

NORMARC 7011

INSTRUMENT LANDING SYSTEM

TRANSMITTER FIGURES





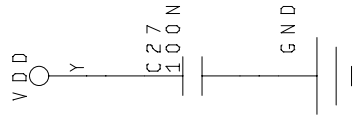
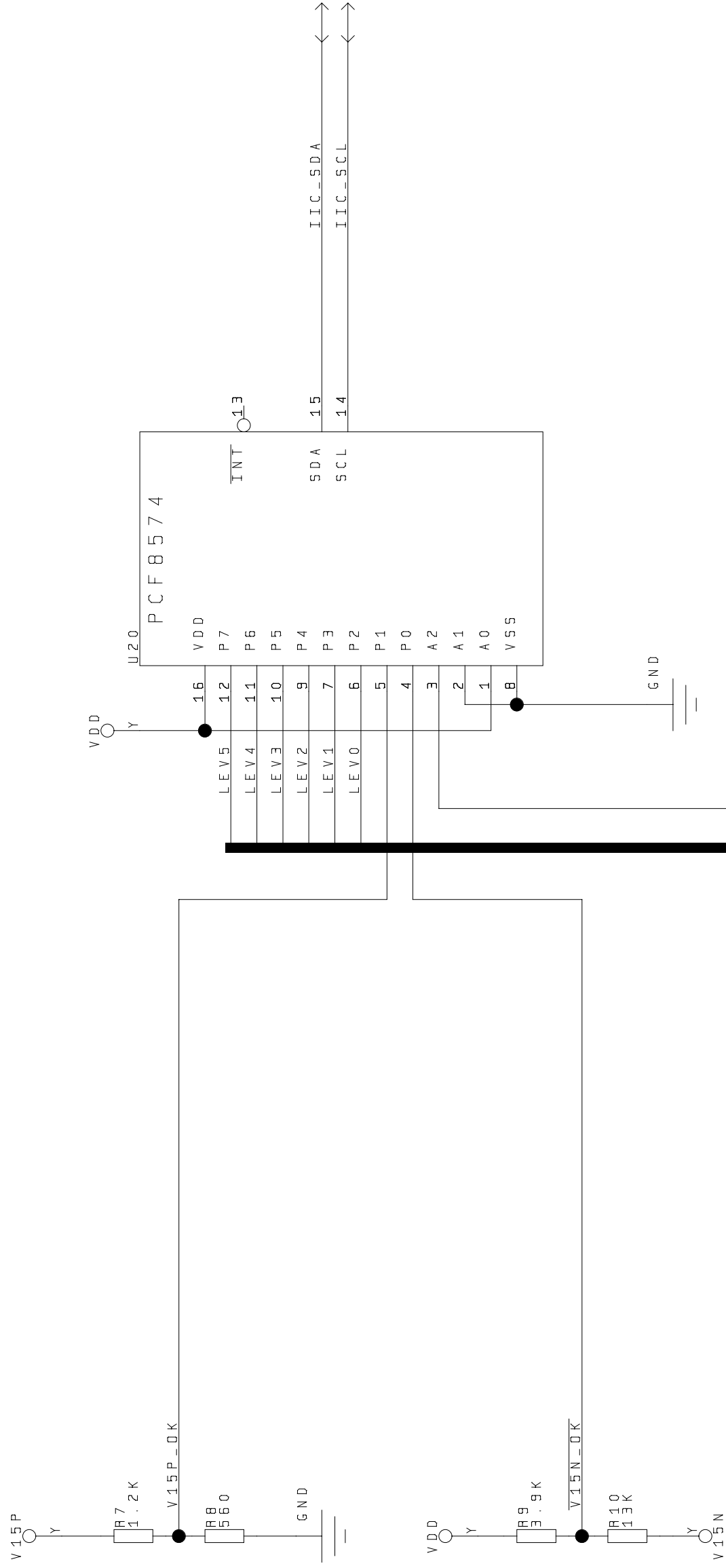
TABLE OF CONTENTS

1	LF1223A LOW FREQUENCY GENERATOR.....	7
1.1	Schematic Diagrams	7
1.2	Photos	8
2	OS1221A RF OSCILLATOR.....	9
2.1	Circuit Diagrams.....	9
2.2	Component Location	10
2.3	Photos	11
3	LPA1230A POWER AMPLIFIER	13
3.1	Photos	13
4	PA1233A LOW FREQUENCY GENERATOR	15
4.1	Schematic Diagrams	15
4.2	Parts List	16
4.3	Photos	17
5	AC1226A AMPLITUDE CONTROL	19
5.1	Schematic Diagrams	19
5.2	Photos	20
6	PC1225A PHASE CONTROL.....	21
6.1	Schematic Diagrams	21
6.2	Photos	22
7	FD1235A FEEDBACK DETECTOR.....	23
7.1	Schematic Diagrams	23
7.2	Photos	24
8	CD 1237A COMBINER DETECTOR	25
8.1	Schematic Diagrams	25
8.2	Photos	26

LIST OF FIGURES

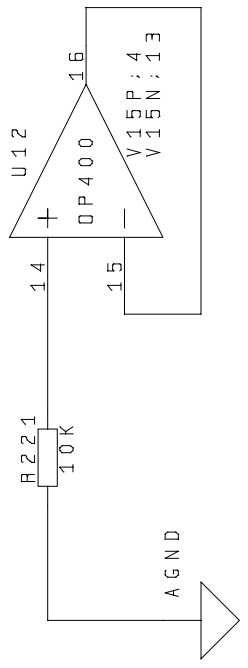
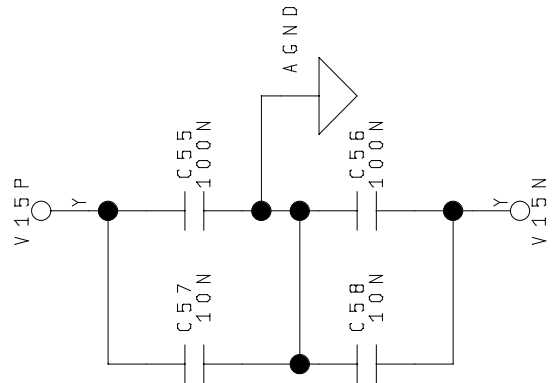
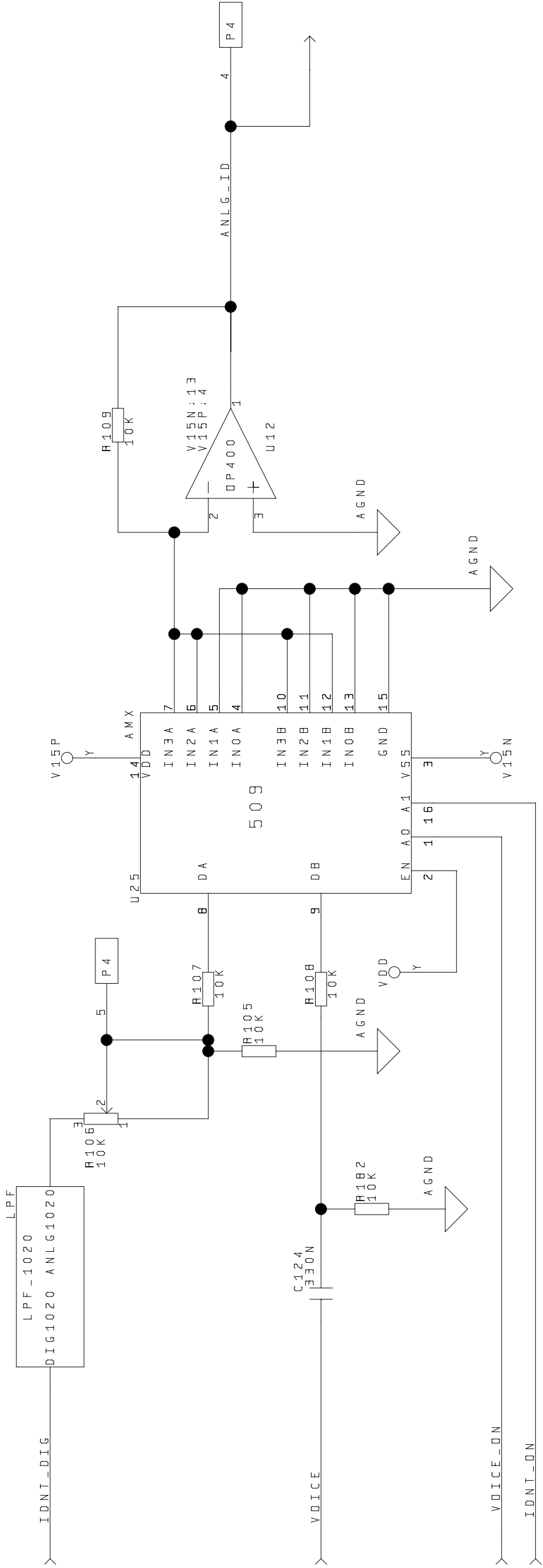
1 LF1223A Low Frequency Generator

1.1 *Schematic Diagrams*

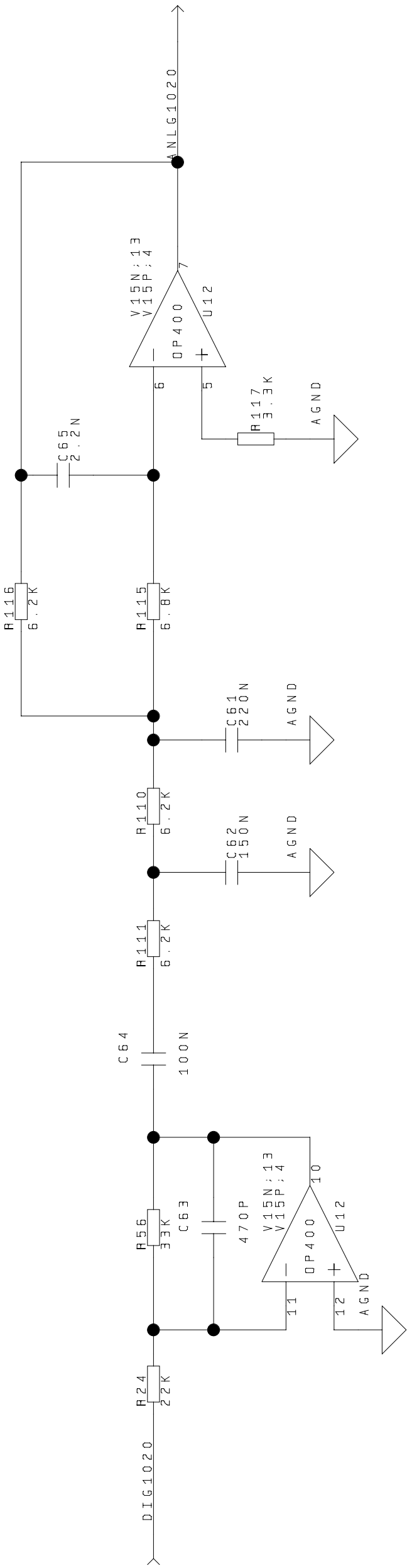


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				NAME : LF_SELF T	MODULE : LF1223A	#SCH. : 24	#HDL : A3	SHEET : 2		
2259	3	16.03.95	ER	 Normarc					DWG. NO. : 15472	VERSION : 7
2205	2	08.02.95	ER							
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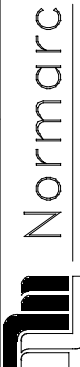
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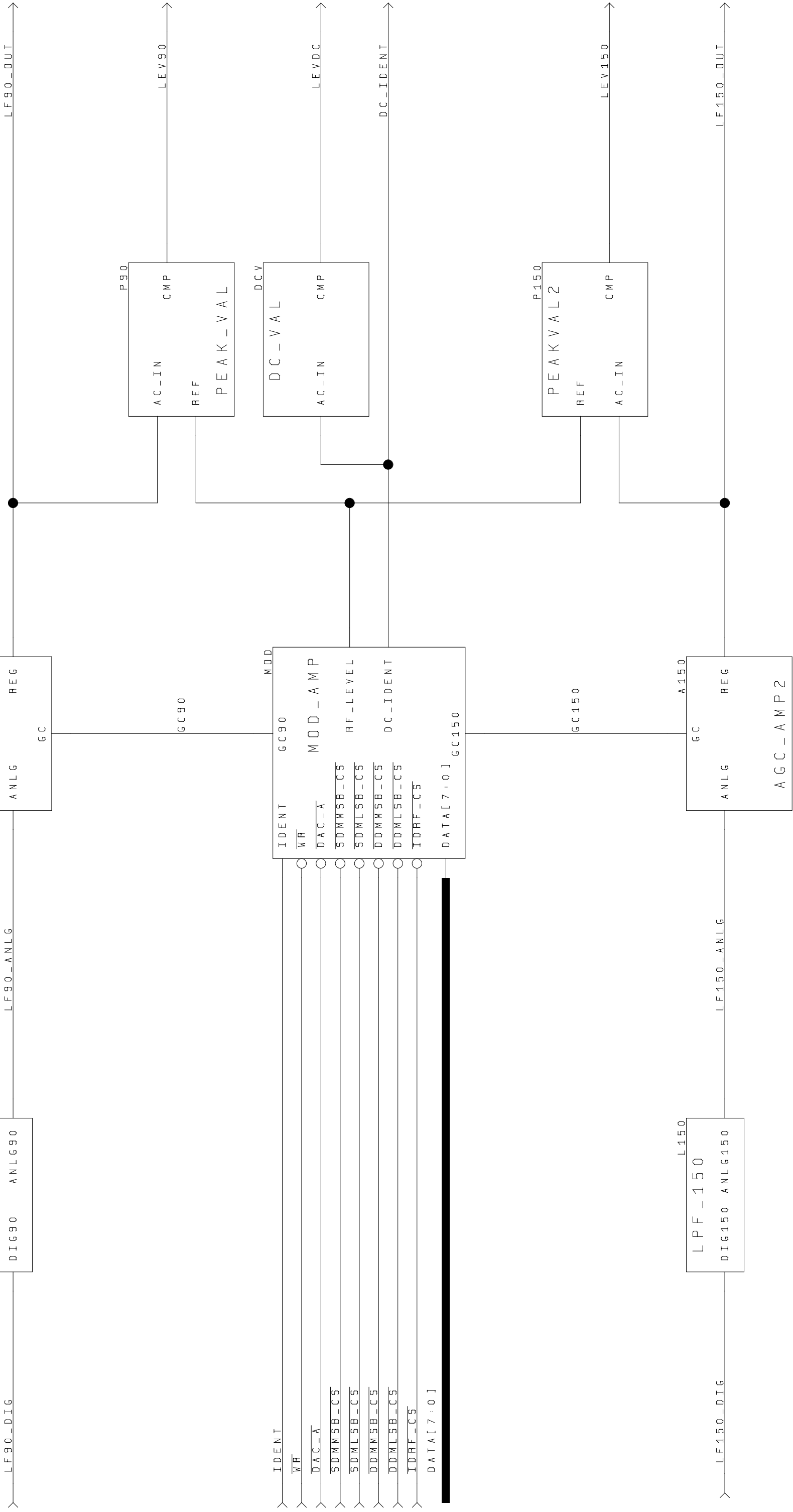


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2403	4	03.07.95	ER			#SCH.:	#HDL:	SHEET:
2259	3	16.03.95	ER			NAME :	MODULE :	SIZE :
2205	2	08.02.95	ER			ANLG-ID	LF1223A	A3
			15472	VERSION :				
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2403	4	03.07.95	ER	NAME : LPF_1020	#SCH. :	#HDL :	SIZE : A3
2259	3	16.03.95	ER	MODULE : LF1223A	24		SHEET : 5
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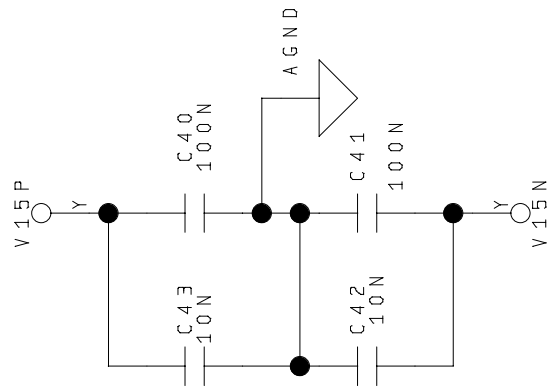
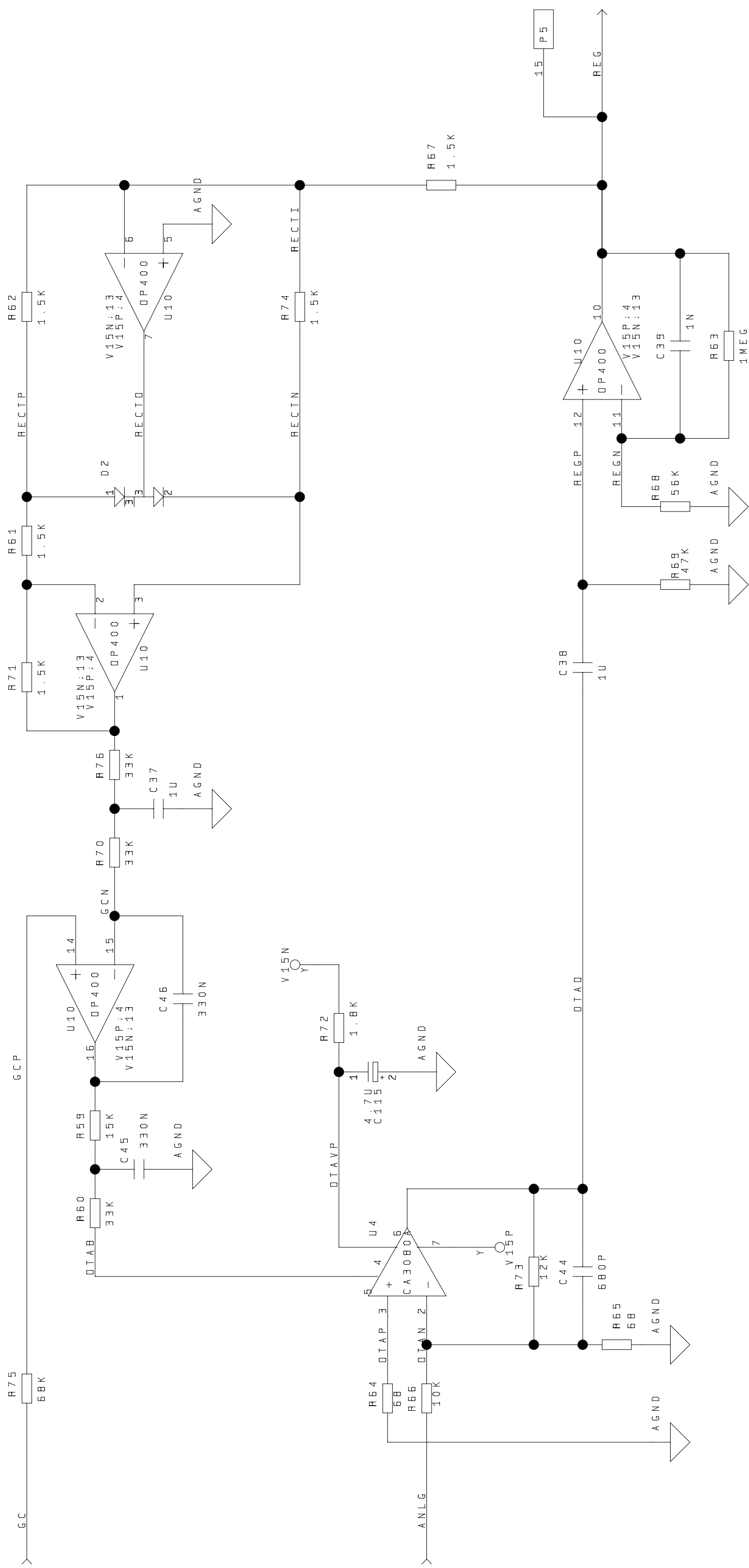


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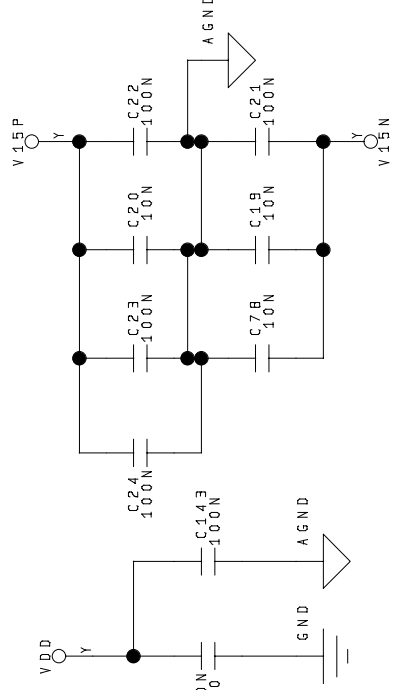
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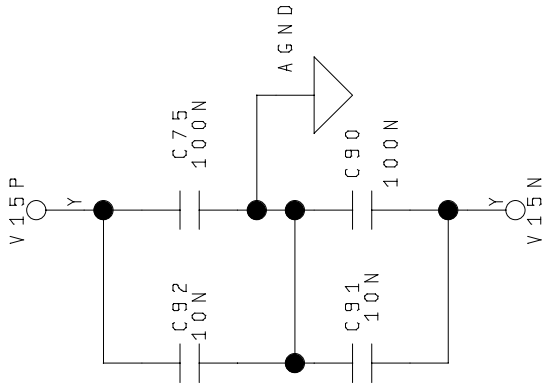
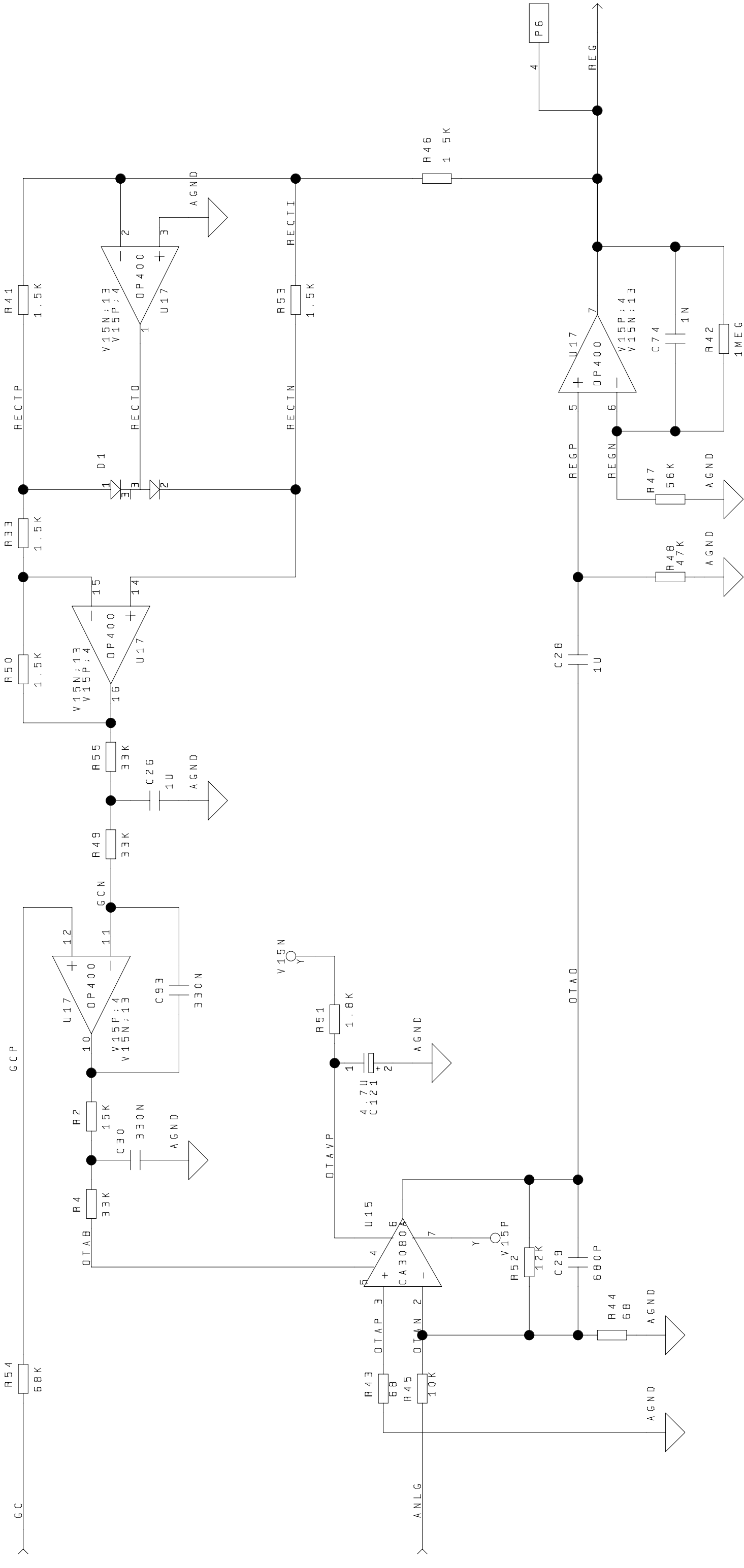
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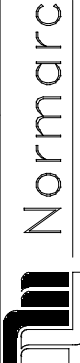
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2403	4	03.07.95	ER		NAME :	AGC - AMP	MODULE :	LF1223A	
2259	3	16.03.95	ER		 Normarc				
2205	2	08.02.95	ER						
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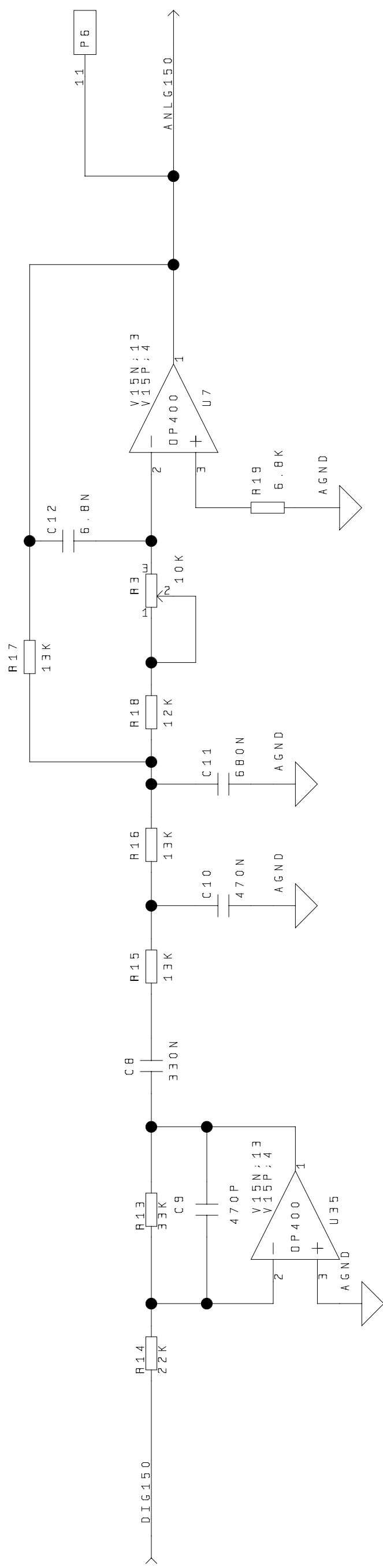
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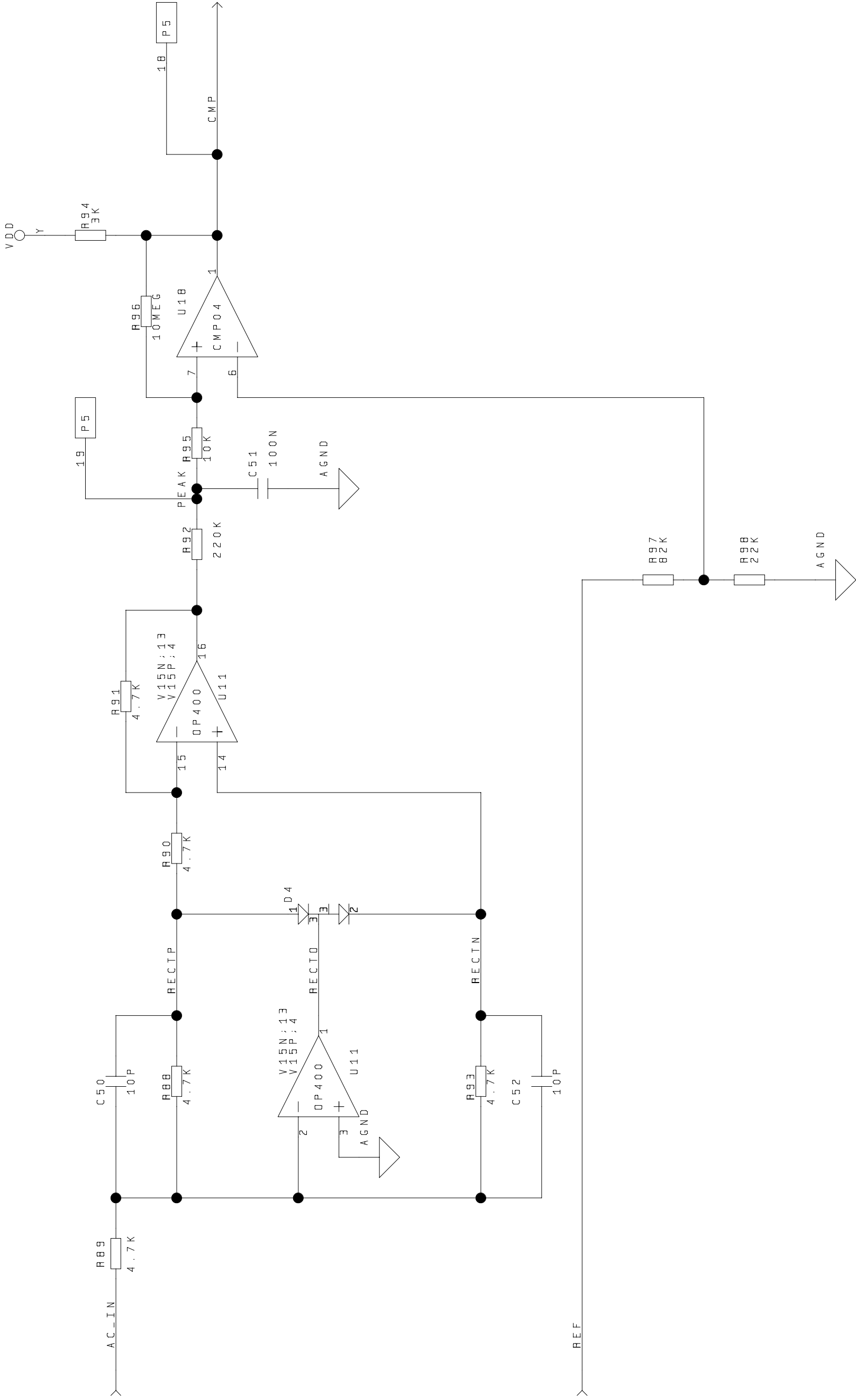
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2259	3	16.03.95	ER	 Normarc				DWG. NO. : 15472		VERSION : 7
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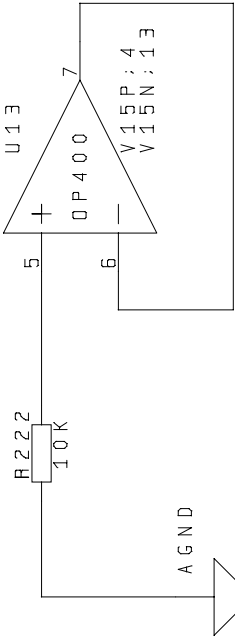
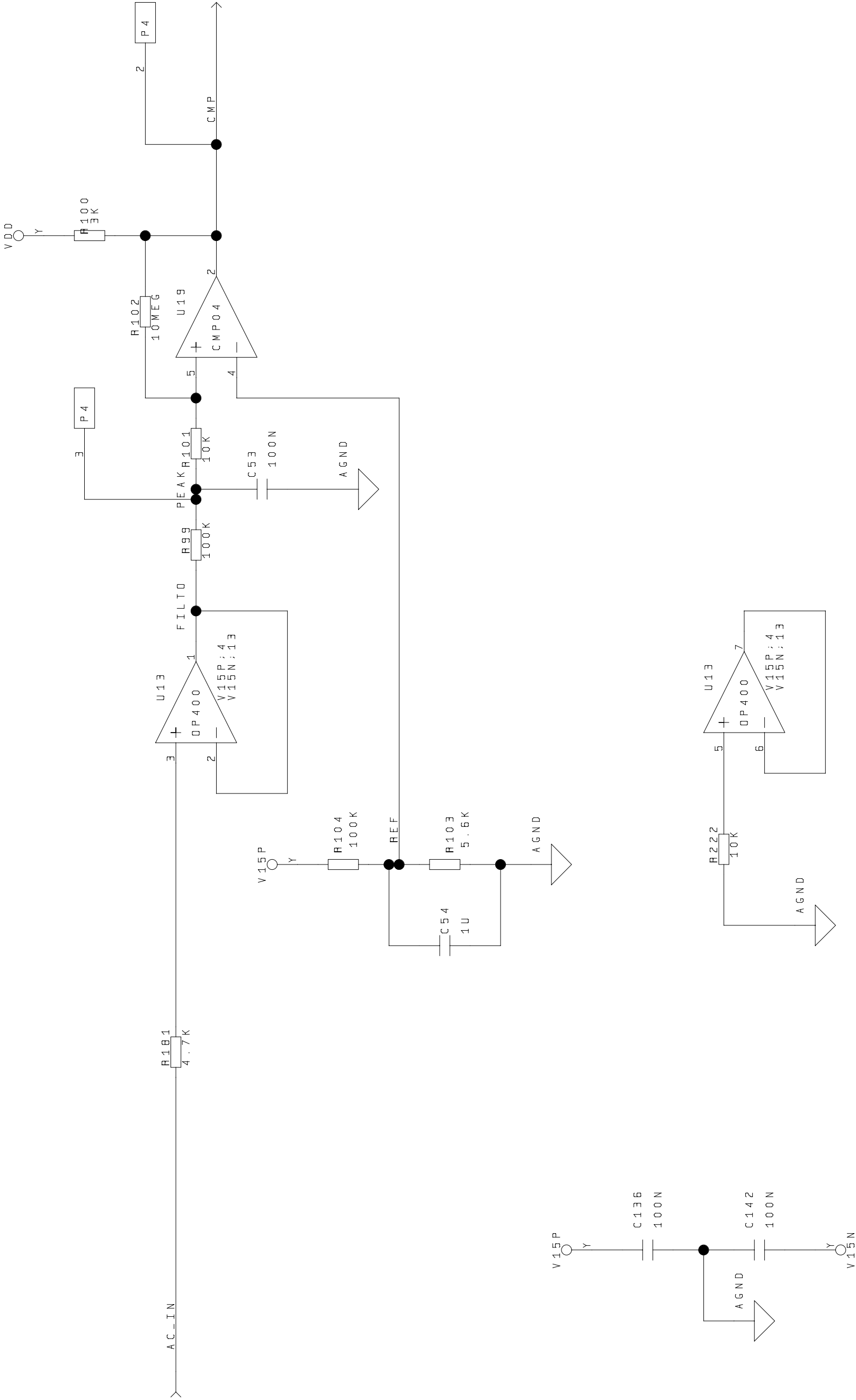


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2498	5	29.09.95	ER											APPR.	10.10.94		JSA				
2403	4	03.07.95	ER	NAME : PEAK_VAL		MODULE : LF1223A												#SCH. : 24	#HDL :	SIZE : A3	SHEET : 12
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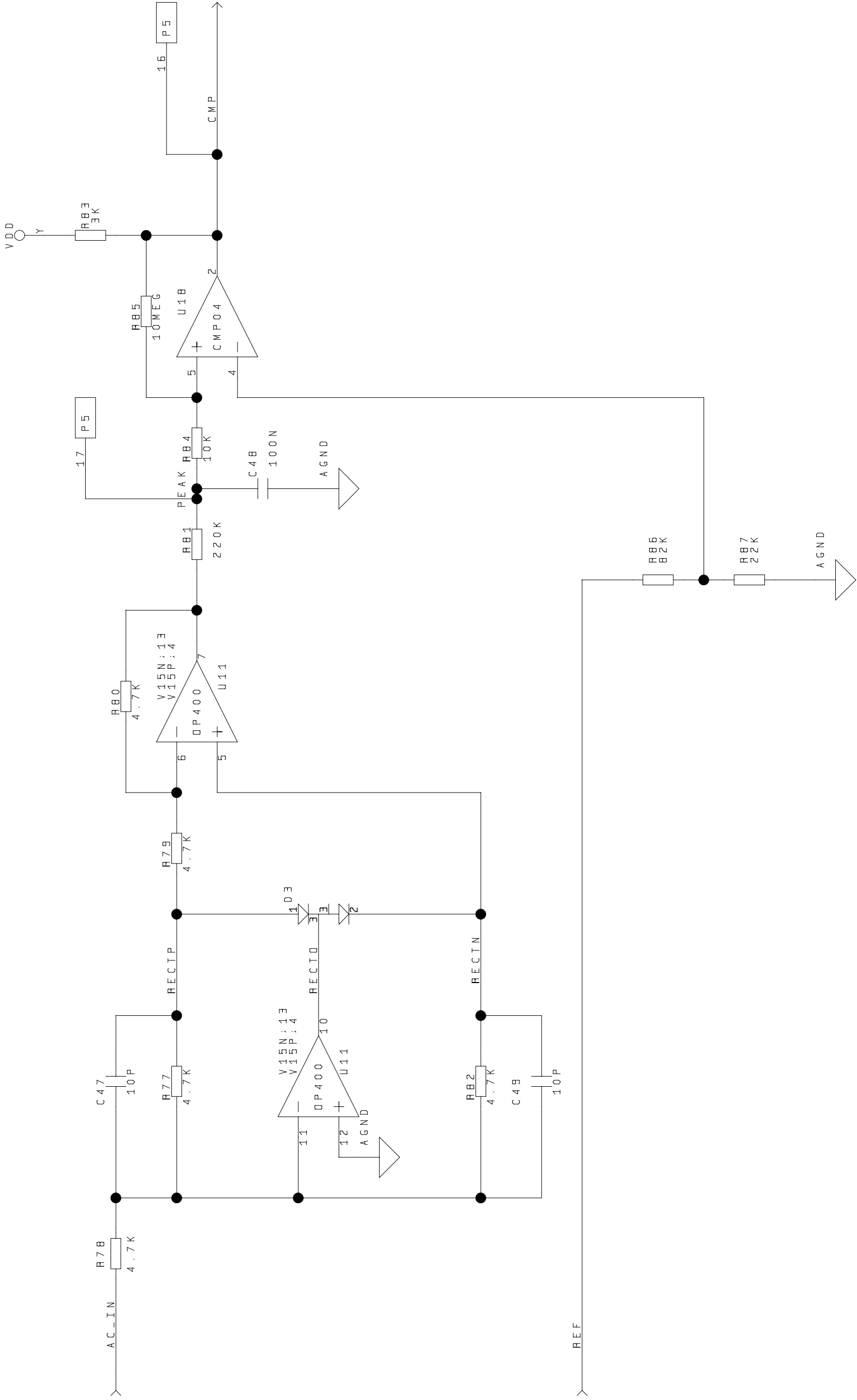
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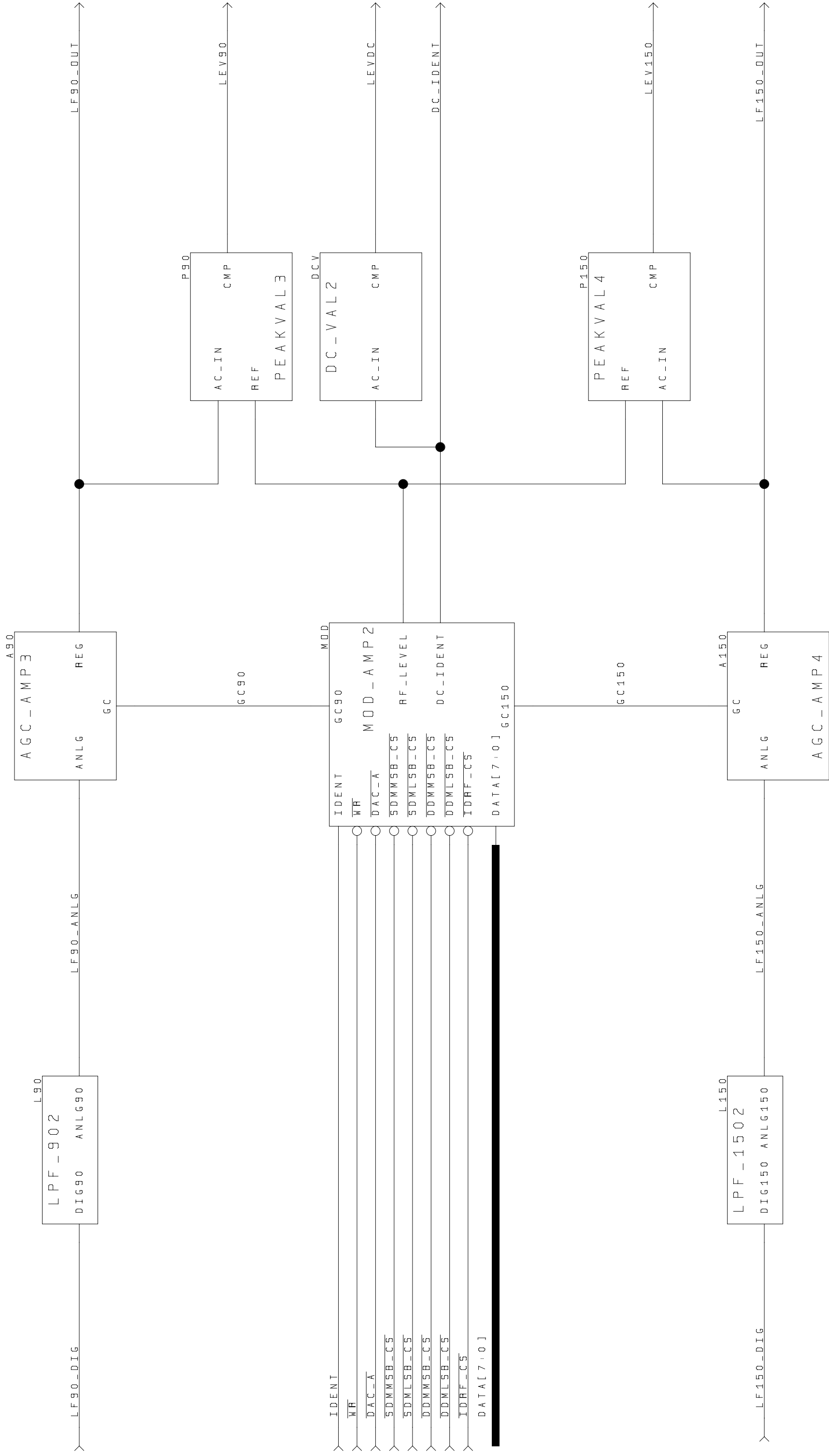


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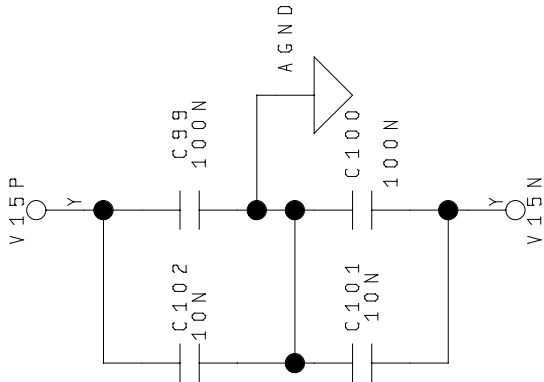
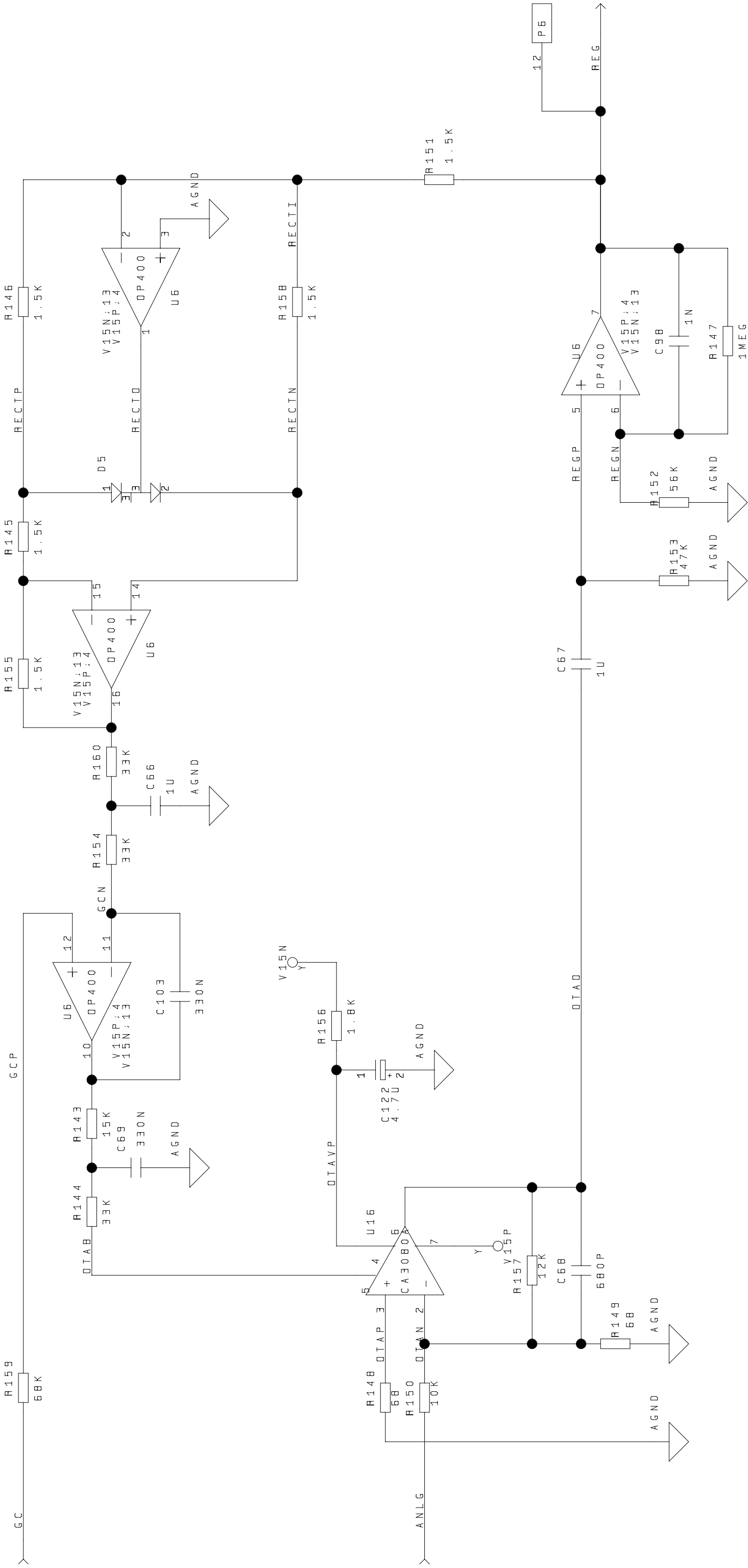
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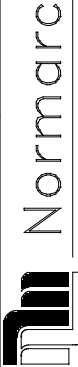
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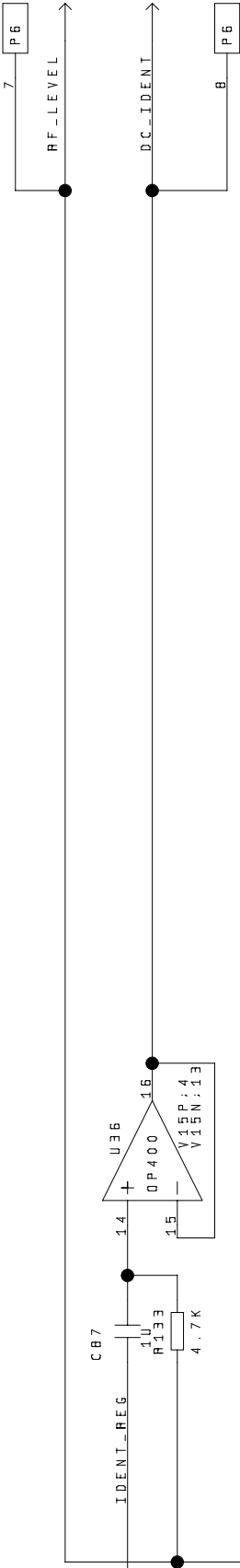
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DATA[7:0]

DDMM5B-CS

DDML5B-CS

IDENT

VDD

DATA0

DATA1

DATA2

DATA3

DATA4

DATA5

DATA6

DATA7

DAC-A

IDRF-CS

V15N

REF08

SEL VOUT

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VREF

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DB1

DB2

DB3

DB4

DB5

DB6

DB7

DF-DOR

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CSLSB

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VREF

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CSMSB

CSLSB

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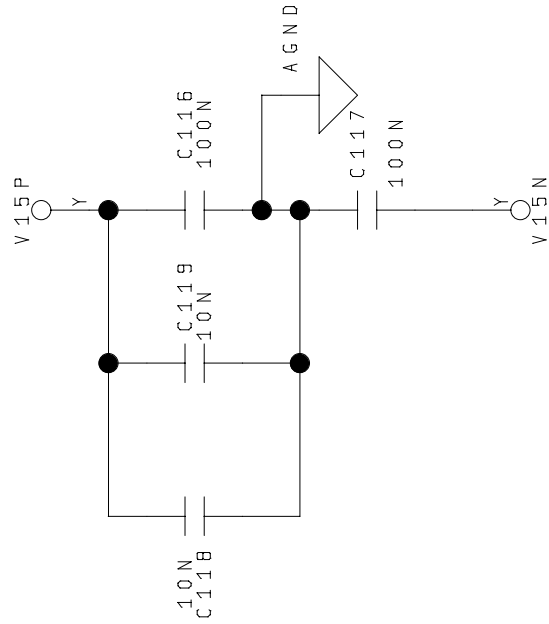
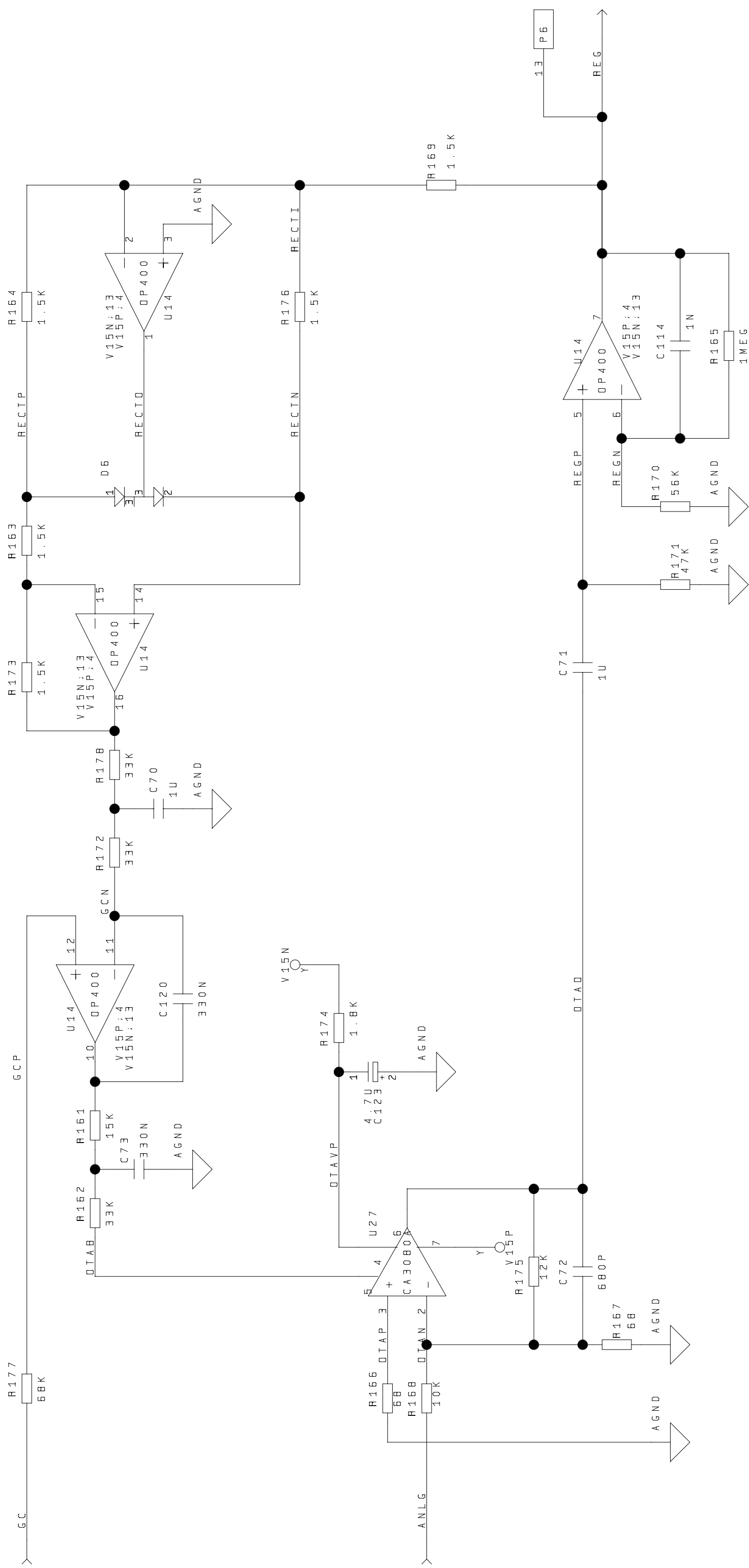
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VDD

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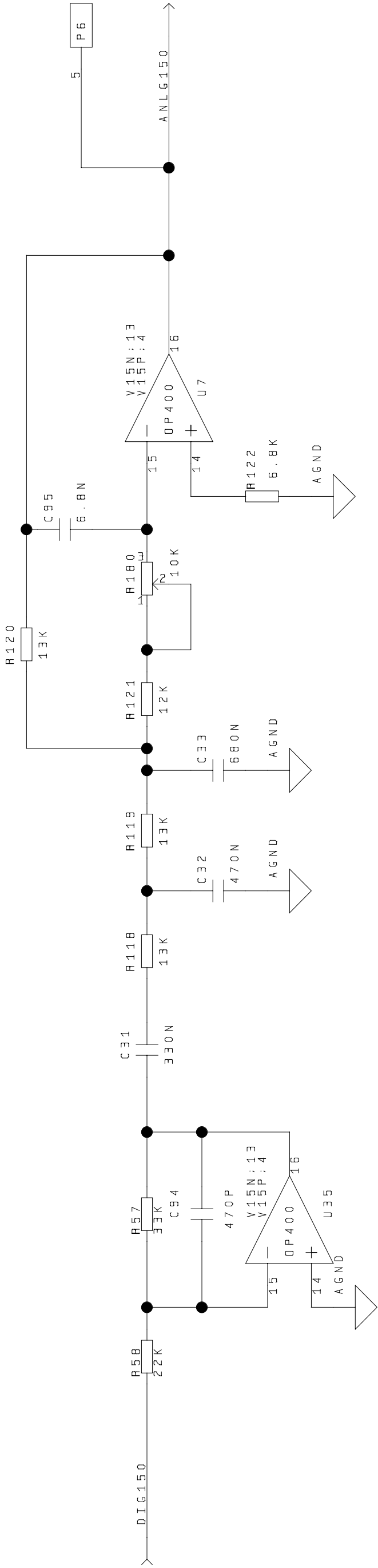


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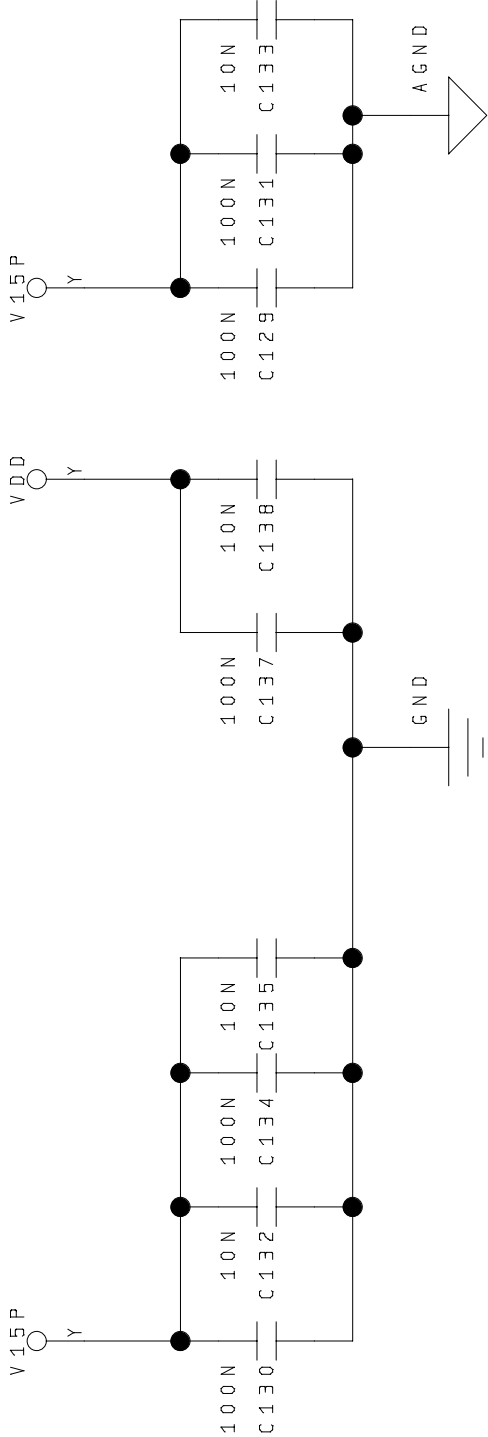
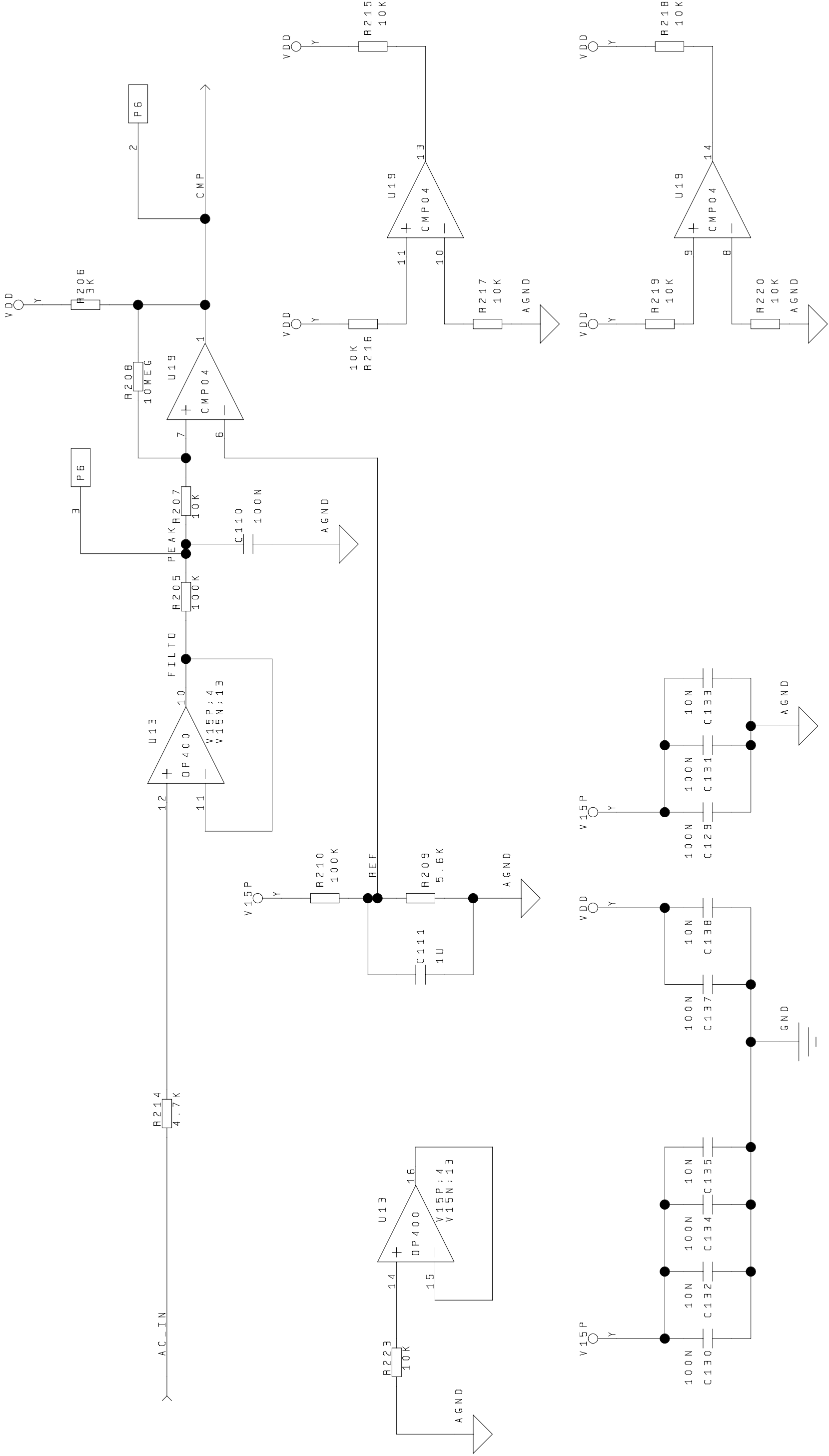
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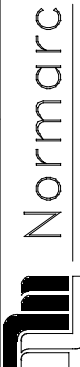
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2403	4	03.07.95	ER	NAME : LPF_1502	MODULE : LF1223A	#SCH. : 24	#HDL : A3	SHEET : 20
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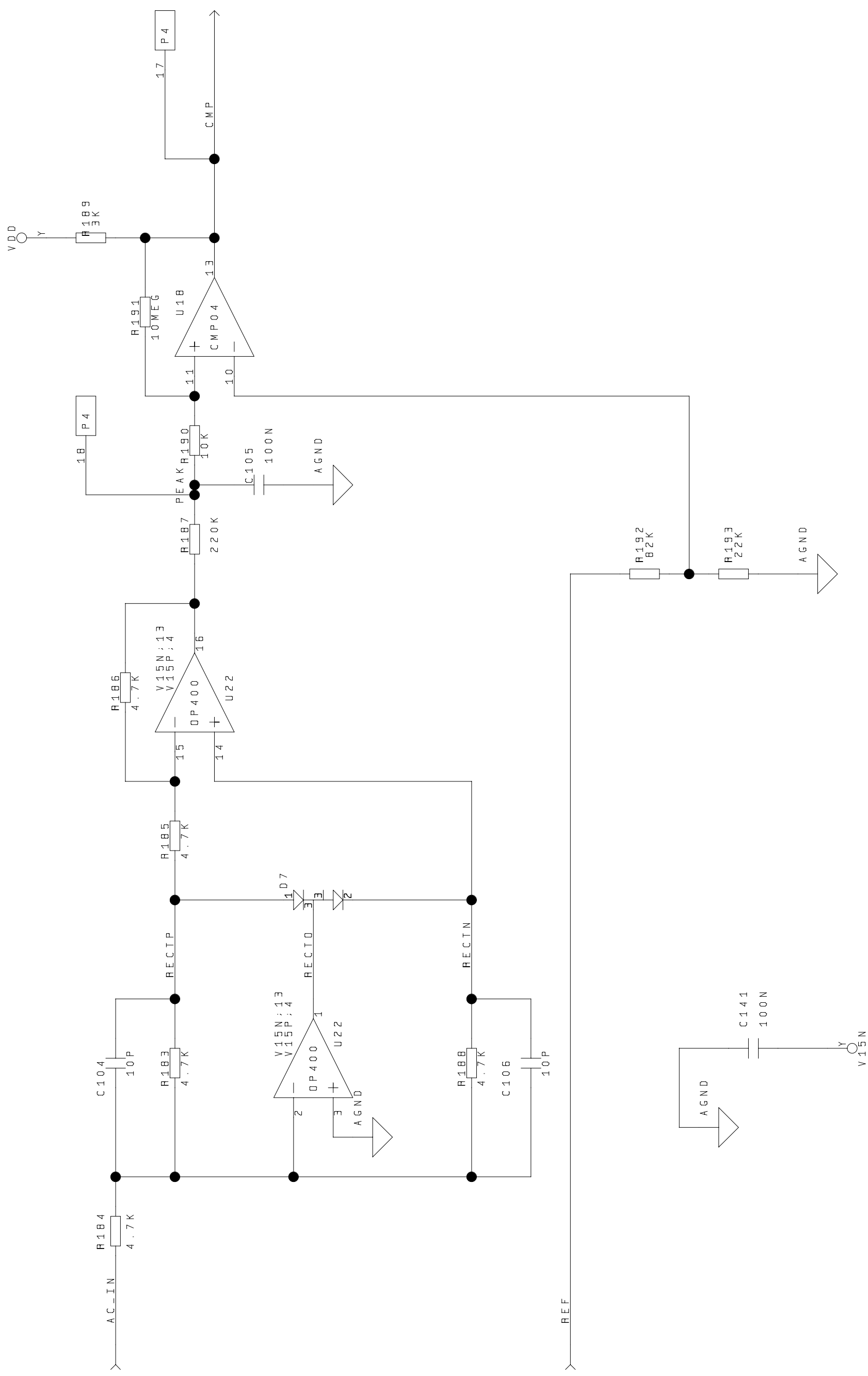


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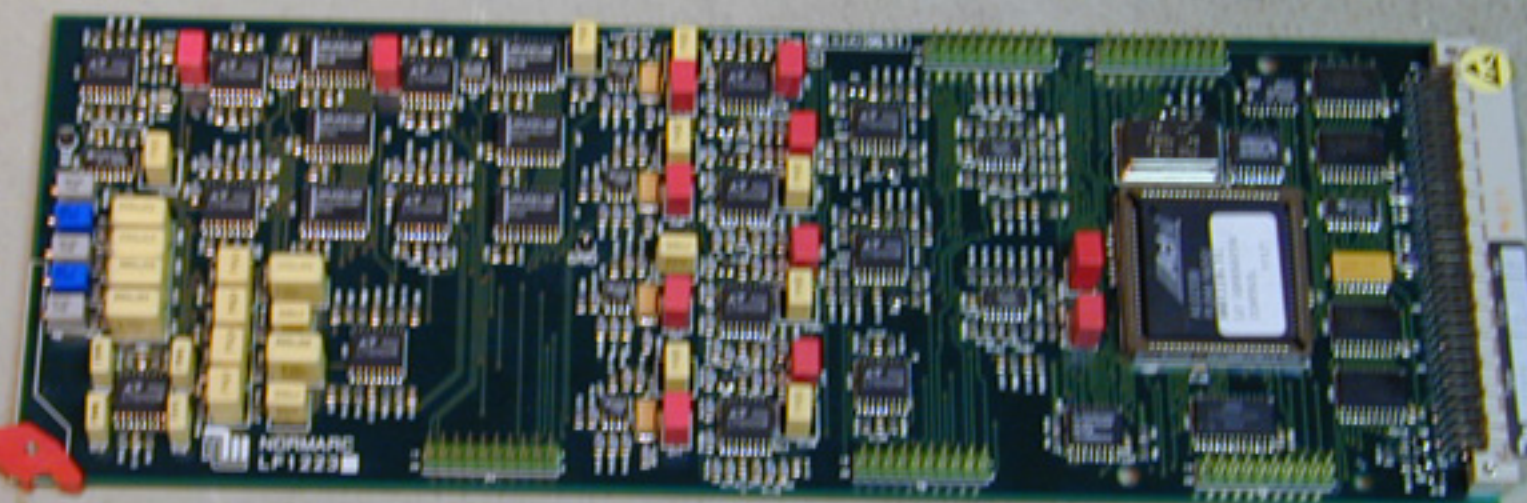
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	2259	3	16.03.95	ER																	VERSION :	7			
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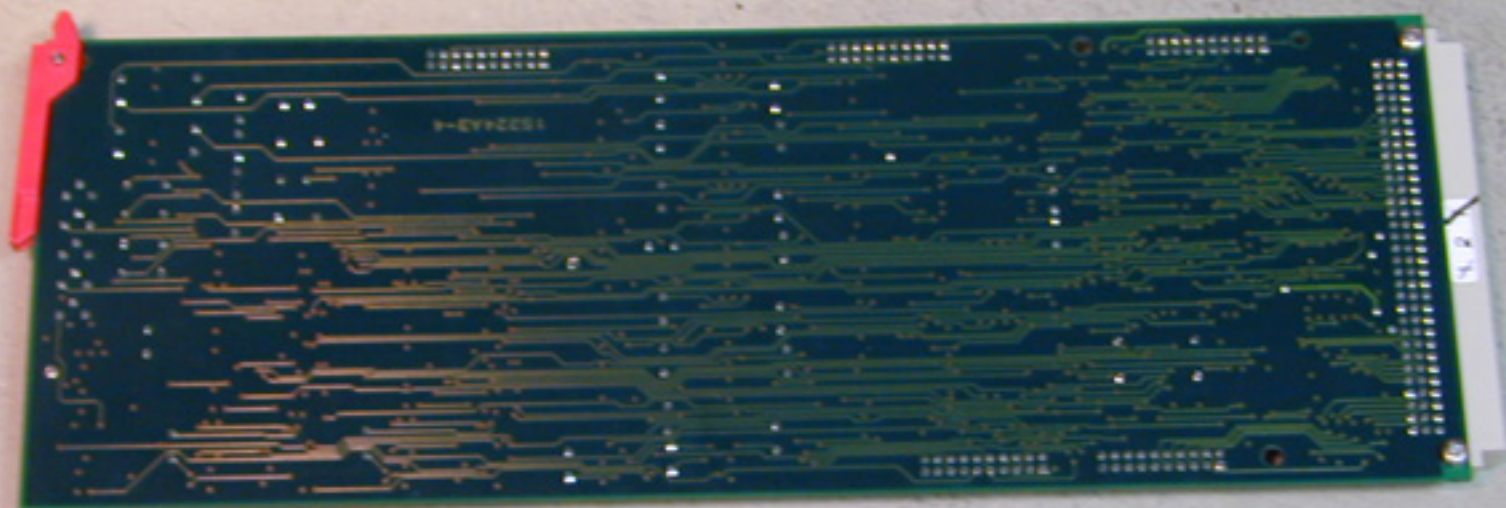




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2498	5	29.09.95	ER						
2403	4	03.07.95	ER						
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REF. NO.	ISSUE	DATE	SIGN	PROJECT:					
Copyright and all modification rights reserved NAVIA AVIATION AS, NORWAY									

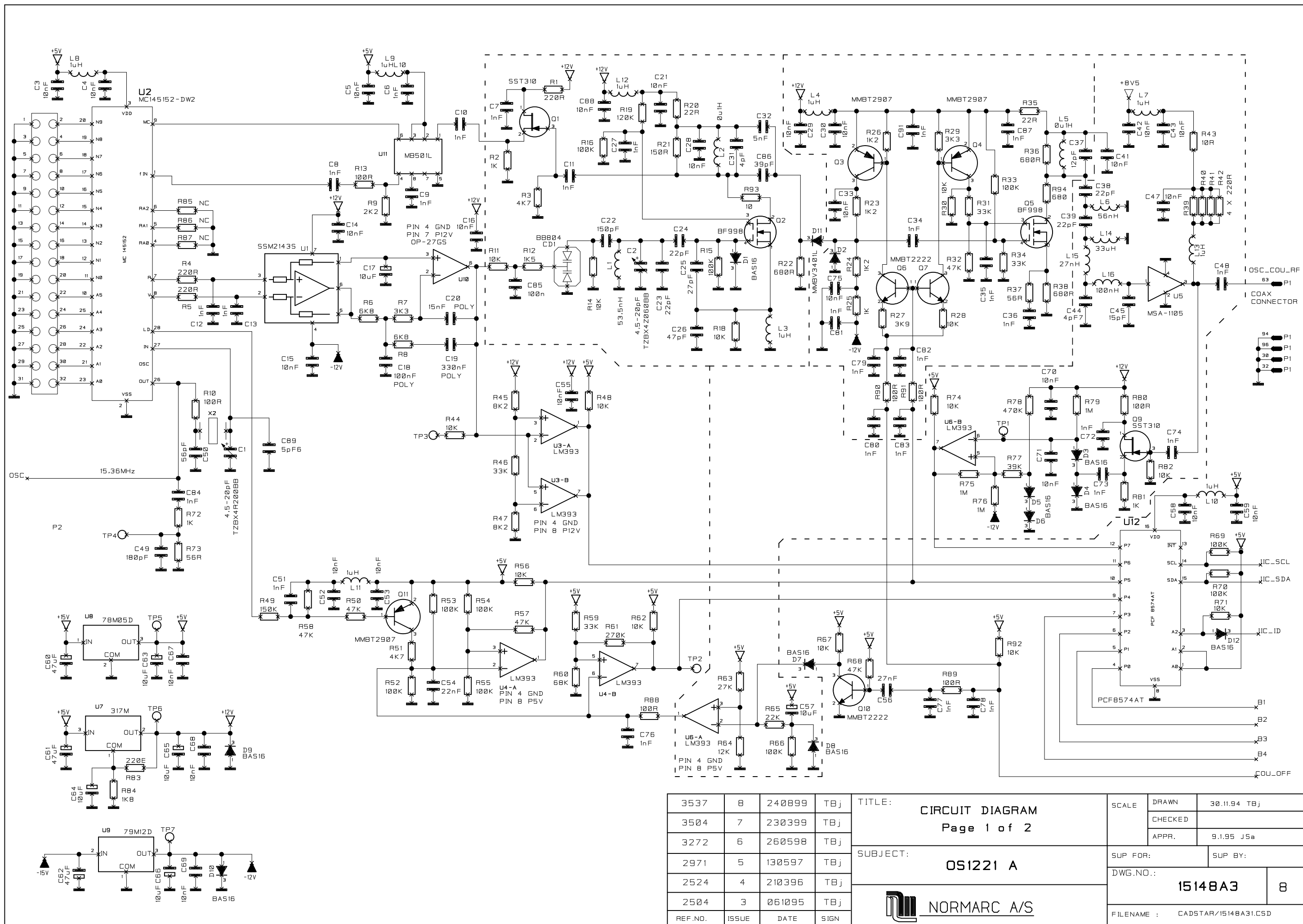
1.2 *Photos*





2 OS1221A RF Oscillator

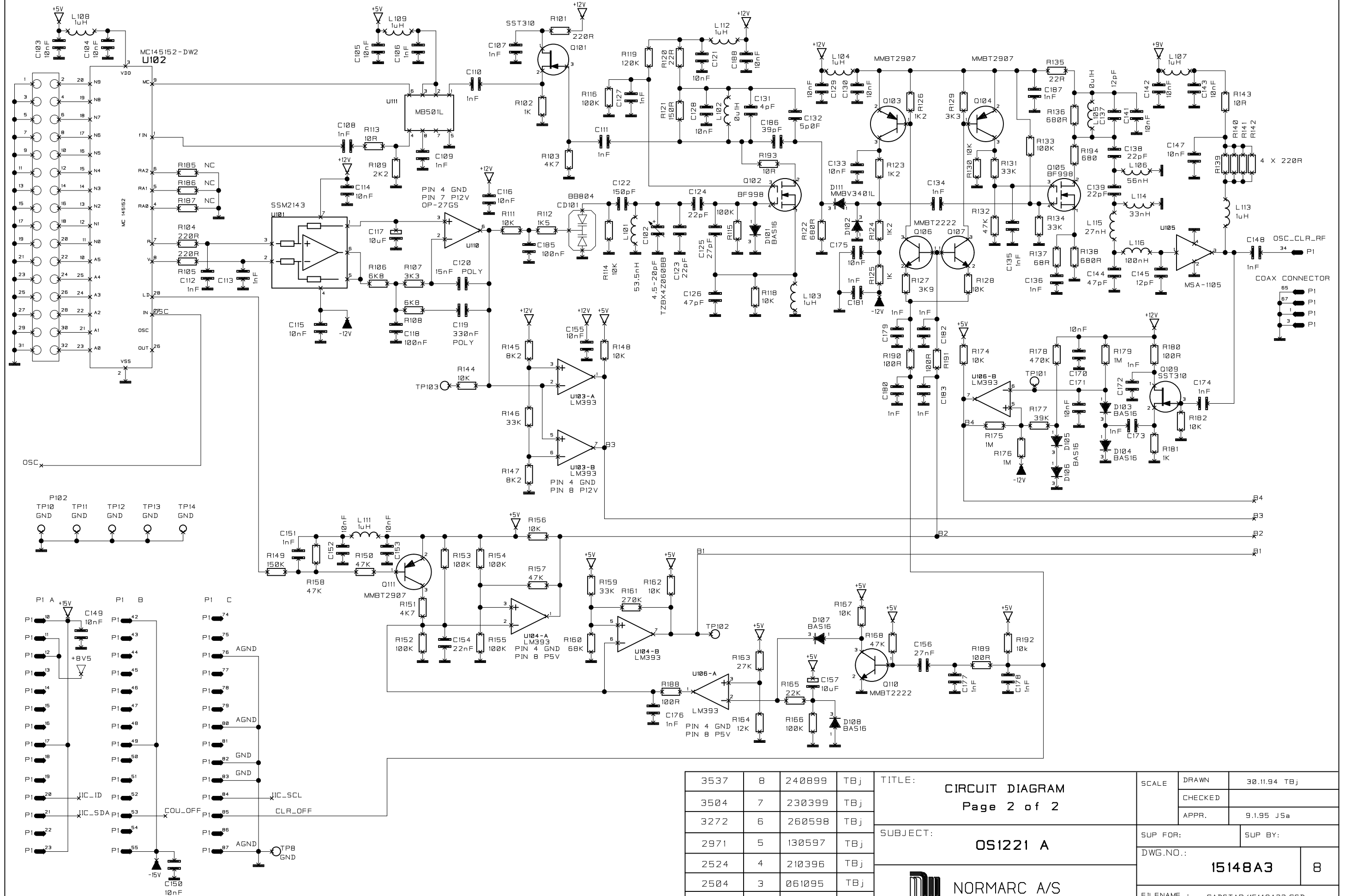
2.1 *Circuit Diagrams*



3537	8	240899	TBJ
3504	7	230399	TBJ
3272	6	260598	TBJ
2971	5	130597	TBJ
2524	4	210396	TBJ
2504	3	061095	TBJ
REF.NO.	ISSUE	DATE	SIGN

TITLE:		CIRCUIT DIAGRAM	
		Page 1 of 2	
SUBJECT:		OS1221 A	
		NORMARC A/S	

SCALE	DRAWN	30.11.94 TBJ	
	CHECKED		
	APPR.	9.1.95 JSa	
SUP FOR:		SUP BY:	
DWG.NO.:		15148A3	
FILENAME :		CADSTAR/15148A31.CSD	

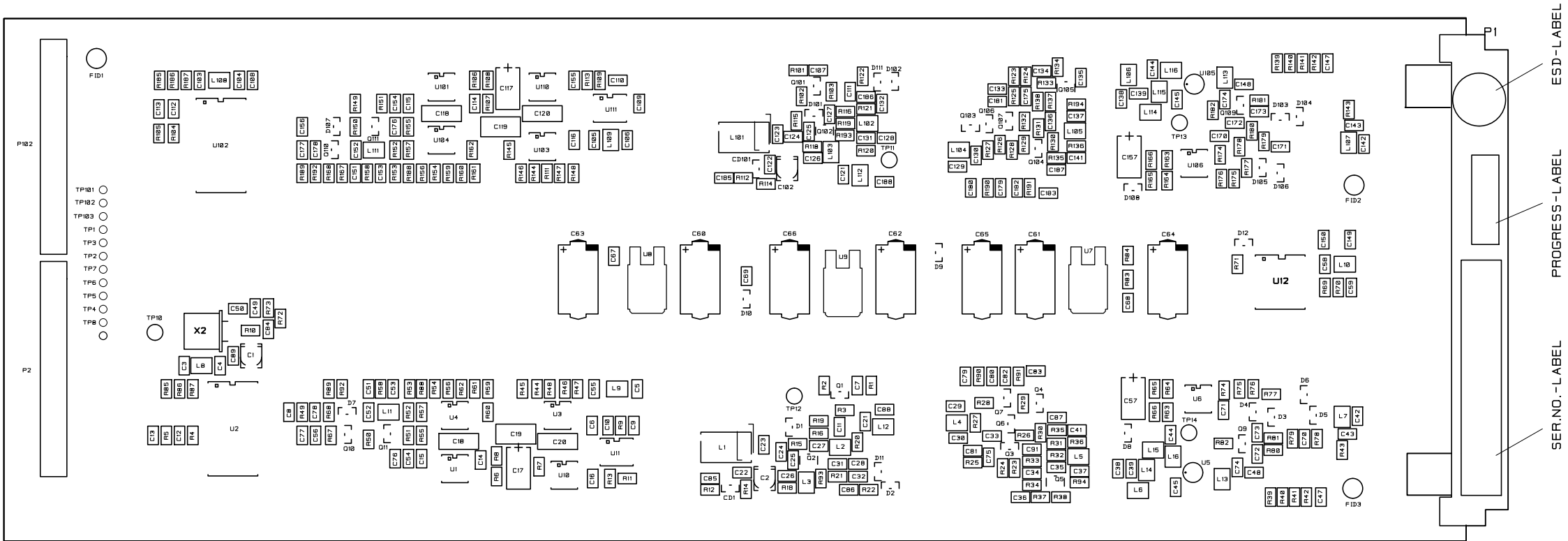


3537	8	240899	TBJ
3504	7	230399	TBJ
3272	6	260598	TBJ
2971	5	130597	TBJ
2524	4	210396	TBJ
2504	3	061095	TBJ
REF.NO.	ISSUE	DATE	SIGN

TITLE:		CIRCUIT DIAGRAM	
		Page 2 of 2	
SUBJECT:		OS1221 A	
		NORMARC A/S	

SCALE	DRAWN	30.11.94 TBJ	
	CHECKED		
	APPR.	9.1.95 JSa	
SUP FOR:		SUP BY:	
DWG.NO.:		15148A3	
FILENAME :		CADSTAR/15148A32.CSD	

2.2 *Component Location*

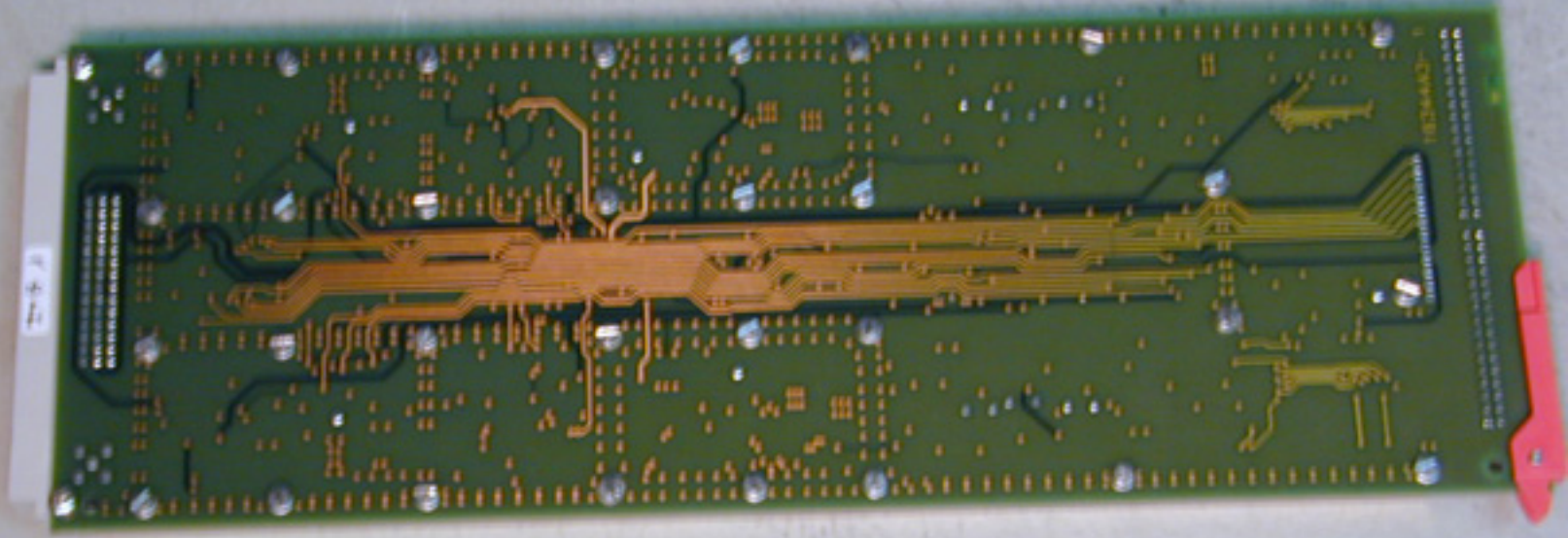


ESD-LABEL
PROGRESS-LABEL
SER.NO.-LABEL

				TITLE: COMPONENT LOCATION SHEET NO. 1 OF 1	SCALE 1:1	DRAWN	21.12.95. TBJ	
						CHECKED		
3537	5	240299	TBJ	SUBJECT: OS 1221A/B	1:1	APPR.	21.12.95. JSA	
3440	4	240299	PLI			SUP FOR:	SUP BY:	
3272	3	280598	TBJ			DWG.NO.: 16453A3		ISSUE 5
2971	2	130597	PLI			FILENAME : 16453A3.SPL		
REF.NO.	ISSUE	DATE	SIGN	 NORMARC Copyright and all modification right reserved NAVIA AVIATION AS, NORWAY				

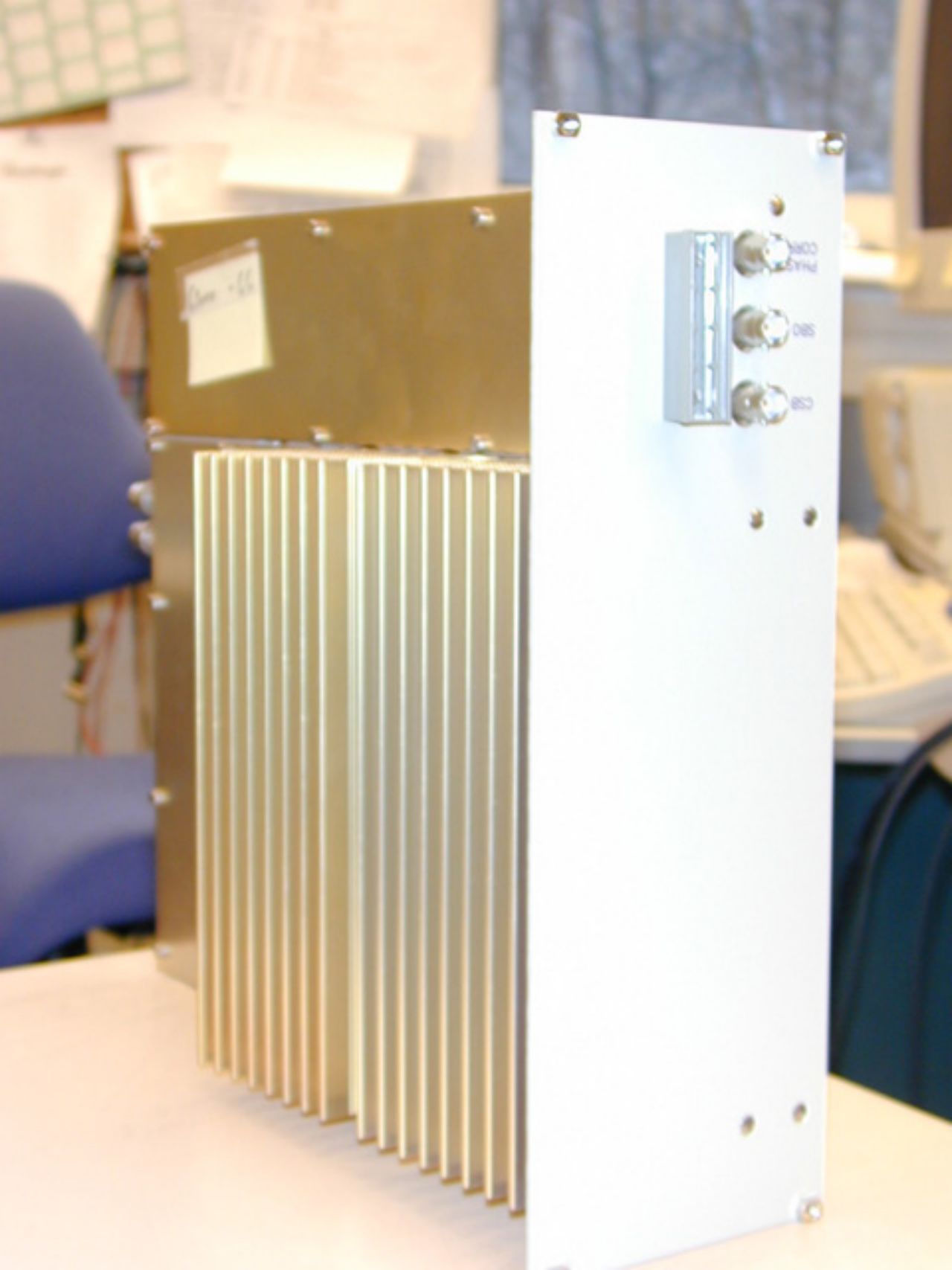
2.3 *Photos*





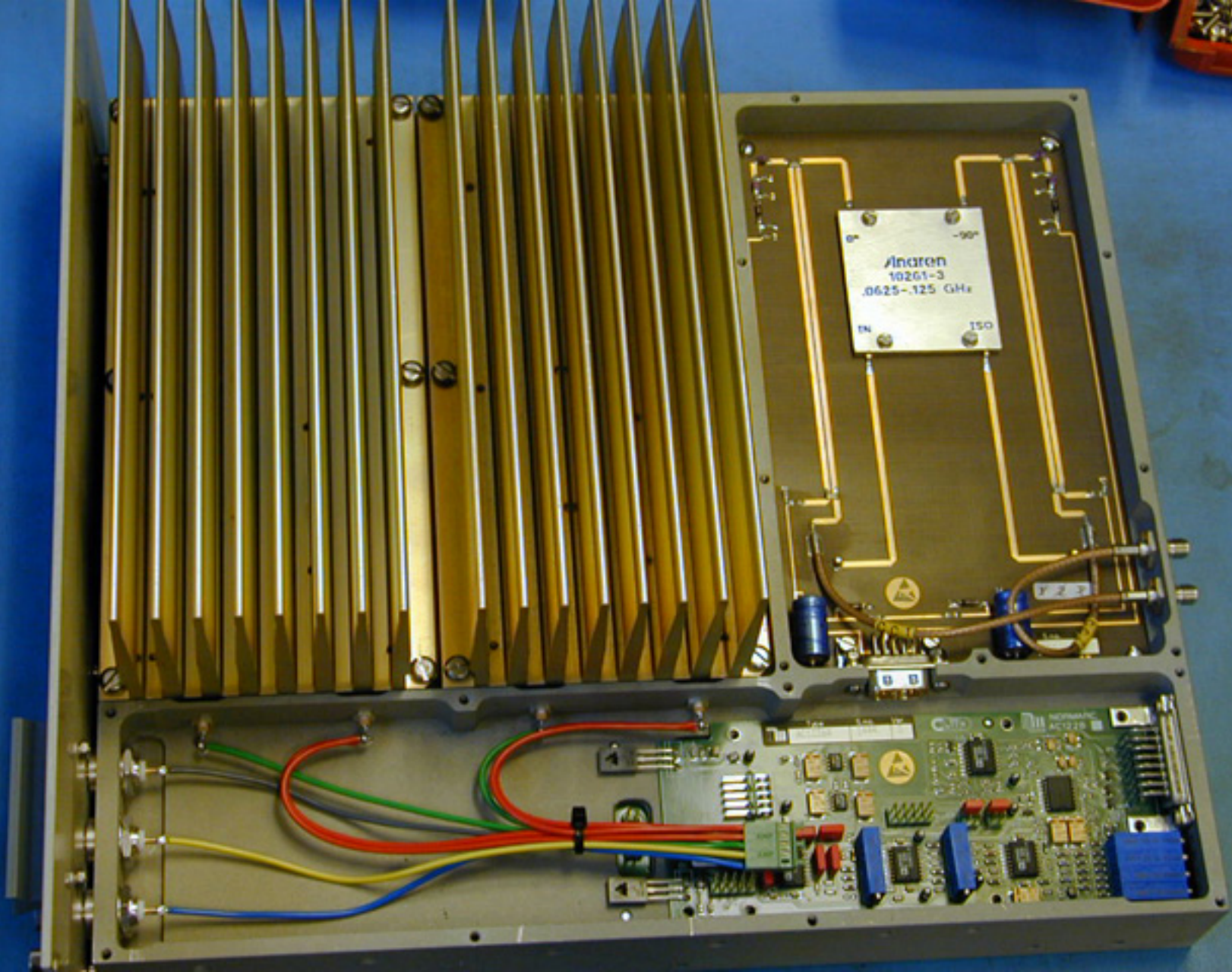
3 LPA1230A POWER AMPLIFIER ASSEMBLY

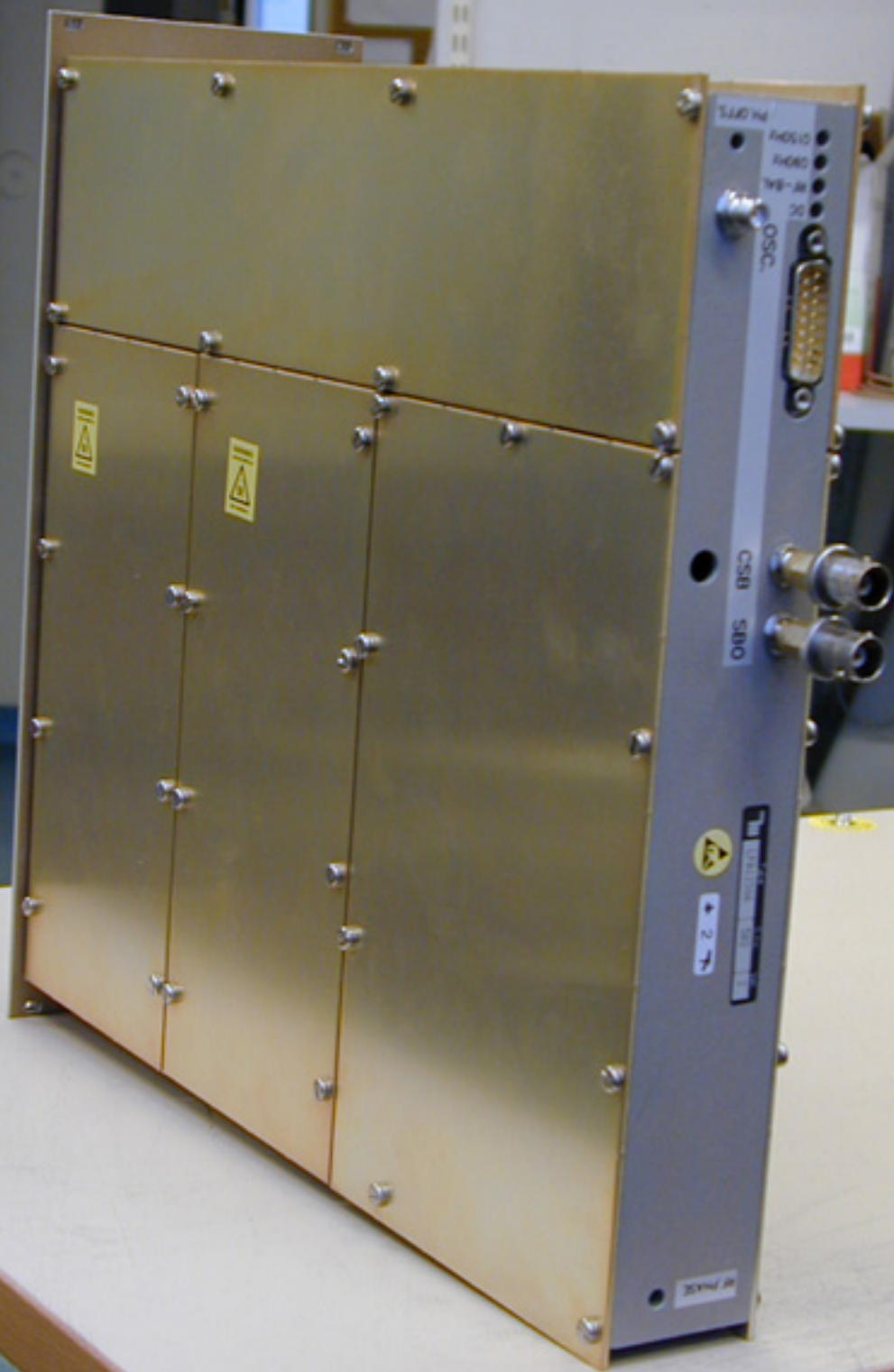
3.1 *Photos*

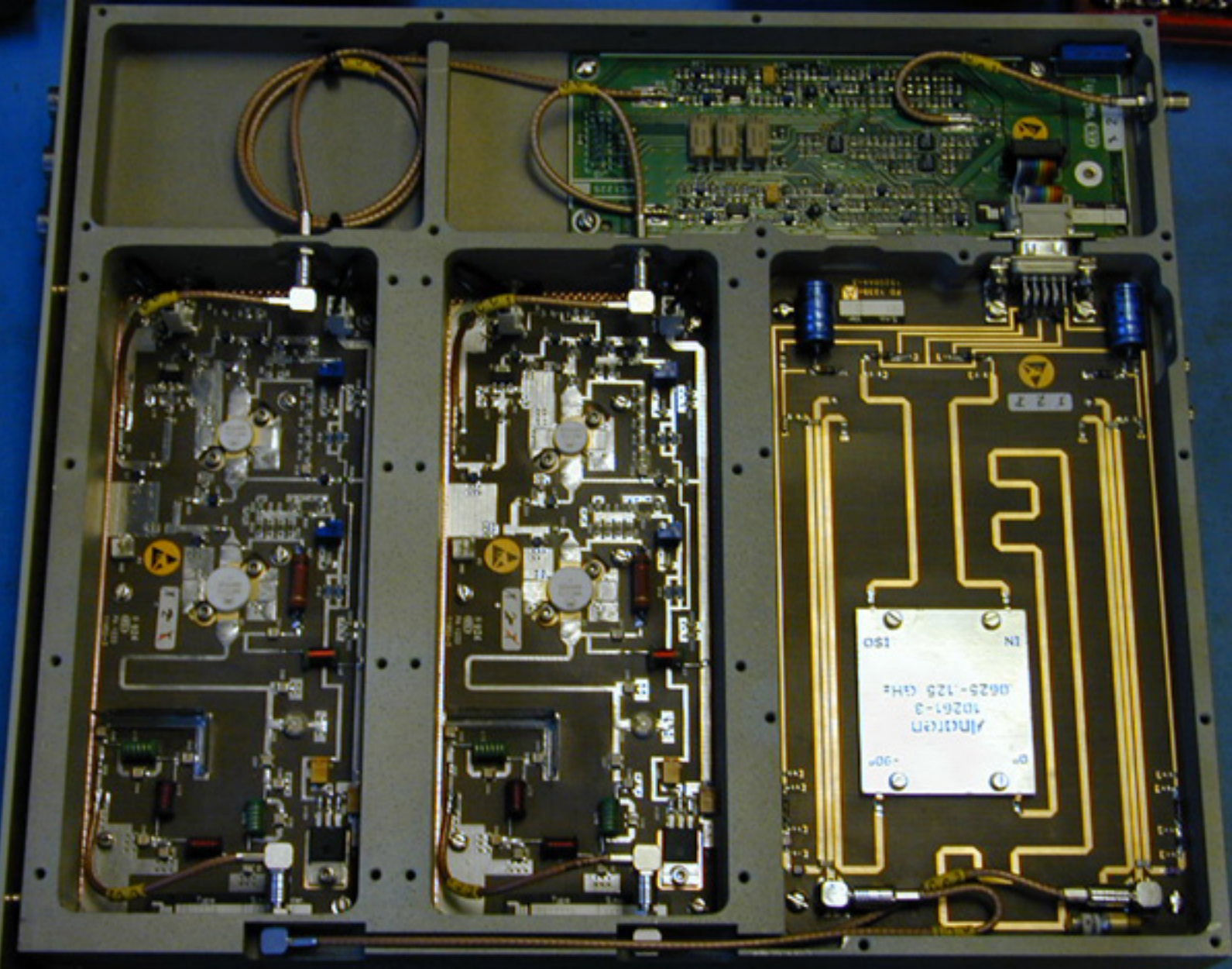


61000 - 66



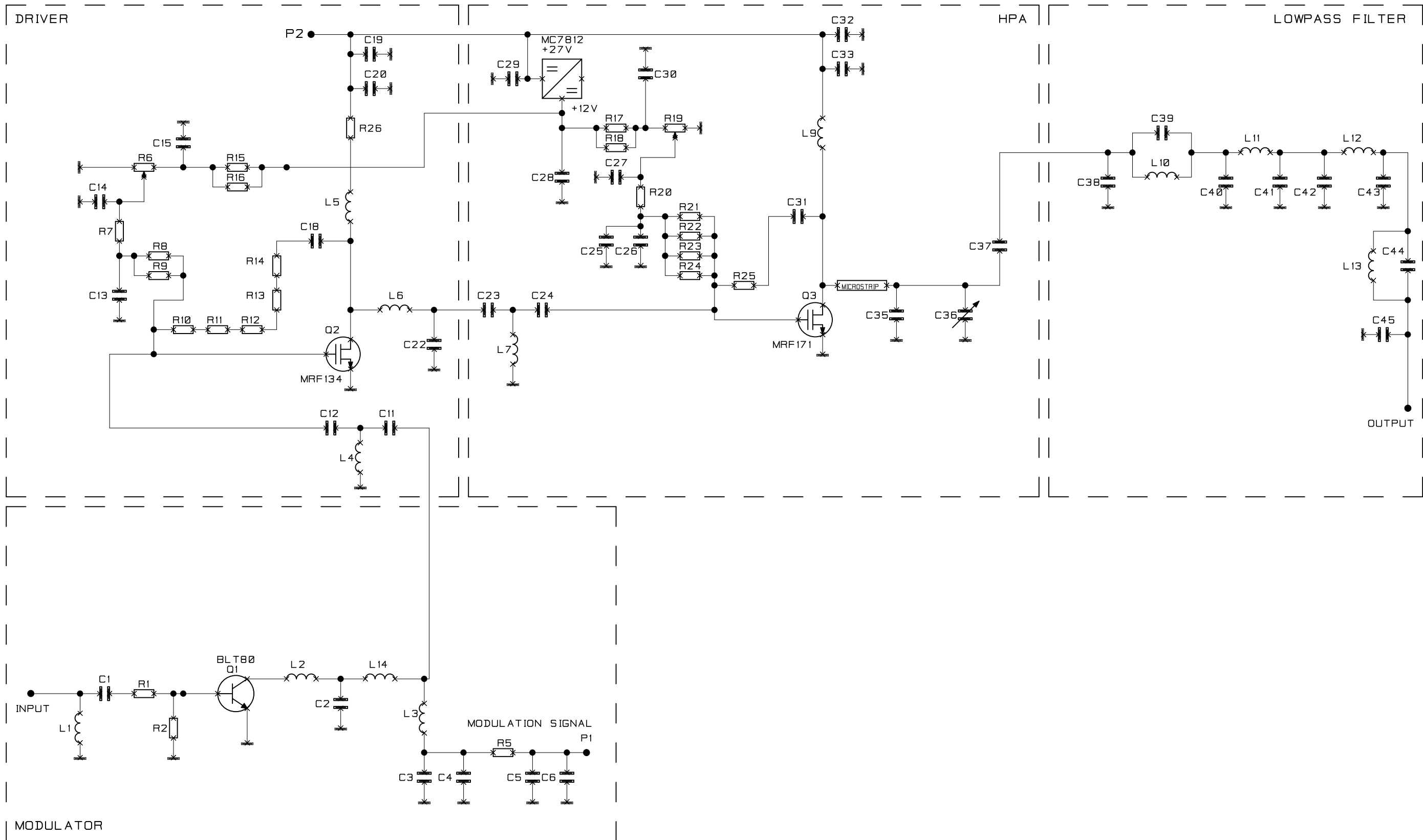






4 PA1233A Power Amplifier

4.1 *Schematic Diagrams*



				TITLE:	SCALE	DRAWN	20.12.94. PL.
				CIRCUIT DIAGRAM	CHECKED		
				SHEET NO. 1 OF 1	APPR.	21.12.94 JSa	
				SUBJECT:	SUP FOR:	SUP BY:	
				PA 1233A	DWG.NO.:	15577A3	ISSUE
							2
2351	2	080695	TBj	 NORMARC A/S			
REF.NO.	ISSUE	DATE	SIGN	FILENAME : CSTAR\CSD\15577A3			

4.2 *Parts List*

Product: 18632 Rev. 4

PA 1233A POWER AMPLIFIER

Issue: 4

Change Order: 3479

Appr.: A/S

Date: 24.2.99

Tot. Quant.	Pos.	Part no.	Component Manu. Description	Drwg. no.	Rev.	Value/Dim. Ratings	Tol. Function	Quant./Pos.
1 PCS		13298	LABEL ESD	-				1 PCS
1 PCS		18633	TYPE 52404 PA 1233A POWER AMPLIFIER PL	18633/8	6			1 PCS
1 PCS		18634	PA 1233A POWER AMPLIFIER MPL	-	8			1 PCS
1 PCS		18635	PA 1233A POWER AMPLIFIER CPL	-	3			1 PCS
1 PCS	C11	19833	CAP.SMD	-		33P	5%	1 PCS
1 PCS	C12	19842	PH 0805C330J50 CAP.SMD	-		50V 150P	5%	1 PCS
1 PCS	C23	10207	PH 0805C151J50 CAP.CERAMIC	-		50V 56P	0.05	1 PCS
1 PCS	C24	10197	ATC 100A560JP150DR CAP.CERAMIC	-		150V 100P	0.05	1 PCS
1 PCS	Q02	11296	ATC 100A101JP150DR TRANSISTOR	-		150V		1 PCS
1 PCS	Q03	20375	MOT MRF 134 TRANSISTOR	-		5W 2-200MHZ		1 PCS
1 PCS	U01	11510	MOT MRF 173 IC	-		80W	N CH MOSFET RF	1 PCS
			MOT MCT7812CT / MC7812	-				

Product: 18633 Rev.6

PA 1233A POWER AMPLIFIER PL

Issue: 9

Change Order: 3489

Appr.: HSA

Date: 100399

Tot.Quant.	Pos.	Part no.	Component Manu. Description	Drwg.no.	Rev.	Value/Dim. Ratings	Tol. Function	Quant./Pos.
1 PCS		11952	PCB PA1233	11952/3				1 PCS
1 PCS		13231	LABEL SER.NO.	13344A4	3		PA1233A	1 PCS
1 PCS		13298	LABEL ESD TYPE 52404	-	1			1 PCS
1 PCS		20325	LABEL PROGRESS 2	16037A4	P3	1-2-T		1 PCS
1 PCS		21073	PA 1233A POWER AMPL. ESPL	-	2			1 PCS
1 PCS	2	14892	SHIELD	16217A4	4			1 PCS
2 PCS	C18	10094	CAP.CERAMIC	-		100p	0.05	1 PCS
1 PCS	C22	10205	ATC 100B101JP500X	-		500V		
			CAP.CERAMIC	-		20p	0.05	1 PCS
2 PCS	C28	10571	ATC 100A200JP150DR	-		150V		
			CAP.TANTALUM	-		1.5u	20%	1 PCS
			KYOC TAJD155M050R	-		50V		
	C29	10571	CAP.TANTALUM	-		1.5u	20%	1 PCS
			KYOC TAJD155M050R	-		50V		
	C31	10094	CAP.CERAMIC	-		100p	0.05	1 PCS
1 PCS	C35	10067	ATC 100B101JP500X	-		500V		
			CAP.CERAMIC	-		47p	0.1	1 PCS
1 PCS	C36	10593	ATC 100B470KP500DR	-		500V		
			CAP.TRIMMER	-		3-20p		1 PCS
			TLEC 9612SL	-				
1 PCS	C37	10084	CAP.CERAMIC	-		75p	0.05	1 PCS
			ATC 100B750JP500DR	-		500V		
2 PCS	C38	10092	CAP.CERAMIC	-		12p	0.05	1 PCS
			ATC 100B120JP500DR	-		500V		
2 PCS	C39	10080	CAP.CERAMIC	-		9.1p	0.05	1 PCS
			ATC 100B91JP500DR	-		500V		

Product: 18633

PA 1233A POWER AMPLIFIER PL

Issue: 9

Change Order: 3489

Appr.: HSA

Date: 100399

Tot.Quant.	Pos.	Part no.	Component Manu. Description	Drwg.no.	Value/Dim. Ratings	Tol. Function	Quant./Pos.
2 PCS	C40	10206	CAP.CERAMIC	-	39p	0.05	1 PCS
2 PCS	C41	10129	ATC 100B390JP500DR	-	500V		
			CAP.CERAMIC	-	27p	0.05	1 PCS
	C42	10129	ATC 100B270JP500DR	-	500V		
			CAP.CERAMIC	-	27p	0.05	1 PCS
	C43	10206	ATC 100B270JP500DR	-	500V		
			CAP.CERAMIC	-	39p	0.05	1 PCS
	C44	10080	ATC 100B390JP500DR	-	500V		
			CAP.CERAMIC	-	9.1p	0.05	1 PCS
	C45	10092	ATC 100B91JP500DR	-	500V		
			CAP.CERAMIC	-	12p	0.05	1 PCS
2 PCS	L01	13476	ATC 100B120JP500DR	-	500V		
			INDUCTOR	-	0.10u		1 PCS
2 PCS	L02	13537	COIL 1008CS-101XKBC	-			
			INDUCTOR	-	47n	10%	1 PCS
1 PCS	L03	13482	COIL 1008CS-470XKBC	-			
			INDUCTOR	-	1u		1 PCS
1 PCS	L04	13530	COIL 1008CS 102XKBC ALT.HS	-			
			INDUCTOR	-	56n	10%	1 PCS
1 PCS	L05	13528	COIL 1008CS-560XKBC	-			
			INDUCTOR	-	270n	10%	1 PCS
	L06	13476	COIL 1008CS-271XKBC	-			
			INDUCTOR	-	0.10u		1 PCS
1 PCS	L07	13527	COIL 1008CS-101XKBC	-			
			INDUCTOR	-	22n	20%	1 PCS
1 PCS	L09	13532	COIL 1008CS-220XMBC	-			
			INDUCTOR	-	345n	5%	1 PCS
2 PCS	L10	13534	COIL 132-15 345nH +-5%	-			
			INDUCTOR	-	64n	5%	1 PCS
2 PCS	L11	13533	COIL 132-05 64nH +-5%	-			
			INDUCTOR	-	99n	5%	1 PCS
			COIL 132-07 99nH +-5%	-			

Product: 18633 PA 1233A POWER AMPLIFIER PL Issue: 9 Change Order: 3489 Appr.: HSA Date: 100399

Tot.Quant.	Pos.	Part no.	Component Manu. Description	Drwg.no.	Value/Dim. Ratings	Tol. Function	Quant./Pos
	L12	13533	INDUCTOR	-	99n	5%	1 PCS
			COIL 132-07 99nH +-5%				
	L13	13534	INDUCTOR	-	64n	5%	1 PCS
			COIL 132-05 64nH +-5%				
	L14	13537	INDUCTOR	-	47n	10%	1 PCS
			COIL 1008CS-470XKBC				
3 PCS	P01	12303	CONN.	-			1 PCS
			MOLX 22-27-2021				
	P02	12303	CONN.	-			1 PCS
			MOLX 22-27-2021				
	P03	12303	CONN.	-			1 PCS
			MOLX 22-27-2021				
1 PCS	Q01	11302	TRANSISTOR	-	SOT-223		1 PCS
			PH BLT80,115 (TAPE)				
2 PCS	R06	11134	POTENTIOMETER	-	10k	10%	1 PCS
			BOUR 3266W-1-103		0.25W		
	R19	11134	POTENTIOMETER	-	10k	10%	1 PCS
			BOUR 3266W-1-103		0.25W		
1 PCS	R25	10621	RES.METALFILM	-	1K	5%	1 PCS
			PH 2322 195 13102		750V		

Product: 18635

PA 1233A POWER AMPLIFIER CPL

Issue: 3

Change Order: 3338

Appr.: *1/1*

Date: 23.9.98

Tot.Quant.	Pos.	Part no.	Component Manu. Description	Drwg.no.	Value/Dim. Ratings	Tol. Function	Quant./Pos.
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2 PCS

12128

CONN.COAX

-

SUHN 16 SMB-50-2-10/133

2 PCS

.19 M

19676

COAX CABLE

-

SMB-MALE

190 MM

RG 316/U

Product: 21073

PA 1233A POWER AMPL. ESPL

Issue: 4

Change Order: 3386

Appr.: A.S.

Date: 18.11.98.

Tot.Quant.	Pos.	Part no.	Component Manu. Description	Drwg.no.	Value/Dim.		Tol.	Quant./Pos.
					Rev.	Ratings		
1 PCS	C01	19838	CAP.SMD	-	-	68P	5%	1 PCS
			XXXX 0805C680J50			50V		
1 PCS	C02	19832	CAP.SMD	-	-	27P	5%	1 PCS
			XXXX 0805C270J50			50V		
6 PCS	C03	19840	CAP.SMD	-	-	100P	5%	1 PCS
			XXXX 0805C101J50			50V		
9 PCS	C04	19852	CAP.SMD	-	-	1N	5%	1 PCS
			XXXX 0805C102J50			50V		
	C05	19840	CAP.SMD	-	-	100P	5%	1 PCS
			XXXX 0805C101J50			50V		
	C06	19852	CAP.SMD	-	-	1N	5%	1 PCS
			XXXX 0805C102J50			50V		
	C13	19852	CAP.SMD	-	-	1N	5%	1 PCS
			XXXX 0805C102J50			50V		
	C14	19840	CAP.SMD	-	-	100P	5%	1 PCS
			XXXX 0805C101J50			50V		
	C15	19852	CAP.SMD	-	-	1N	5%	1 PCS
			XXXX 0805C102J50			50V		
	C19	19852	CAP.SMD	-	-	1N	5%	1 PCS
			XXXX 0805C102J50			50V		
	C20	19840	CAP.SMD	-	-	100P	5%	1 PCS
			XXXX 0805C101J50			50V		
	C25	19840	CAP.SMD	-	-	100P	5%	1 PCS
			XXXX 0805C101J50			50V		
	C26	19852	CAP.SMD	-	-	1N	5%	1 PCS
			XXXX 0805C102J50			50V		
	C27	19852	CAP.SMD	-	-	1N	5%	1 PCS
			XXXX 0805C102J50			50V		
	C30	19852	CAP.SMD	-	-	1N	5%	1 PCS
			XXXX 0805C102J50			50V		
	C32	19852	CAP.SMD	-	-	1N	5%	1 PCS
			XXXX 0805C102J50			50V		

Product: 21073

PA 1233A POWER AMPL. ESPL

Issue: 4

Change Order: 3386

Appr.: *W.S.*Date: *10.11.98*

Tot.Quant.	Pos.	Part no.	Component Manu. Description	Drwg.no.	Value/Dim.		Tol.	Quant./Pos.
					Rev.	Ratings		
	C33	19840	CAP.SMD	-		100P	5%	1 PCS
1 PCS	R01	10909	XXXX 0805C101J50 SMD RESISTOR	-		50V 10	1%	1 PCS
1 PCS	R02	10926	XXXX 1206F100 SMD RESISTOR	-		0.25W	1%	1 PCS
1 PCS	R05	10903	XXXX 1206F510 SMD RESISTOR	-		51 5.6	1%	1 PCS
2 PCS	R07	10977	XXXX 1206F5R6 SMD RESISTOR	-		10K	1%	1 PCS
6 PCS	R08	10937	XXXX 1206F103 SMD RESISTOR	-		200	1%	1 PCS
	R09	10937	XXXX 1206F201 SMD RESISTOR	-		200	1%	1 PCS
5 PCS	R10	10933	XXXX 1206F201 SMD RESISTOR	-		120	1%	1 PCS
	R11	10933	XXXX 1206F121 SMD RESISTOR	-		120	1%	1 PCS
	R12	10933	XXXX 1206F121 SMD RESISTOR	-		120	1%	1 PCS
	R13	10933	XXXX 1206F121 SMD RESISTOR	-		120	1%	1 PCS
	R14	10933	XXXX 1206F121 SMD RESISTOR	-		120	1%	1 PCS
4 PCS	R15	10966	XXXX 1206F121 SMD RESISTOR	-		120	1%	1 PCS
	R16	10966	XXXX 1206F362 SMD RESISTOR	-		3.6K	1%	1 PCS
	R17	10966	XXXX 1206F362 SMD RESISTOR	-		3.6K	1%	1 PCS
	R18	10966	XXXX 1206F362 SMD RESISTOR	-		3.6K	1%	1 PCS

Product: 21073

PA 1233A POWER AMPL. ESPL

Issue: 4

Change Order: 3386

Appr.: *D.S.*

Date: 12.11.98

Tot.Quant.	Pos.	Part no.	Component Manu. Description	Drwg.no.	Rev.	Value/Dim. Ratings	Tol. Function	Quant./Pos.
	R20	10977	SMD RESISTOR XXXX 1206F103	-		10K	1%	1 PCS
	R21	10937	SMD RESISTOR XXXX 1206F201	-		200	1%	1 PCS
	R22	10937	SMD RESISTOR XXXX 1206F201	-		200	1%	1 PCS
	R23	10937	SMD RESISTOR XXXX 1206F201	-		200	1%	1 PCS
	R24	10937	SMD RESISTOR XXXX 1206F201	-		200	1%	1 PCS
1 PCS	R26	20100	XXXX 1206F201 JUMPER XXXX 1206F000	-		0	1%	1 PCS

4.3 *Photos*

