



Sheet: Power

OBC_1V2_P_PG
OBC_1V2_R_PG

File: Power.sch

Sheet: TMS570 uC

OBC_1V2_P_PG
OBC_1V2_R_PG

Sheet: Supervisor_RTC_FRAM

SPVSR_COPID
SPVSR_CIPID
SPVSR_CLK
SPVSR_nCS
SPVSR_ACSD
SPVSR_nRSTD
SPVSR_CNT

File: Supervisor_RTC_FRAM.sch

Sheet: CAN_XCVR_PL

CAN_PL_Rs
CAN_PL_DD
CAN_PL_R

File: CAN_XCVR.sch

Sheet: CAN_XCVR_R

CAN_PL_Rs
CAN_PL_DD
CAN_PL_R

File: CAN_XCVR.sch

Sheet: CAN_XCVR_PA

CAN_PL_Rs
CAN_PL_DD
CAN_PL_R

File: CAN_XCVR.sch

Sheet: Connectors

OBC_SDA
OBC_SCL
ADS_nRST

CAN_H_PL
CAN_L_PL

CAN_H_R
CAN_L_R

CAN_H_PA
CAN_L_PA

GPS_STS
GPS_P1PPS

GPS_nRST
GPS_RXD0

GPS_TXD0

File: Connectors.sch

Sheet: FRAM_1

FRAM_1_CIPID
FRAM_1_COPID
FRAM_1_CLKD
FRAM_1_nCS

File: FRAM_BMBit.sch

Sheet: FL_1

FL_1_nCS1D
FL_1_nCS2D
FL_1_CLKD

FL_1_nRESETD

FL_1_SL_I00D

FL_1_SO_I01D

FL_1_nHOLD_I03D

File: FL_1Gbit.sch

Sheet: SDRAM_1

DQ[0:15]
BA[0:1]
A[0:12]

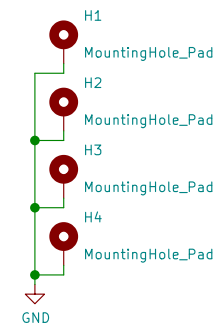
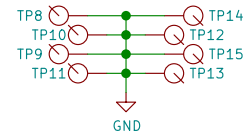
SDRAM_1_DQMHD
SDRAM_1_DQMLD
SDRAM_1_CLKD
SDRAM_1_CKED
SDRAM_1_nCASD
SDRAM_1_nRASD
SDRAM_1_nWED
SDRAM_1_nCSD

SDRAM_1_DQMML
SDRAM_1_DQML
SDRAM_1_CLK
SDRAM_1_CKE
SDRAM_1_nCAS
SDRAM_1_nRAS
SDRAM_1_nWE
SDRAM_1_nCS

SDRAM_1_nCAS
SDRAM_1_nRAS
SDRAM_1_nWE
SDRAM_1_nCS

File: SDRAM_128Mbit.sch

File: TMS570_uC.sch



Licensed under CERN OHLv2-Strong

(c) The Flame Trench 2021

Status: PROTOTYPE

Drawn by: Ben Cartwright

The Flame Trench

Sheet: /

File: OBC-1.sch

Title: Singularity OBC – Top Level Architecture

Size: A4

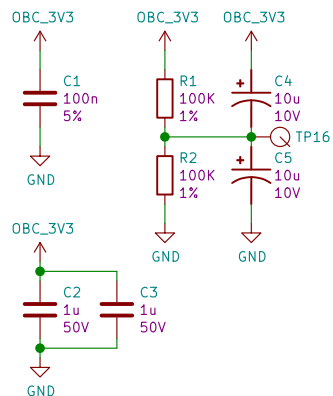
Date: 2021-03-24

KiCad E.D.A. kicad (5.1.9)-1

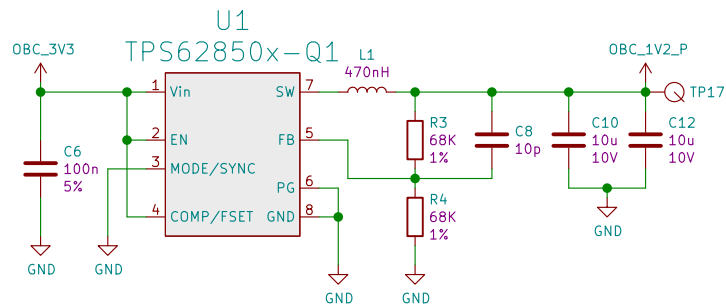
Rev: PROTO_A

Id: 1/11

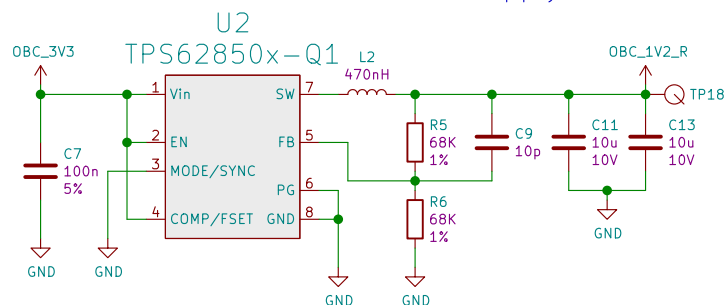
Bulk decoupling



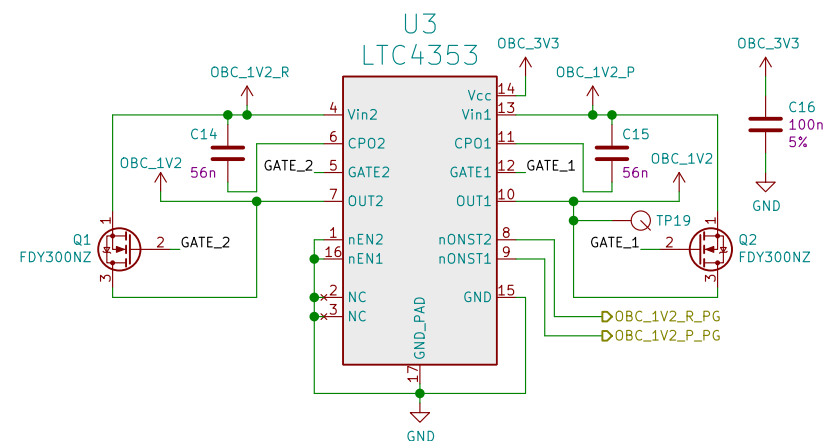
OBC 1V2 Core Primary Supply



OBC 1V2 Core Redundant Supply



OBC 1V2 Core Supply ORing



Licensed under CERN OHLv2-Strong

(c) The Flame Trench 2021

Status: PROTOTYPE

Drawn by: Ben Cartwright

The Flame Trench

Sheet: /Power/

File: Power.sch

Title: Singularity OBC – Power Conditioning

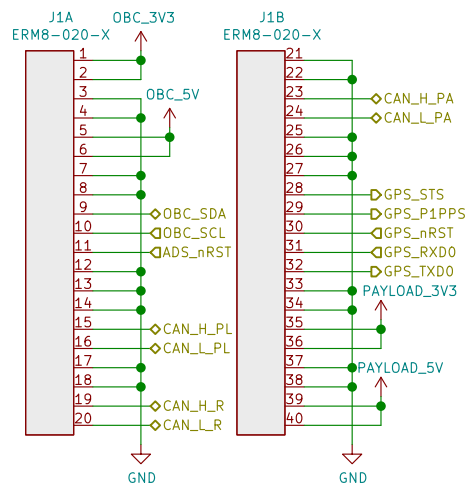
Size: A4 Date: 2021-03-24

KiCad E.D.A. kicad (5.1.9)-1

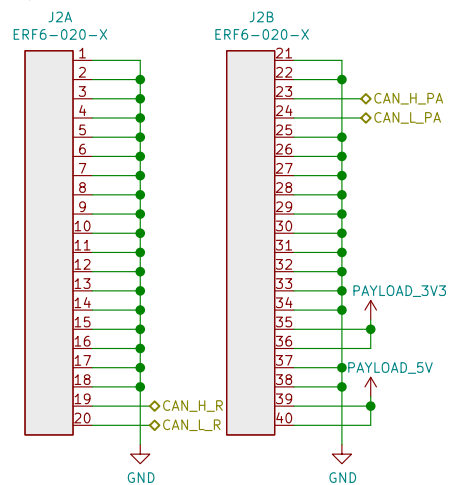
Rev: PROTO_A

Id: 2/11

RFS Connector



Payload Connector



Licensed under CERN OHLv2-Strong

(c) The Flame Trench 2021

Status: PROTOTYPE

Drawn by: Ben Cartwright

The Flame Trench

Sheet: /Connectors/

File: Connectors.sch

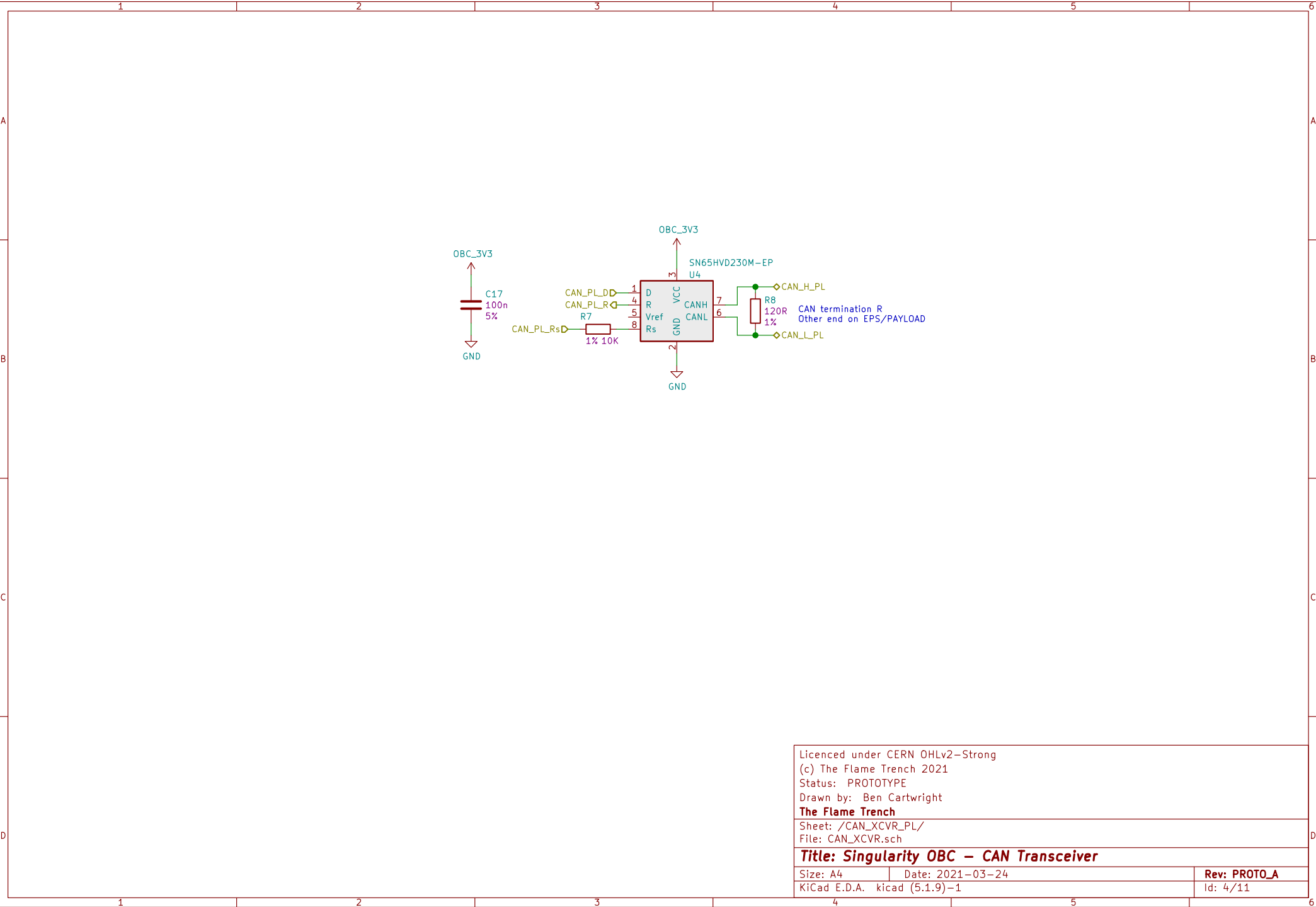
Title: Singularity OBC – Connectors

Size: A4 Date: 2021-03-24

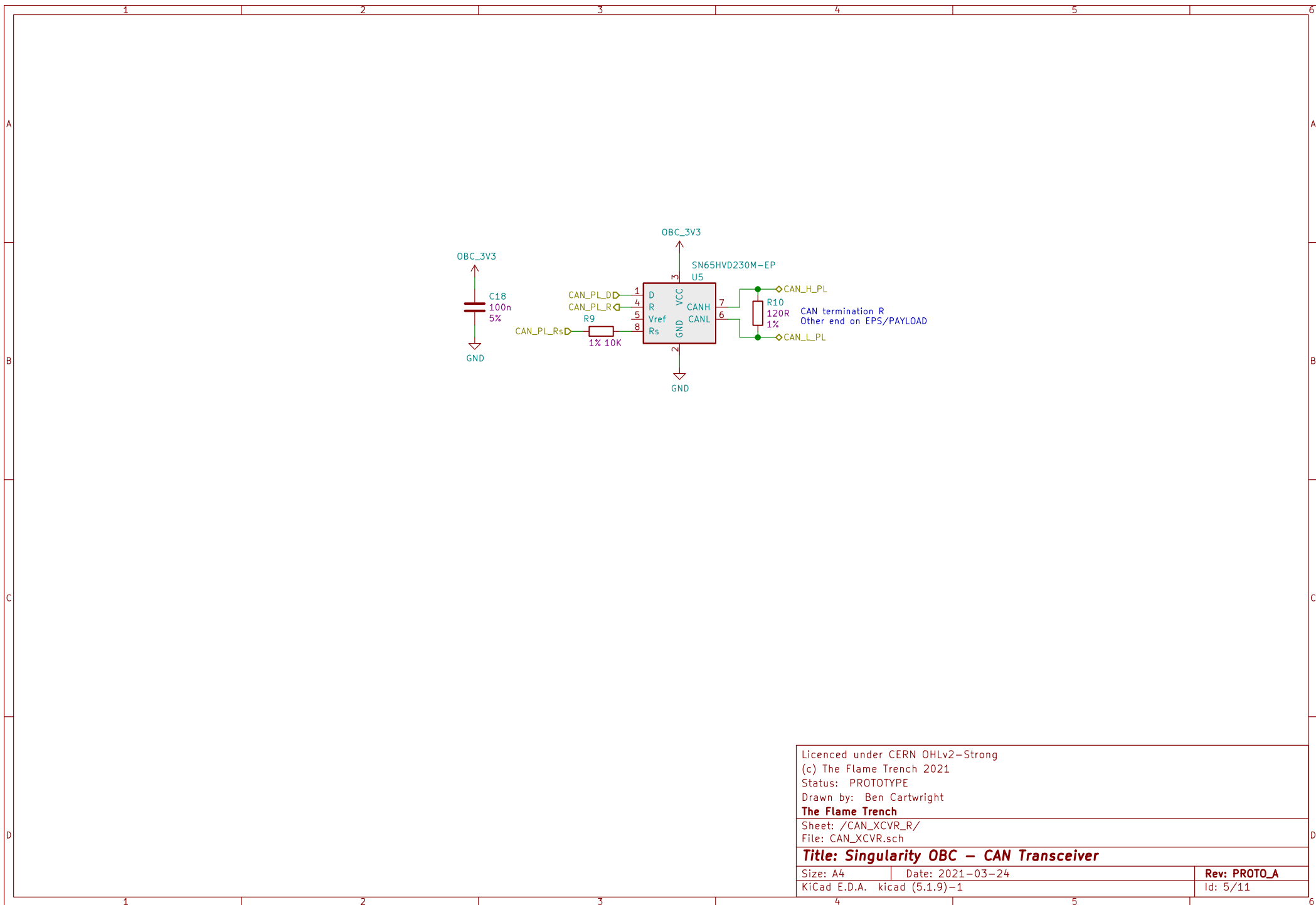
KiCad E.D.A. kicad (5.1.9)-1

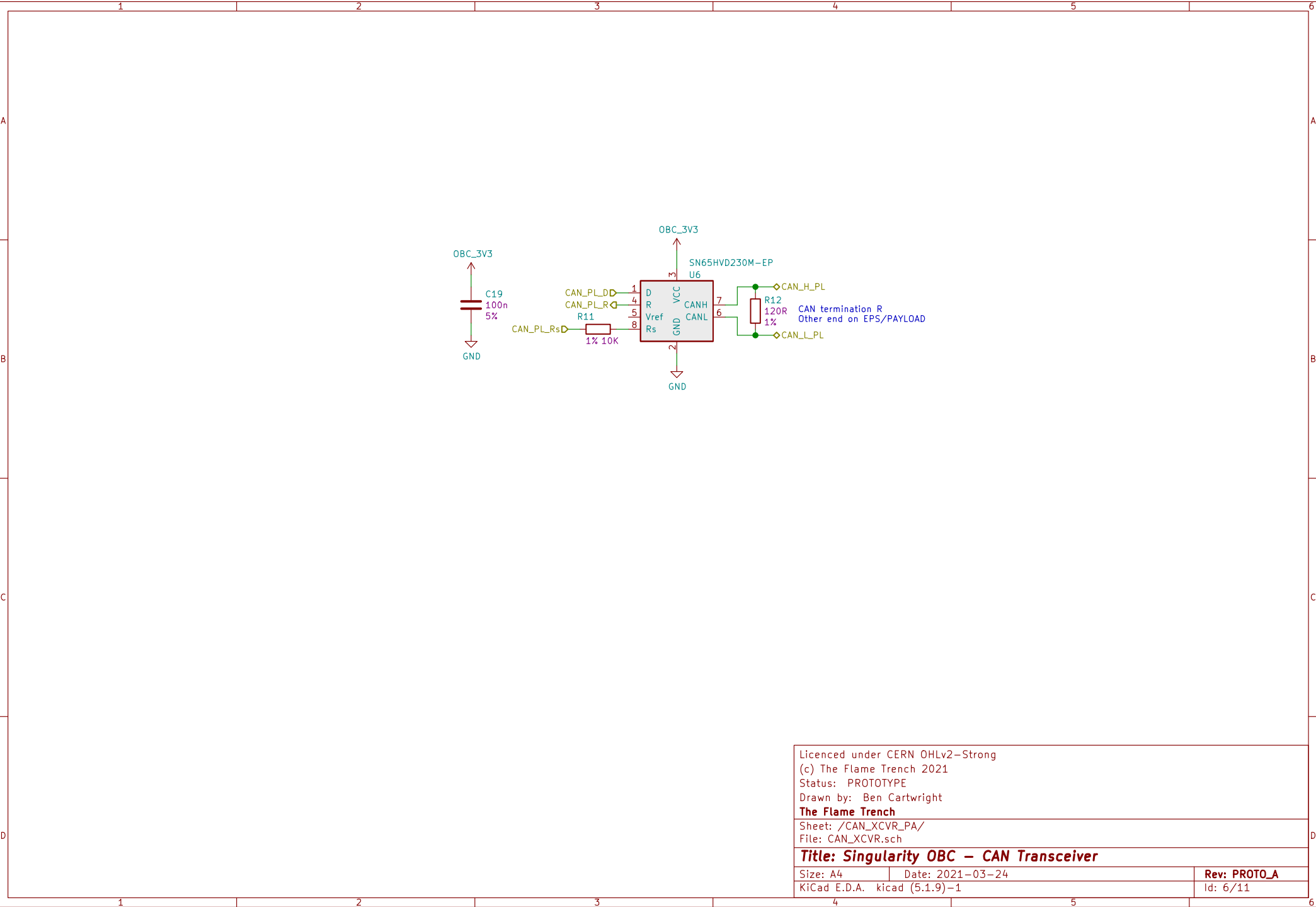
Rev: PROTO_A

Id: 3/11

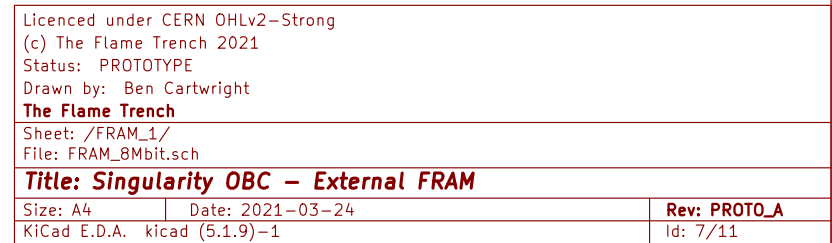


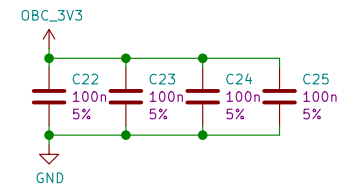
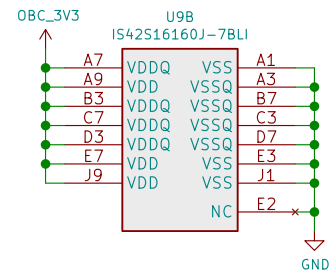
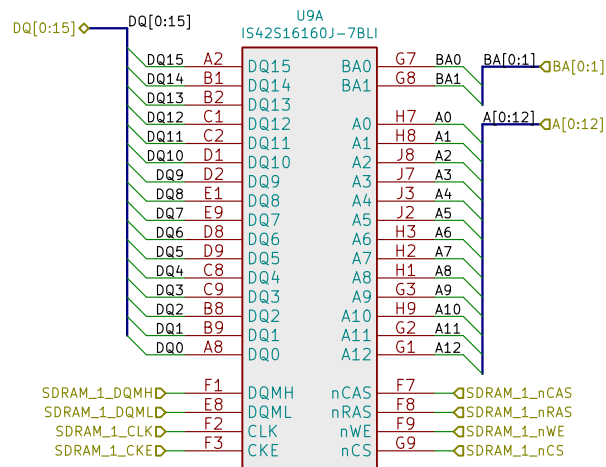
Licenced under CERN OHLv2-Strong		
(c) The Flame Trench 2021		
Status: PROTOTYPE		
Drawn by: Ben Cartwright		
The Flame Trench		
Sheet: /CAN_XCVR_PL/		
File: CAN_XCVR.sch		
Title: Singularity OBC – CAN Transceiver		
Size: A4	Date: 2021-03-24	Rev: PROTO_A
KiCad E.D.A. kicad (5.1.9)-1		Id: 4/11





Licenced under CERN OHLv2-Strong		
(c) The Flame Trench 2021		
Status: PROTOTYPE		
Drawn by: Ben Cartwright		
The Flame Trench		
Sheet: /CAN_XCVR_PA/		
File: CAN_XCVR.sch		
Title: Singularity OBC – CAN Transceiver		
Size: A4	Date: 2021-03-24	Rev: PROTO_A
KiCad E.D.A. kicad (5.1.9)-1		Id: 6/11





Licensed under CERN OHLv2-Strong

(c) The Flame Trench 2021

Status: PROTOTYPE

Drawn by: Ben Cartwright

The Flame Trench

Sheet: /SDRAM_1/

File: SDRAM_128Mbit.sch

Title: Singularity OBC - External SDRAM

Size: A4 Date: 2021-03-24

KiCad E.D.A. kicad (5.1.9)-1

Rev: PROTO_A

Id: 9/11

