

# **DCS1 DC/Sinus/Rechteck Präzisions-Generator +-10V max. 30kHz**

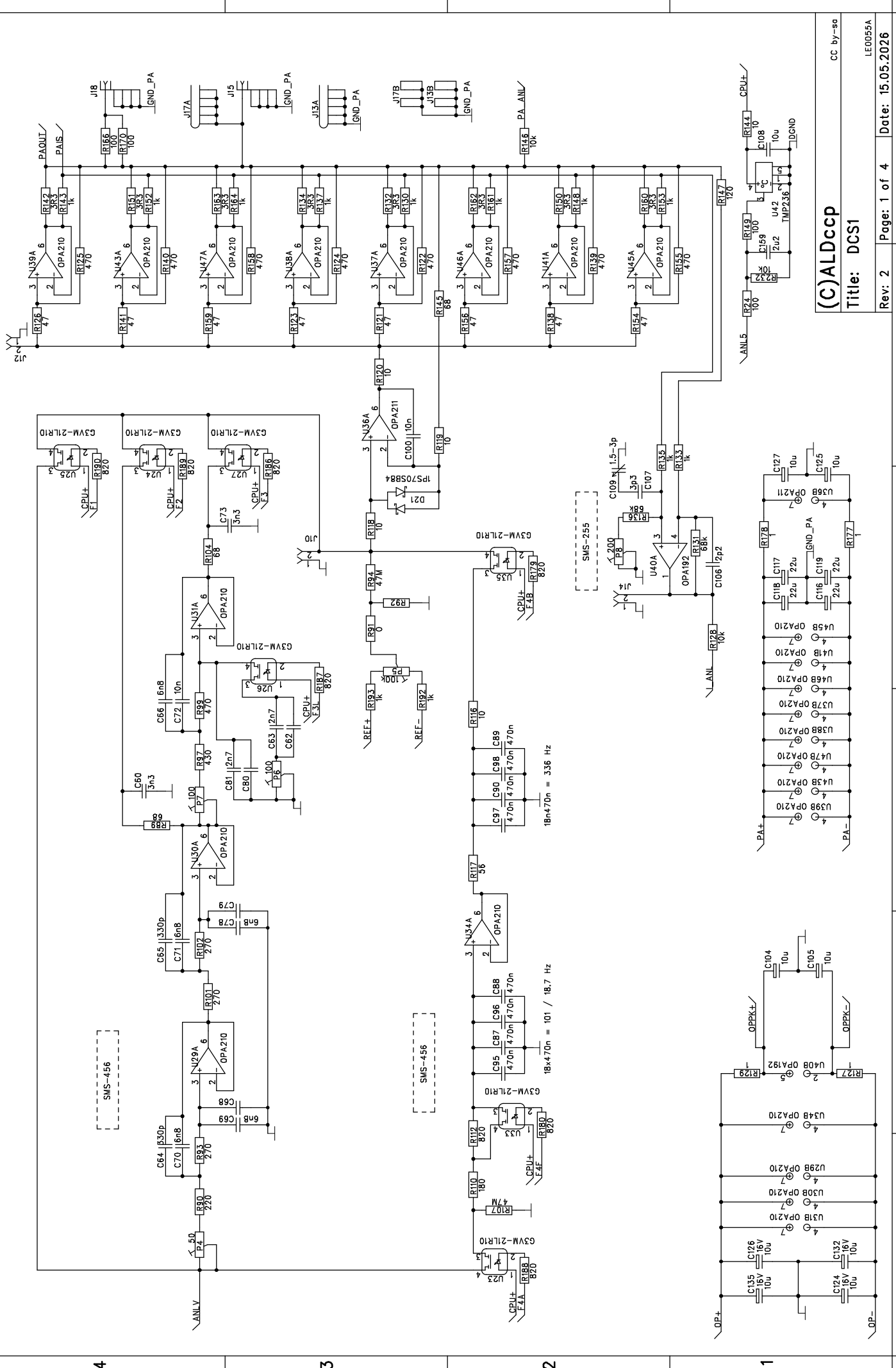
Rev 1.00: Schaltplan, Bestückung, Material Liste



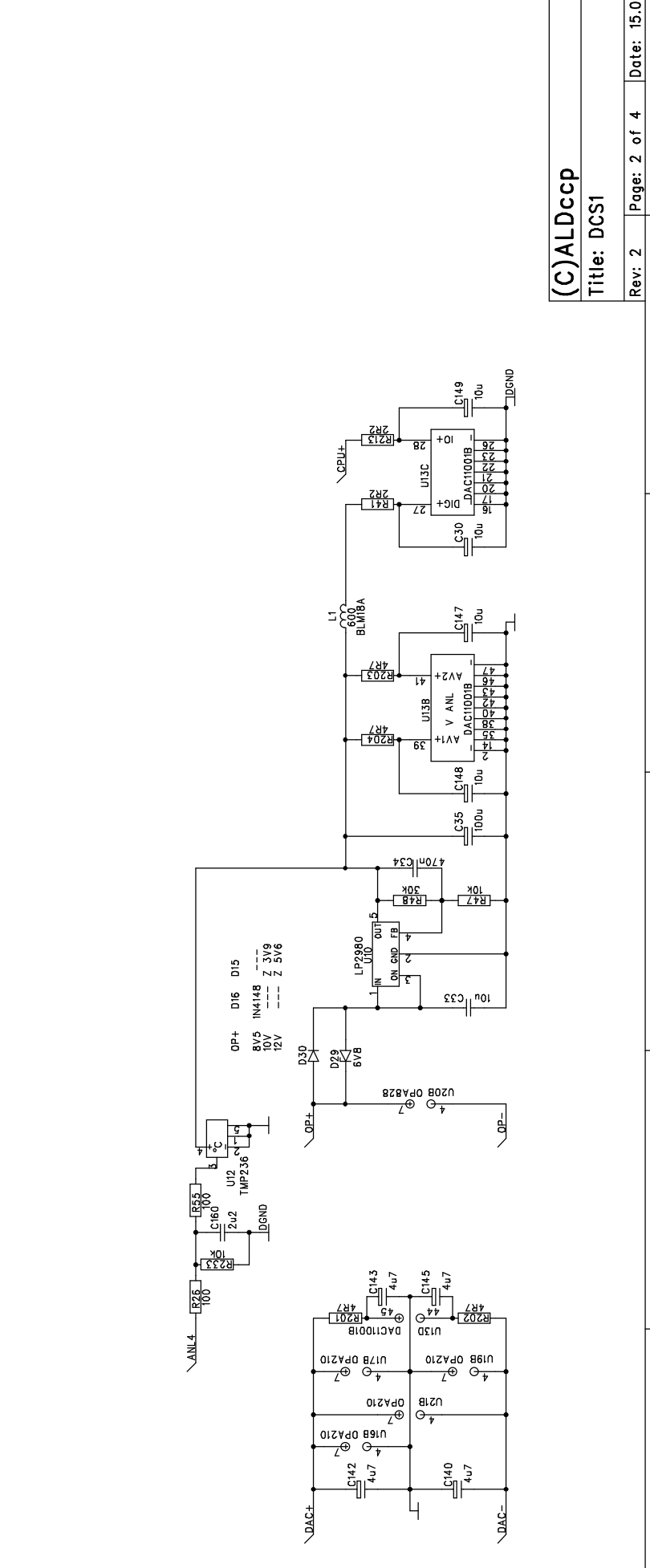
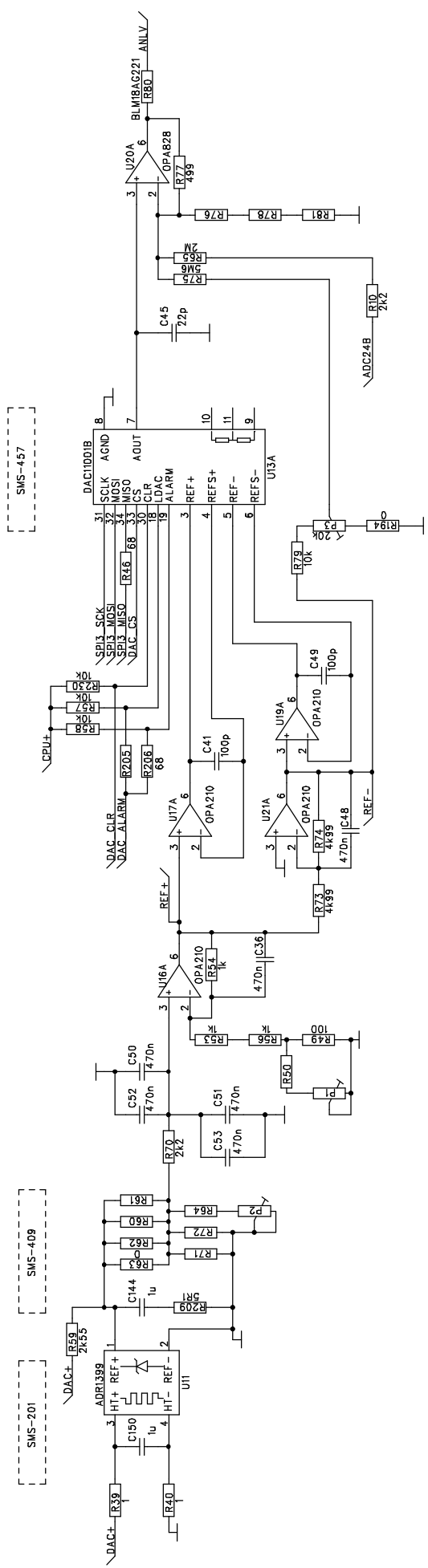
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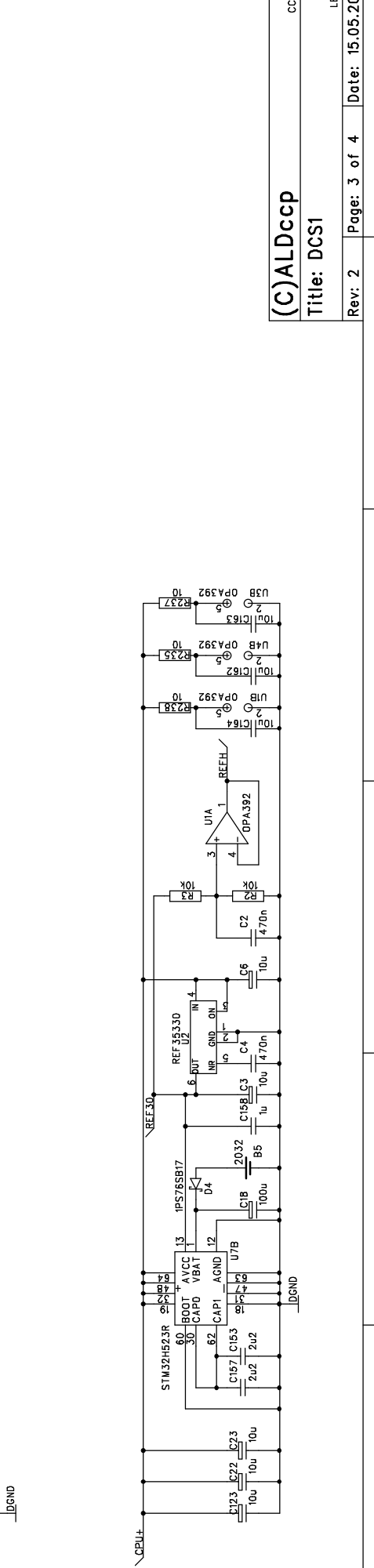
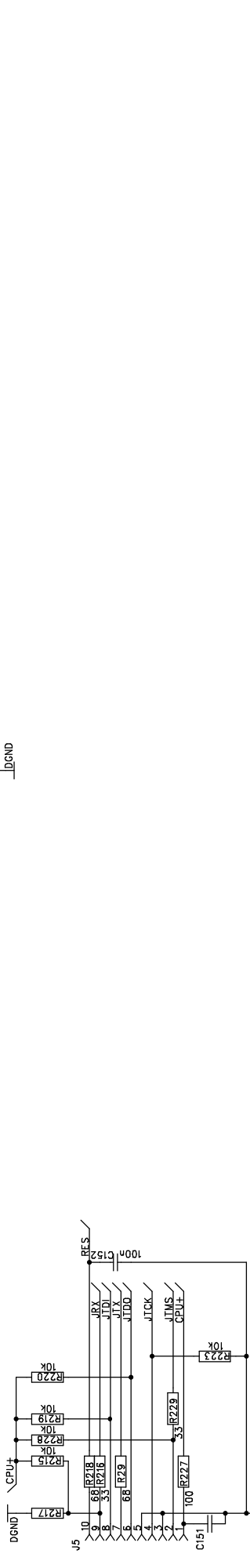
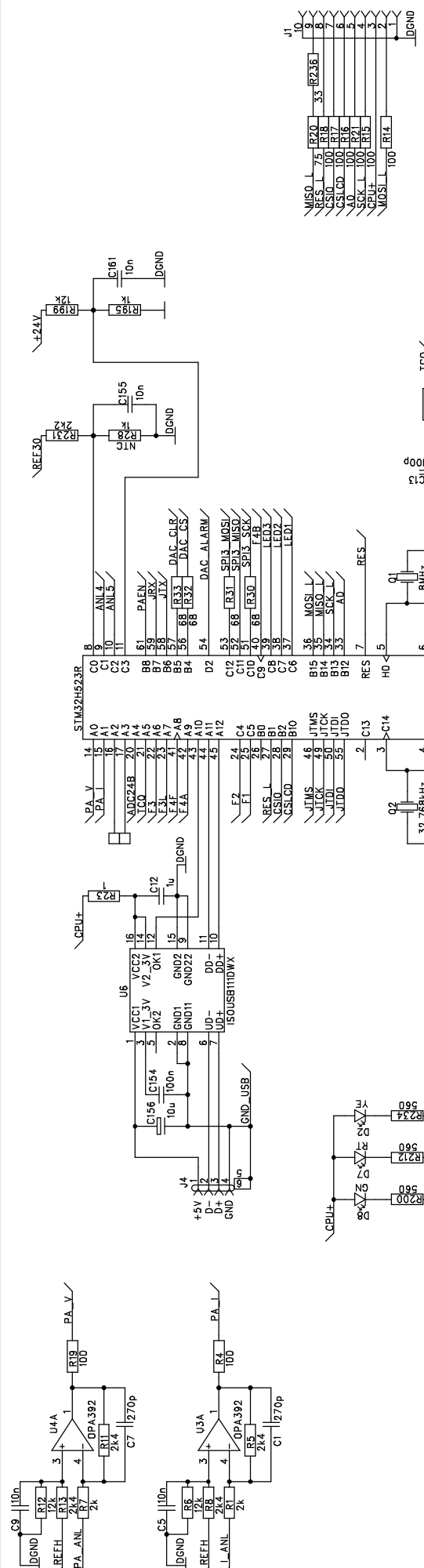
<http://www.aldccb.at/>

Hoefer Alfred  
(hw16@aldccb.at)

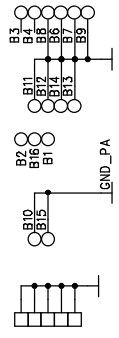
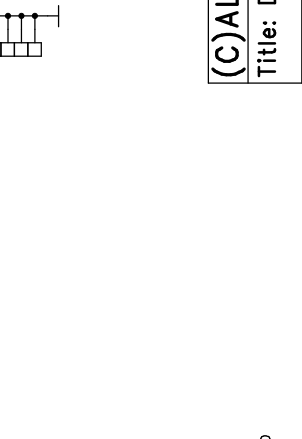
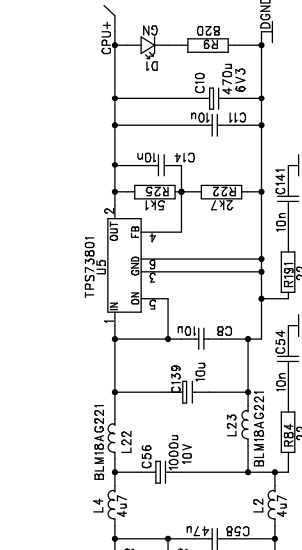
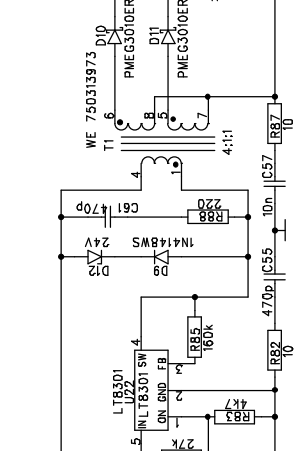
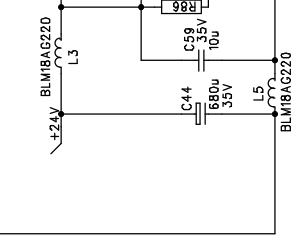
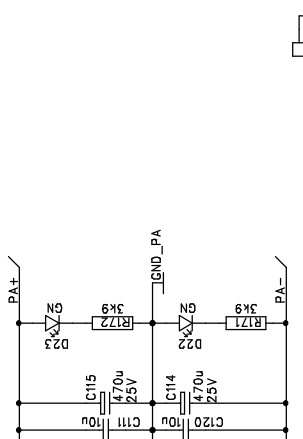
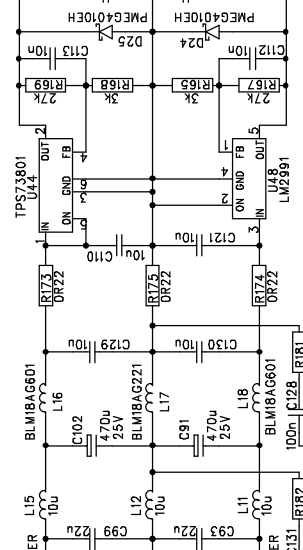
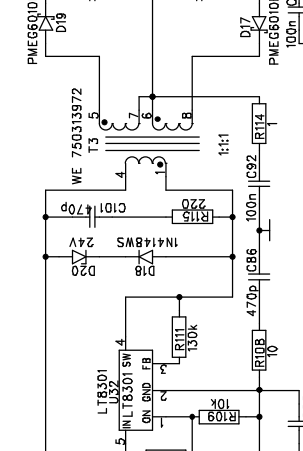
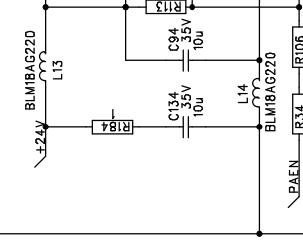
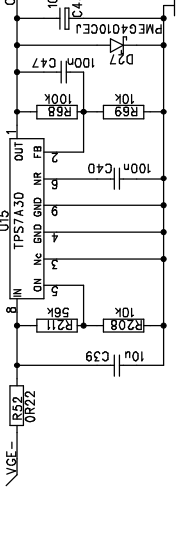
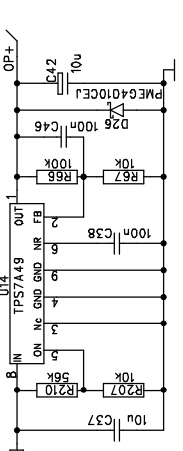
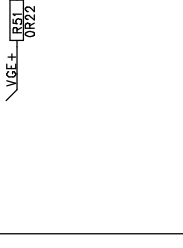
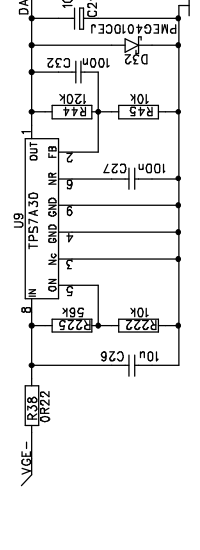
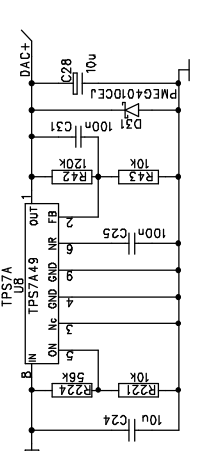
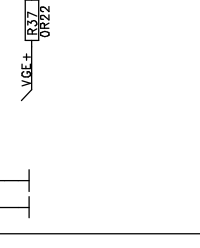
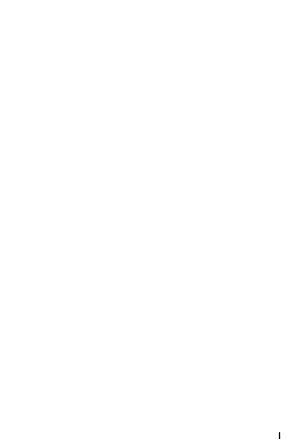
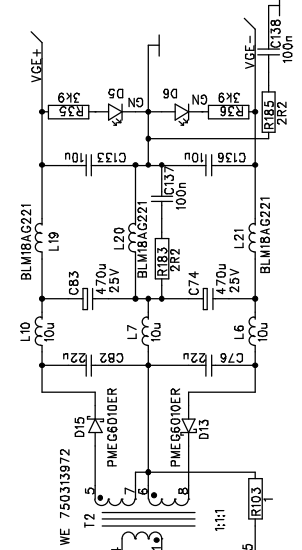
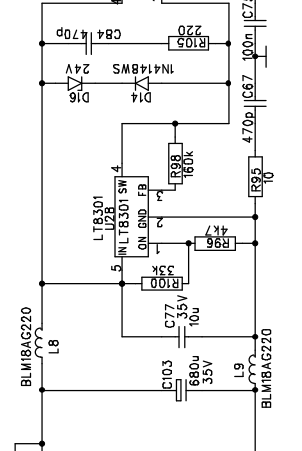
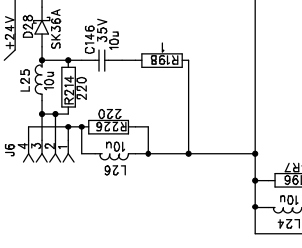


(C)ALDccp  
 Title: DCS1





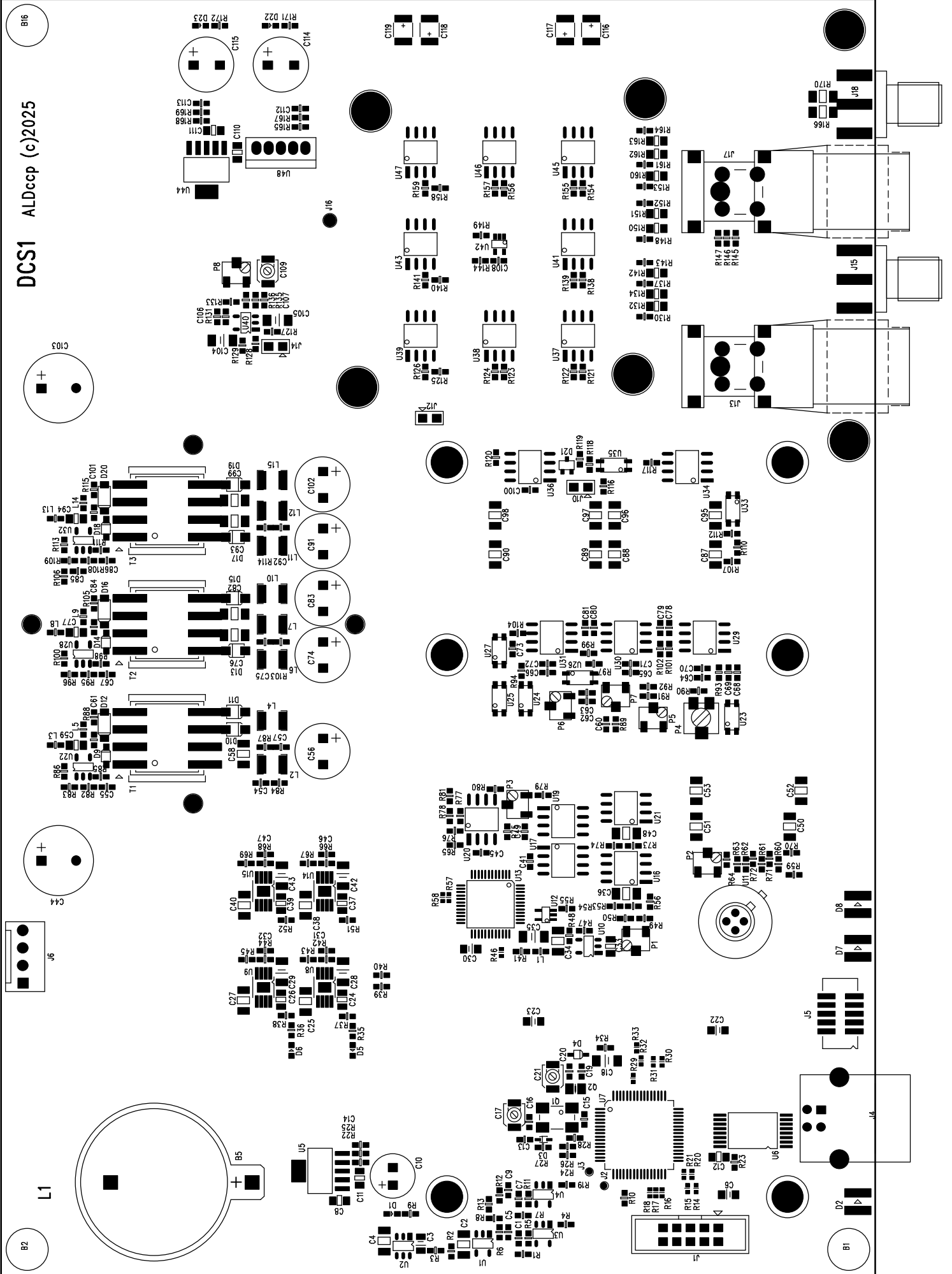
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 Title: DCS1  
 Rev: 2 Page: 3 of 4 Date: 15.05.2026  
 CC by-so  
 LED055A



(C)ALDccp  
 Title: DCS1  
 Rev: 2 Page: 4 of 4 Date: 15.05.2026

CC by-so  
 LED055A

DCS1 ALDccp (c)2025





Bill Of Materials for DCS1A\_00.sch on Sun May 24 16:50:02 2026

Qty	Reference	Part Name	Wert	Wert2	PCB DECAL
1	U11	ADR1399			TO46-4
2	J13 J17	BAN-4MM			BAN-4MM
1	B5	BATH	2032		BATH2032
2	C1 C7	C	270p		0603
16	C4 C2 C36	C	470n	C0G	1206
	C48 C50-53				
	C87-90				
	C95-98				
4	C27 C38 C40	C	100n		1206
	C25				
1	C34	C	470n		0805
12	C5 C9 C54	C	10n		0603
	C57 C72 C14				
	C100				
	C112-113				
	C141 C155				
	C161				
15	C11 C59 C77	C	10u	35V	0805
	C94 C110-111				
	C120-121				
	C129-130				
	C133-134				
	C136 C8 C146				
6	C67 C84 C86	C	470p		0603
	C101 C55 C61				
2	C73 C60	C	3n3		0603
4	C76 C82 C93	C	22u	25V	1206
	C99				
6	C80 C68 C16	C			0603
	C79 C62 C151				
3	C41 C13 C49	C	100p		0603
1	C19	C	3p9		0603
12	C92 C31	C	100n		0603
	C46-47 C128				
	C75 C32 C131				
	C137-138				
	C152 C154				
8	C108 C39 C24	C	10u		0603
	C26 C37				
	C162-164				
5	C71 C78 C70	C	6n8		0603
	C66 C69				
2	C63 C81	C	2n7		0603
2	C45 C15	C	22p		0603
2	C65 C64	C	330p		0603
3	C144 C150	C	1u		0805
	C12				
1	C106	C	2p2		0603
3	C153 C157	C	2u2		0805
	C160				
1	C107	C	3p3		0603
1	C158	C	1u		0603
1	C159	C	2u2		0603
1	C33	C	10u		0805
1	C20	C	1p5		0603
1	C58	C	47u	16V	1206
1	C85	C	1n		0603
1	C122	C			0805
3	D9 D14 D18	D	1N4148WS		SOD-323F
1	D30	D			SOD-323F

1	D21	D2_ACC	1PS70SB84		SOT323
1	U13	DAC11001	DAC11001B		TQFP48
3	D12 D16 D20	DZ	24V		SOD-123
1	D29	DZ	6V8		SOD-123
1	D3	D_C	BB175		SOD-523_LP
1	D4	D_S	1PS76SB17		SOD-123F
2	D10-11	D_S	PMEG3010ER		SOD-123W
4	D13 D15 D17 D19	D_S	PMEG6010ER		SOD-123W
3	D26-27 D31	D_S	PMEG4010CEJ		SOD-323F
1	D32	D_S	PMEG4010CEJ		SOD-123F
1	C10	EC	470u	6V3	EC100D60
2	C44 C103	EC	680u	35V	EC200D100
1	C74	EC	470u	25V	EC-SMD-D63
5	C83 C91 C102 C114-115	EC	470u	25V	EC150D80
1	C56	EC	1000u	10V	EC150D80
9	C3 C6 C22-23 C30 C123 C147-149	EC_SMD	10u		0805P
4	C42-43 C28-29	EC_SMD	10u	TCJA106M025	1206P
4	C116-119	EC_SMD	22u		1411P
4	C104 C125 C127 C105	EC_SMD	10u	TCJA106M016R02 00	1206P
4	C124 C132 C135 C126	EC_SMD	10u	16V	1206P
4	C140 C142-143 C145	EC_SMD	4u7	T58W0475M025C0 500	0805P
2	C139 C156	EC_SMD	10u	6V3	0805P
1	C35	EC_SMD	100u	T55A107M6R3C02 00	1206P
1	C18	EC_SMD	100u		1206P
1	T1	EP10-8_3W	WE 750313973	4:1:1	EP7I_10
2	T2-3	EP10-8_3W	WE 750313972	1:1:1	EP7I_10
1	U6	ISOUSB111DWX			SSOP16W
1	D2	LED	YE		LED3
1	D7	LED	RT		LED3
1	D8	LED	GN		LED3
5	D1 D5-6 D22-23	LED_SMD	GN		0603D
1	U48	LM2991			TO220-5G
7	J2-3 J7-9 J11 J16	LP			LP_D16
3	U22 U28 U32	LT8301	LT8301		SOT23-5P
1	L1	L_SMD	600	BLM18A	0603
2	L2 L4	L_SMD	4u7	LQH32PB	1210
6	L3 L5 L8-9 L13-14	L_SMD	BLM18AG220		0603
6	L10-12 L6-7 L15	L_SMD	10u	LQH32PB	1210
2	L16 L18	L_SMD	BLM18AG601		0603
6	L17 L19-23	L_SMD	BLM18AG221		0603
3	L24-26	L_SMD	10u	LQH5BPN	2020L
1	R28	NTC	1k		0603
1	U10	ON_FB_5_SOT23	LP2980		SOT23-5
16	U16-17 U19 U21 U29-31 U34 U37-39 U41 U43 U45-47	OP1	OPA210		SO8
1	U20	OP1	OPA828		SO8
1	U36	OP1	OPA211		SO8
3	U1 U3-4	OP-SOT23-5	OPA392		SOT23-5

1	U40	OP-SOT23-5	OPA192		SOT23-5
7	U23-27 U33 U35	OPTO	G3VM-21LR10		SSOP4
2	D24-25	PMEG4010	PMEG4010EH		SOD-123F
2	P1-2	POTI			P5L_SMD
1	P3	POTI	20k		P5SS_SMD
1	P4	POTI	50		P5L_SMD
1	P5	POTI	100k		P4SS_SMD
2	P6-7	POTI	100		P5L_SMD
1	P8	POTI	200		P4SS_SMD
1	Q2	Q	32.768kHz		Q20X12
1	Q1	Q4SMD	8MHz		Q50X32
2	R1 R7	R	2k	0.1%	0603
4	R3 R2 R128 R146	R	10k	0.1%	0603
8	R4 R19 R24 R26 R34 R55 R149 R227	R	100		0603
6	R15-18 R21 R14	R	100		0402
4	R8 R11 R5 R13	R	2k4	0.1%	0603
1	R25	R	5k1		0603
3	R10 R70 R231	R	2k2		0603
7	R30-33 R46 R206 R29	R	68		0402
7	R37-38 R51-52 R173-175	R	0R22		0603
2	R44 R42	R	120k		0603
1	R22	R	2k7		0603
20	R47 R58 R67 R69 R79 R109 R45 R43 R207-208 R215 R219-223 R228 R230 R232-233	R	10k		0603
1	R49	R	100	0.1%	0603
2	R68 R66	R	100k		0603
1	R27	R	1M		0402
8	R71-72 R76 R78 R81 R60-62	R		0.1%	0603
11	R39 R103 R40 R114 R127 R23 R129 R177-178 R184 R198	R	1		0603
6	R90 R105 R115 R88 R214 R226	R	220		0603
2	R96 R83	R	4k7		0603
2	R98 R85	R	160k		0603
1	R100	R	33k		0603
3	R101-102 R93	R	270		0603
4	R104 R145 R89 R218	R	68		0603
12	R108 R82 R116 R118-120 R144 R87 R95 R235 R237-238	R	10		0603

6	R113 R176 R92 R217 R64 R50	R				0603
8	R126 R138 R141 R154 R156 R159 R121 R123	R	47			0603
8	R134 R142 R150-151 R160 R162-163 R132	R	3R3			0805
5	R135 R53-54 R56 R133	R	1k	0.1%		0603
1	R147	R	120	0.1%		0603
12	R148 R137 R152-153 R130 R161 R164 R143 R192-193 R195 R106	R	1k			0603
1	R97	R	430			0603
9	R9 R179-180 R186-190 R112	R	820			0603
2	R170 R166	R	100	0.1%		1206
4	R172 R171 R35-36	R	3k9			0603
2	R84 R191	R	22			0603
9	R122 R139-140 R99 R157-158 R155 R124-125	R	470			0603
2	R165 R168	R	3k			0603
3	R167 R86 R169	R	27k			0603
2	R136 R131	R	68k	0.1%		0603
2	R194 R91	R	0			0603
5	R196 R201-204	R	4R7			0603
1	R199	R	12k			0805
3	R200 R212 R234	R	560			0603
1	R80	R	BLM18AG221			0603
2	R12 R6	R	12k	0.1%		0603
1	R209	R	5R1			0603
4	R210-211 R224-225	R	56k			0603
2	R94 R107	R	47M			0603
2	R216 R229	R	33			0603
1	R57	R	10k			0402
1	R48	R	30k			0603
1	R59	R	2k55	0.1%		0603
2	R73-74	R	4k99	0.05%		0603
1	R77	R	499	0.1%		0603
6	R182 R213 R183 R185 R181 R41	R	2R2			0603
1	R20	R	75			0402
1	R75	R	5M6			0603
1	R65	R	2M			0603
1	R63	R	0	0.1%		0603
1	R205	R				0402
1	R117	R	56			0603

1	R236	R	33		0402
1	R111	R	130k		0603
1	R110	R	180		0603
1	U2	REF35	REF35330		SOT23-6
1	D28	SK36A			SMAD
3	J10 J12 J14	SL2			SL79_1X2G
1	J6	SL4			PSS254_4G
1	J1	SL10			SL79U_2X10
1	J5	SL10			SL50US_2X10
2	J15 J18	SMA_B			SMA-180
2	U5 U44	SOT223_6	TPS73801		SOT223-6
1	U7	STM32H523R			TQFP64
1	C17	TC		JR150	TC35SMD
2	C21 C109	TC	1.5-3p	JR030	TC35SMD
2	U12 U42	TEMP5	TMP236		SC70-5
2	U8 U14	TPS7A	TPS7A49		VSSOP9A
2	U9 U15	TPS7A	TPS7A30		VSSOP9A
1	J4	USB_B	61729		USB_B_R

-----  
Zusätzliche Komponenten:

Schirmung:

1x	TEKO-3710			
1x	"Leader Tech"	SMS-201F	+	SMS-201C
1x	"Leader Tech"	SMS-255F	+	SMS-255C
1x	"Leader Tech"	SMS-409F	+	SMS-409C
2x	"Leader Tech"	SMS-456F	+	SMS-456C
1x	"Leader Tech"	SMS-457F	+	SMS-457C

Kühlkörper: <https://www.sameskydevices.com/>

1x HSB43-454515P oder HSB30-373710  
+ Gel Wärmeleitfolie (z.B.: fischer elektronik)

Bananenstecker:

73099-0 + 73099-2 Black/Red <https://www.pomonaelectronics.com>  
oder CT3151SP-0 + CT3151SP-2 Black/Red

Bemerkung:

Es sollen die Widerstände bei den Spannungsteilern/Verstärkung von hoher Qualität sein min. (0.05% 10ppm)