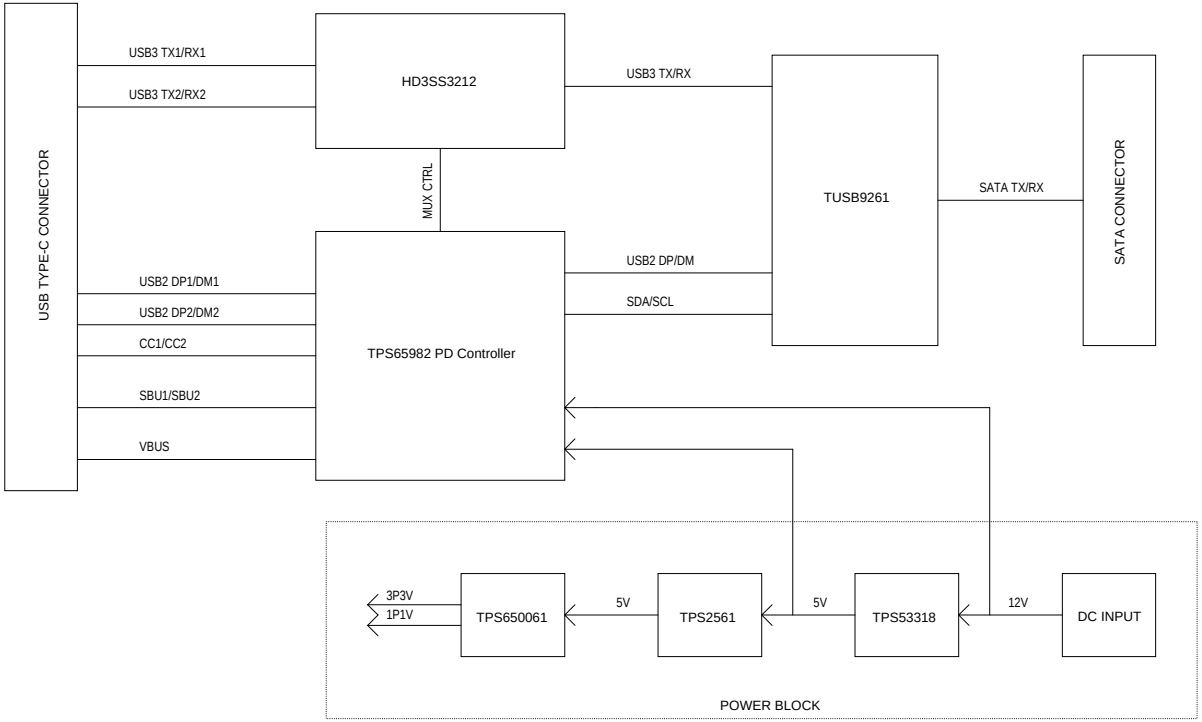
TIDA-00882: USB TYPE-C HDD WITH USB POWER DELIVERY

REV. A



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TIDA-00882: USB Type-C HDD		
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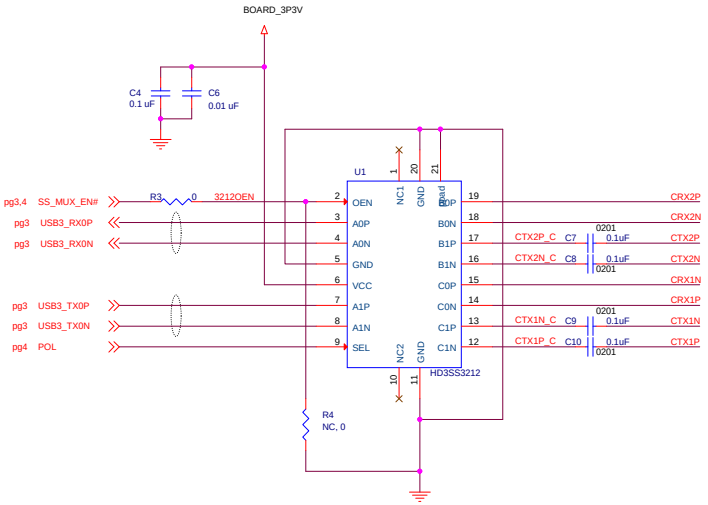
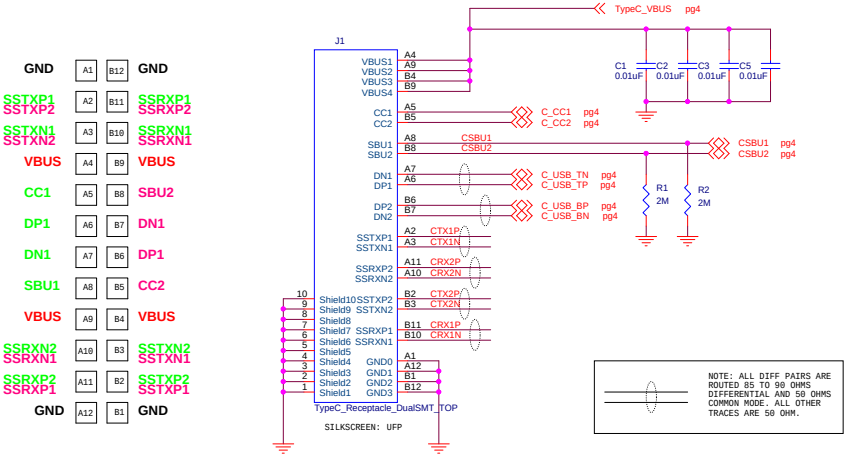
USB3.1 Mux



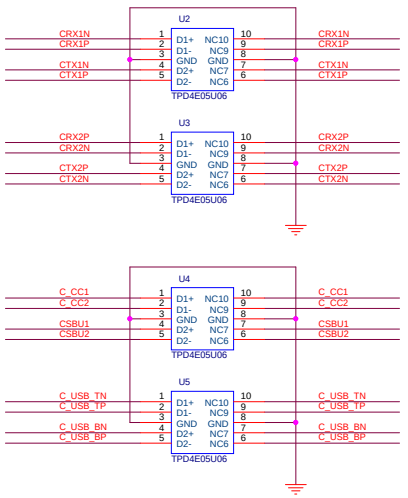
Port select pin (SEL). Internally tied to GND via 100k resistor.
L: Port A to Port B
H: Port A to Port C

Type-C Recepticle



ESD Components

Place near UFP connector in pass-through position with no stub



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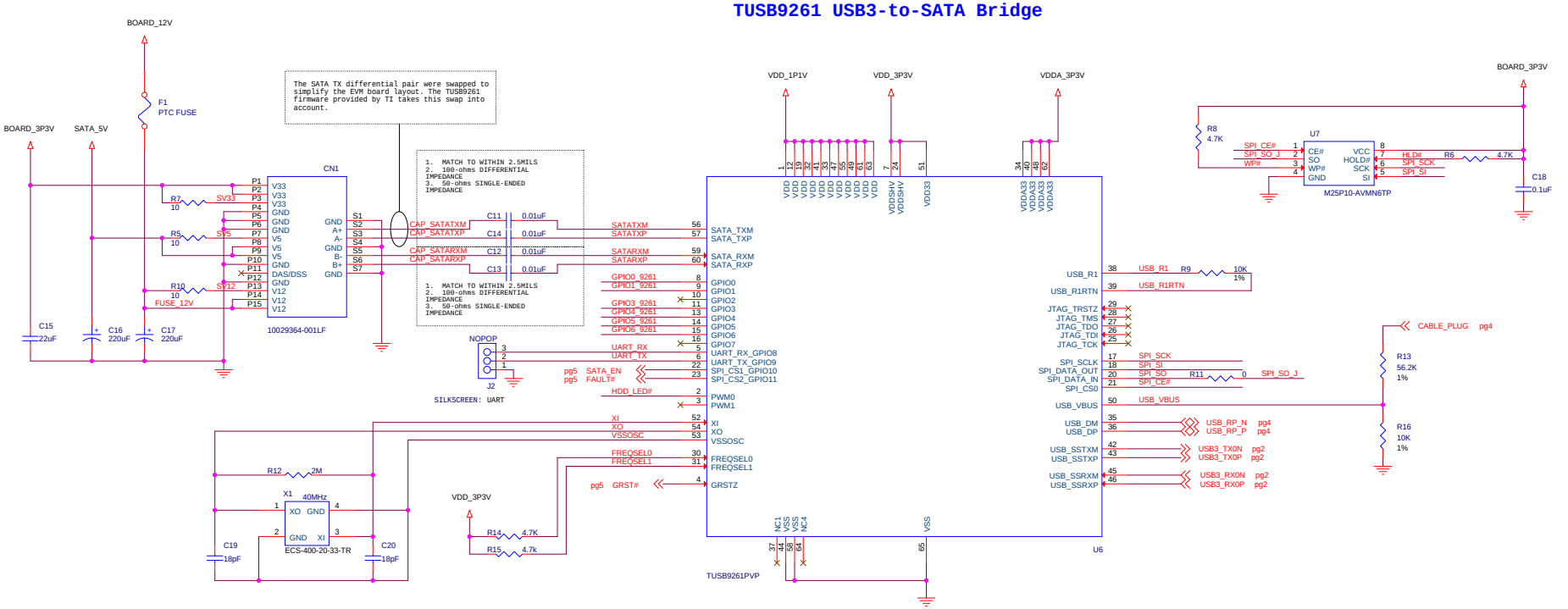
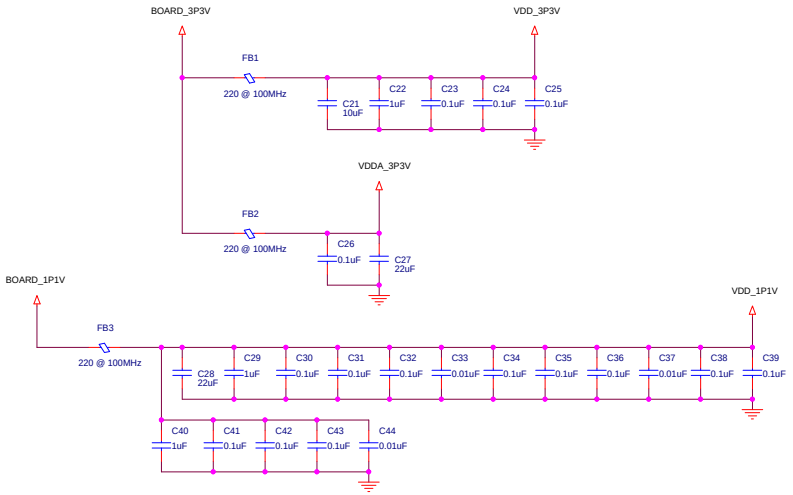
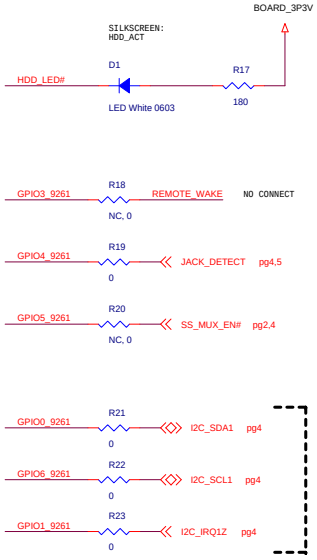
TUSB9261 USB3-to-SATA Bridge



DECOUPLING





NOTE: ALL DIFF PAIRS ARE ROUTED 85 TO 90 OHMS DIFFERENTIAL AND 50 OHMS COMMON MODE. ALL OTHER TRACES ARE 50 OHM.

TEXAS INSTRUMENTS

TIDA-00882: USB Type-C HDD: TUSB9261

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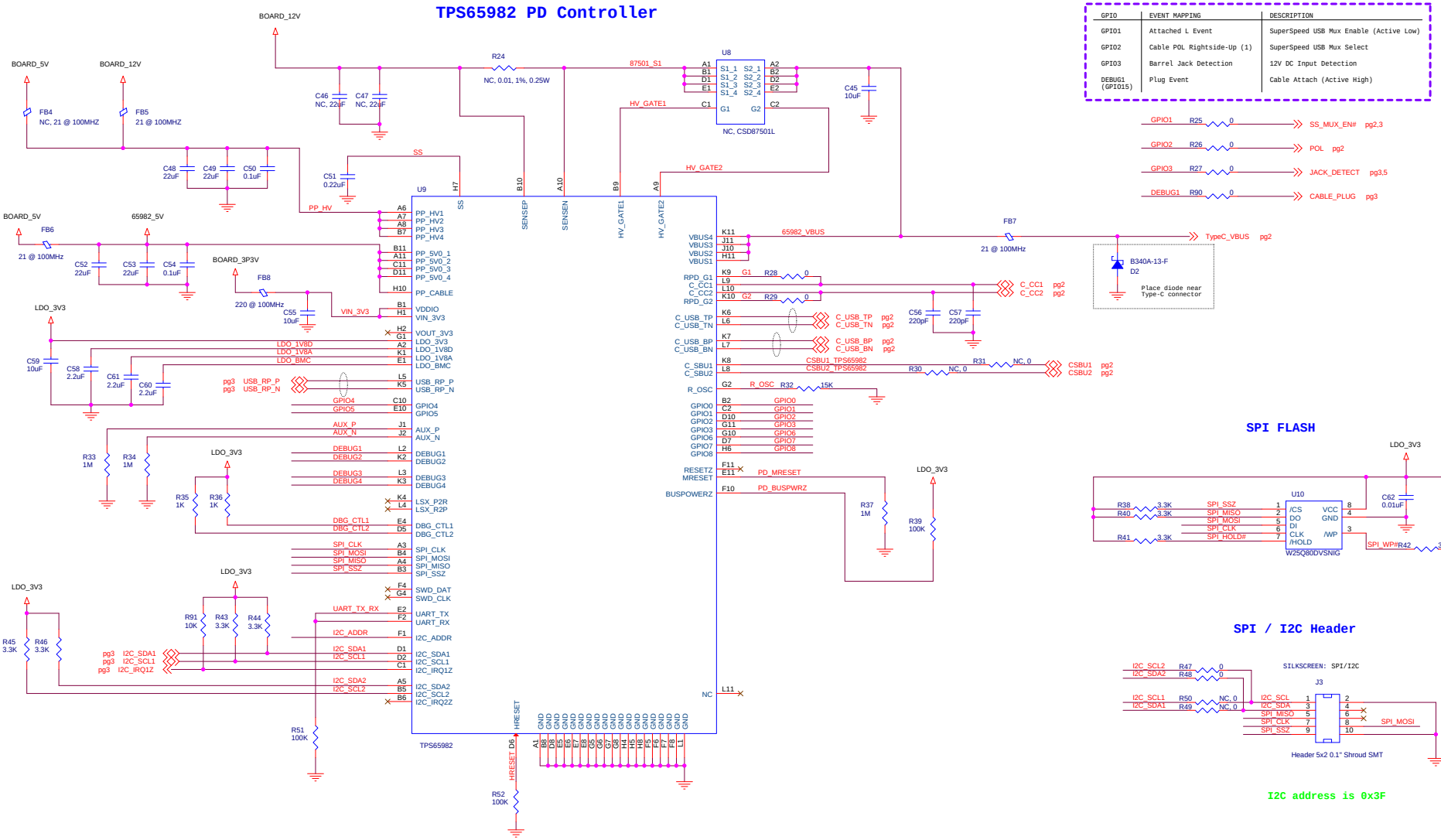
TPS65982 PD Controller



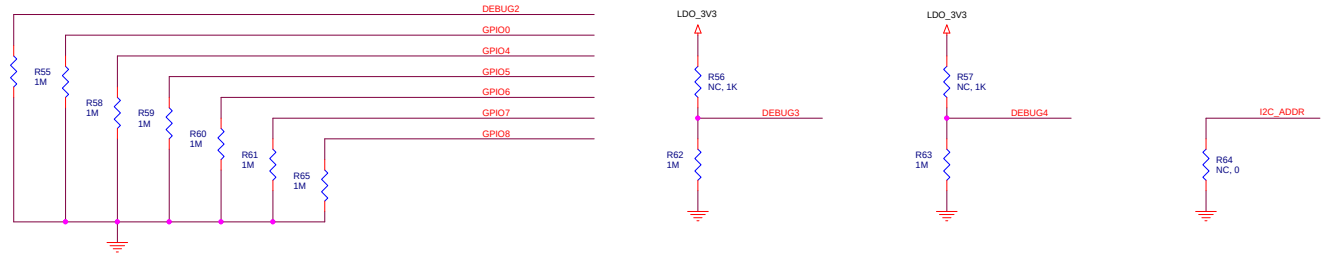
GPIO CONFIGURATION

GPIO	EVENT MAPPING	DESCRIPTION
GPIO1	Attached L Event	SuperSpeed USB Mux Enable (Active Low)
GPIO2	Cable POL Rightside-Up (1)	SuperSpeed USB Mux Select
GPIO3	Barrel Jack Detection	12V DC Input Detection
DEBUG1 (GPIO15)	Plug Event	Cable Attach (Active High)

SPI FLASH

SPI / I2C Header

I2C address is 0x3F



NOTE: ALL DIFF PAIRS ARE ROUTED 85 TO 90 OHMS DIFFERENTIAL AND 50 OHMS COMMON MODE. ALL OTHER TRACES ARE 50 OHM.

Note: If GPIOs are configured as "No Event Mapped" (i.e. outputs), the 1Mohm pull-down resistors can be omitted.

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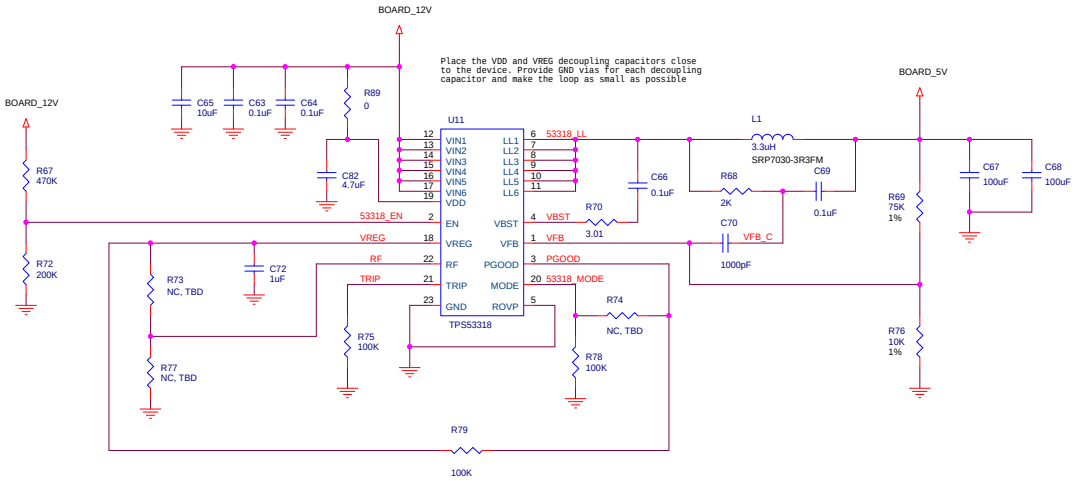
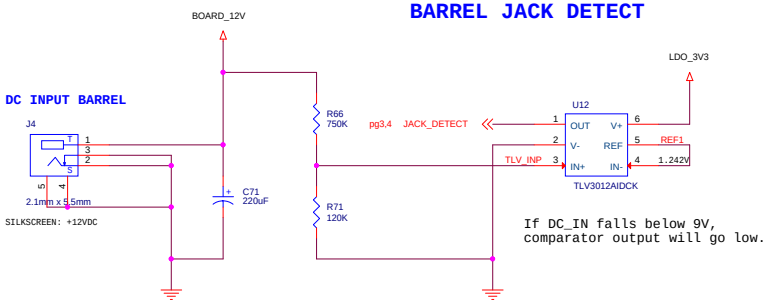
5.25V (7A) Buck Converter

Input Range 4.5 - 22V.
Auto-Skip Mode, 500kHz, 1.4ms soft start.



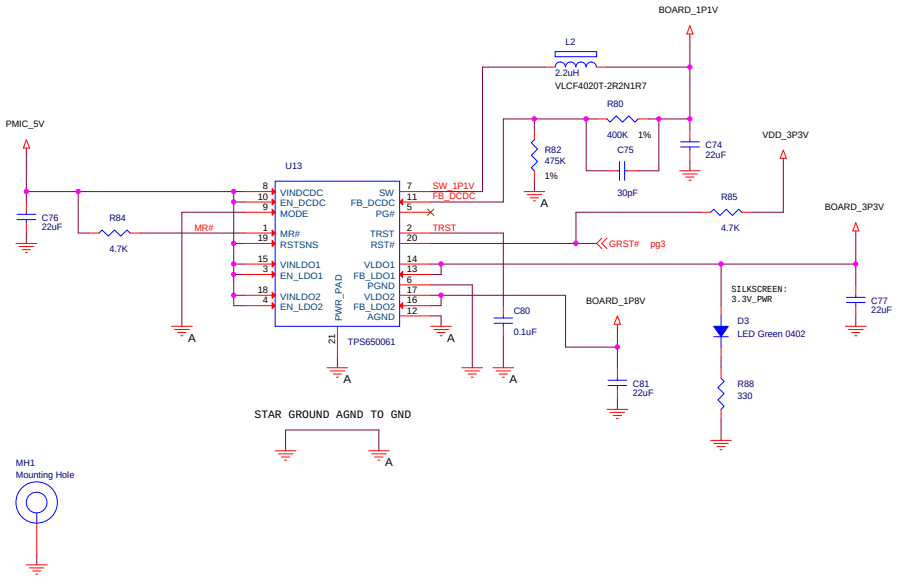
BARREL JACK DETECT



If DC_IN falls below 9V, comparator output will go low.

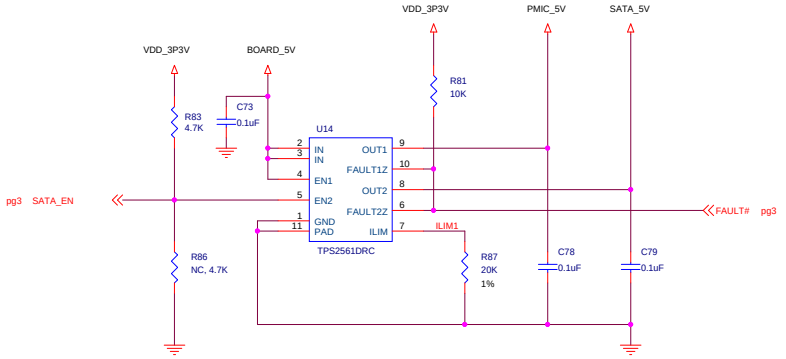
3.3V (300mA) LDO, 1.8V (300mA) LDO, and 1.1V (1A) Step-Down Converter

[Note: 1.8V is not utilized in this design]



MH1
Mounting Hole

Current Limiting Power Switch



Current Limit Threshold is 2.5 - 3.0A with 20K ILIM resistor

TEXAS INSTRUMENTS

TIDA-00882: USB Type-C HDD: Power Block

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C	POWER	
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