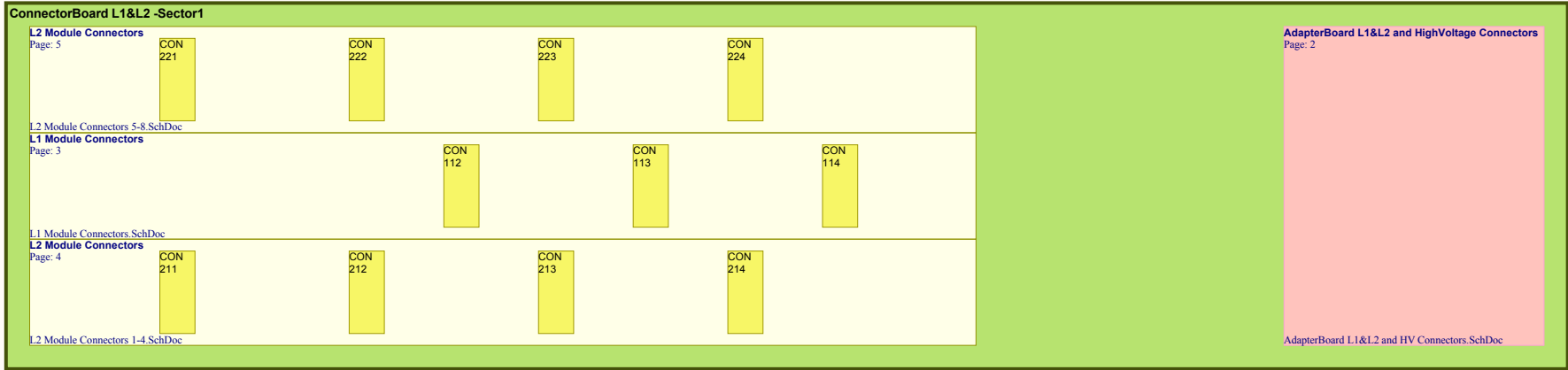
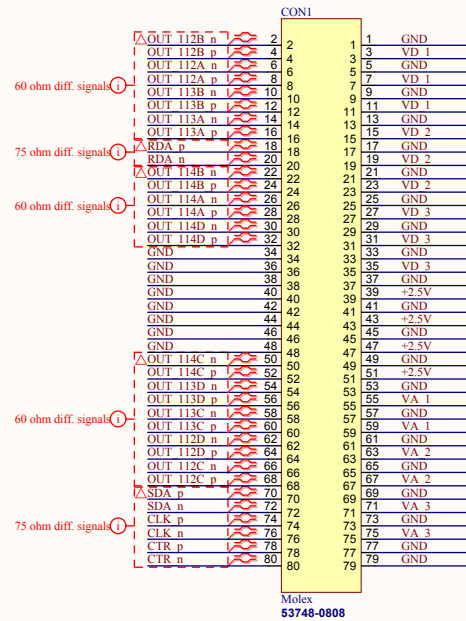


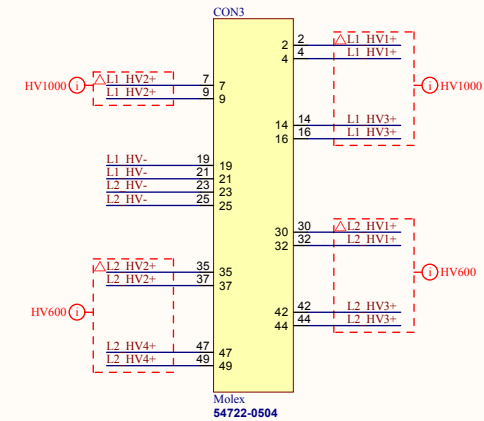
ConnectorBoard L1&L2 -Sector1



AdapterBoard L1&L2 Connectors



HV L1&L2 Connector



According to the IPC-2221 Standard:

Minimum isolation on inner layer:

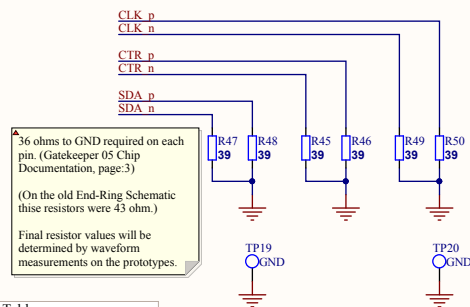
600V ----> 0.5mm
1000V ----> 1.5mm

Minimum isolation on outer (coated) layer:

600V ----> 1.105mm
1000V ----> 2.325mm

This values are not kept!

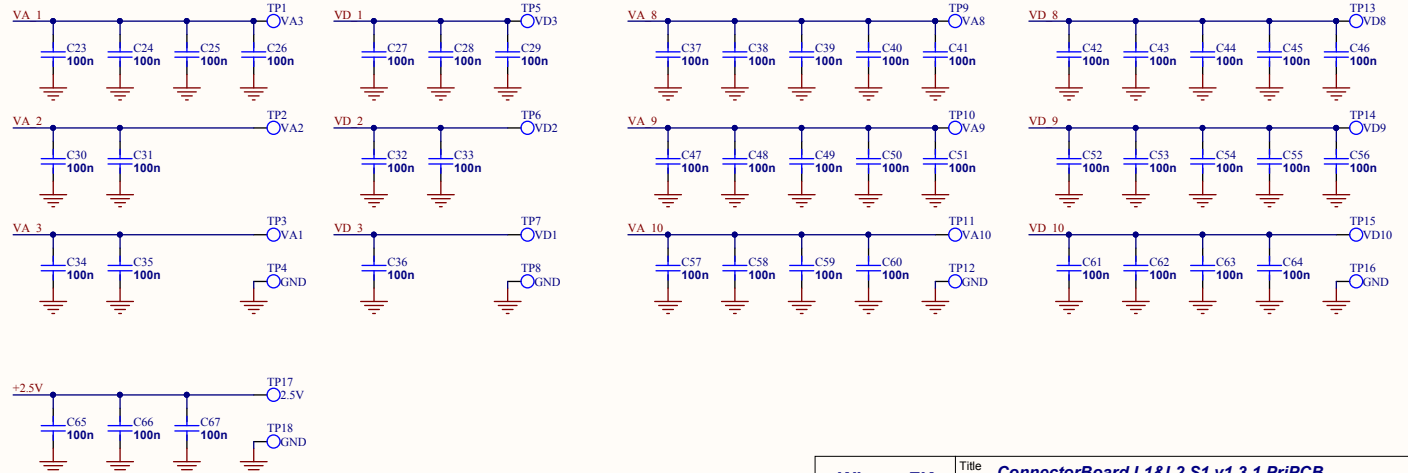
Signal Termination



Low Voltage Conversion Table

Cable1	Conv0	-->	VA_1, VD_1
	Conv1	-->	VA_2, VD_2
	Conv2	-->	VA_3, VD_3
	Conv3	-->	VA_4, VD_4
	Conv4	-->	VA_5, VD_5
	Conv5	-->	VA_6, VD_6
	Conv6	-->	VA_7, VD_7
	Conv7	-->	VA_8, VD_8
	Conv8	-->	VA_9, VD_9
	Conv9	-->	VA_10, VD_10
	Conv10	-->	VA_11, VD_11
	Conv11	-->	VA_12, VD_12
	Conv12	-->	VA_13, VD_13

Low Voltage Polygons Decoupling Capacitors



Wigner FK. Budapest, Hungary www.wigner.hu		Title: ConnectorBoard L1&L2 S1 v1.3.1.PrjPCB AdapterBoard L1&L2 and HighVoltage Connectors	
Designer: Tolyhi T.	Size: A3	Scale: -	Revision: 1.3
Drawn by:	Modified: 2015.12.21.	Printed: 2015.12.21.	Sheet 2 of 5
Approved:	File: AdapterBoard L1&L2 and HV Connectors.SchDoc		

L1 Module Connectors

Module: LYR1-LDR1-MOD2

CON112	1	L1 HV1+
1	2	
2	3	
3	4	
4	5	L1 HV-
5	6	GND
6	7	OUT I12C n
7	8	OUT I12C p
8	9	RDA2 I12 n
9	10	RDA2 I12 p
10	11	OUT I12D n
11	12	OUT I12D p
12	13	GND
13	14	GND
14	15	VA 1
15	16	VA 1
16	17	VA 1
17	18	VD 1
18	19	VD 1
19	20	VD 1
20	21	VD 1
21	22	VD 1
22	23	GND
23	24	GND
24	25	CLK I13 n
25	26	CLK I13 p
26	27	CTR I13 n
27	28	CTR I13 p
28	29	SDA I13 n
29	30	SDA I13 p
30	31	GND
31	32	GND
32	33	OUT I13A n
33	34	OUT I13A p
34	35	RDA1 I13 n
35	36	RDA1 I13 p
36	37	OUT I13B n
37	38	OUT I13B p
38	39	GND

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Module: LYR1-LDR1-MOD3

CON113	1	L1 HV2+
1	2	
2	3	
3	4	
4	5	L1 HV-
5	6	GND
6	7	OUT I13C n
7	8	OUT I13C p
8	9	RDA2 I13 n
9	10	RDA2 I13 p
10	11	OUT I13D n
11	12	OUT I13D p
12	13	GND
13	14	GND
14	15	VA 2
15	16	VA 2
16	17	VA 2
17	18	VD 2
18	19	VD 2
19	20	VD 2
20	21	VD 2
21	22	VD 2
22	23	GND
23	24	GND
24	25	CLK I13 n
25	26	CLK I13 p
26	27	CTR I13 n
27	28	CTR I13 p
28	29	SDA I13 n
29	30	SDA I13 p
30	31	GND
31	32	GND
32	33	OUT I13A n
33	34	OUT I13A p
34	35	RDA1 I13 n
35	36	RDA1 I13 p
36	37	OUT I13B n
37	38	OUT I13B p
38	39	GND

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Module: LYR1-LDR1-MOD4

CON114	1	L1 HV3+
1	2	
2	3	
3	4	
4	5	L1 HV-
5	6	GND
6	7	OUT I14C n
7	8	OUT I14C p
8	9	RDA2 I14 n
9	10	RDA2 I14 p
10	11	OUT I14D n
11	12	OUT I14D p
12	13	GND
13	14	GND
14	15	VA 3
15	16	VA 3
16	17	VA 3
17	18	VD 3
18	19	VD 3
19	20	VD 3
20	21	VD 3
21	22	VD 3
22	23	GND
23	24	GND
24	25	CLK I14 n
25	26	CLK I14 p
26	27	CTR I14 n
27	28	CTR I14 p
28	29	SDA I14 n
29	30	SDA I14 p
30	31	GND
31	32	GND
32	33	OUT I14A n
33	34	OUT I14A p
34	35	RDA1 I14 n
35	36	RDA1 I14 p
36	37	OUT I14B n
37	38	OUT I14B p
38	39	GND

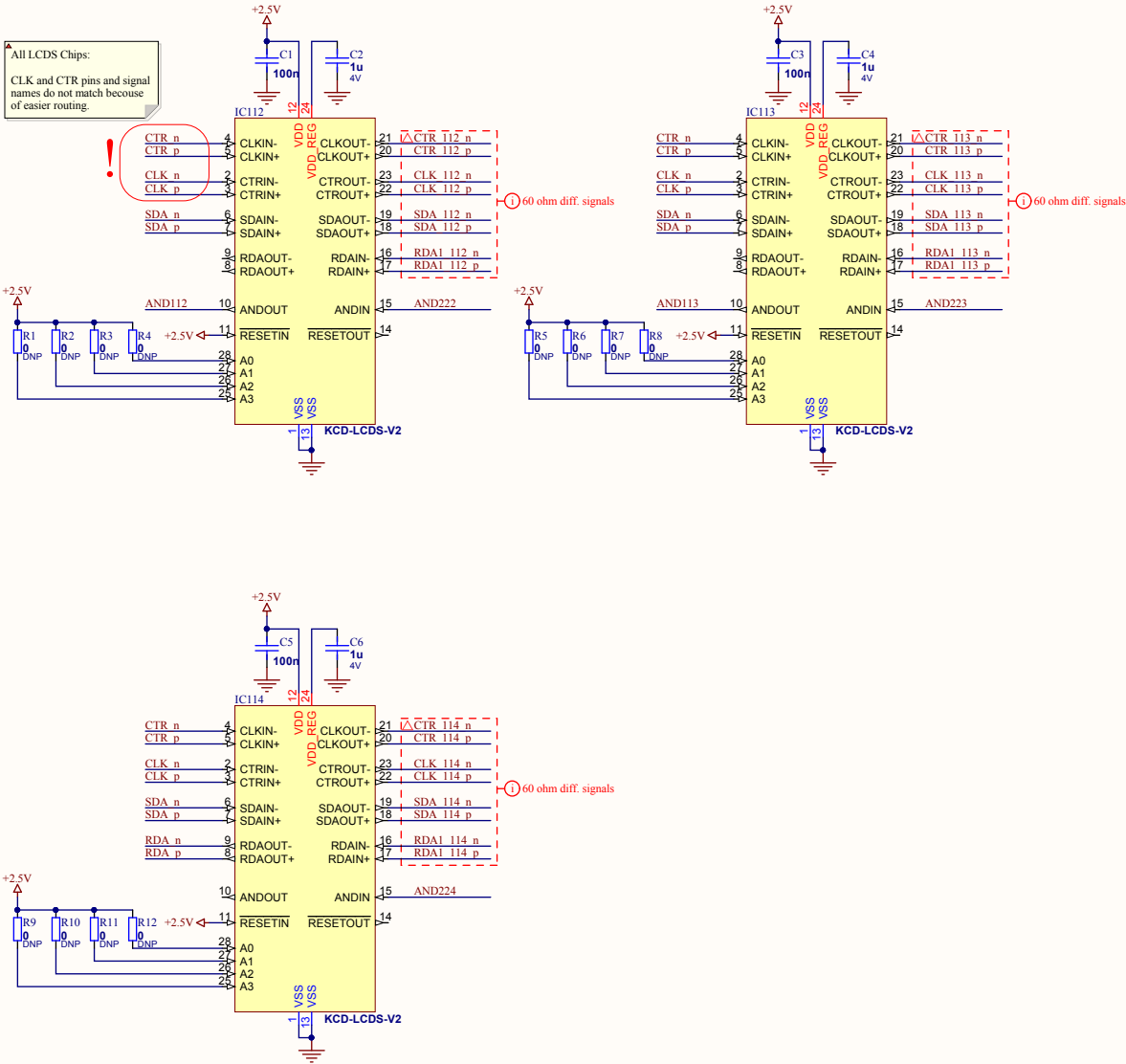
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Net Numbering: SignalName_Layer1adderModuleTBM
Net number example:
OUT_I14B --> Out signal from Layer1, Ladder1, Module4, TBM2

Layer1 Modules have 2 RDA signals. We connected only 1 (RDA1) of from these 2 signals to the LCDs Drivers.

L1 Module LCDS Drivers

All LCDS Chips:
CLK and CTR pins and signal names do not match because of easier routing.



L2 Module Connectors

Module: LYR2-LDR1-MOD1

CON211	1	L2 HV1+
2	2	
3	3	
4	4	L2 HV-
5	5	VA 8
6	6	VA 8
7	7	VA 8
8	8	GND
9	9	GND
10	10	GND
11	11	GND
12	12	OUT 211B n
13	13	OUT 211B p
14	14	GND
15	15	GND
16	16	CLK 211 n
17	17	CLK 211 p
18	18	CTR 211 n
19	19	CTR 211 p
20	20	SDA 211 n
21	21	SDA 211 p
22	22	RDA 211 n
23	23	RDA 211 p
24	24	OUT 211A n
25	25	OUT 211A p
26	26	GND
27	27	GND
28	28	VD 8
29	29	VD 8
30	30	VD 8
31	31	VD 8
32	32	VD 8
33	33	VD 8

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Module: LYR2-LDR1-MOD2

CON212	1	L2 HV2+
2	2	
3	3	
4	4	L2 HV-
5	5	VA 8
6	6	VA 8
7	7	VA 8
8	8	GND
9	9	GND
10	10	GND
11	11	GND
12	12	OUT 212B n
13	13	OUT 212B p
14	14	GND
15	15	GND
16	16	CLK 212 n
17	17	CLK 212 p
18	18	CTR 212 n
19	19	CTR 212 p
20	20	SDA 212 n
21	21	SDA 212 p
22	22	RDA 212 n
23	23	RDA 212 p
24	24	OUT 212A n
25	25	OUT 212A p
26	26	GND
27	27	GND
28	28	VD 8
29	29	VD 8
30	30	VD 8
31	31	VD 8
32	32	VD 8
33	33	VD 8

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Module: LYR2-LDR1-MOD3

CON213	1	L2 HV3+
2	2	
3	3	
4	4	L2 HV-
5	5	VA 8
6	6	VA 8
7	7	VA 8
8	8	GND
9	9	GND
10	10	GND
11	11	GND
12	12	OUT 213B n
13	13	OUT 213B p
14	14	GND
15	15	GND
16	16	CLK 213 n
17	17	CLK 213 p
18	18	CTR 213 n
19	19	CTR 213 p
20	20	SDA 213 n
21	21	SDA 213 p
22	22	RDA 213 n
23	23	RDA 213 p
24	24	OUT 213A n
25	25	OUT 213A p
26	26	GND
27	27	GND
28	28	VD 8
29	29	VD 8
30	30	VD 8
31	31	VD 8
32	32	VD 8
33	33	VD 8

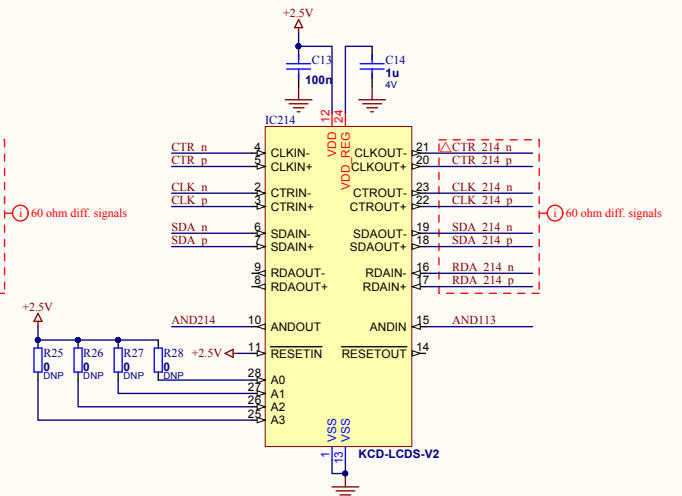
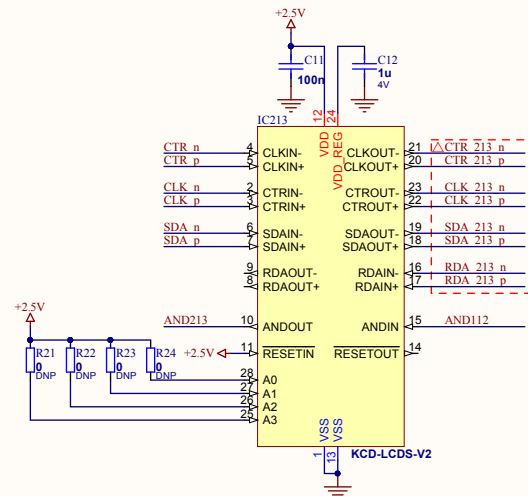
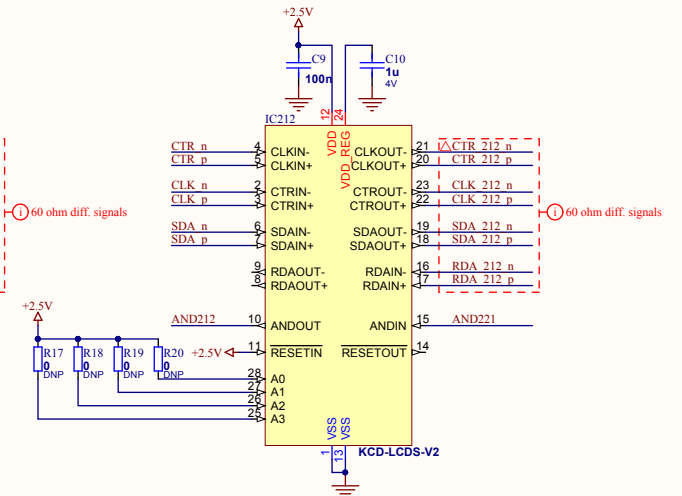
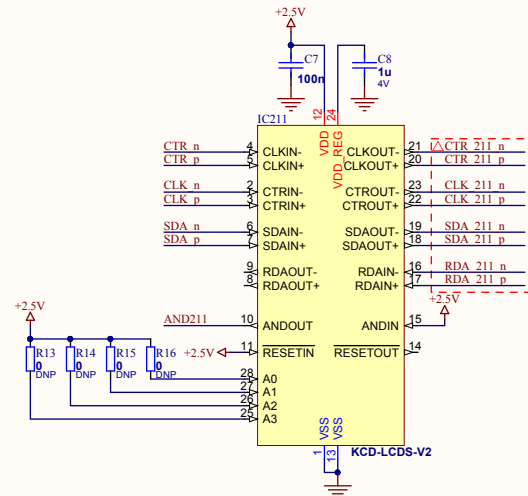
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Module: LYR2-LDR1-MOD4

CON214	1	L2 HV4+
2	2	
3	3	
4	4	L2 HV-
5	5	VA 9
6	6	VA 9
7	7	VA 9
8	8	GND
9	9	GND
10	10	GND
11	11	GND
12	12	OUT 214B n
13	13	OUT 214B p
14	14	GND
15	15	GND
16	16	CLK 214 n
17	17	CLK 214 p
18	18	CTR 214 n
19	19	CTR 214 p
20	20	SDA 214 n
21	21	SDA 214 p
22	22	RDA 214 n
23	23	RDA 214 p
24	24	OUT 214A n
25	25	OUT 214A p
26	26	GND
27	27	GND
28	28	VD 9
29	29	VD 9
30	30	VD 9
31	31	VD 9
32	32	VD 9
33	33	VD 9

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L2 Module LCDS Drivers



Wigner FK. Budapest, Hungary www.wigner.hu		Title: ConnectorBoard L1&L2 S1 v1.3.1.PrjPCB L2 Module Connectors and LCDS Drivers	
Designer: Tolyhi T.	Size: A3	Scale: -	Document Number: 1.3
Drawn by:	Modified: 2015.12.21.	Printed: 2015.12.21.	Sheet: 4 of 5
Approved:	File: L2 Module Connectors 1-4.SchDoc		

L2 Module Connectors

Module: LYR2-LDR2-MOD1

CON221	1	L2 HV1+
2		
3		
4		L2 HV-
5		VA 9
6		VA 9
7		VA 9
8		GND
9		GND
10		GND
11		GND
12		OUT 221B n
13		OUT 221B p
14		GND
15		GND
16		CLK 221 n
17		CLK 221 p
18		CTR 221 n
19		CTR 221 p
20		SDA 221 n
21		SDA 221 p
22		RDA 221 n
23		RDA 221 p
24		OUT 221A n
25		OUT 221A p
26		GND
27		GND
28		VD 9
29		VD 9
30		VD 9
31		VD 9
32		VD 9
33		VD 9

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Module: LYR2-LDR2-MOD2

CON222	1	L2 HV2+
2		
3		
4		L2 HV-
5		VA 10
6		VA 10
7		VA 10
8		GND
9		GND
10		GND
11		GND
12		OUT 222B n
13		OUT 222B p
14		GND
15		GND
16		CLK 222 n
17		CLK 222 p
18		CTR 222 n
19		CTR 222 p
20		SDA 222 n
21		SDA 222 p
22		RDA 222 n
23		RDA 222 p
24		OUT 222A n
25		OUT 222A p
26		GND
27		GND
28		VD 10
29		VD 10
30		VD 10
31		VD 10
32		VD 10
33		VD 10

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Module: LYR2-LDR2-MOD3

CON223	1	L2 HV3+
2		
3		
4		L2 HV-
5		VA 10
6		VA 10
7		VA 10
8		GND
9		GND
10		GND
11		GND
12		OUT 223B n
13		OUT 223B p
14		GND
15		GND
16		CLK 223 n
17		CLK 223 p
18		CTR 223 n
19		CTR 223 p
20		SDA 223 n
21		SDA 223 p
22		RDA 223 n
23		RDA 223 p
24		OUT 223A n
25		OUT 223A p
26		GND
27		GND
28		VD 10
29		VD 10
30		VD 10
31		VD 10
32		VD 10
33		VD 10

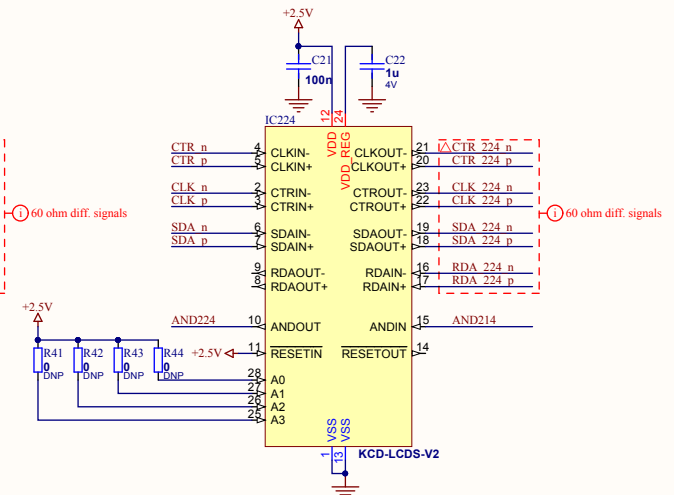
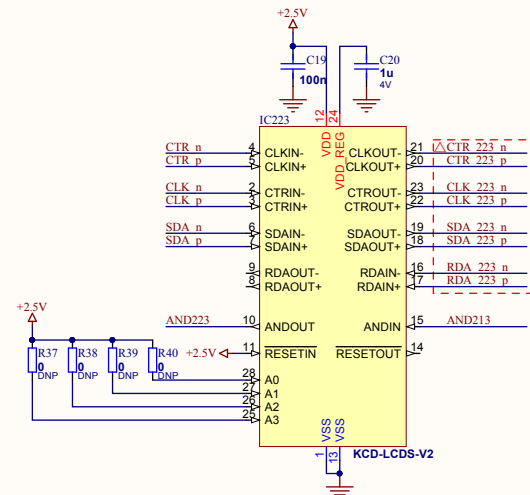
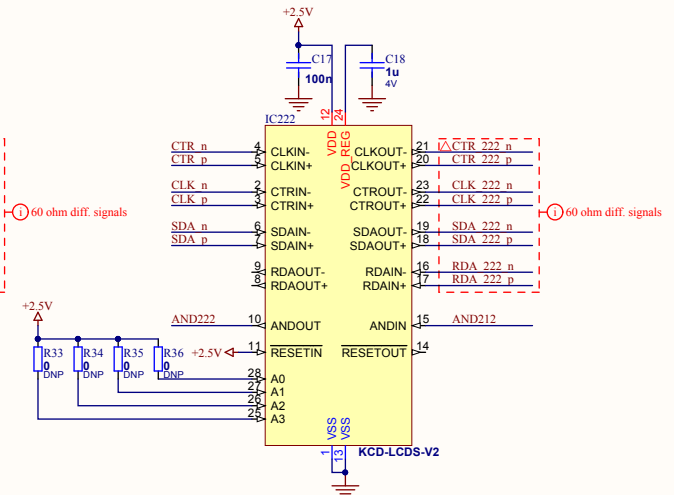
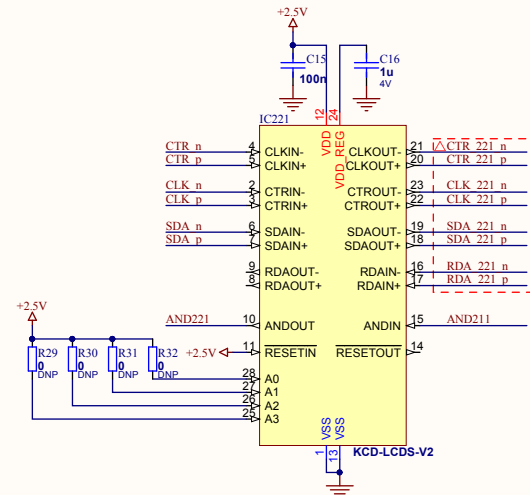
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Module: LYR2-LDR2-MOD4

CON224	1	L2 HV4+
2		
3		
4		L2 HV-
5		VA 10
6		VA 10
7		VA 10
8		GND
9		GND
10		GND
11		GND
12		OUT 224B n
13		OUT 224B p
14		GND
15		GND
16		CLK 224 n
17		CLK 224 p
18		CTR 224 n
19		CTR 224 p
20		SDA 224 n
21		SDA 224 p
22		RDA 224 n
23		RDA 224 p
24		OUT 224A n
25		OUT 224A p
26		GND
27		GND
28		VD 10
29		VD 10
30		VD 10
31		VD 10
32		VD 10
33		VD 10

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L2 Module LCDS Drivers



Wigner FK. Budapest, Hungary www.wigner.hu		Title: ConnectorBoard L1&L2 S1 v1.3.1.PrjPCB L2 Module Connectors and LCDS Drivers	
Designer: Tolyhi T.	Size: A3	Scale: -	Document Number: 1.3
Drawn by:	Modified: 2015.12.21.	Printed: 2015.12.21.	Sheet 5 of 5
Approved:	File: L2 Module Connectors 5-8.SchDoc		