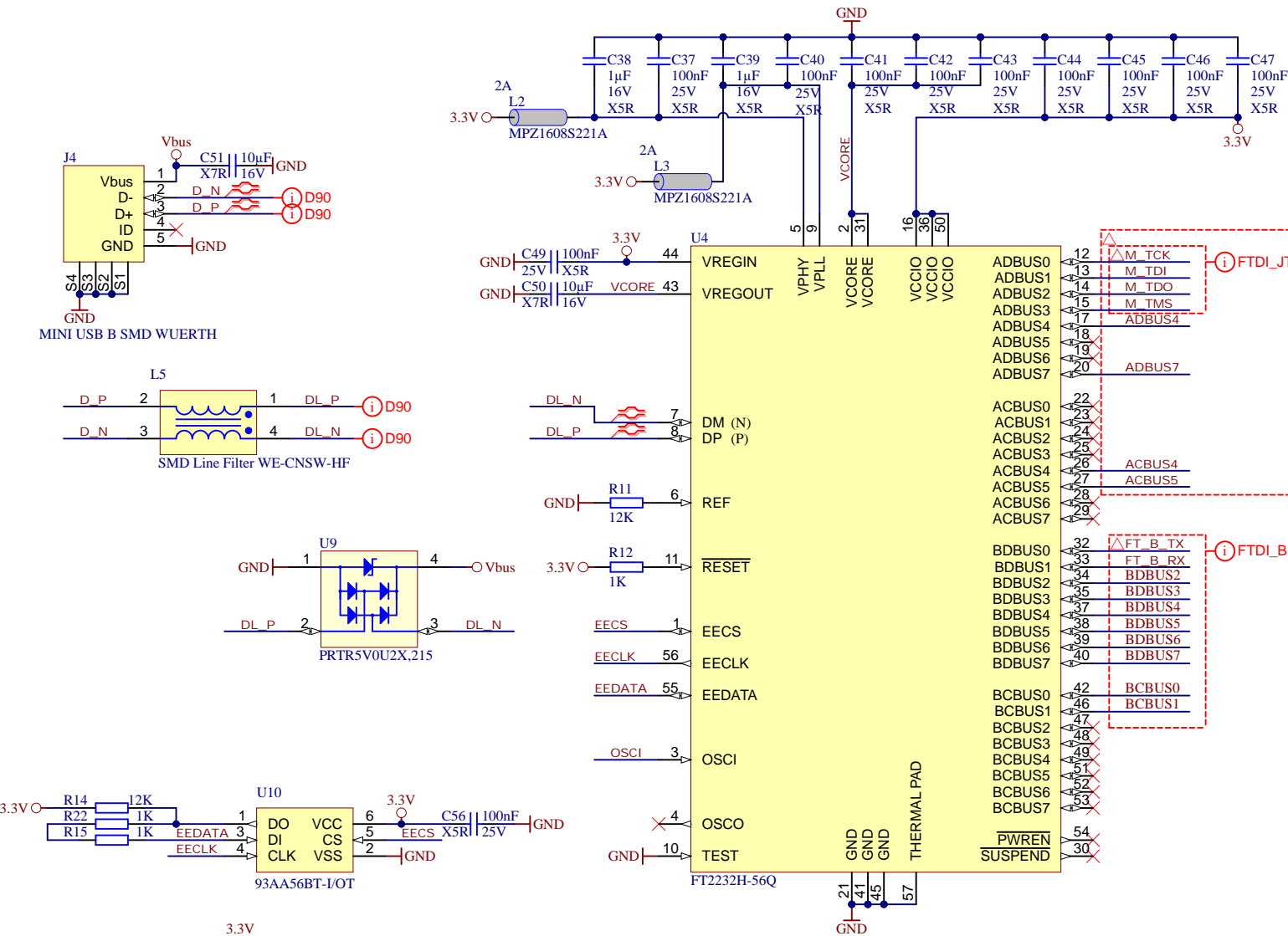
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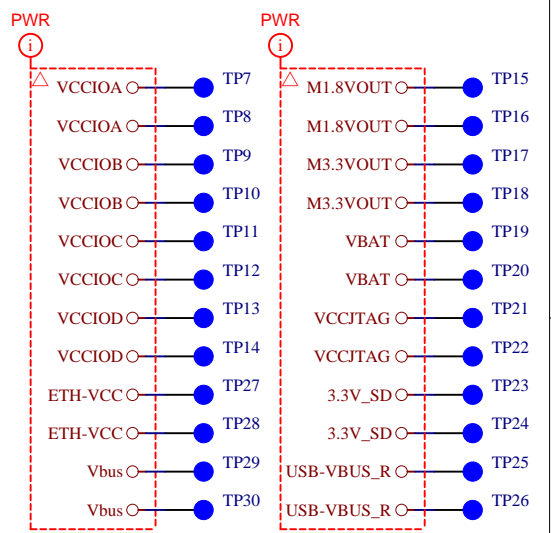
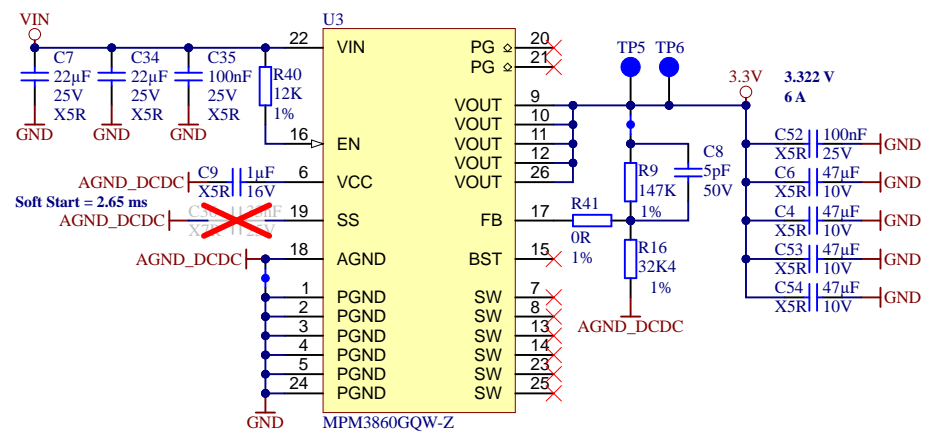
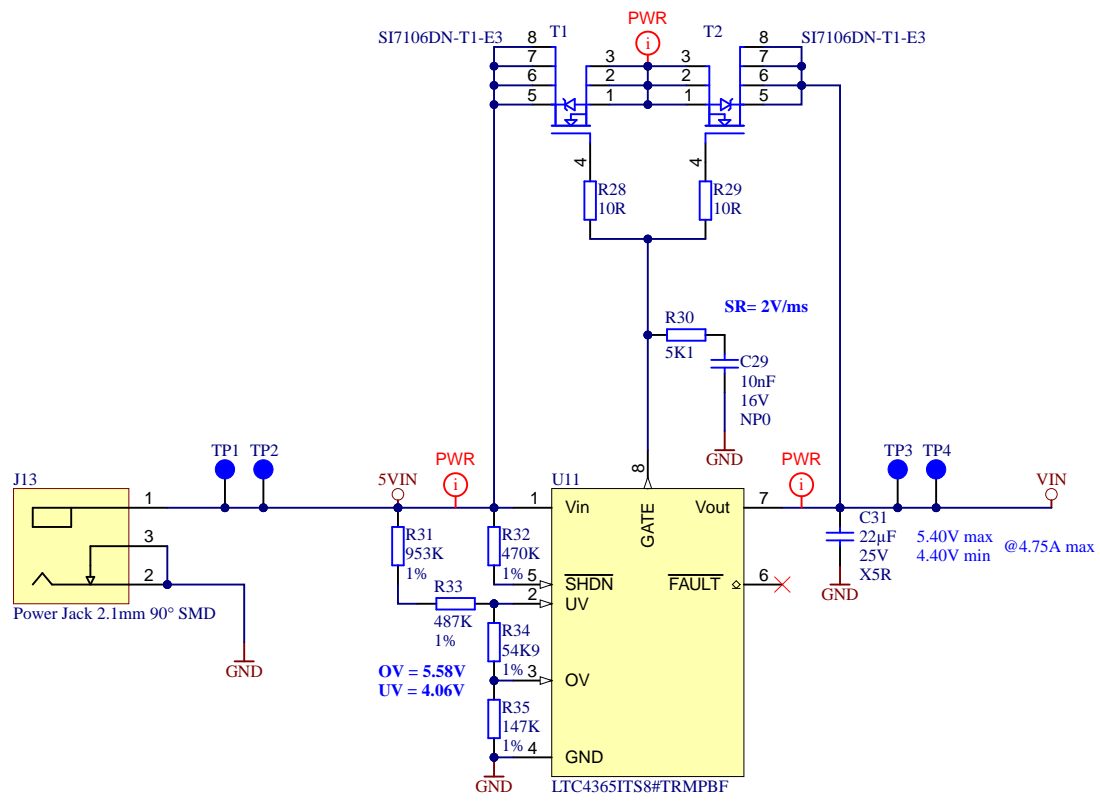
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