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Revisions			
Rev	Description	Date	Approved
X1	Reference Design Release	06-May-19	Dong N

SHIELD-HOST

6501 William Cannon Drive West
Austin, TX 78735-8598

ICAP Classification: CP: IUO: X PUBI:

Designer: Dong Nguyen	Drawing Title: SHIELD-HOST	
Drawn by: Luis T	Page Title: TITLE & REV	
Approved: Dong Nguyen	Size C / Document Number OM13790HOST:SCH-32144 PDF: SPF-32144	Rev X1
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1. Unless Otherwise Specified:
   All resistors are in ohms
   All voltages are DC

2. Device type number is for reference only. The number varies with the manufacturer.

3. Interpret diagram in accordance with American National Standards Institute specifications, current revision, with the exception of logic block symbology.

User notes are given throughout the schematics

Specific PCB LAYOUT notes are detailed in ITALICS

ICAP Classification: CP: ___ IUO: X PUBI: ___

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SHIELD-HOST

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NOTES

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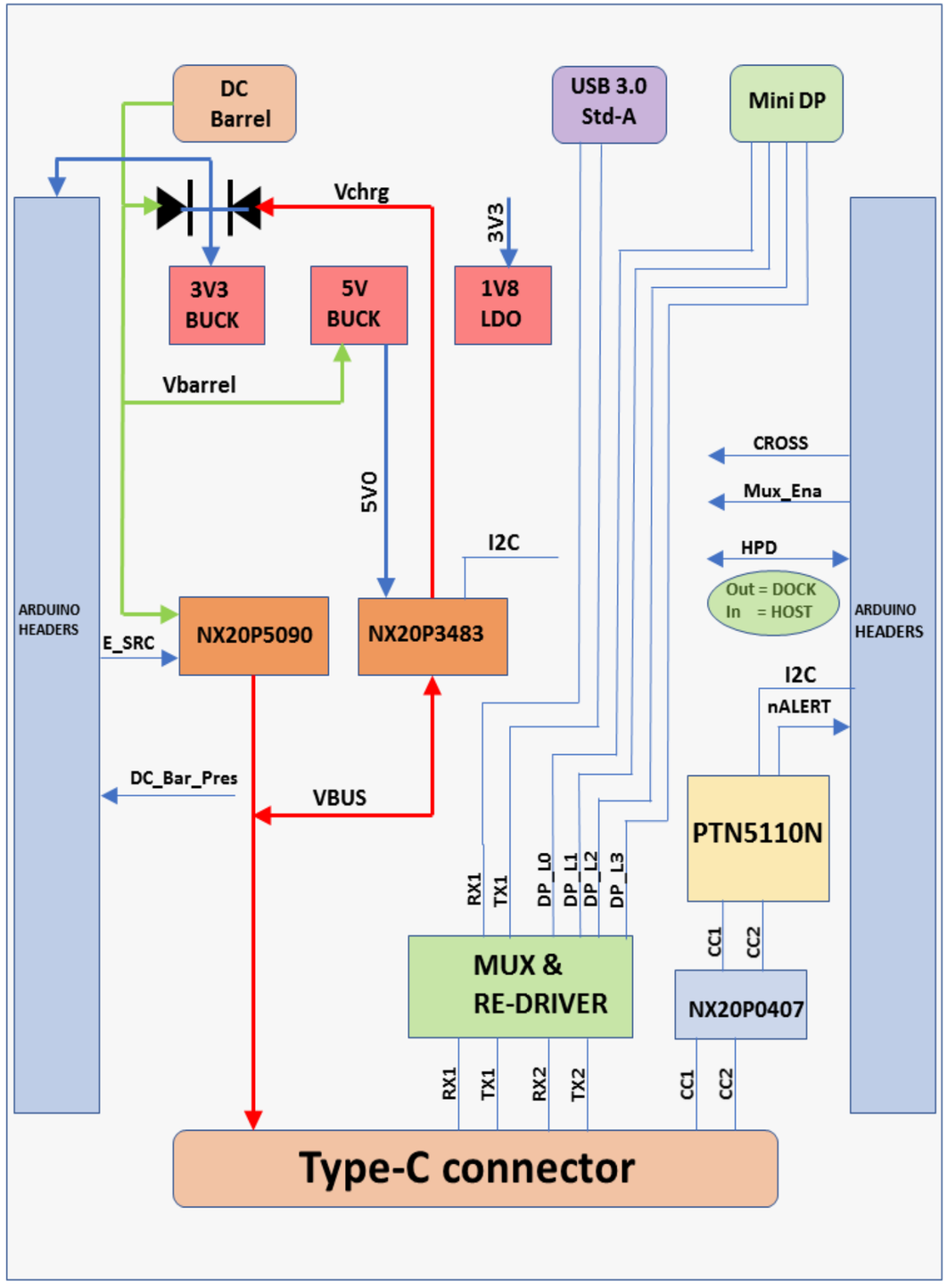

USB PD/ Type C Shield Board

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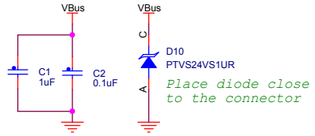
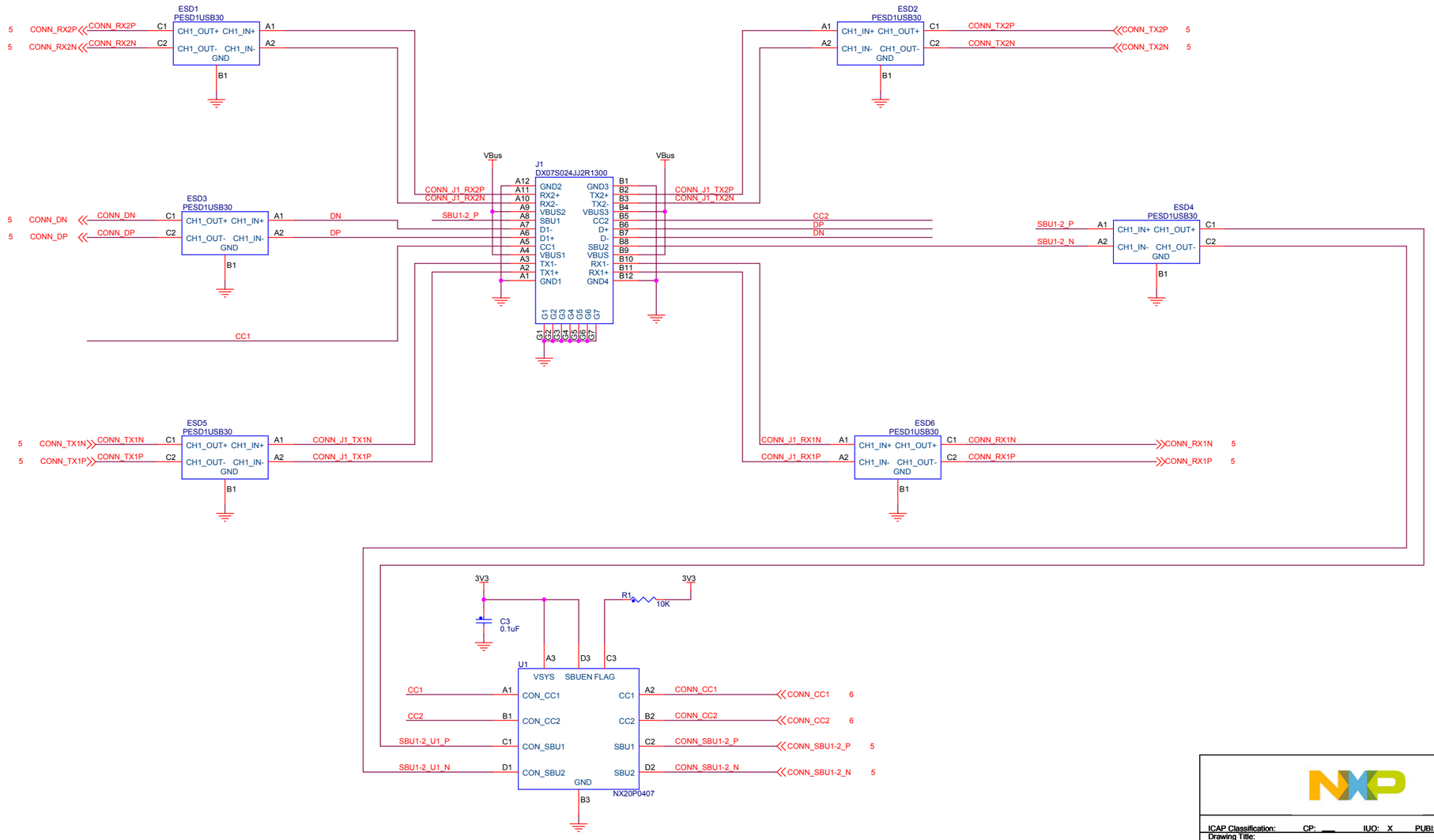


USB- Type C Connector



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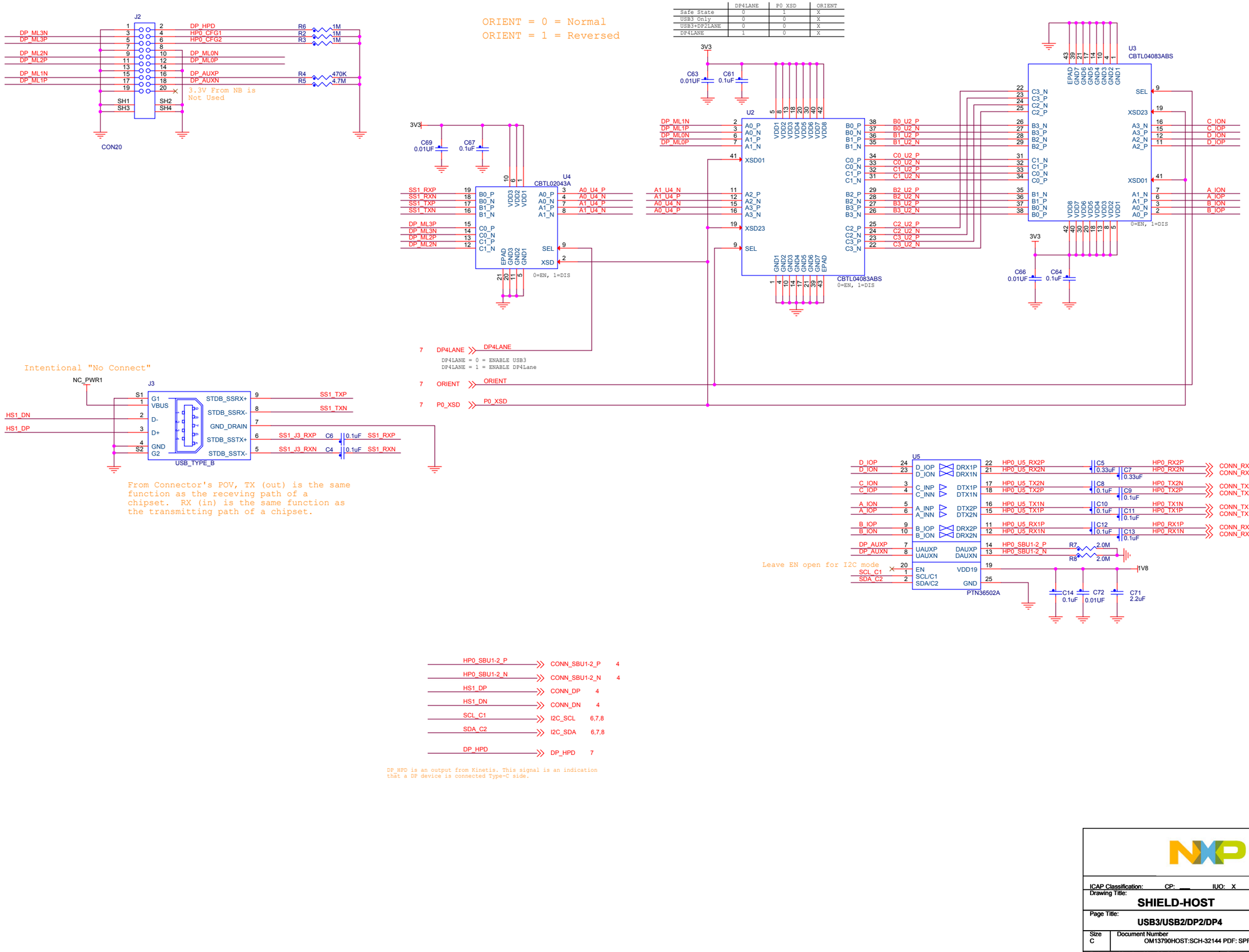

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Page Title:	USB3/USB2/DP2/DP4
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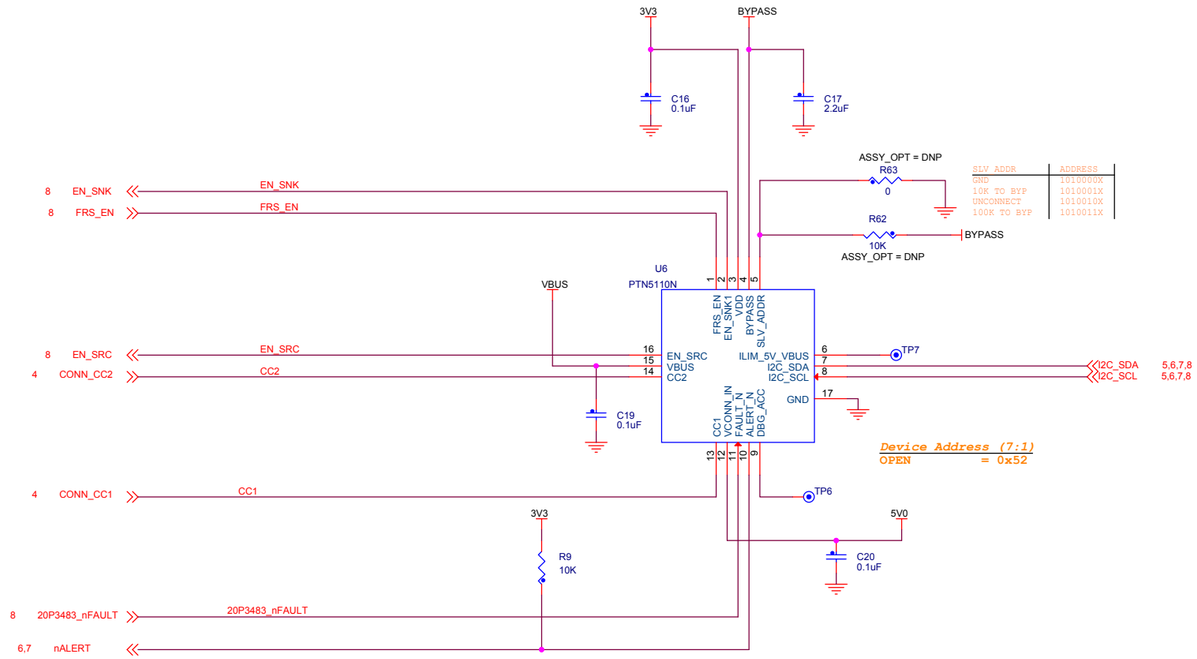
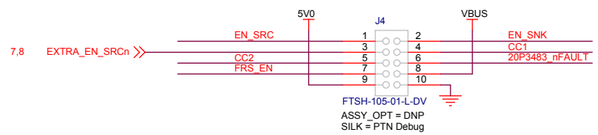
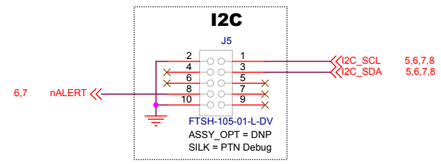


Debug Headers

NOTE:
Debug purpose only



PTN5110 MISC.



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Drawing Title:
SHIELD-HOST

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PTN5110 PD TCPC

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ORIENT - OUTPUT, push-pull. TCPM determines plug oritentation and drives low on normal orientation, else drives high

PD_XSD - OUTPUT, push-pull. TCPM drives this signal high to shut down the high speed mux, safe state etc,.

DP4LANE - OUTPUT, push-pull. TCPM drives this signal high if ALT mode is 4 lane DP. Drives this signal low if ALT mode is 2 lane DP / USB 3.0 (if Multip-function bit is set, drive low, else drives high)

DP_HPD - OUTPUT, push-pull. TCPM gets DP sink HPD status through PD Status_Update message. TCPM drives this signal high if HPD state is high.

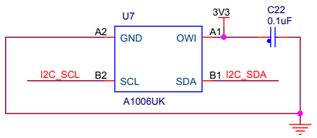
EXTRA_EN_SRCn - OUTPUT, push-pull. TCPM drives this signal low when sourcing on second PDO (higher than defaut 5V)

DC_BARREL_PRES - INPUT, push-pull. This signal indicates that Shield board is powered by an external ACDC adapter. TCPM will not initiate or accept a power role swap if this signal is low.

nALERT - INPUT, push-pull. TCPC interrupt signal.

RST_GPIO - not used.

Authentication Chip

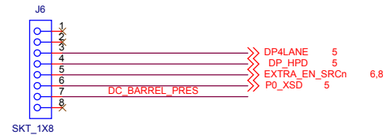


Make sure there are 4 pins/headers on PCB to download certificate for the first time.
* VDD_MCU
* I2C_SCL
* I2C_SDA
* GND

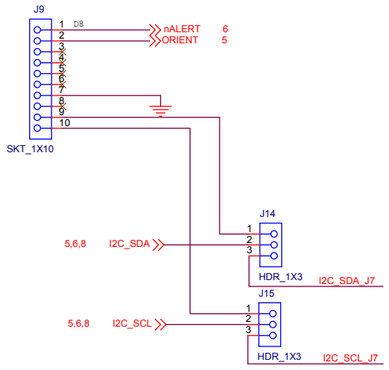
ARDUINO HEADERS

SHIELD BOARD ARDUINO HEADER

Mate to J1/J13 of Kinetis/PTN546xx

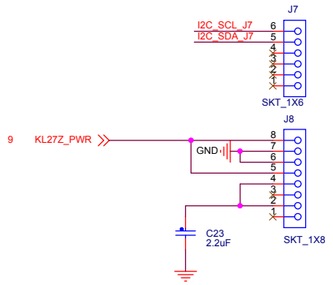


Mate to J2/J9 of Kinetis/PTN546xx

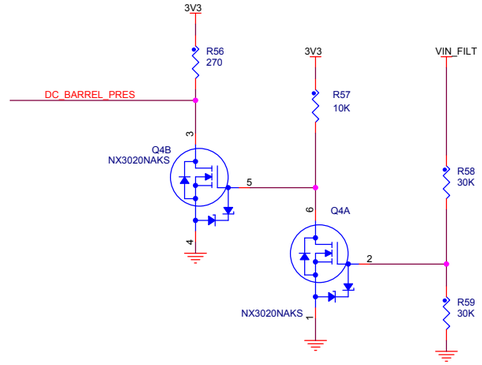


SHIELD BOARD ARDUINO HEADER

Mate to J4/J12 of Kinetis/PTN546xx



Mate to J3/J10 of Kinetis/PTN546xx



ICAP Classification: CP: ___ IUO: X PUBI: ___

Drawing Title: **SHIELD-HOST**

Page Title: **Shield headers**

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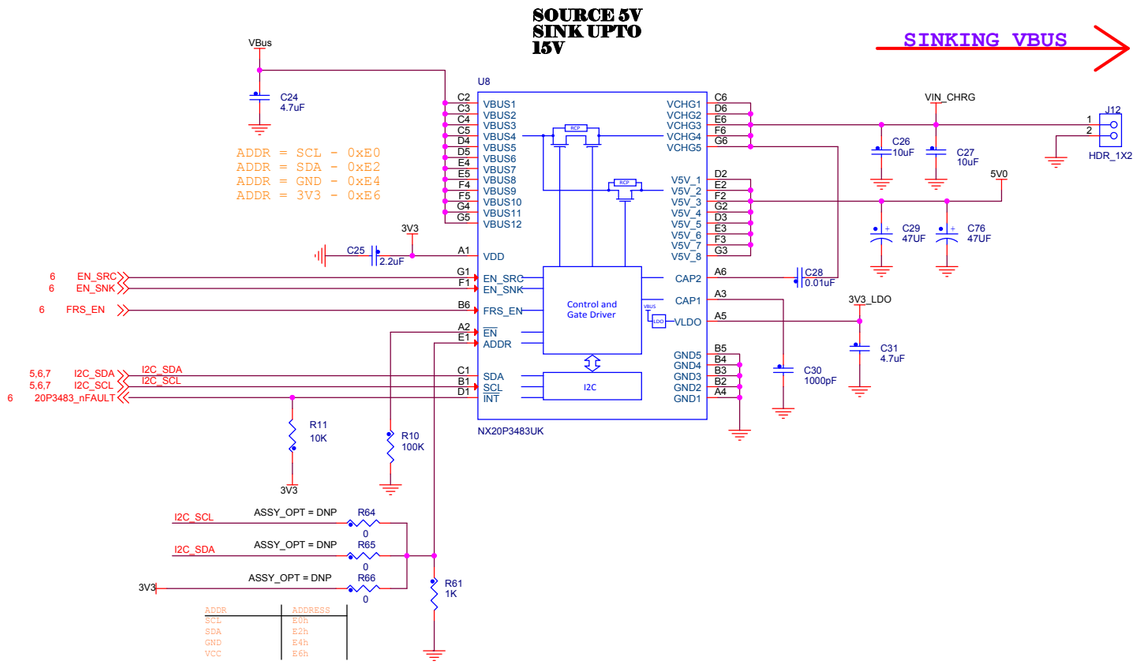
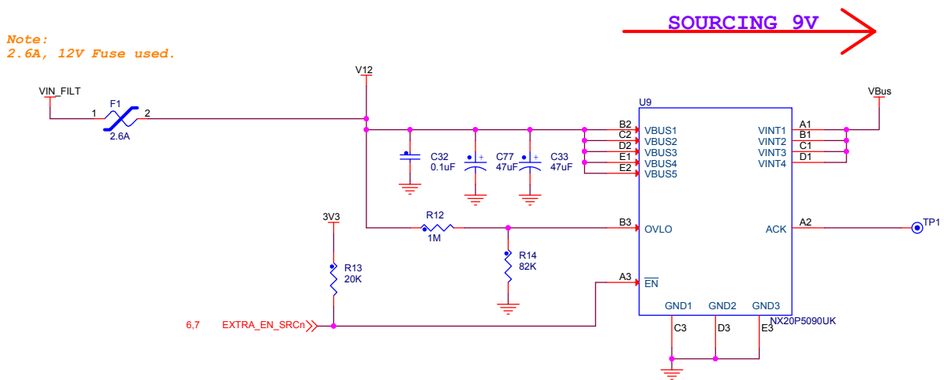


Source 9V Load switch



ICAP Classification: CP: ___ IUO: X PUBI: ___

Drawing Title: **SHIELD-HOST**

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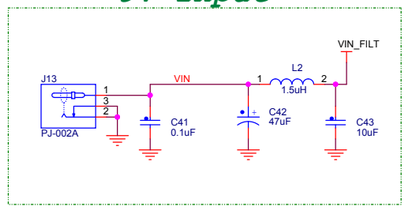
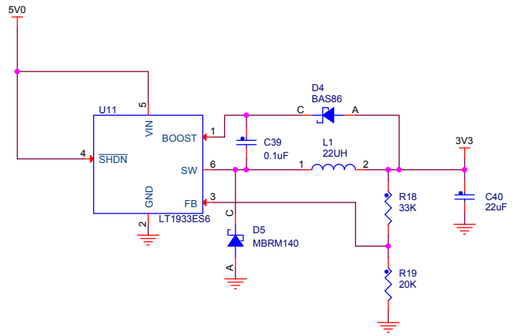
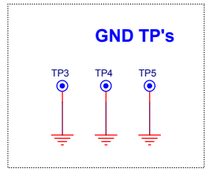
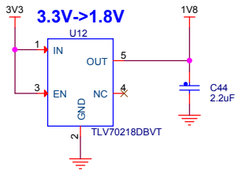
9V Input

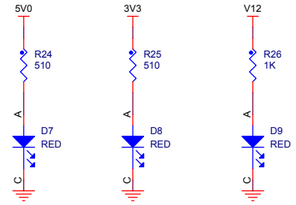


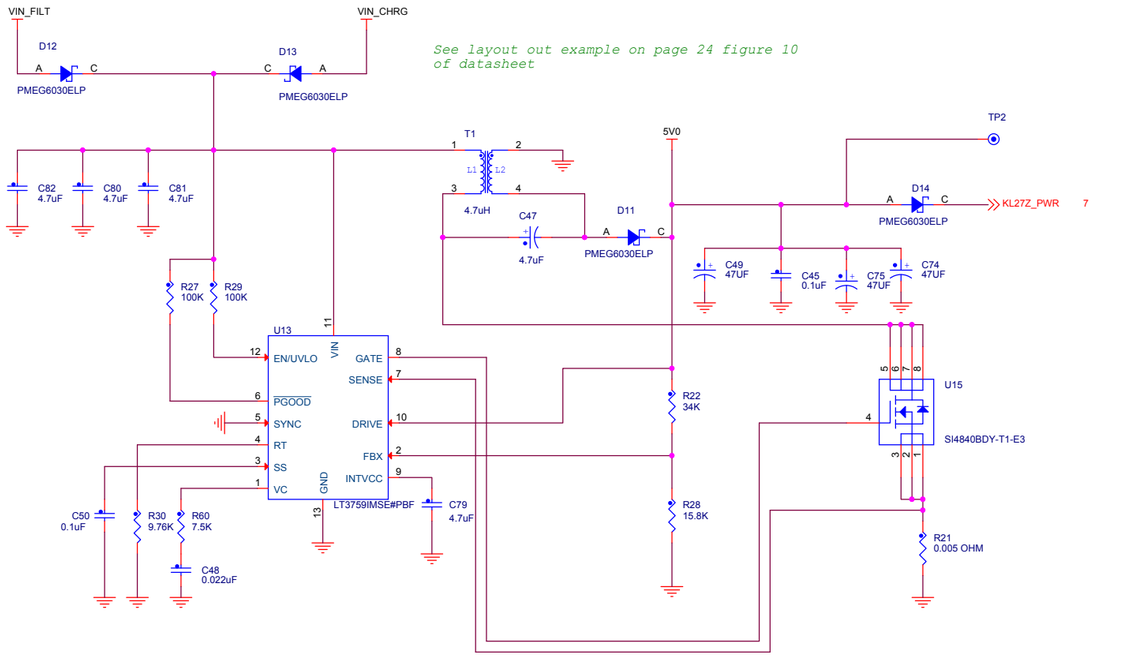
See layout out example on page 16 figure 8 of datasheet

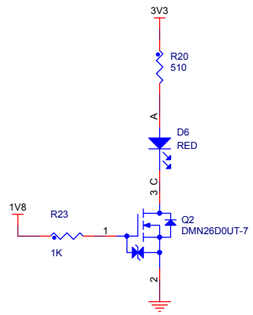












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Drawing Title:
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09 - 3V3, 5V0, 1V8 Supplies

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