

OSMEVK 1.0

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Revision History

Revision	Date	Changes
1.0	07.11.2023	Initial release

OSMEVK

Sheet: TITLE PAGE

Variant: ASM_1

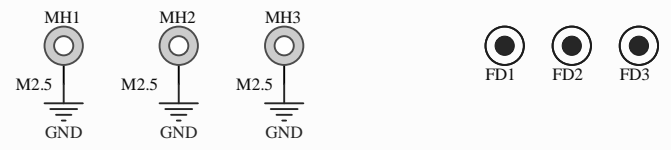
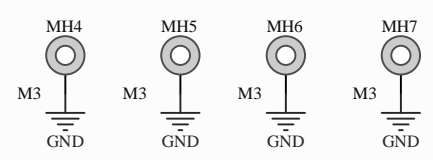
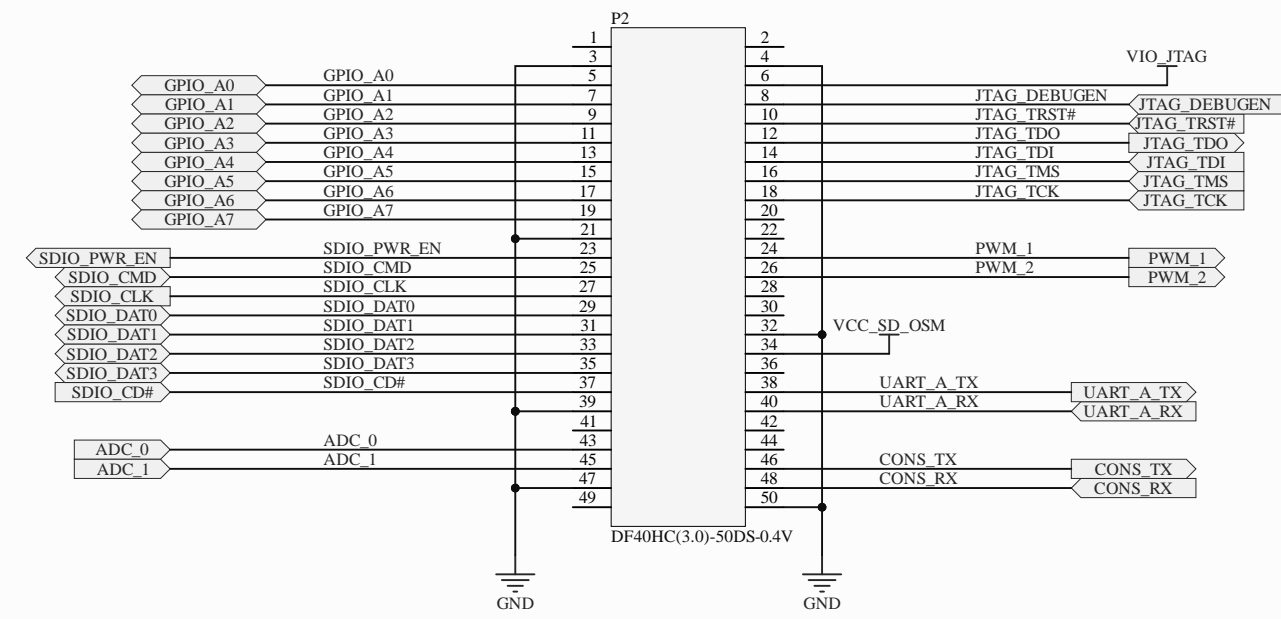
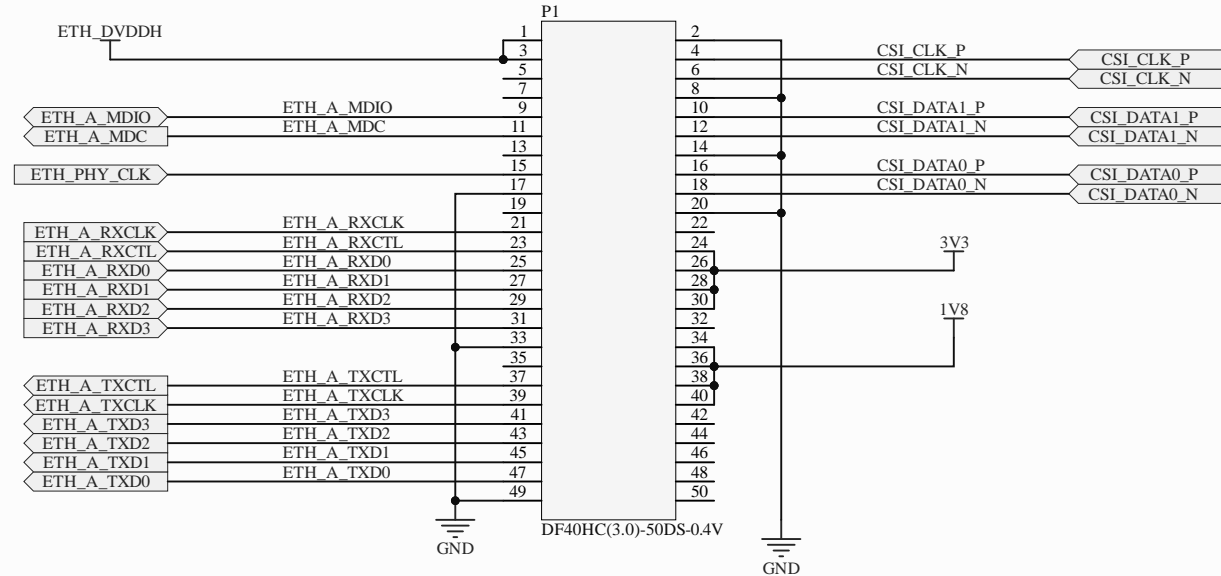
Number 1

Revision: 1.0 Sheet 1 of 15

Date: 07.11.2023



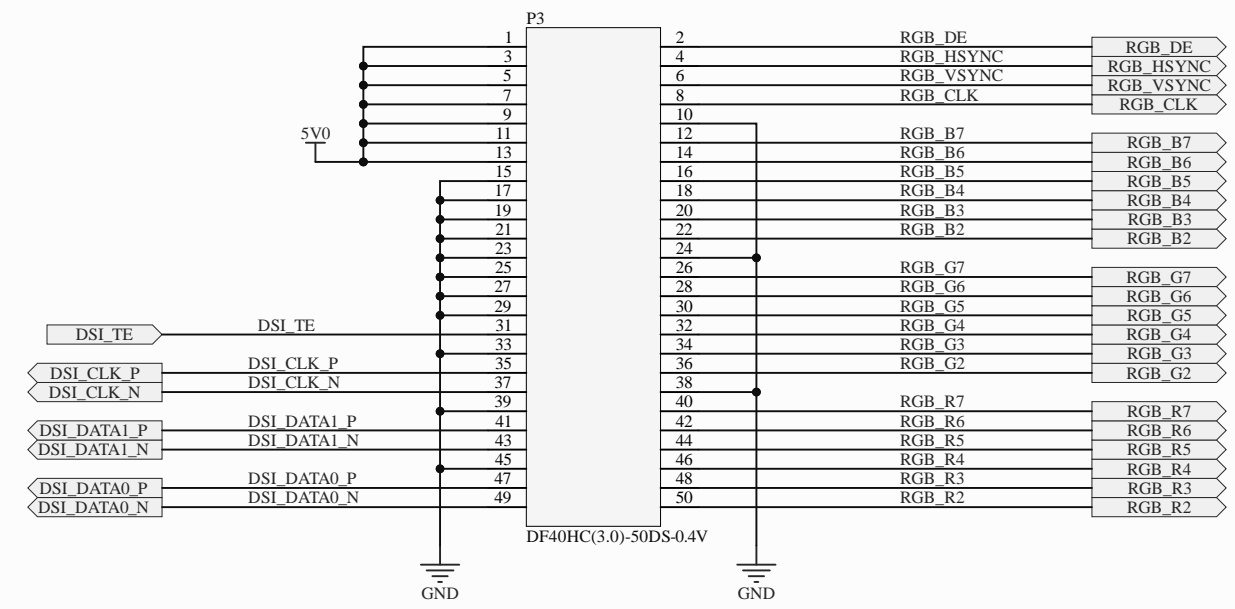
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Sheet: CONNECTOR TOP		
Variant: ASM_1		
Number 2		
Revision: 1.0	Sheet 2 of 15	
Date: 07.11.2023		

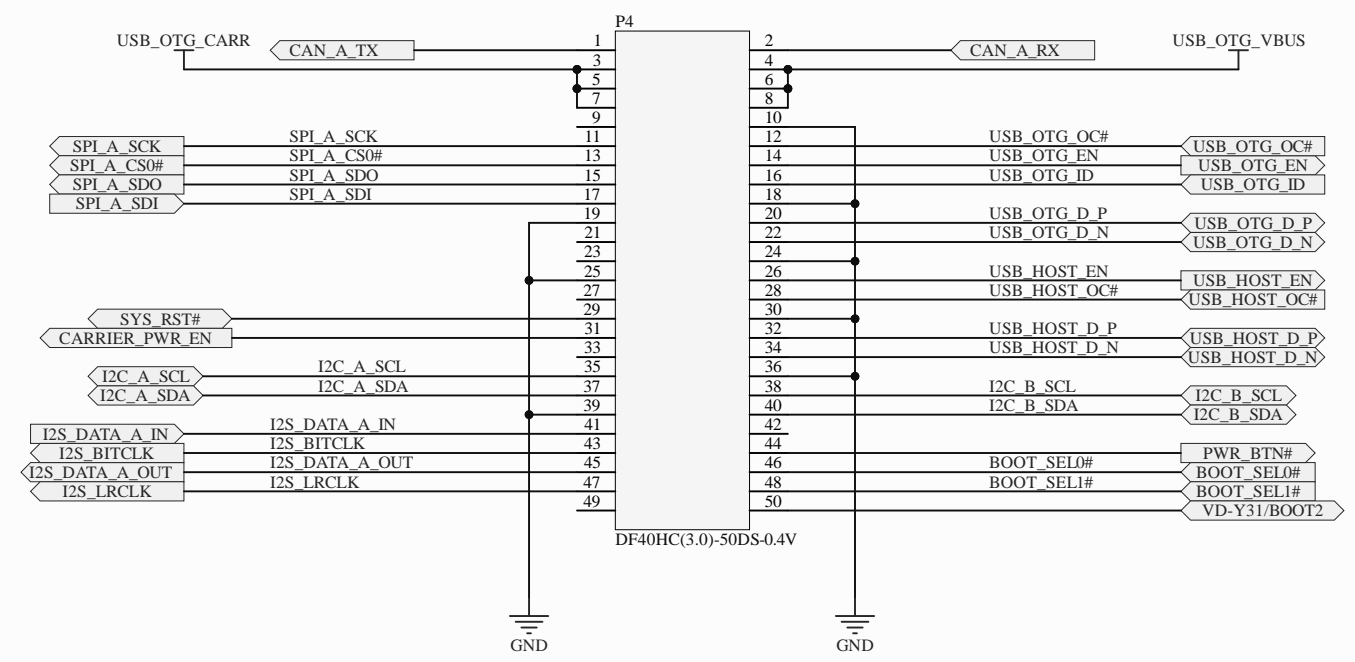
A

A



B

B




C

C

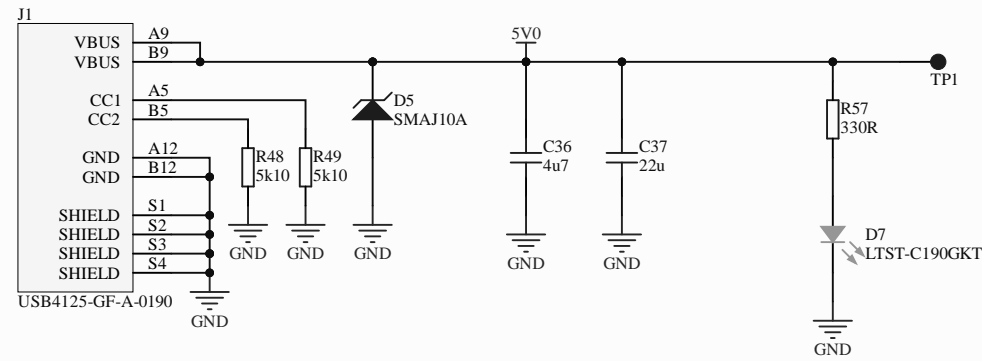
D

D

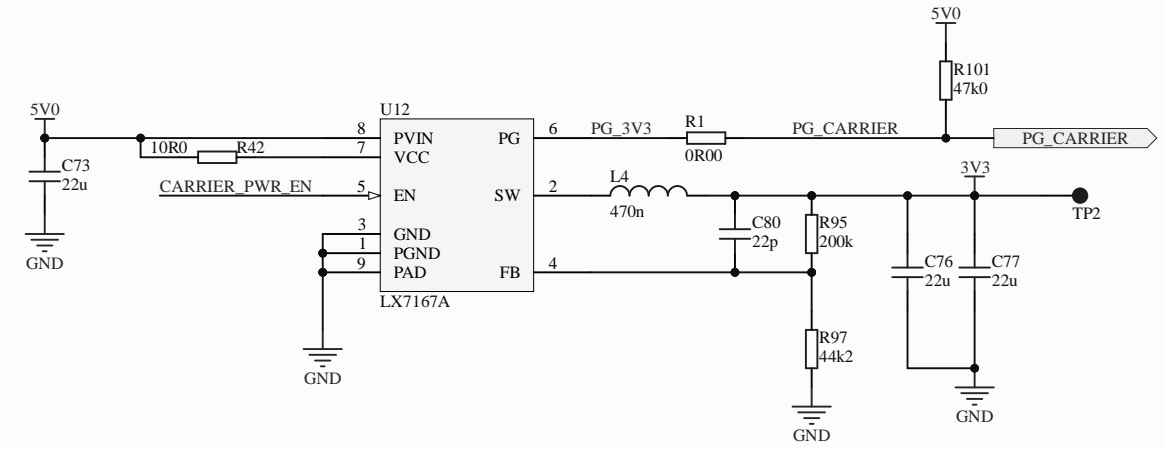
OSMEVK		 aries embedded GmbH Schöngesinger Straße 84 D-82256 Fürstenfeldbruck Tel. +49 (0)8141 36367-0 web: www.aries-embedded.de
Sheet:	CONNECTOR BOTTOM	
Variant:	ASM_1	
Number	3	
Revision:	1.0	
Date:	07.11.2023	Sheet 3 of 15

POWER

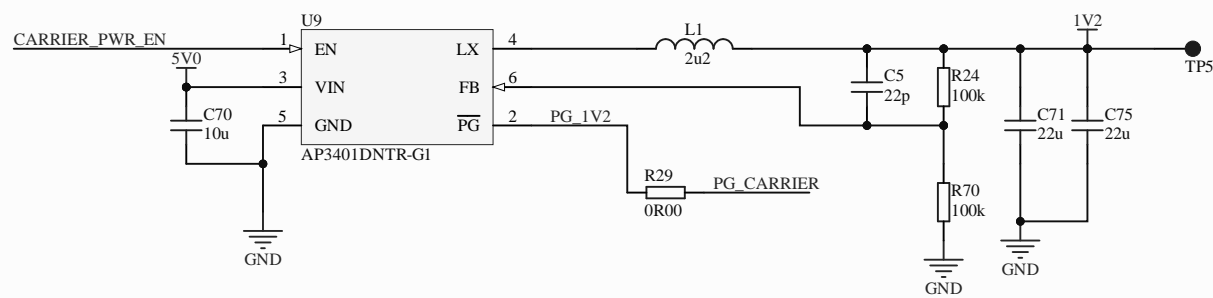
Power input 5V/3A



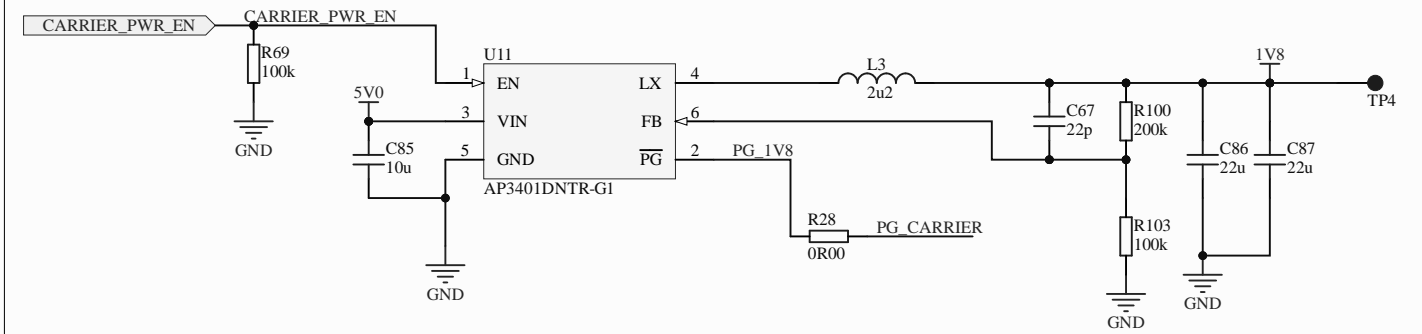
3.3V power supply



1.2V power supply



1.8V power supply



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Sheet: POWER

Variant: ASM_1

Number 4

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ETHERNET

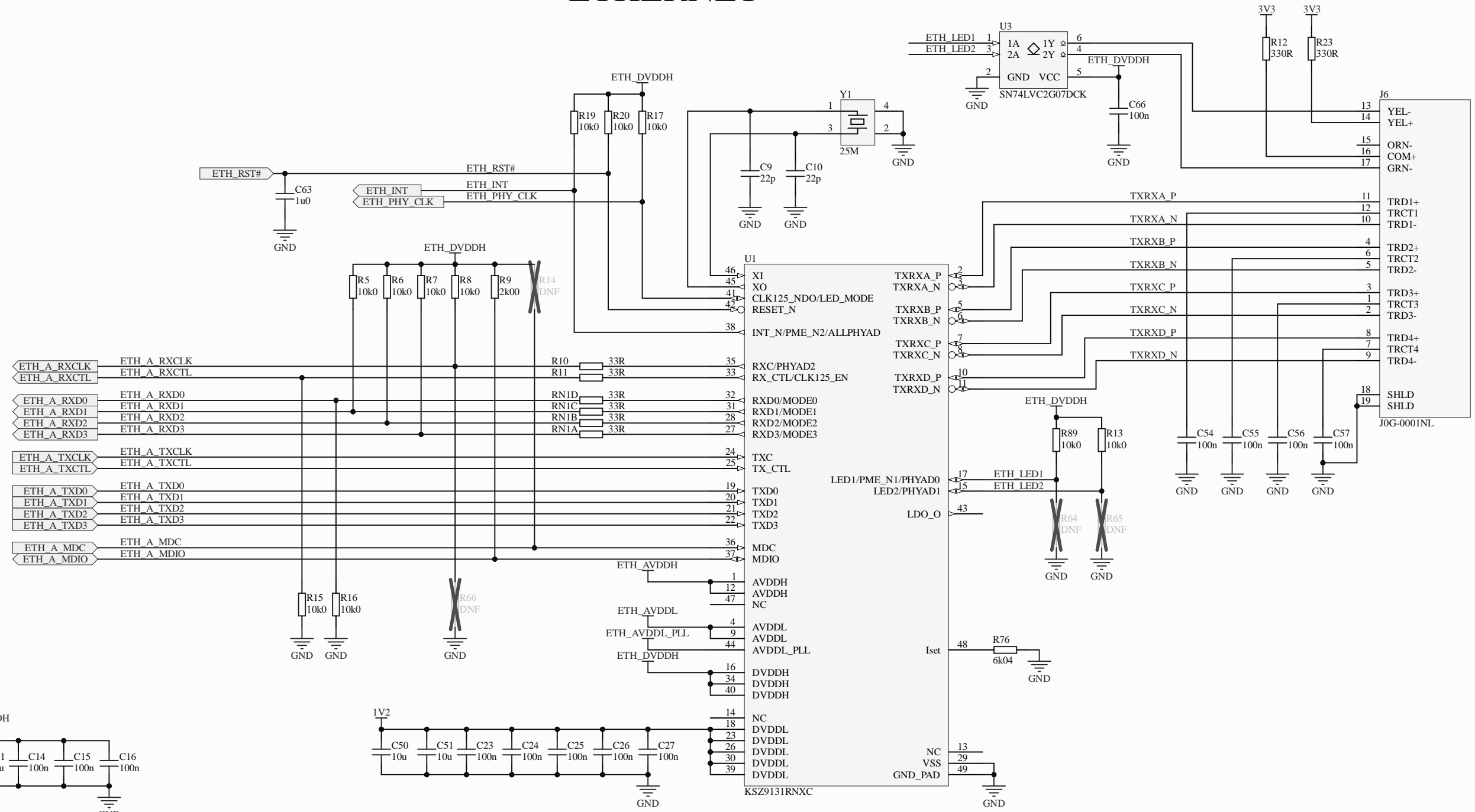
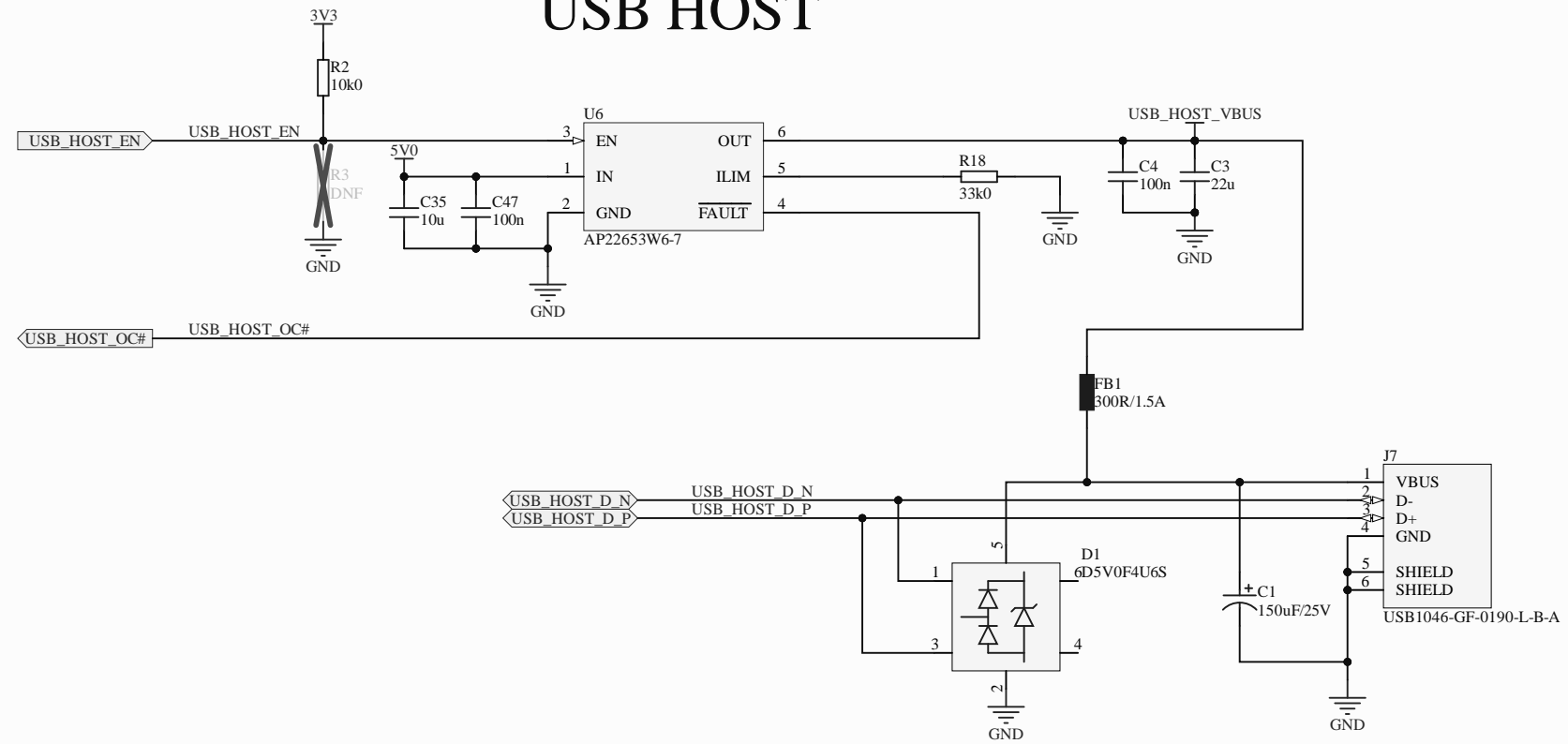


TABLE 3-8: DEVICE MODE SELECTIONS

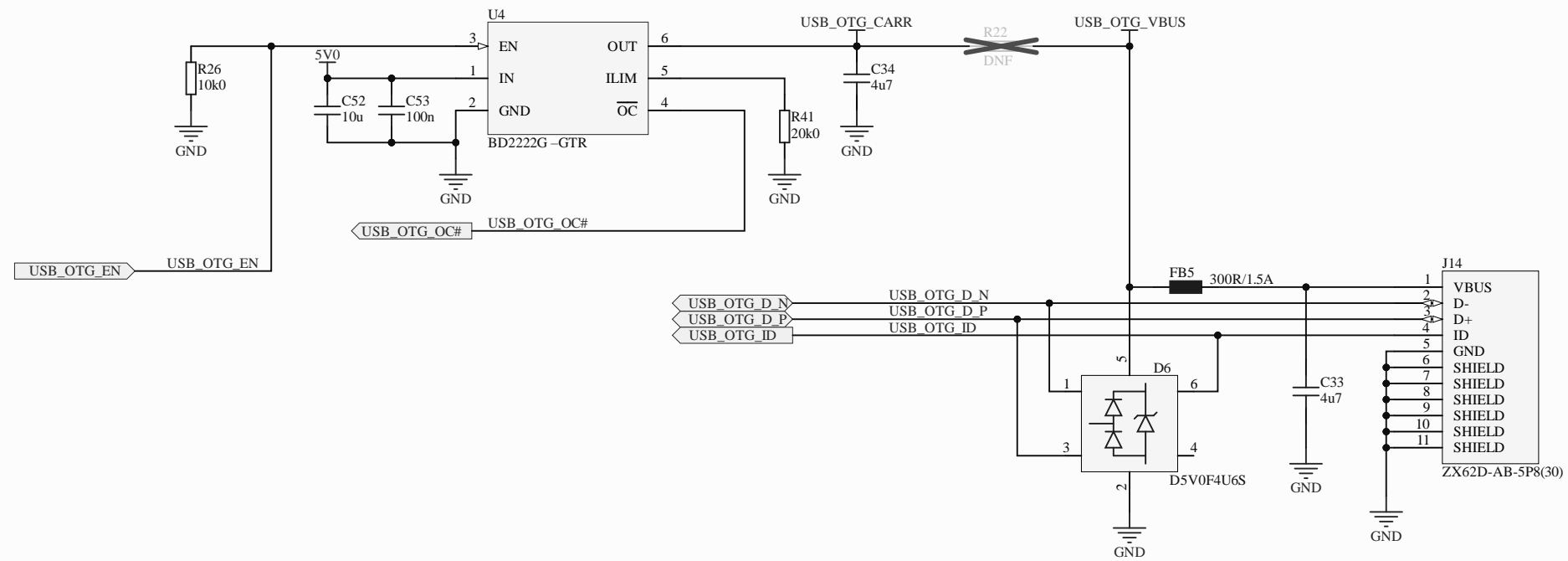
MODE[3:0]	Mode	Pin 17 Function	Pin 38 Function	Functional Modes			
				1000BT Full Duplex	1000BT Half Duplex	10/100BT Full Duplex	10/100BT Half Duplex
0000	RESERVED			-	-	-	-
0001	RESERVED			-	-	-	-
1000	RGMI	LED1 (PME_N1)		no	no	yes	yes
1001	RESERVED			-	-	-	-
1010	RGMI		INT_N (PME_N2)	no	no	yes	yes
1011	RESERVED			-	-	-	-
1100	RGMI			yes	no	no	no
1101	RESERVED			-	-	-	-
1110	RGMI			yes	no	yes	yes
1111	RESERVED			-	-	-	-

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Sheet: ETHERNET		
Variant: ASM_1		
Number 5		
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Date: 07.11.2023		

USB HOST



USB OTG



OSMEVK

Sheet: USB

Variant: ASM_1

Number 6

Revision: 1.0

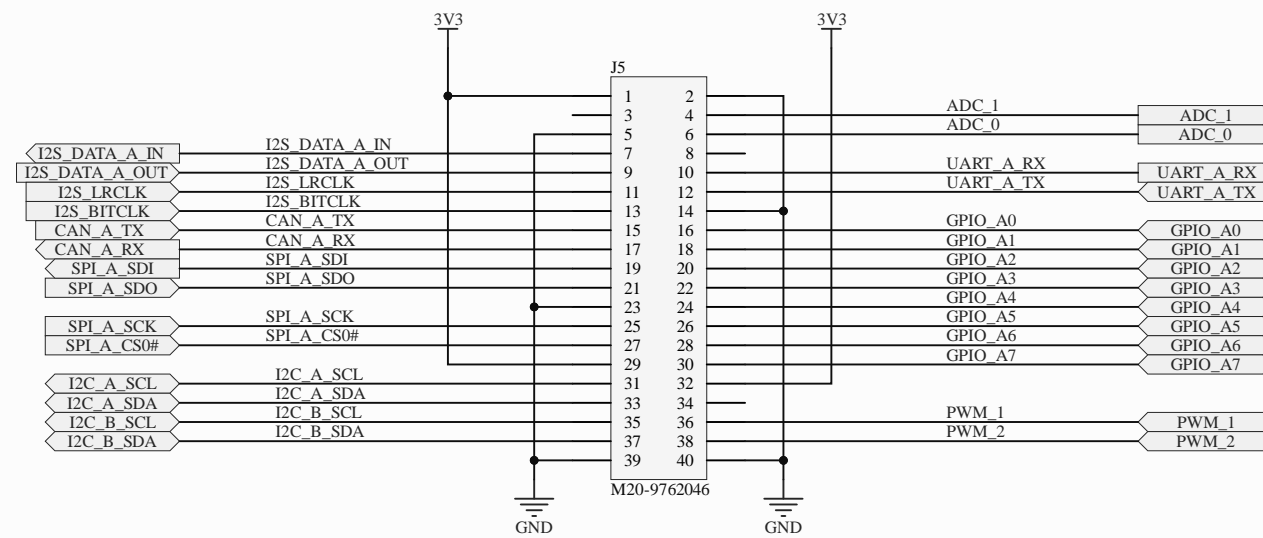
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GPIO HEADER



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Sheet: HEADERINTERFACES

Variant: ASM_1

Number 8

Revision: 1.0

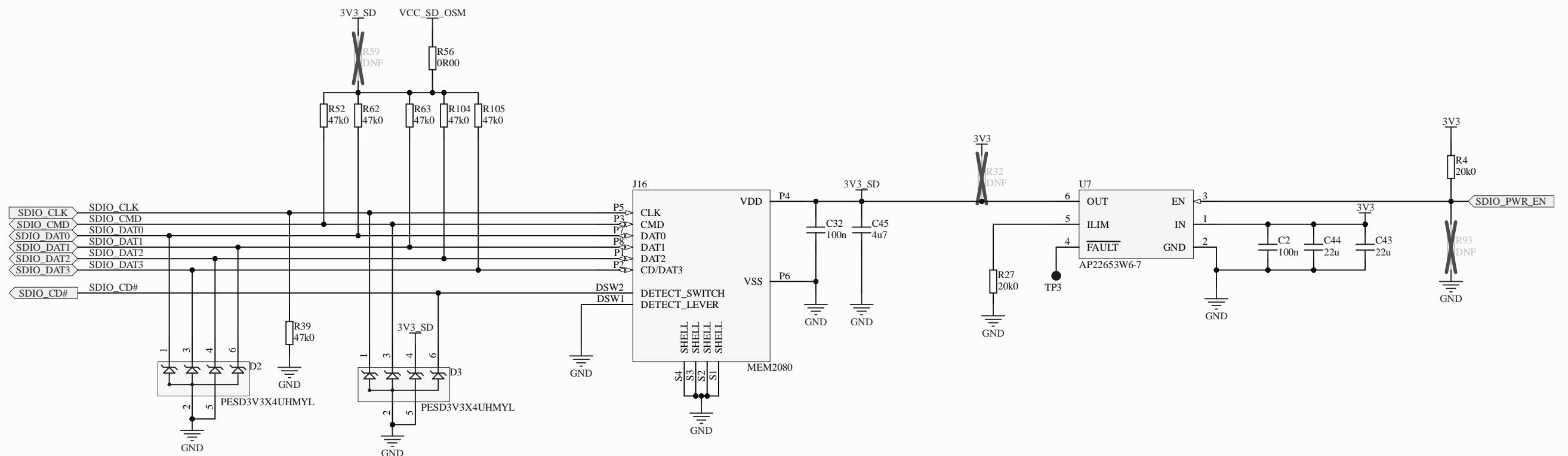
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SD CARD



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Sheet: SDCARD

Variant: ASM_1

Number 10

Revision: 1.0

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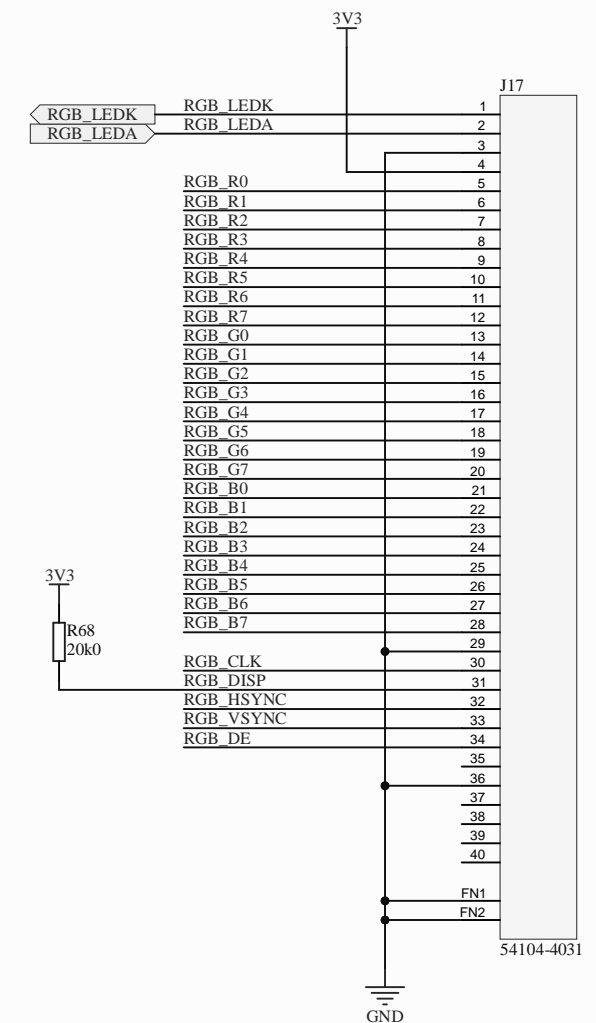
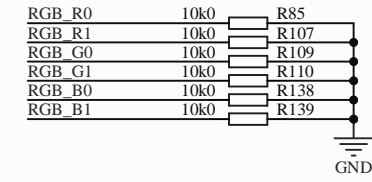
Date: 07.11.2023



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RGB DISPLAY

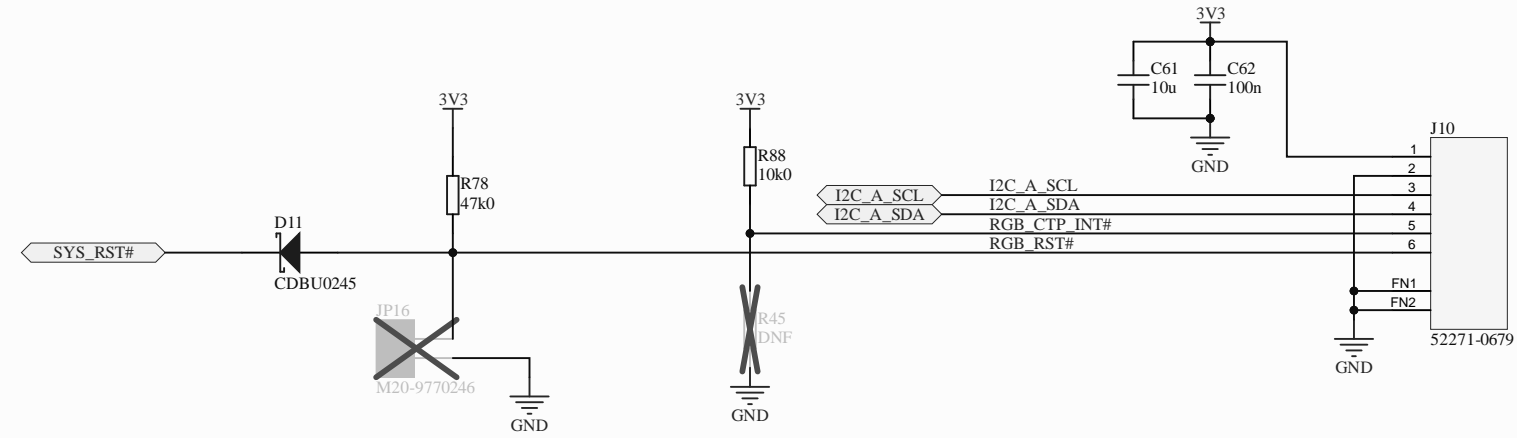
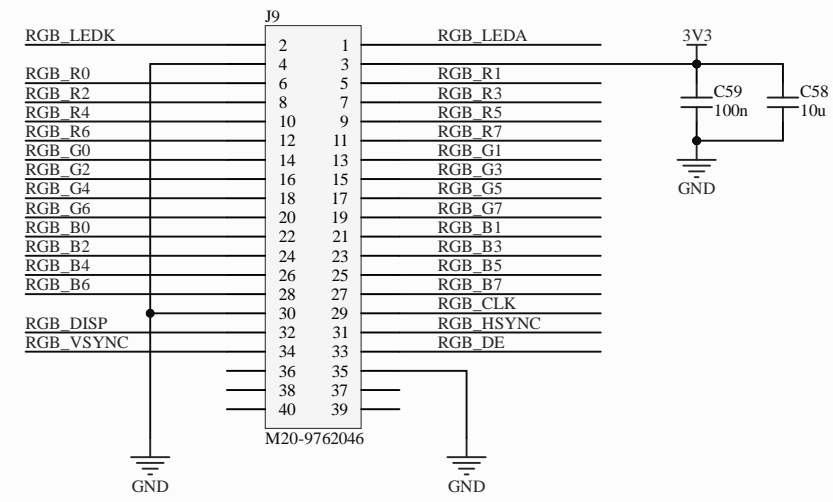
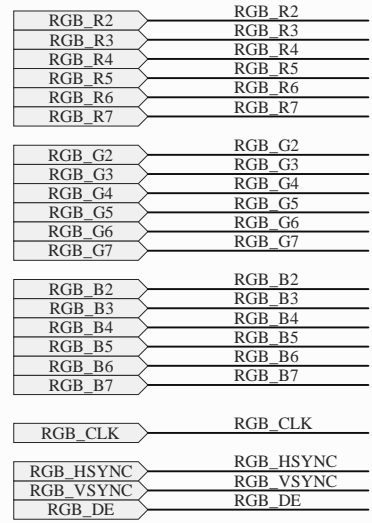
NHD-7.0-800480EF-ATXL#-CTP DISPLAY - capacitive TFT
NHD-7.0-800480EF-ASXN#-CTP



PIN	SYMBOL
1	LED-K
2	LED-A
3	GND
4	VDD
5	R0
6	R1
7	R2
8	R3
9	R4
10	R5
11	R6
12	R7
13	G0
14	G1
15	G2
16	G3
17	G4
18	G5
19	G6
20	G7
21	B0
22	B1
23	B2
24	B3
25	B4
26	B5
27	B6
28	B7
29	GND
30	DCCLK
31	DISP
32	HSYNC
33	VSYNC
34	DEN
35	NC
36	GND
37	NC(XR)
38	NC(YD)
39	NC(XL)
40	NC(YU)

PIN	SYMBOL
1	VDD
2	GND
3	SCL
4	SDA
5	INT
6	RESET

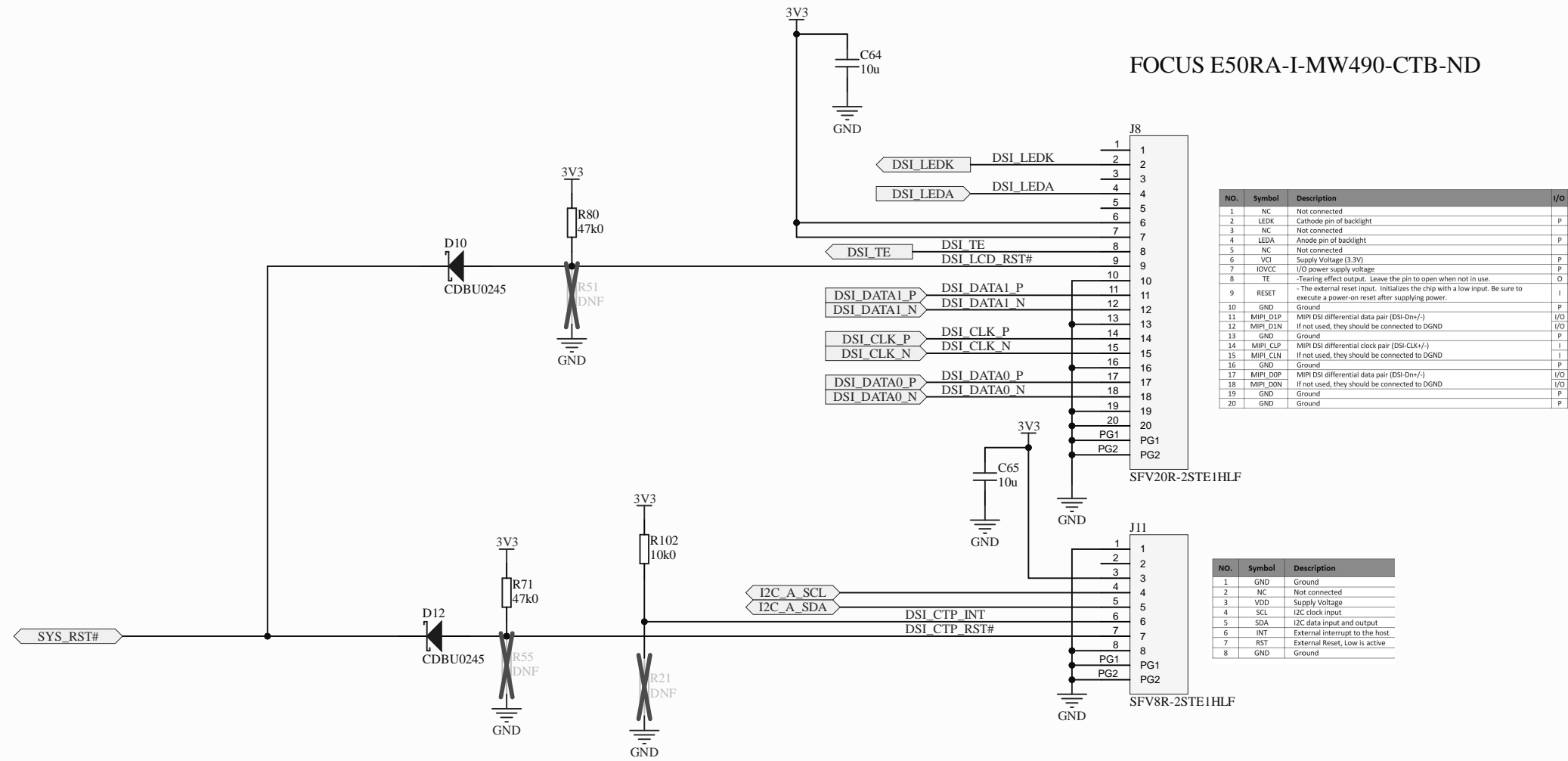
from OSM module



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Sheet: RGB DISPLAY		
Variant: ASM_1		
Number 11		
Revision: 1.0	Sheet 11 of 15	
Date: 07.11.2023		

DSI DISPLAY

FOCUS E50RA-I-MW490-CTB-ND



NO.	Symbol	Description	I/O
1	NC	Not connected	
2	LEDK	Cathode pin of backlight	P
3	NC	Not connected	
4	LEDA	Anode pin of backlight	P
5	NC	Not connected	
6	VCI	Supply Voltage (3.3V)	P
7	IOVCC	I/O power supply voltage	P
8	TE	-Tearing effect output. Leave the pin to open when not in use.	O
9	RESET	- The external reset input. Initializes the chip with a low input. Be sure to execute a power-on reset after supplying power.	I
10	GND	Ground	P
11	MIP1_D1P	MIP1 DSI differential data pair (DSI-Dn+/-)	I/O
12	MIP1_D1N	If not used, they should be connected to DGND	I/O
13	GND	Ground	P
14	MIP1_CLP	MIP1 DSI differential clock pair (DSI-CLK+/-)	I
15	MIP1_CLN	If not used, they should be connected to DGND	I
16	GND	Ground	P
17	MIP1_D0P	MIP1 DSI differential data pair (DSI-Dn+/-)	I/O
18	MIP1_D0N	If not used, they should be connected to DGND	I/O
19	GND	Ground	P
20	GND	Ground	P

NO.	Symbol	Description
1	GND	Ground
2	NC	Not connected
3	VDD	Supply Voltage
4	SCL	I2C clock input
5	SDA	I2C data input and output
6	INT	External interrupt to the host
7	RST	External Reset, Low is active
8	GND	Ground

OSMEVK

Sheet: DSI DISPLAY

Variant: ASM_1

Number 12

Revision: 1.0

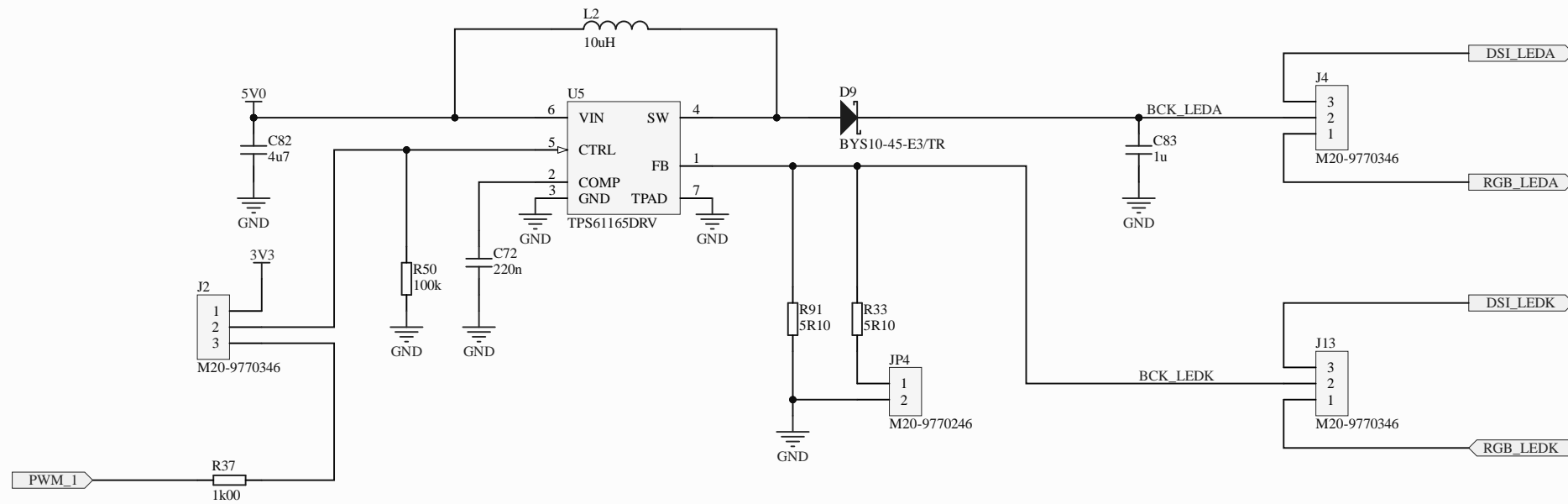
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LED BACKLIGHT



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Sheet: LCD Backlight

Variant: ASM_1

Number 13

Revision: 1.0

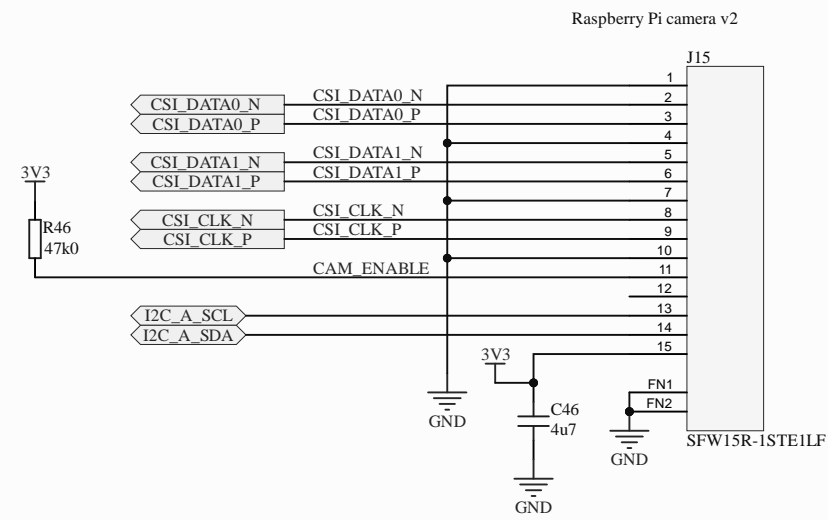
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CSI CAMERA



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Sheet: CAMERA

Variant: ASM_1

Number 14

Revision: 1.0

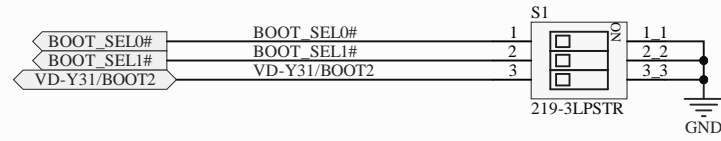
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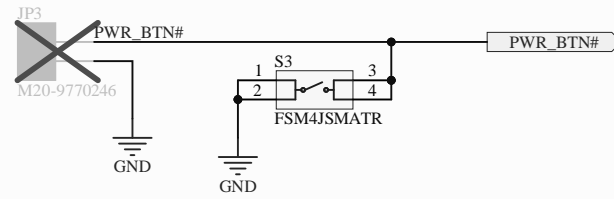


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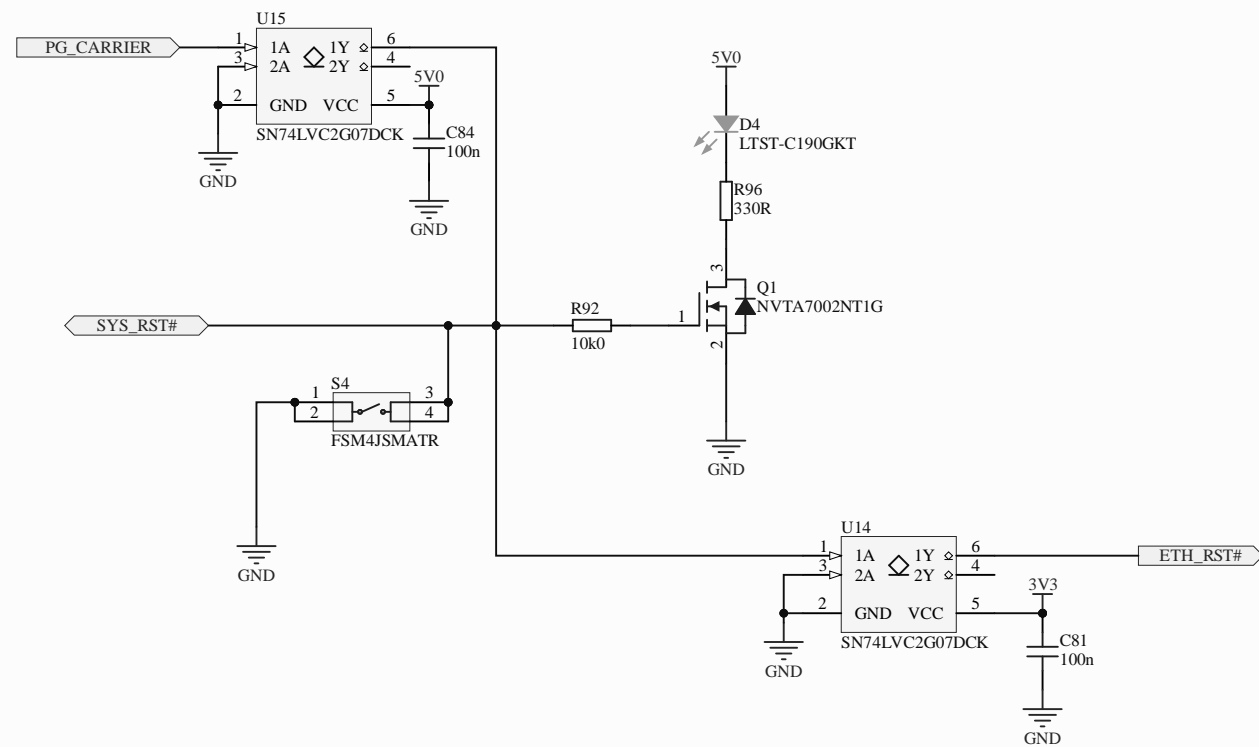
BOOT



POWER BUTTON



RESET



OSMEVK

Sheet: SYSTEM

Variant: ASM_1

Number 15

Revision: 1.0

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Date: 07.11.2023

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