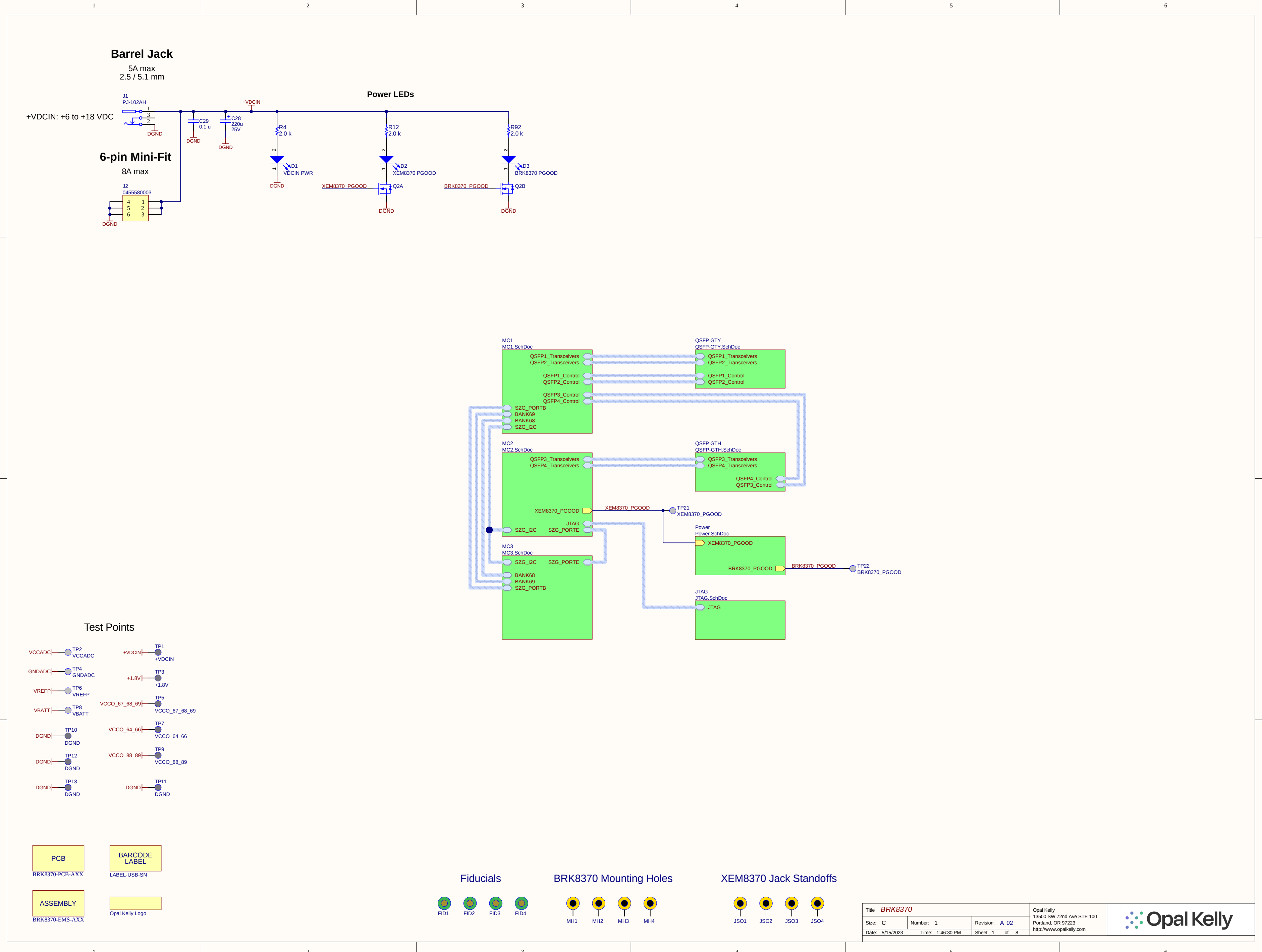




PCB
BRK8370-PCB-AXX

ASSEMBLY
BRK8370-EMS-AXX

BARCODE LABEL
LABEL-USB-SN

Opal Kelly Logo

Fiducials
FID1 FID2 FID3 FID4

BRK8370 Mounting Holes
MH1 MH2 MH3 MH4

XEM8370 Jack Standoffs
JSO1 JSO2 JSO3 JSO4

Title BRK8370		
Size: C	Number: 1	Revision: A 02
Date: 5/15/2023	Time: 1:46:30 PM	Sheet 1 of 8

Opal Kelly
13500 SW 72nd Ave STE 100
Portland, OR 97223
<http://www.opalkelly.com>



QSFP Transceivers

TX1P	<u>QSFP 3 TX1 P</u>
TX1N	<u>QSFP 3 TX1 N</u>
TX2P	<u>QSFP 3 TX2 P</u>
TX2N	<u>QSFP 3 TX2 N</u>
TX3P	<u>QSFP 3 TX3 P</u>
TX3N	<u>QSFP 3 TX3 N</u>
TX4P	<u>QSFP 3 TX4 P</u>
TX4N	<u>QSFP 3 TX4 N</u>
RX1P	<u>QSFP 3 RX1 P</u>
RX1N	<u>QSFP 3 RX1 N</u>
RX2P	<u>QSFP 3 RX2 P</u>
RX2N	<u>QSFP 3 RX2 N</u>
RX3P	<u>QSFP 3 RX3 P</u>
RX3N	<u>QSFP 3 RX3 N</u>
RX4P	<u>QSFP 3 RX4 P</u>
RX4N	<u>QSFP 3 RX4 N</u>

QSFP Transceivers

TX1P	<u>QSFP 4 TX1 P</u>
TX1N	<u>QSFP 4 TX1 N</u>
TX2P	<u>QSFP 4 TX2 P</u>
TX2N	<u>QSFP 4 TX2 N</u>
TX3P	<u>QSFP 4 TX3 P</u>
TX3N	<u>QSFP 4 TX3 N</u>
TX4P	<u>QSFP 4 TX4 P</u>
TX4N	<u>QSFP 4 TX4 N</u>
RX1P	<u>QSFP 4 RX1 P</u>
RX1N	<u>QSFP 4 RX1 N</u>
RX2P	<u>QSFP 4 RX2 P</u>
RX2N	<u>QSFP 4 RX2 N</u>
RX3P	<u>QSFP 4 RX3 P</u>
RX3N	<u>QSFP 4 RX3 N</u>
RX4P	<u>QSFP 4 RX4 P</u>
RX4N	<u>QSFP 4 RX4 N</u>

Power Disable Switch

The diagram illustrates a power disable switch circuit. A +VDCIN supply is connected to a 0.1 uF 25V capacitor (C1), which is connected to GND. A +1.8V supply is also shown. A switch is connected between GND and pin 1 of the SSS811101 J3. Pin 2 of J3 is connected to the TP14 PWR_EN pin. The PWR_EN pin is also connected to the XEM8370_PGOOD pin of the XEM8370 module. The XEM8370_PGOOD pin is connected to the PWR_EN pin of the module. The PWR_EN pin is also connected to the VBATT pin of the module. A callout box explains that PWR_EN is pulled up to +VDCIN on the XEM8370 and is default ON. Pulling it to GND turns it off.

Pinout diagram for the TXR4 component, showing pin numbers, signals, and power connections.

Pin	Signal	Pin	Signal
1	SZG_SCL_3V3	2	+5V
2	SZG_SDA_3V3	4	+5V_TST
3	SC_L	6	PORT_E_TX0_P
4	SC_D	8	PORT_E_TX0_N
5	PORT_E_RX0_P	10	PORT_E_TX1_P
6	PORT_E_RX0_N	12	PORT_E_TX1_N
7	RX0n	14	PORT_E_S0
8	RX0n	16	PORT_E_S1
9	PORT_E_RX1_P	18	PORT_E_S3
10	PORT_E_RX1_N	20	PORT_E_S5
11	RX1p	22	PORT_E_S7
12	RX1n	24	PORT_E_S9
13	PORT_E_REFCLK_P	26	PORT_E_TX3_P
14	PORT_E_REFCLK_N	28	PORT_E_TX3_N
15	REFCLKp	30	PORT_E_TX2_P
16	REFCLKn	32	PORT_E_TX2_N
17	PORT_E_S2	34	PORT_E_C2P_CLK_P
18	PORT_E_S4	36	PORT_E_C2P_CLK_N
19	S4	38	RSVD +3.3V
21	PORT_E_S6	40	
22	PORT_E_S8		
23	S6		
24	PORT_E_S2		
25	PORT_E_RX3_P		
26	PORT_E_RX3_N		
27	RX3p		
28	RX3n		
29	PORT_E_RX2_P		
30	PORT_E_RX2_N		
31	RX2p		
32	RX2n		
33	P2C_CLKp		
34	P2C_CLKn		
35	P2C_CLKp		
36	P2C_CLKn		
37	RSVD		
38	VIO		
39	VCCO_64_66		
40			

Additional connections shown in the diagram:

- Pin 39 is connected to VCCO_64_66.
- Pin 40 is connected to RSVD +3.3V.
- Pin 38 is connected to RSVD.
- Pin 37 is connected to RSVD.
- Pin 36 is connected to P2C_CLKn.
- Pin 35 is connected to P2C_CLKp.
- Pin 34 is connected to P2C_CLKn.
- Pin 33 is connected to P2C_CLKp.
- Pin 32 is connected to RX2n.
- Pin 31 is connected to RX2p.
- Pin 30 is connected to PORT_E_TX2_N.
- Pin 29 is connected to PORT_E_TX2_P.
- Pin 28 is connected to PORT_E_TX3_N.
- Pin 27 is connected to PORT_E_TX3_P.
- Pin 26 is connected to S9.
- Pin 25 is connected to S7.
- Pin 24 is connected to S6.
- Pin 23 is connected to S8.
- Pin 22 is connected to S4.
- Pin 21 is connected to S2.
- Pin 20 is connected to S5.
- Pin 19 is connected to S4.
- Pin 18 is connected to S3.
- Pin 17 is connected to S2.
- Pin 16 is connected to S1.
- Pin 15 is connected to S0.
- Pin 14 is connected to S0.
- Pin 13 is connected to S1.
- Pin 12 is connected to S1.
- Pin 11 is connected to S1.
- Pin 10 is connected to S1.
- Pin 9 is connected to S1.
- Pin 8 is connected to S1.
- Pin 7 is connected to S1.
- Pin 6 is connected to S1.
- Pin 5 is connected to S1.
- Pin 4 is connected to S1.
- Pin 3 is connected to S1.
- Pin 2 is connected to S1.
- Pin 1 is connected to S1.

GTH Transceivers

IPMI EEPROM

U2: M24256-DFM6NTP

Connections:

- EEPROM_A0 (Pin 1) to A0 (Pin 8) via R6 (0Ω)
- EEPROM_A1 (Pin 2) to A1 (Pin 9) via R7 (0Ω)
- EEPROM_A2 (Pin 3) to A2 (Pin 10) via R8 (0Ω)
- FX3_SCL 1V8 (Pin 6) to SCL (Pin 5)
- FX3_SDA 1V8 (Pin 7) to SDA (Pin 4)
- WP (Pin 7) to GND (Pin 4)

Power and Grounding:

- +1.8V supply connected to VCC (Pin 8) and GND (Pin 4) via capacitor C27 (0.1μF).
- DGND connected to GND (Pin 4).

Notes:

- Resistors R3, R5, and R9 are marked with a red 'X', indicating they are not required.
- IPMI address: A[2:0] = 3'b001

A

B

C

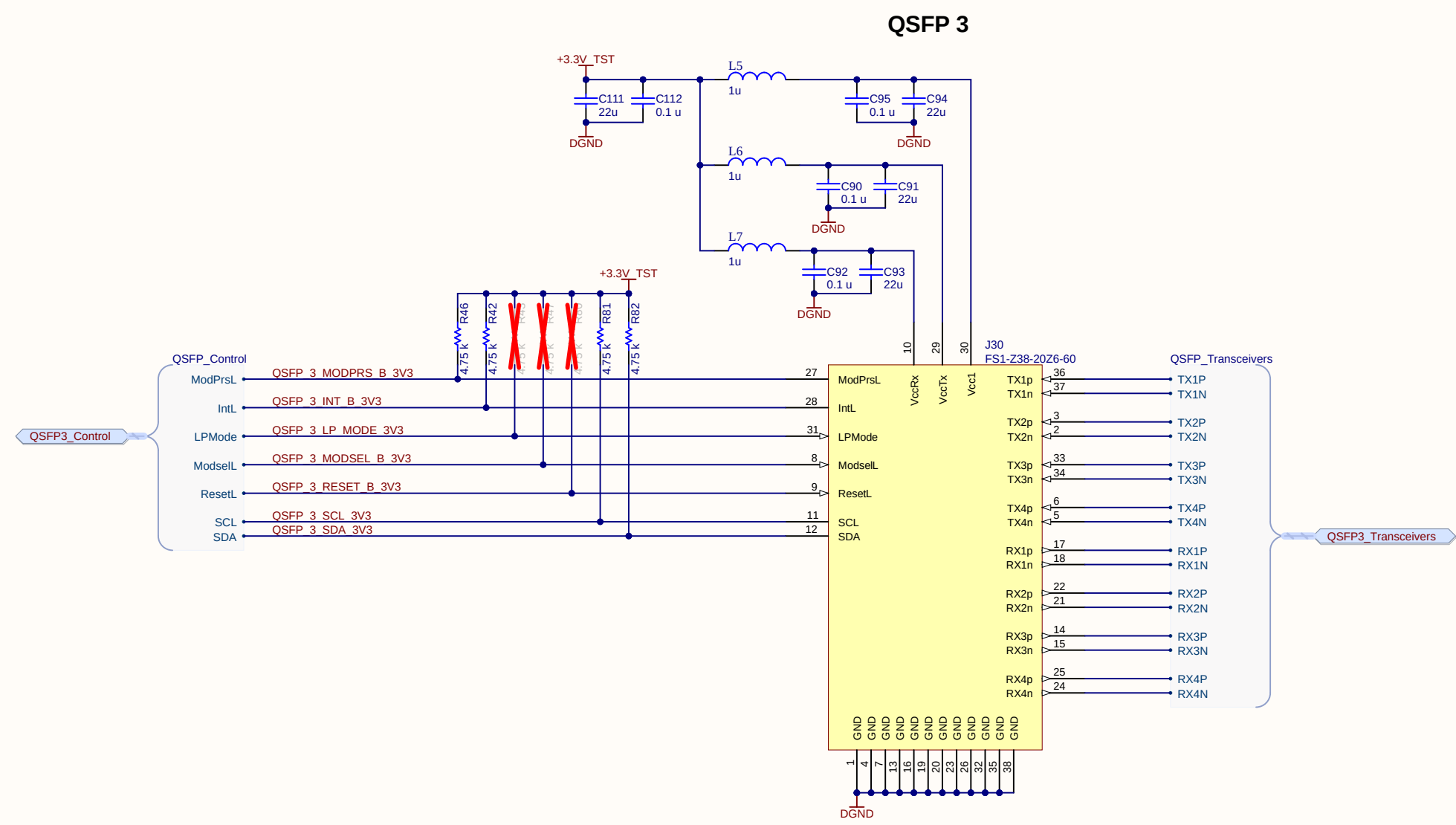
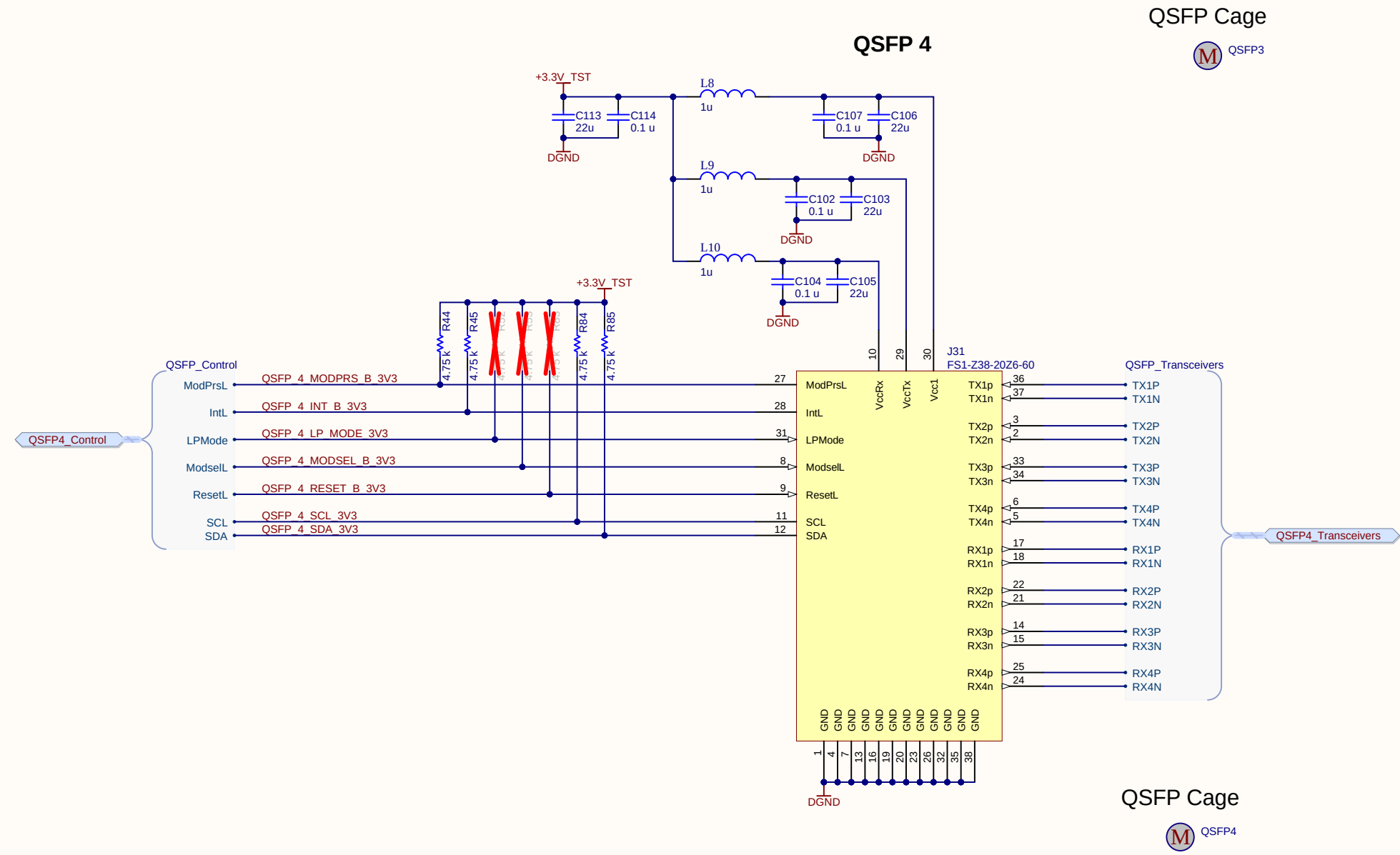
D

A

B

C

D



A

B

C

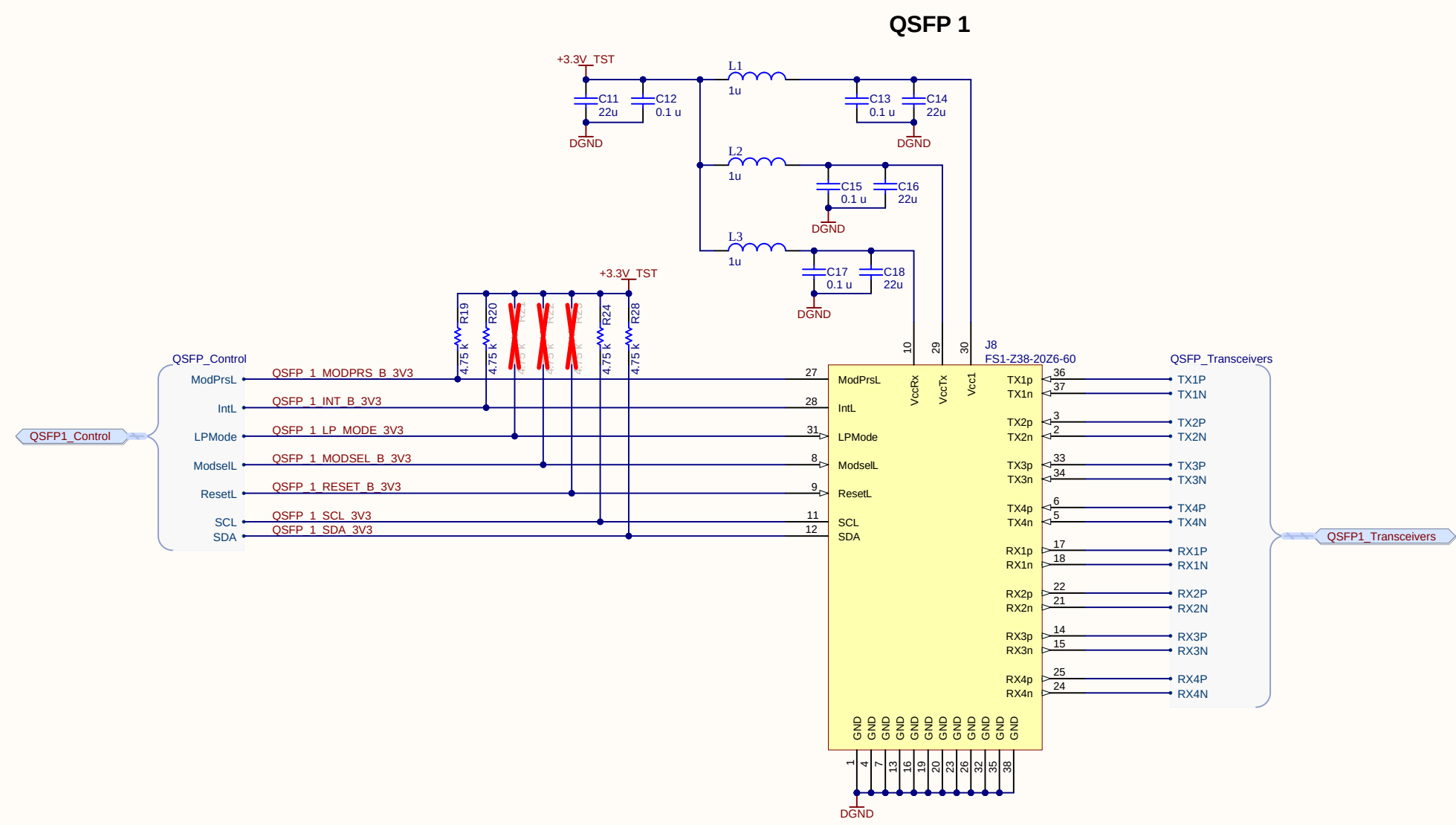
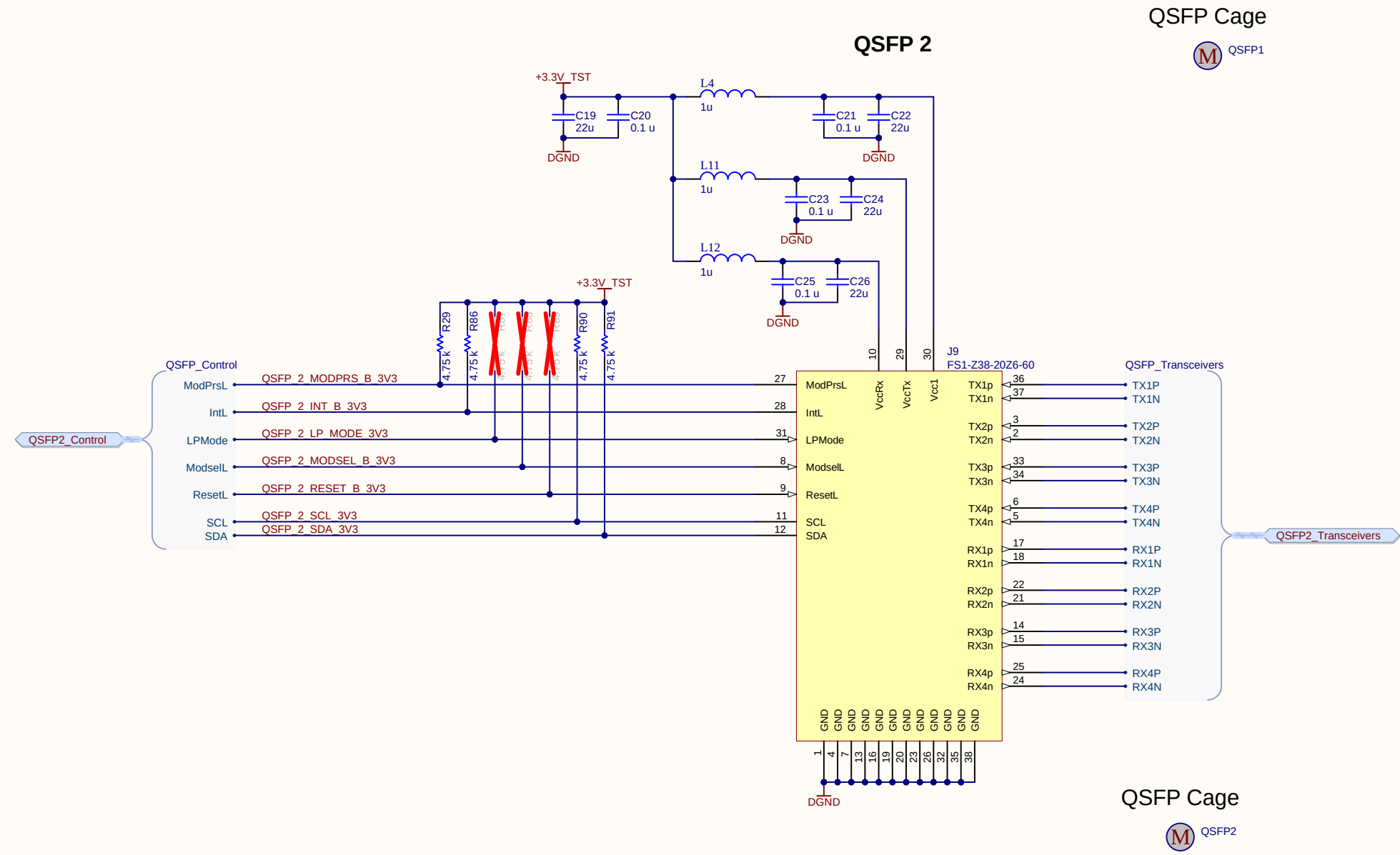
D

A

B

C

D



QSFP Cage

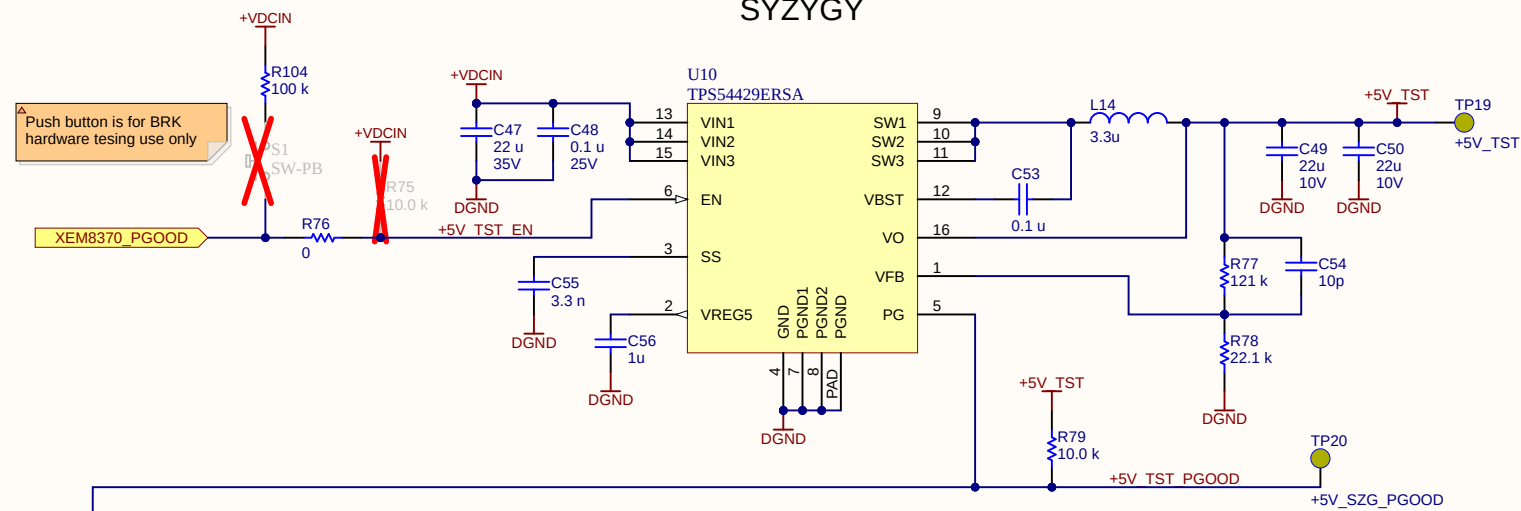


QSFP Cage



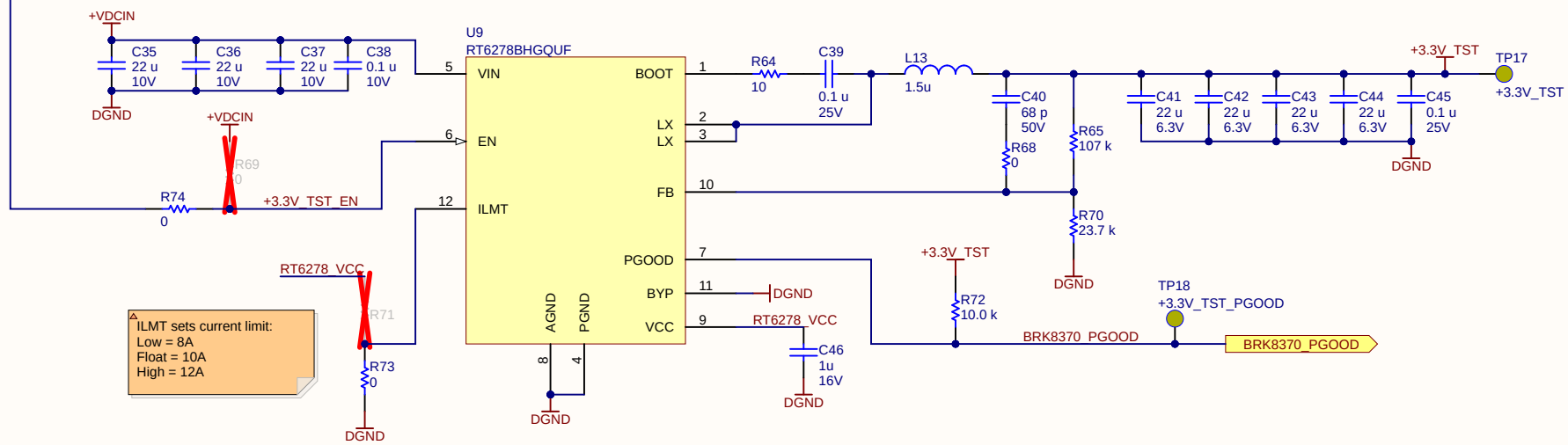
5V TST Regulator 4.5A

SYZGY



3.3V TST Regulator 7A

QSFP, SYZGY



JTAG
USB Type C Connector

