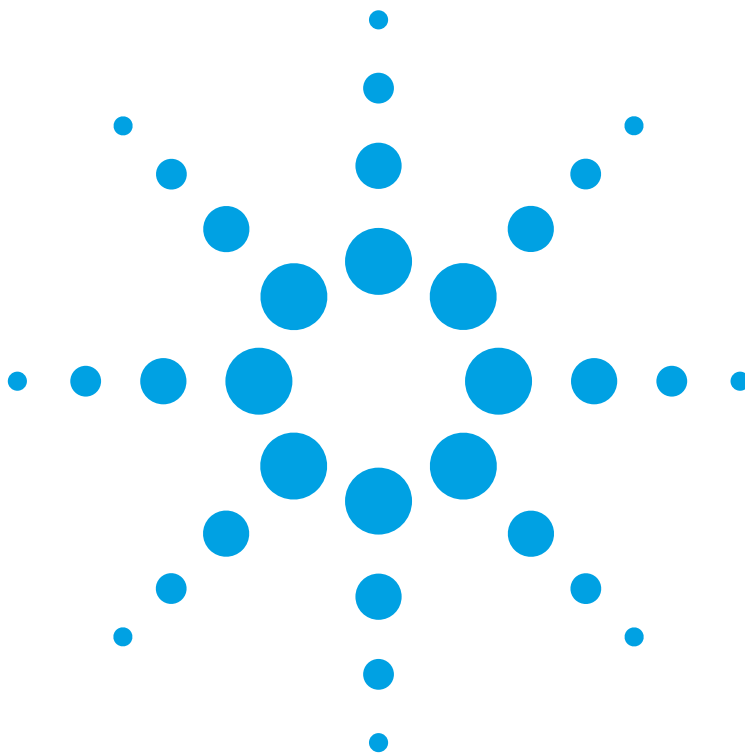


Agilent 3499A/B/C

Switch/Control System



Service Manual
(Schematics Only)



Agilent Technologies

Legal and Safety Information

AGILENT TECHNOLOGIES WARRANTY STATEMENT

PRODUCT: Agilent 3499A/B/C Switch/Control System

DURATION OF WARRANTY: 1 year

1. Agilent Technologies warrants Agilent hardware, accessories and supplies against defects in materials and workmanship for the period specified above. If Agilent receives notice of such defects during the warranty period, Agilent will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or like-new.

2. Agilent Technologies warrants that Agilent software will not fail to execute its programming instructions, for the period specified above, due to defects in material and workmanship when properly installed and used. If Agilent receives notice of such defects during the warranty period, Agilent will replace software media which does not execute its programming instructions due to such defects.

3. Agilent Technologies does not warrant that the operation of Agilent products will be interrupted or error free. If Agilent is unable, within a reasonable time, to repair or replace any product to a condition as warranted, customer will be entitled to a refund of the purchase price upon prompt return of the product.

4. Agilent Technologies products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.

5. The warranty period begins on the date of delivery or on the date of installation if installed by Agilent. If customer schedules or delays Agilent installation more than 30 days after delivery, warranty begins on the 31st day from delivery.

6. Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts or supplies not supplied by Agilent, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (e) improper site preparation or maintenance.

7. TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTIES ARE EXCLUSIVE AND NO OTHER WARRANTY OR CONDITION, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED AND AGILENT SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE.

8. Agilent Technologies will be liable for damage to tangible property per incident up to the greater of \$300,000 or the actual amount paid for the product that is the subject of the claim, and for damages for bodily injury or death, to the extent that all such damages are determined by a court of competent jurisdiction to have been directly caused by a defective Agilent product.

9. TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT ARE CUSTOMER'S SOLE AND EXCLUSIVE REMEDIES. EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL AGILENT OR ITS SUPPLIERS BE LIABLE FOR LOSS OF DATA OR FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE.

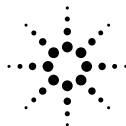
FOR CONSUMER TRANSACTIONS IN AUSTRALIA AND NEW ZEALAND: THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

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Agilent Technologies

Agilent 3499A/B/C Switch/Control System Service Manual
Rev. E

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Documentation History

All Editions and Updates of this manual and their creation date are listed below. The first Edition of the manual is Edition 1. The Edition number increments by 1 whenever the manual is revised. Updates, which are issued between Editions, contain replacement pages to correct or add additional information to the current Edition of the manual. Whenever a new Edition is created, it will contain all of the Update information for the previous Edition. Each new Edition or Update also includes a revised copy of this documentation history page.

Rev. A January 2000
Rev. B December 2000
Rev. C April 2002
Rev. D March 2003
Rev. E March 2009

Safety Symbols



Instruction manual symbol affixed to product. Indicates that the user must refer to the manual for specific **WARNING** or **CAUTION** information to avoid personal injury or damage to the product.



Alternating current (AC)



Direct current (DC).



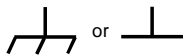
Indicates the field wiring terminal that must be connected to earth ground before operating the equipment—protects against electrical shock in case of fault.



Indicates hazardous voltages.

WARNING

Calls attention to a procedure, practice, or condition that could cause bodily injury or death.



Frame or chassis ground terminal—typically connects to the equipment's metal frame.

CAUTION

Calls attention to a procedure, practice, or condition that could possibly cause damage to equipment or permanent loss of data.

WARNINGS

The following general safety precautions must be observed during all phases of operation, service, and repair of this product. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture, and intended use of the product. Agilent Technologies Company assumes no liability for the customer's failure to comply with these requirements.

Ground the equipment: For Safety Class 1 equipment (equipment having a protective earth terminal), an uninterruptible safety earth ground must be provided from the mains power source to the product input wiring terminals or supplied power cable.

DO NOT operate the product in an explosive atmosphere or in the presence of flammable gases or fumes.

For continued protection against fire, replace the line fuse(s) only with fuse(s) of the same voltage and current rating and type. DO NOT use repaired fuses or short-circuited fuse holders.

Keep away from live circuits: Operating personnel must not remove equipment covers or shields. Procedures involving the removal of covers or shields are for use by service-trained personnel only. Under certain conditions, dangerous voltages may exist even with the equipment switched off. To avoid dangerous electrical shock, DO NOT perform procedures involving cover or shield removal unless you are qualified to do so.

DO NOT operate damaged equipment: Whenever it is possible that the safety protection features built into this product have been impaired, either through physical damage, excessive moisture, or any other reason, REMOVE POWER and do not use the product until safe operation can be verified by service-trained personnel. If necessary, return the product to an Agilent Technologies Sales and Service Office for service and repair to ensure that safety features are maintained.

DO NOT service or adjust alone: Do not attempt internal service or adjustment unless another person, capable of rendering first aid and resuscitation, is present.

DO NOT substitute parts or modify equipment: Because of the danger of introducing additional hazards, do not install substitute parts or perform any unauthorized modification to the product. Return the product to an Agilent Technologies Sales and Service Office for service and repair to ensure that safety features are maintained.

Operating Location: Sheltered location where air temperature and humidity are controlled within this product's specifications and the product is protected against direct exposure to climatic conditions such as direct sunlight, wind, rain, snow, sleet, and icing, water spray or splash, hoarfrost or dew. Pollution environment for which this product may be operated is IEC 664 Pollution degree 2.

WARNINGS (Cont.)

The Agilent 3499A/B/C can have modules that are capable of switching voltages up to 250V maximum. Voltage levels above the levels specified for accessible connectors or cable ends could cause bodily injury or death to an operator. Special precautions must be adhered to (discussed below) when applying voltages in excess of 60 Vdc, 30 Vac rms or 42.4 Vac peak.

Module connectors and test signal cables connected to them cannot be operator accessible. Cables and connectors are considered inaccessible if a tool (e.g., screwdriver, wrench, socket, etc.) or a key (equipment in a locked cabinet) is required to gain access to them. Additionally, the operator cannot have access to a conductive surface connected to any cable conductor (High, Low or Guard).

Assure the equipment under test has adequate insulation between the cable connections and any operator-accessible parts (doors, covers, panels, shields, cases, cabinets, etc.). Verify there are multiple and sufficient protective means (rated for the voltages you are applying) to assure the operator will NOT come into contact with any energized conductor even if one of the protective means fails to work as intended. For example, the inner side of a case, cabinet, door, cover or panel can be covered with an insulating material as well as routing the test cables to the module's front panel connectors through non-conductive, flexible conduit such as that used in electrical power distribution.

This ISM device complies with Canadian CES-001
Cet appareil ISM est conforme à la norme NMB-001 du Canada

CLEANING INFORMATION

The instrument should only be cleaned by wiping it with a soft damp cloth.

Appendix C

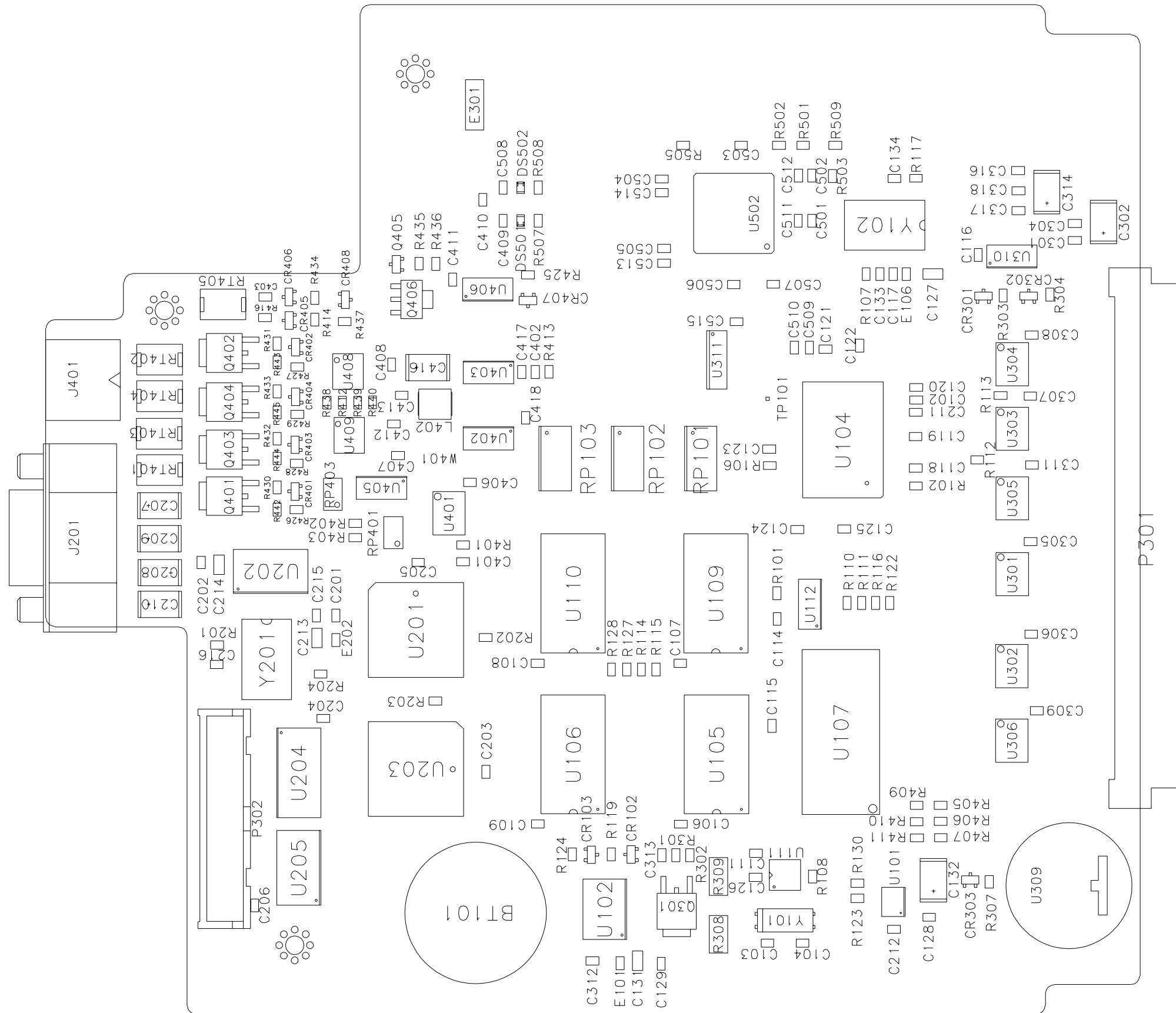
Schematics

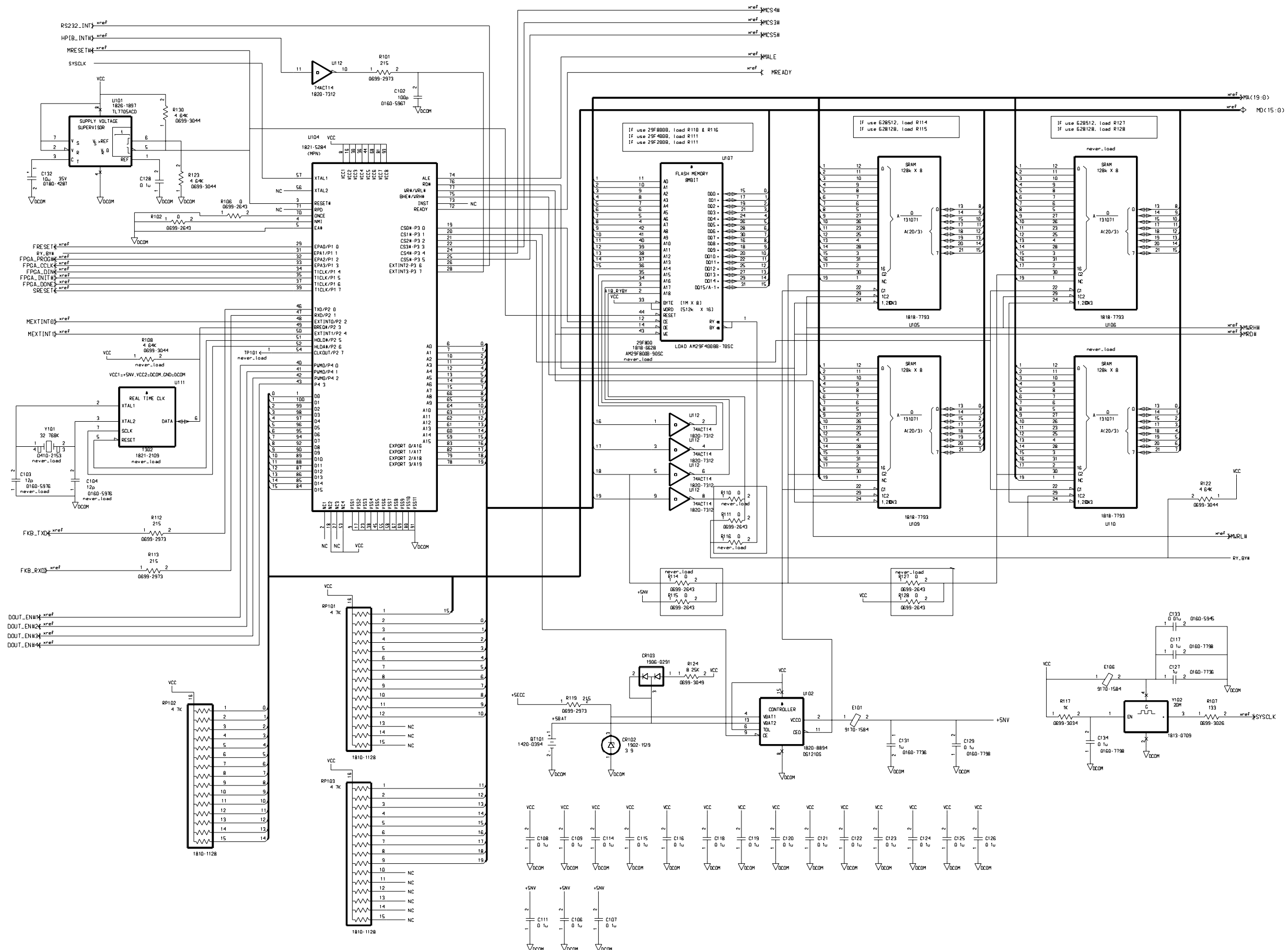
This chapter contains the schematics for the Agilent 3499A/B/C mainframes and the plug-in modules designed for Agilent 3499A/B/C Switch/Control System. For the schematics of the existing 3488A plug-in modules, you can refer to *Agilent 3488A Switch/Control System Service Manual*.

The schematics in this chapter include:

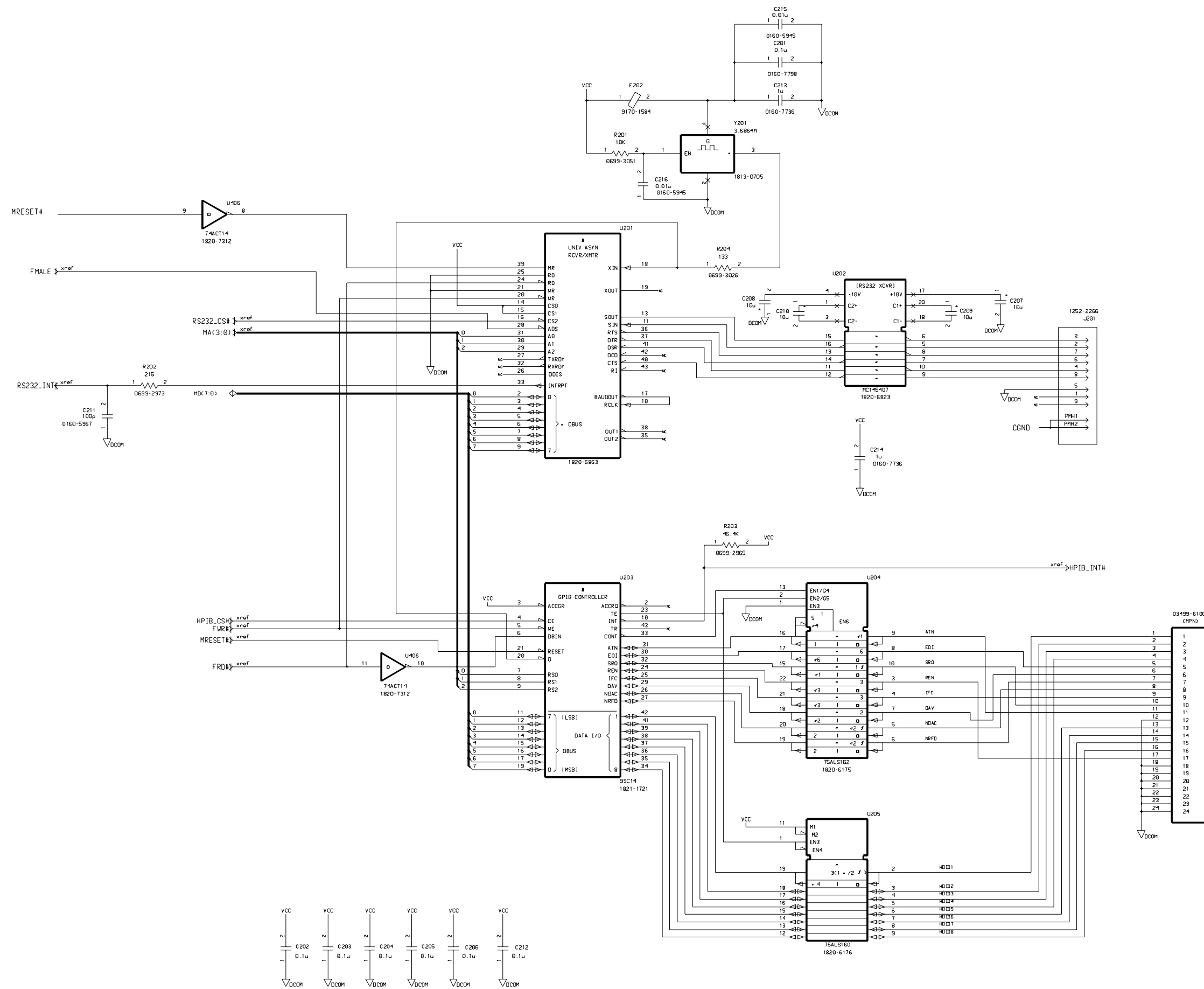
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- Agilent 3499A/B/C Controller Board 1.0 Schematics Page 132
- Agilent 3499A/B/C Controller Board 2.0 Components Locator Page 137
- Agilent 3499A/B/C Controller Board 2.0 Schematics Page 138
- Agilent 3499A/B/C Keyboard and Display Components Locator & Schematics ... Page 143
- Agilent 3499A/B/C Backplane Components Locator & Schematics Page 146
- Agilent N2260A Components Locator Page 149
- Agilent N2260A Schematics Page 150
- Agilent N2290A Components Locator & Schematics Page 154
- Agilent N2261A Components Locator Page 155
- Agilent N2261A Schematics Page 156
- Agilent N2291A Components Locator & Schematics Page 160
- Agilent N2262A Components Locator Page 161
- Agilent N2262A Schematics Page 162
- Agilent N2292A Components Locator & Schematics Page 165
- Agilent N2263A Components Locator Page 166
- Agilent N2263A Schematics Page 167
- Agilent N2293A Components Locator & Schematics Page 174
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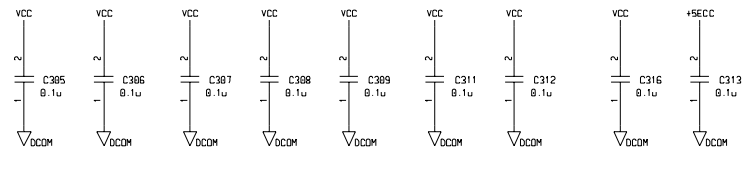
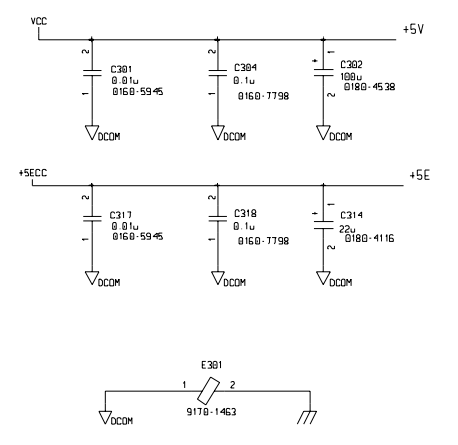
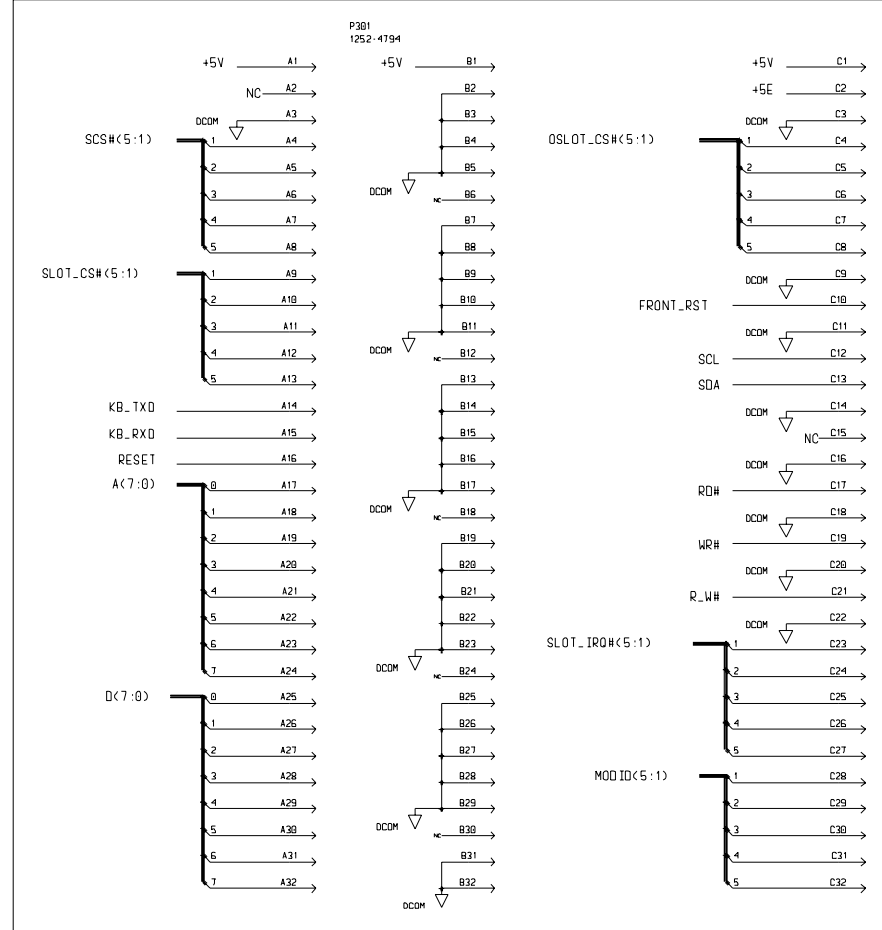
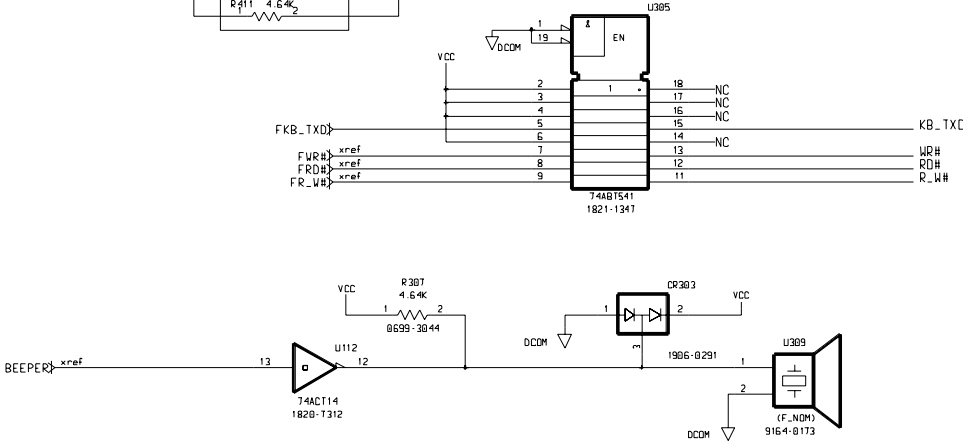
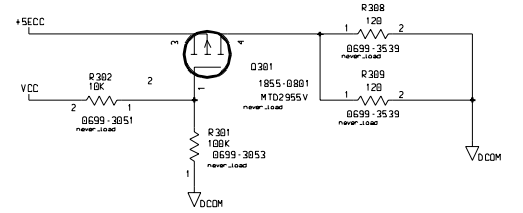
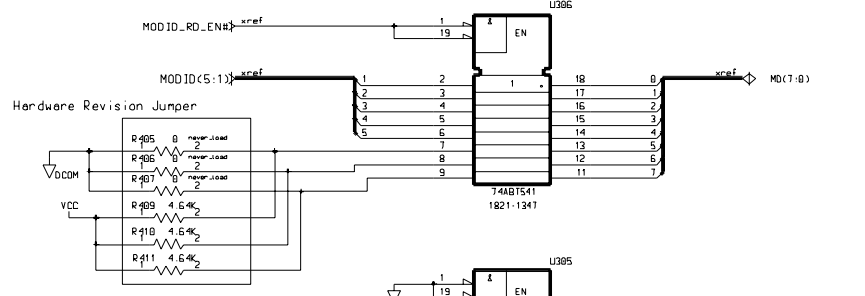
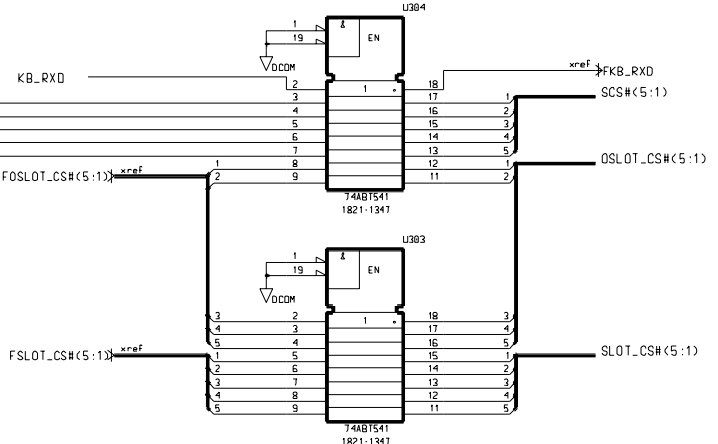
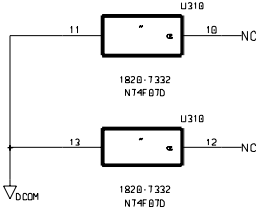
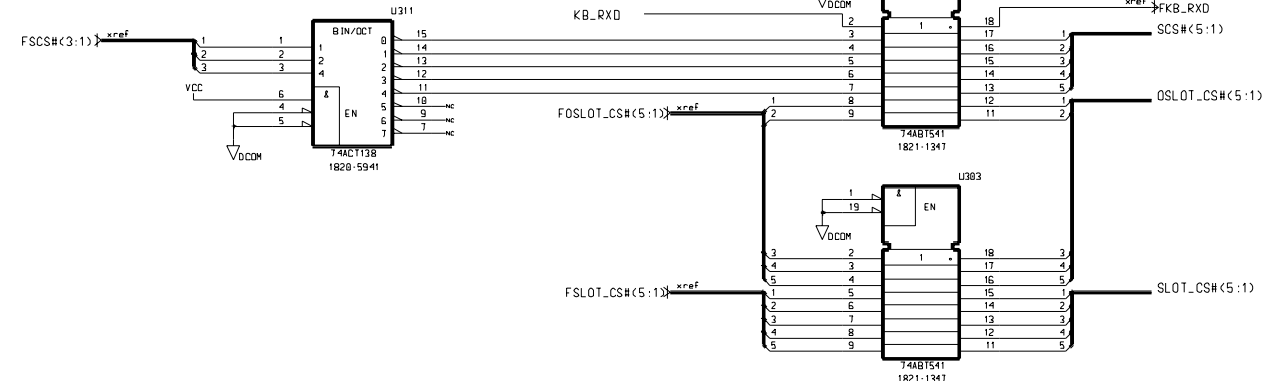
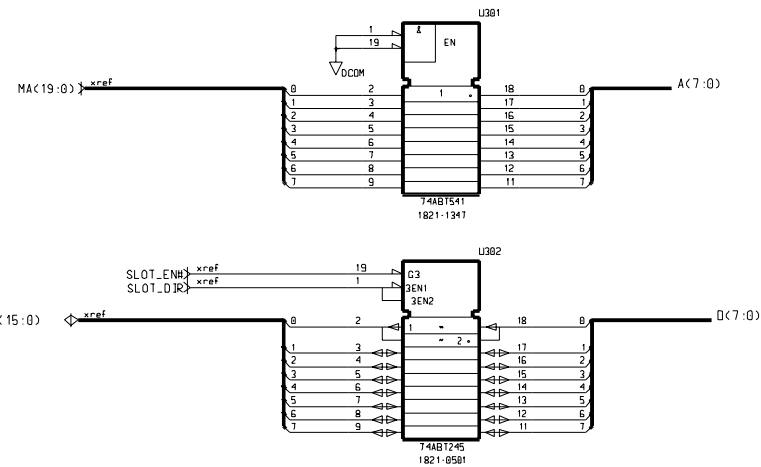
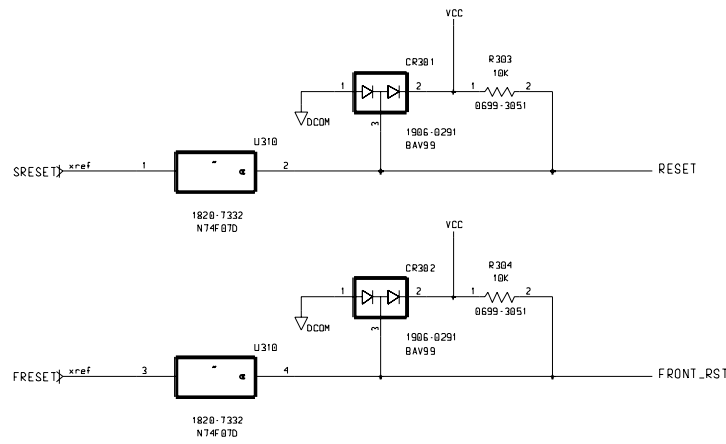
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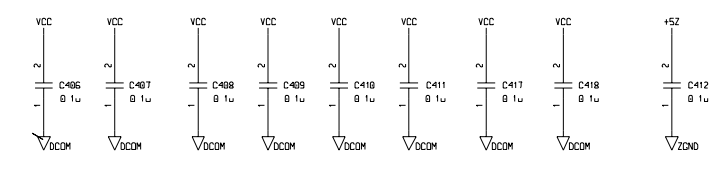
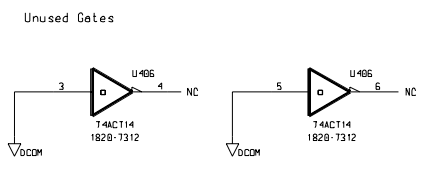
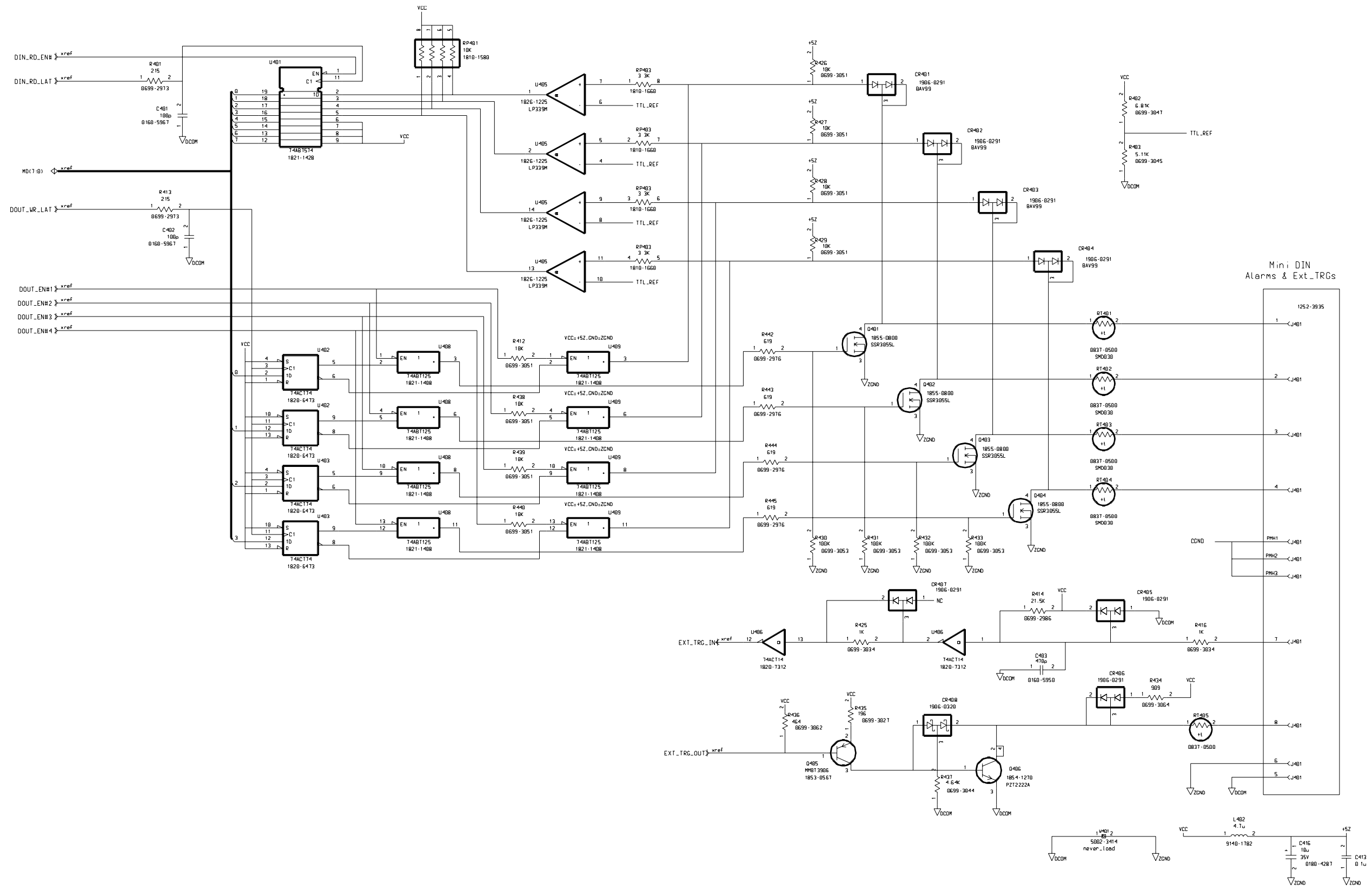


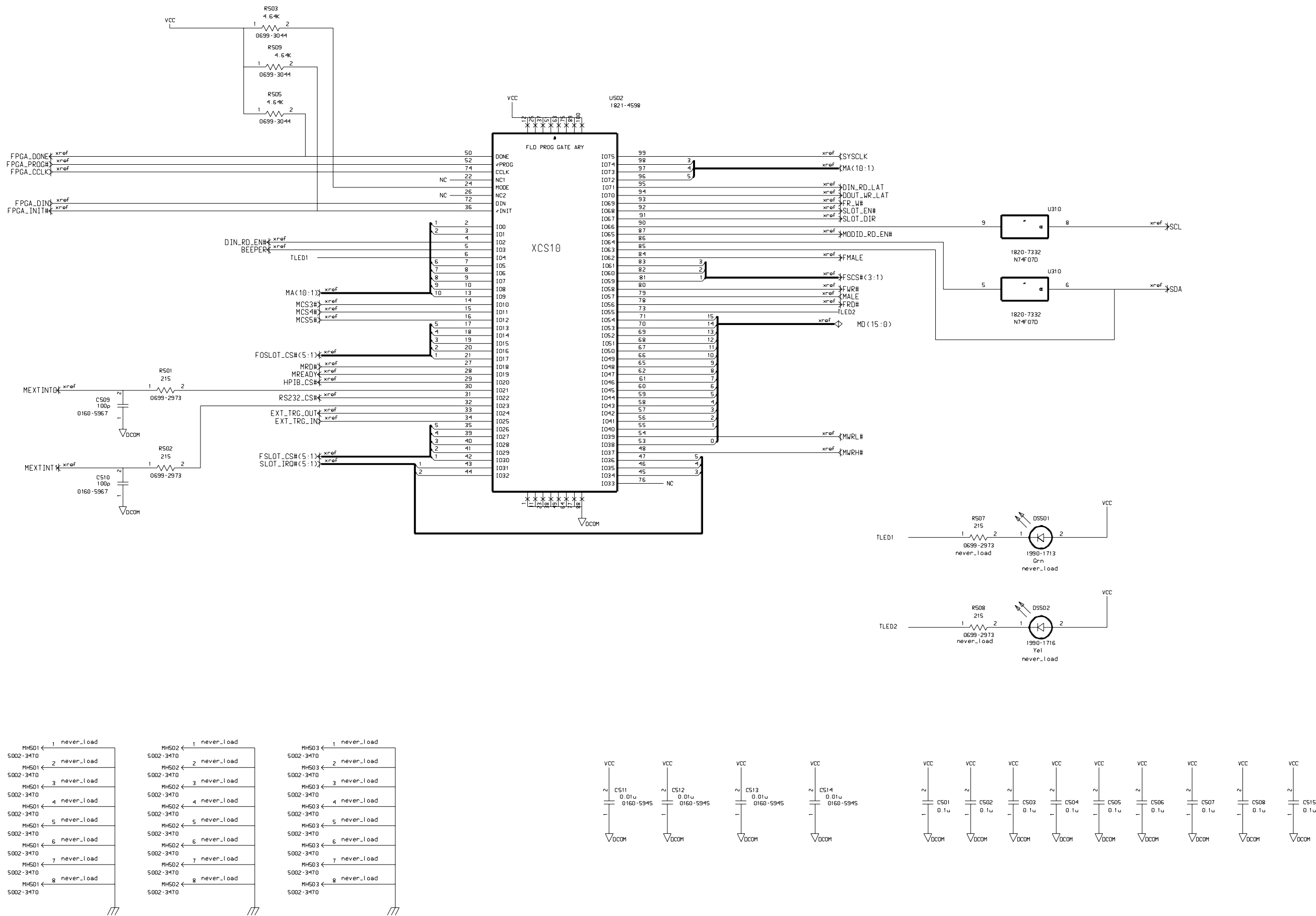


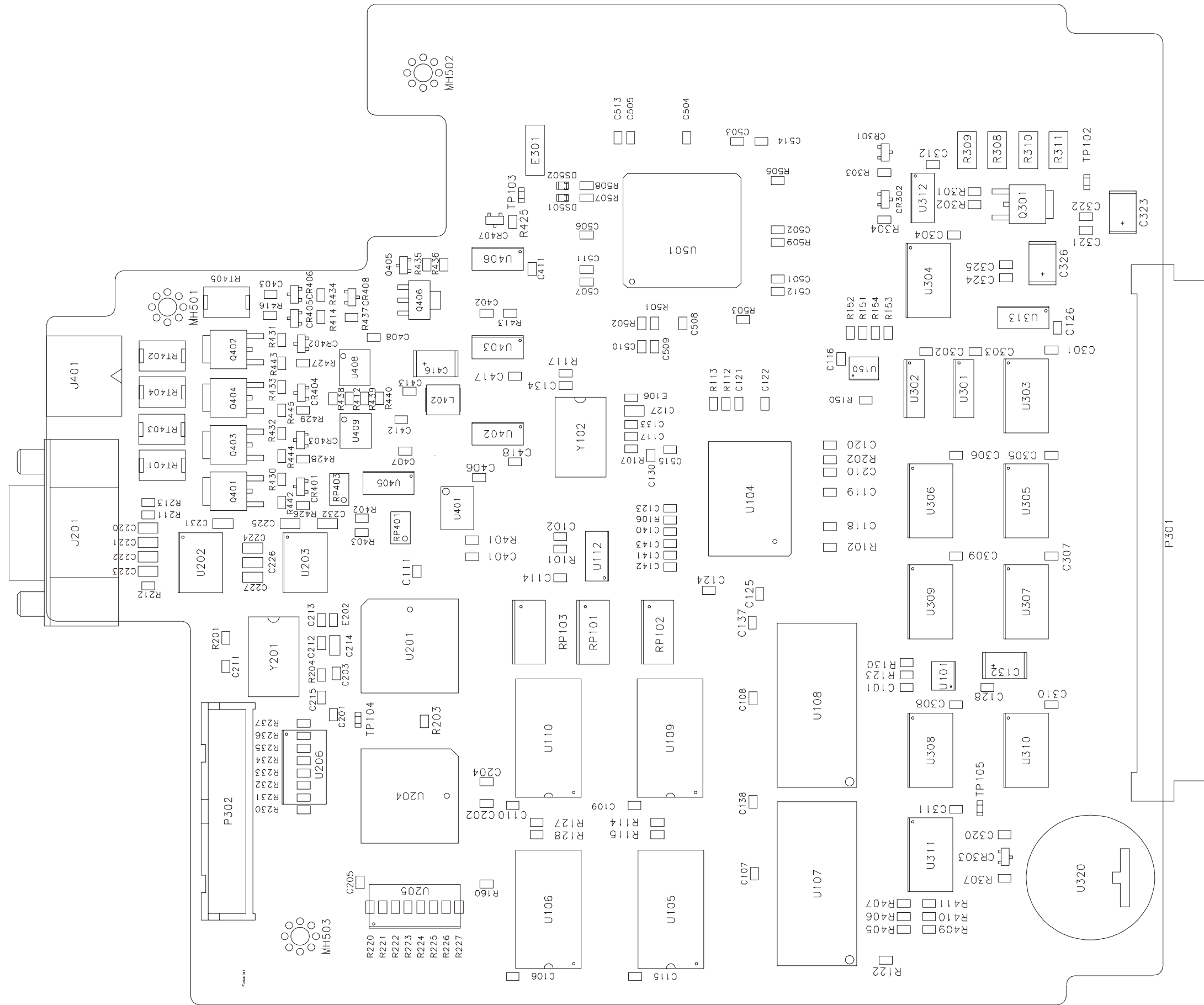
Agilent 3499A/B/C Controller Board 1.0
 Schematic (Sheet 1 of 5)
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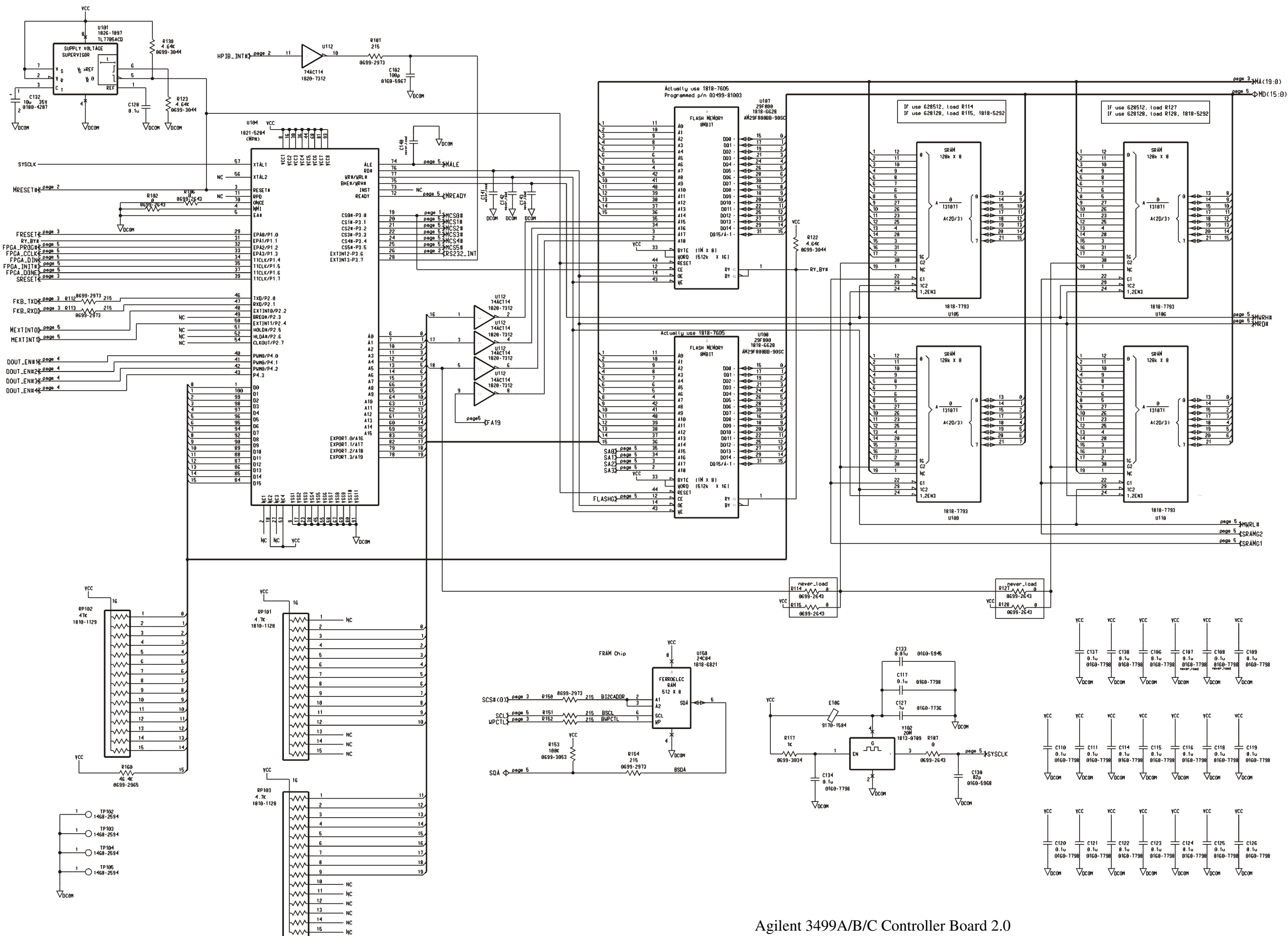




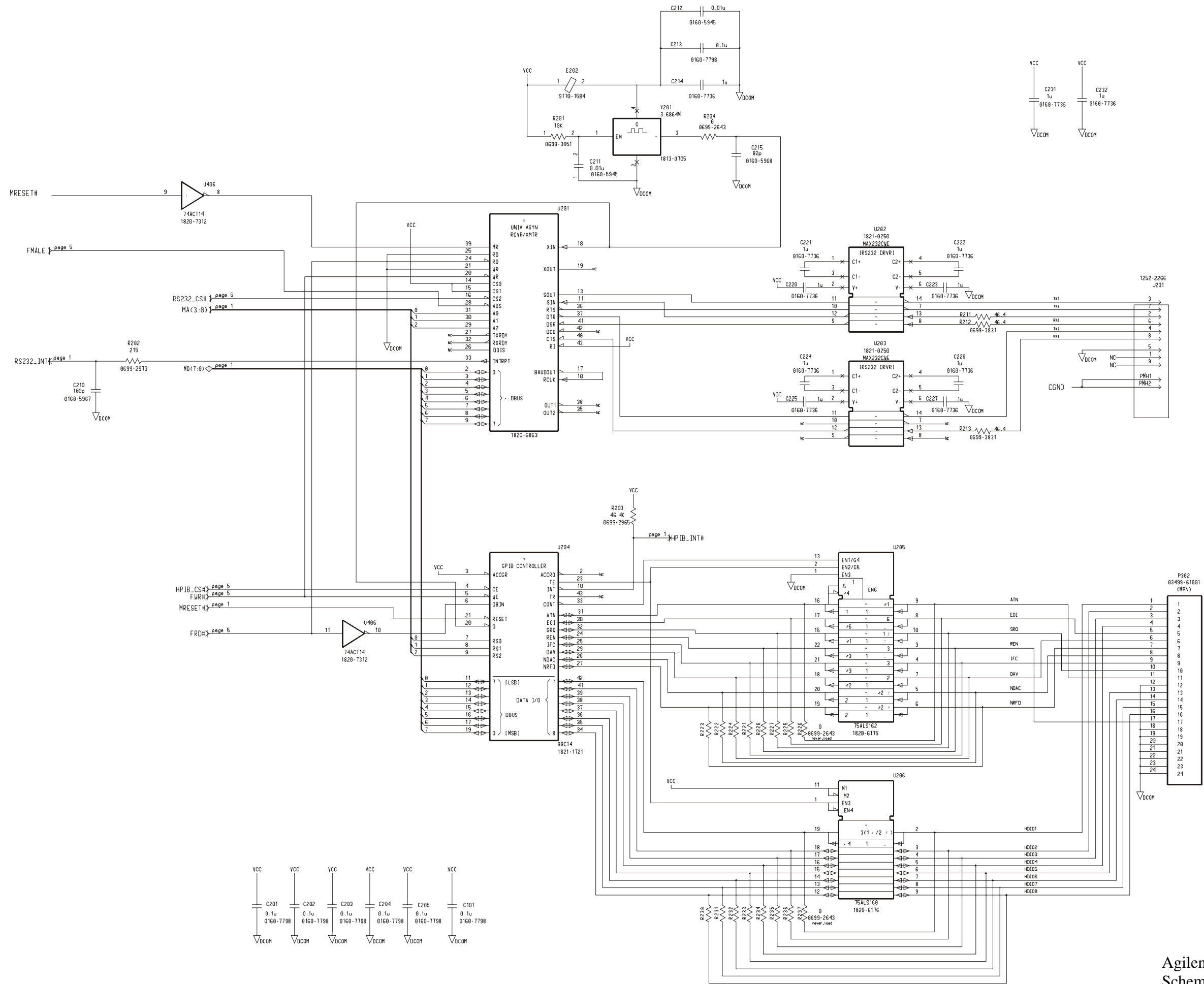


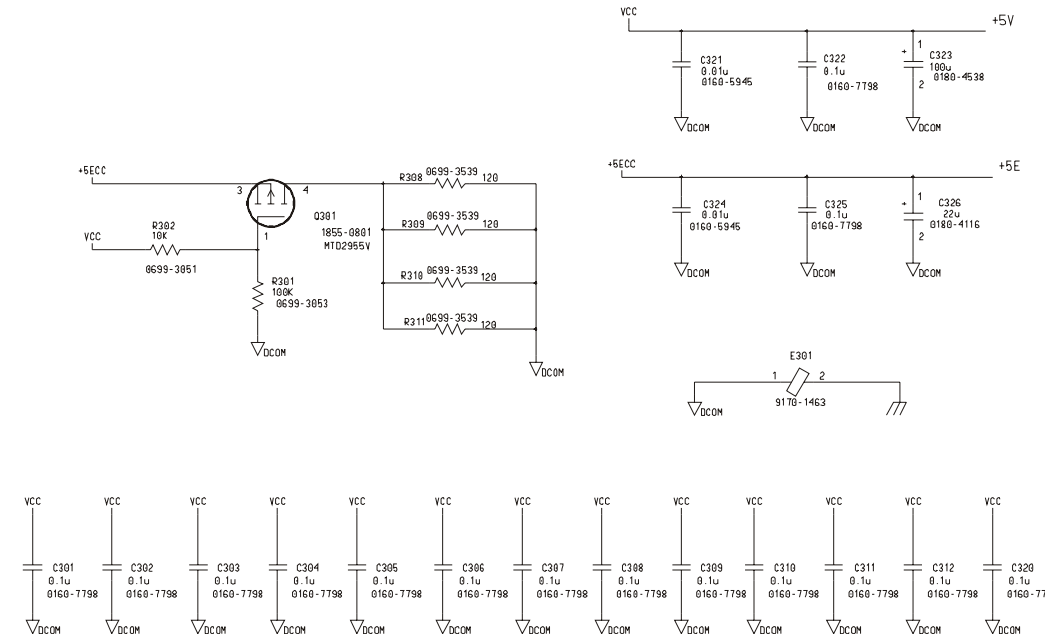
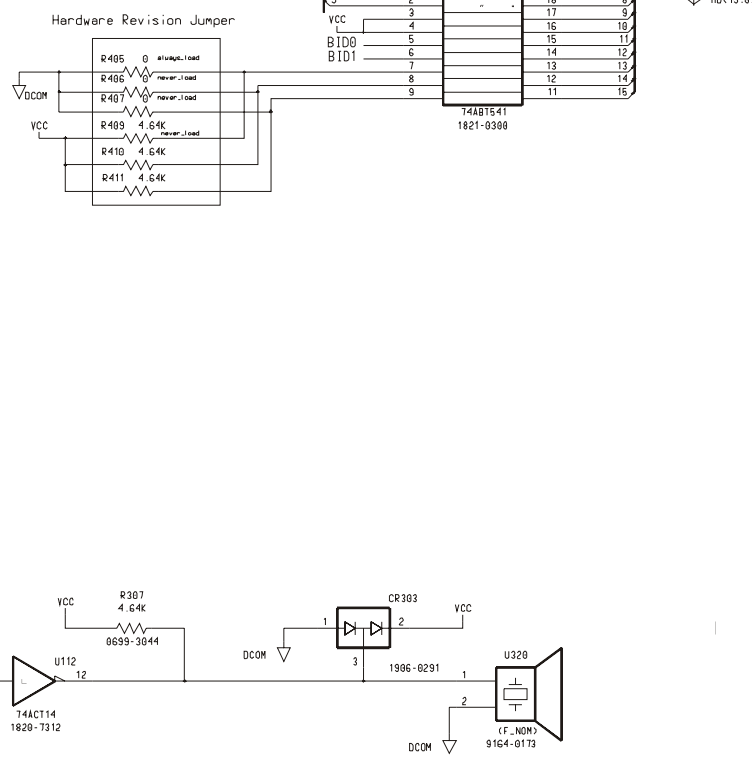
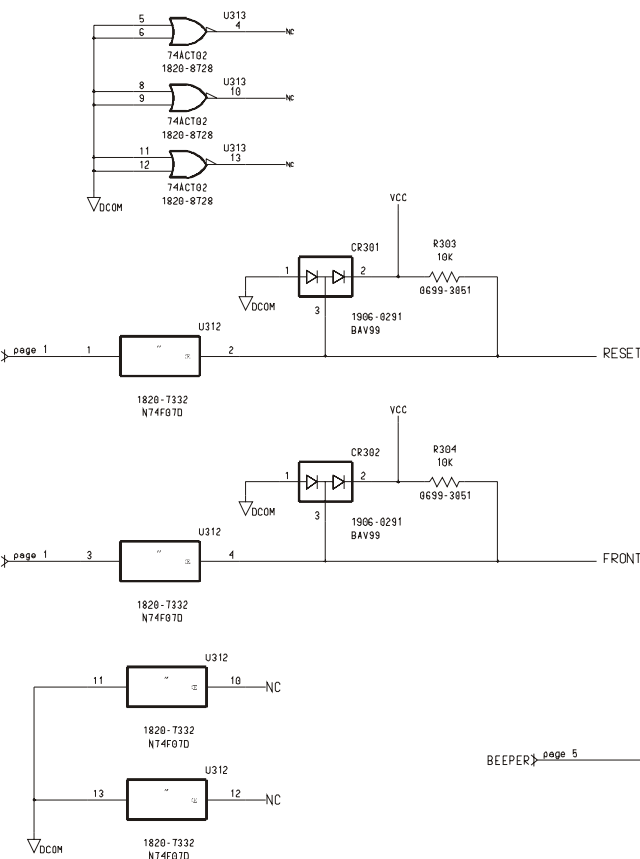
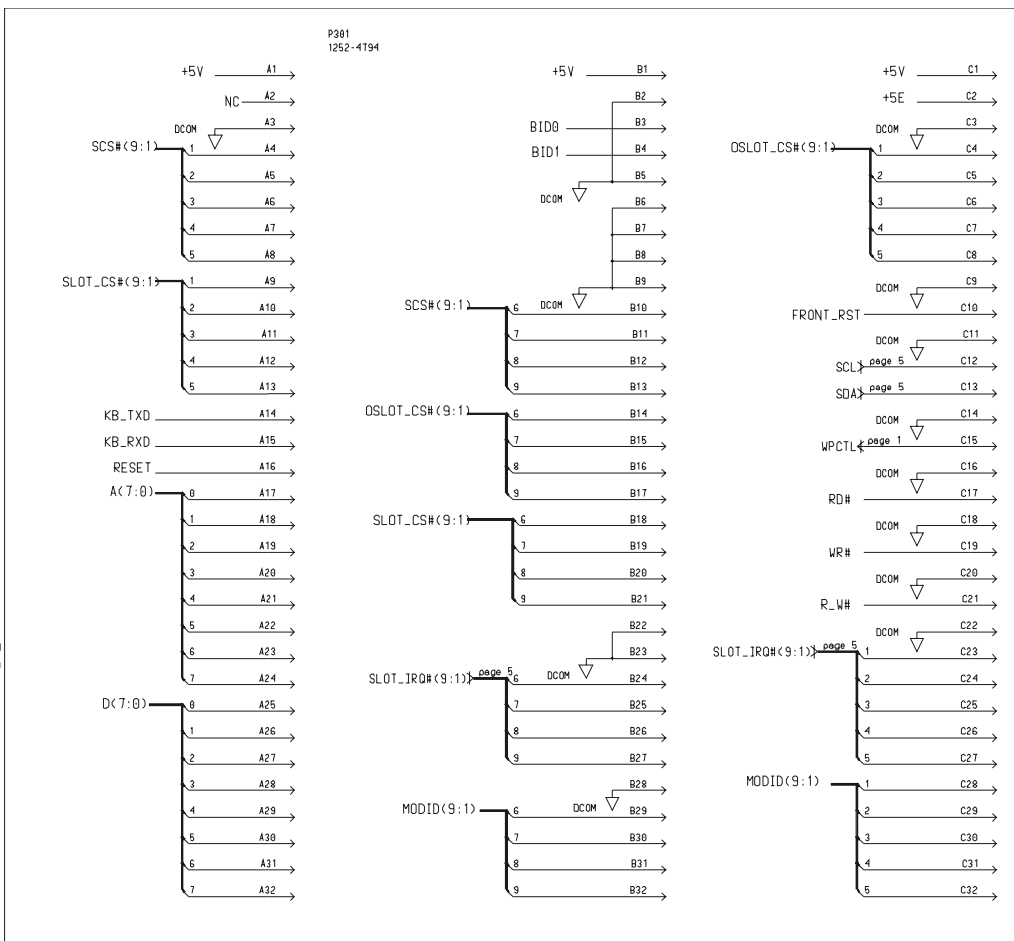
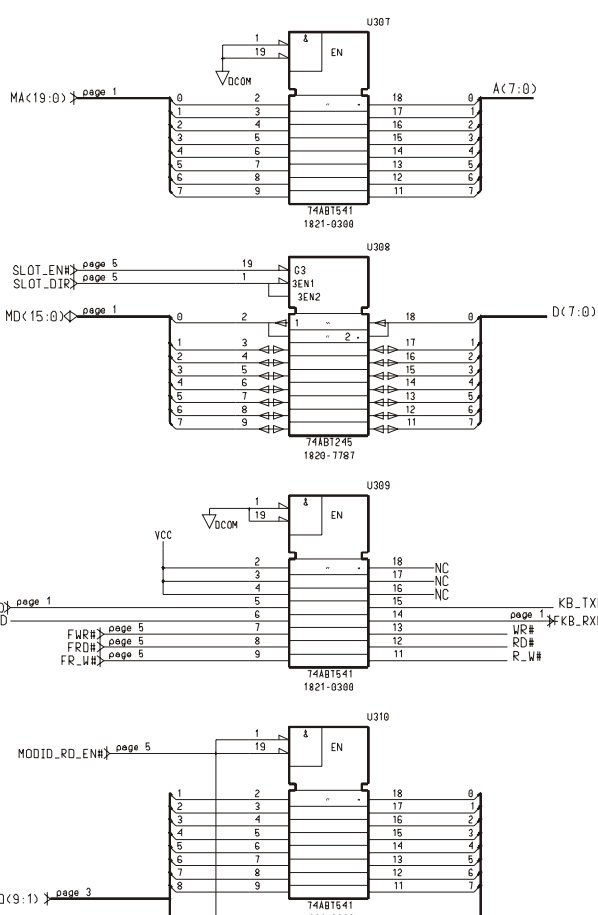
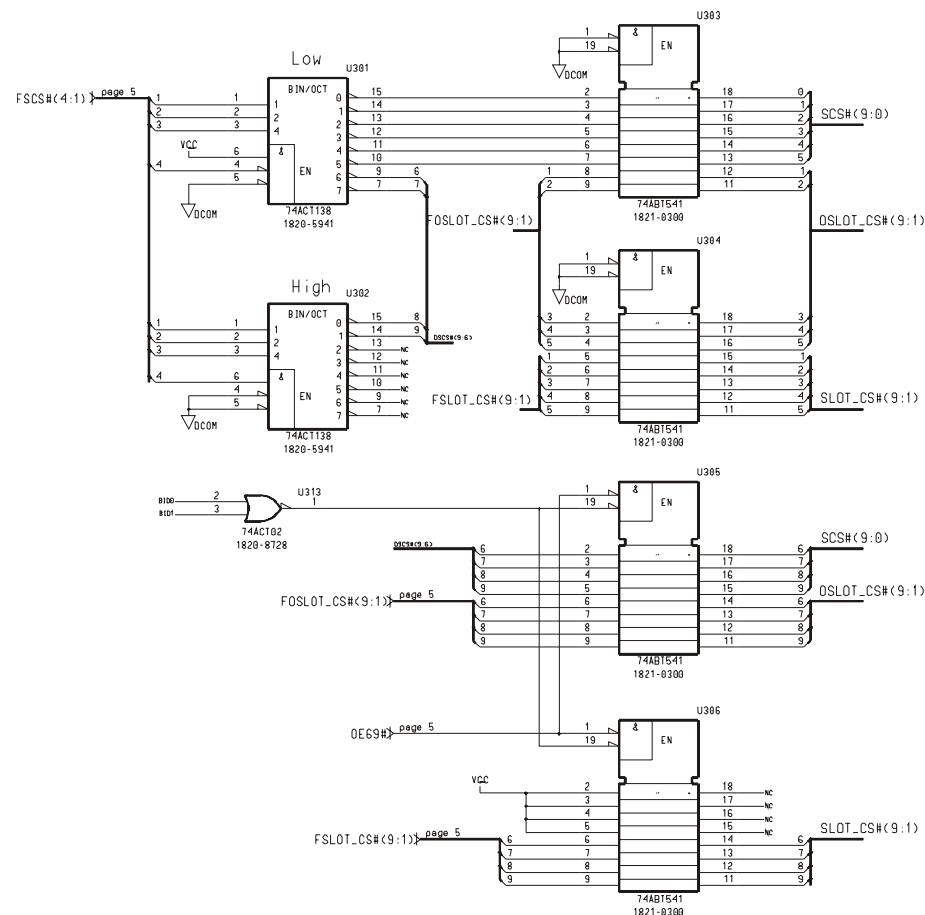


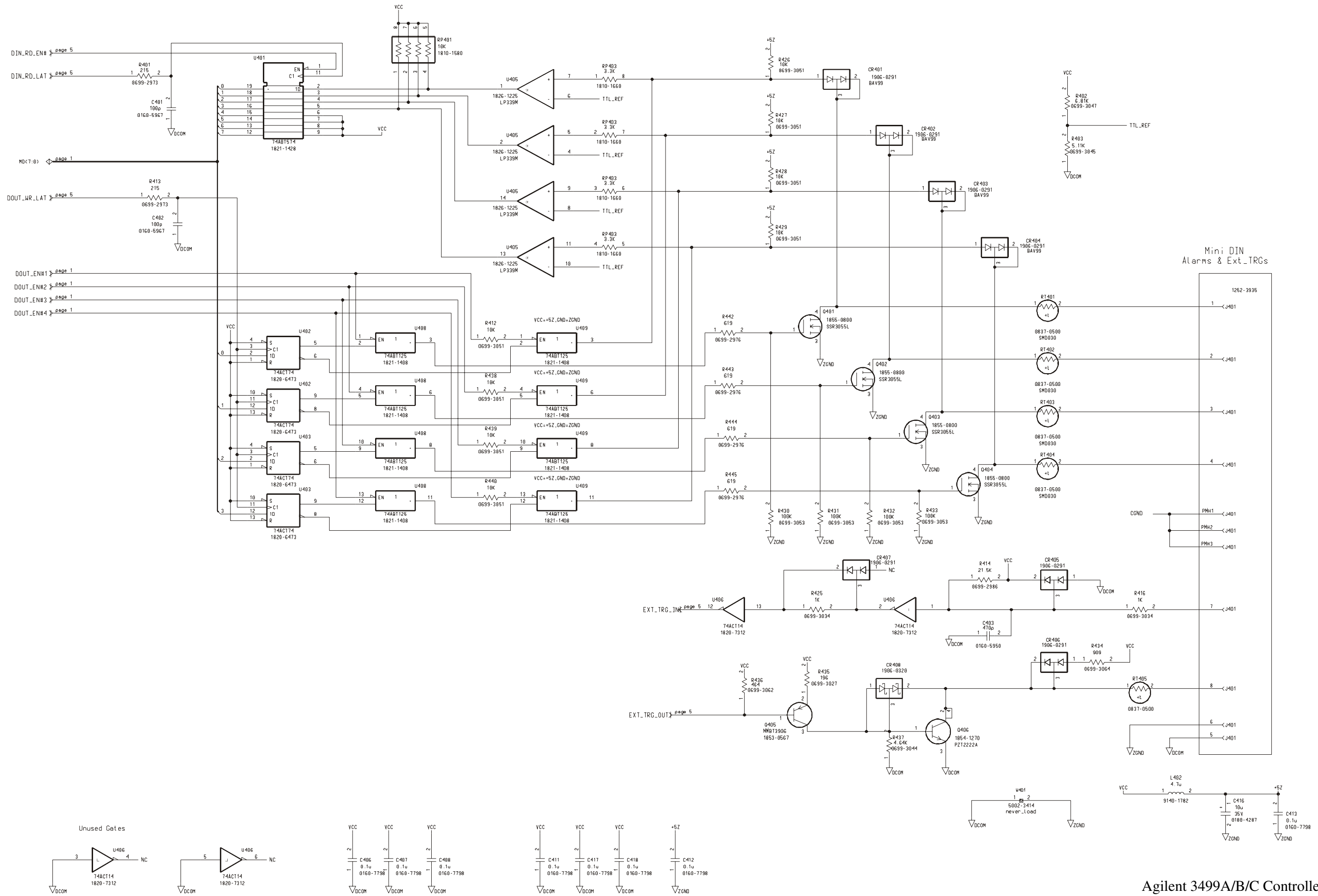




Agilent 3499A/B/C Controller Board 2.0
Schematic (Sheet 1 of 5)
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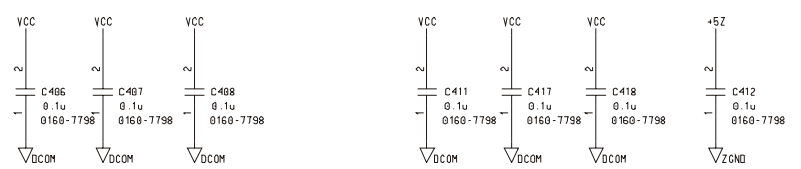
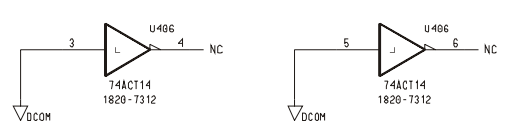


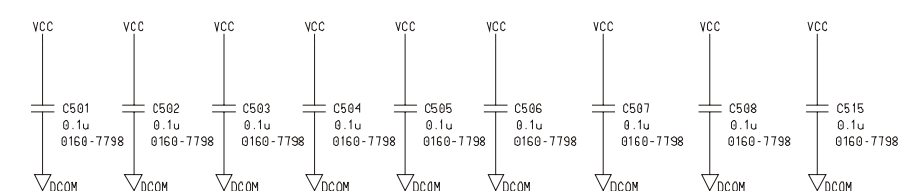
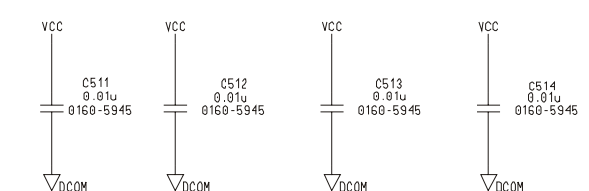
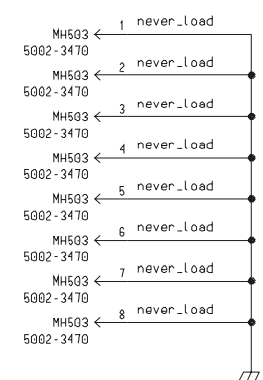
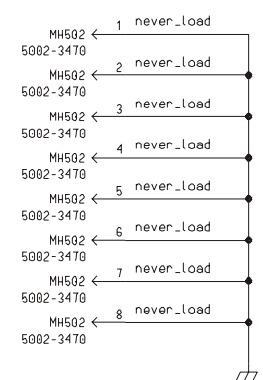
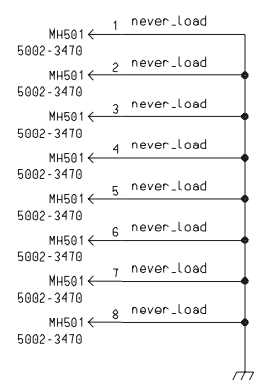
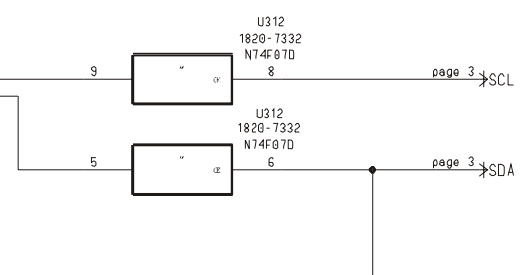
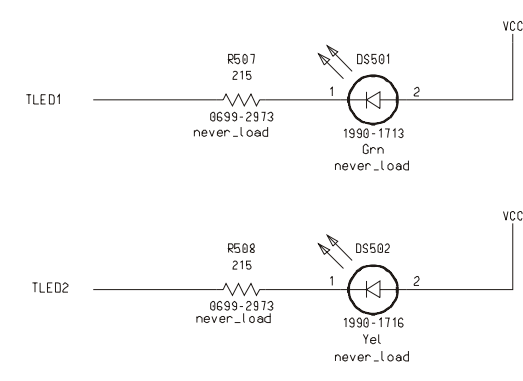
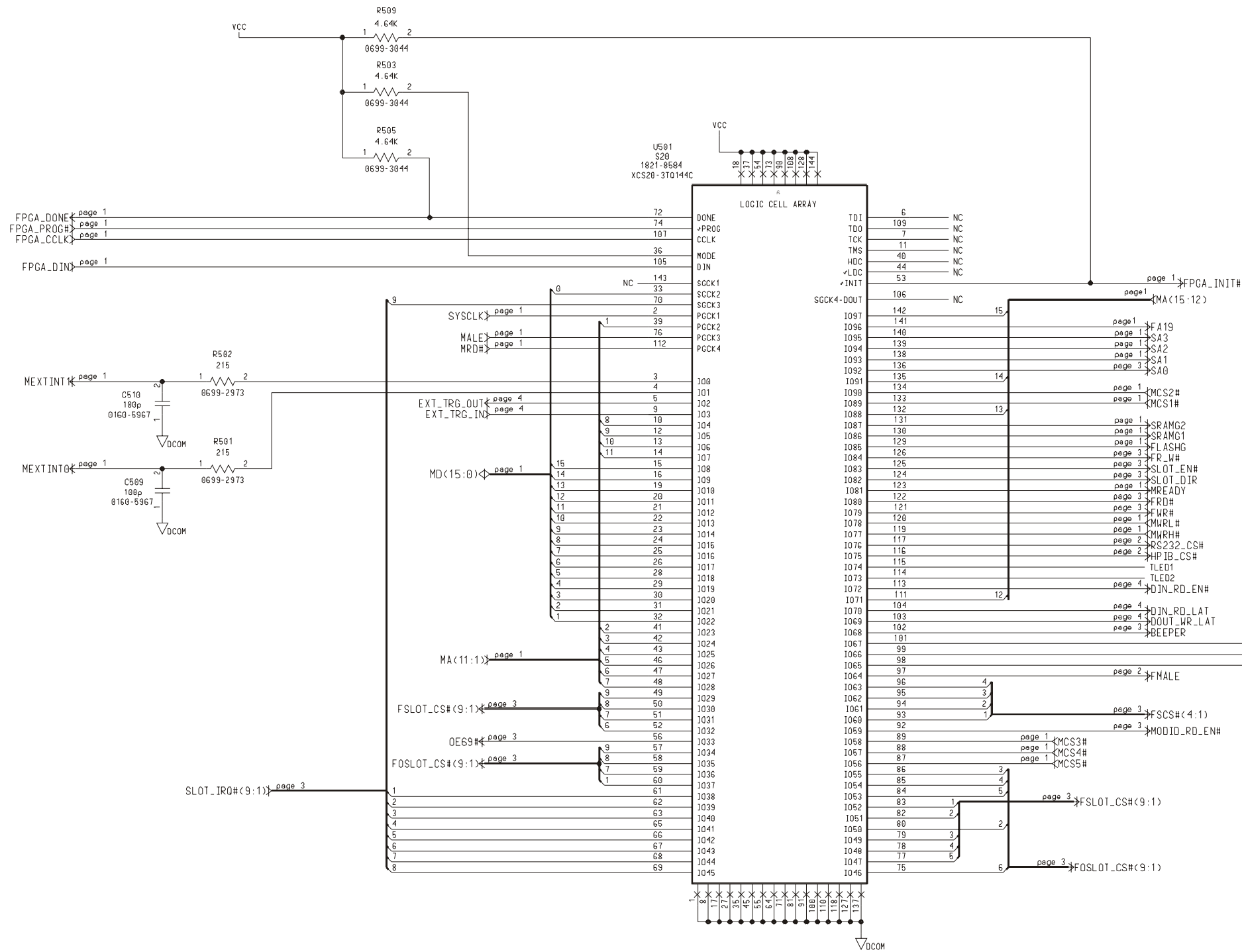




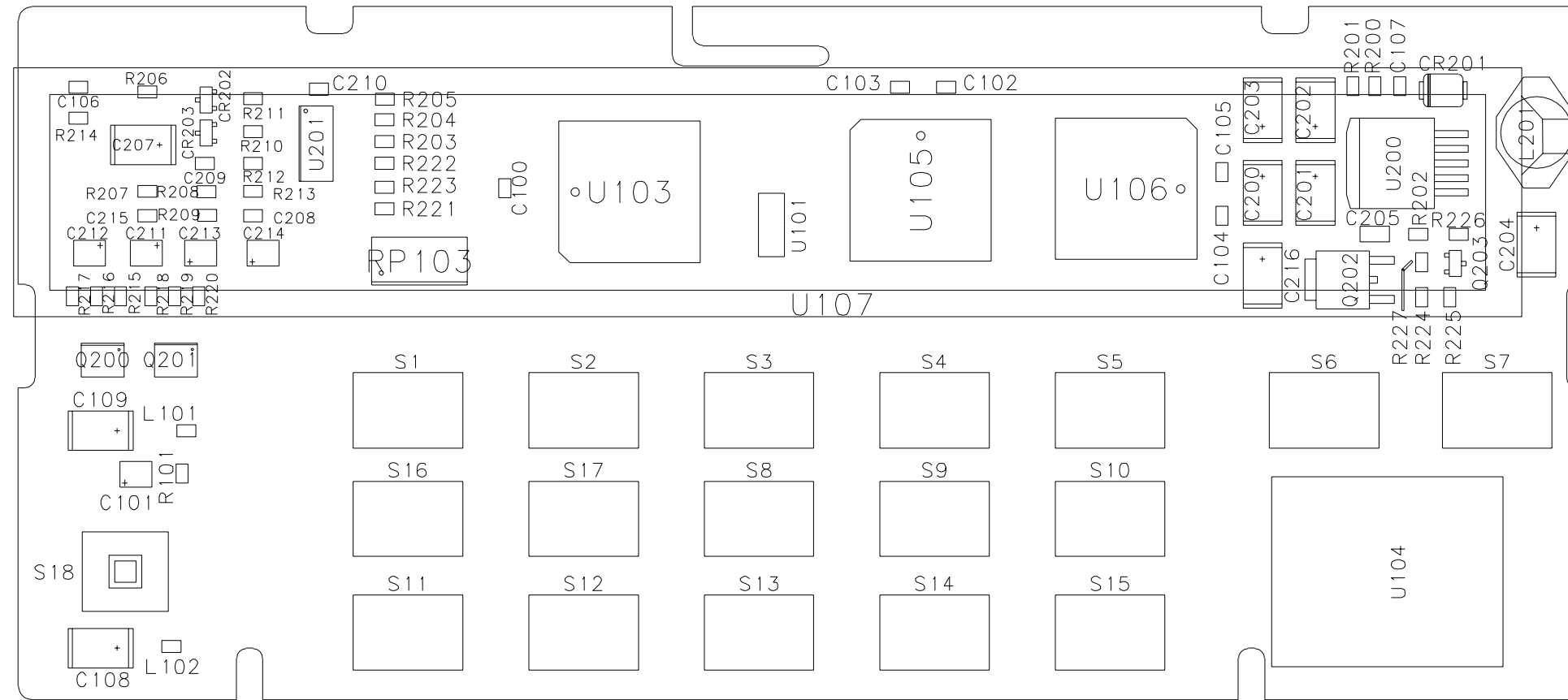
Mini DIN
Alarms & Ext_TRGs

Unused Gates

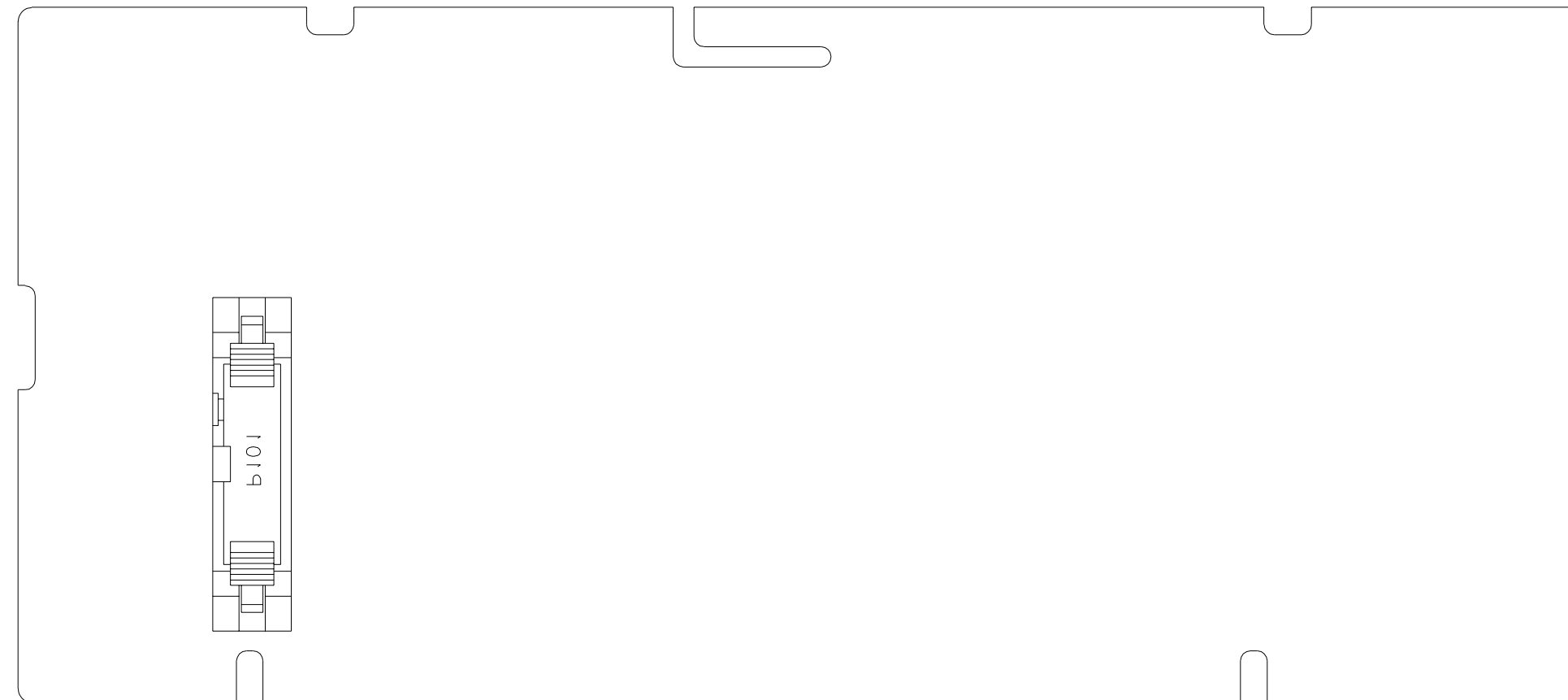


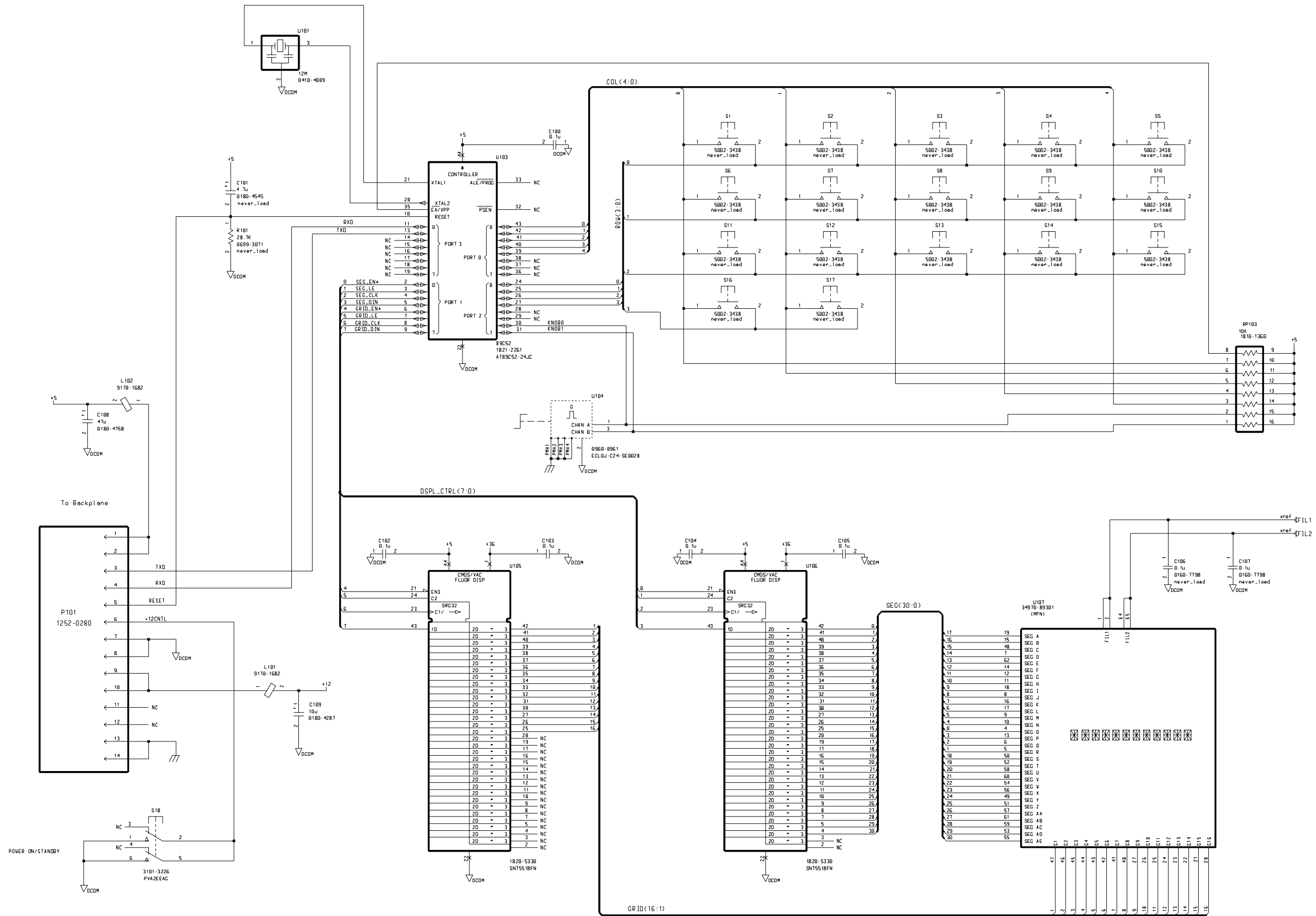


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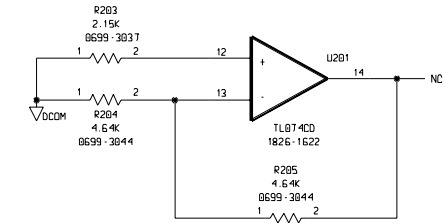
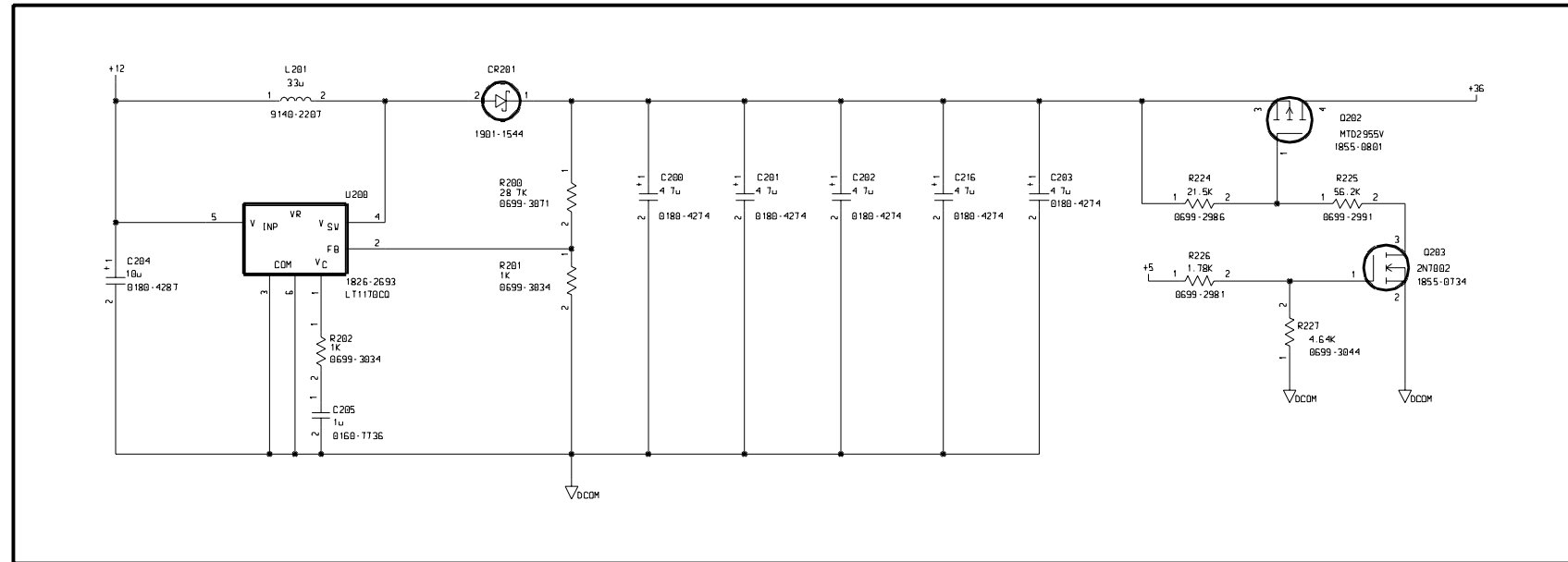


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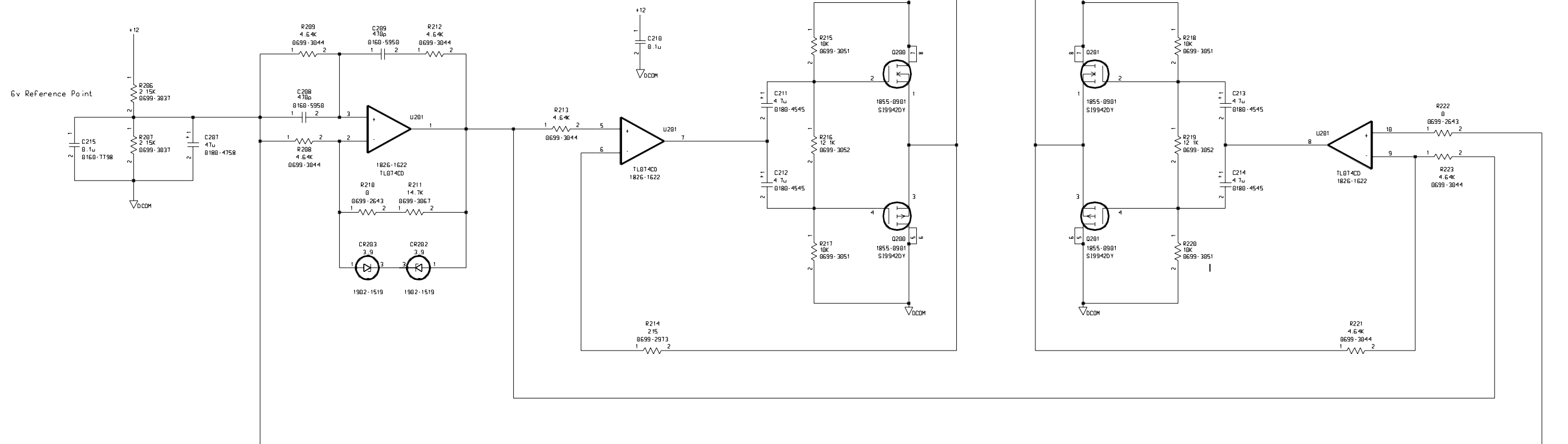


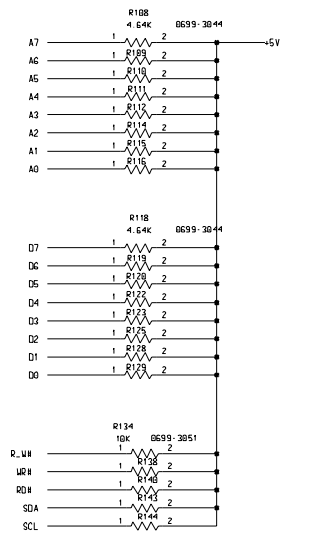
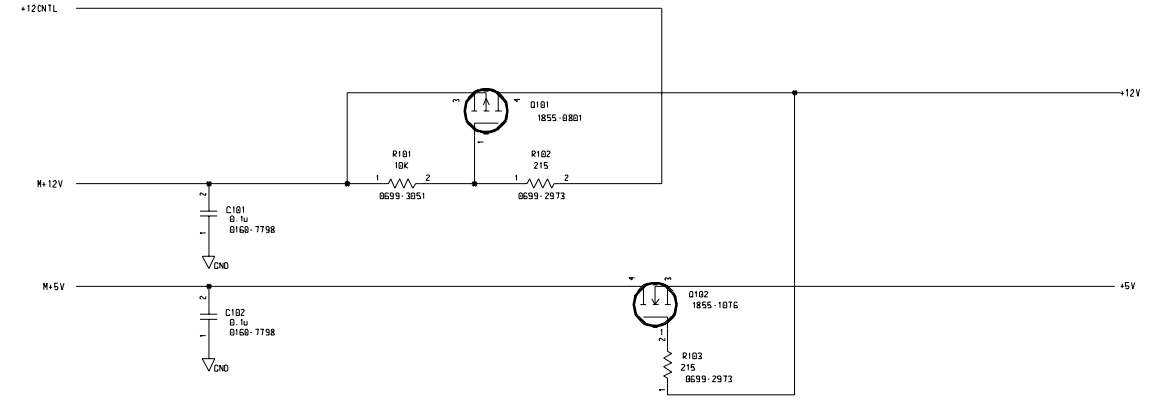
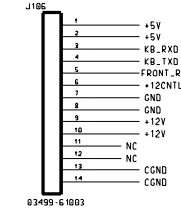
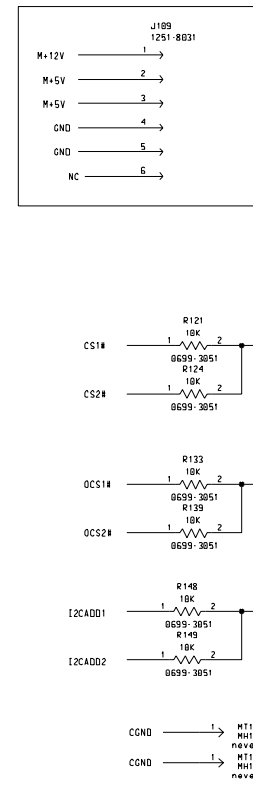
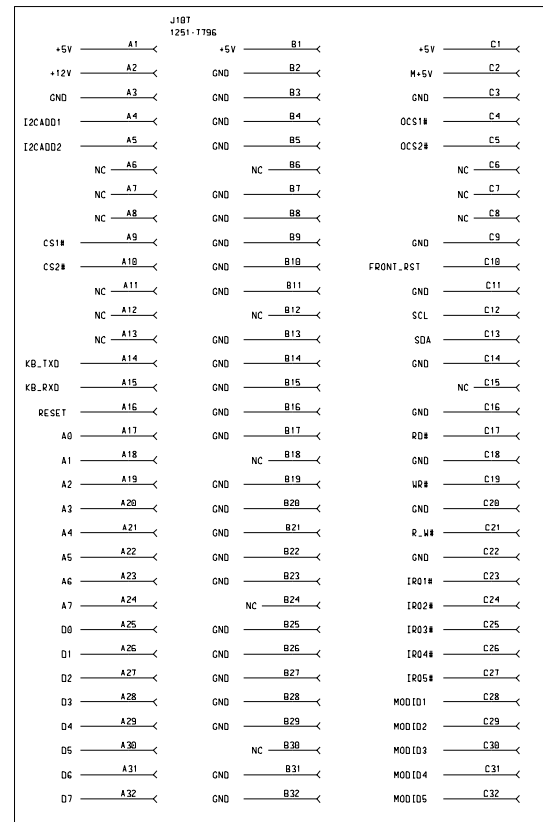
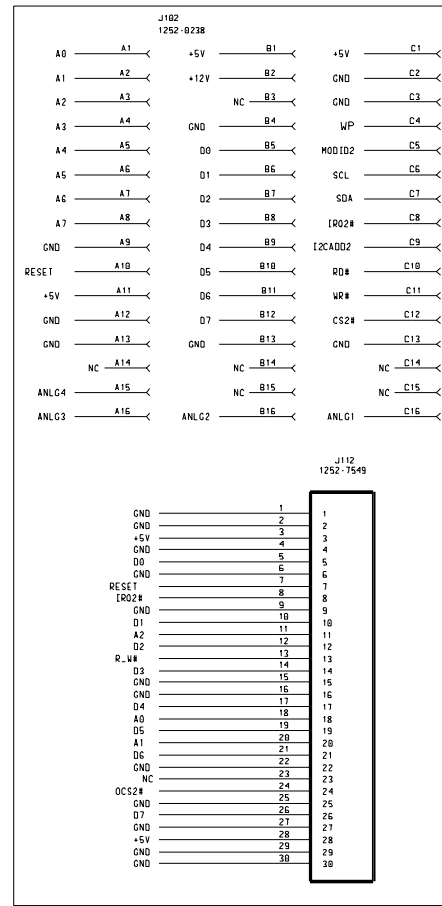
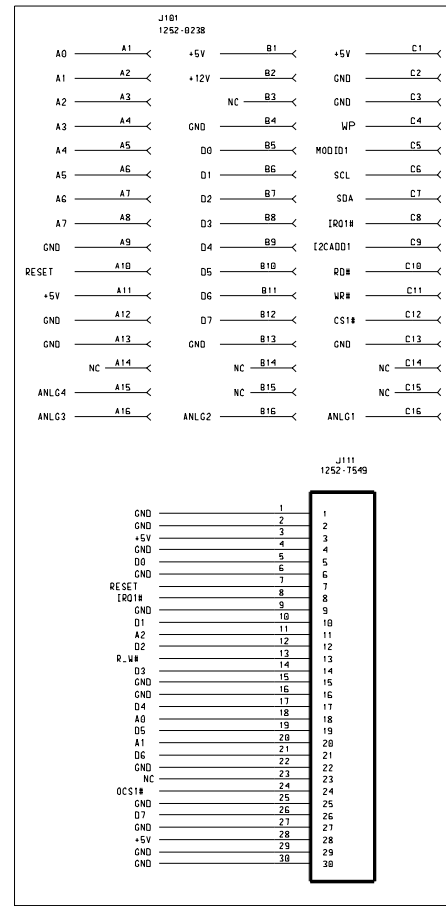
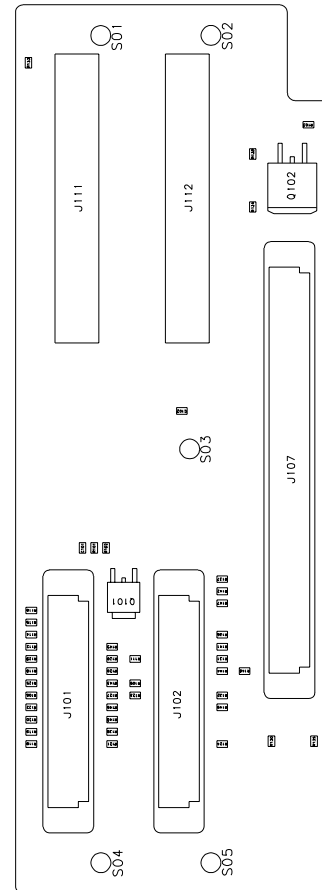
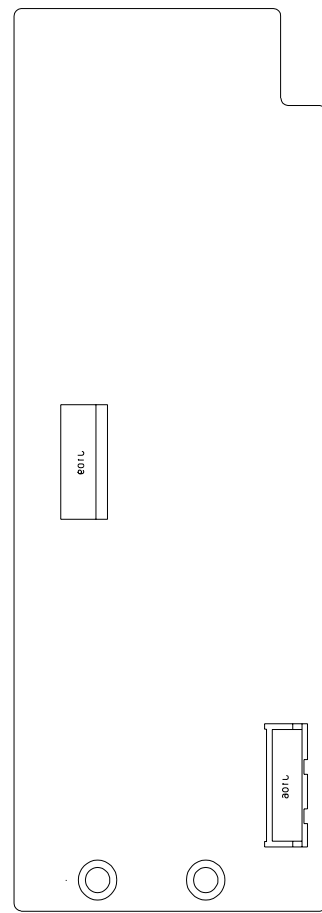


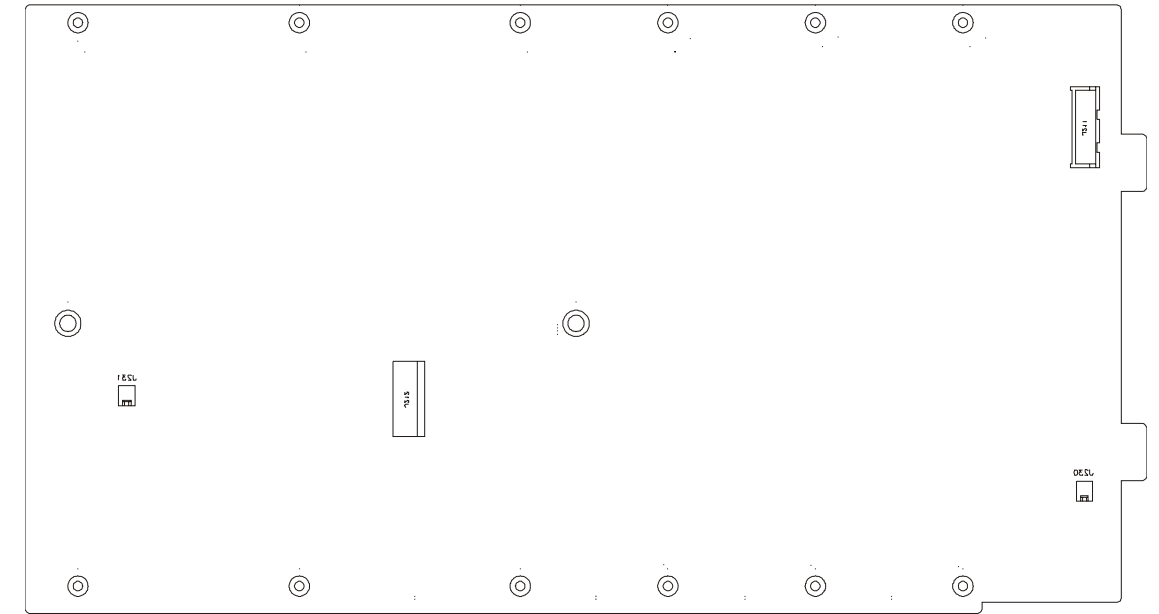
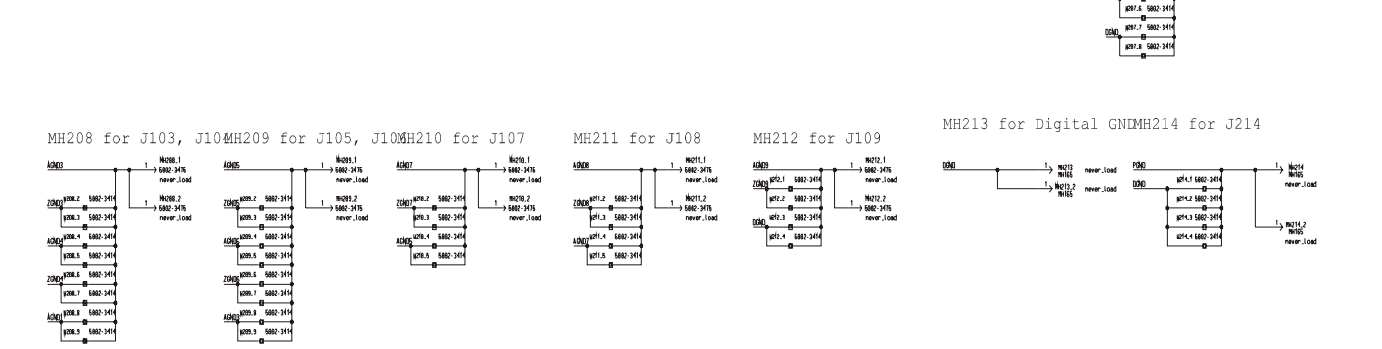
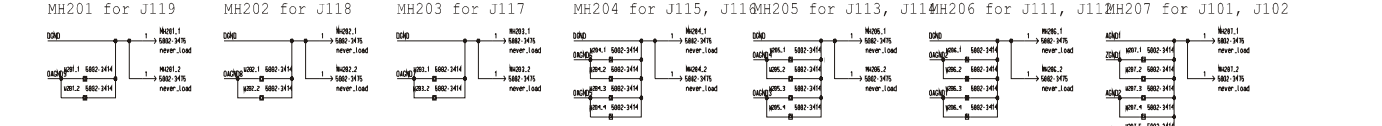
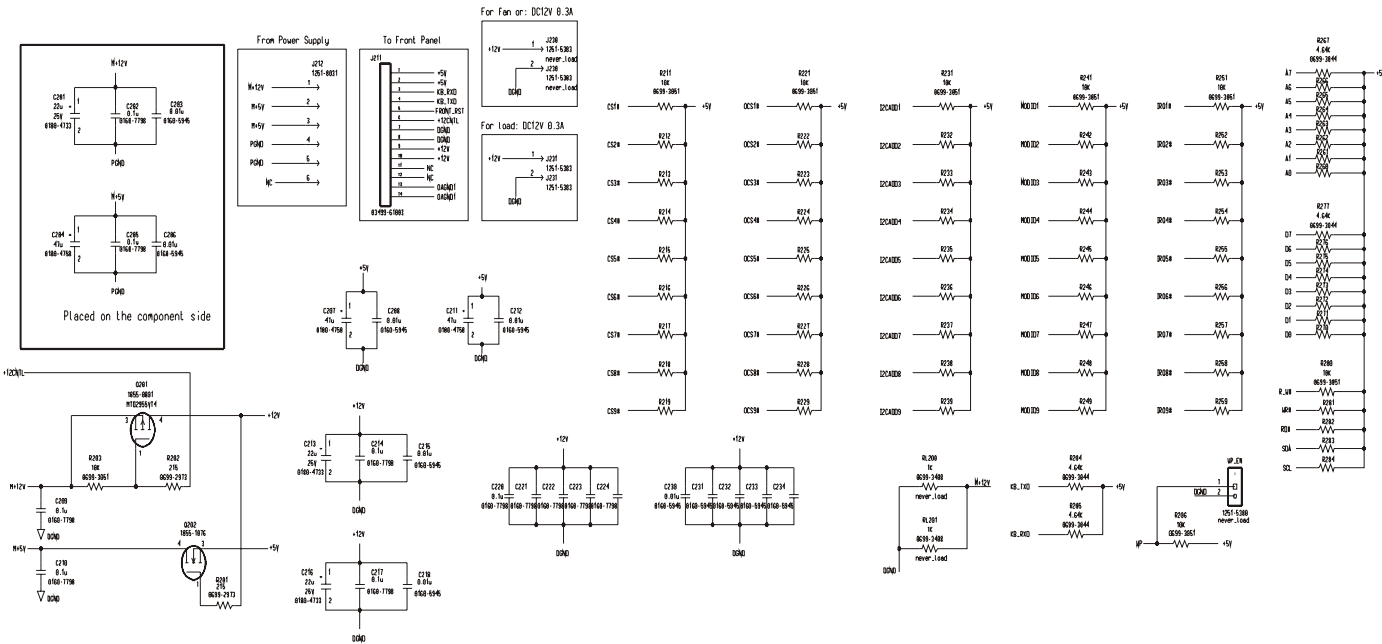
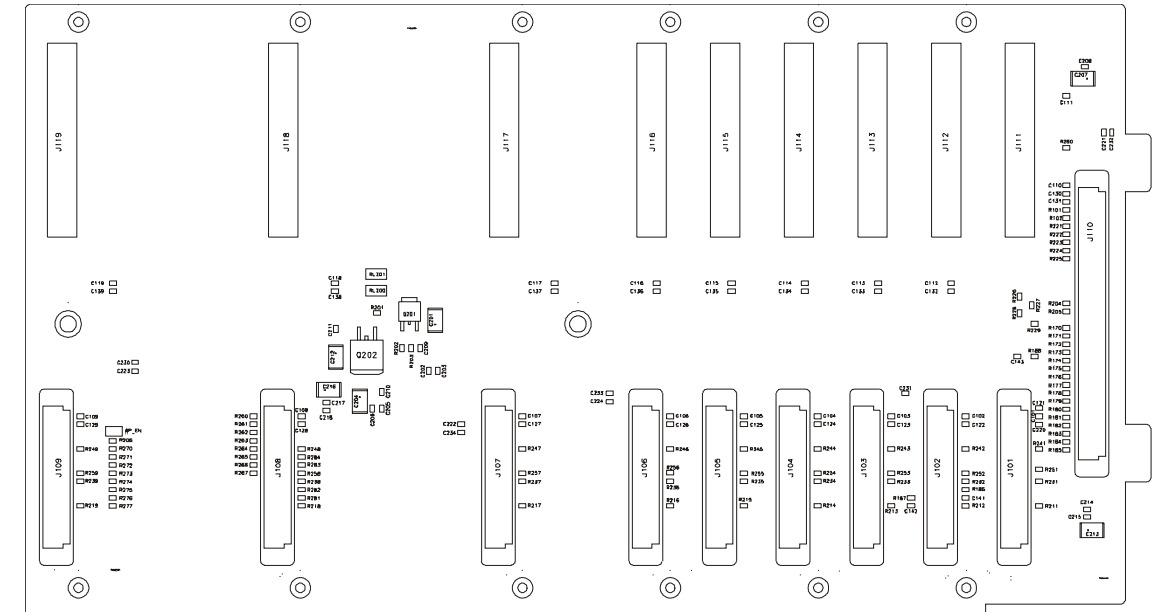
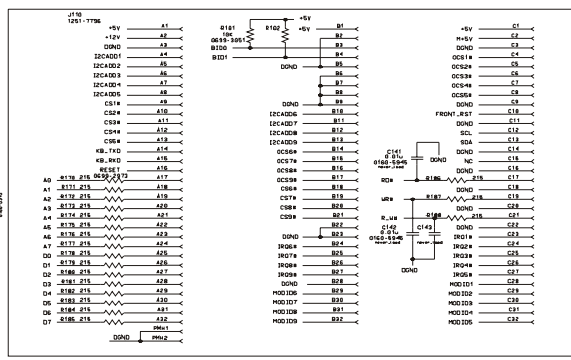
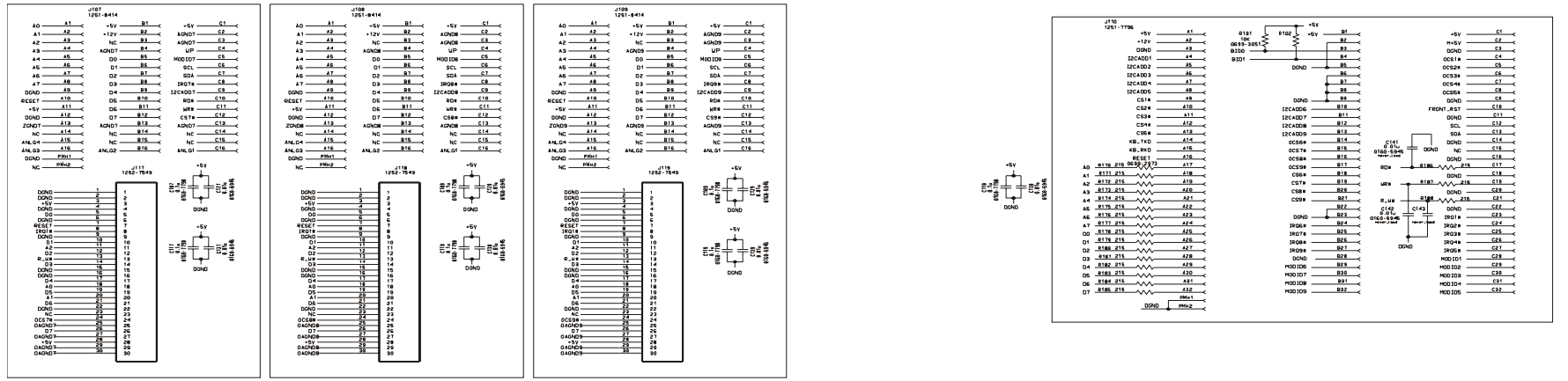
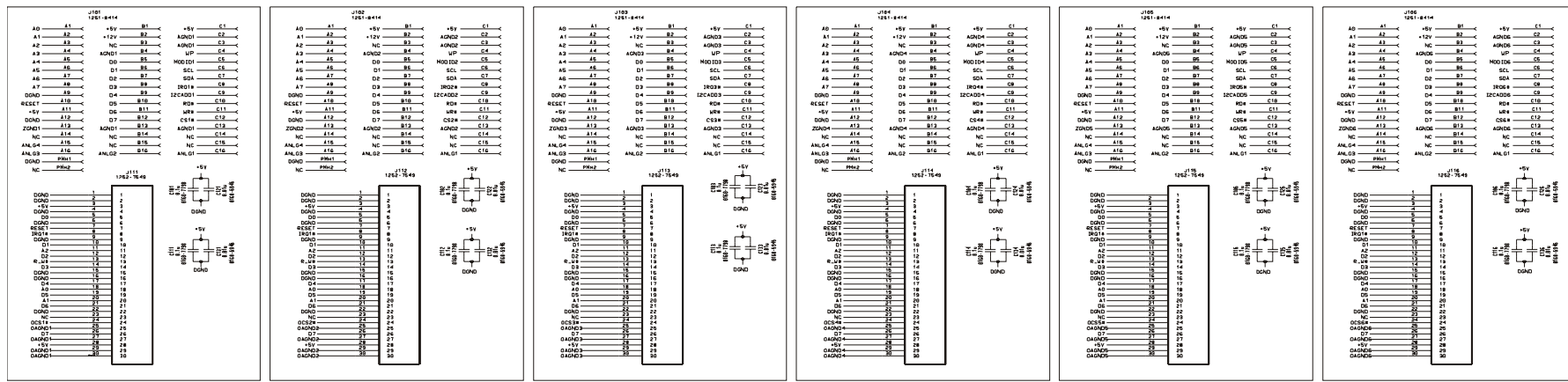
DC(12v) to DC (36v) Converter
 $V_o = (1 + (R_{200}/R_{201})) \cdot 1.24$

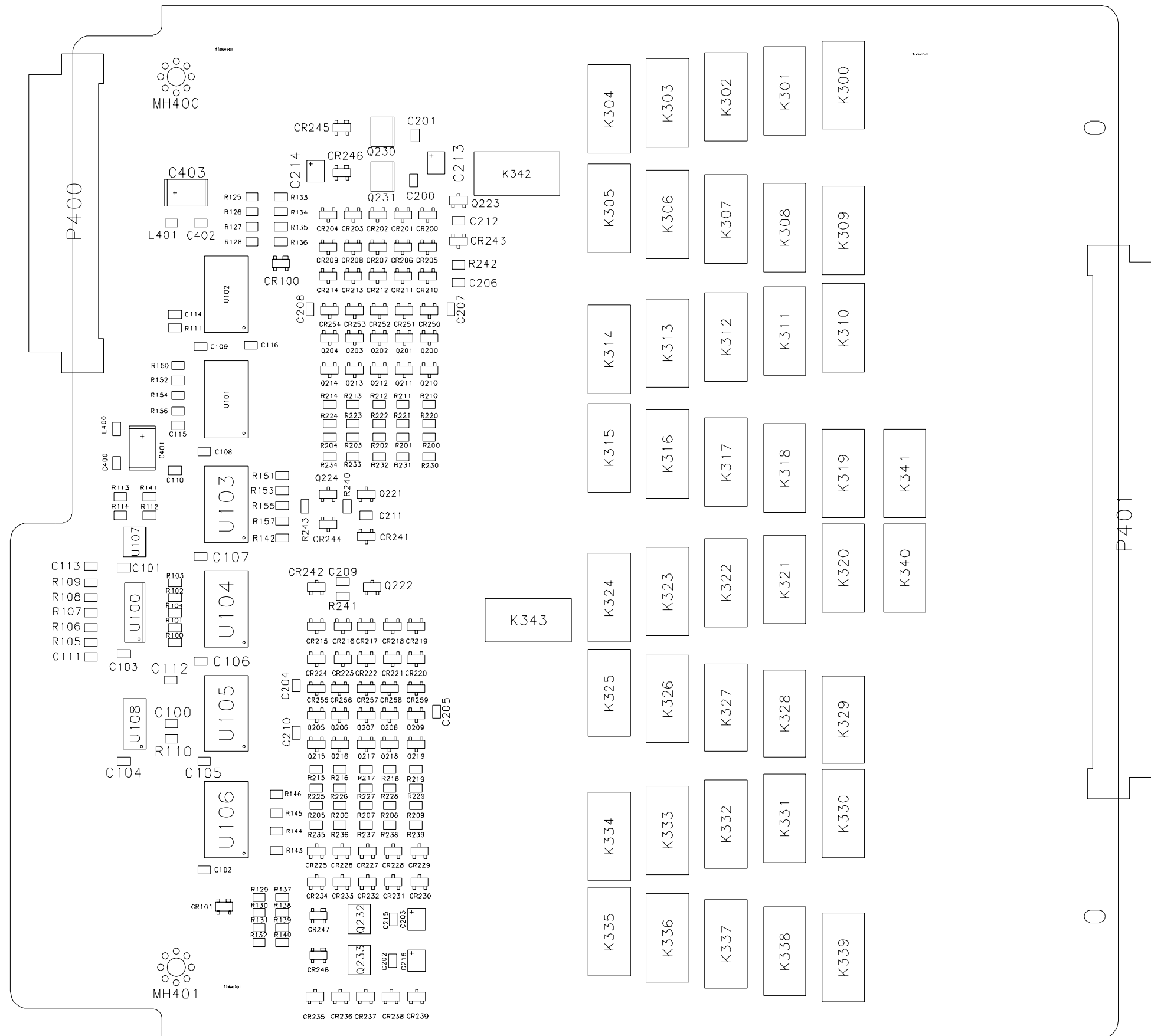


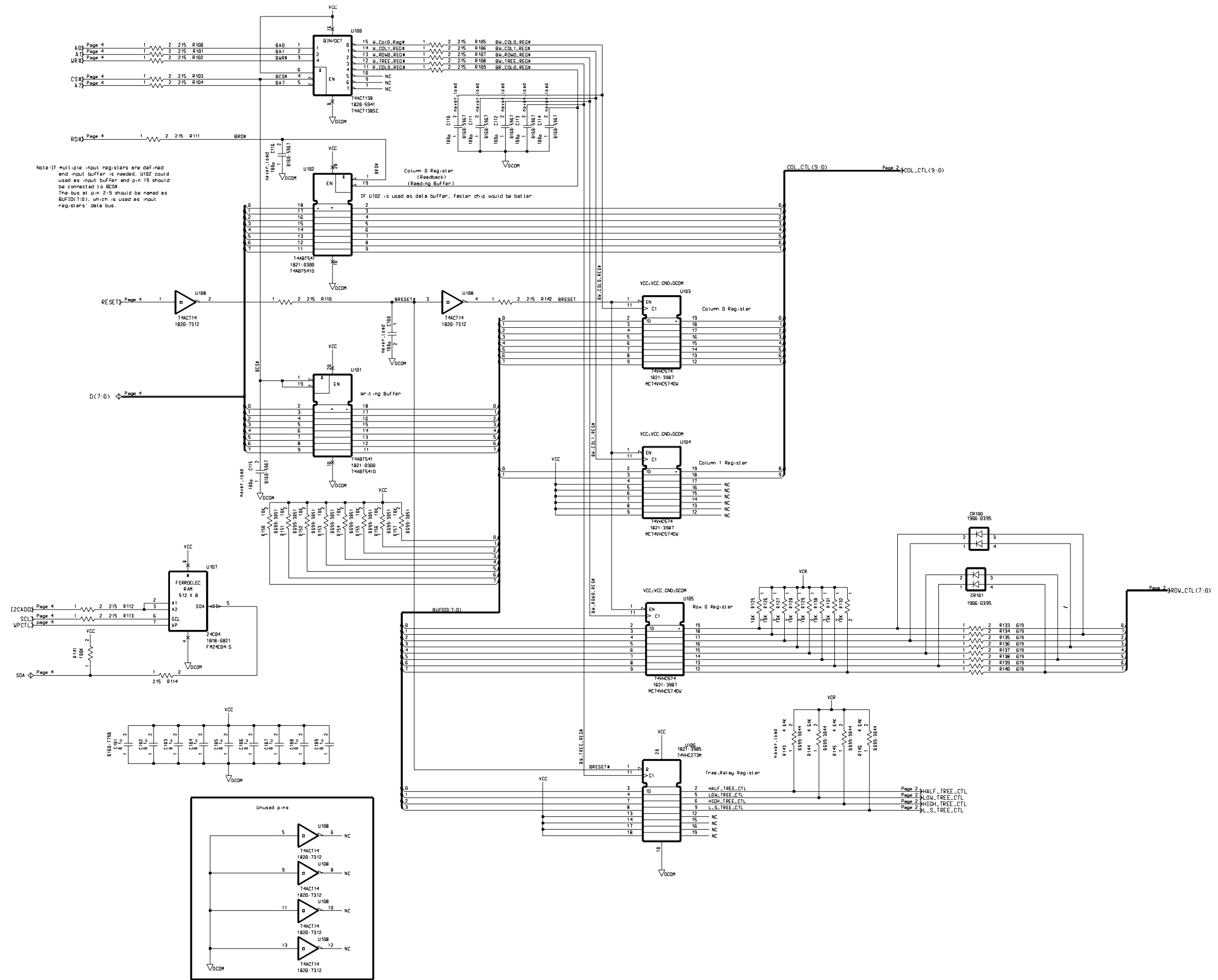
Sine Oscillator
 $F = 1 / (2 \cdot \pi \cdot R_{209} \cdot C_{208})$
 $2.0 < (R_{210} + R_{211}) / R_{208} < 2.15$

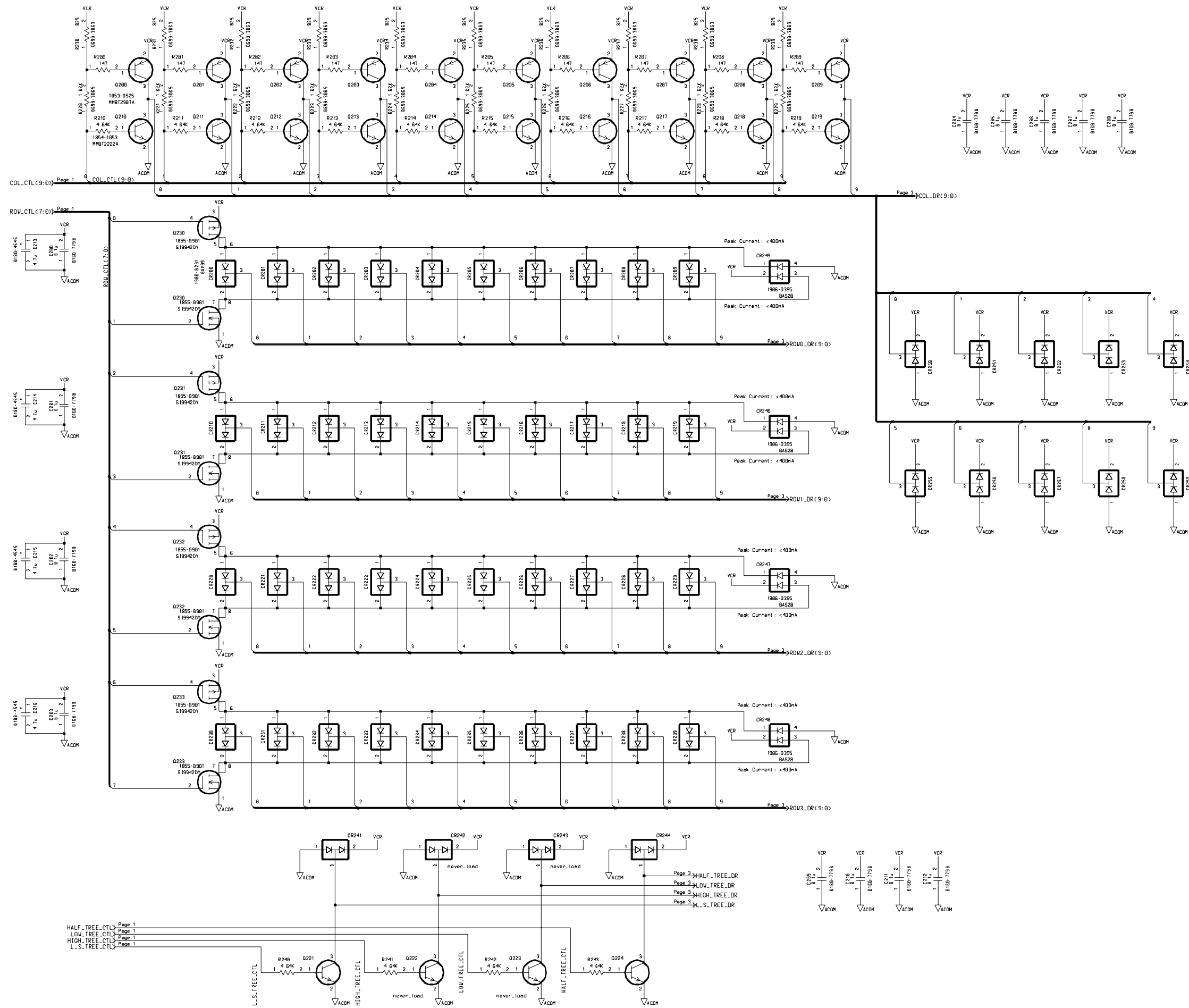


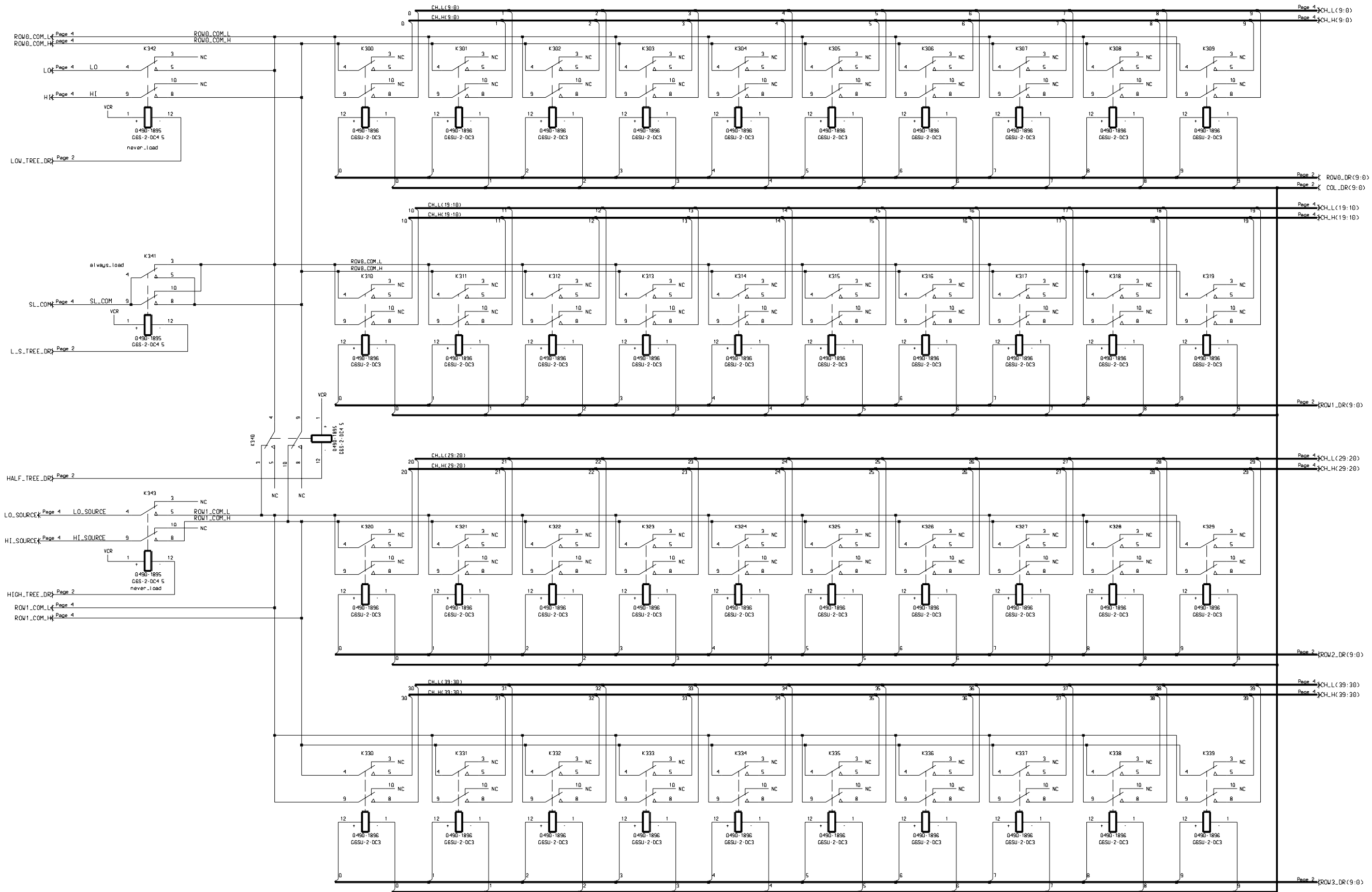




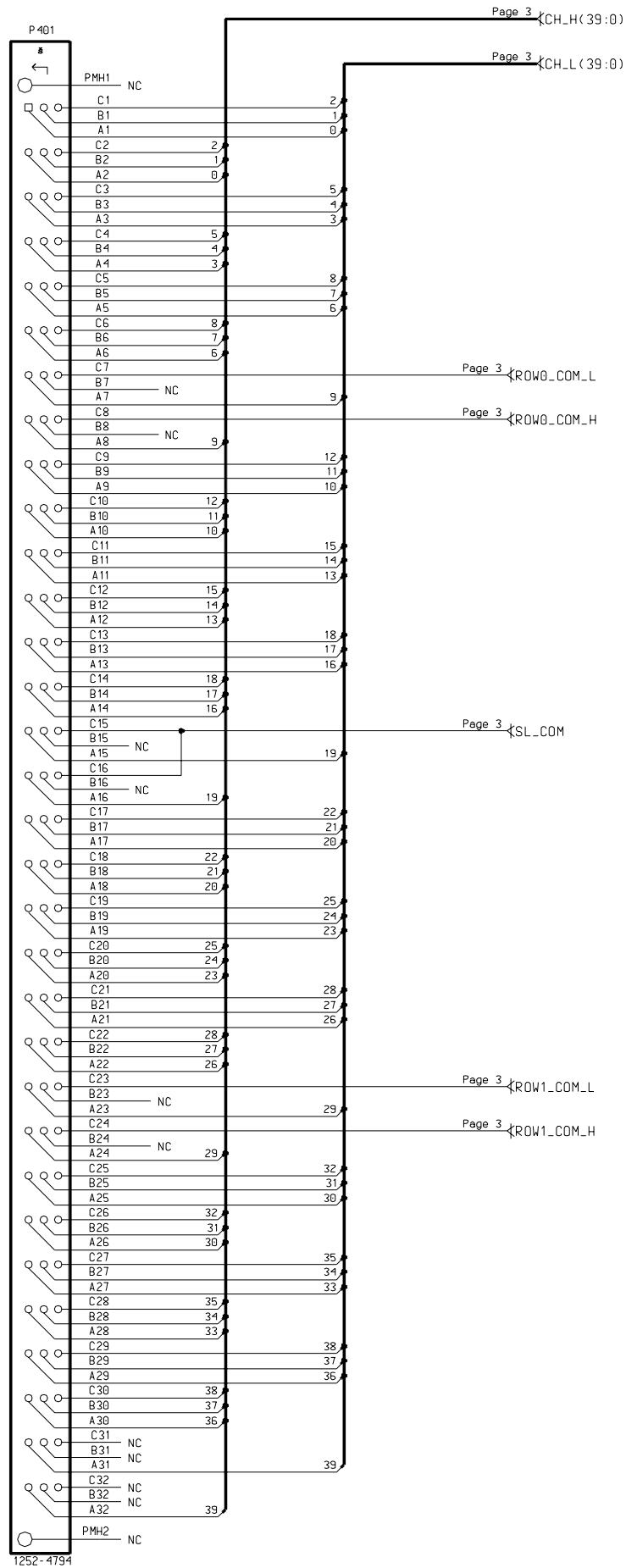








Relay Specification : 1A/200V

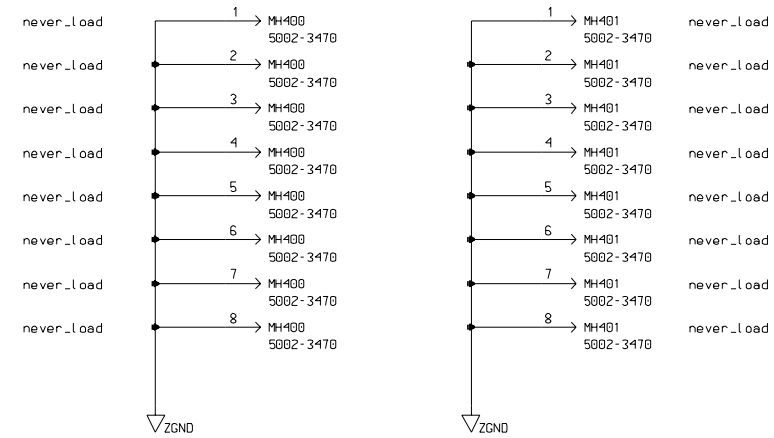
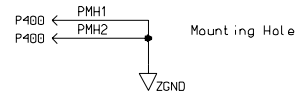
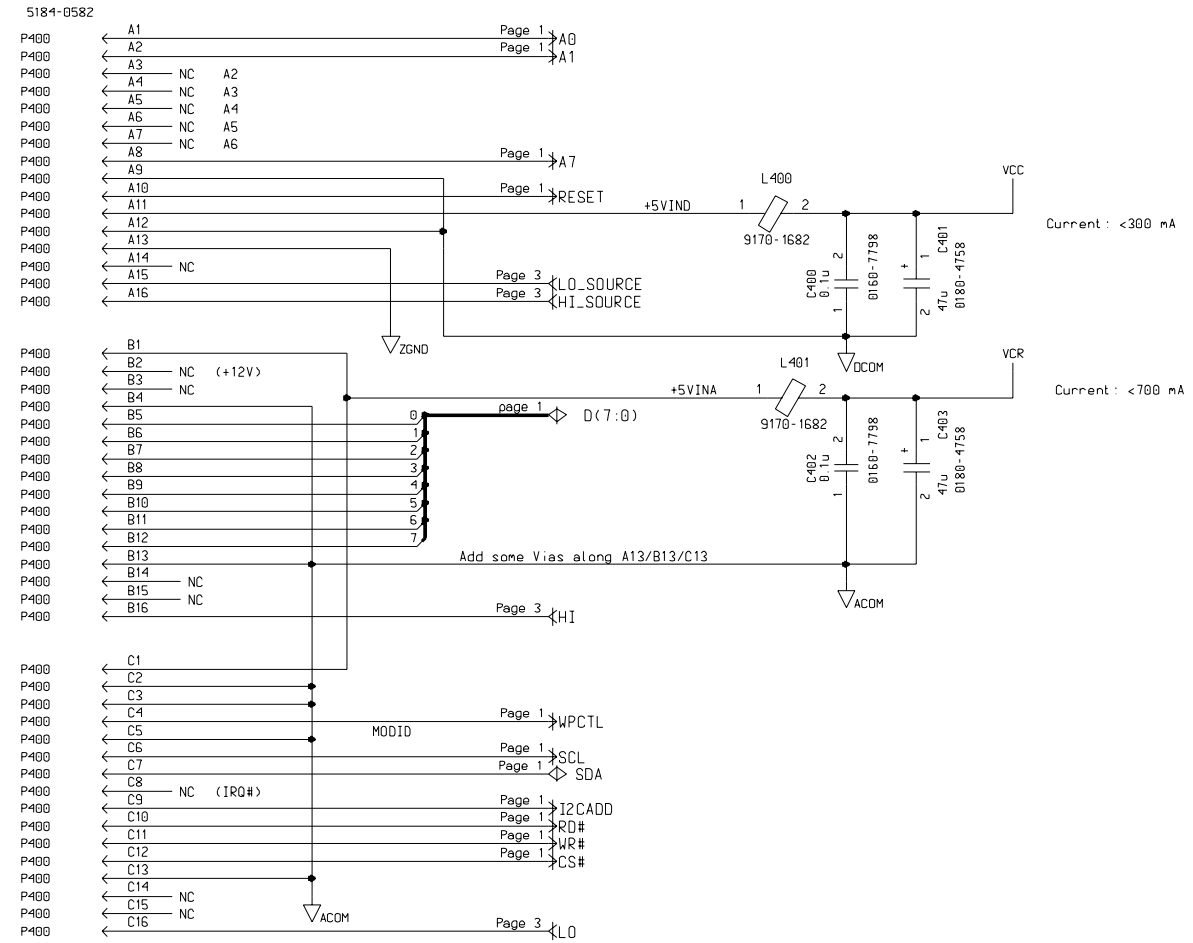


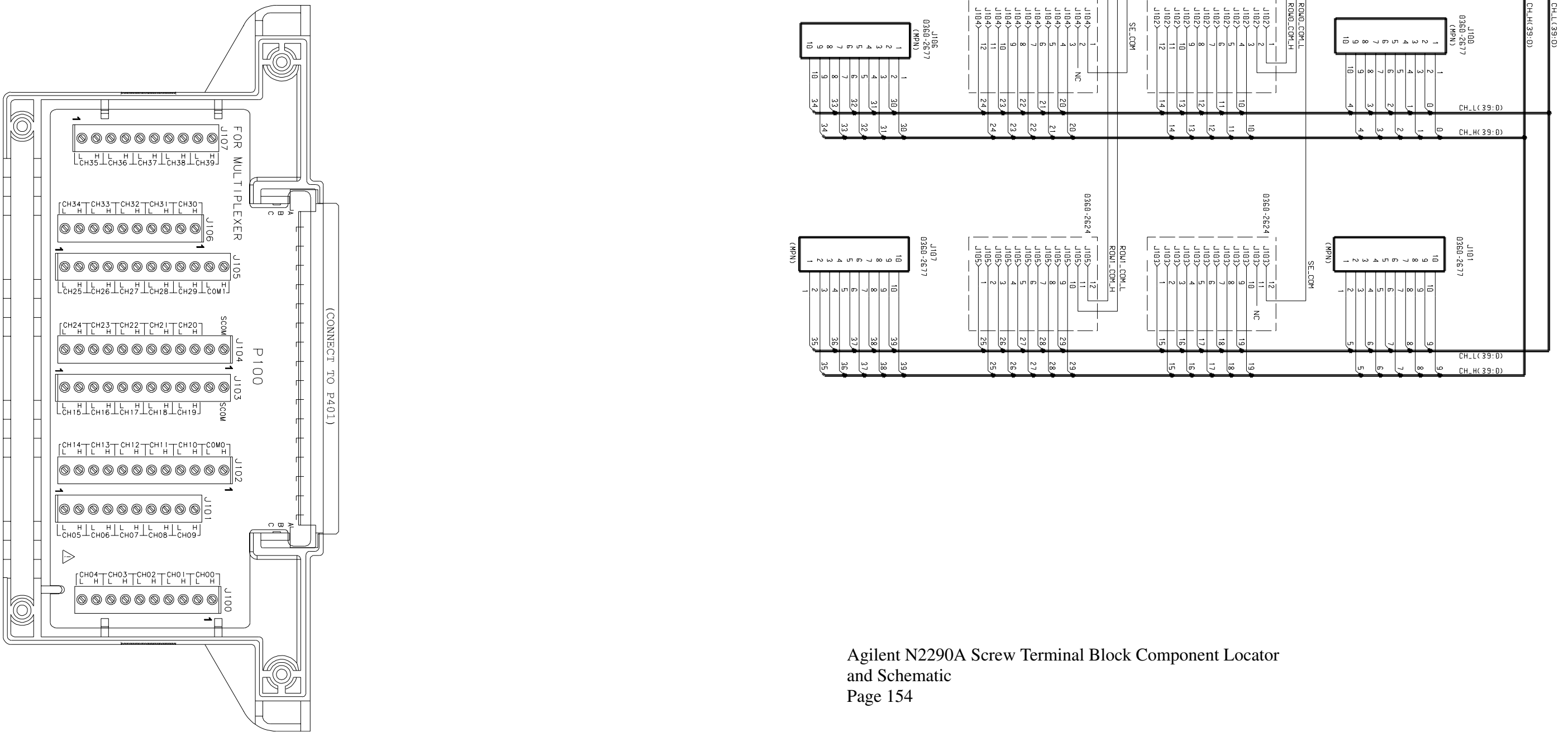
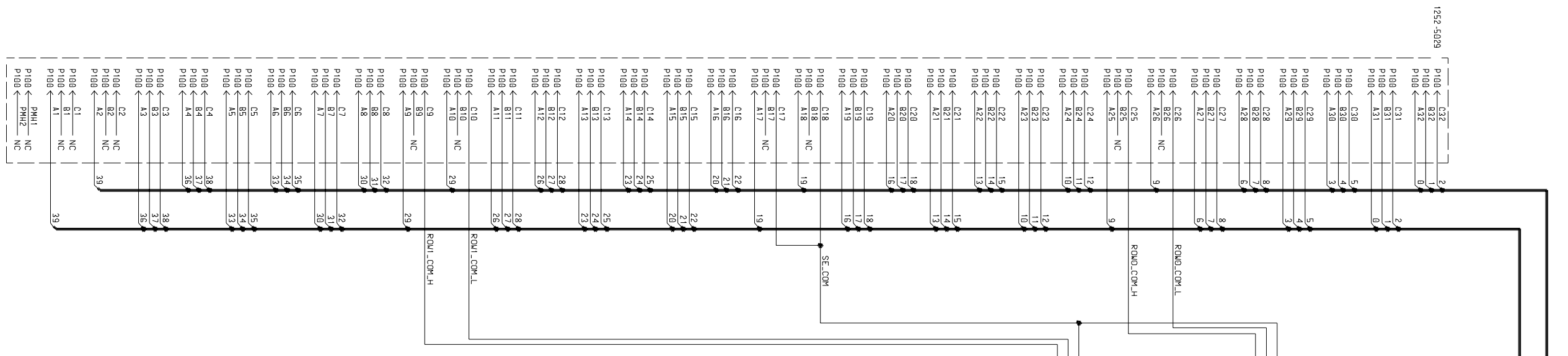
1252-4794

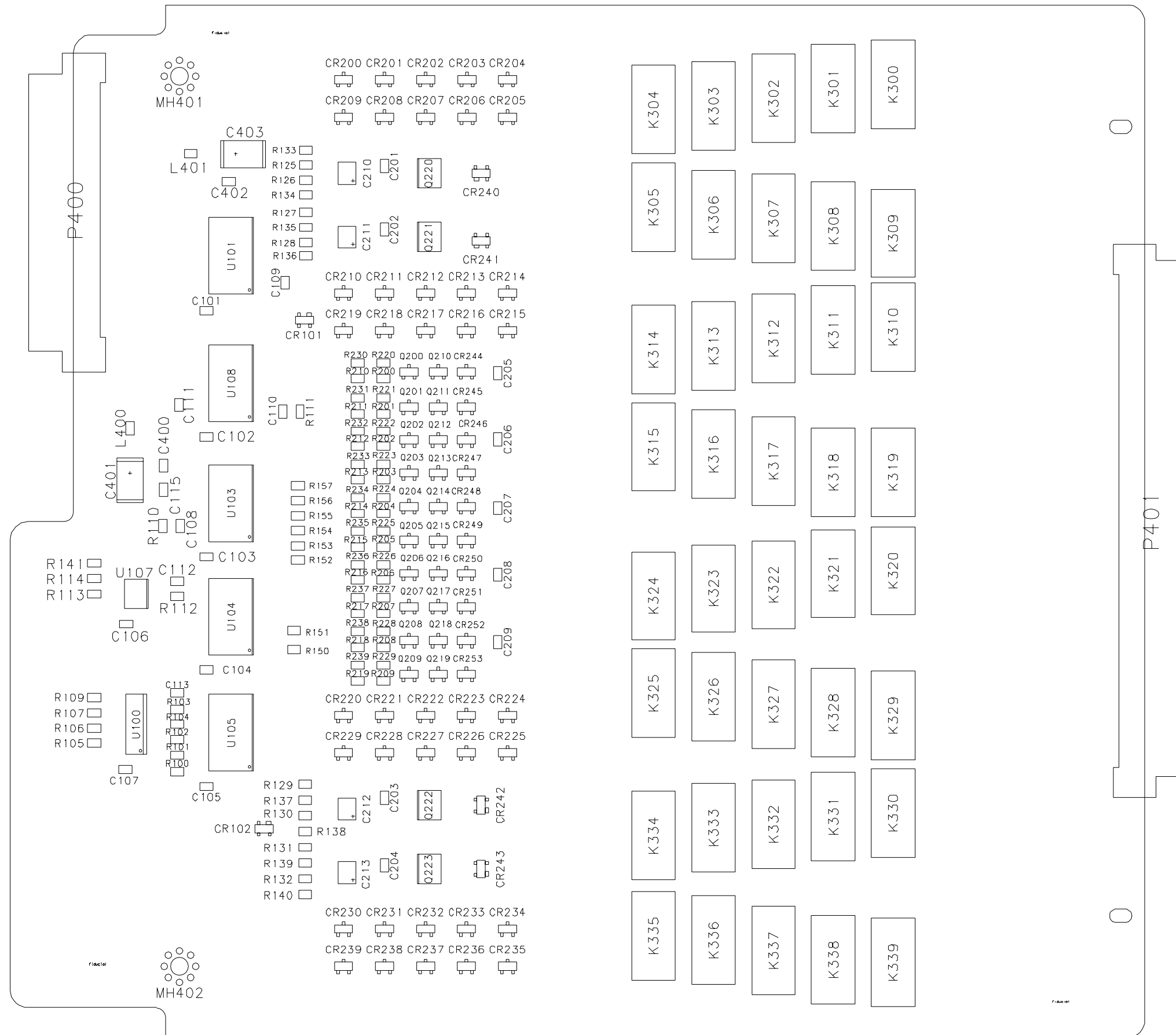
A13 is used as ZGND!
(Isolation between AB and System)

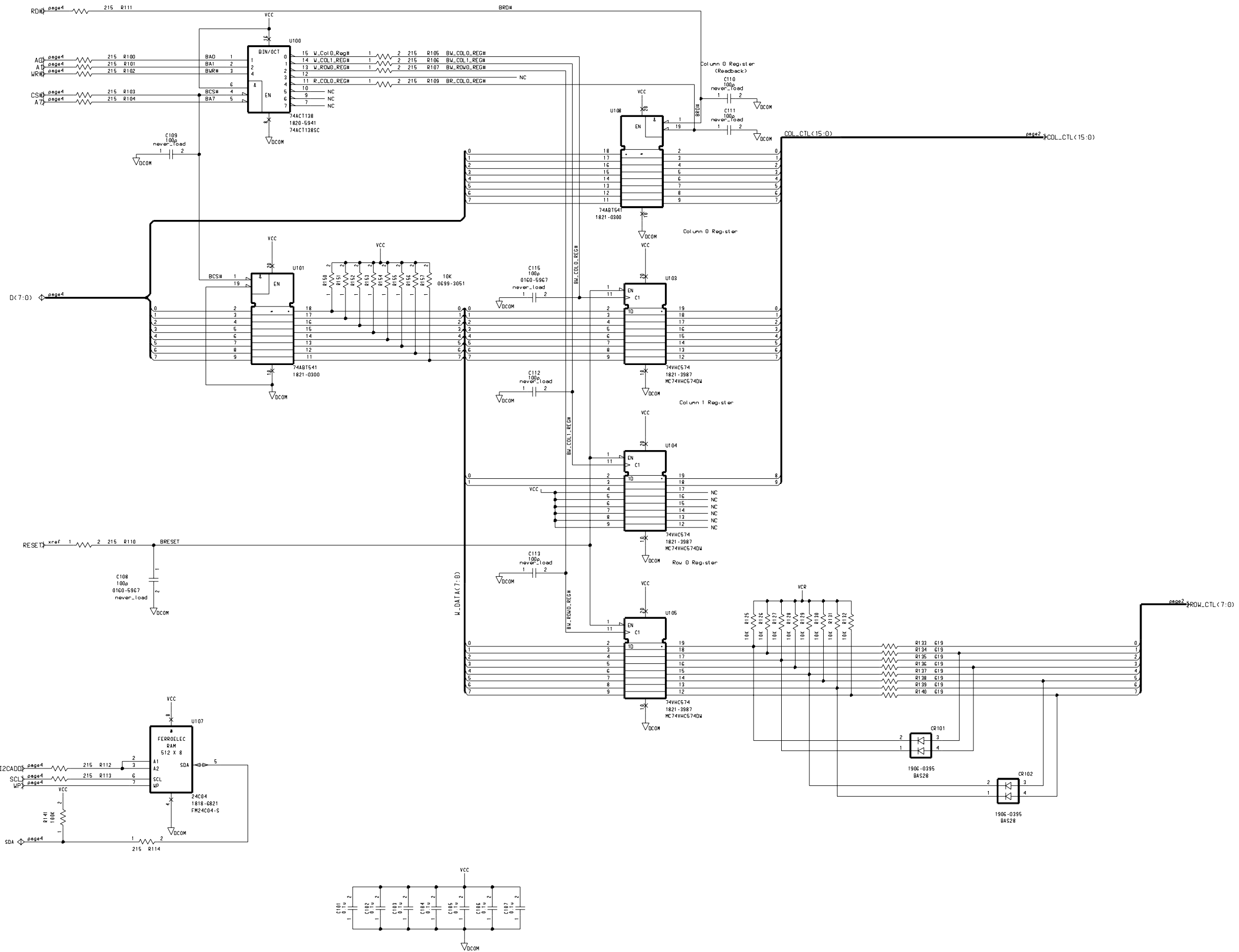
(Isolation between AB and System)

(Isolation between AB and System)

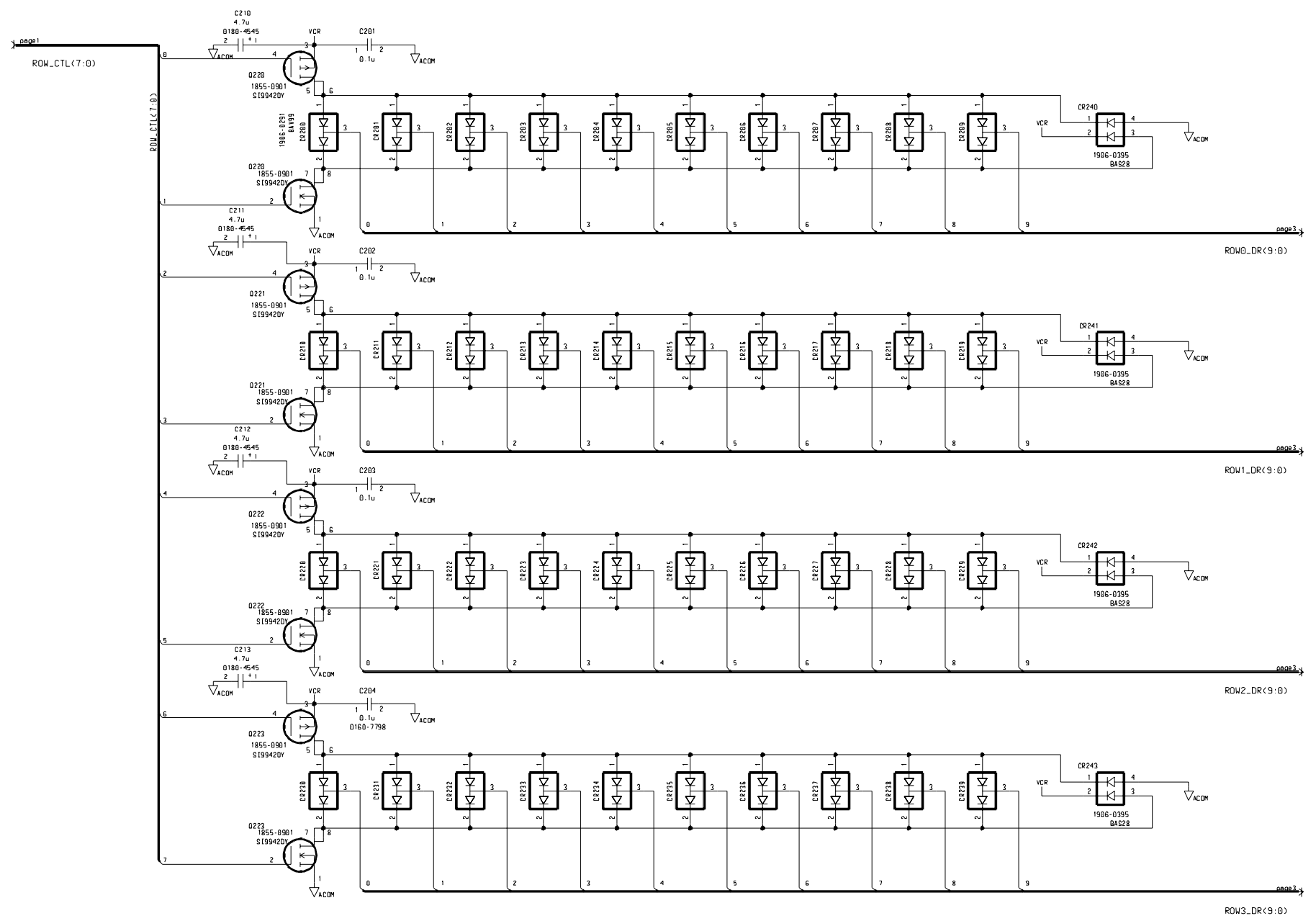
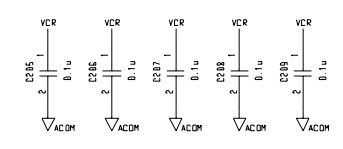
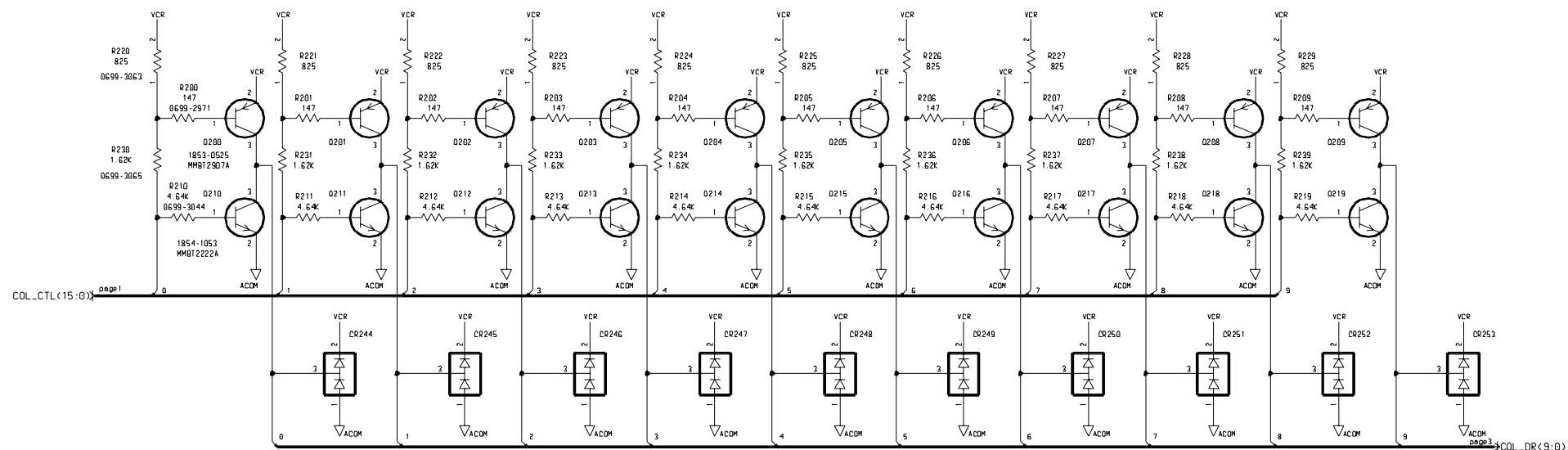


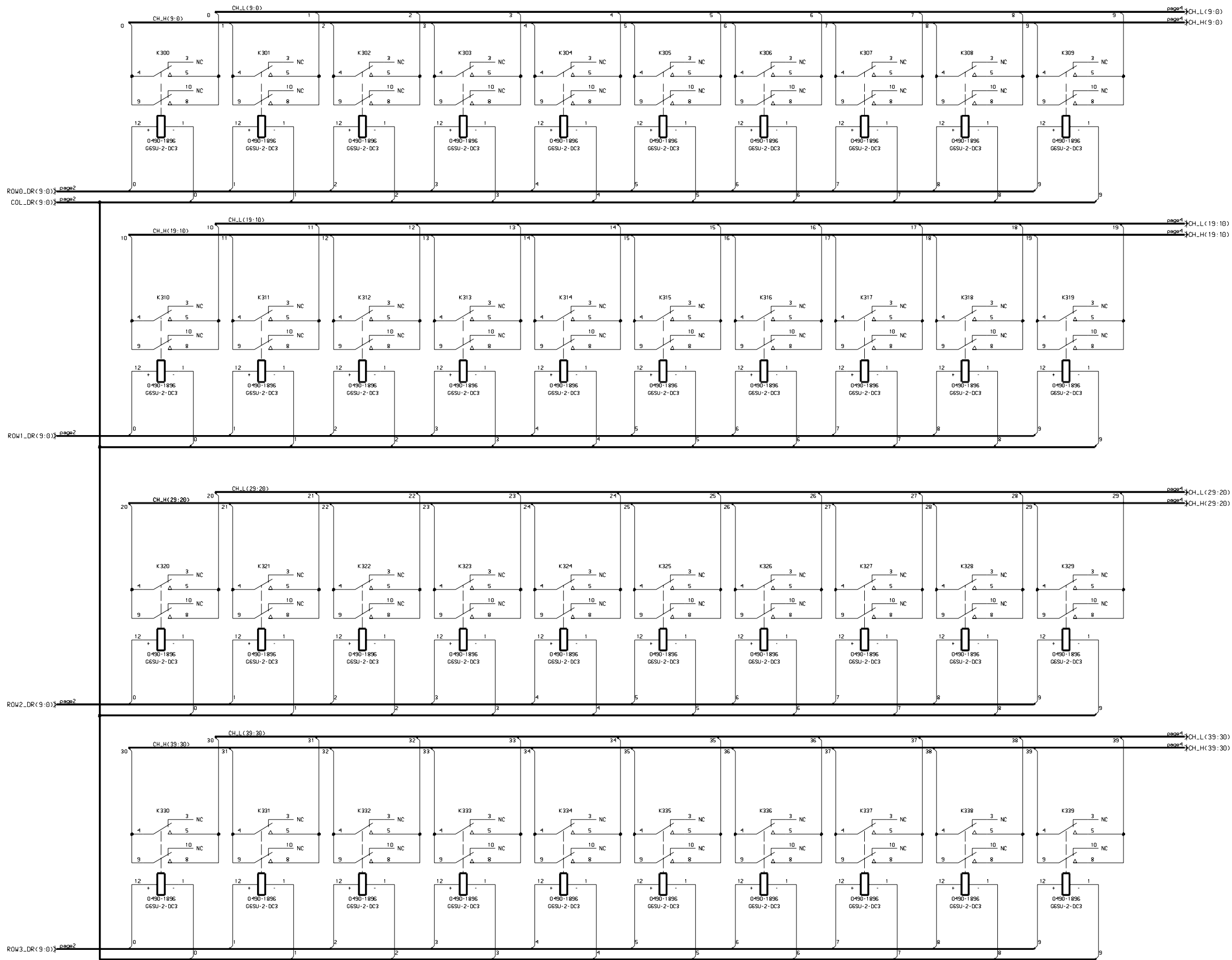




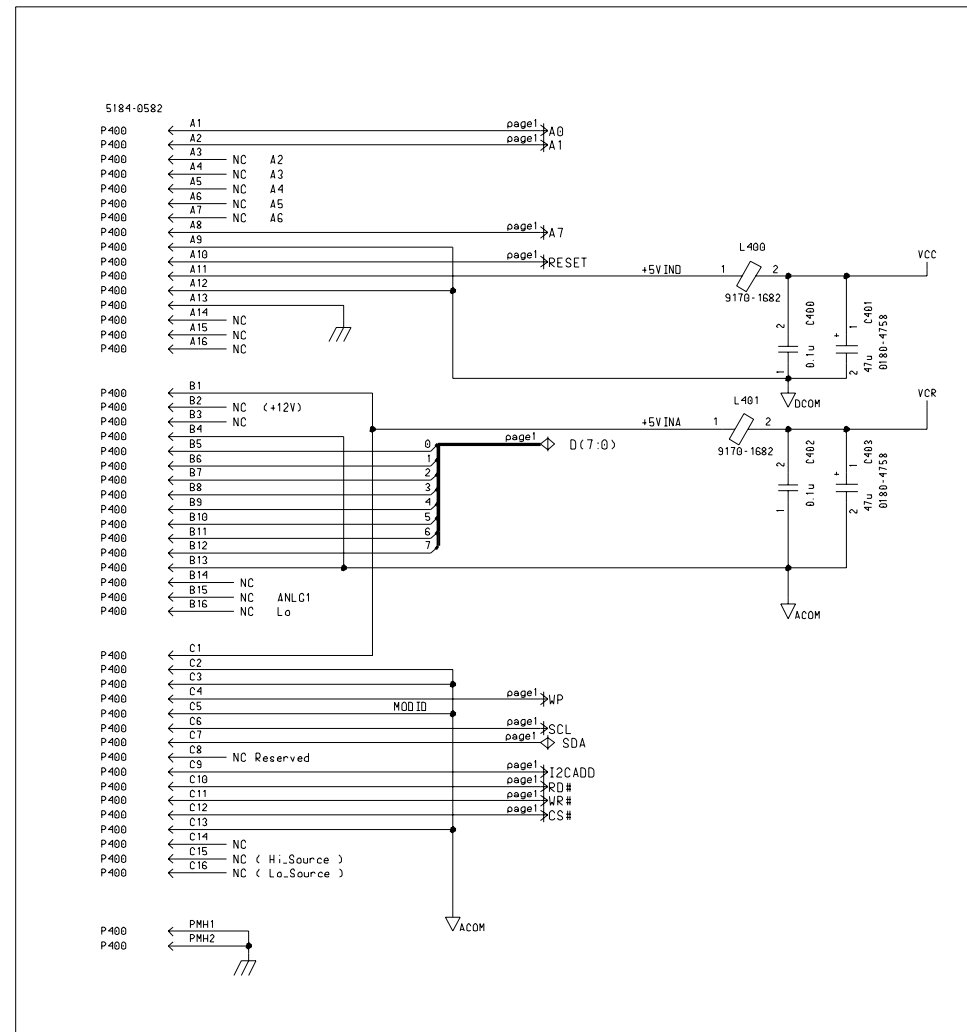


Agilent N2261A GP Relay Module
Schematic (Sheet 1 of 4)
Page 156

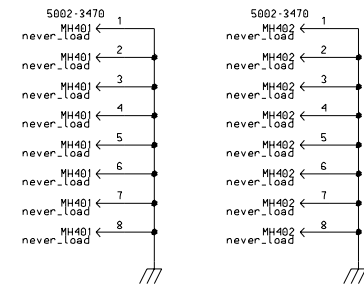




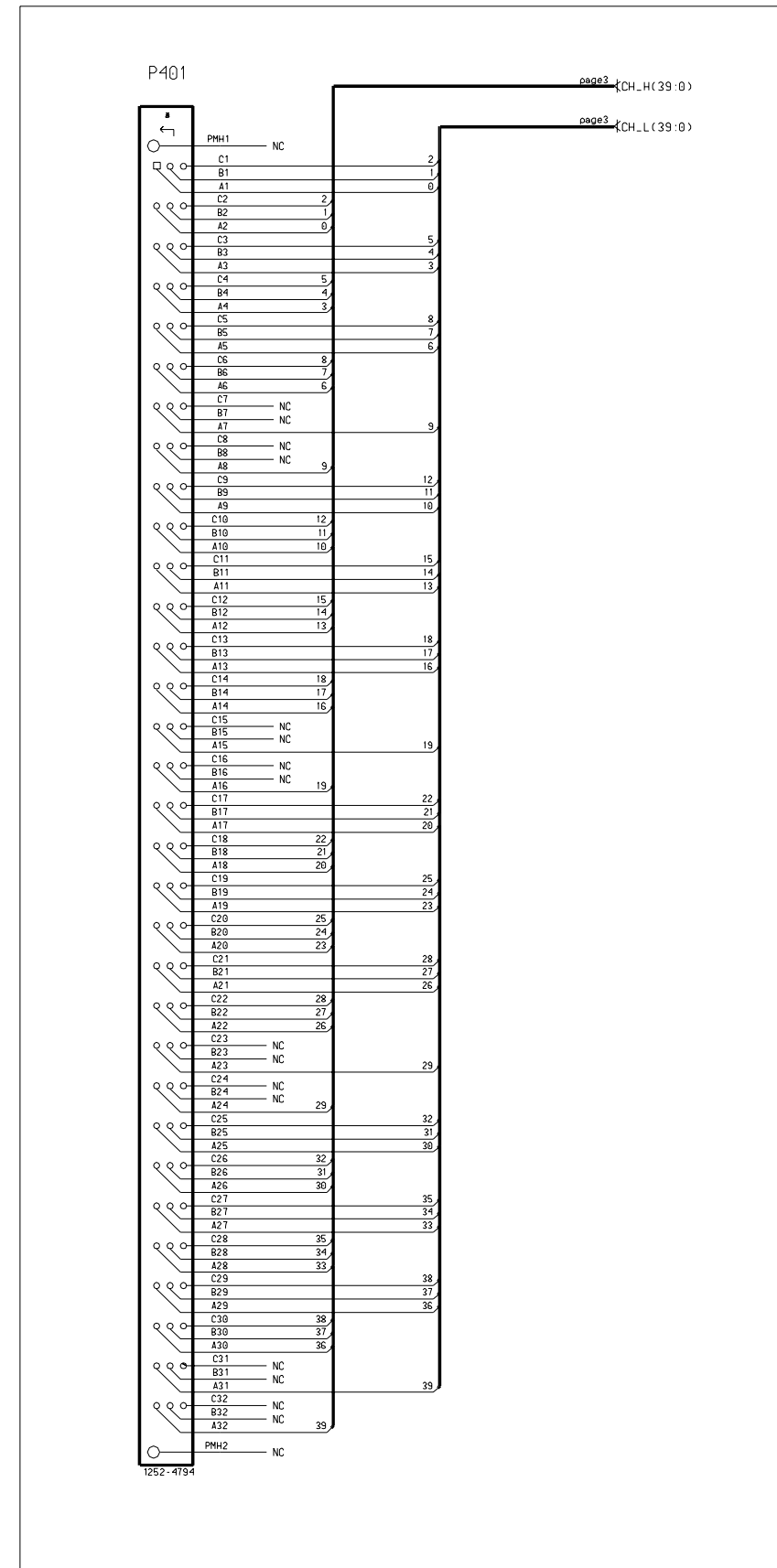
Backplane Connector

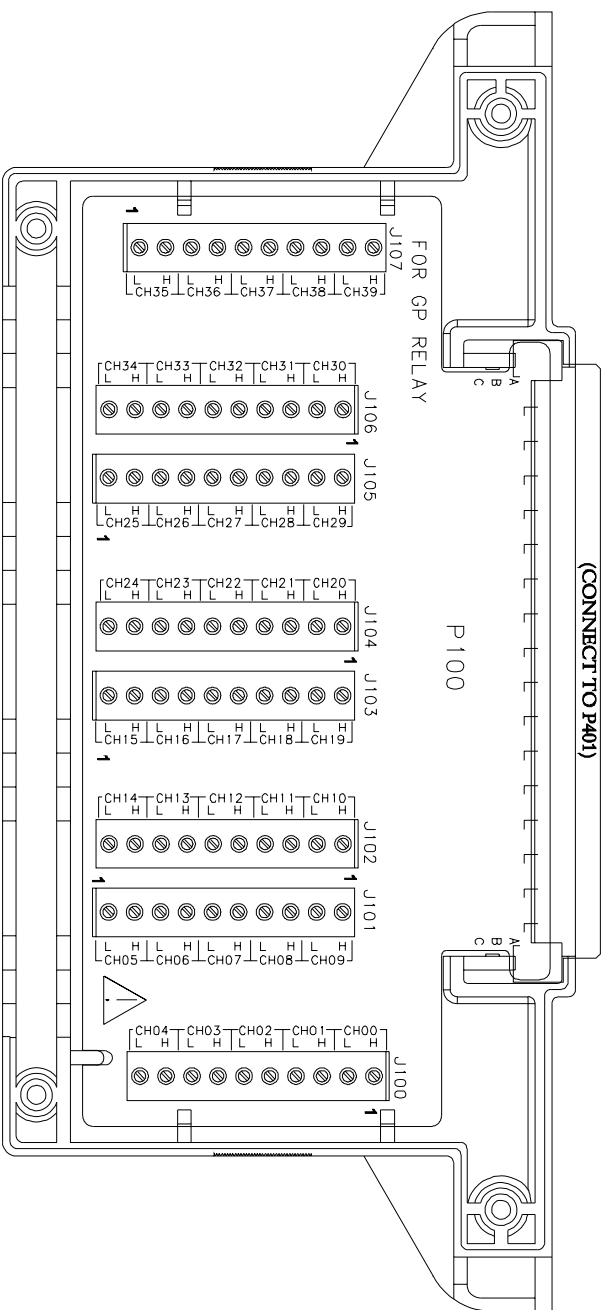
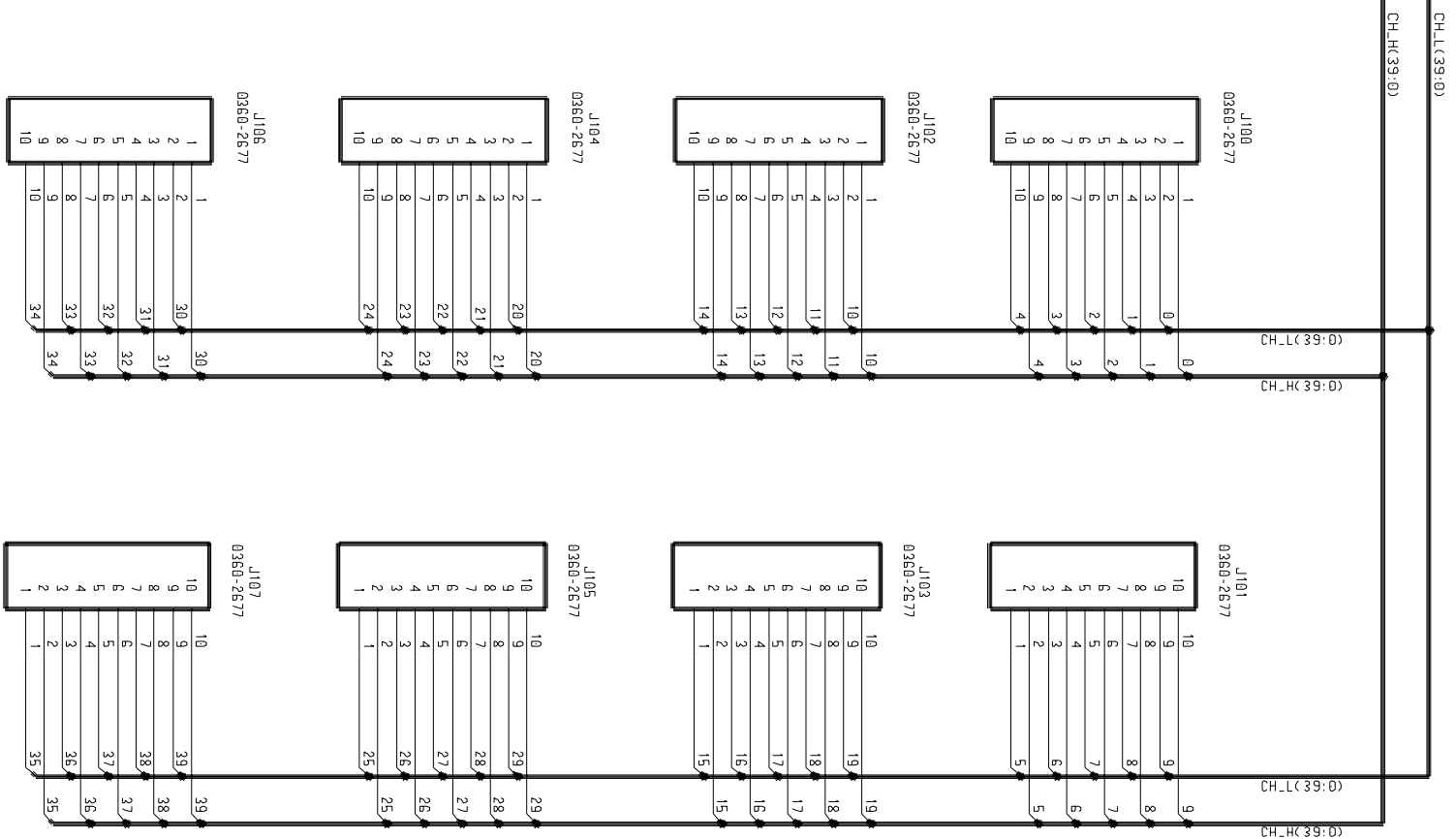
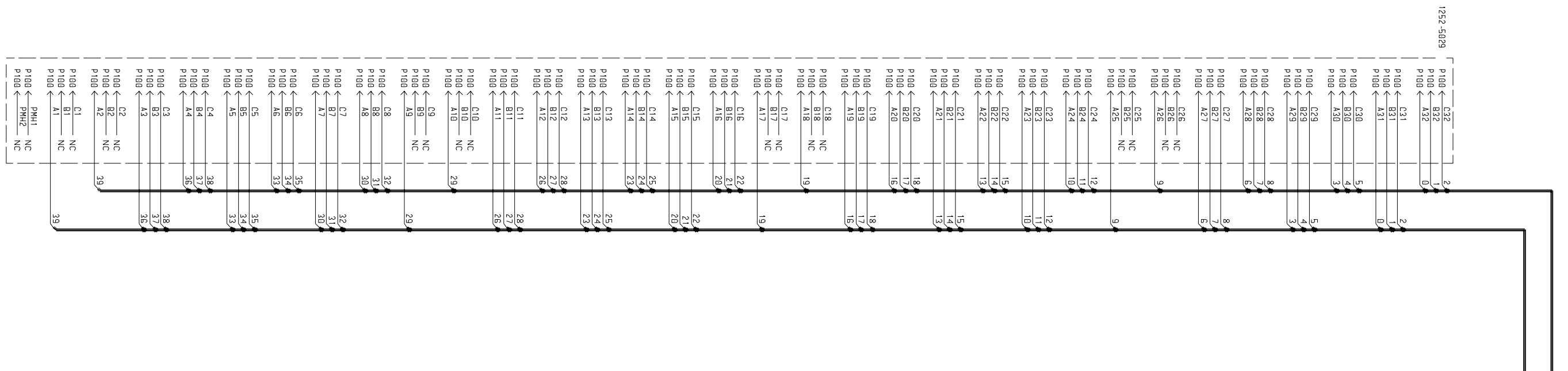


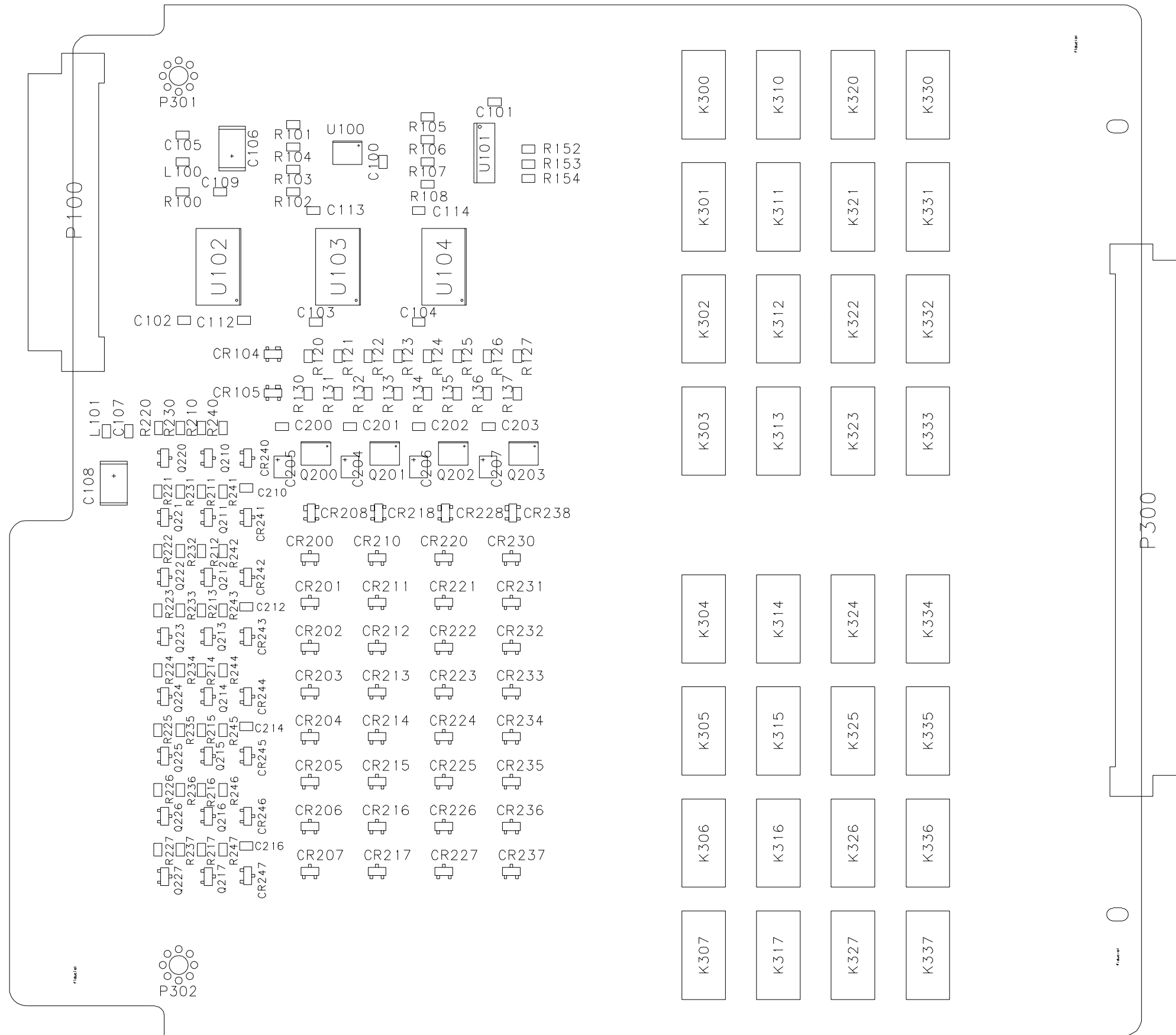
Two Mounting Holes

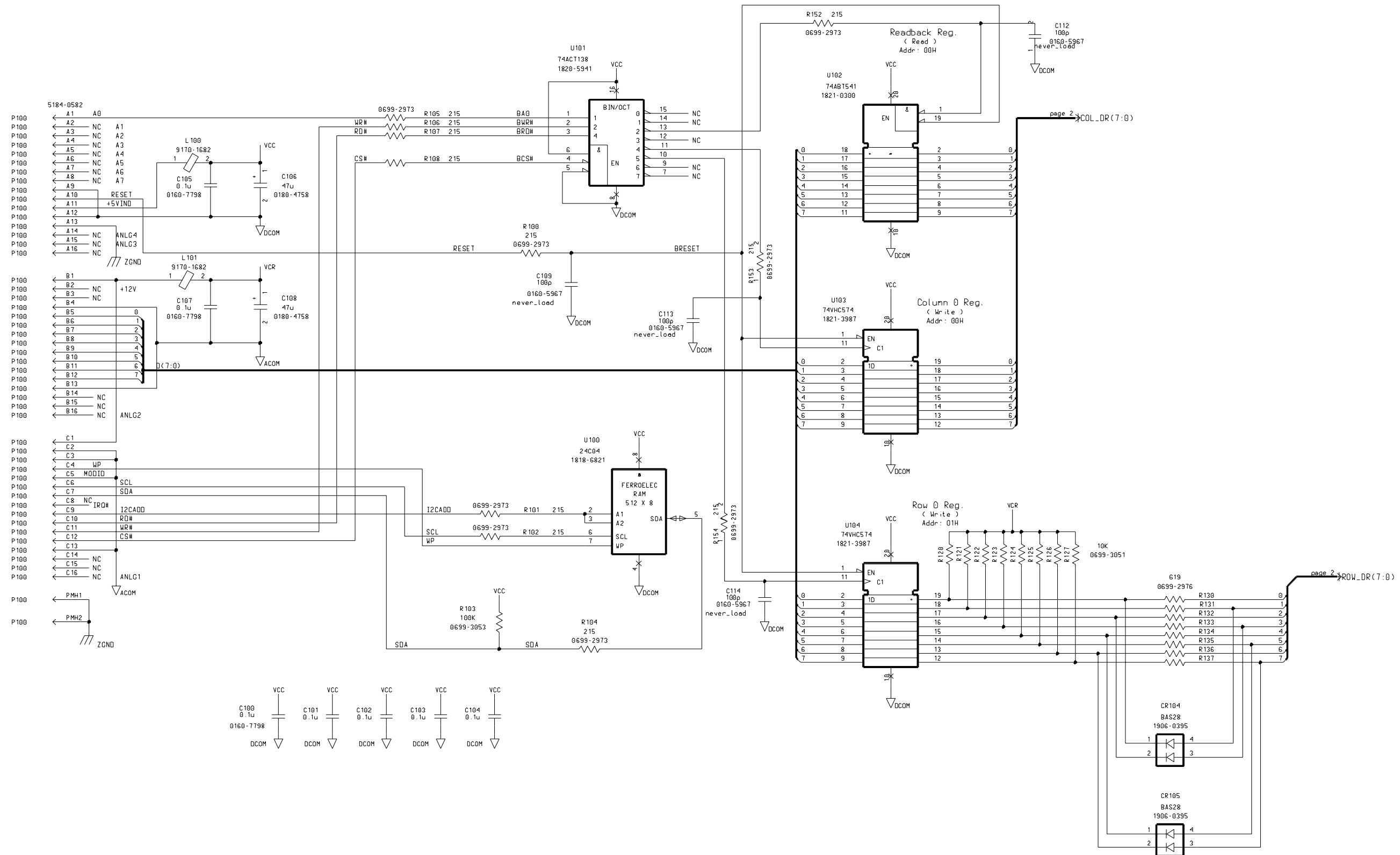


Front Connector

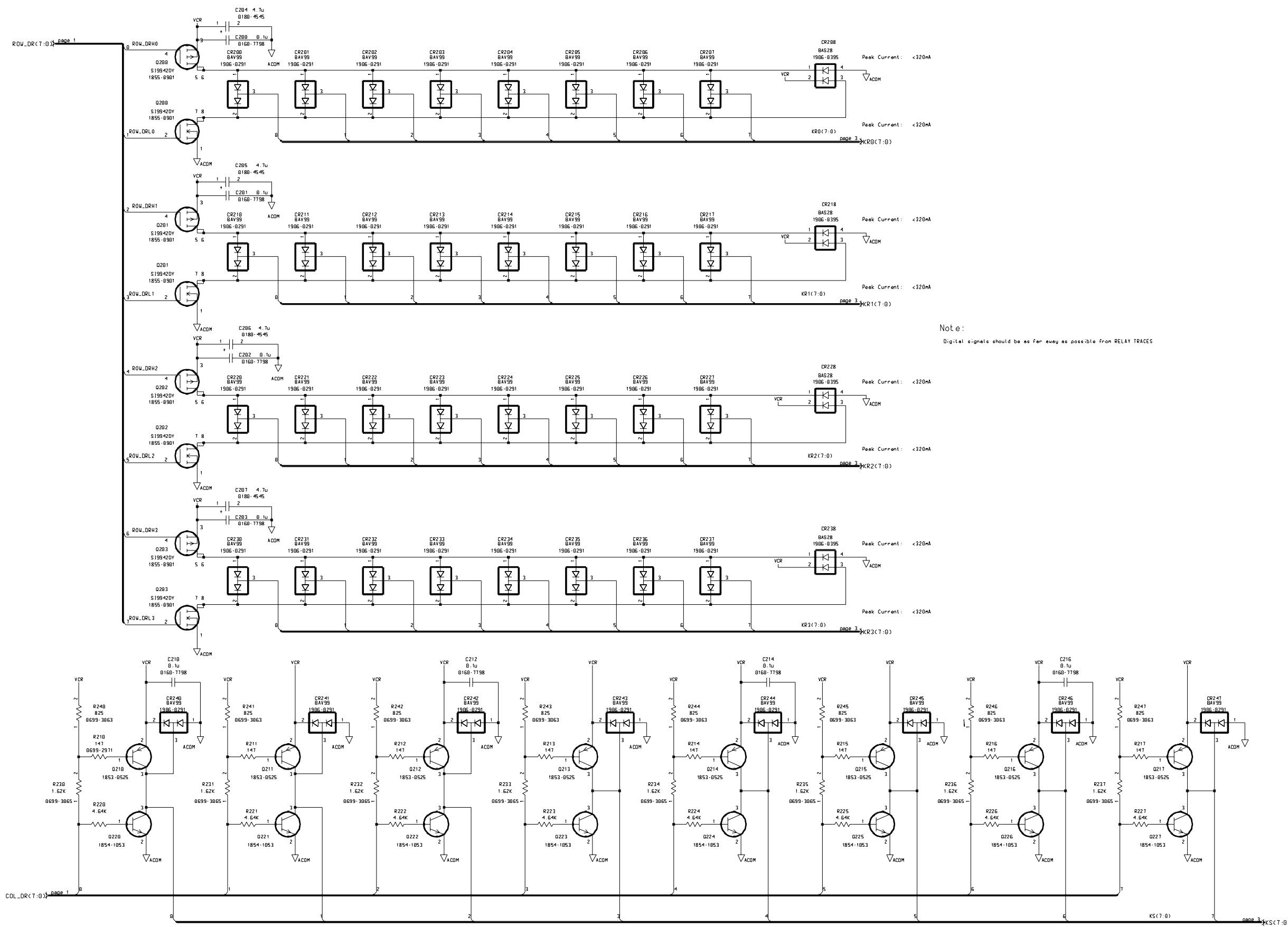




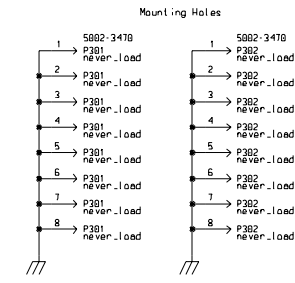
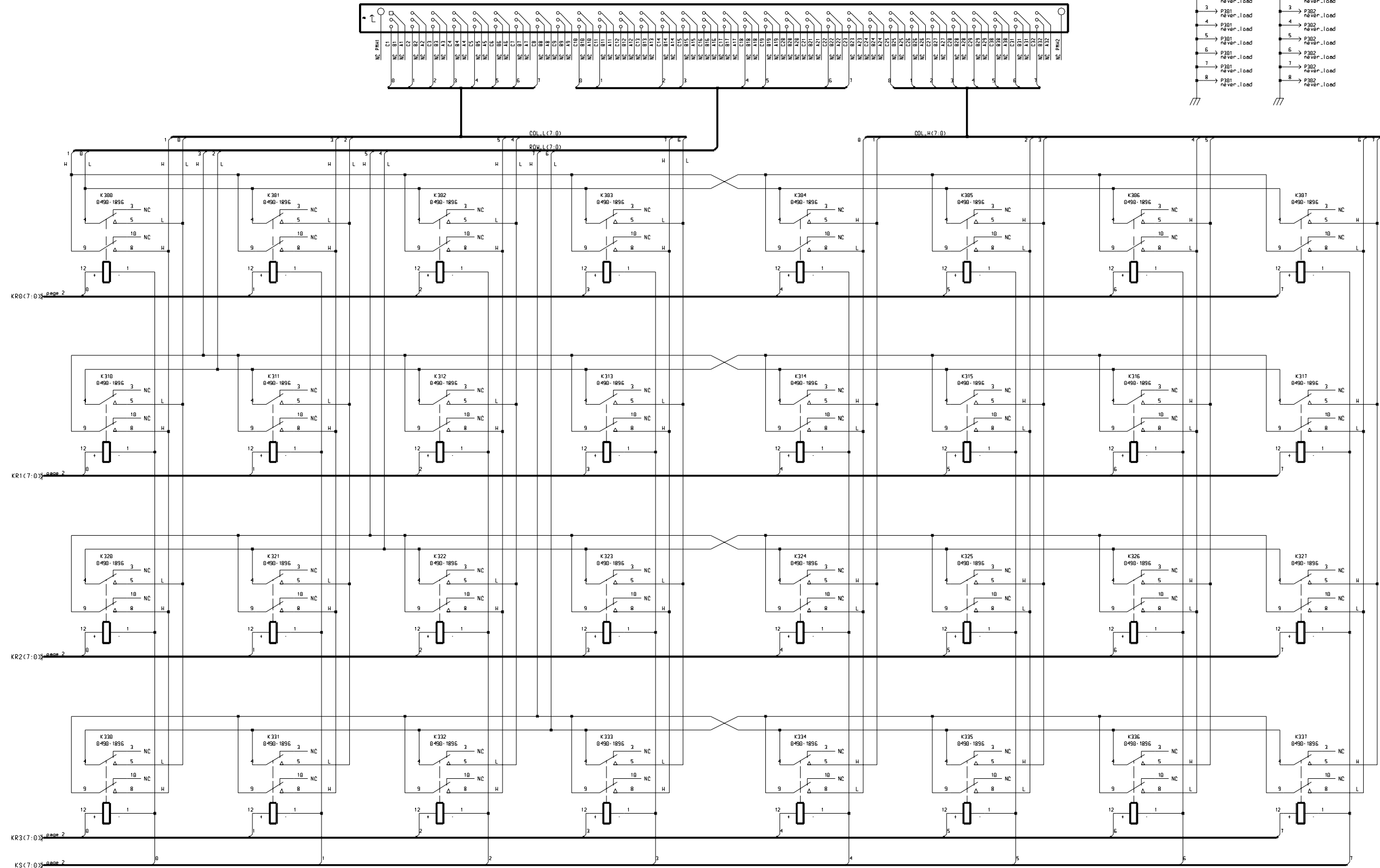




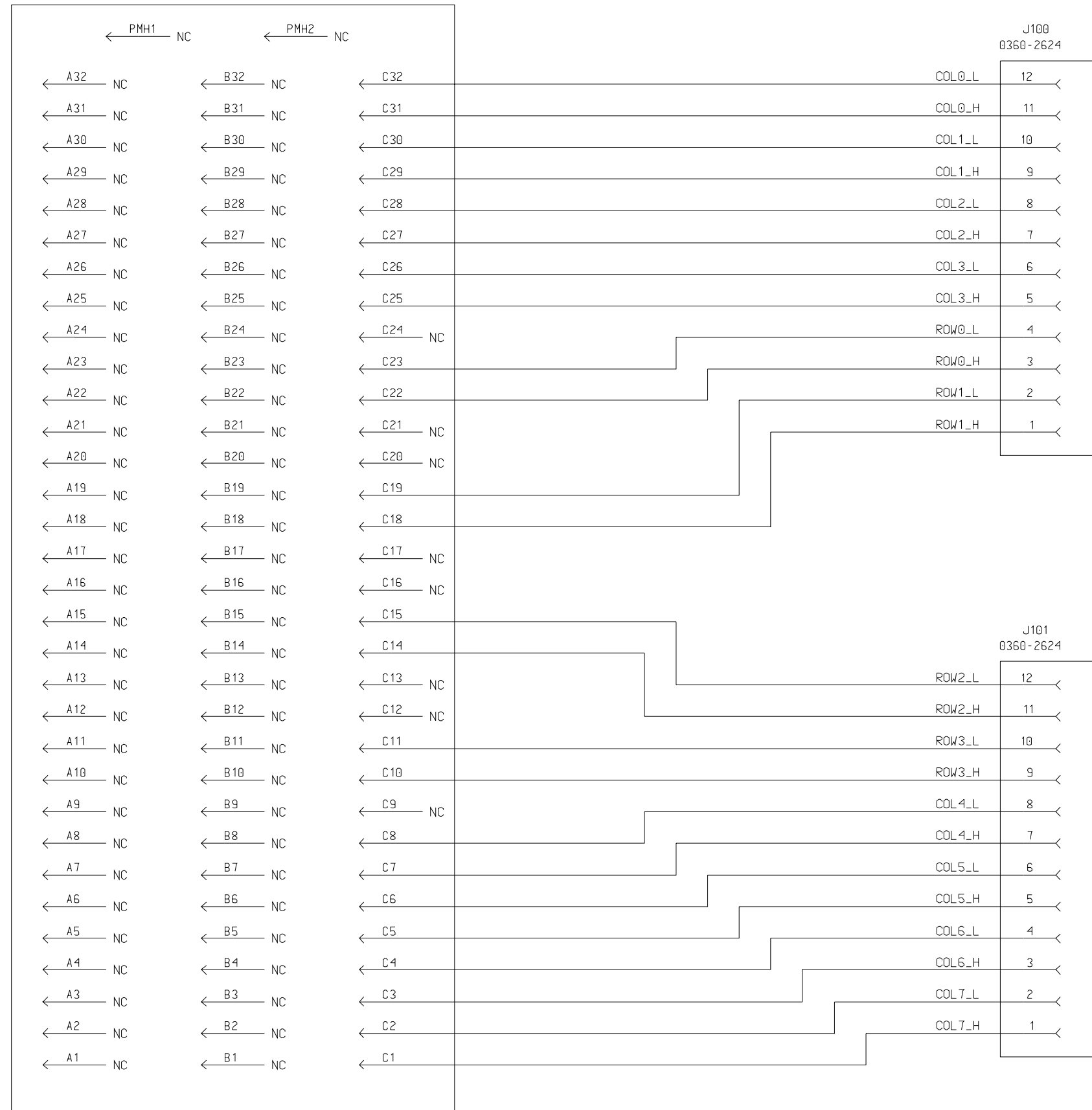
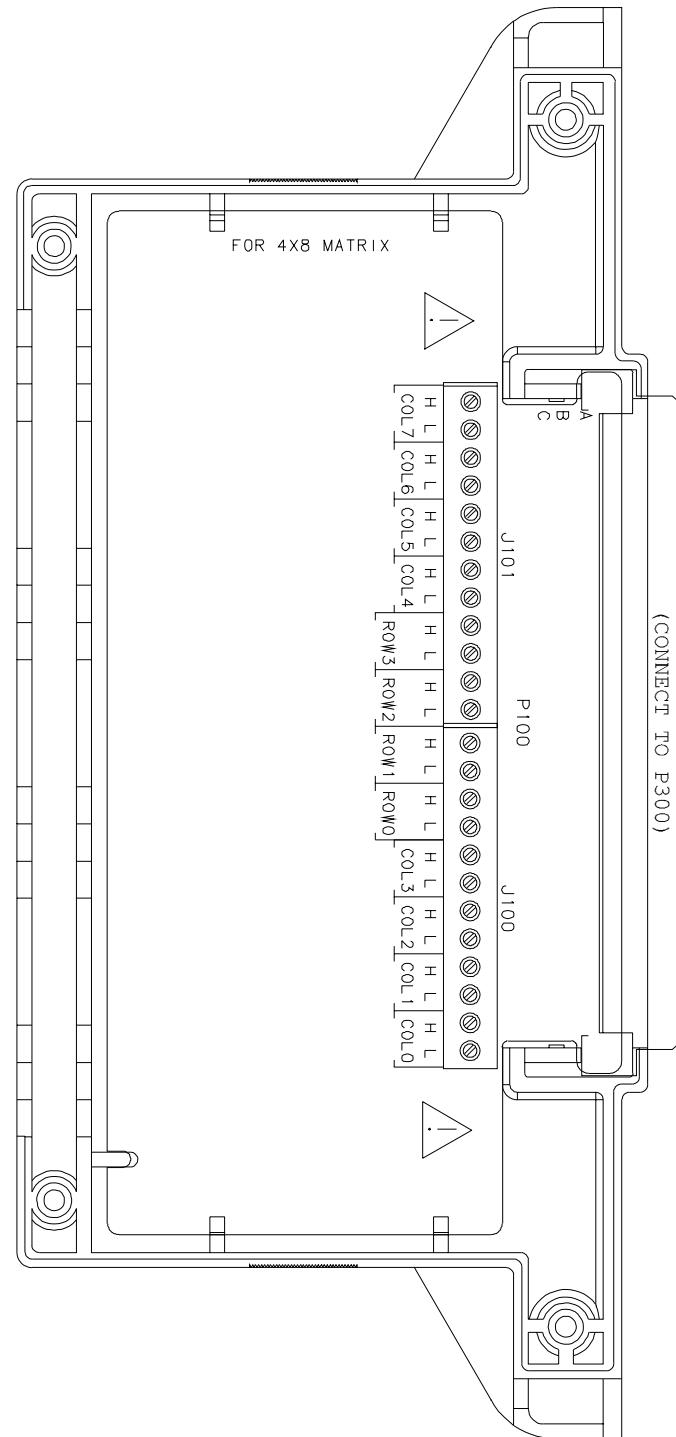
Agilent N2262A 4 x 8 Matrix Module
Schematic (Sheet 1 of 3)
Page 162

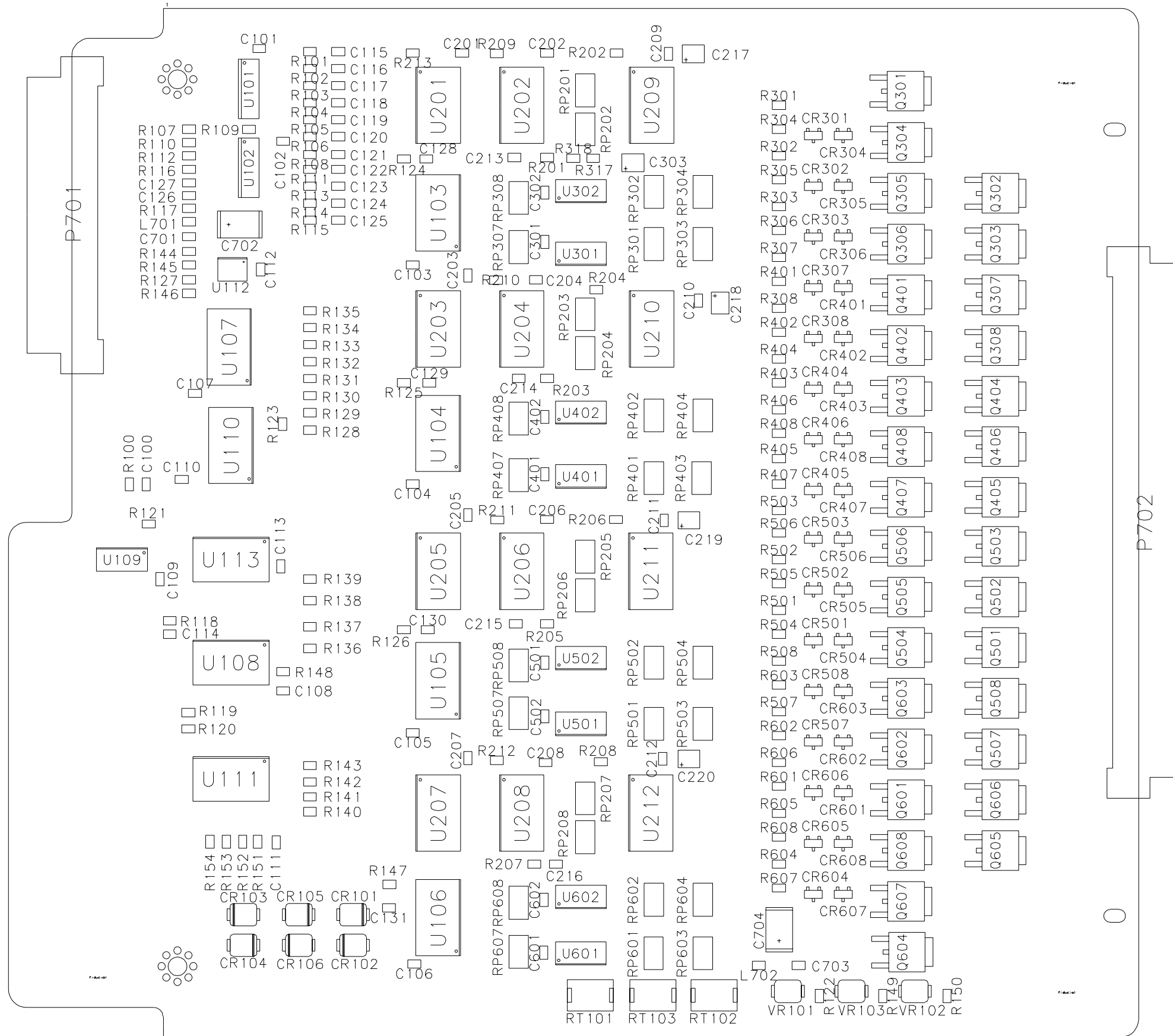


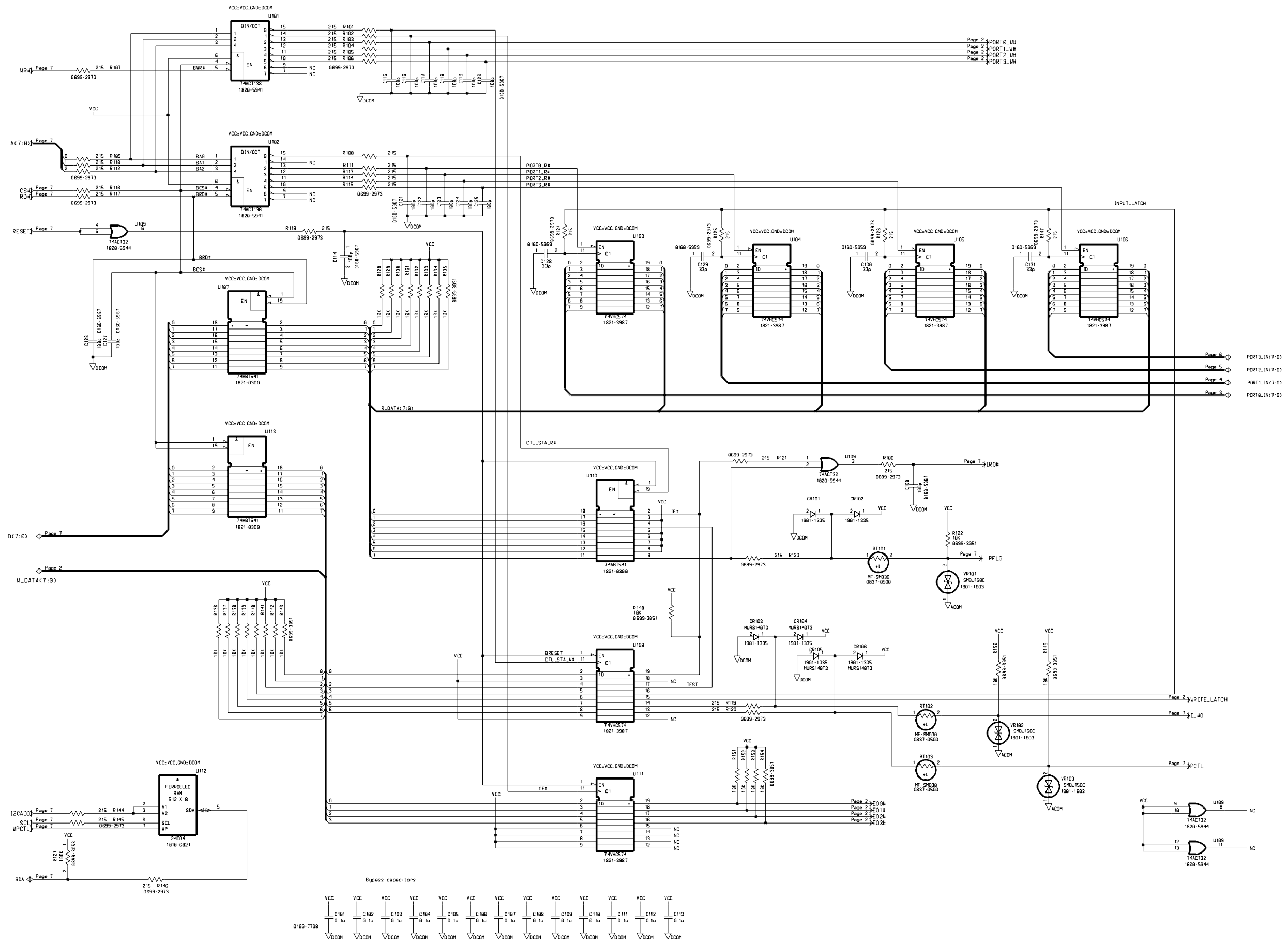
P300
1252-4794



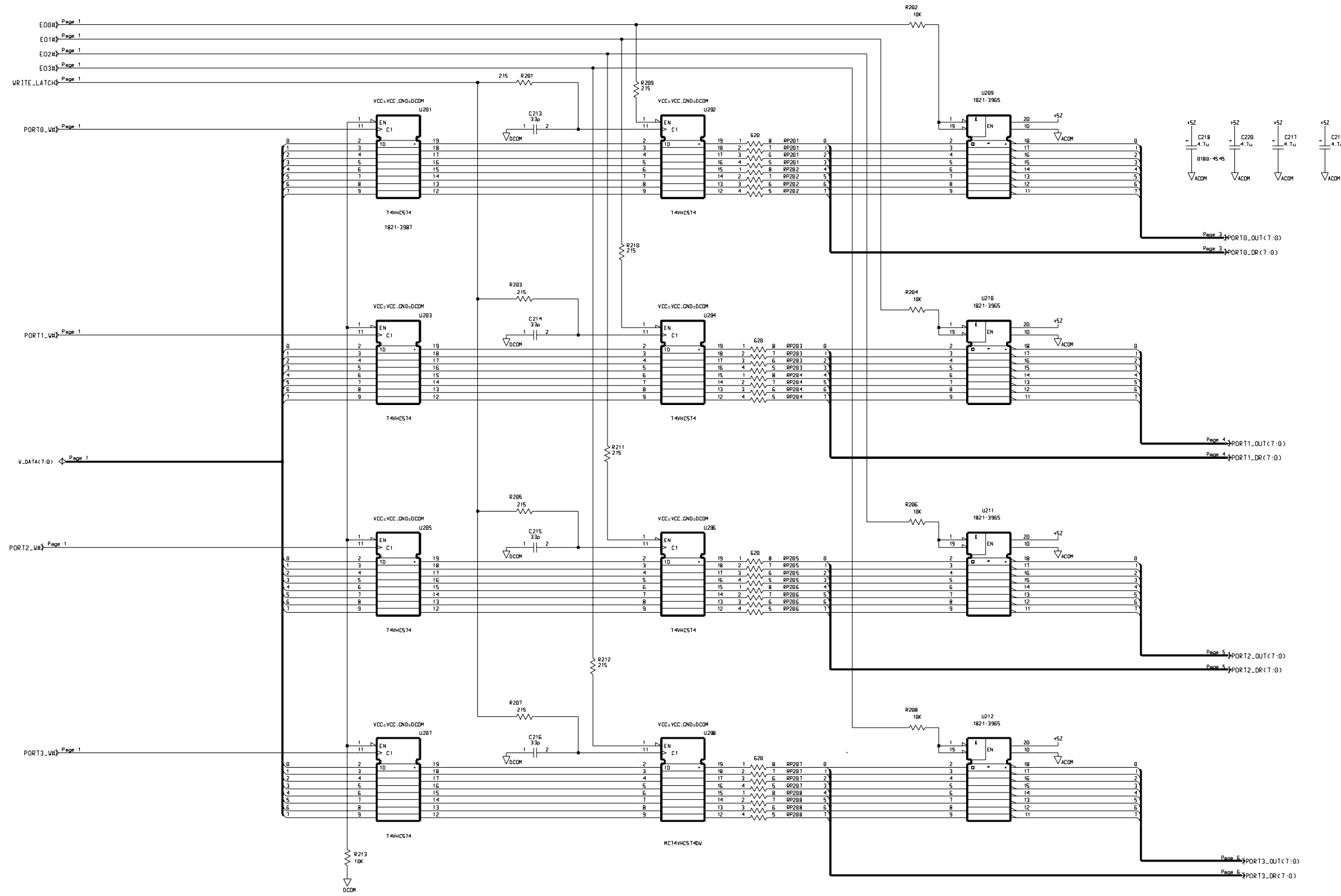
Relay Specification : 1A/200V



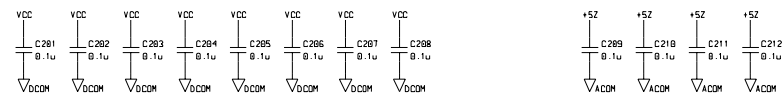


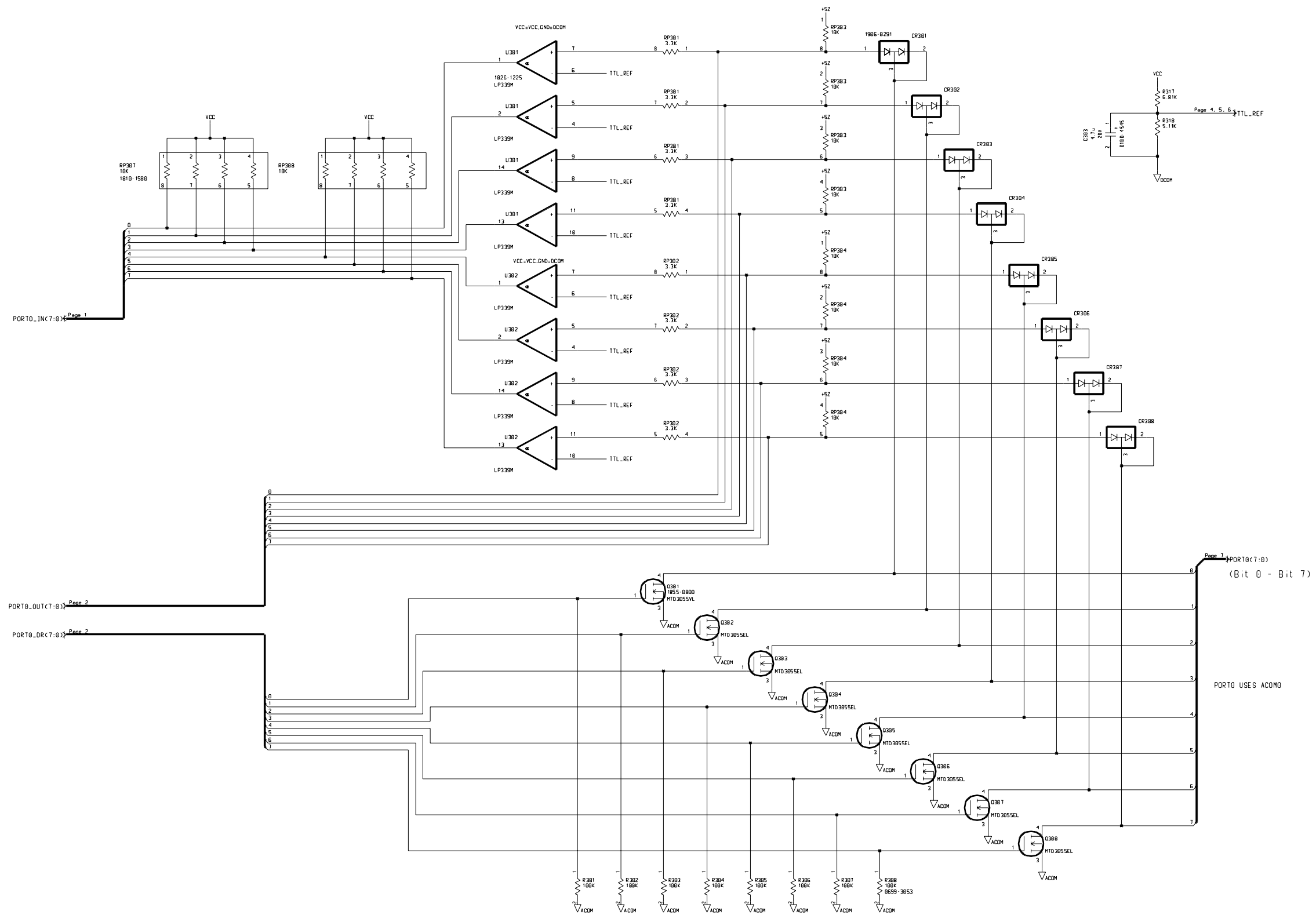


OUTPUT LATCHES & HIGH DRIVERS



Bypass capacitors





PORT0_IN<7:0> Page 1

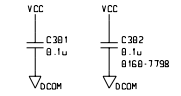
PORT0_OUT<7:0> Page 2

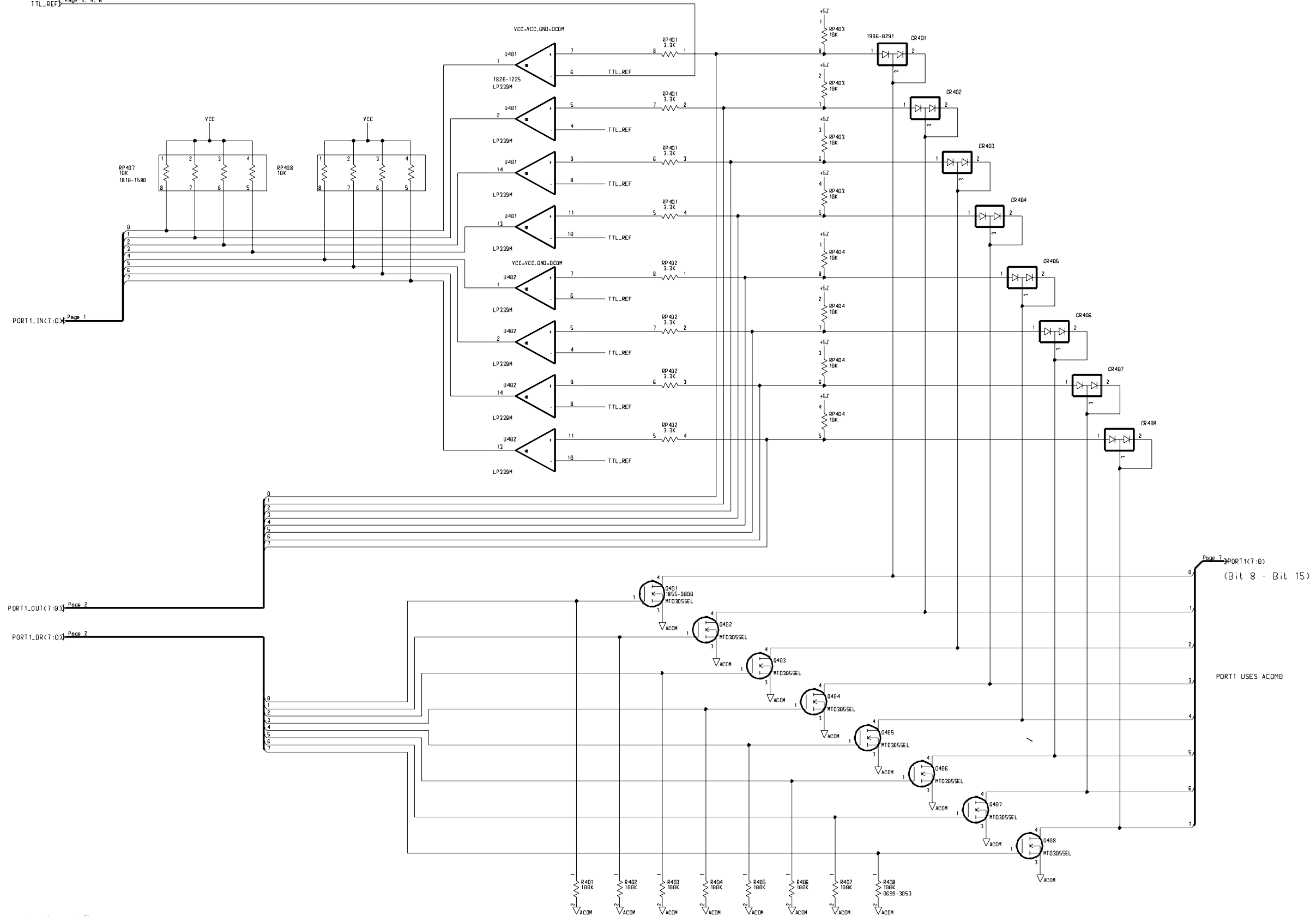
PORT0_DR<7:0> Page 2

PORT0<7:0> (Bit 0 - Bit 7)

PORT0 USES ACOMO

Bypass capacitors for same # IC





Page 1

Page 2

Page 2

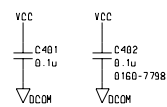
Page 7

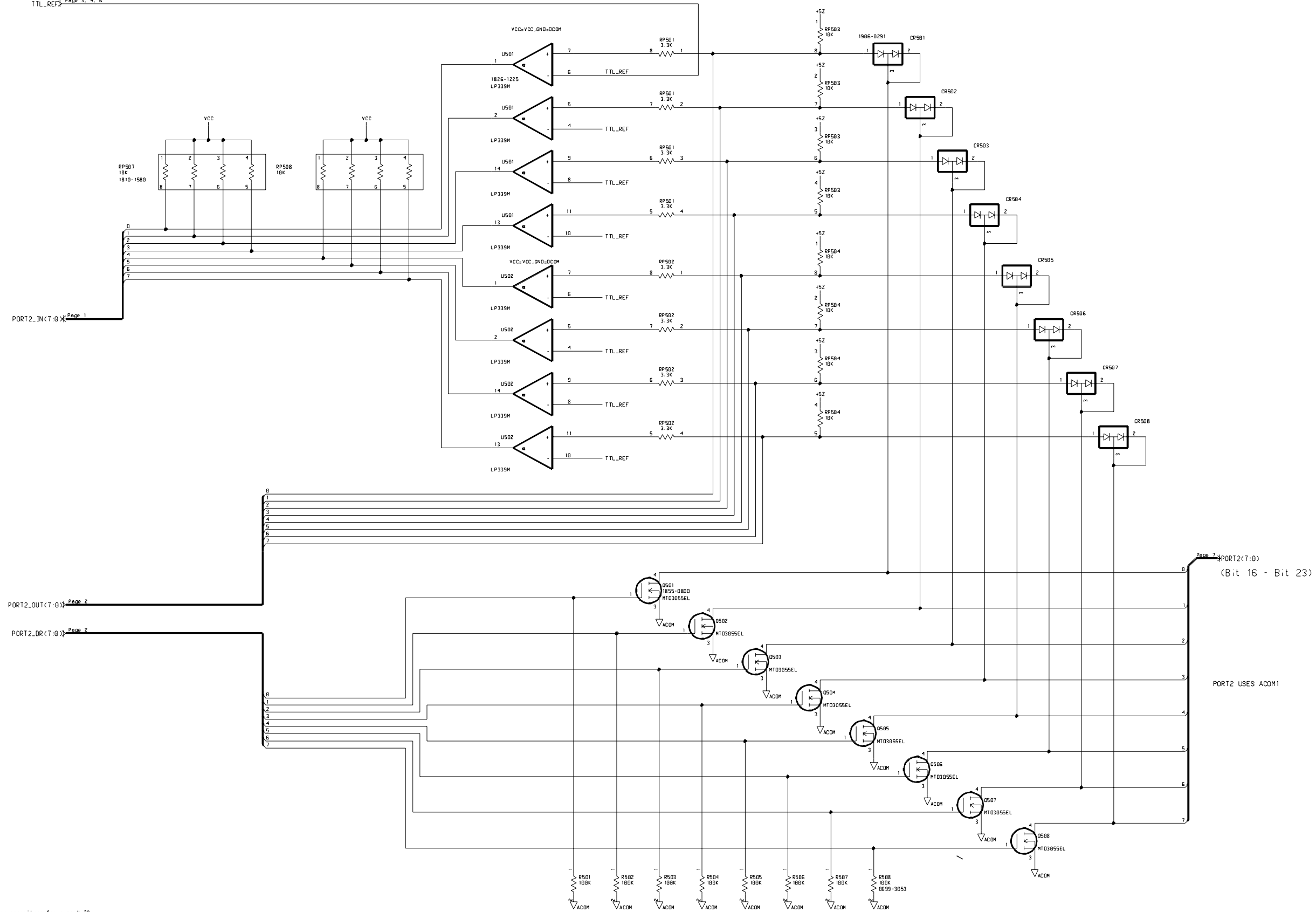
PORT1(7:0)

(Bit 8 - Bit 15)

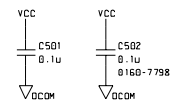
PORT1 USES AC0M0

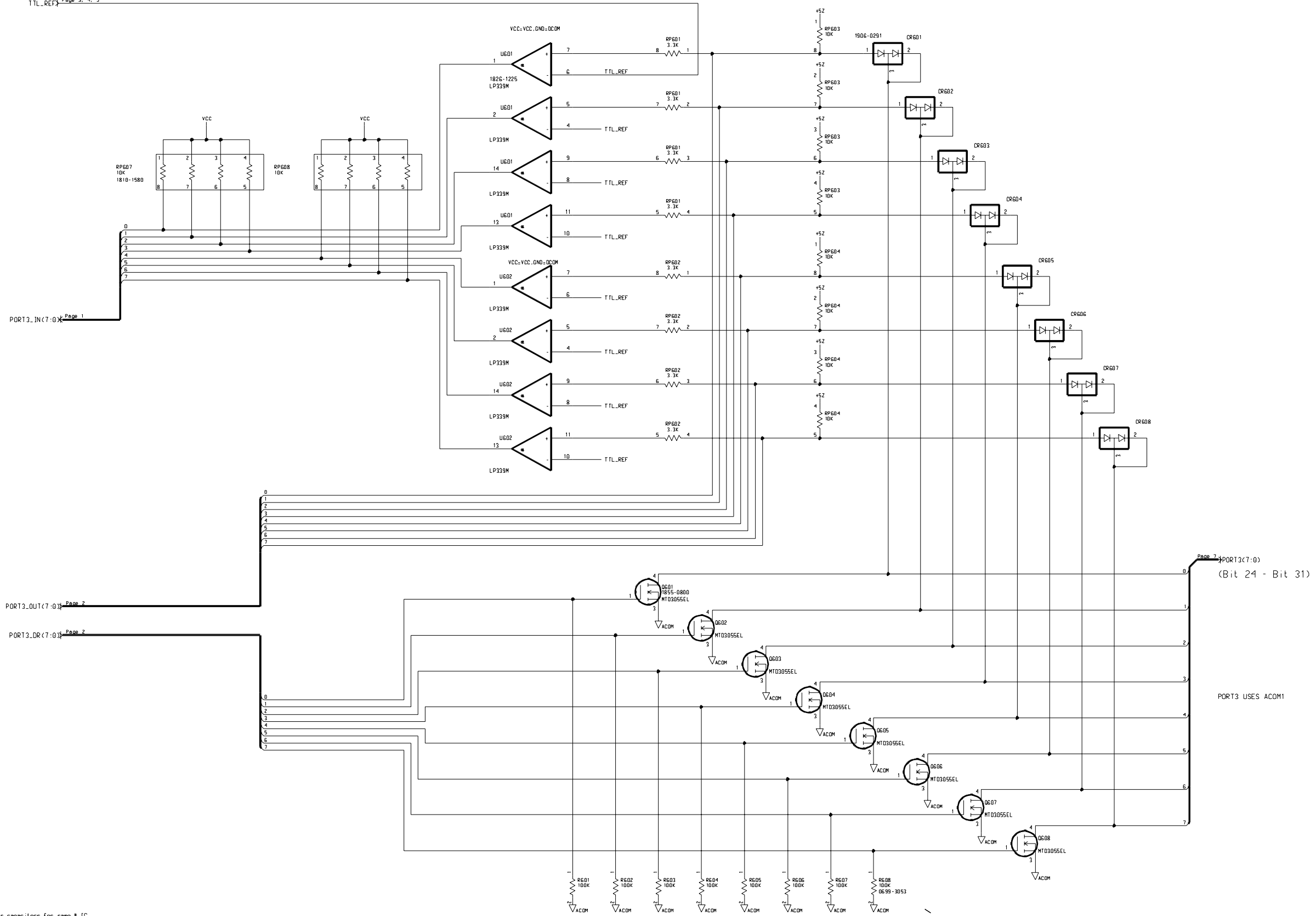
Bypass capacitors for same IC



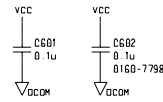


Bypass capacitors for same # IC

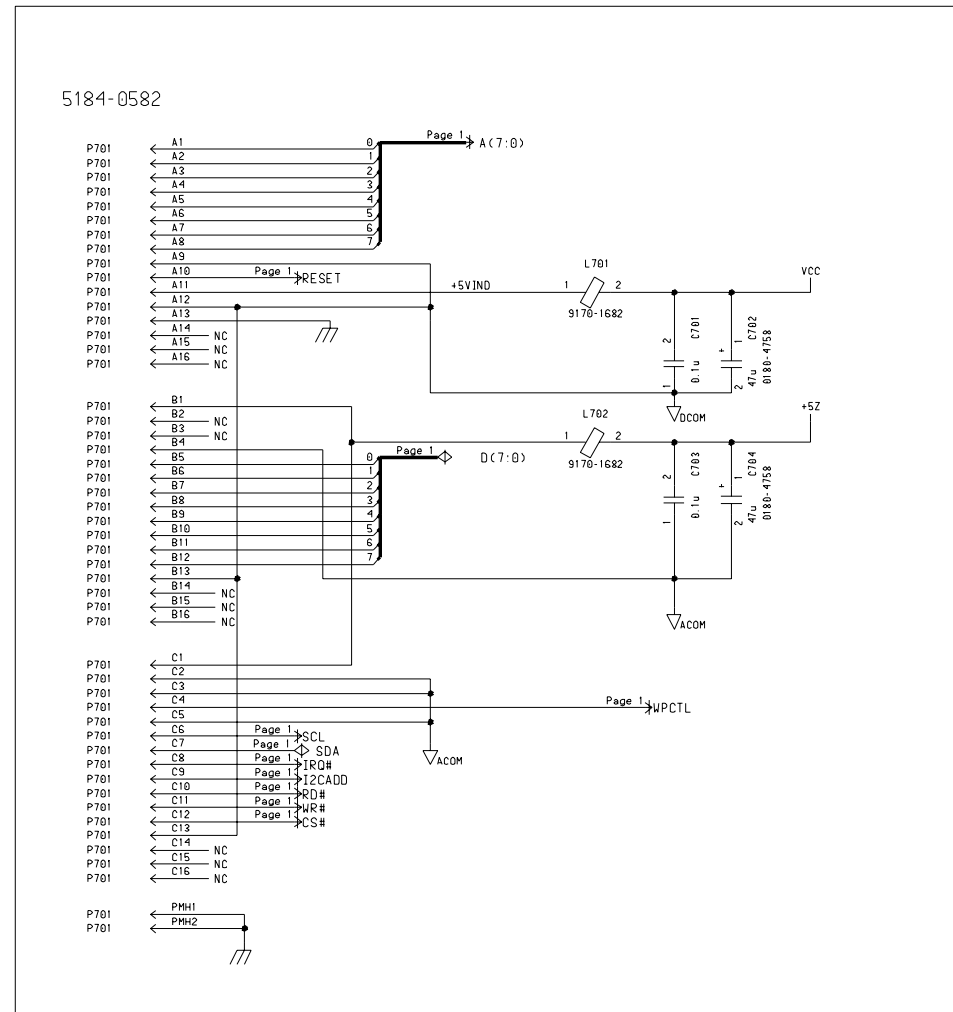




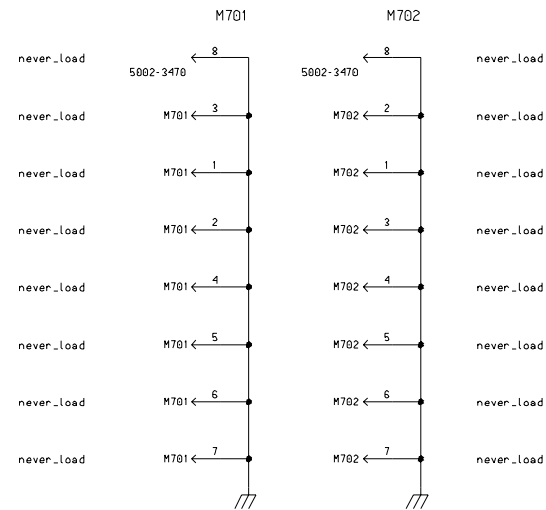
Bypass capacitors for same # IC



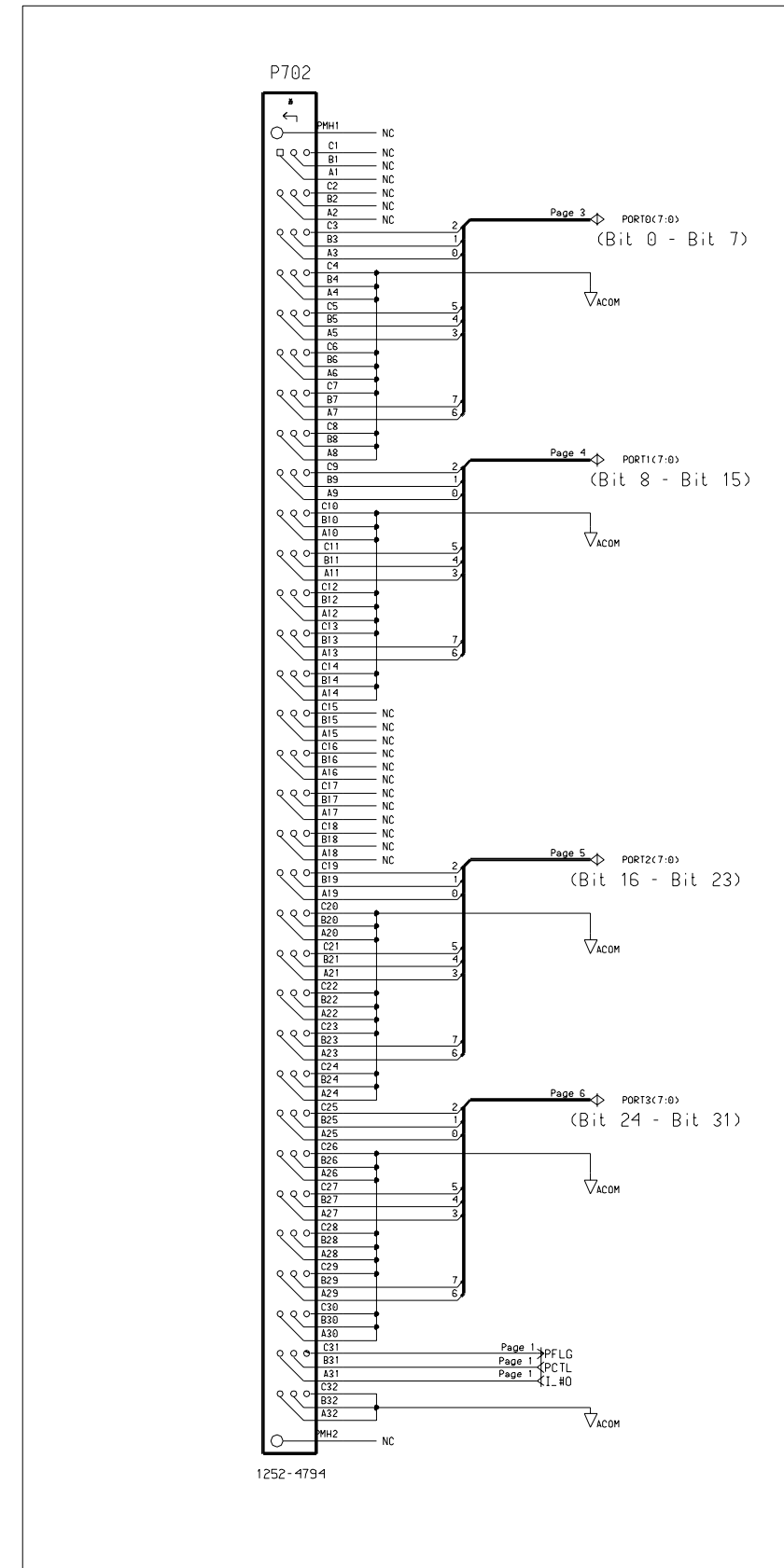
Backplane Connector

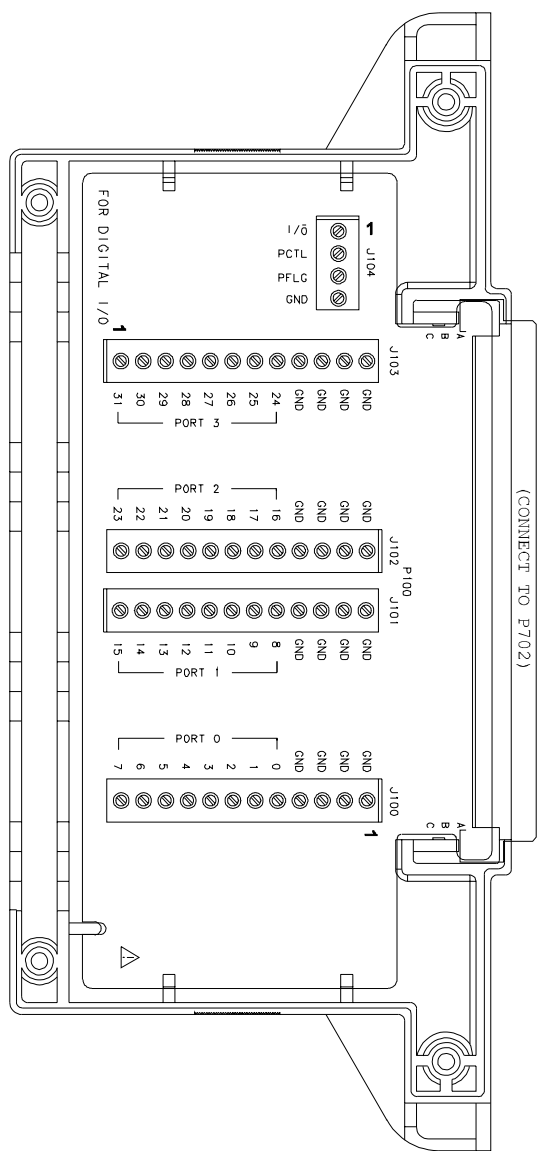
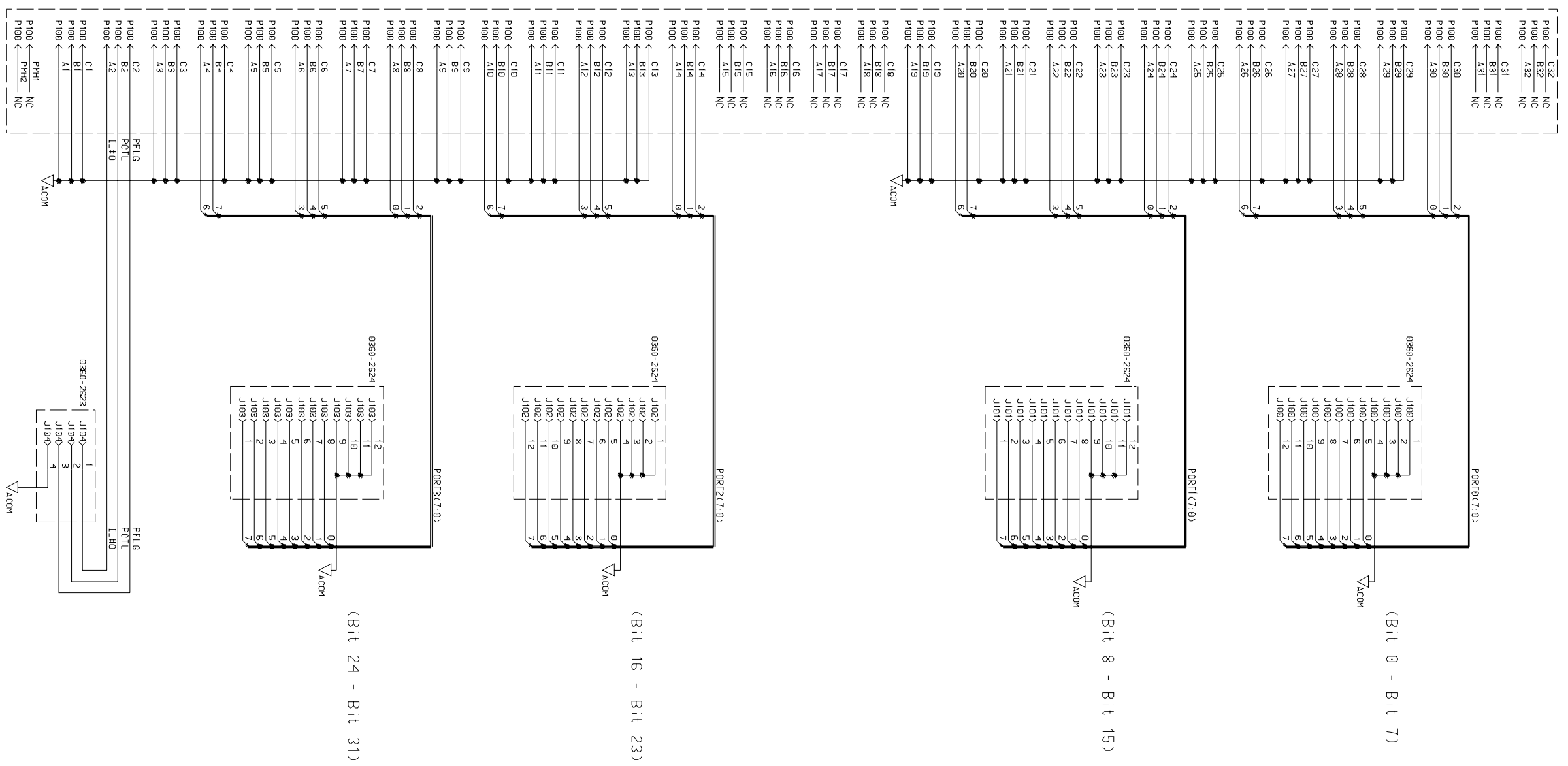


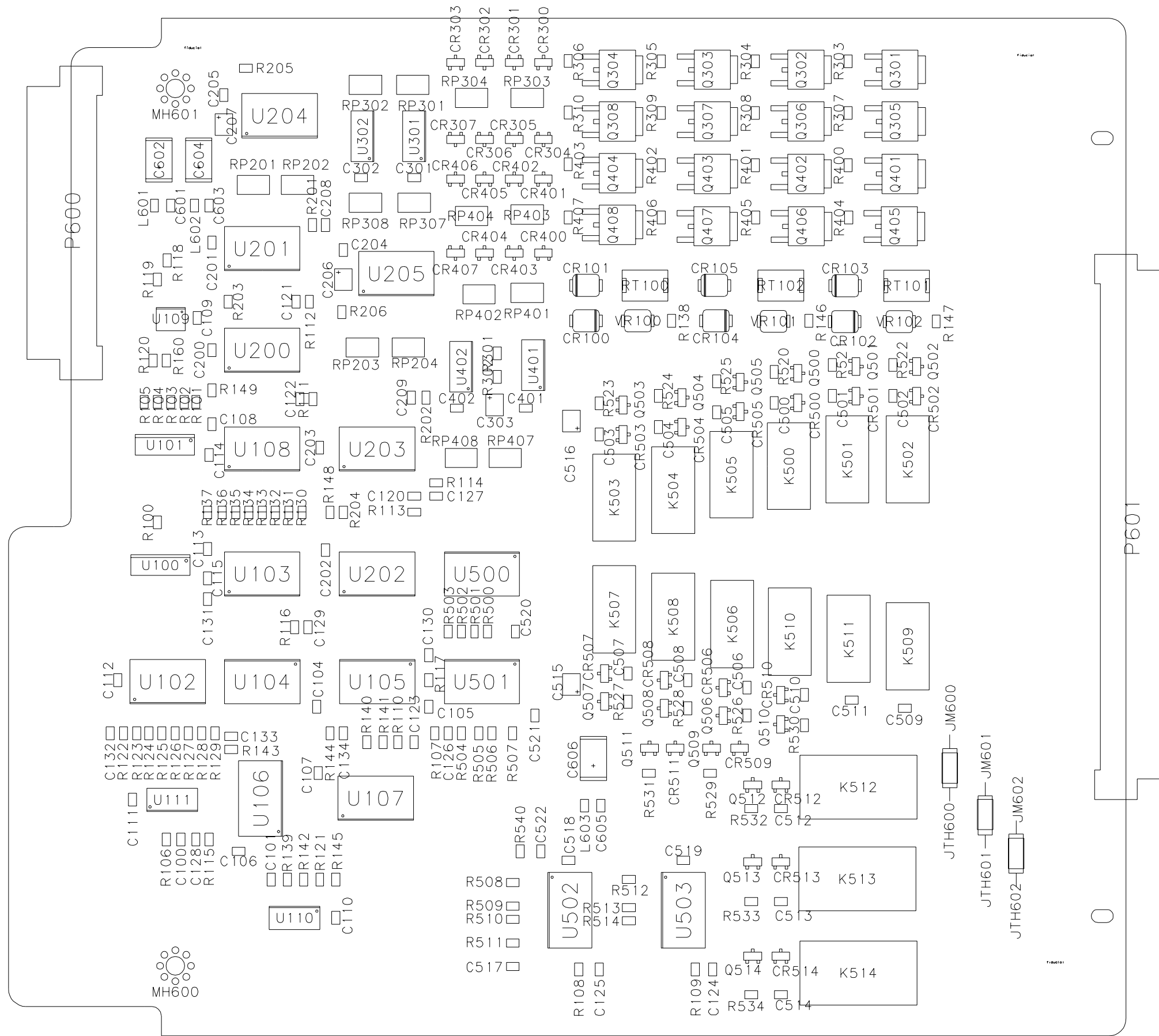
Two Mounting Holes with Soldermask

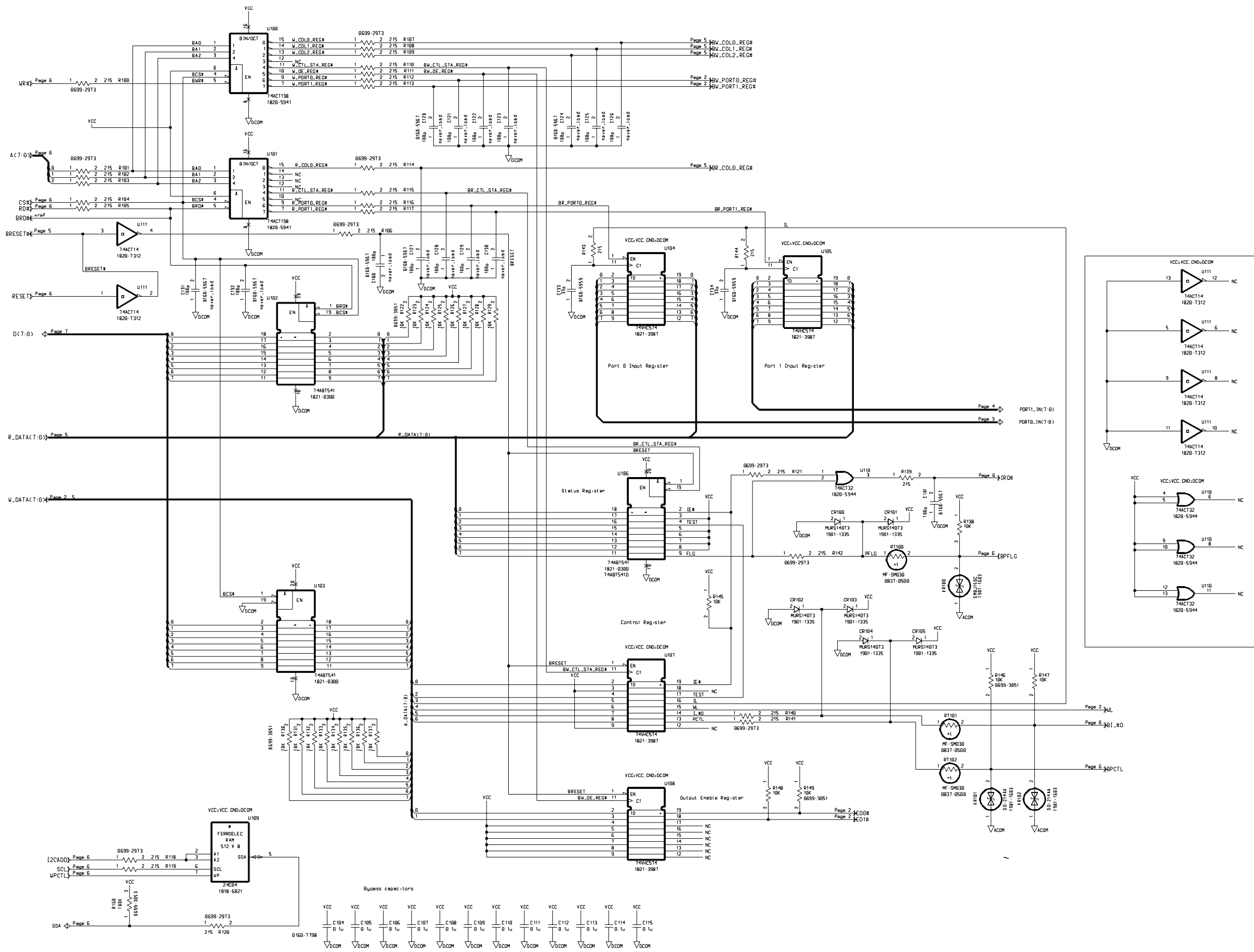


Front Connector

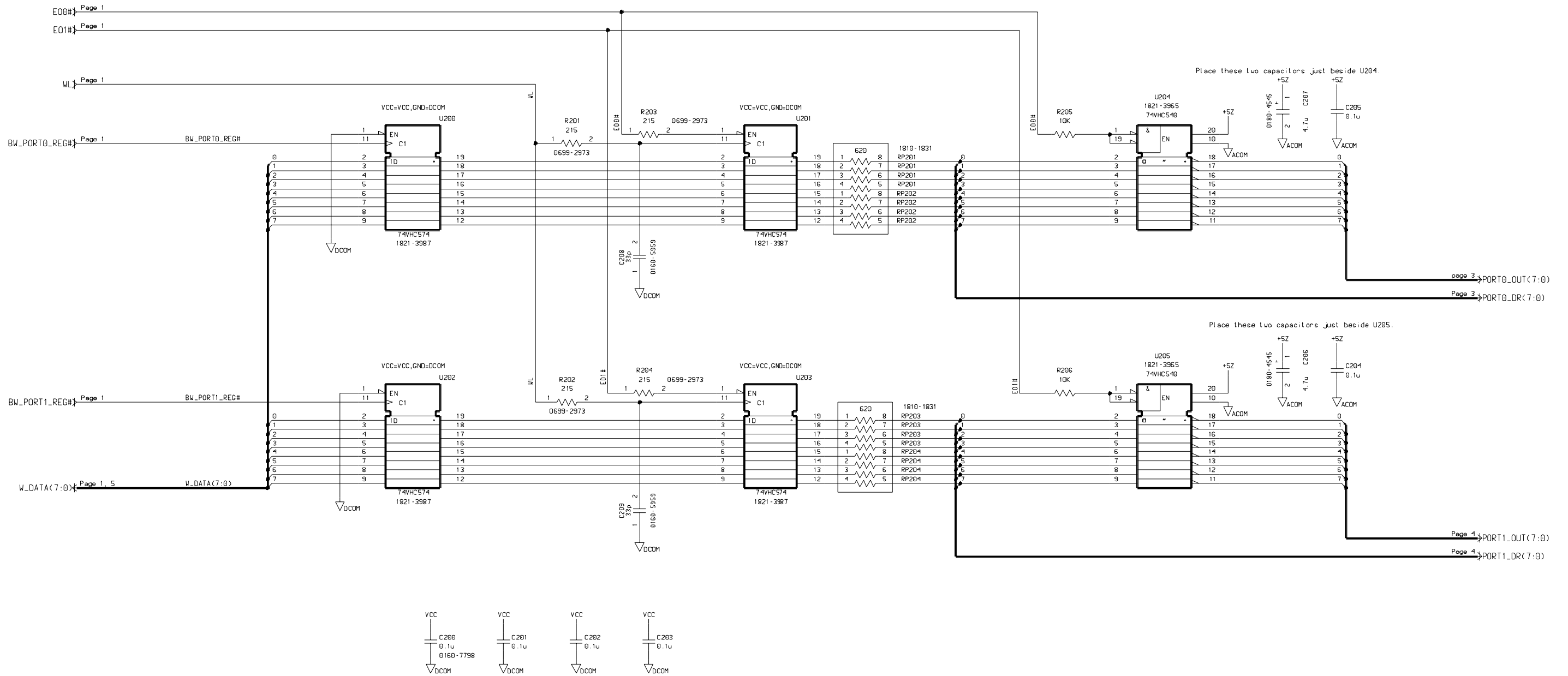


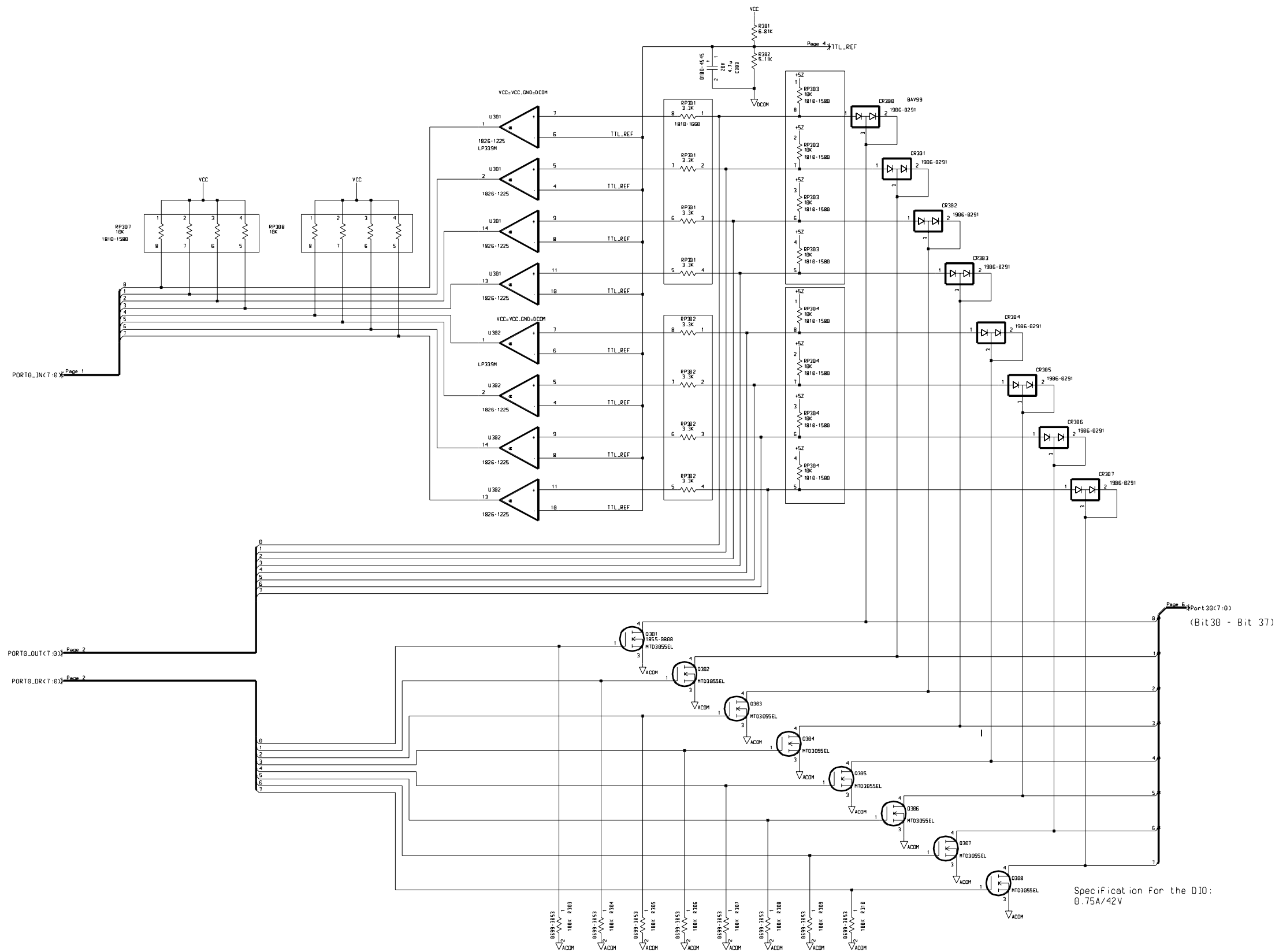




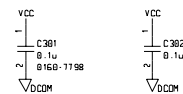


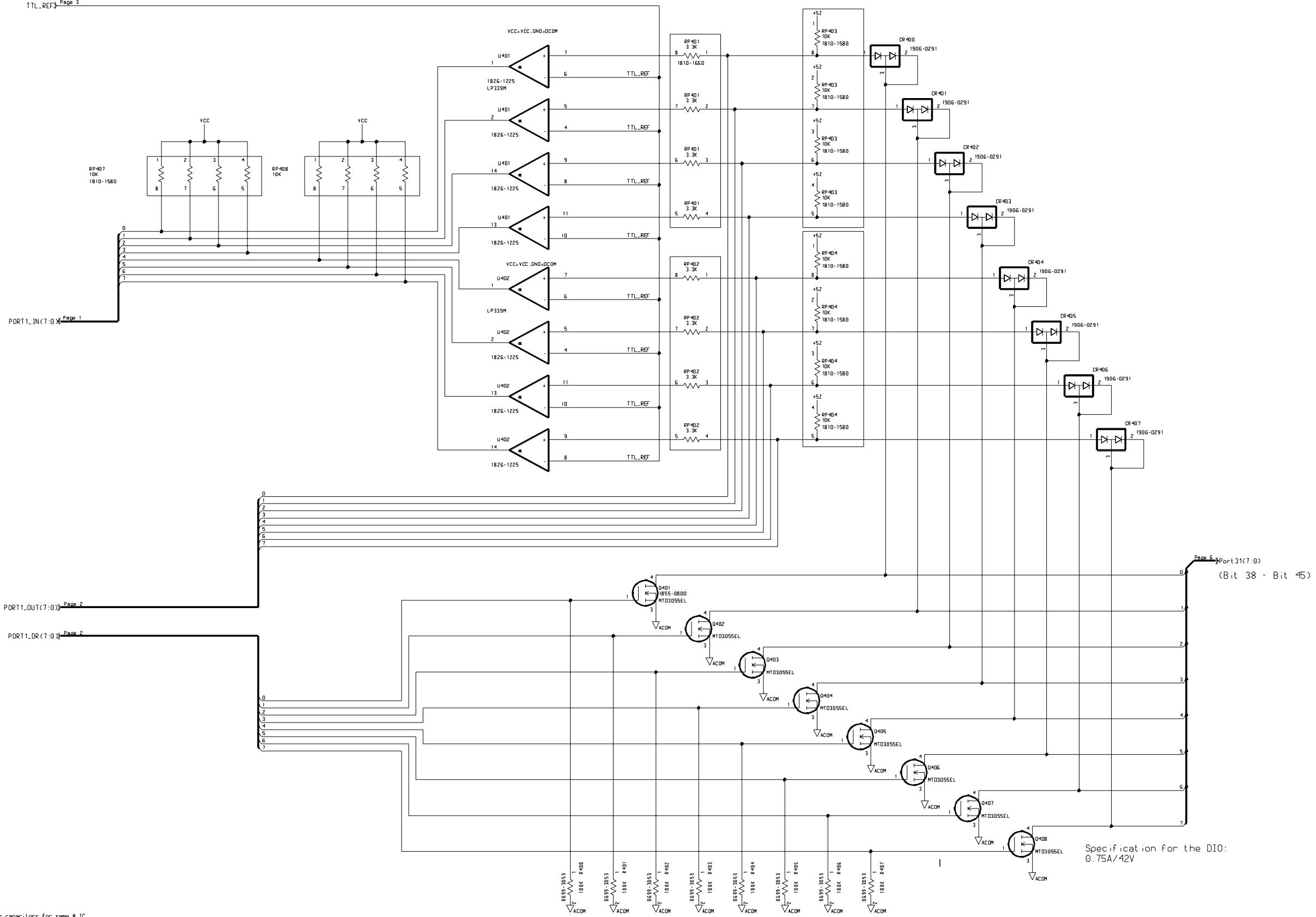
Agilent N2264A Multifunction Module
 Schematic (Sheet 1 of 6)
 Page 176





Bypass capacitors for same IC





PORT1_IN(7:0) Page 1

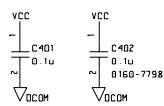
PORT1_OUT(7:0) Page 2

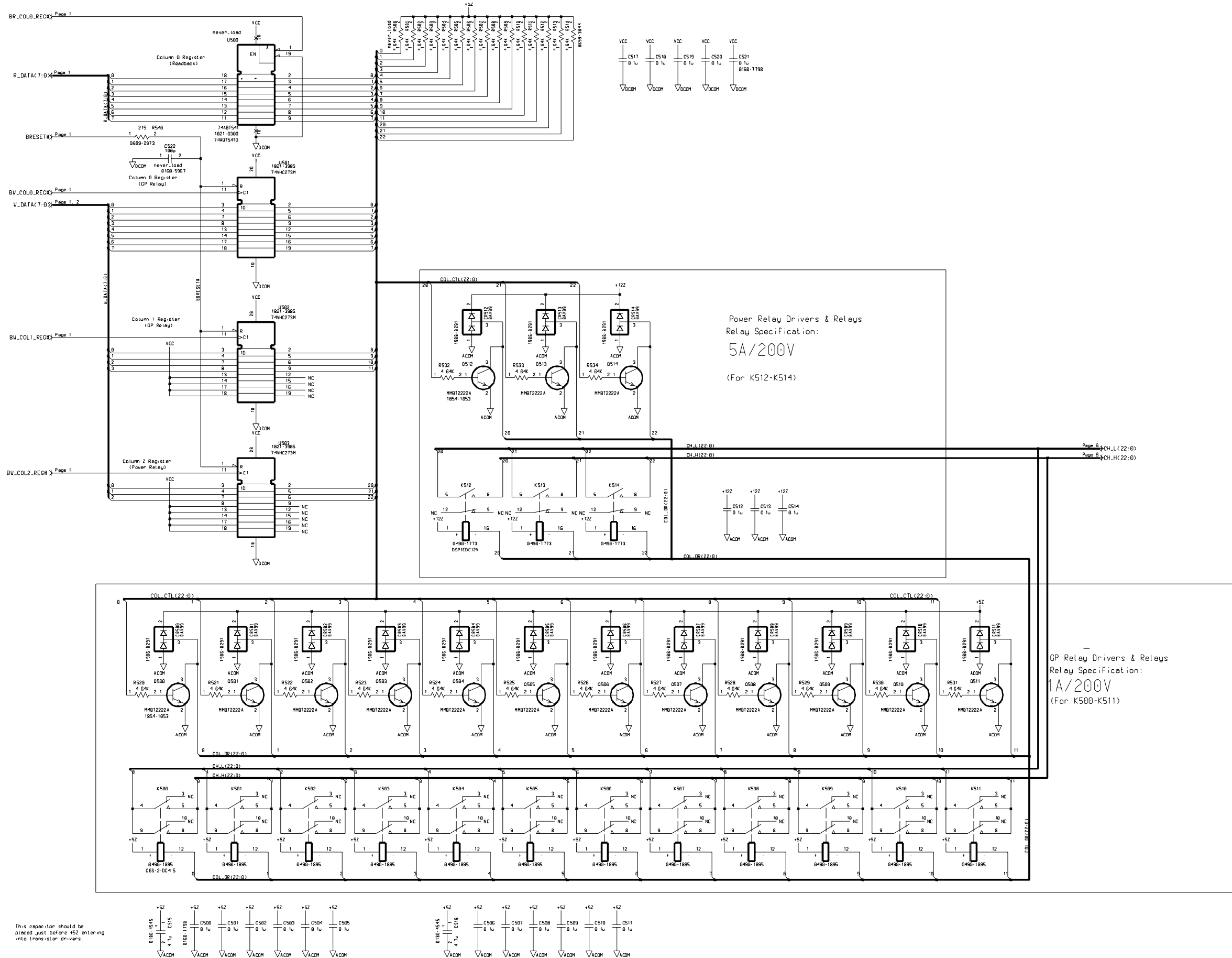
PORT1_DR(7:0) Page 2

Page 5 Port 21(7:0)
(Bit 38 - Bit 45)

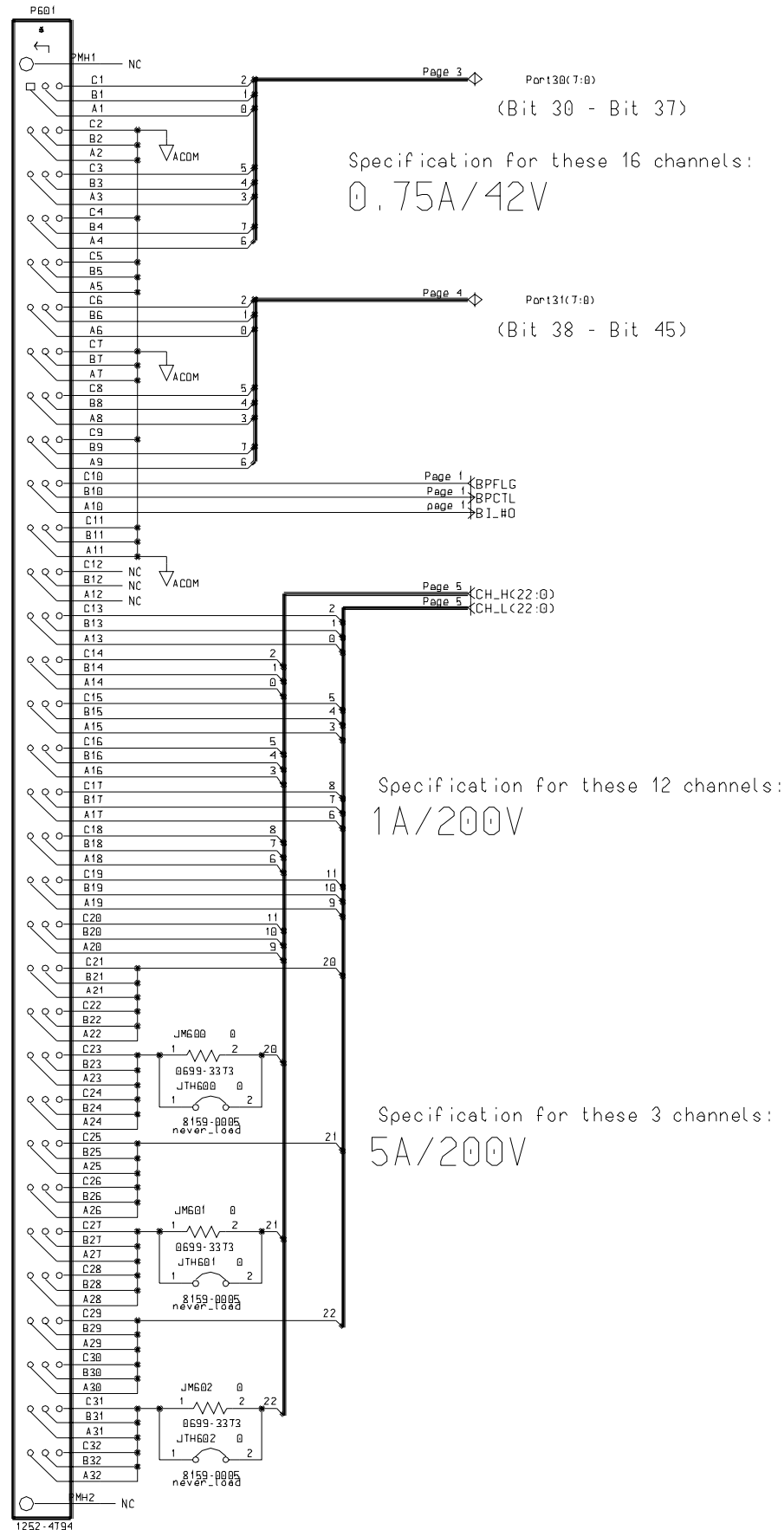
Specification for the D10:
0.75A/42V

Bypass capacitors for same # IC



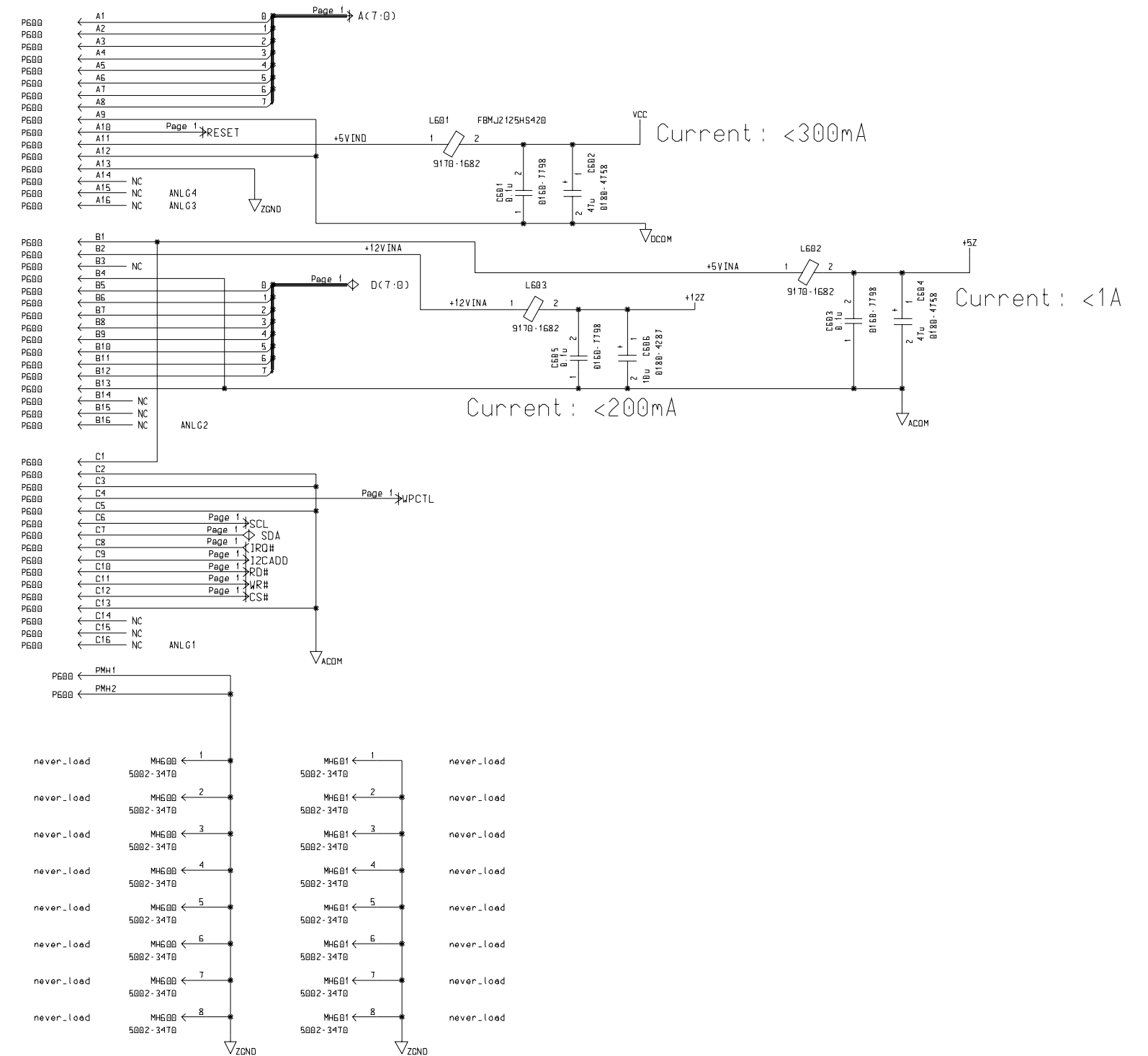


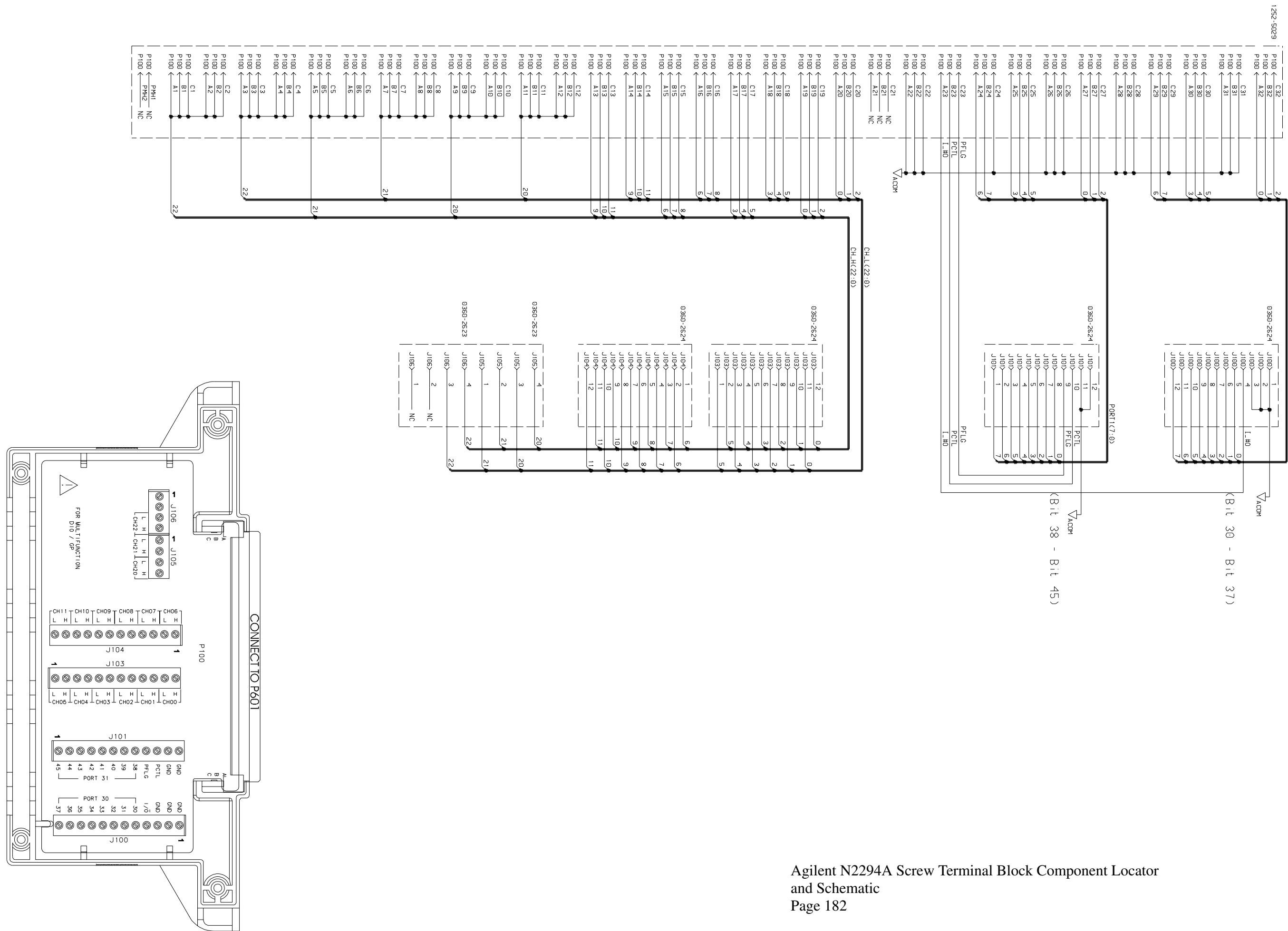
Customer Connector



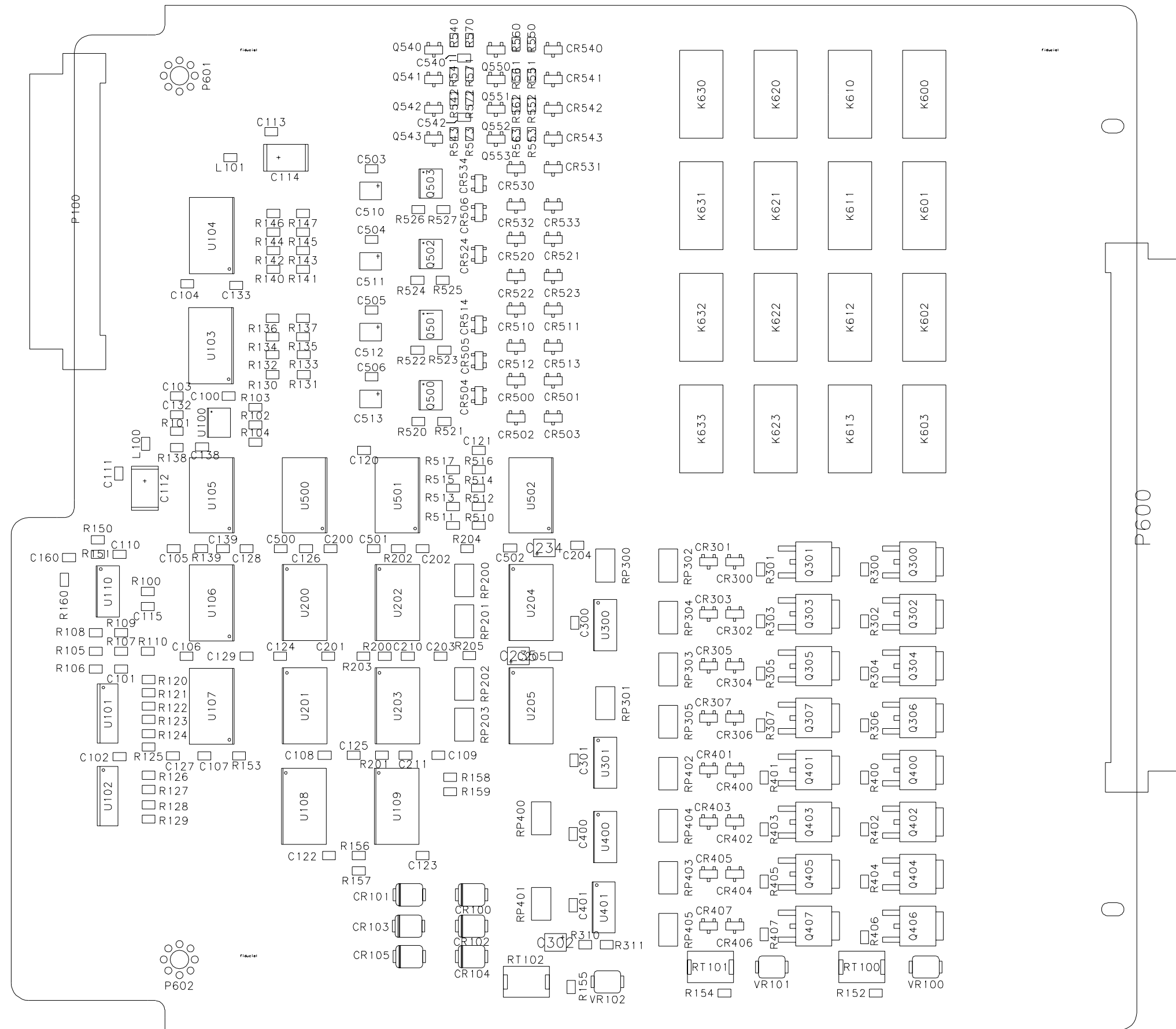
Backplane Connector

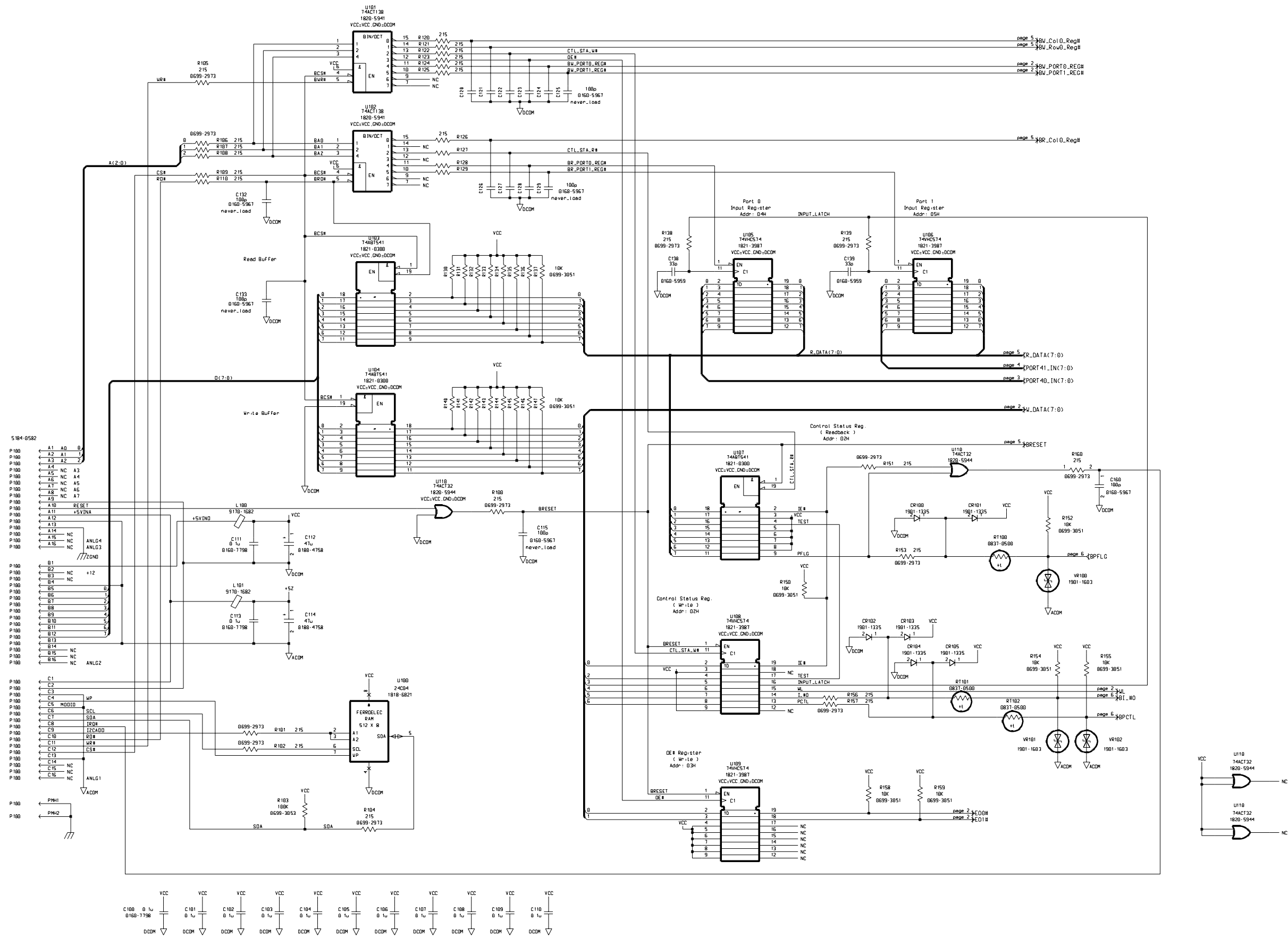
5184-0582

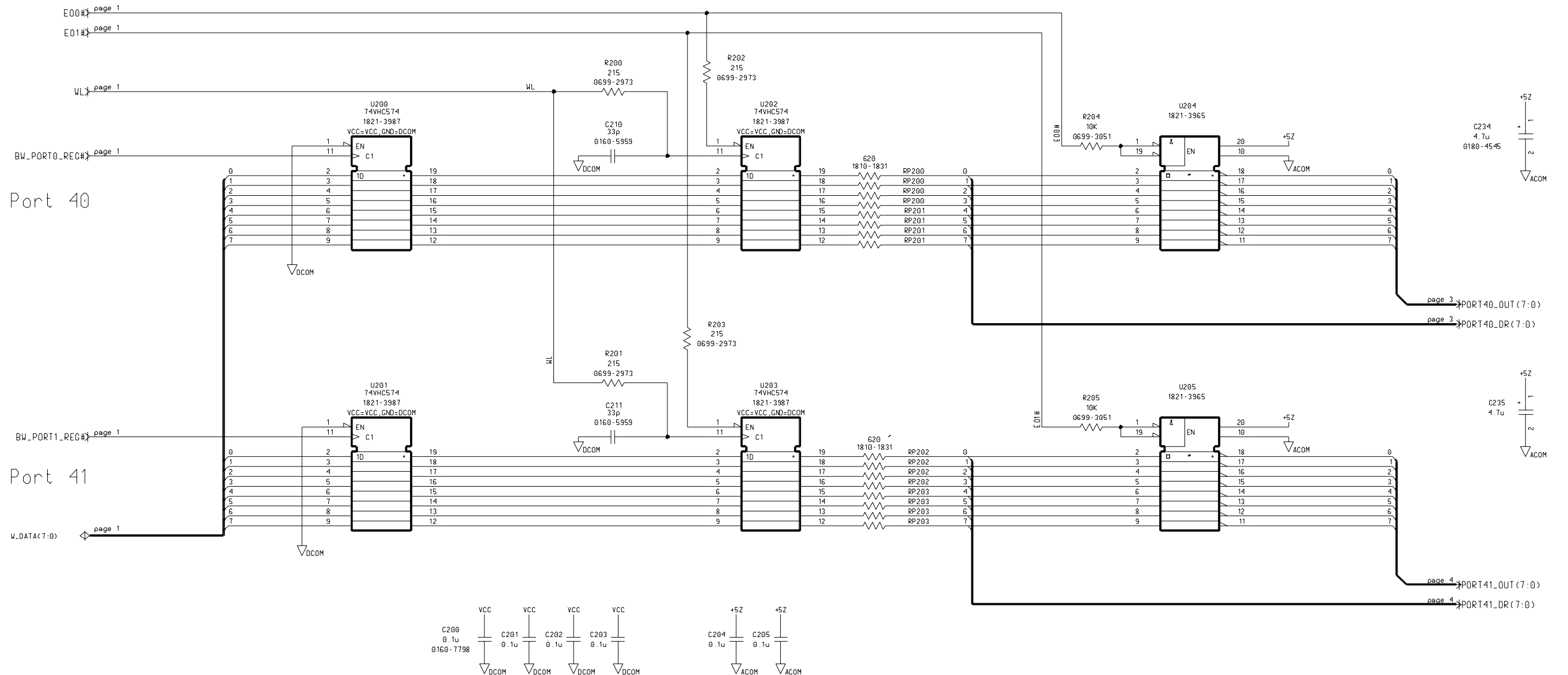


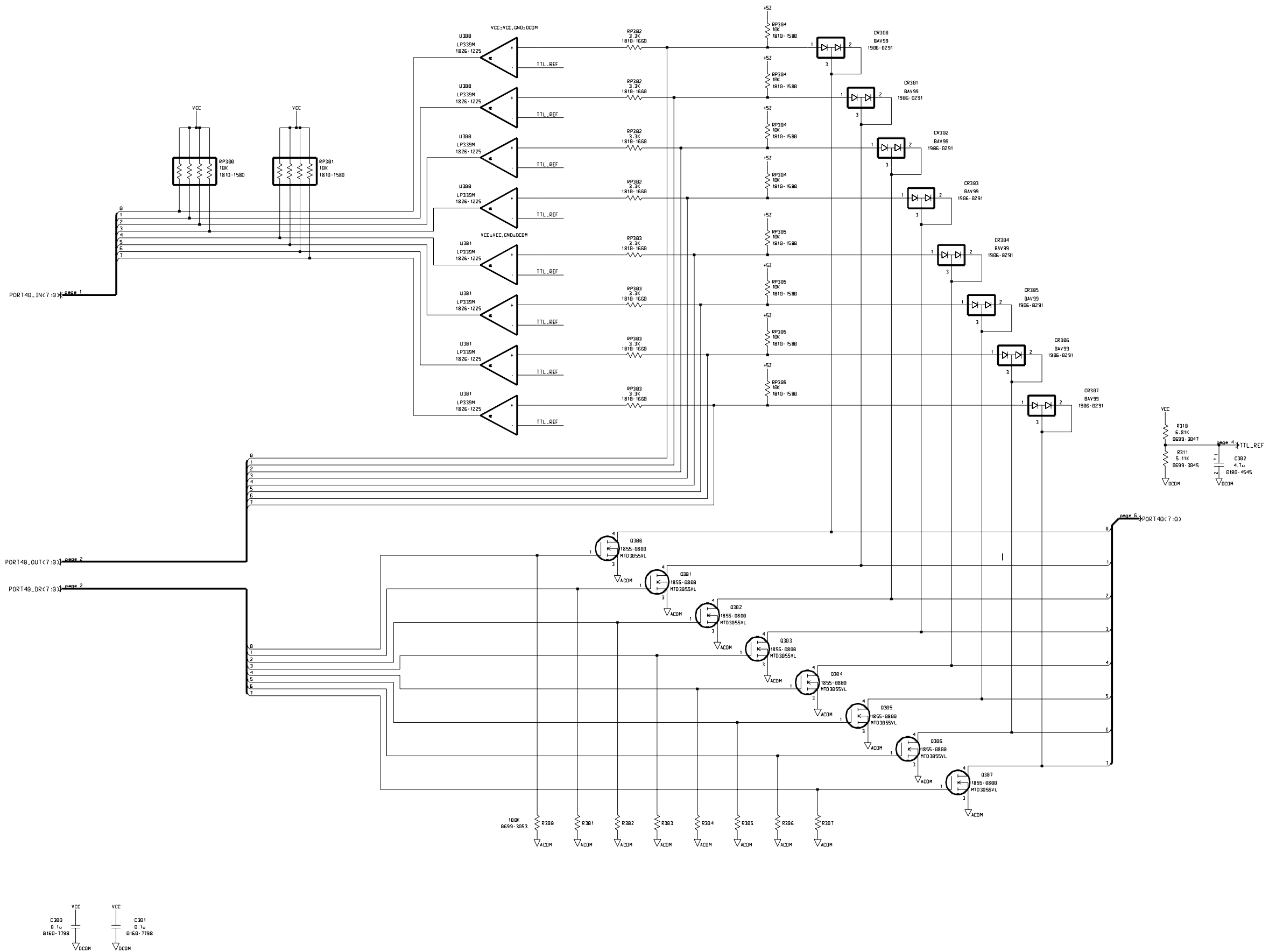


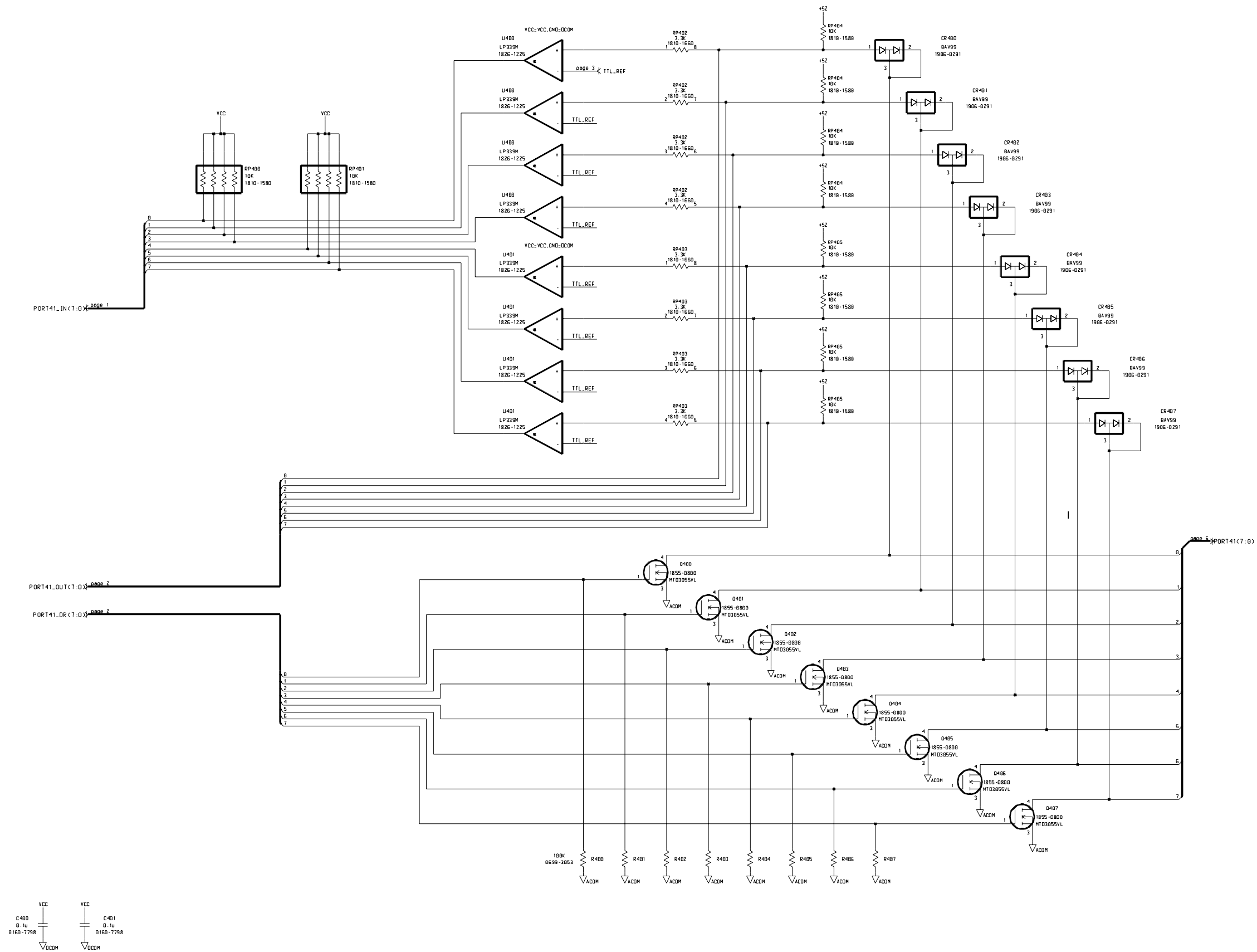
Agilent N2294A Screw Terminal Block Component Locator and Schematic
Page 182

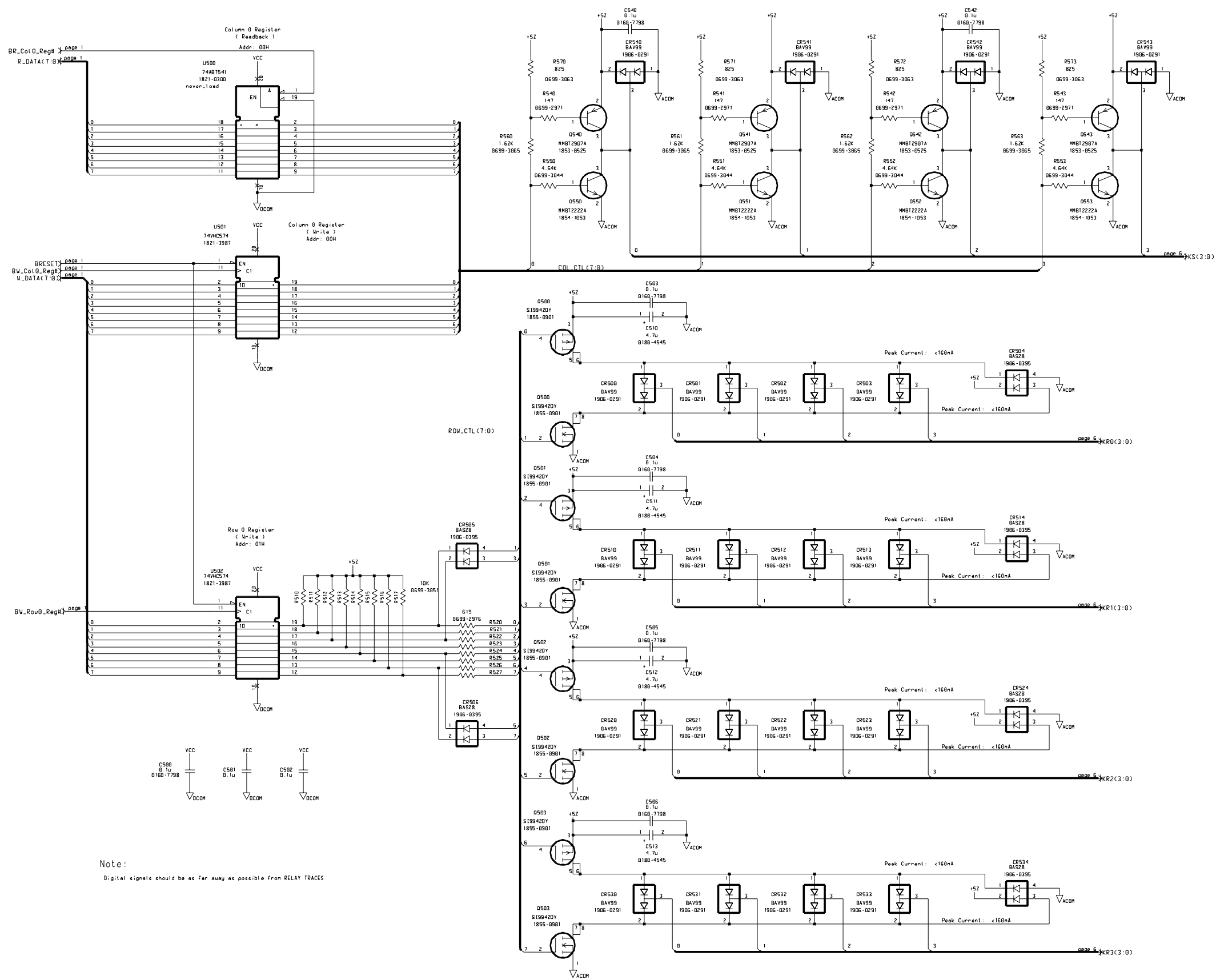


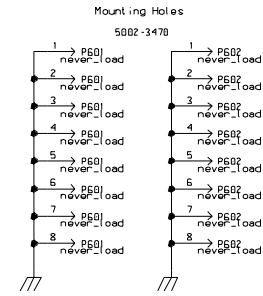
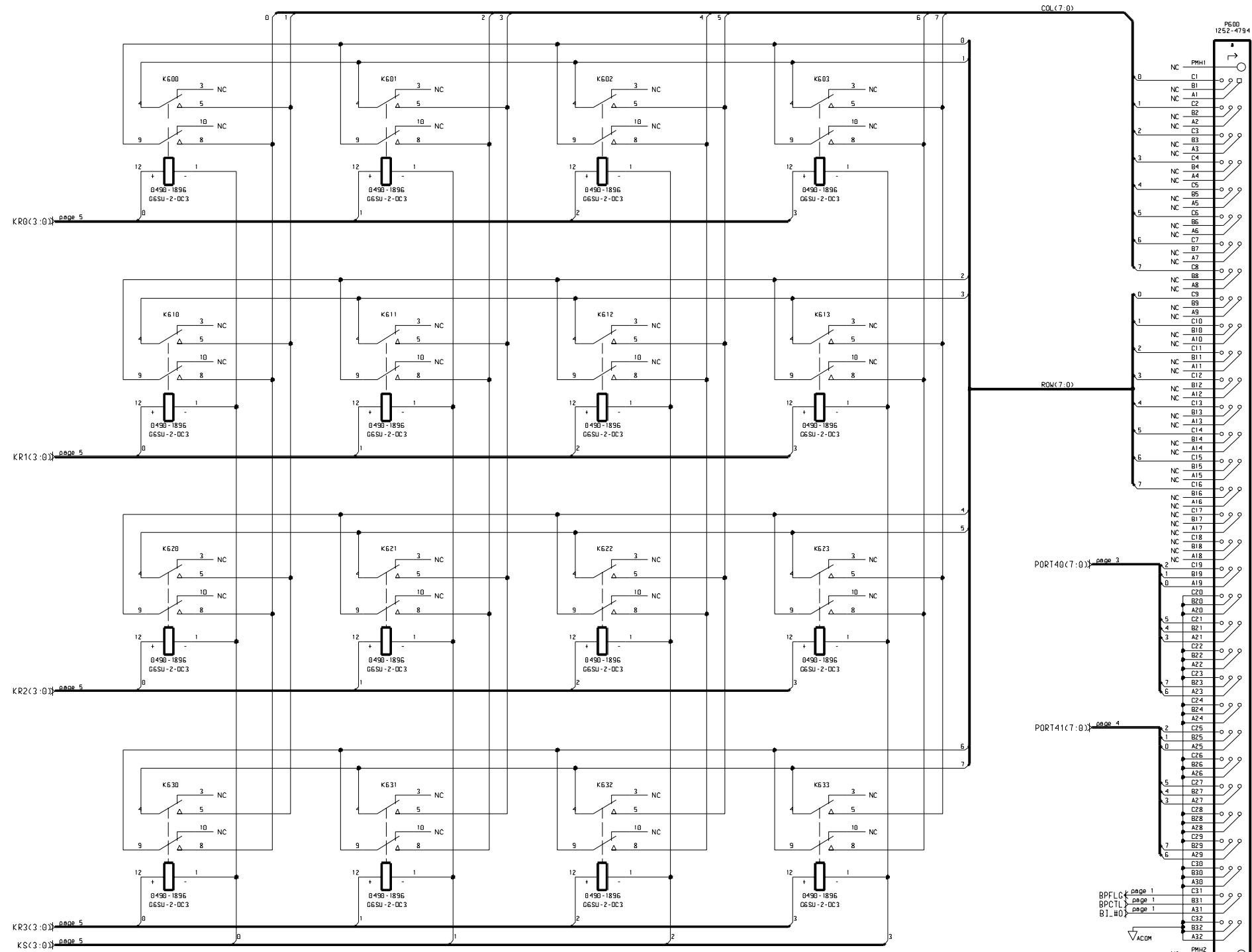




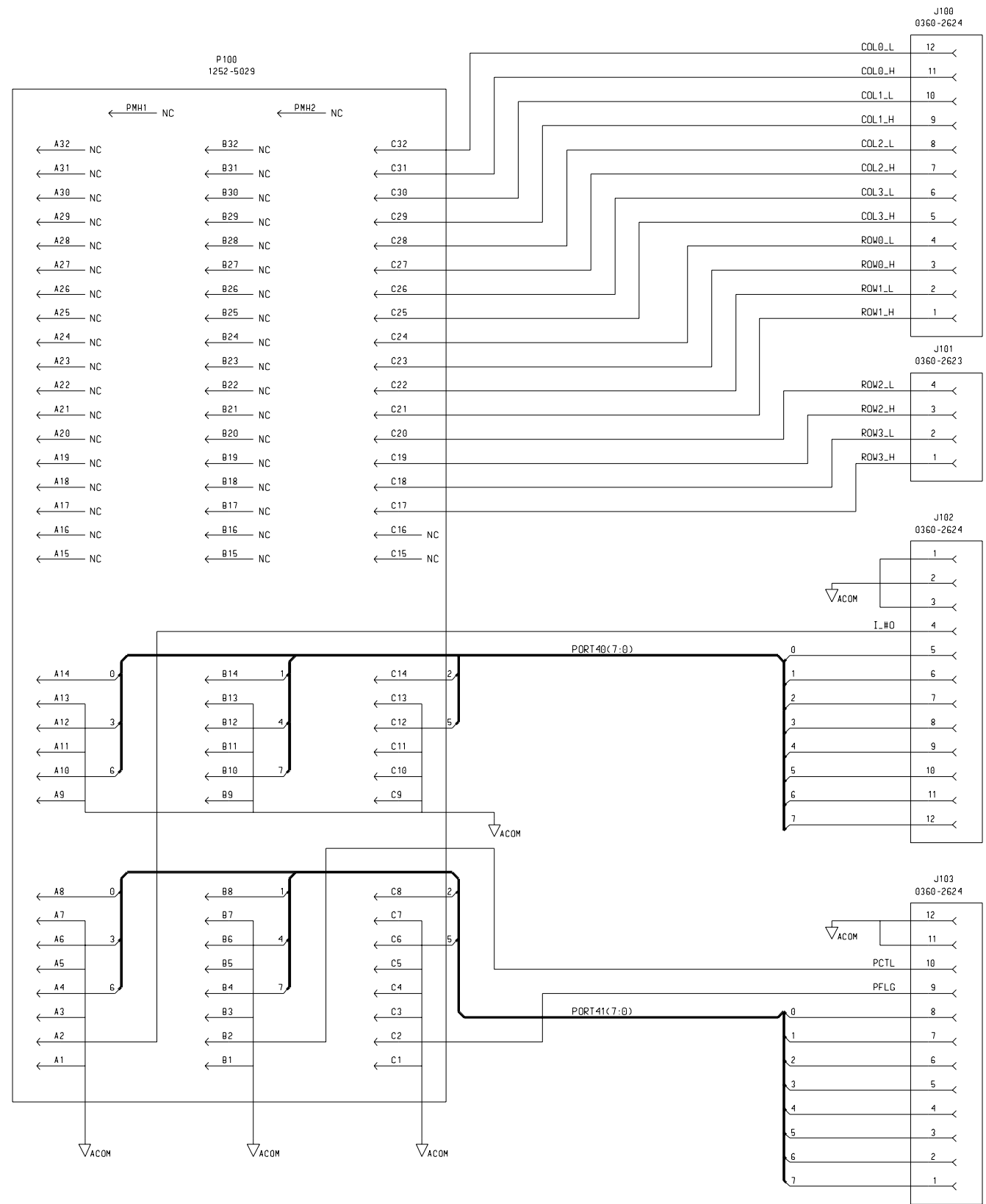
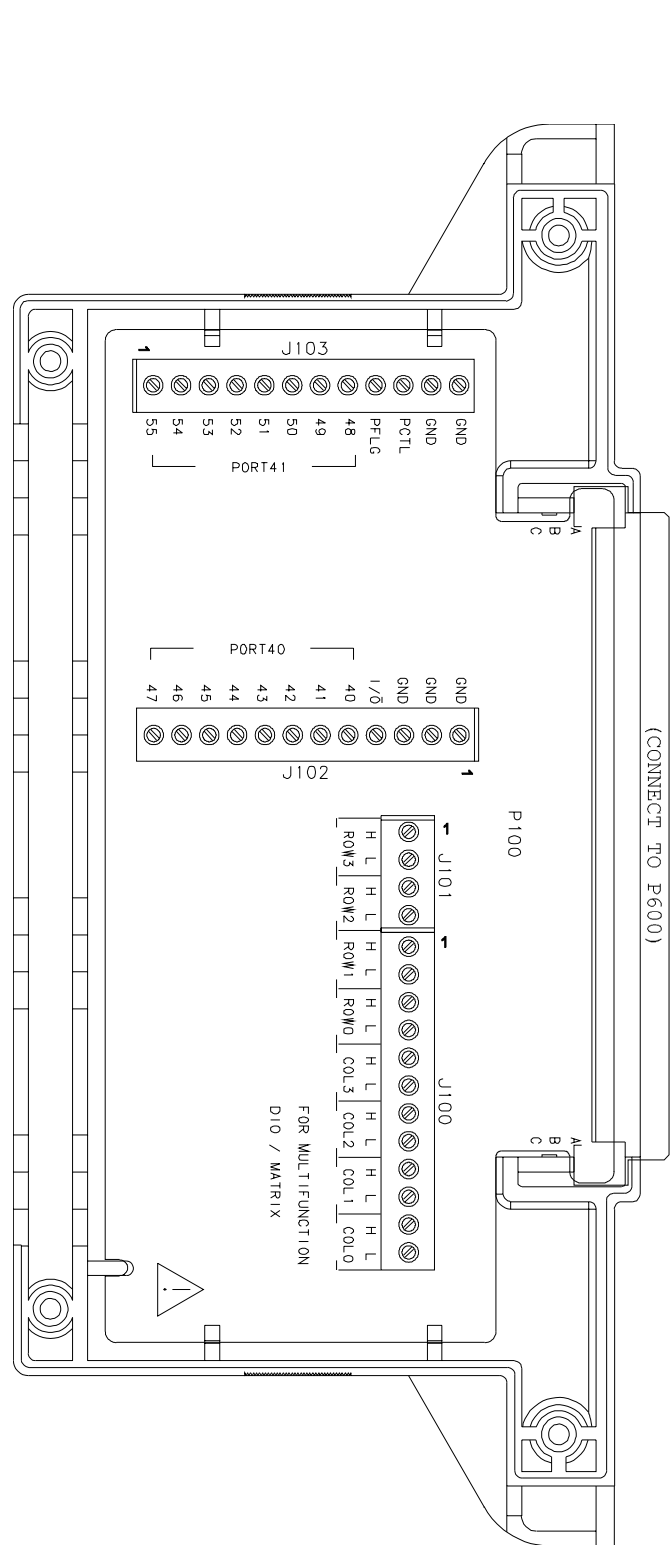


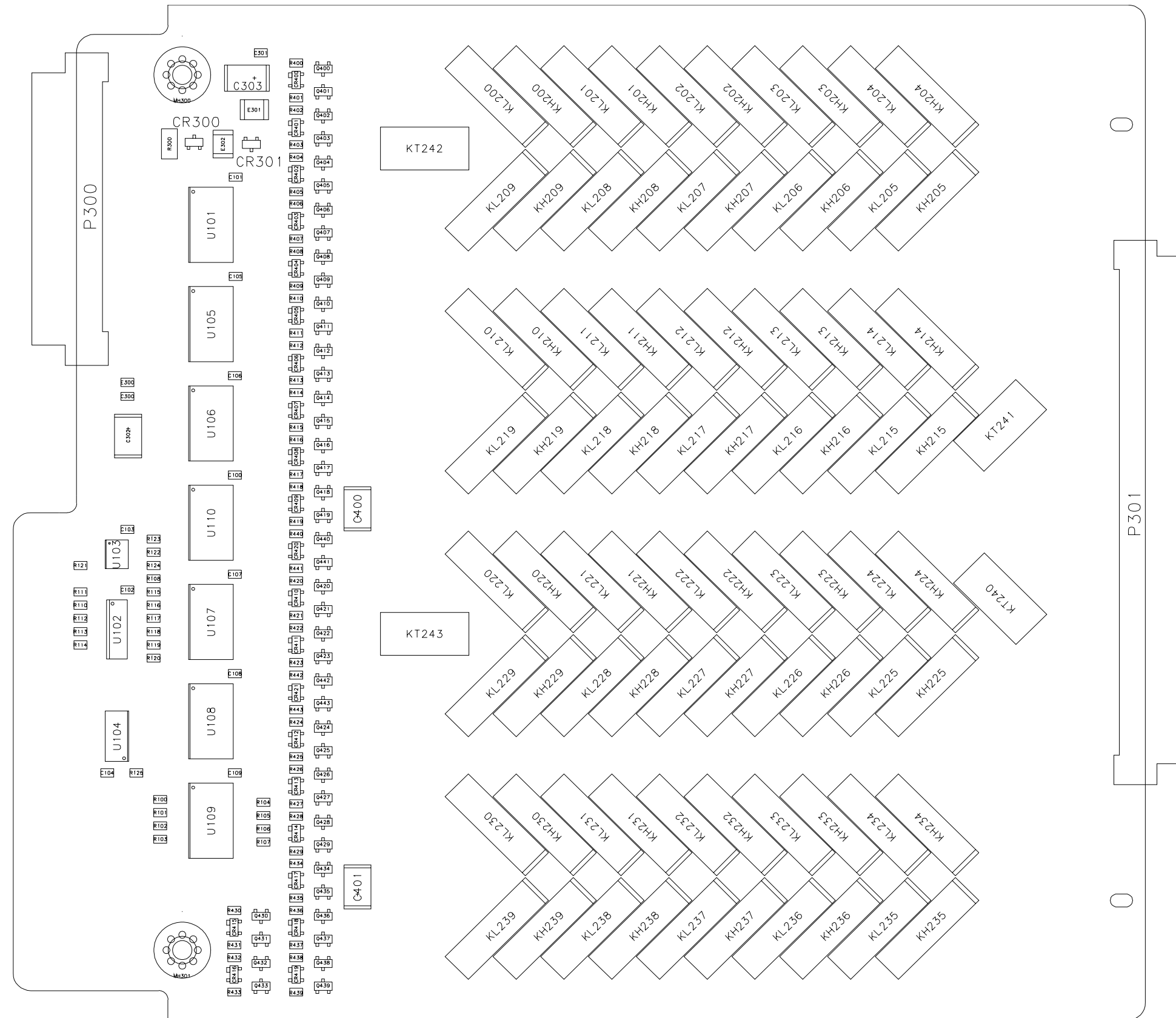


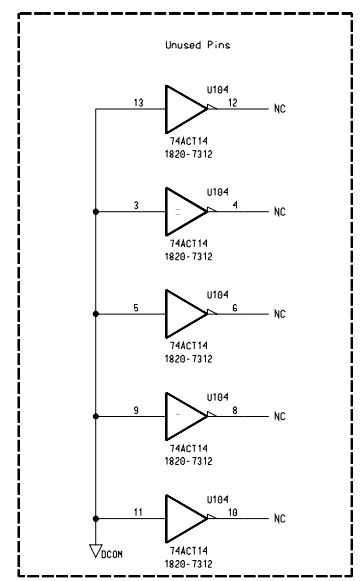
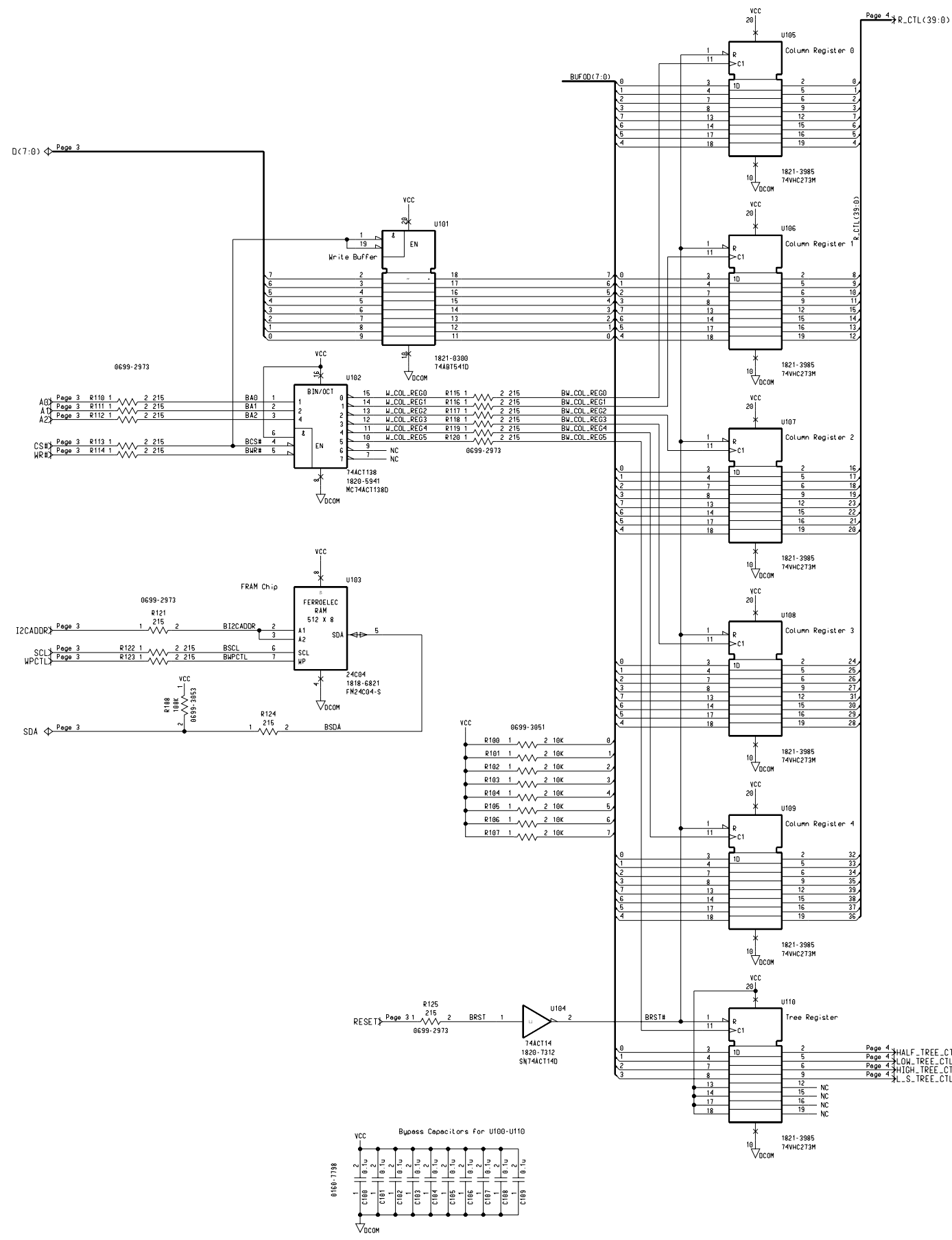




Relay Specification : 1A/200V

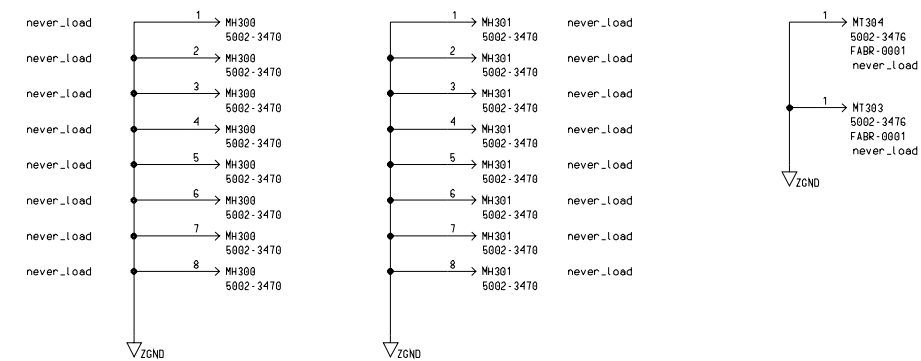
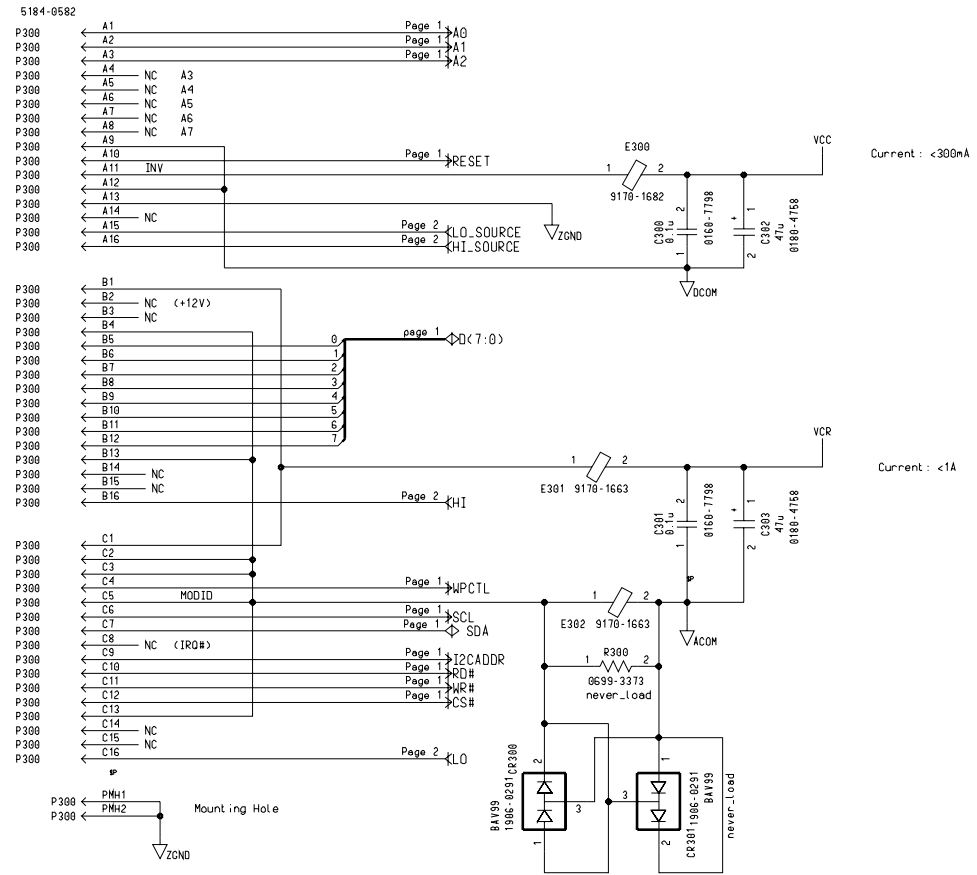
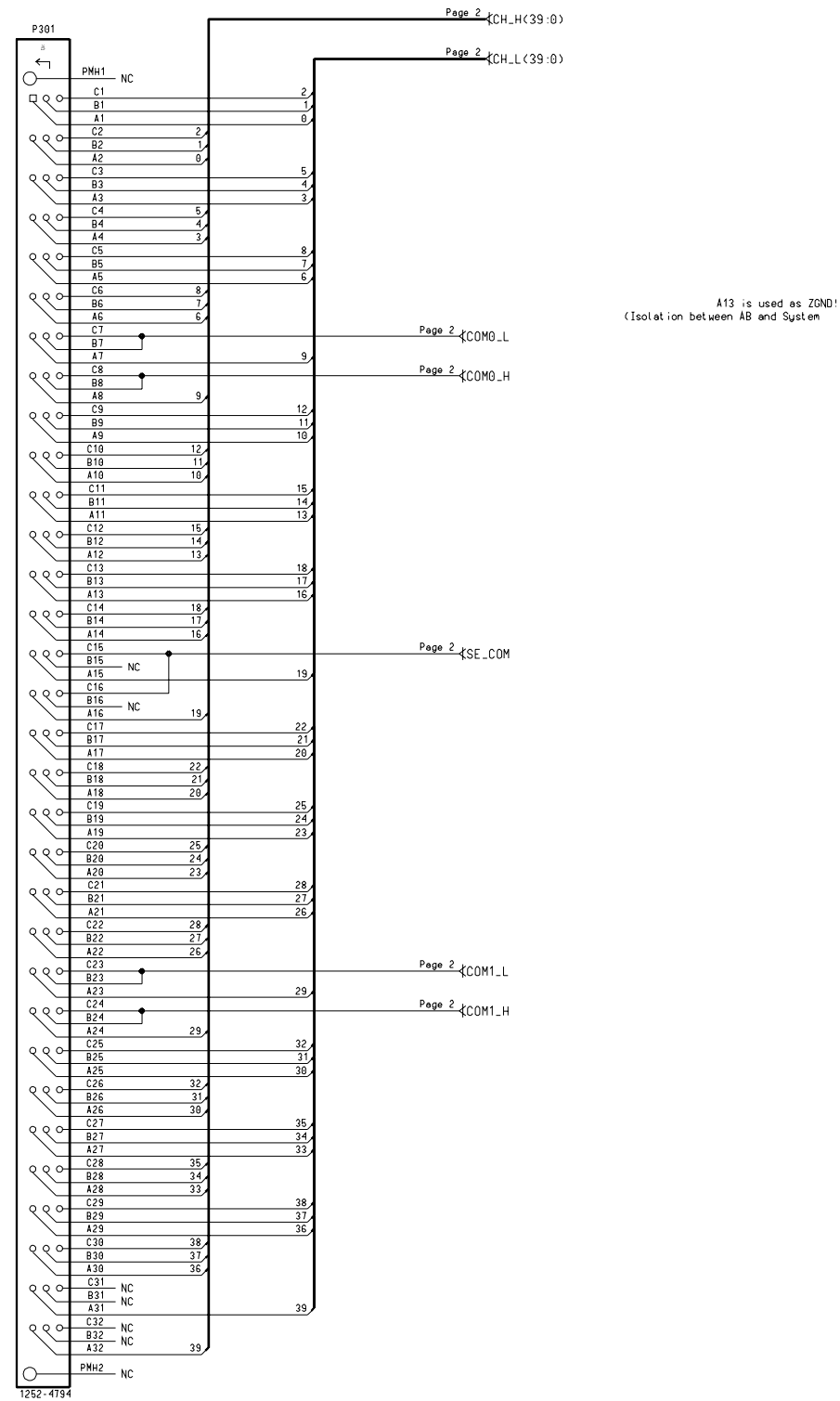


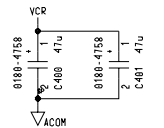
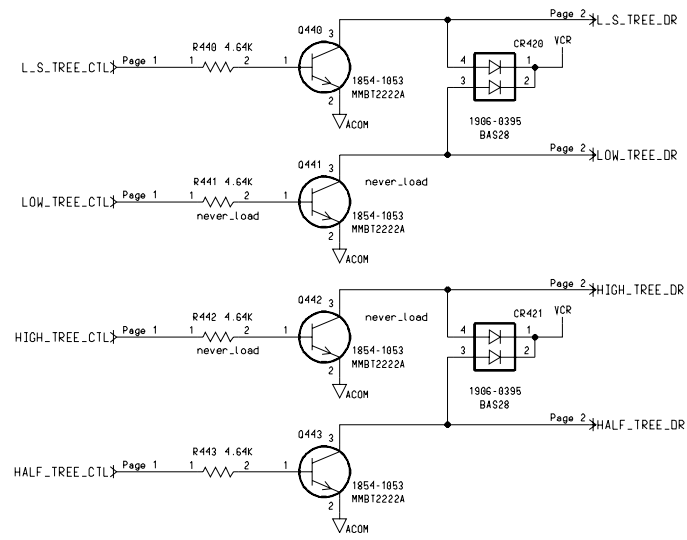
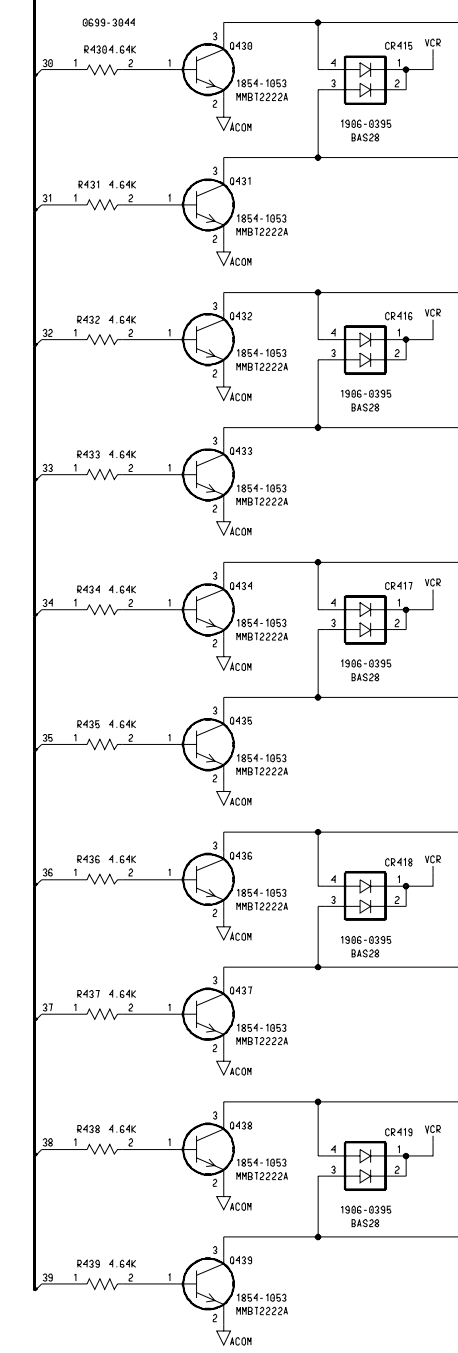
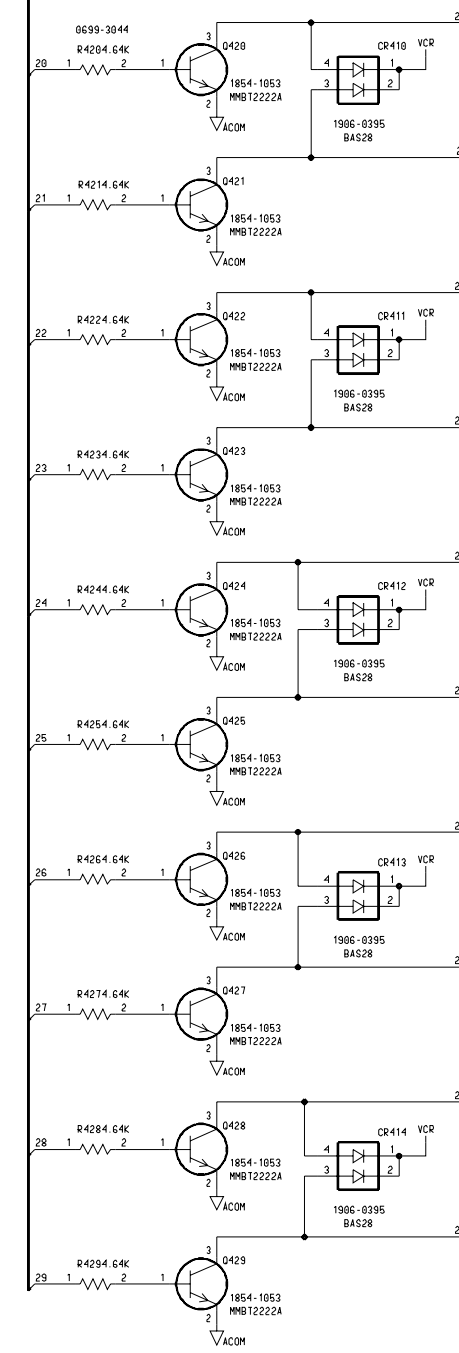
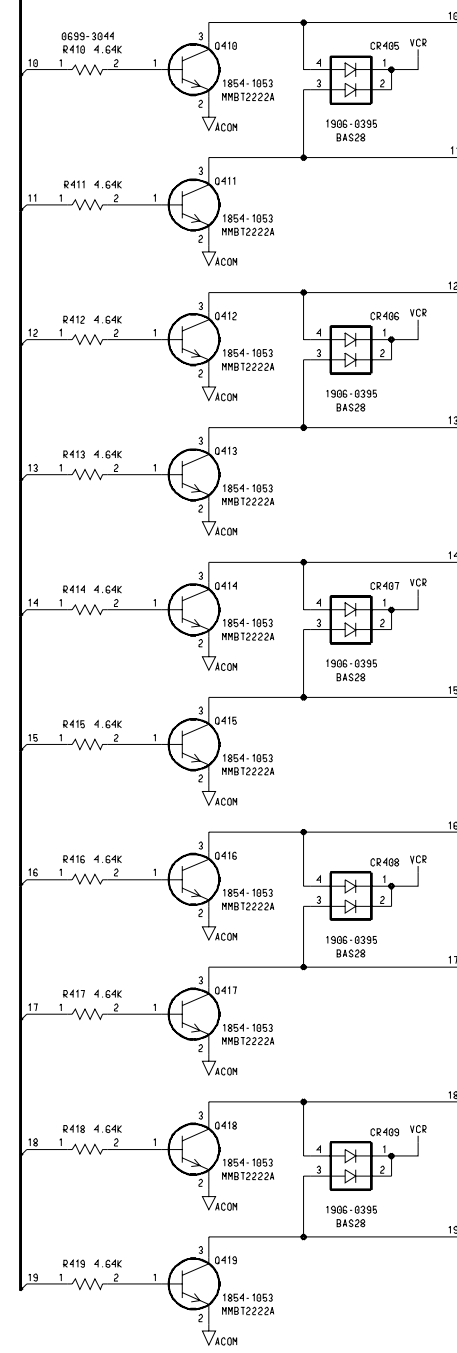
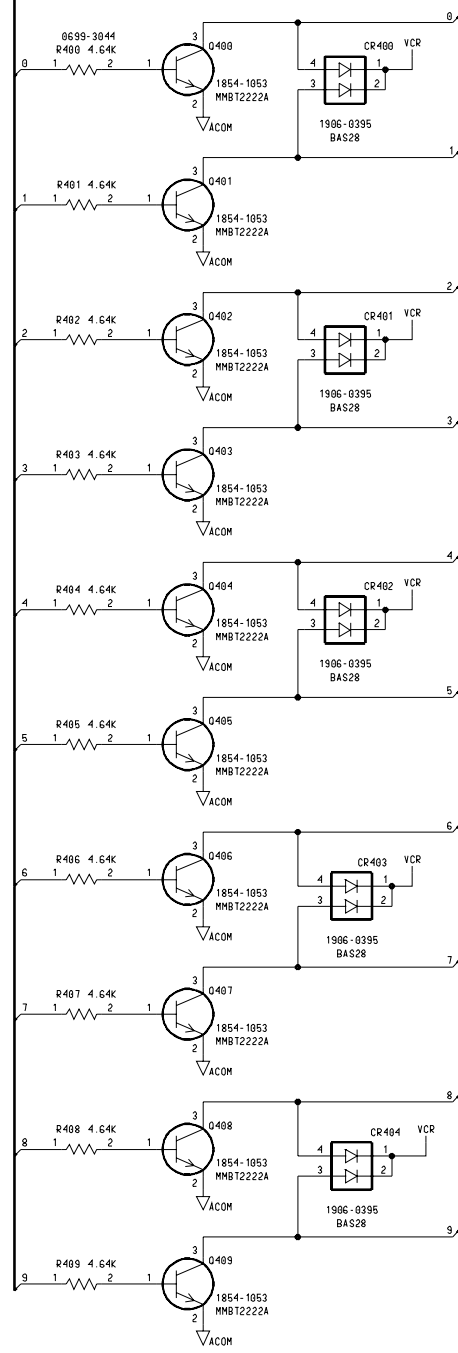


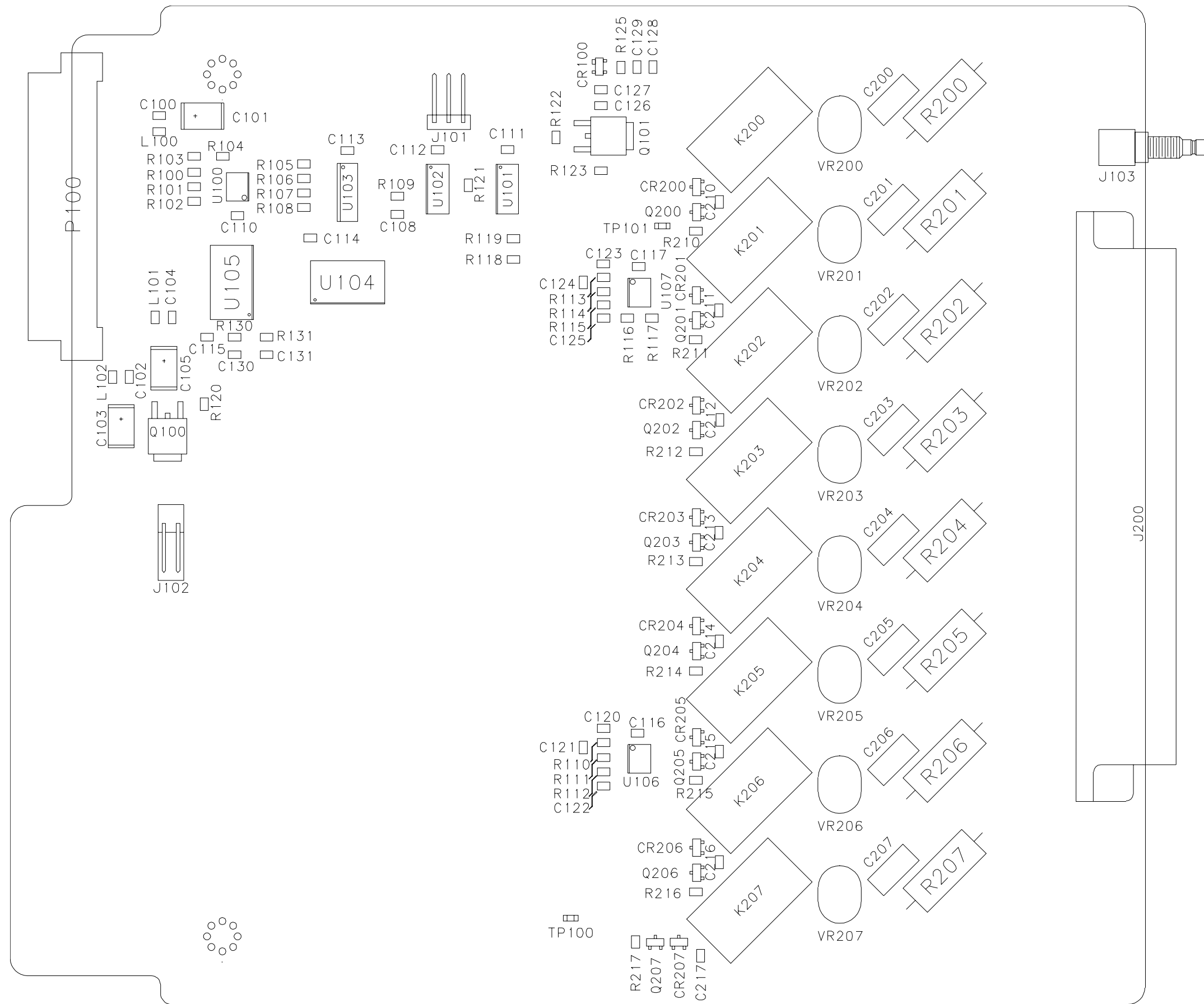




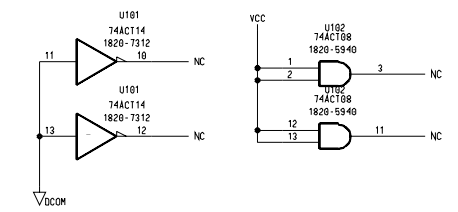
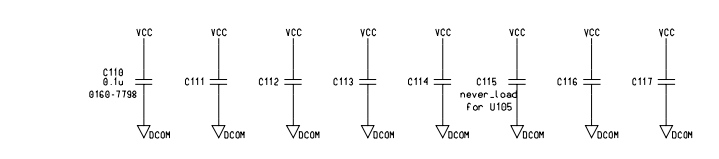
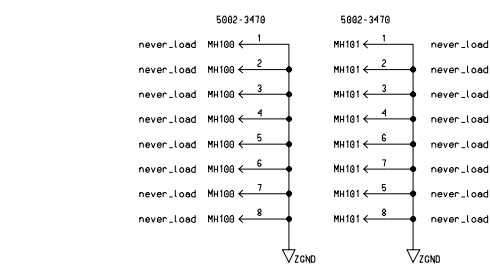
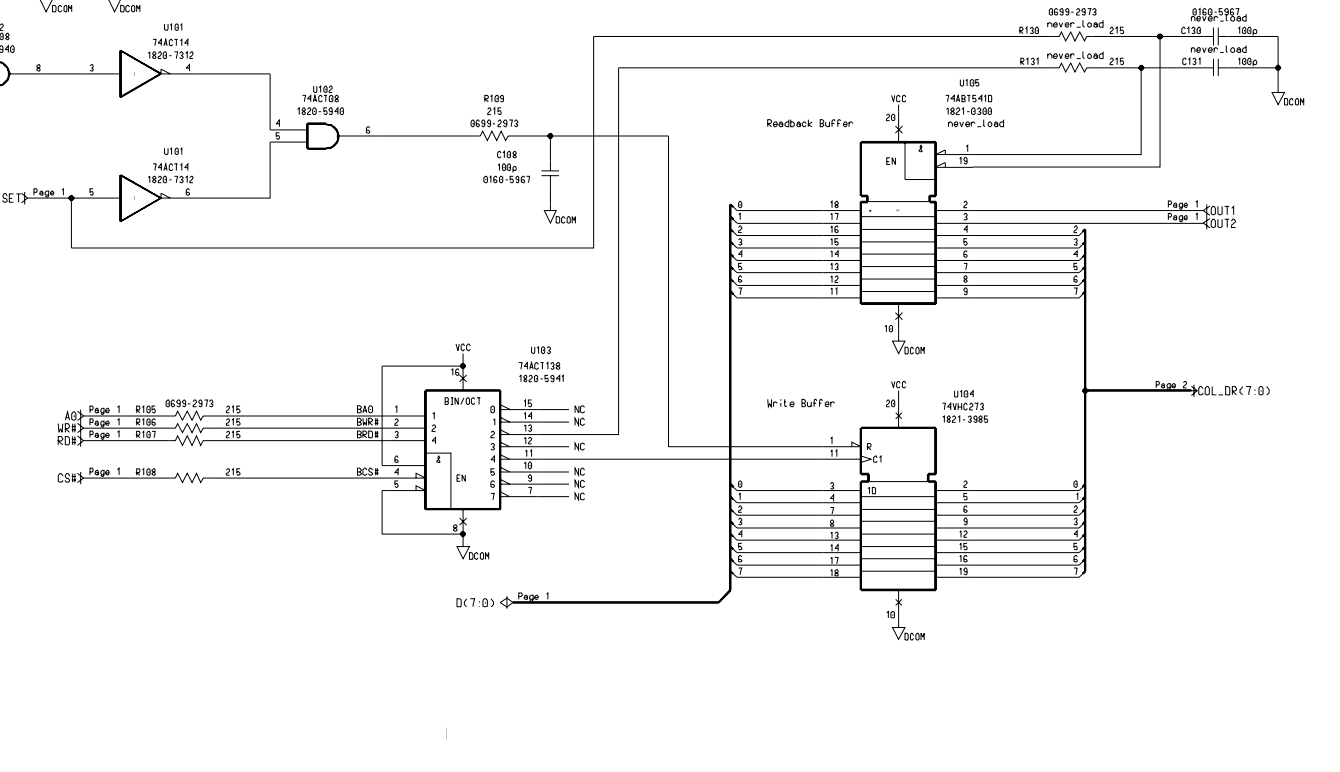
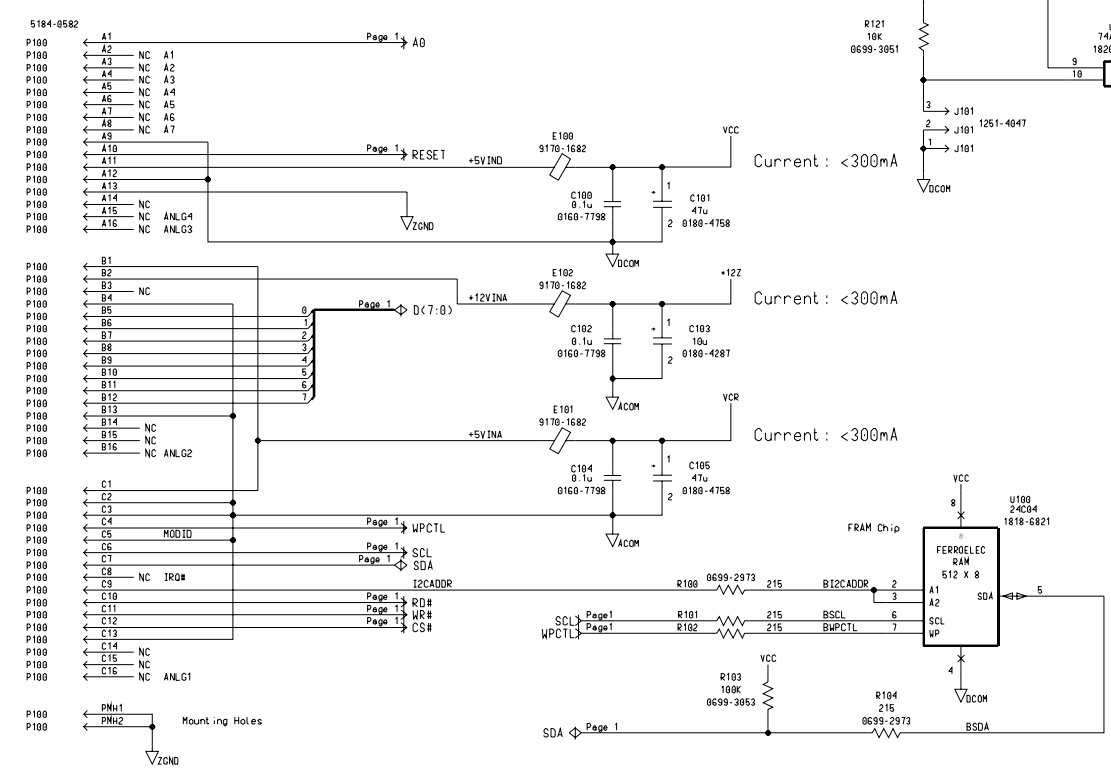
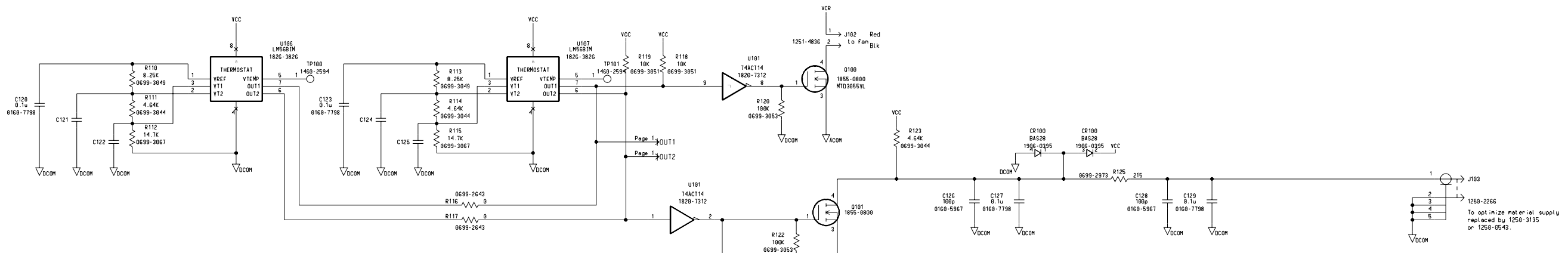
Layout Notes:
 1. If space allowed, enlarge the trace width of relay control lines.
 2. Relay specification: 0.5A/200V

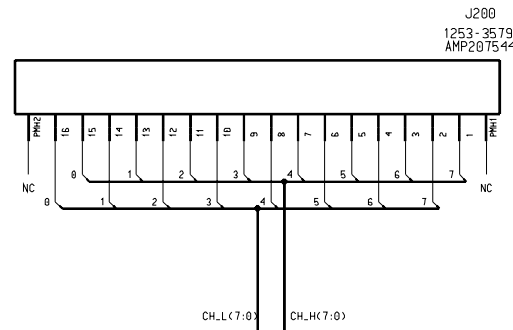




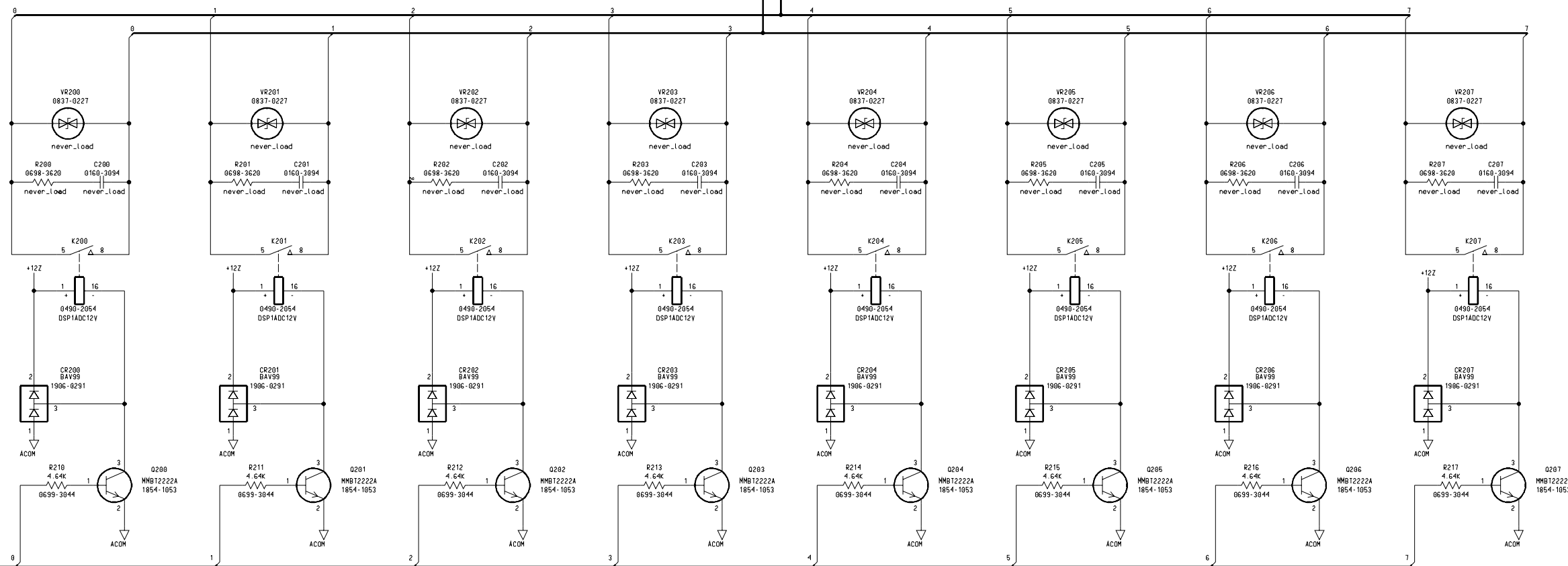


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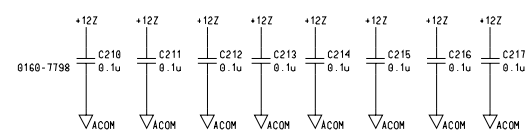


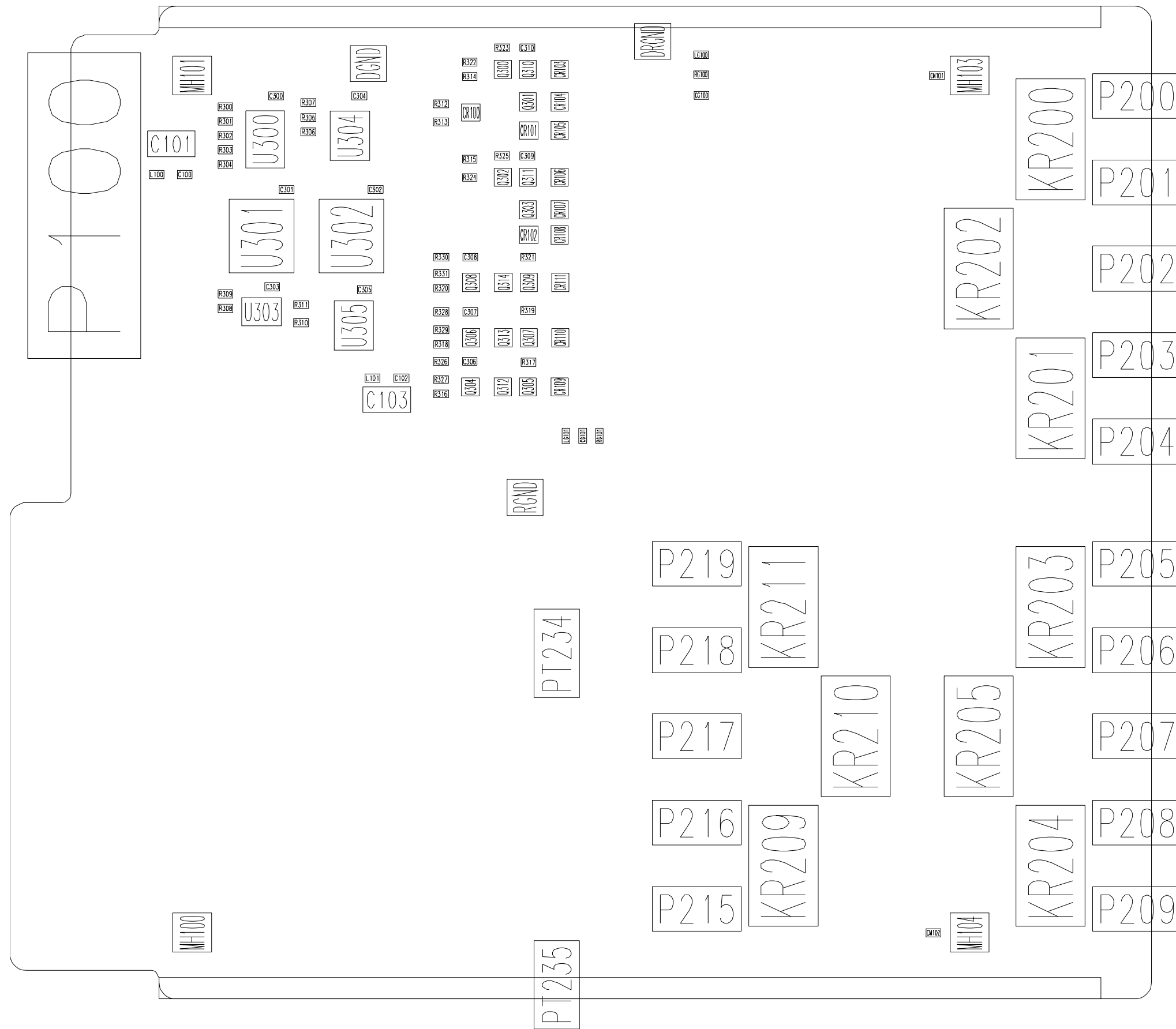


DSP1A-12VDC Specification:
8A/380V
N2267A Specification:
8A/250V



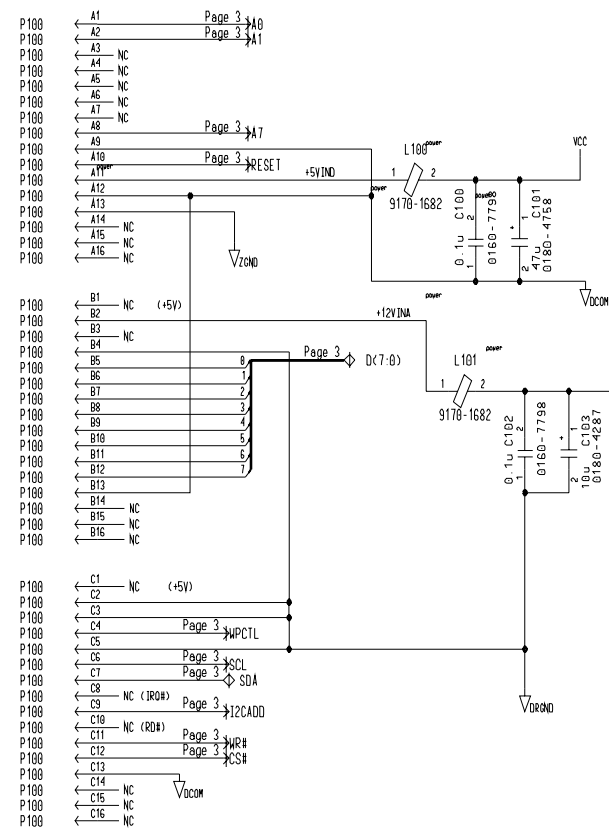
COL_DR (7:0) Page 1





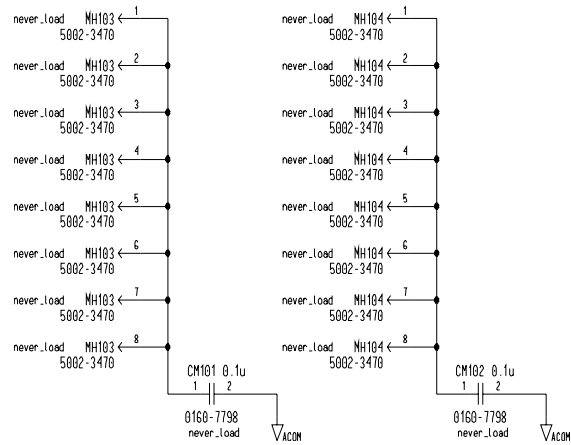
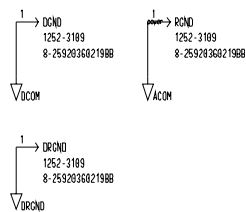
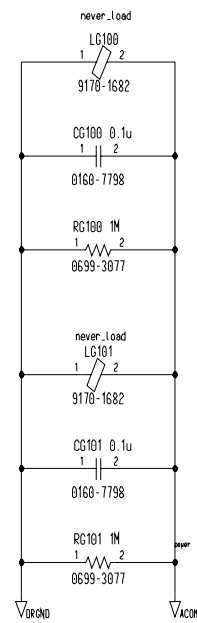
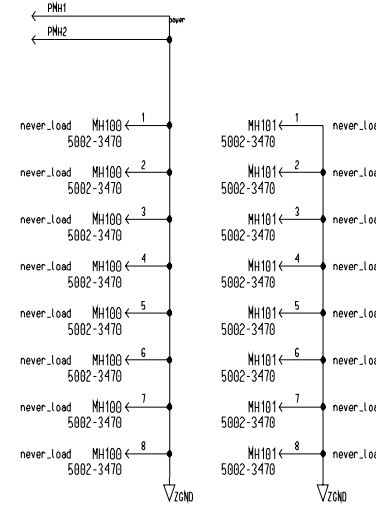
Backplane Connector

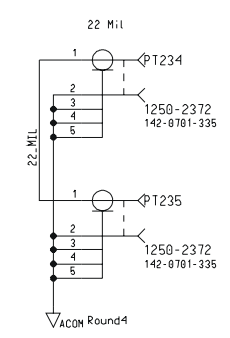
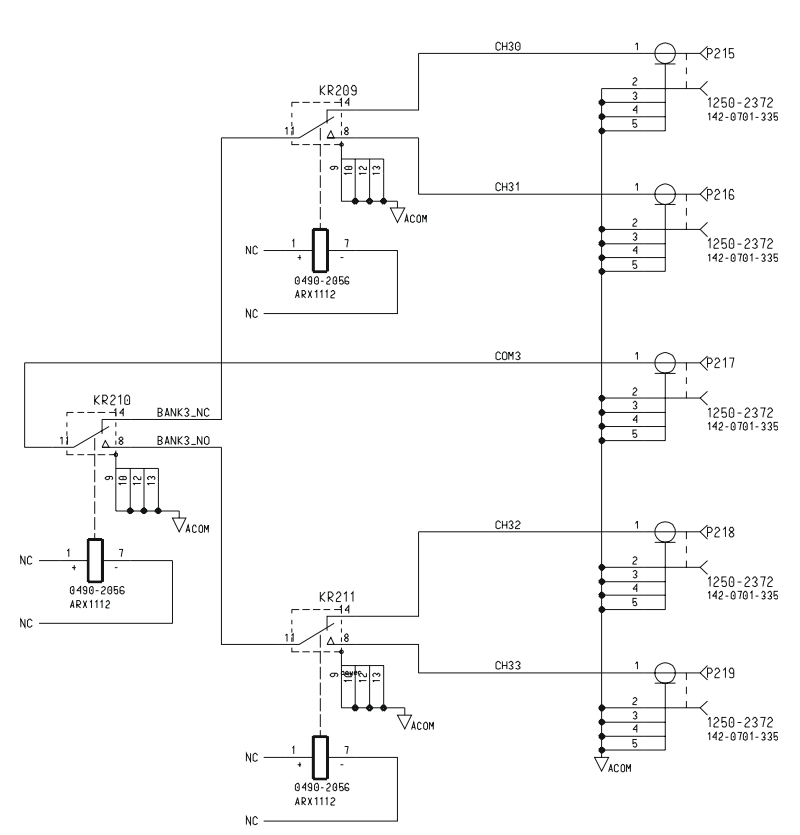
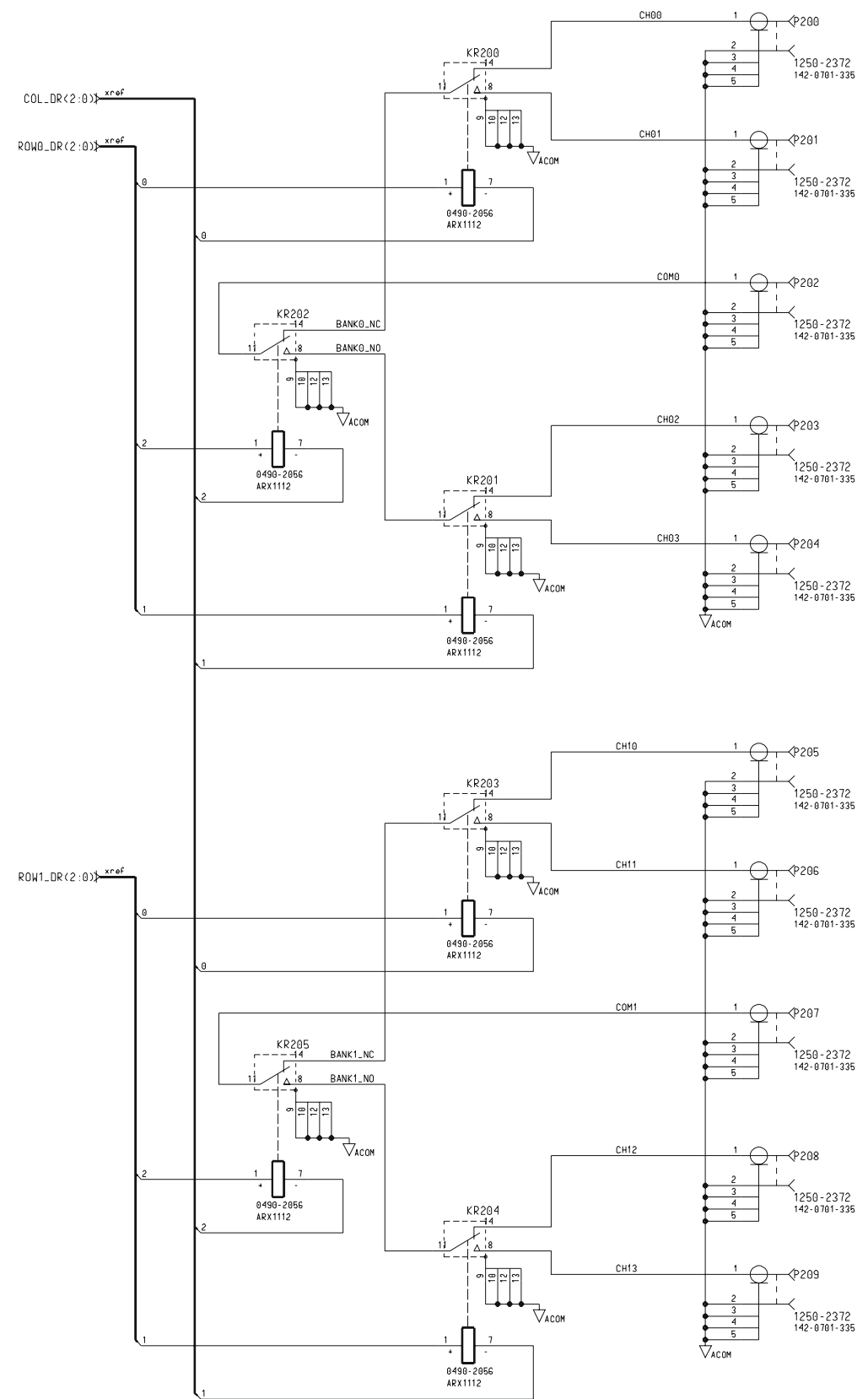
5184-0582

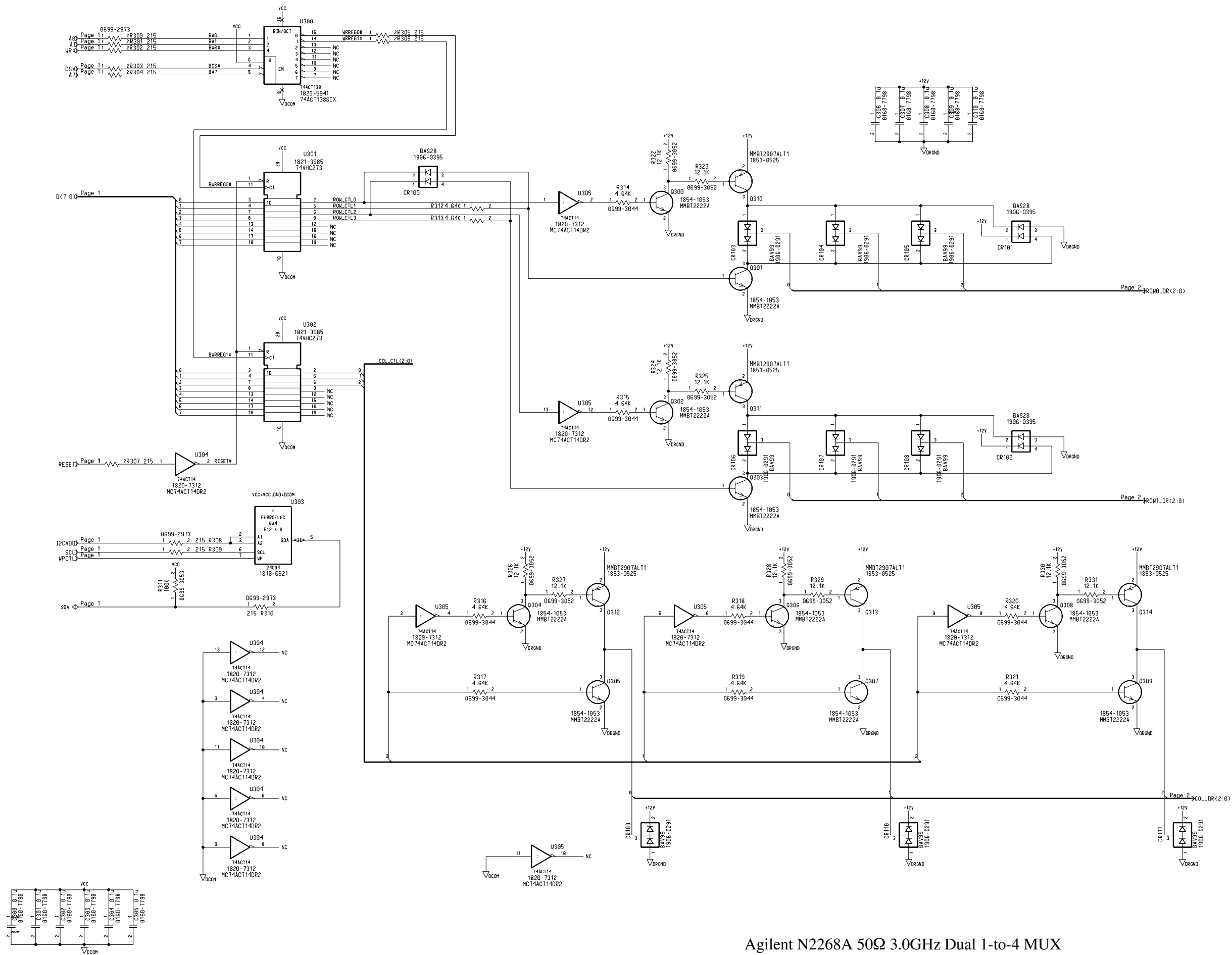


Current: <300mA

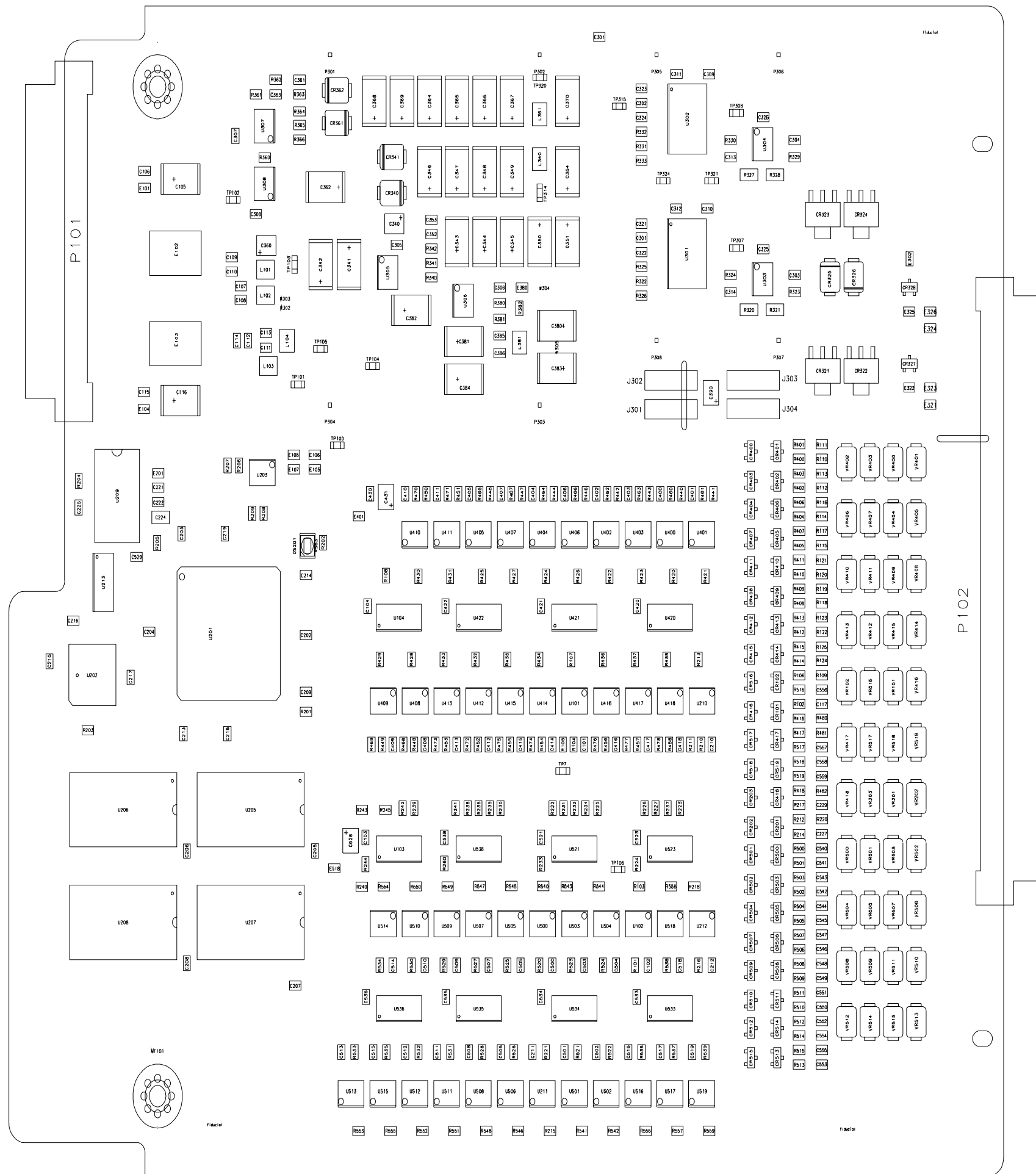
Current: <200mA

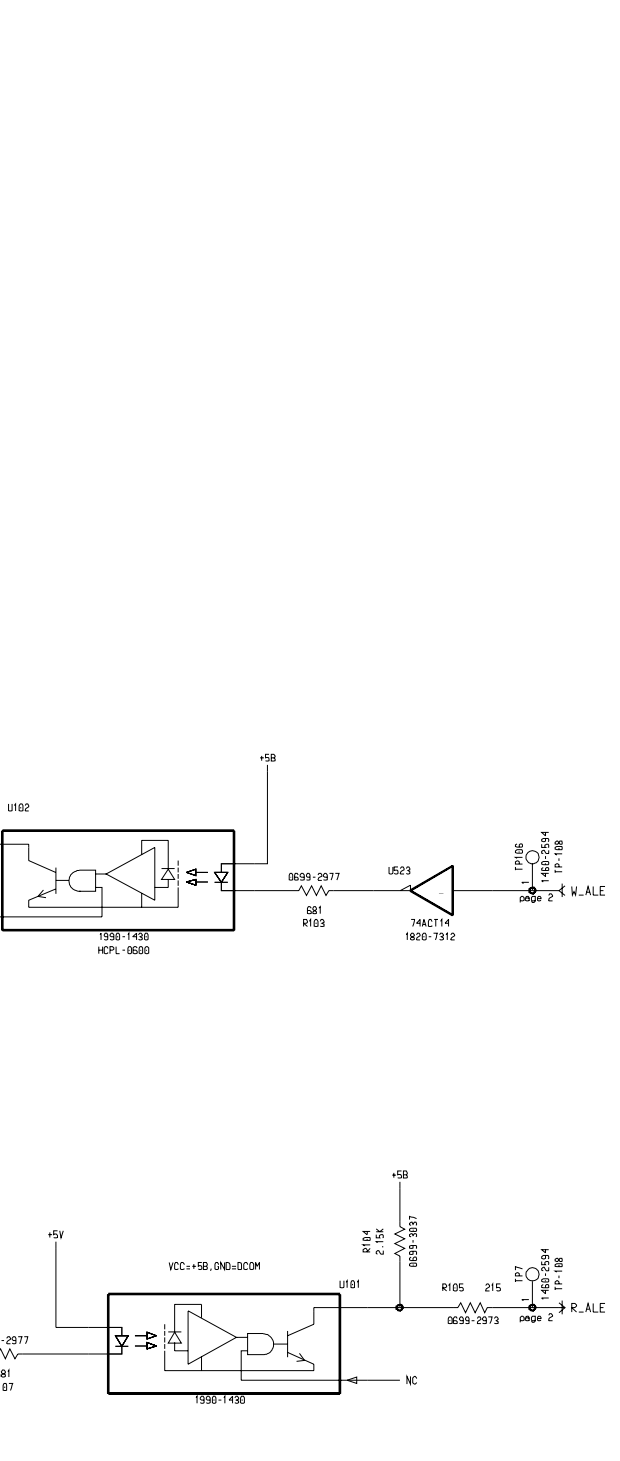
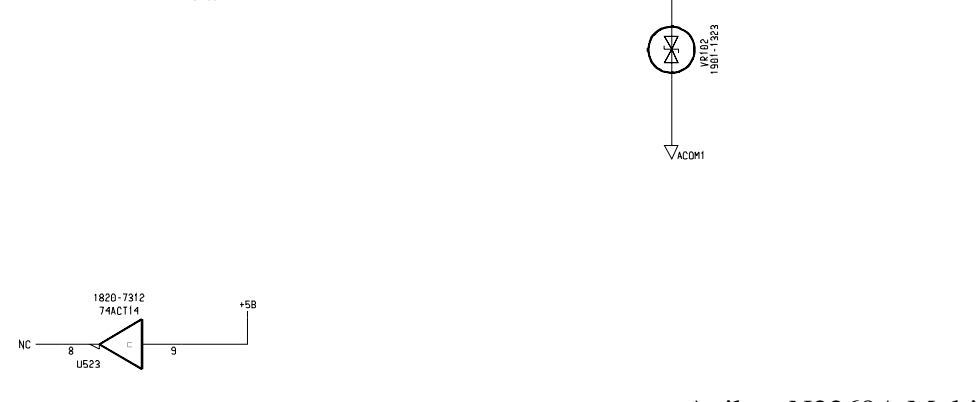
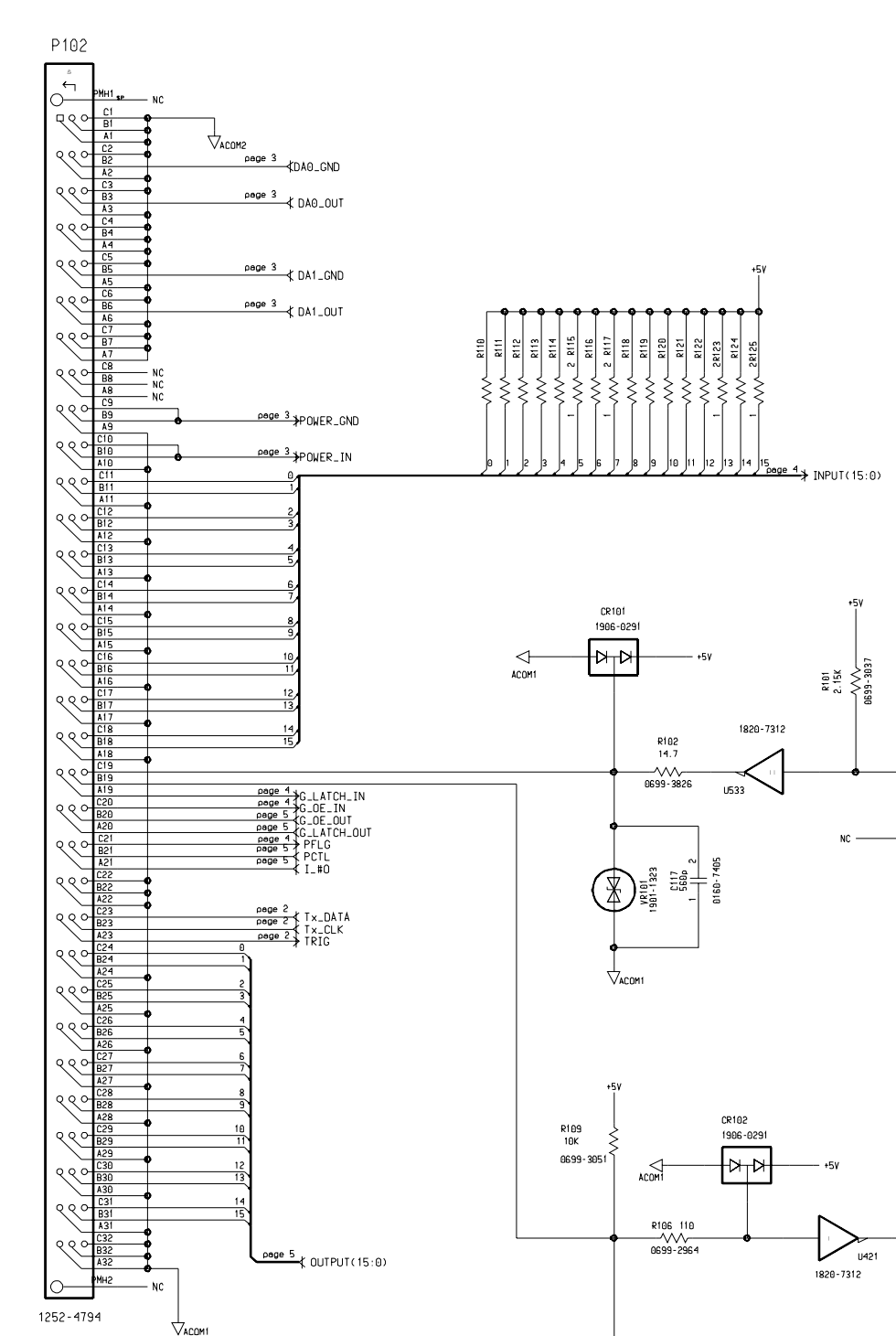
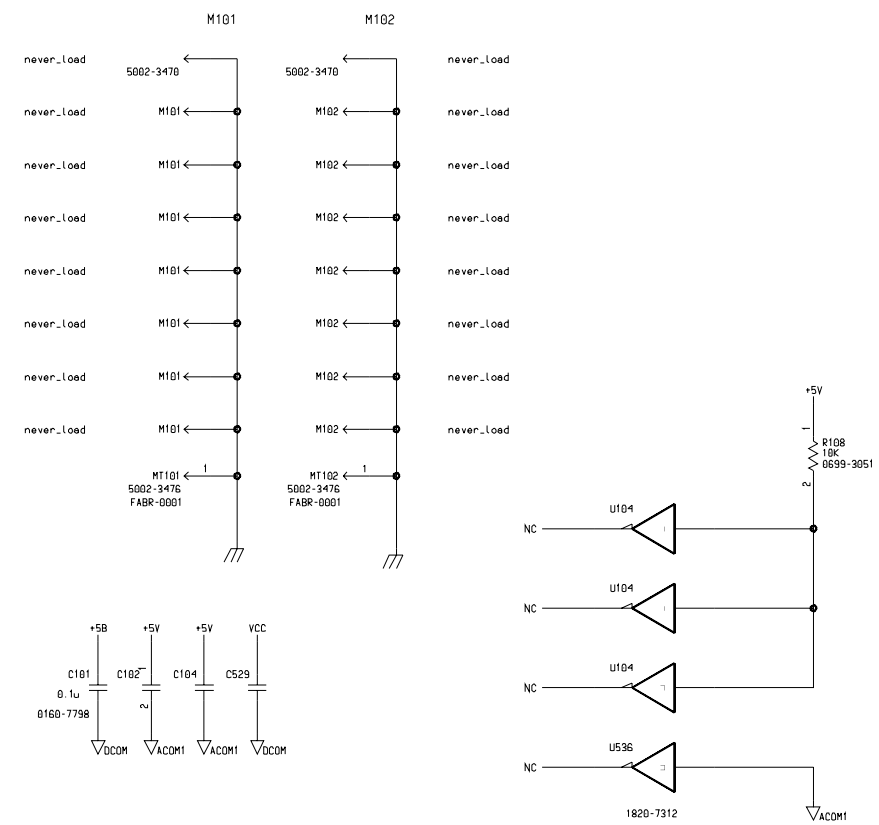
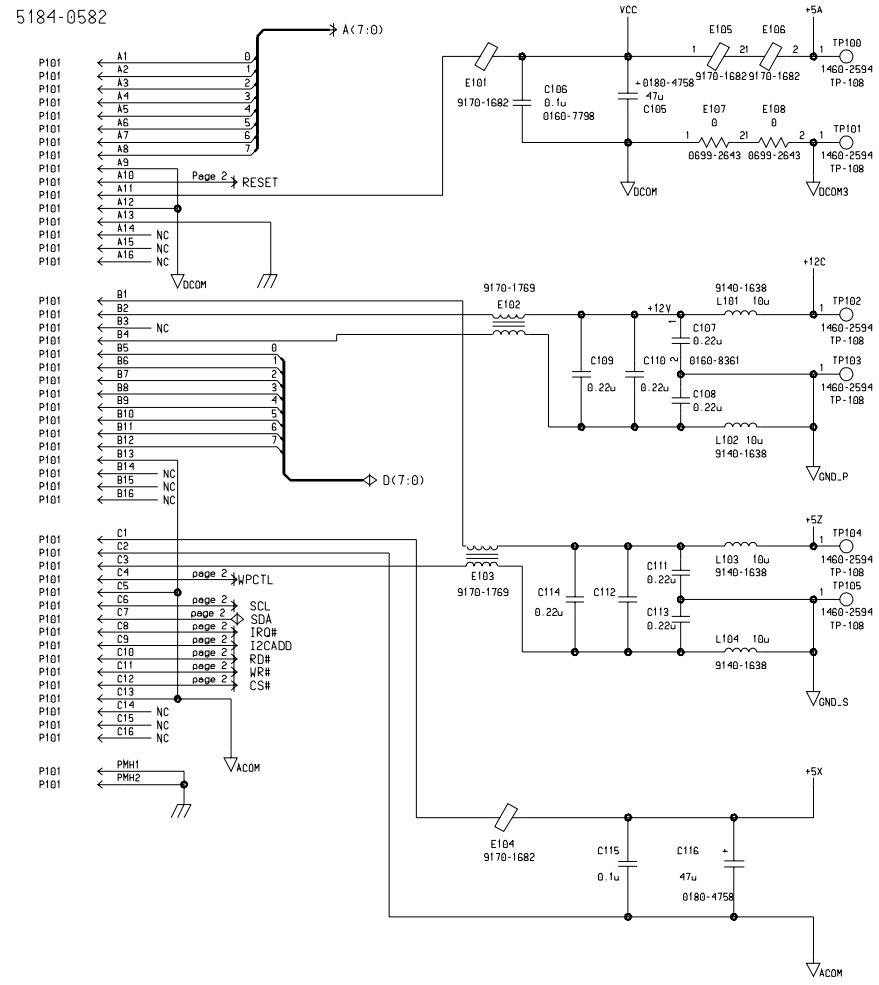




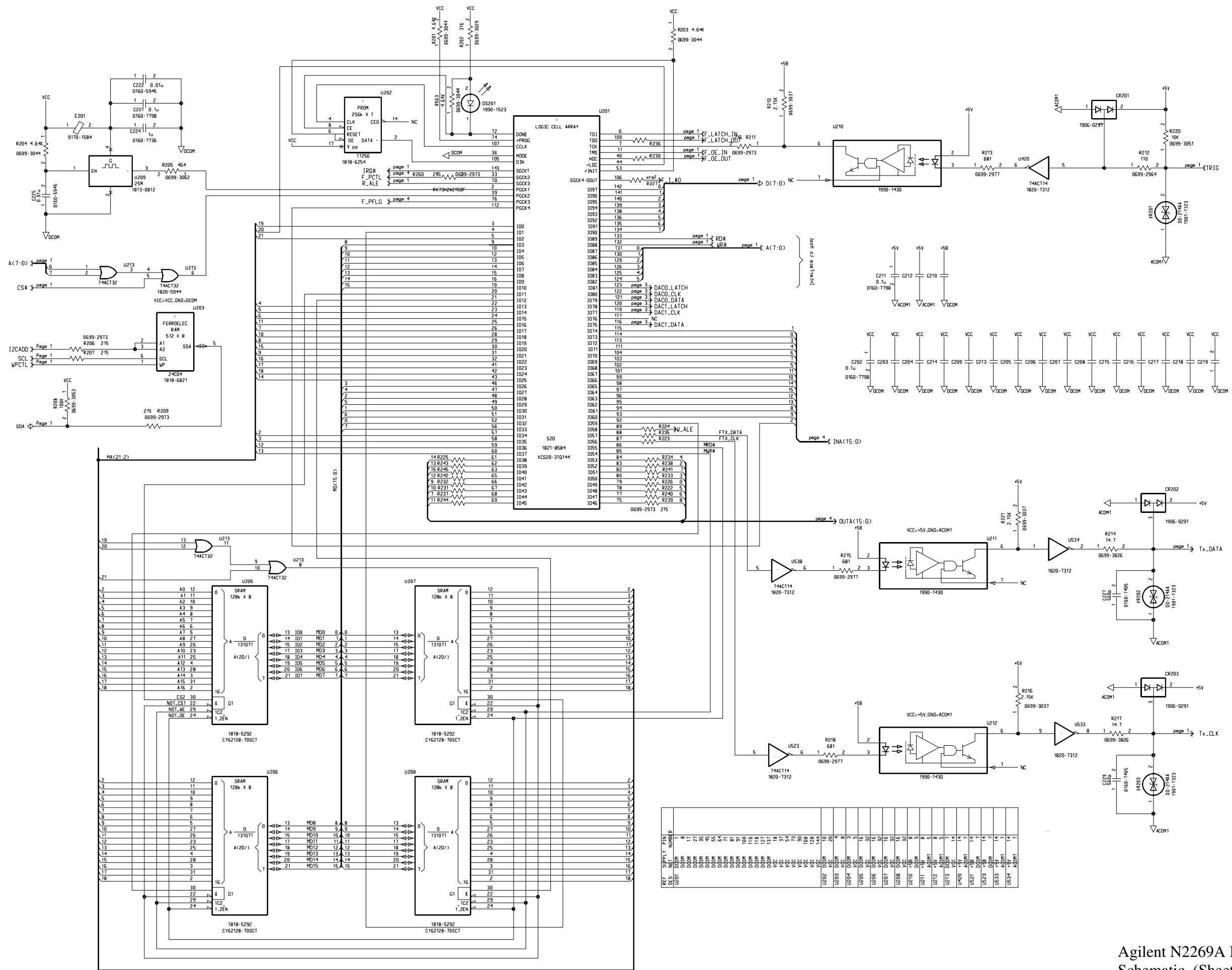


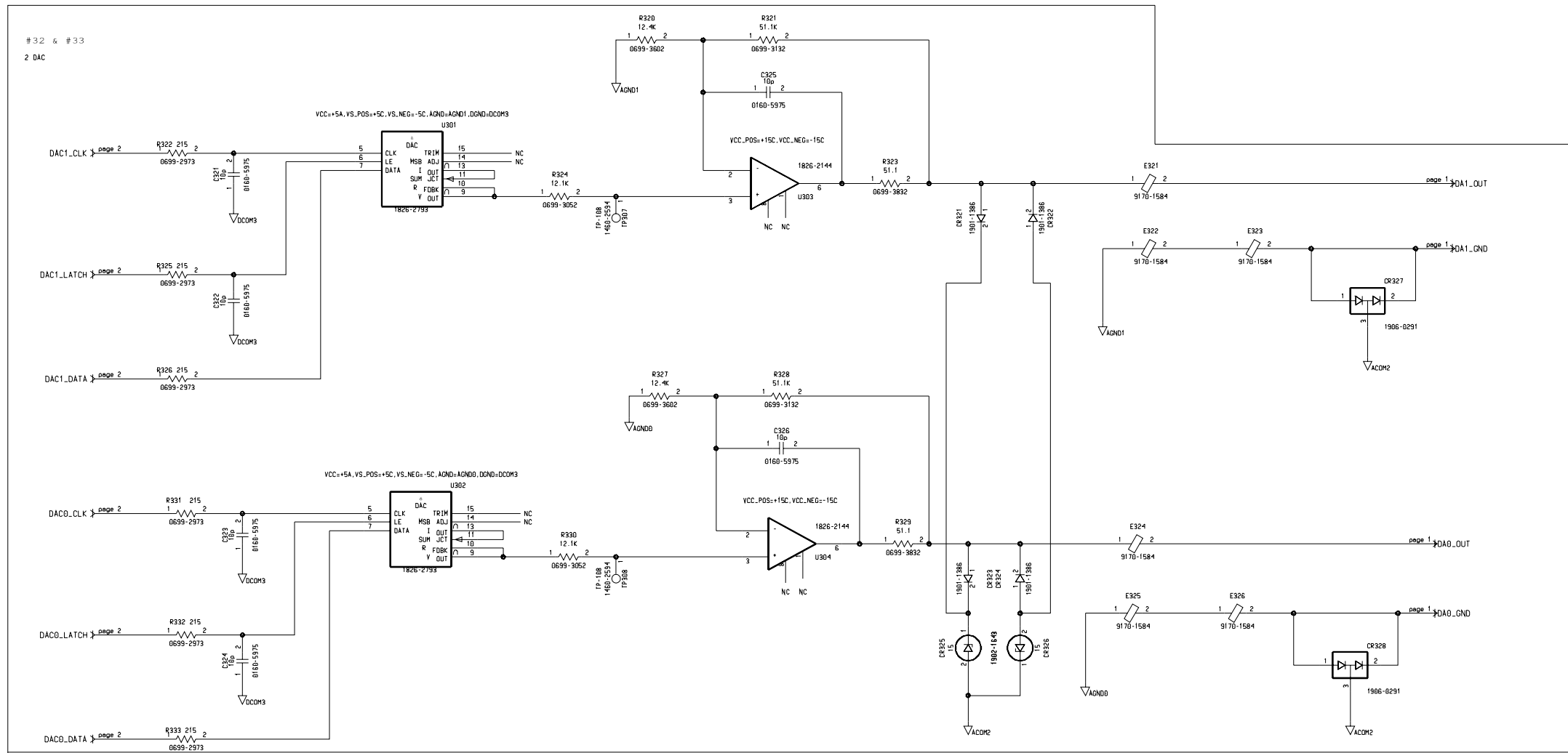
Agilent N2268A 50Ω 3.0GHz Dual 1-to-4 MUX
 Module Schematic (Sheet 3 of 3)
 Page 202



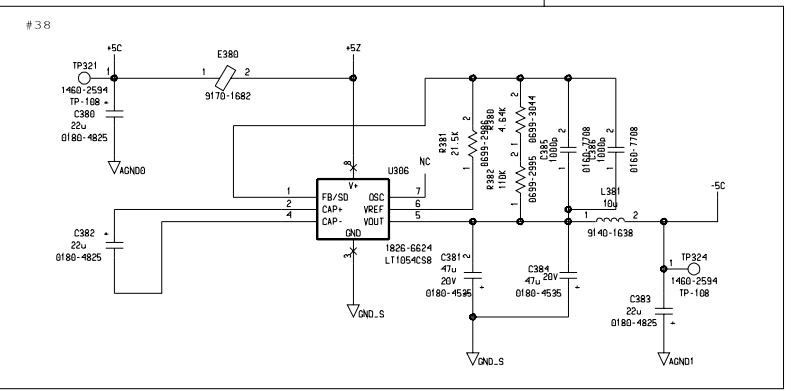
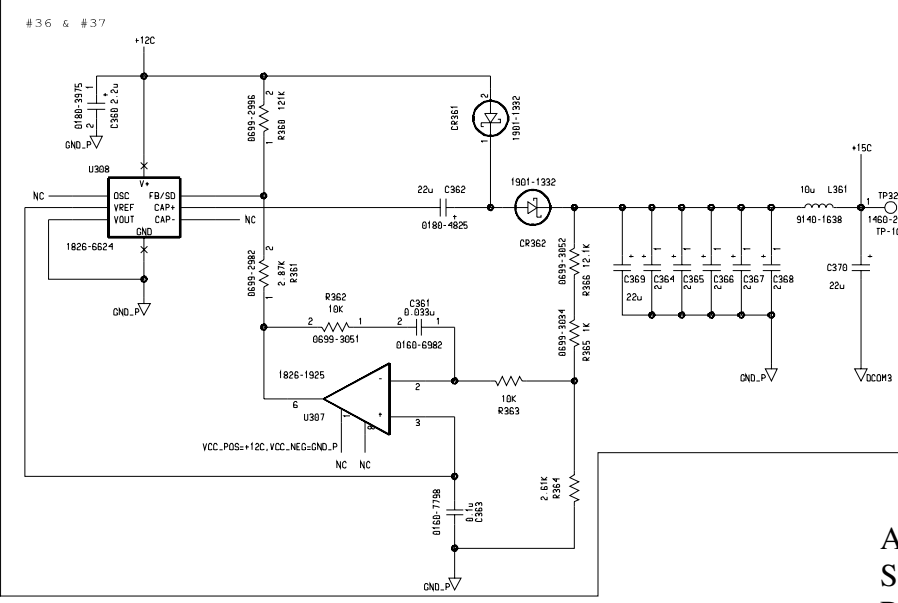
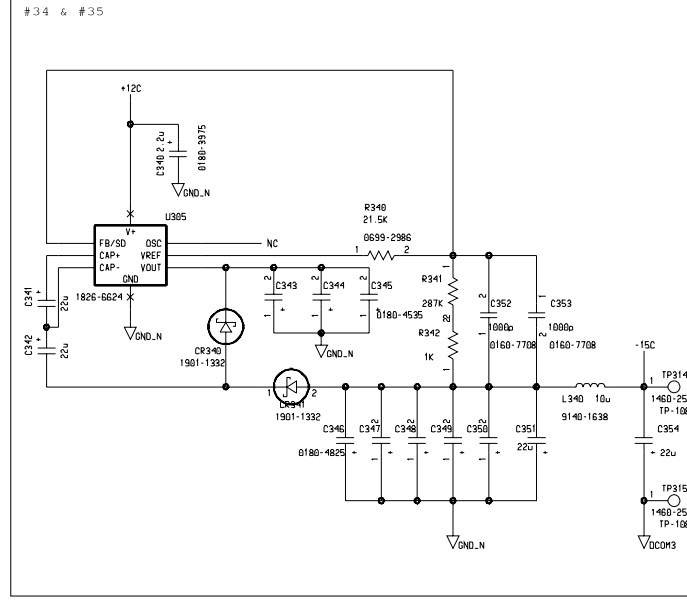
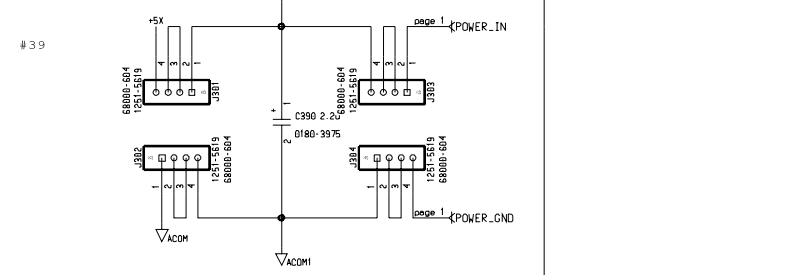
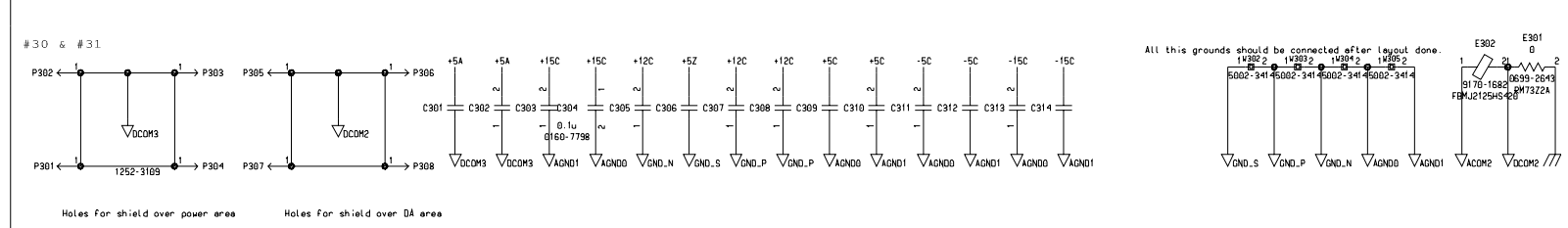


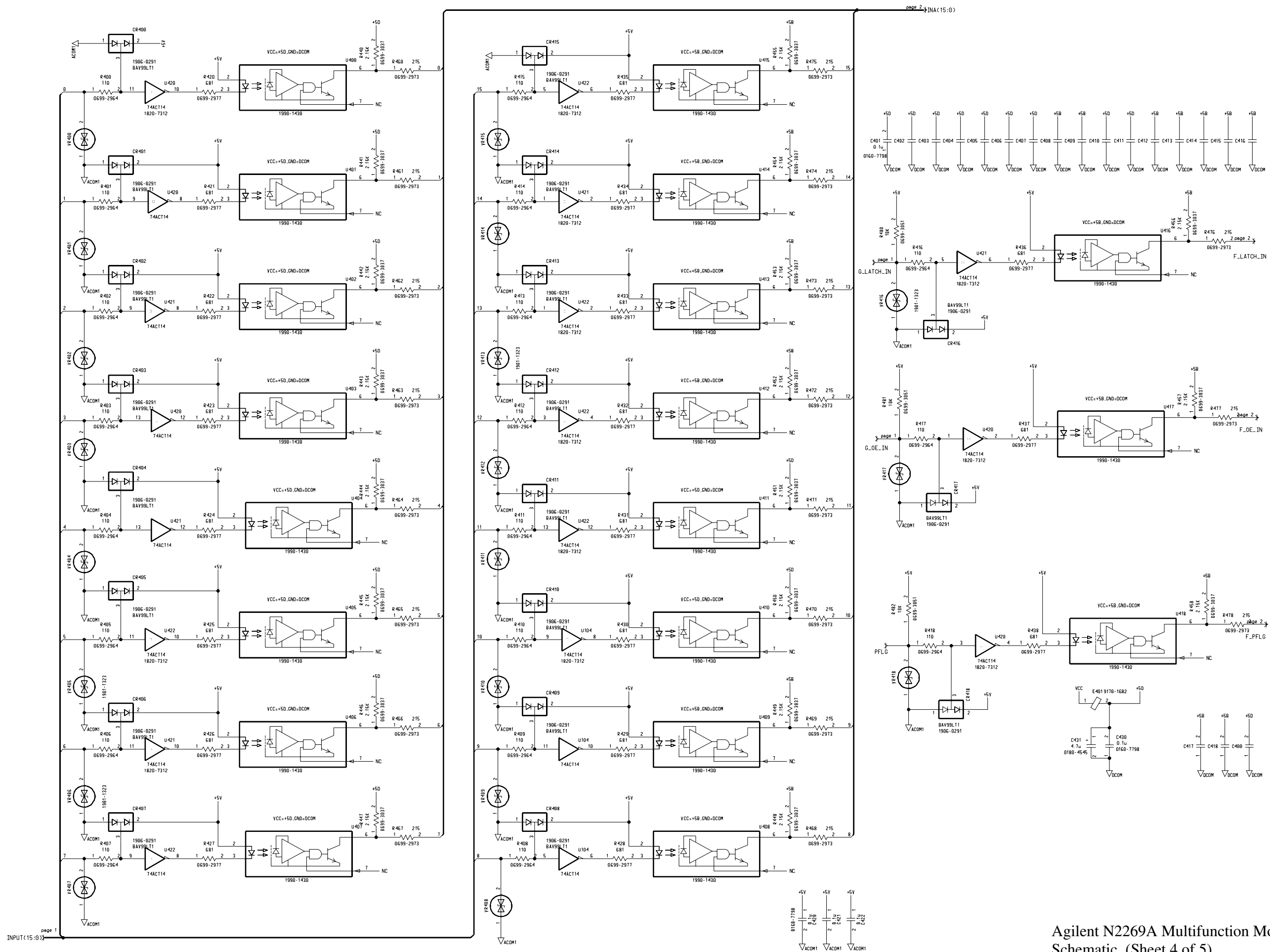
REF	SUPPLY	NET	PIN	NUMBER
U101	+5B	DCCM	8	
U102	+5V	ACQM1	5	
U104	+5V	ACQM1	14	
U421	+5V	ACQM1	7	
U523	+5B	DCCM	7	
U533	+5V	ACQM1	7	
U536	+5V	ACQM1	7	

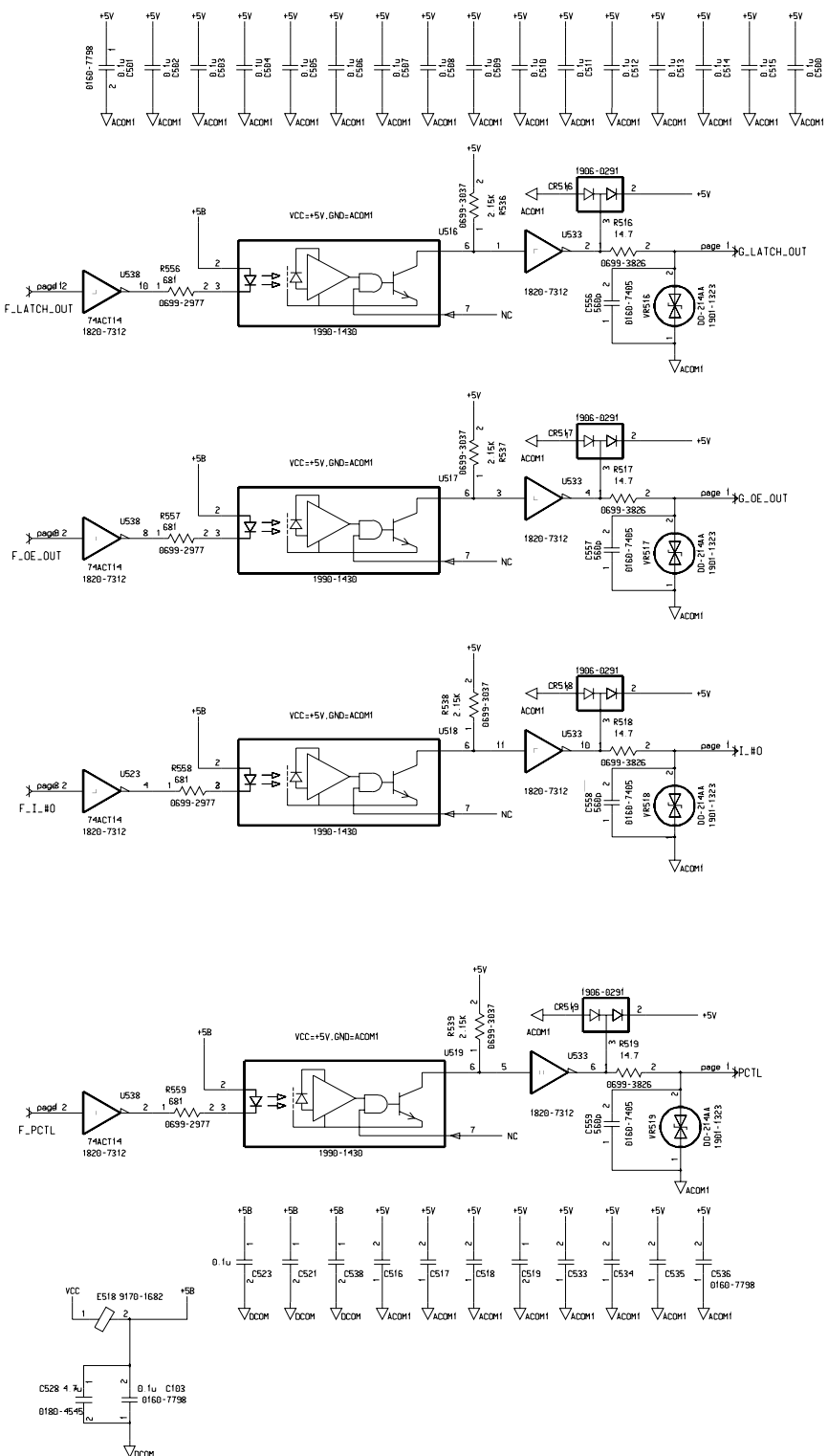
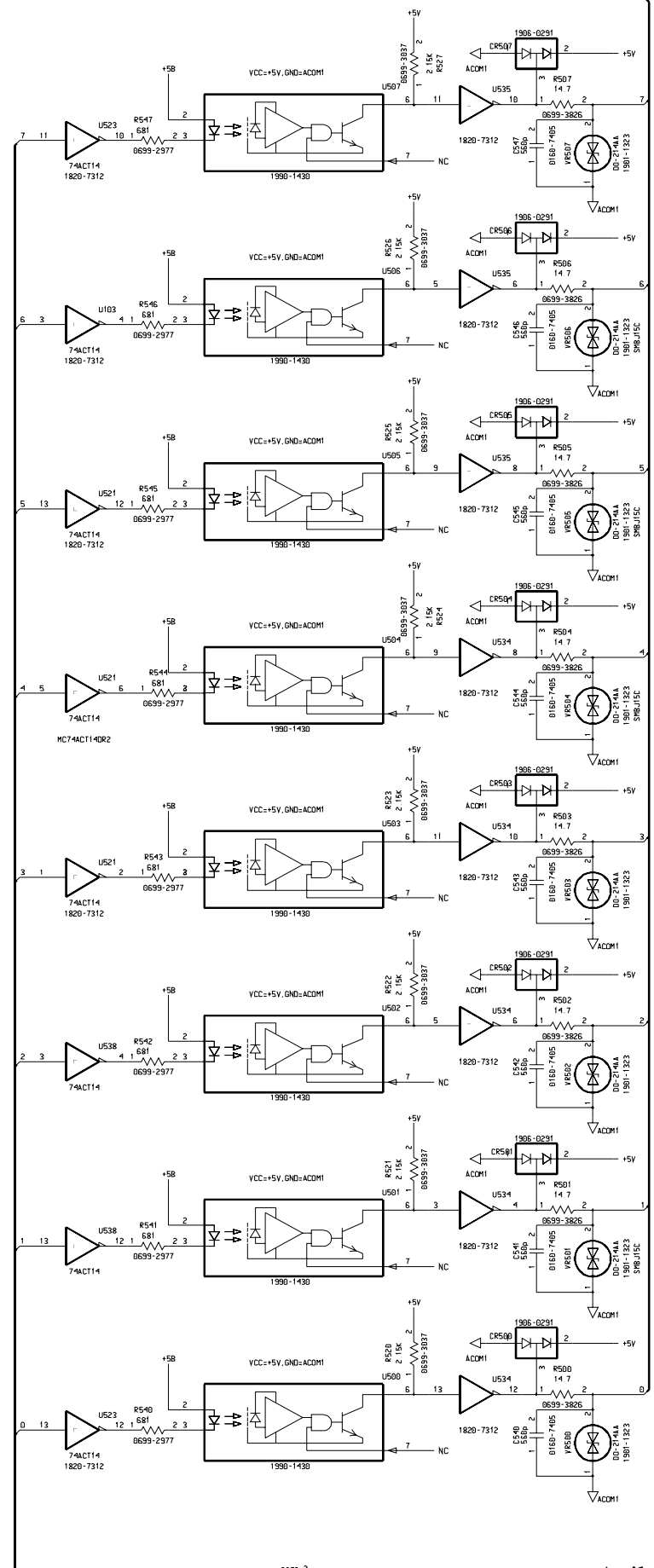
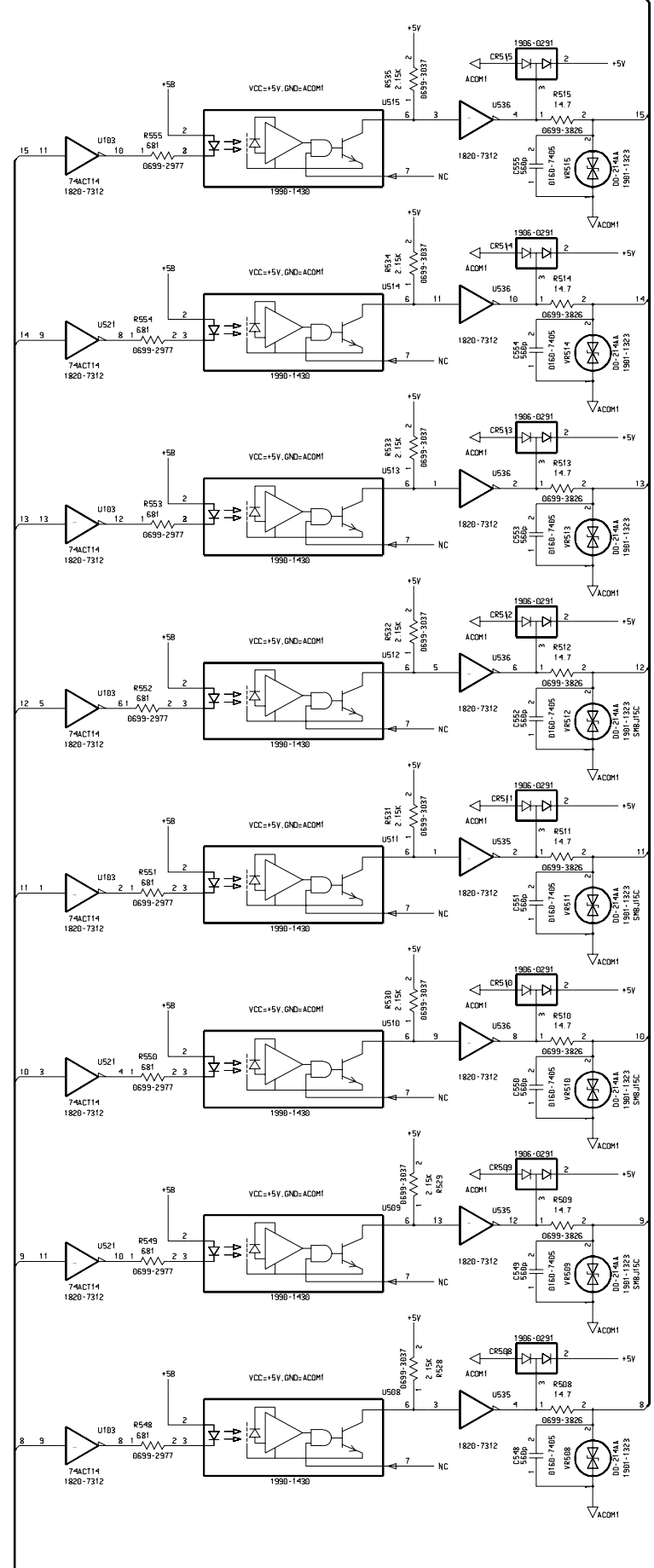


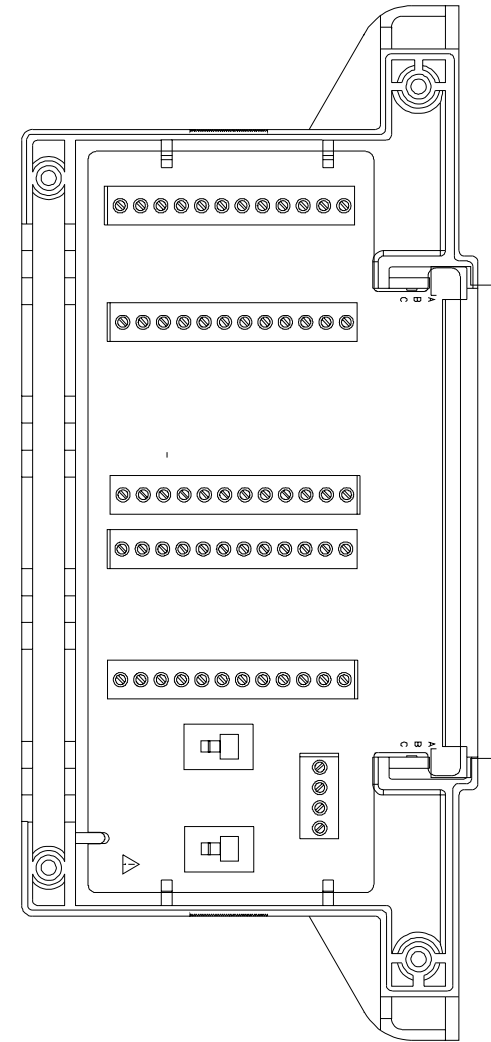


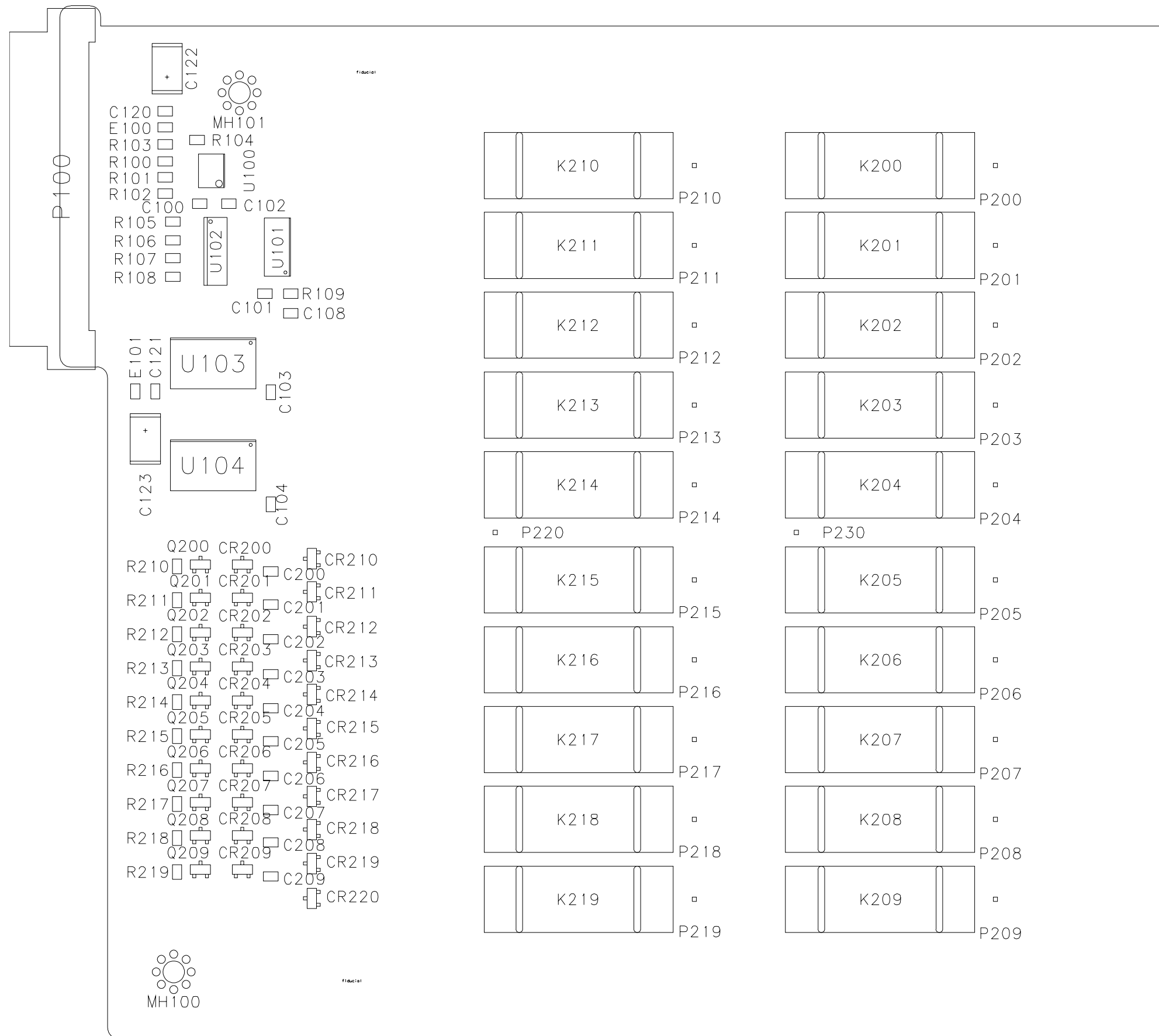
REF DES	SUPPLY	PIN	NUMBER
U301	+5A	3	16
U301	+5C	16	1
U301	-5C	12	1
U301	AGND1	12	2
U302	+5A	3	16
U302	+5C	16	1
U302	-5C	12	1
U302	AGND0	12	2
U303	+5C	7	4
U303	-5C	4	4
U304	+5C	7	4
U304	-5C	4	4
U306	+5C	8	4
U307	+5C	6	4
U307	+5C	7	4
U307	+5C	8	4

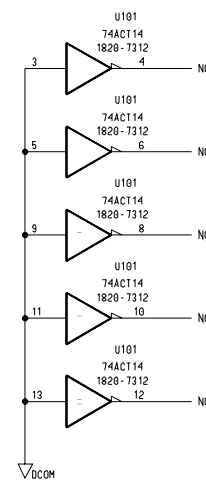
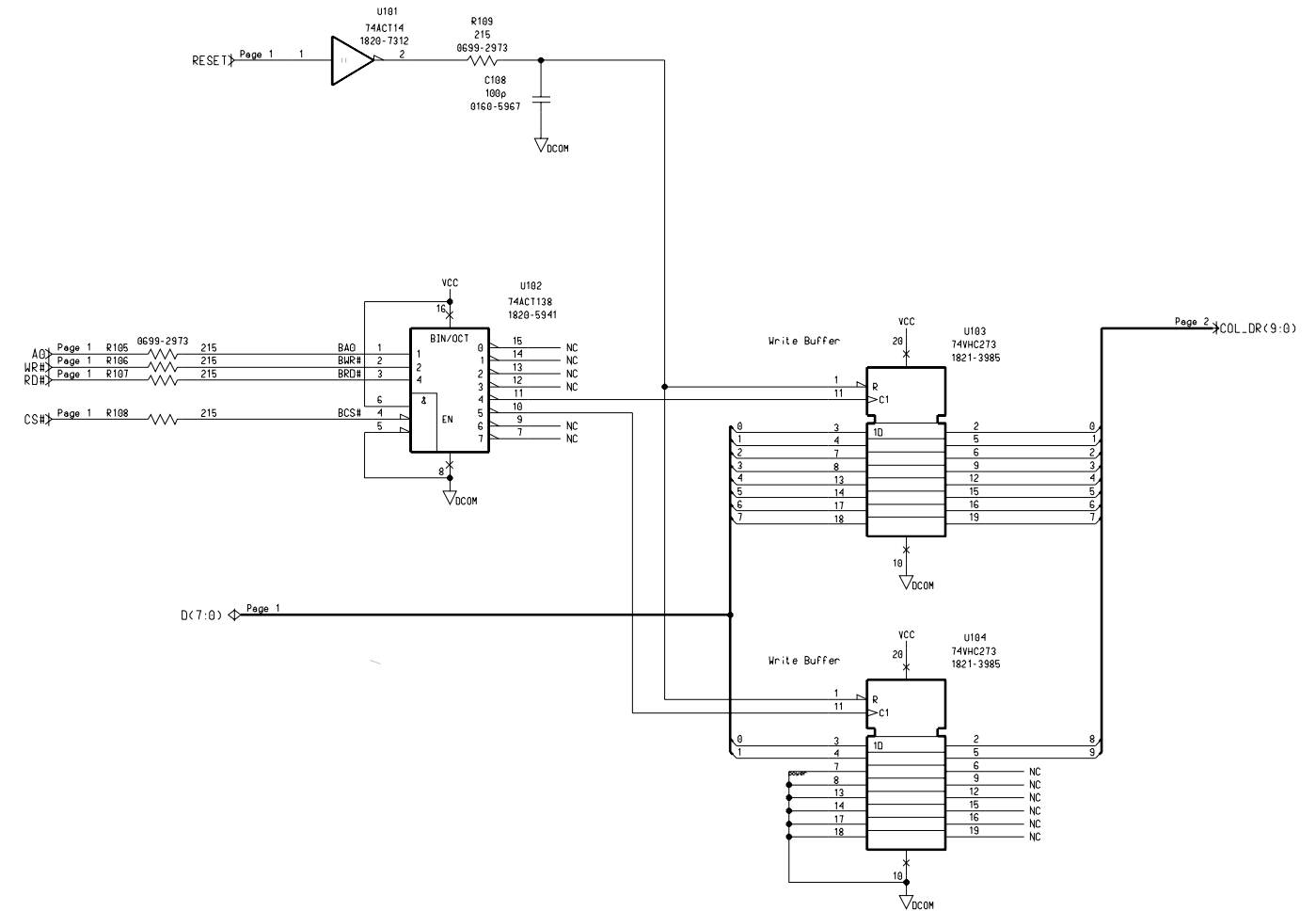
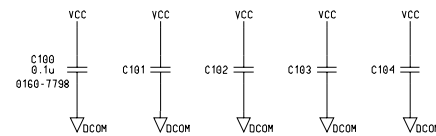
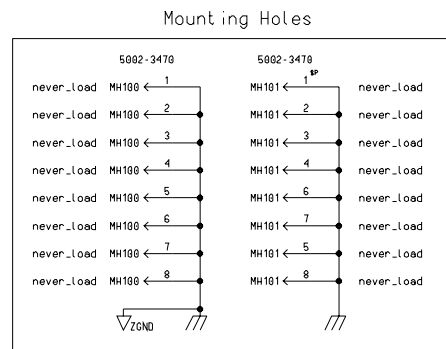
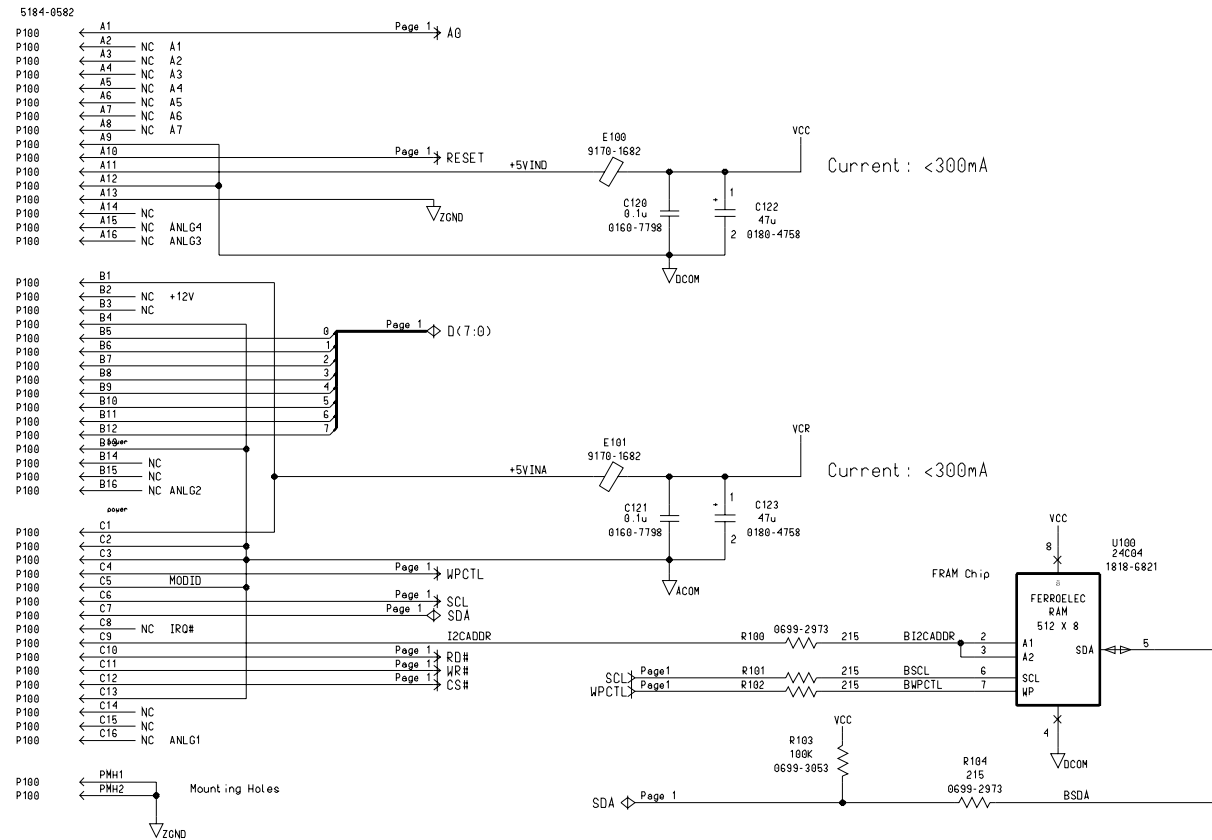


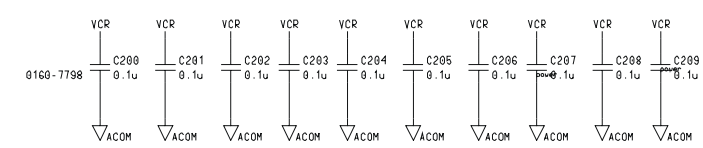
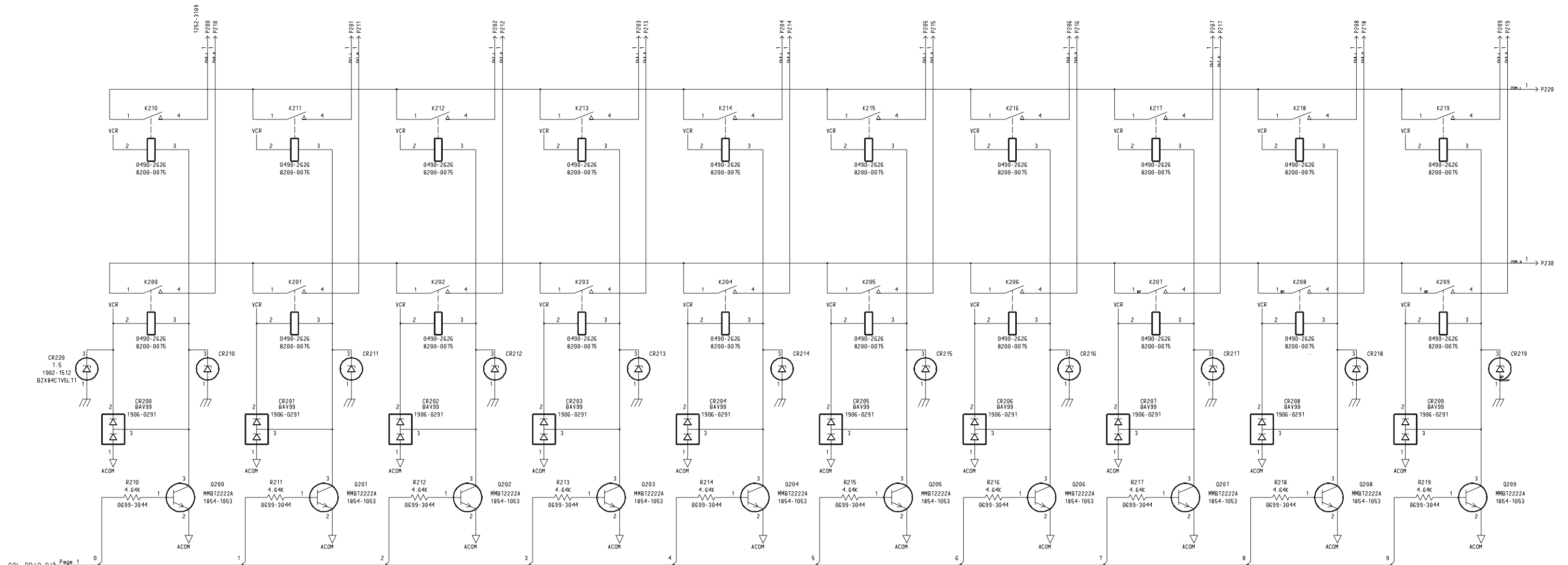


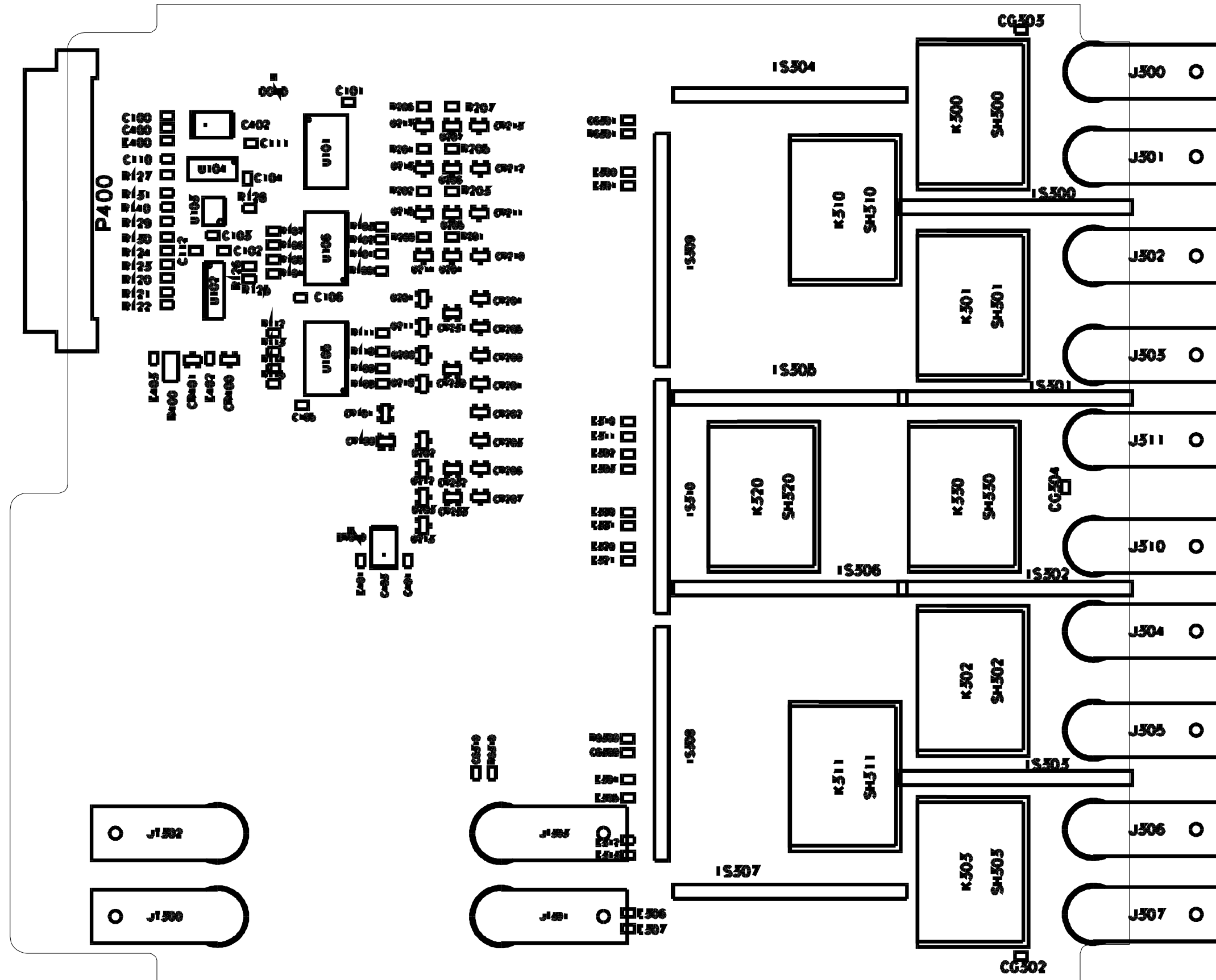


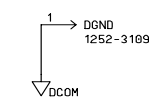
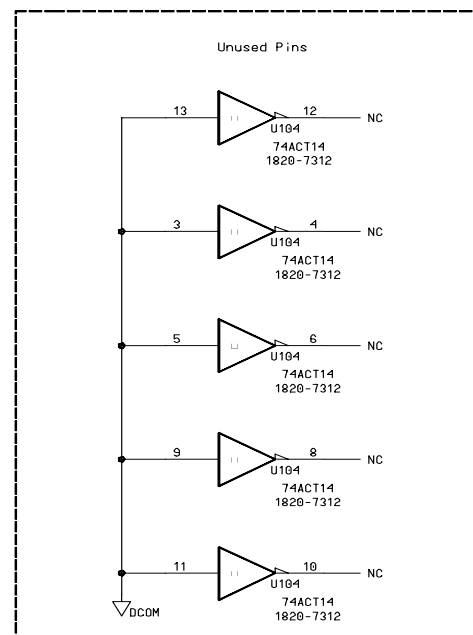
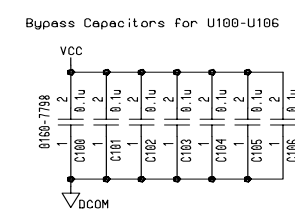
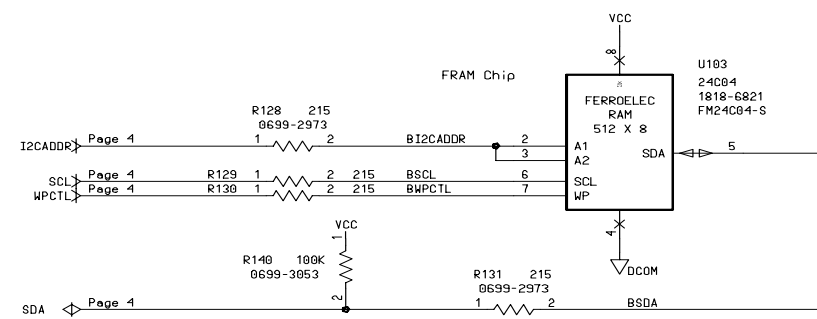
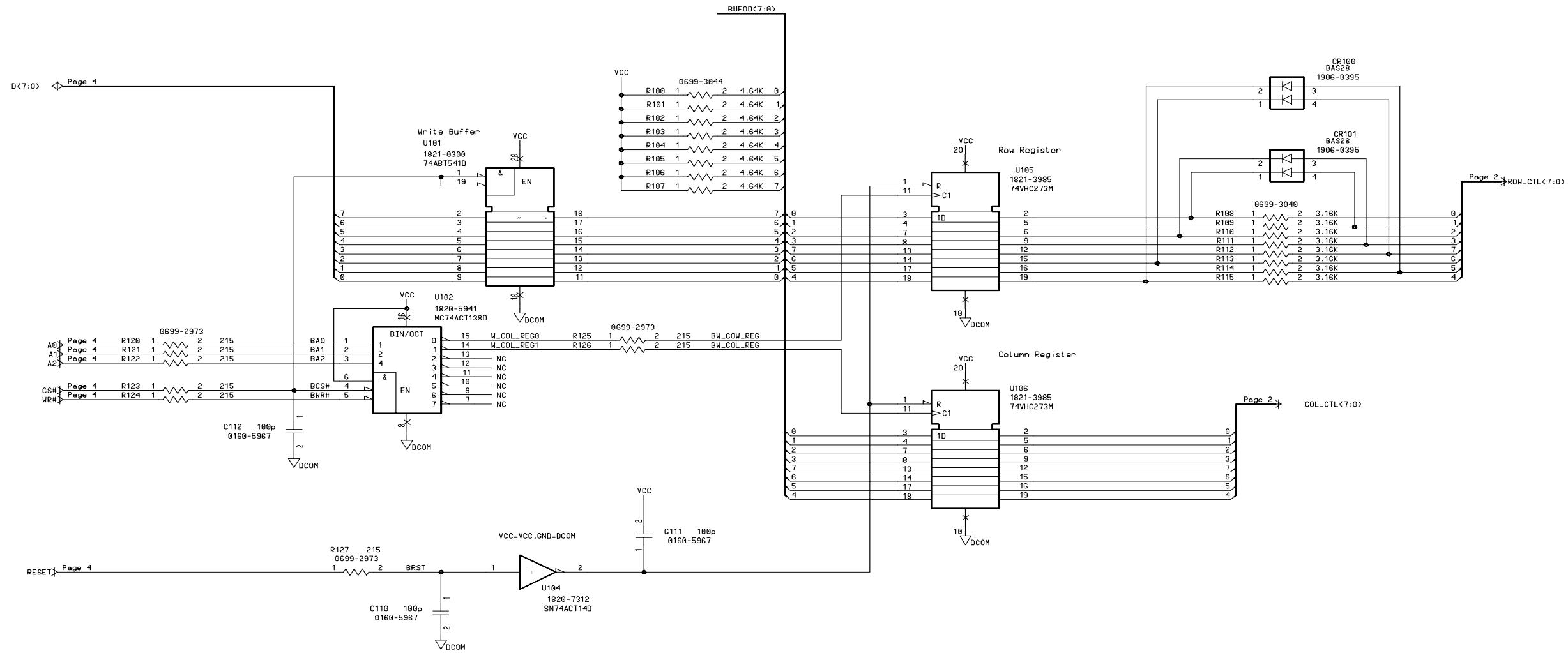


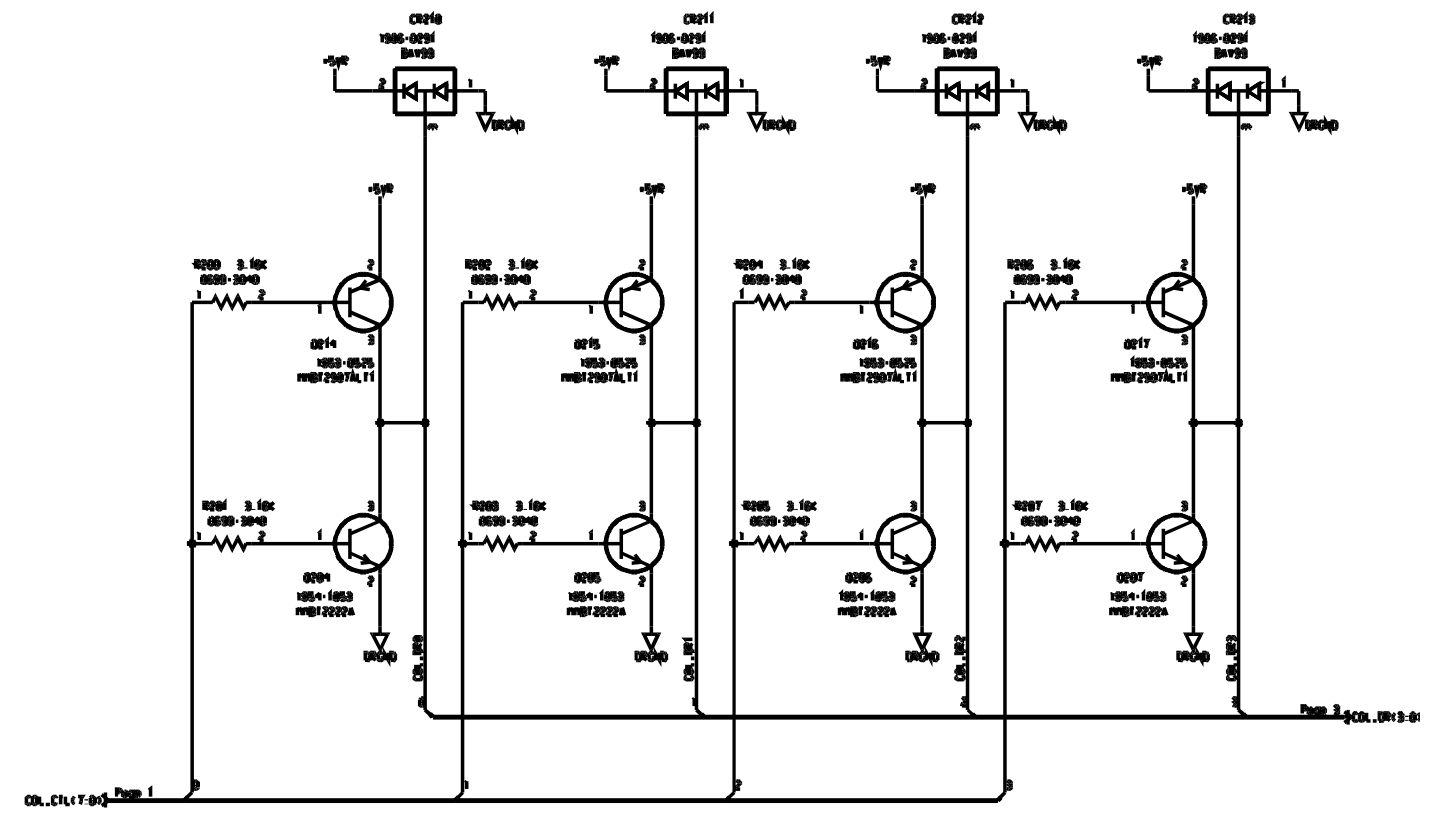
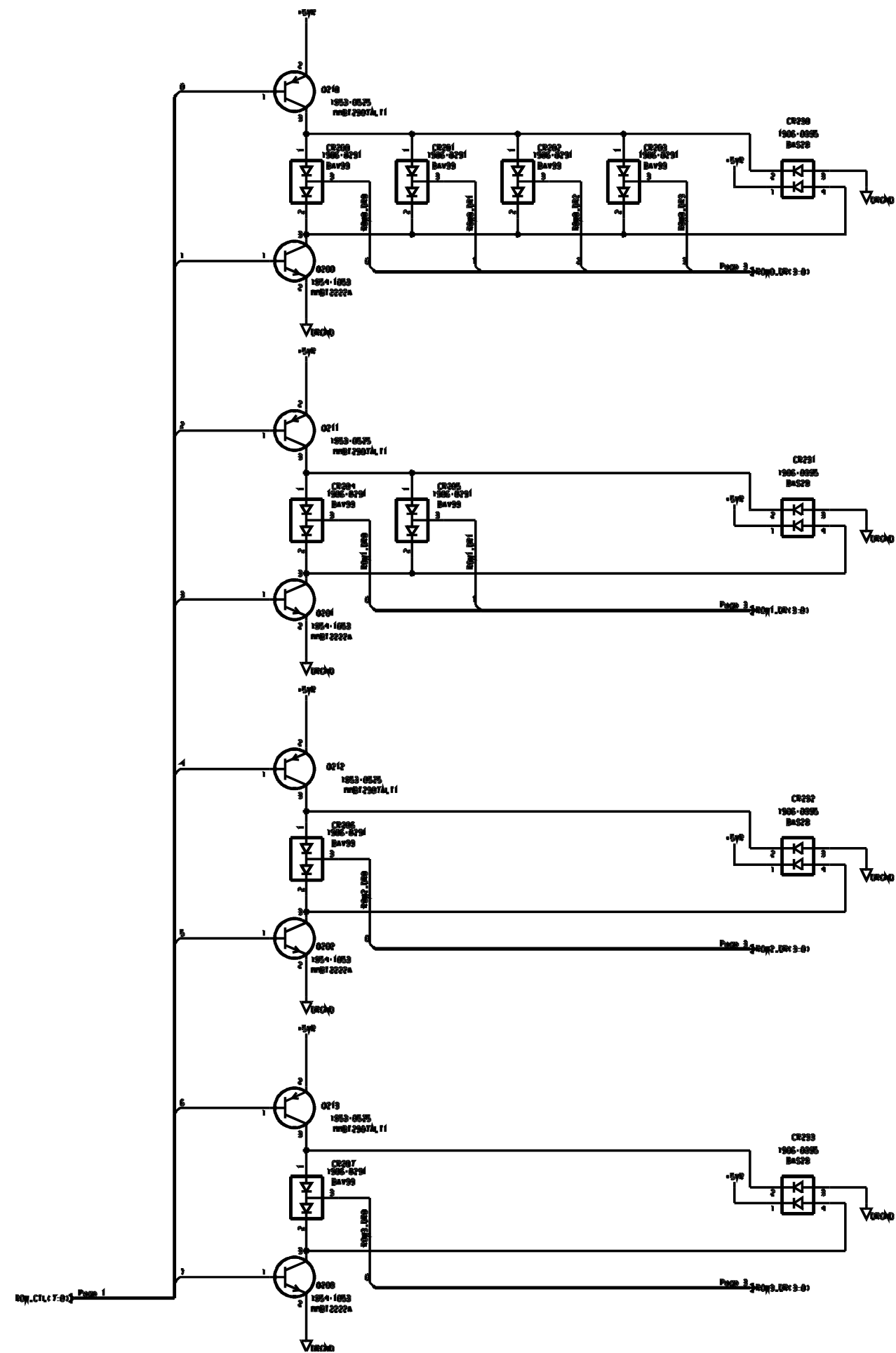




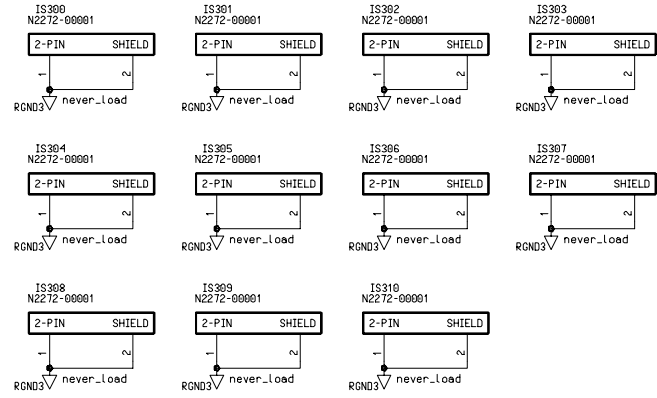




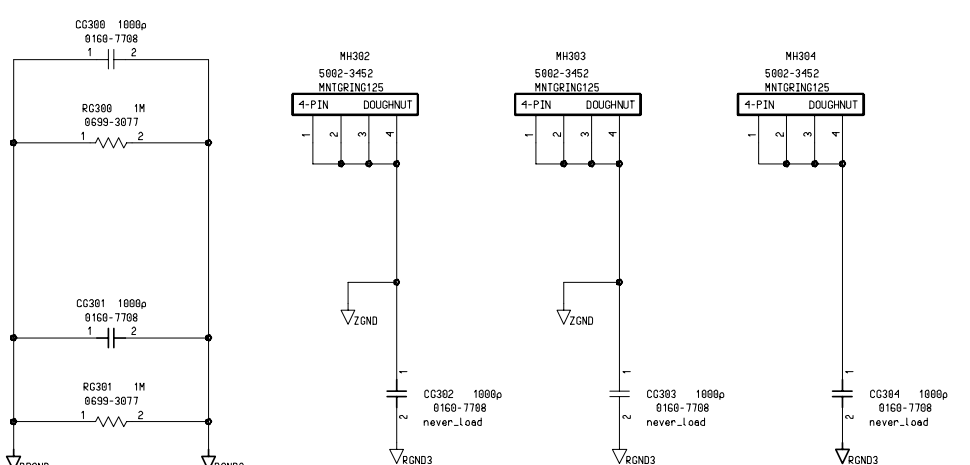
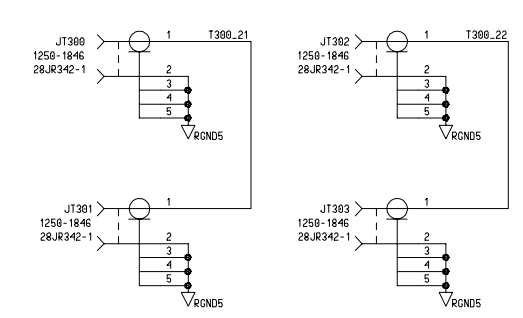
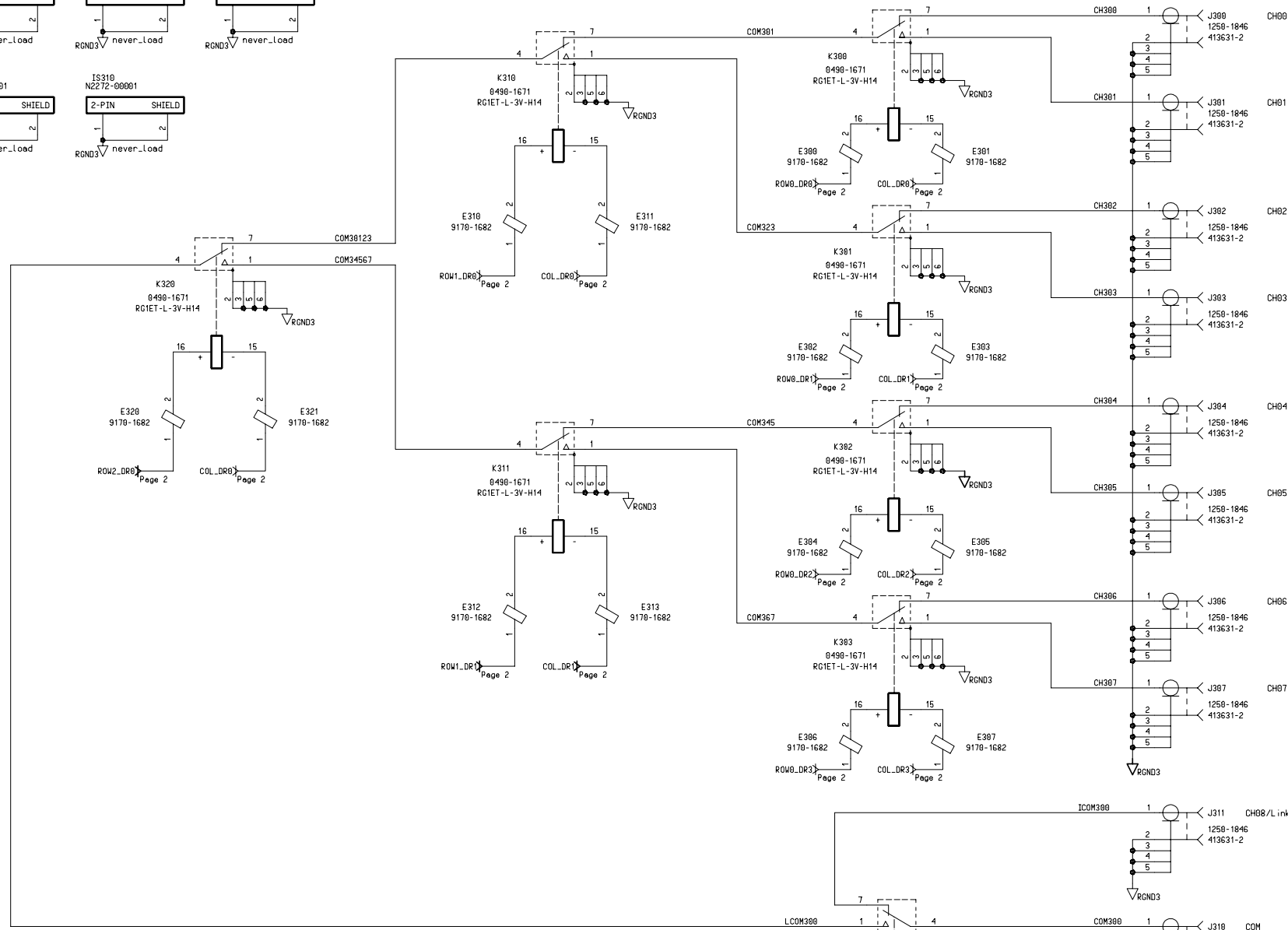
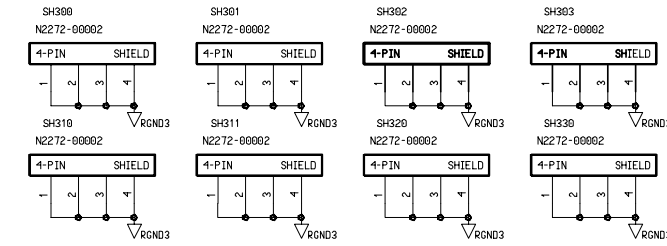




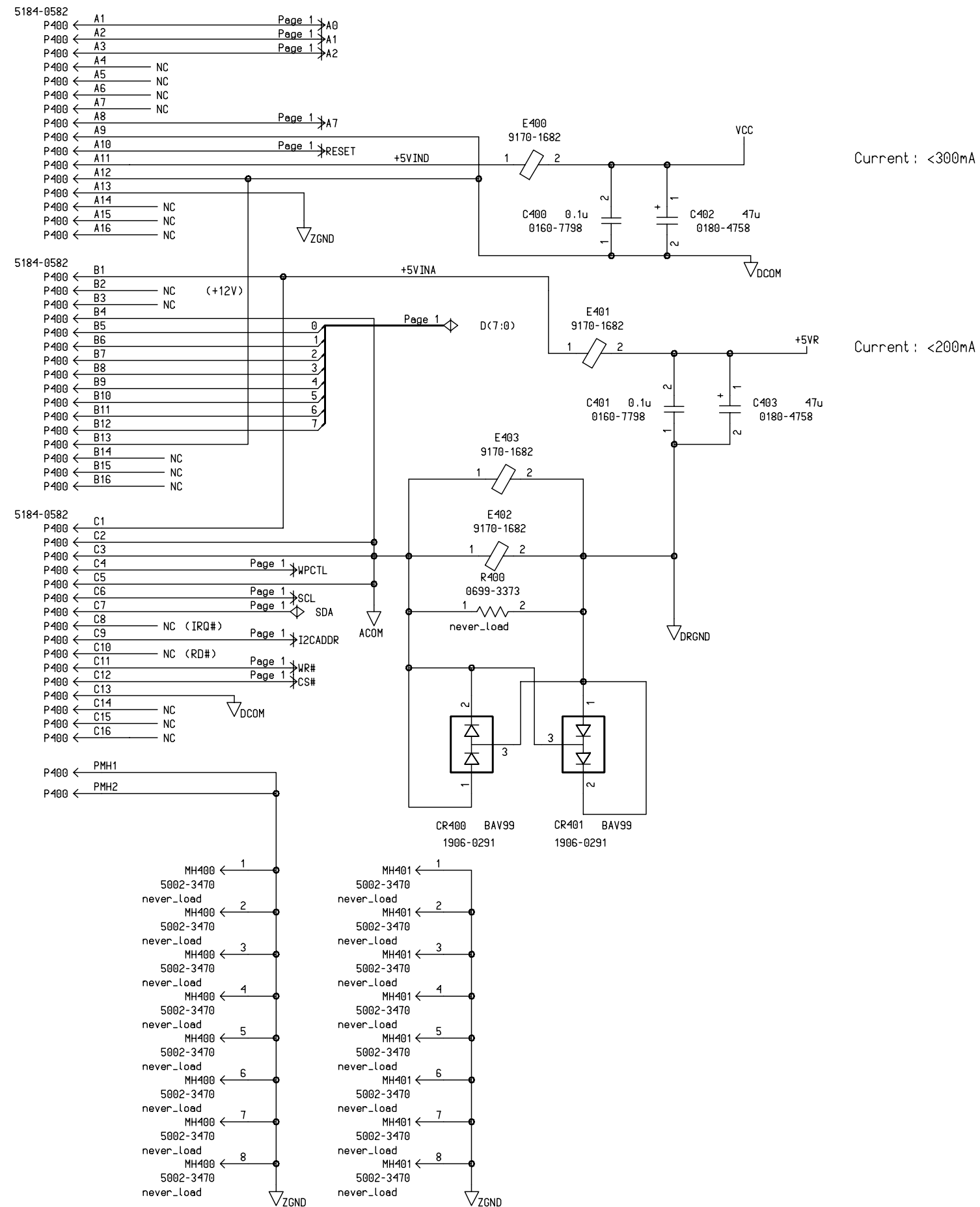
Metal bars between relays

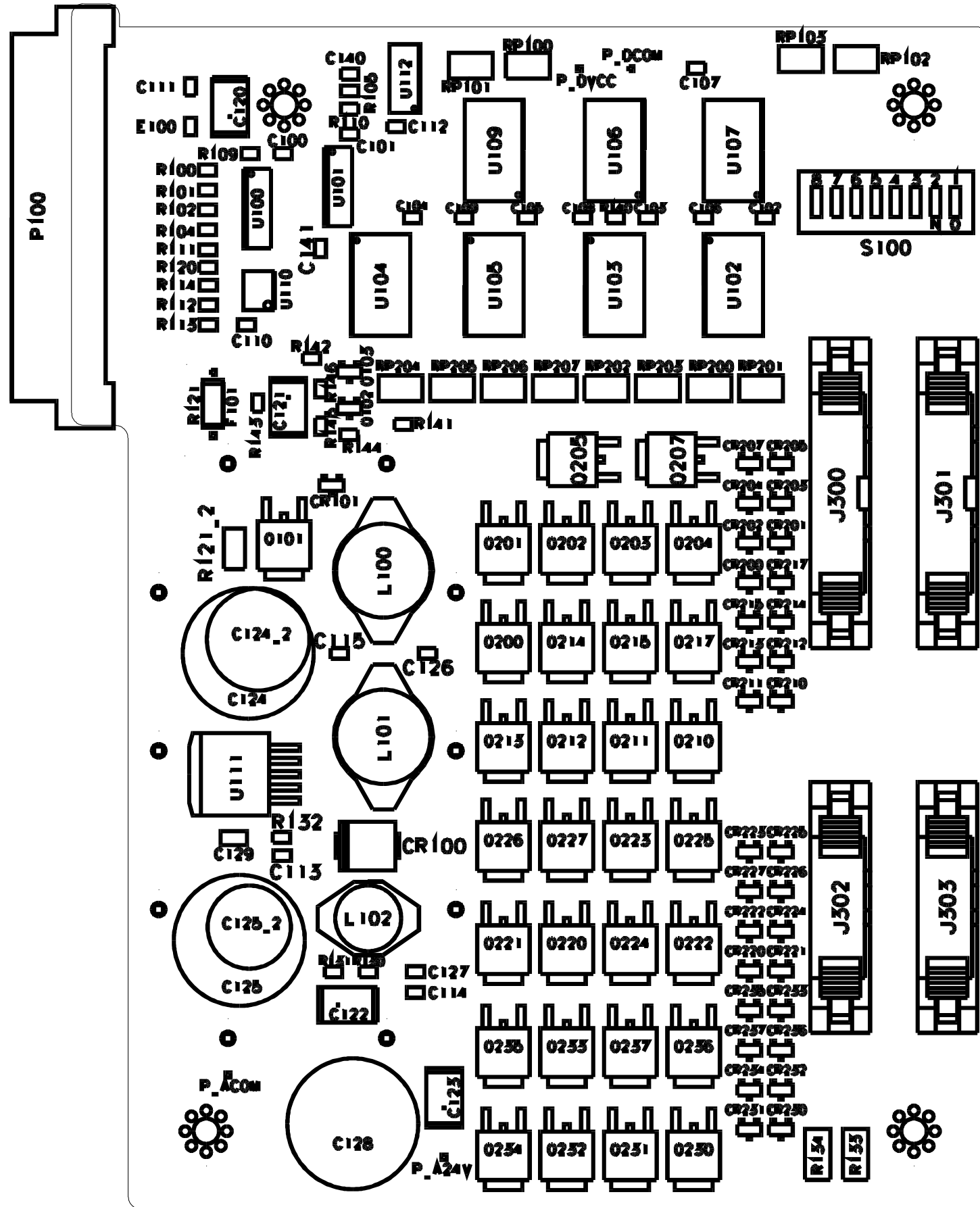


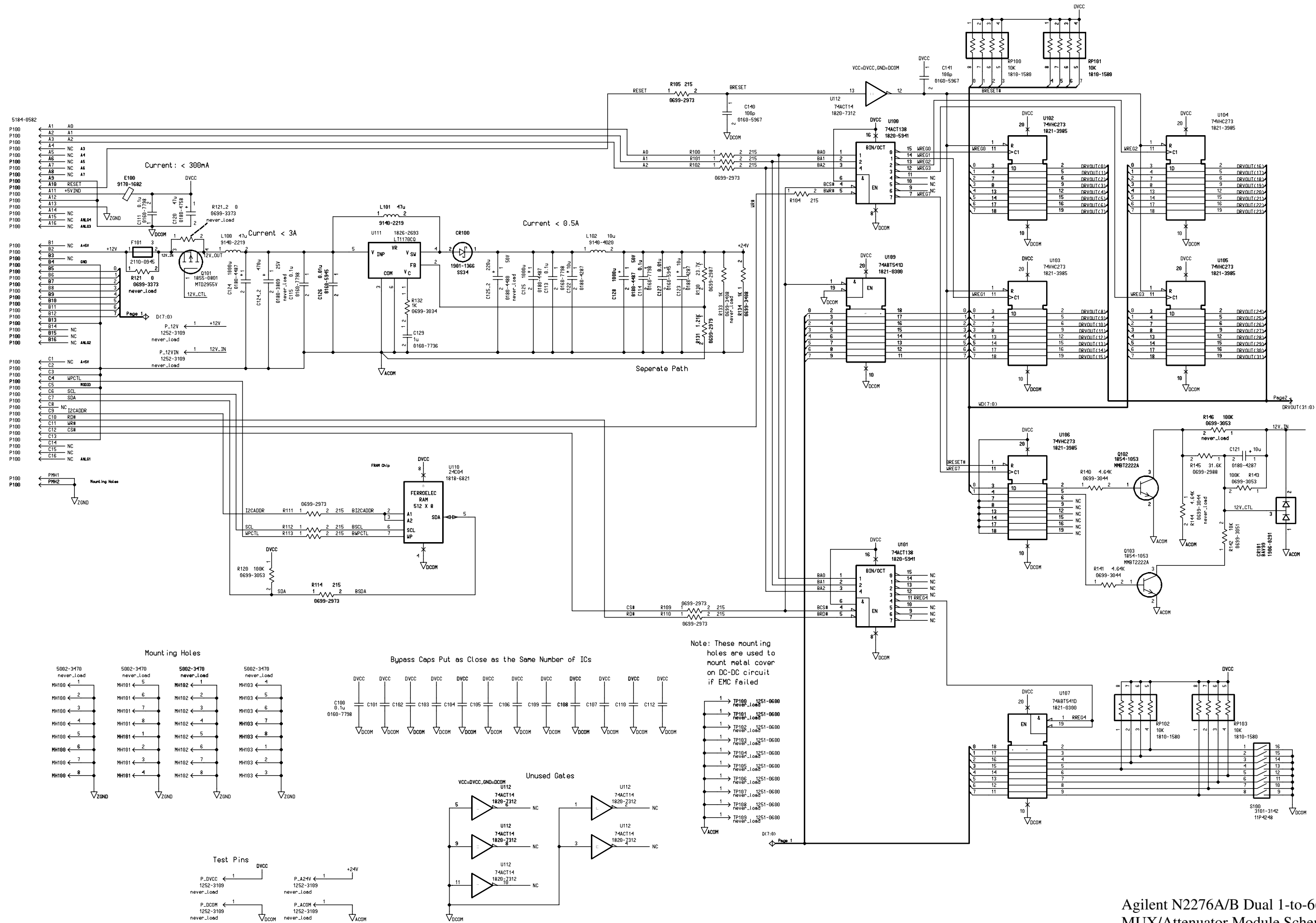
Metal covers for relays



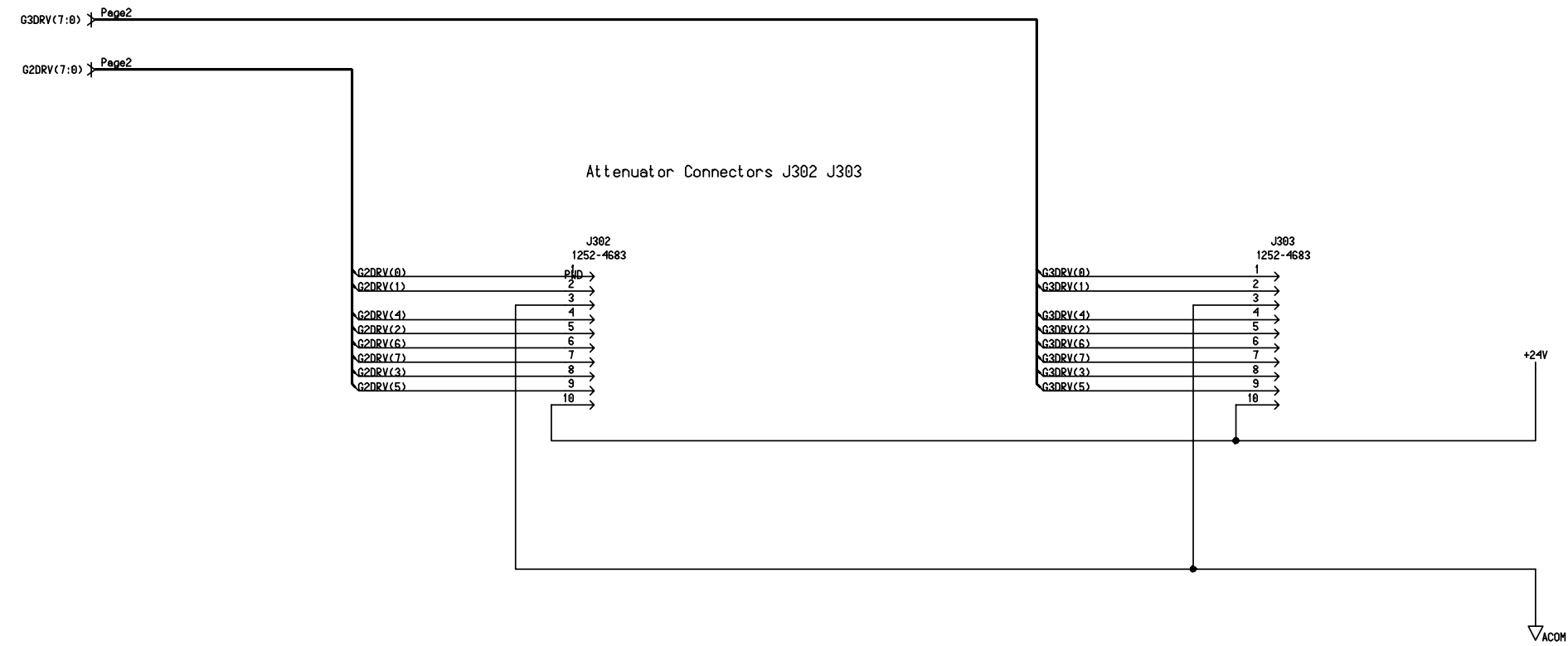
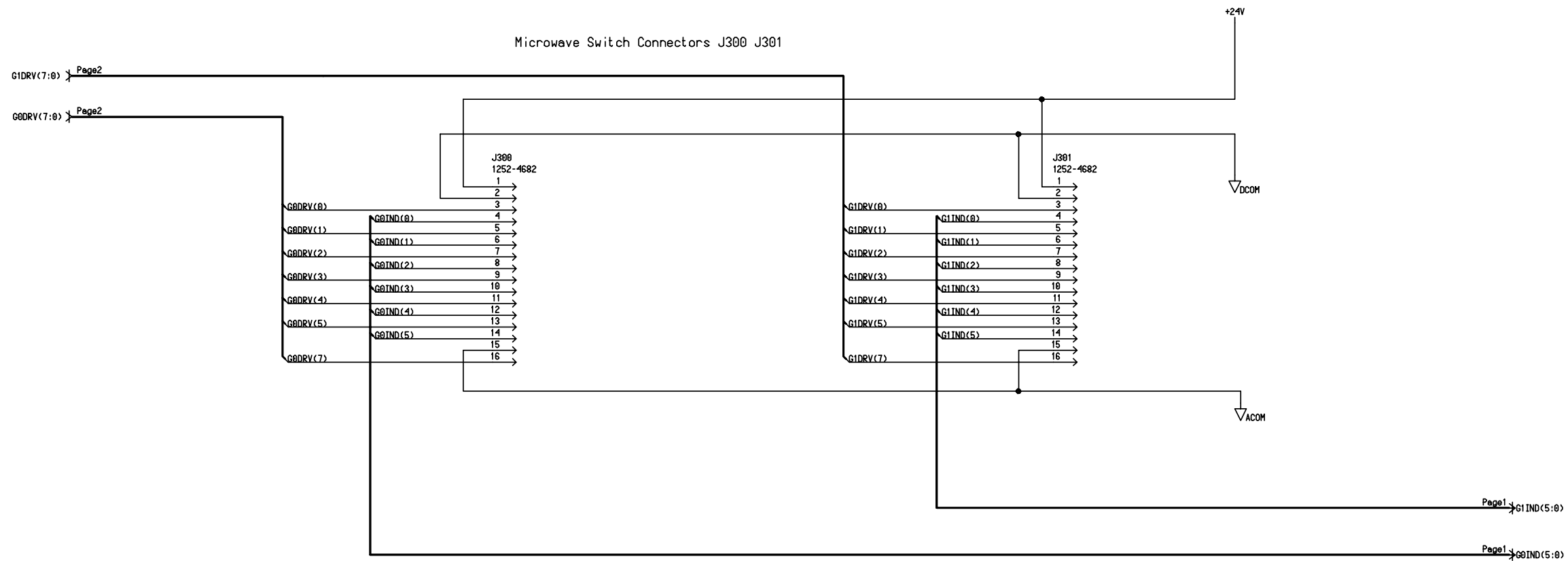
Backplane Connector

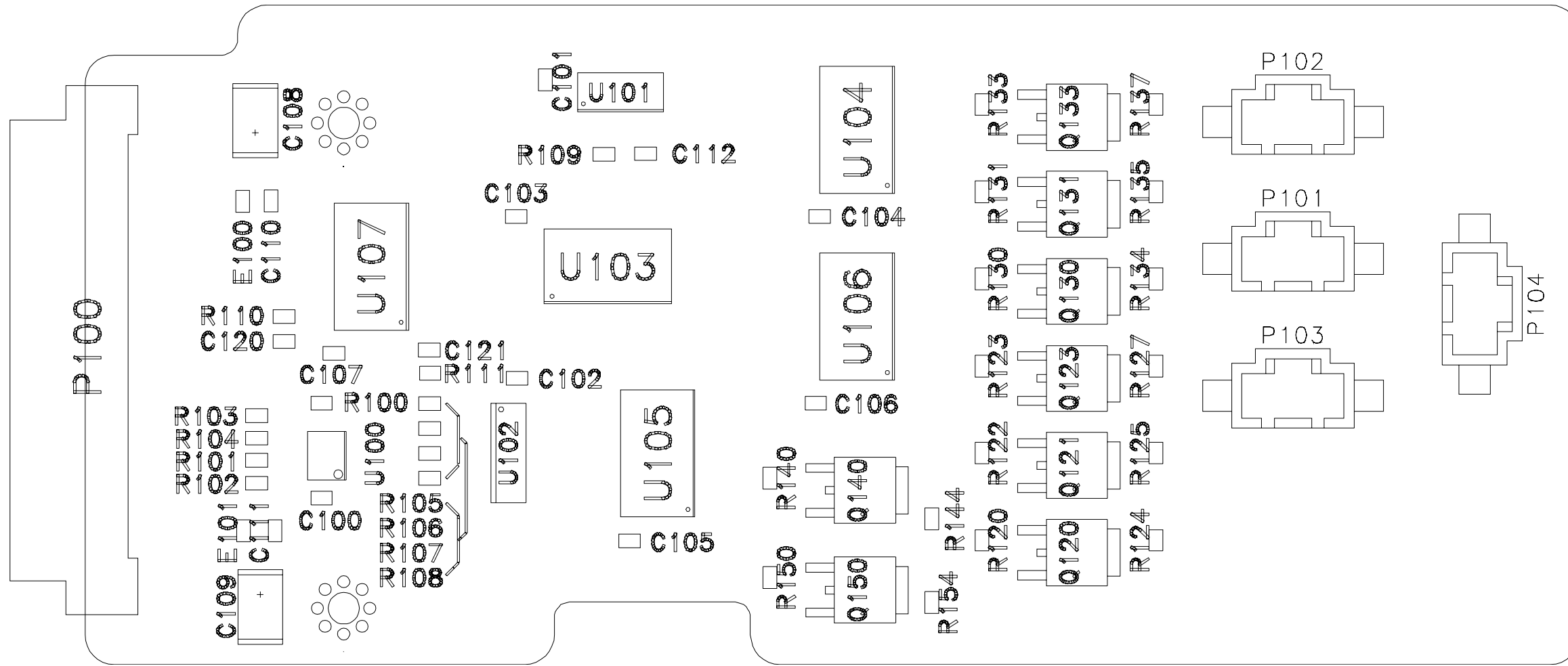


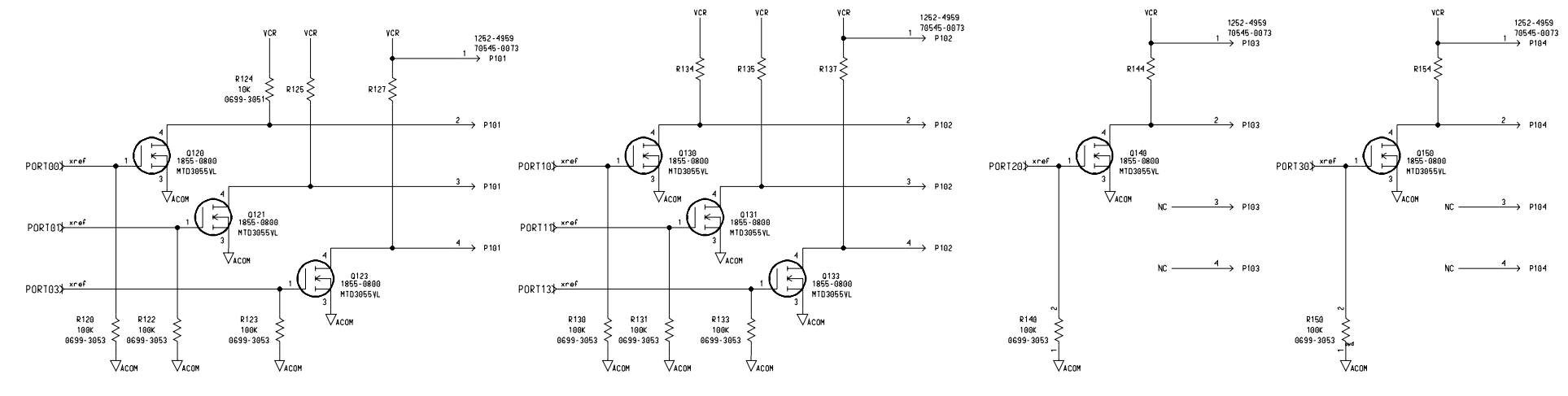
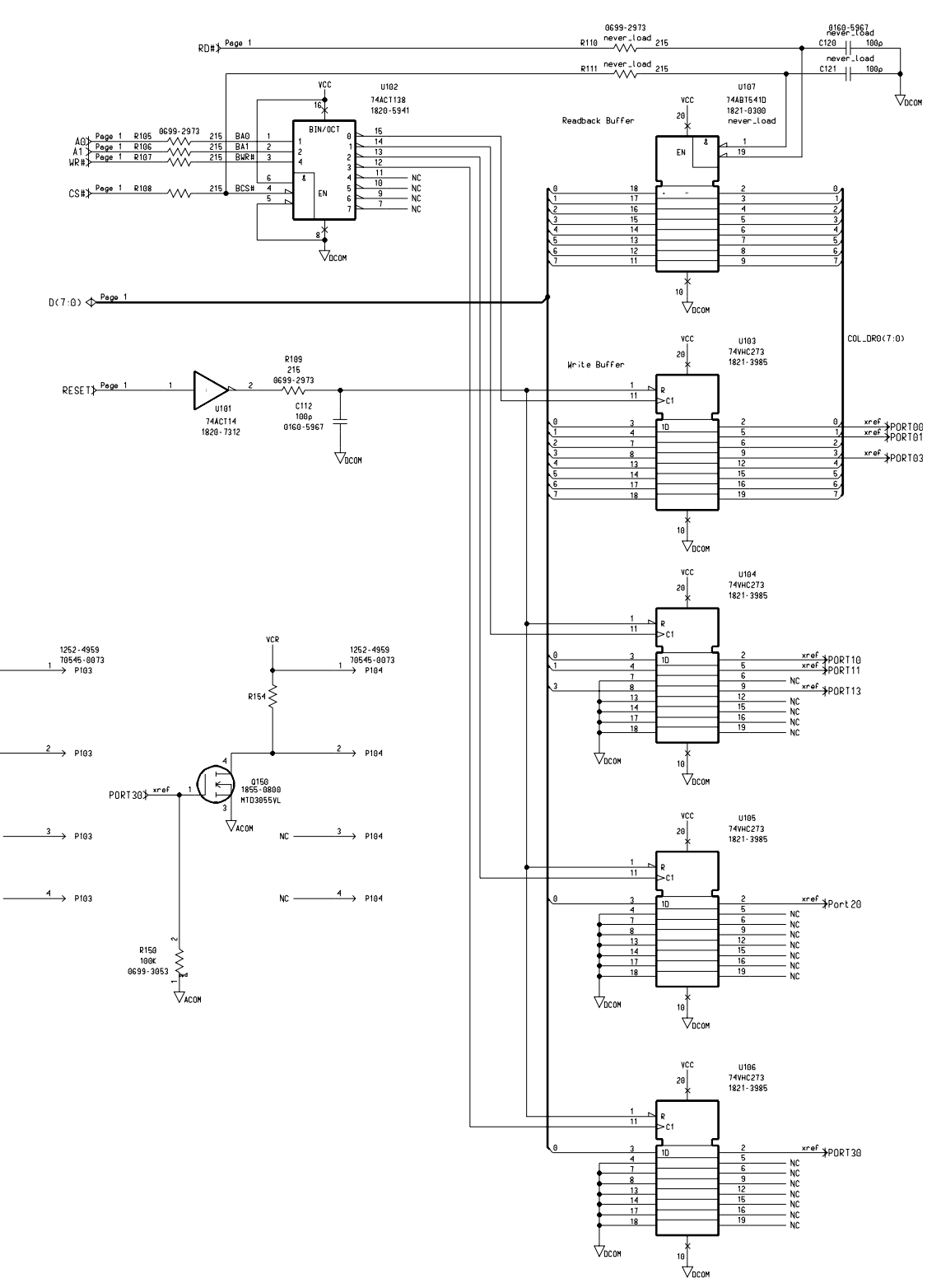
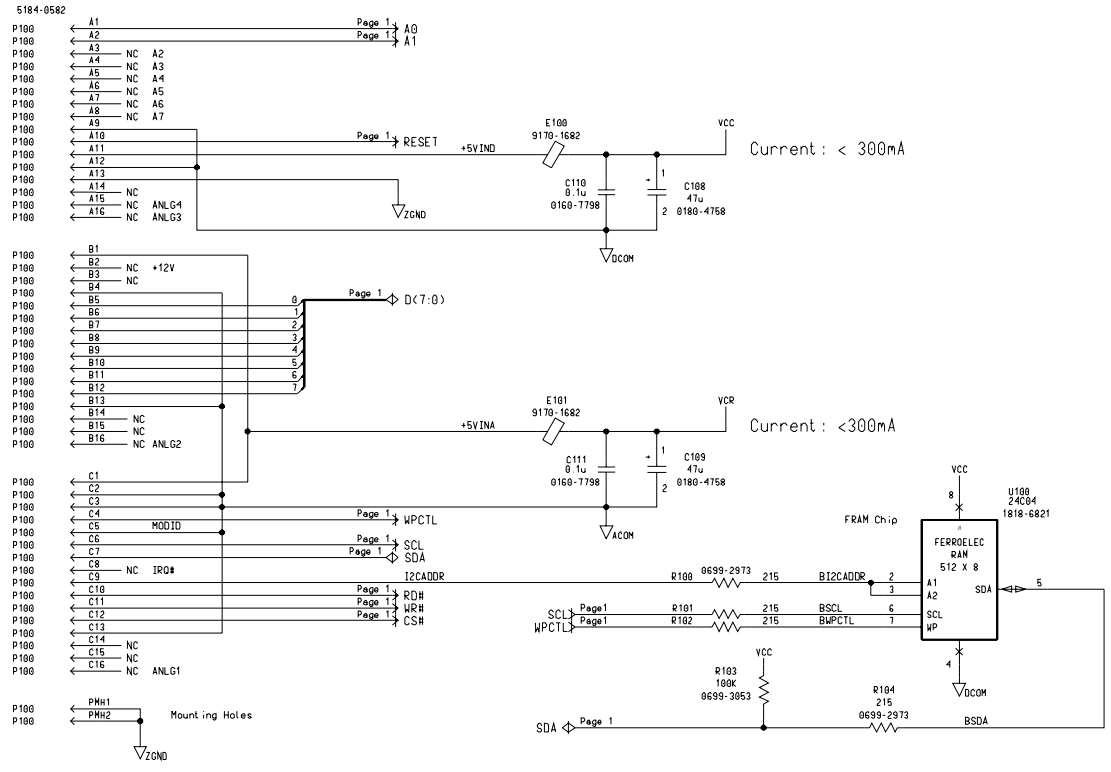




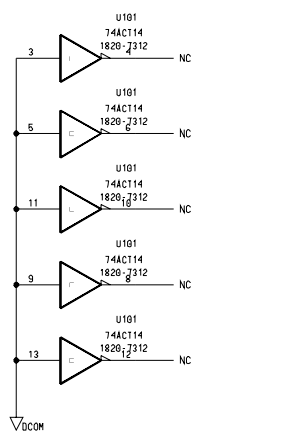
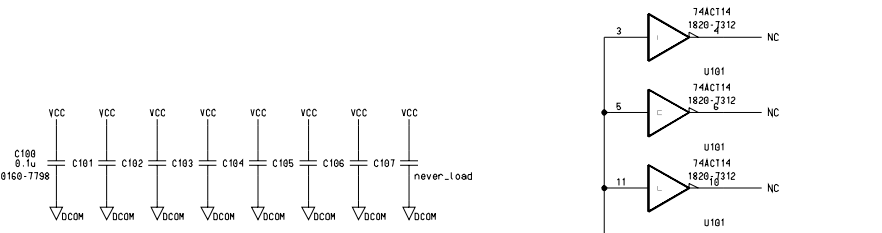
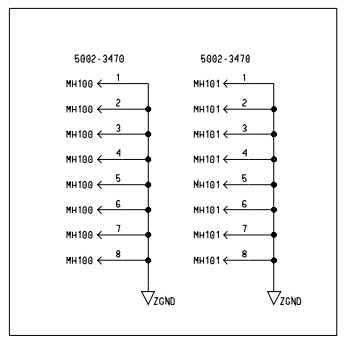


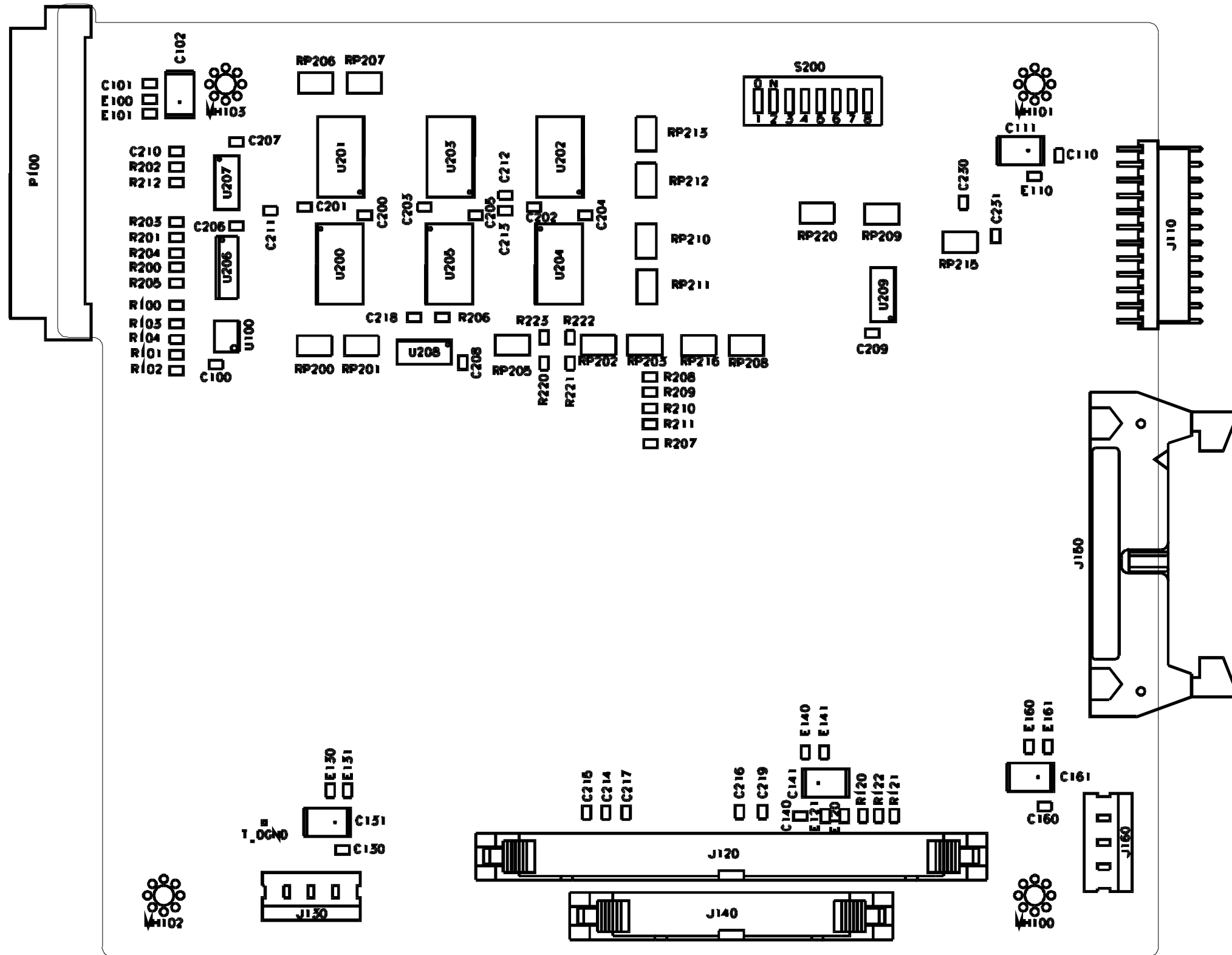




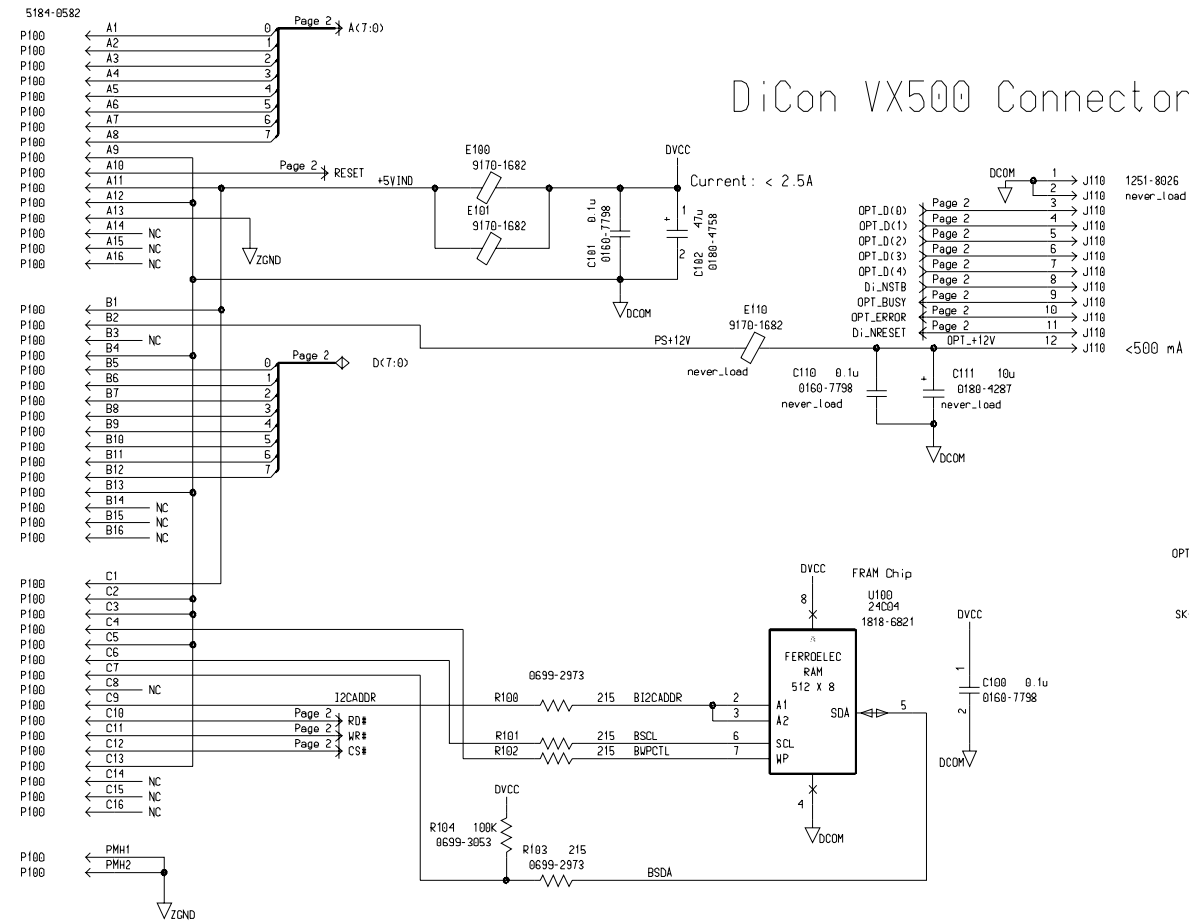


Mounting Holes



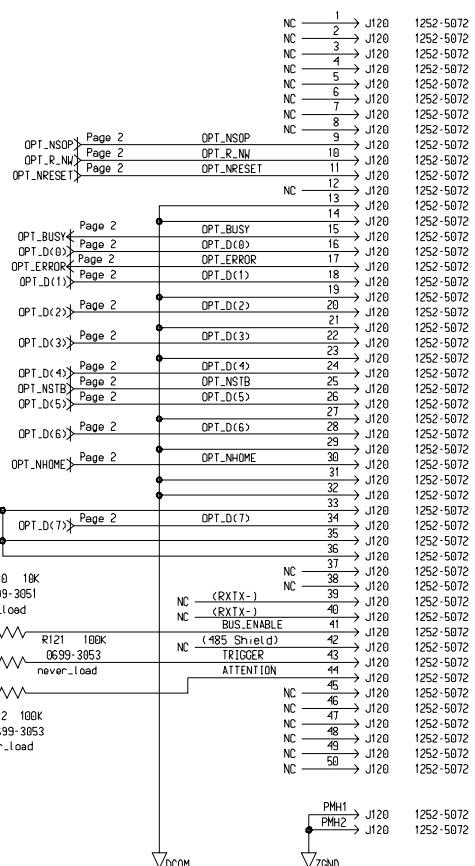


Backplane Connector

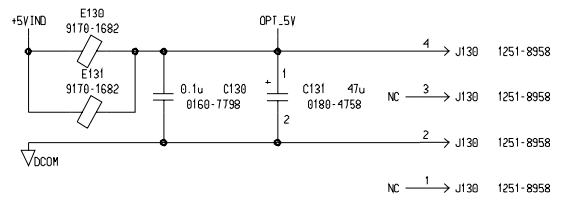


DiCon VX500 Connector

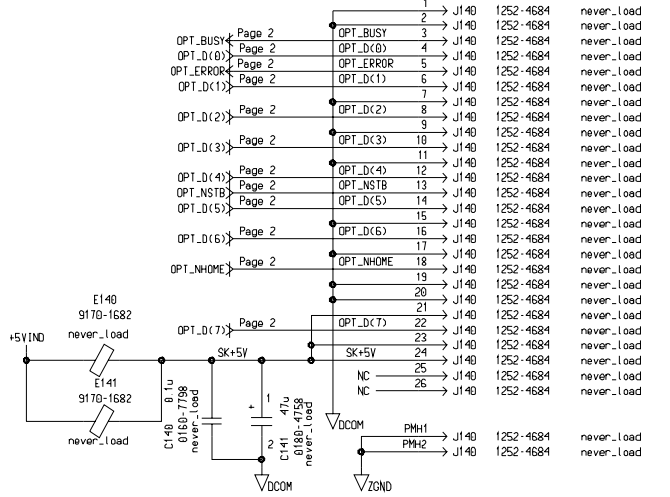
Parallel SKB Connector (IDE50)



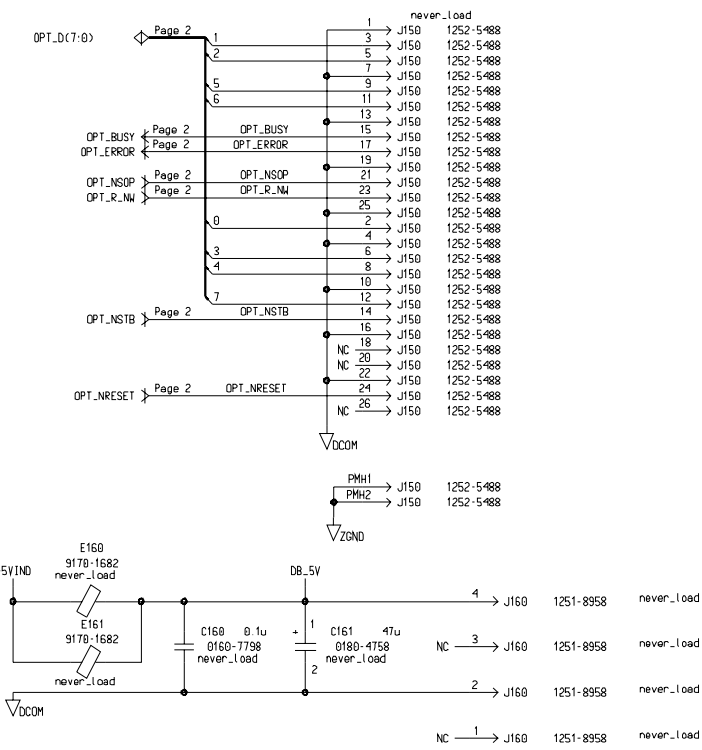
Power for Switch (Twisted for SKB)



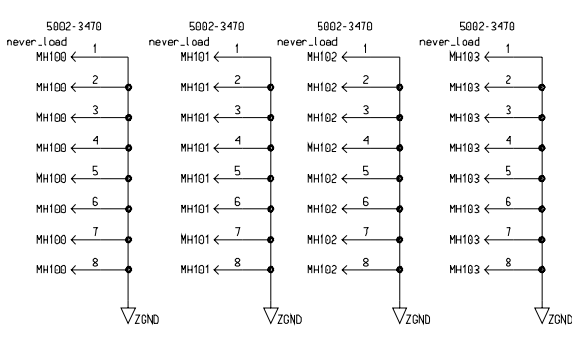
Parallel SK Connector (IDE26)

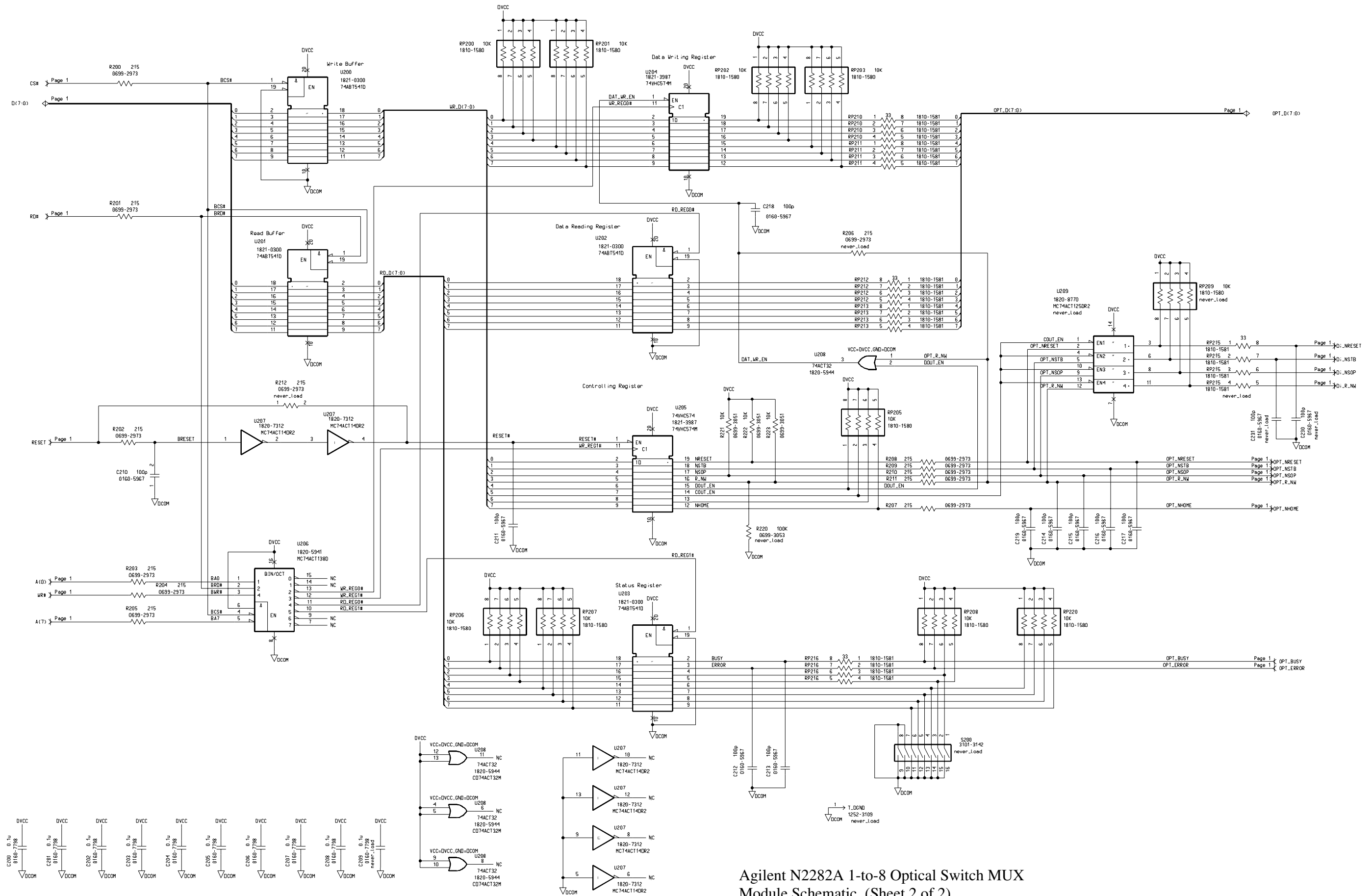


Parallel Interface (For SKB to D25)

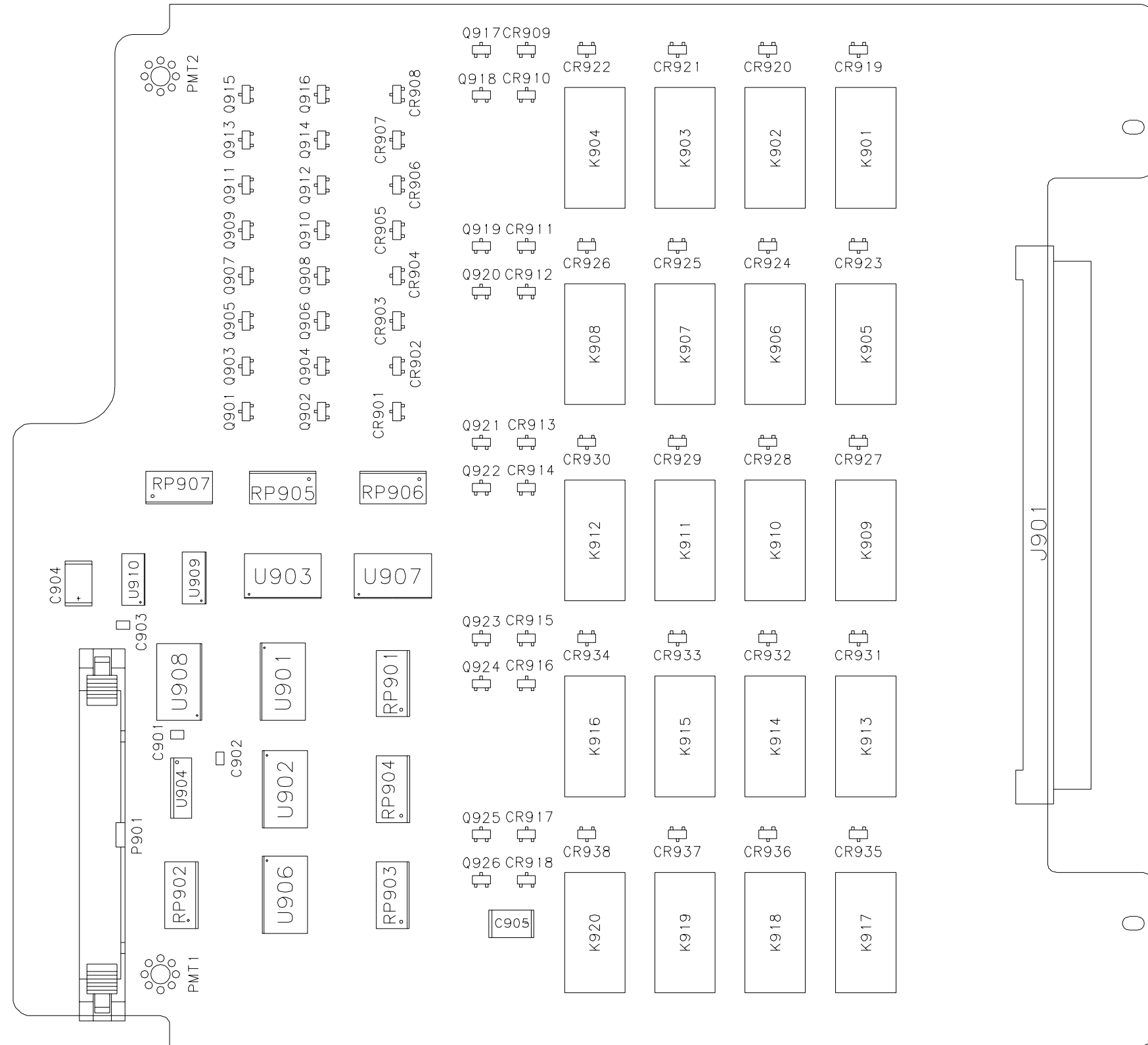


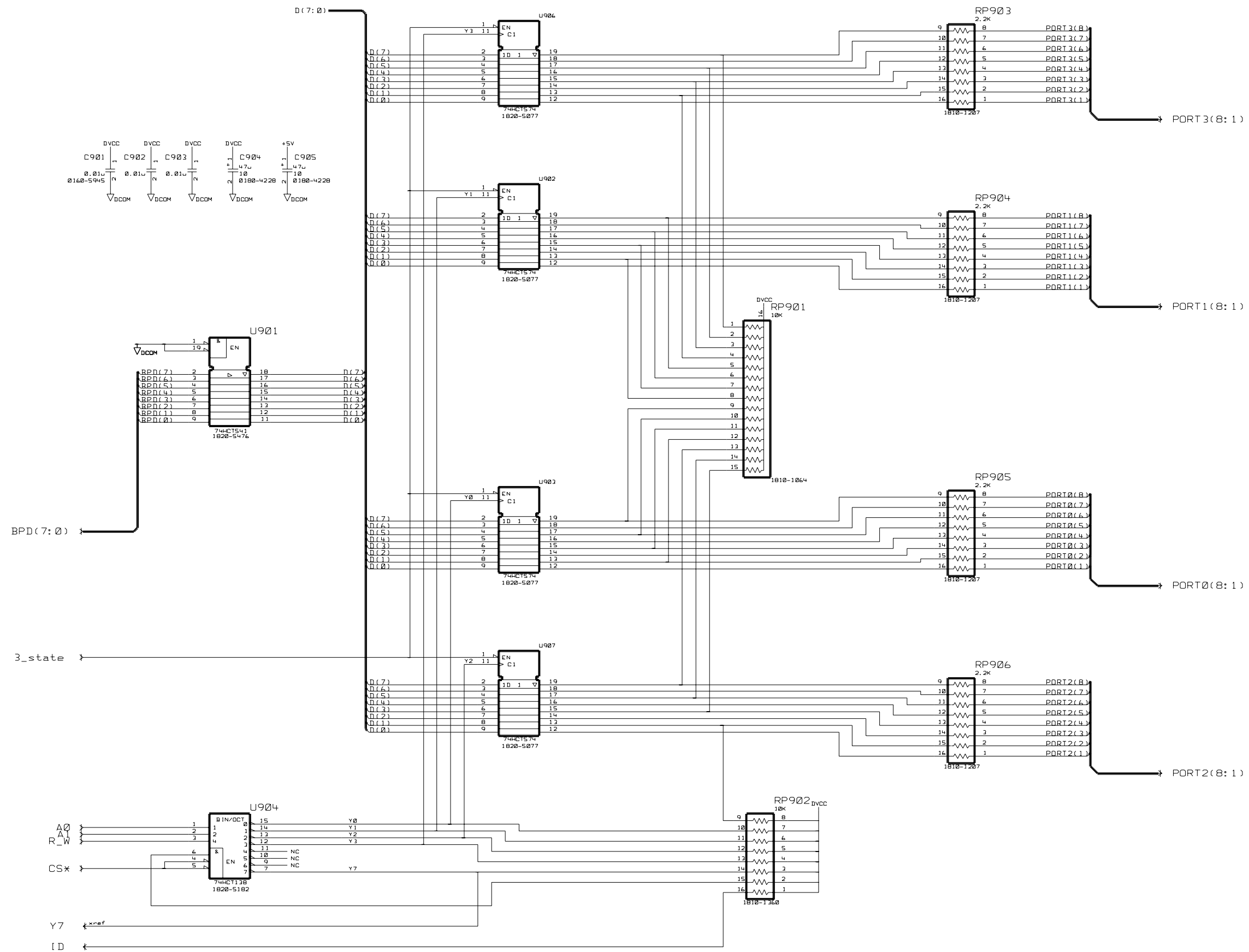
Mounting Holes

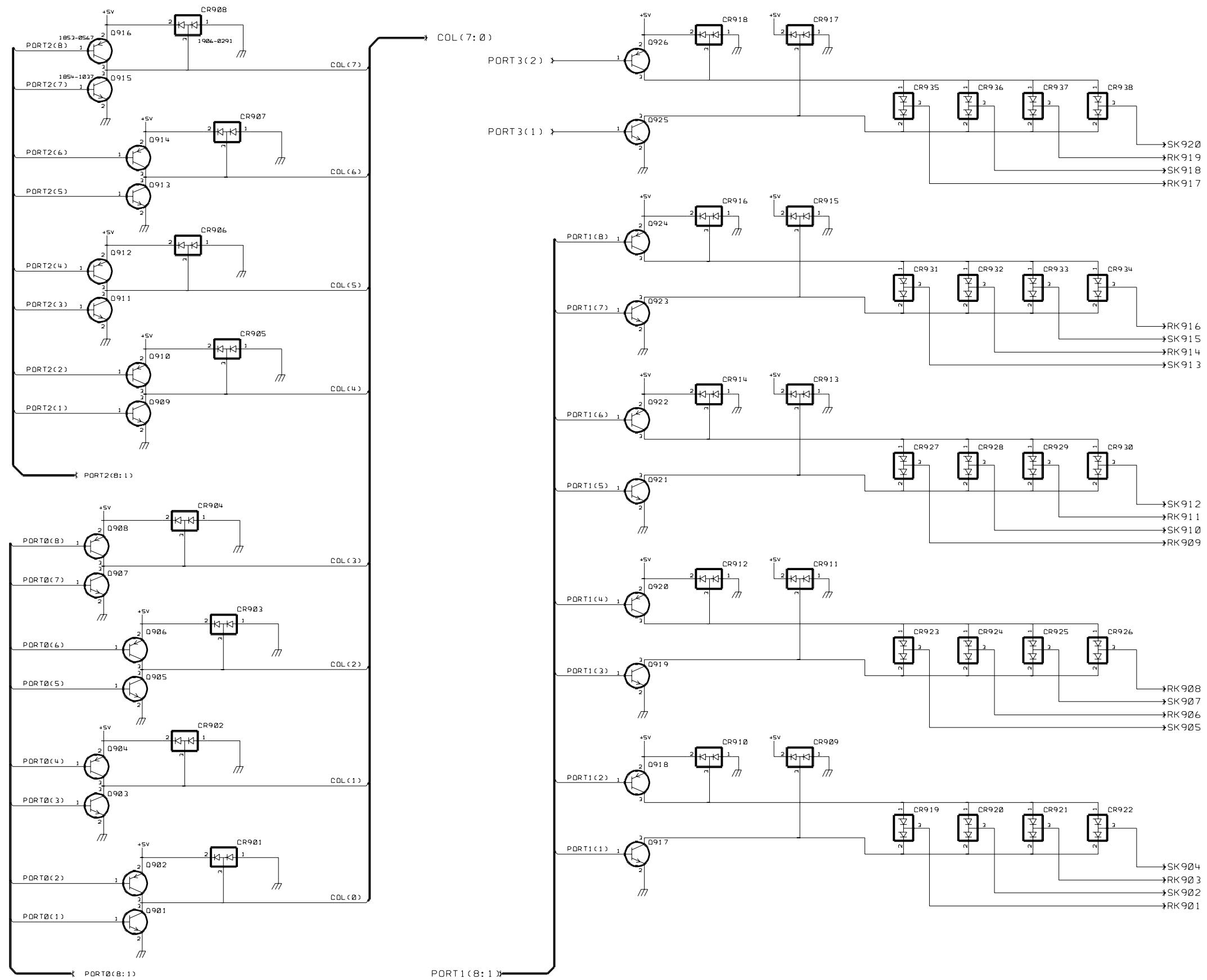


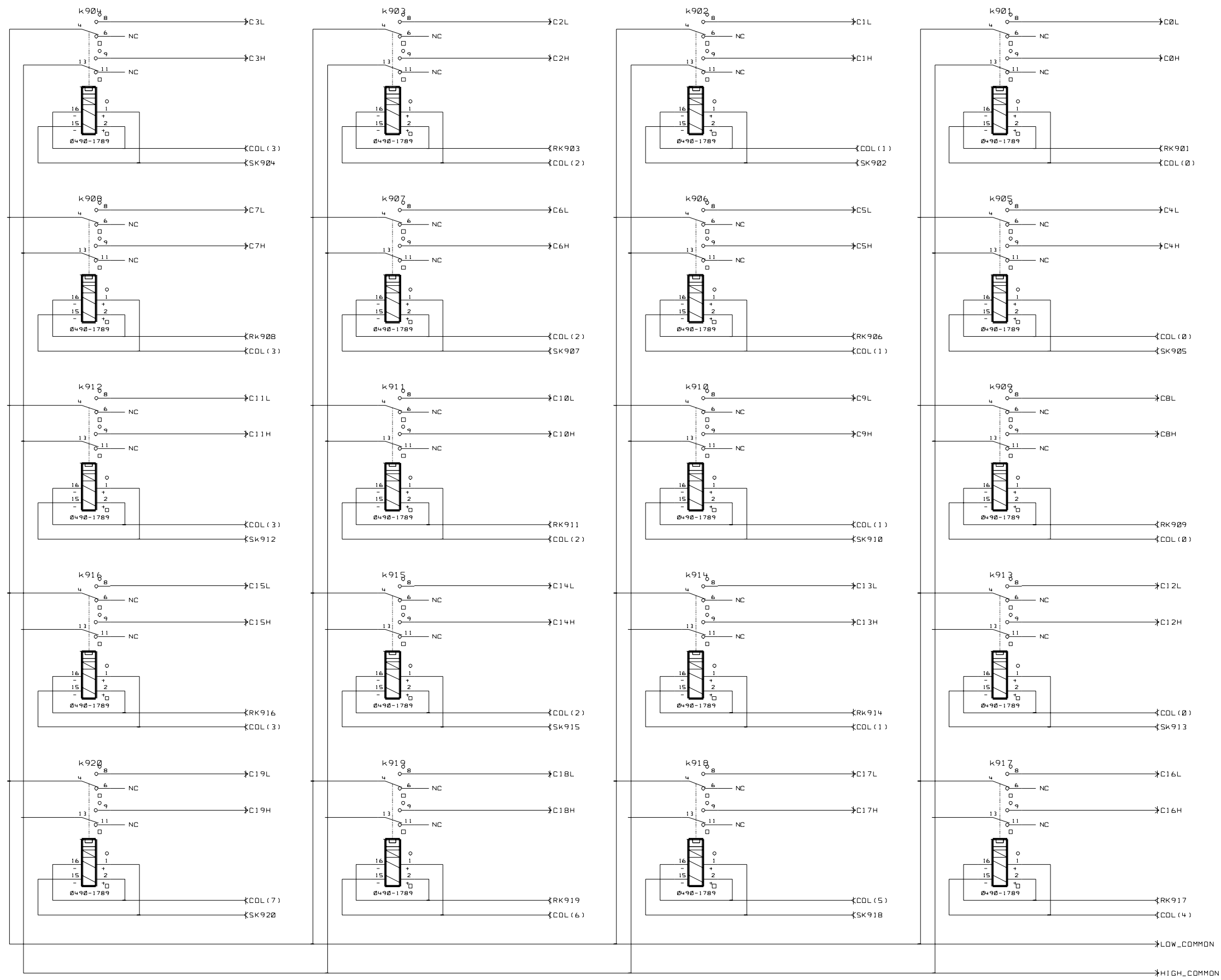


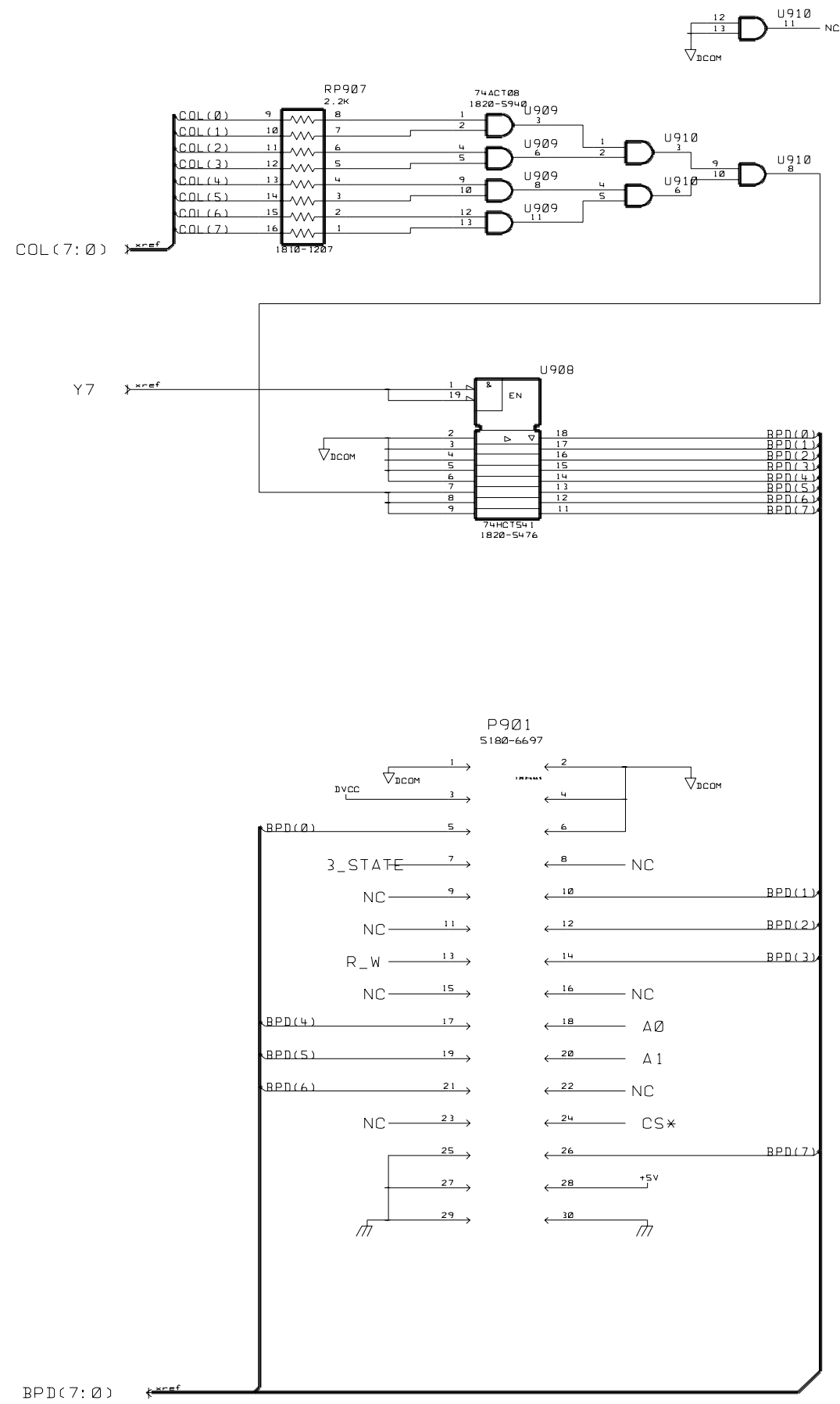
Agilent N2282A 1-to-8 Optical Switch MUX
Module Schematic (Sheet 2 of 2)
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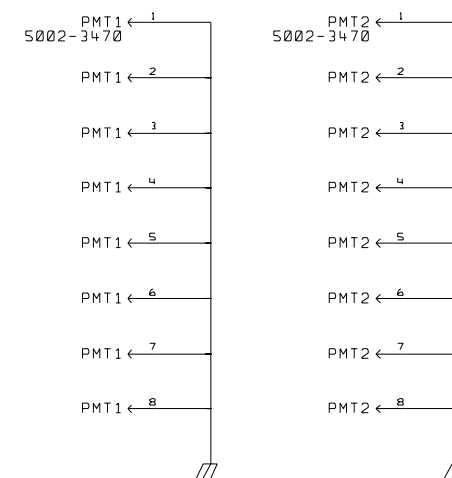


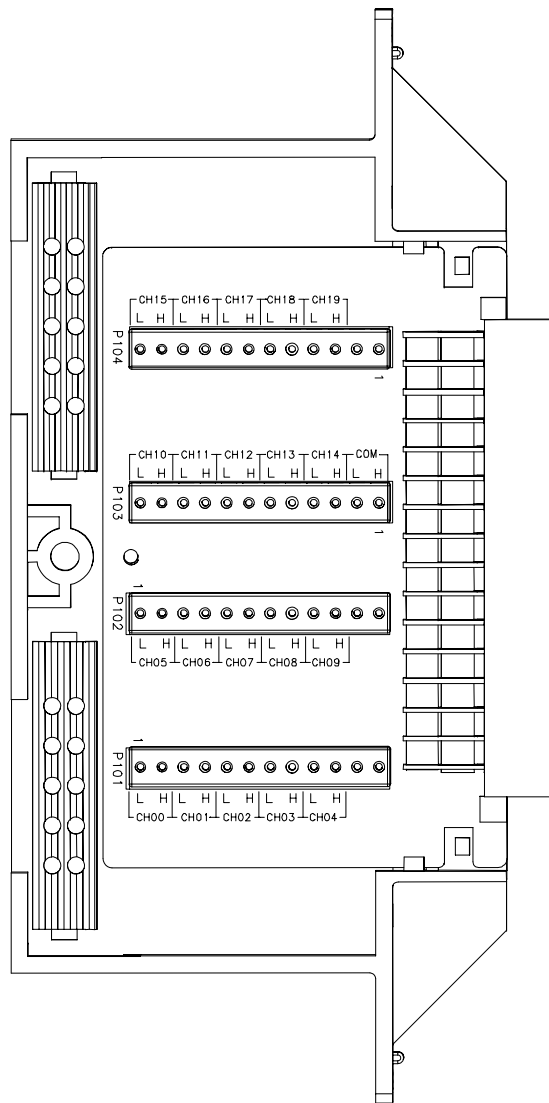




J901
1252-1575

← A2 C0L	← C2 C0H	← E2 C1L
← A4 C2L	← C4 C2H	← E4 C1H
← A6 C3L	← C6 C3H	← E6 C4L
← A8 C5L	← C8 C5H	← E8 C4H
← A10 C6L	← C10 C6H	← E10 C7L
← A12 C8L	← C12 C8H	← E12 C7H
← A14 C9L	← C14 C9H	← E14 NC
← A16 LOW_COMMON	← C16 NC	← E16 HIGH_COMMON
← A18 C10L	← C18 C10H	← E18 C11L
← A20 C12L	← C20 C12H	← E20 C11H
← A22 C13L	← C22 C13H	← E22 C14L
← A24 C15L	← C24 C15H	← E24 C14H
← A26 C16L	← C26 C16H	← E26 C17L
← A28 C18L	← C28 C18H	← E28 C17H
← A30 C19L	← C30 C19H	← E30 NC
← A32 NC	← C32 NC	← E32 NC





J101 1252-1577

→ A2 C0L 1 ← P101
 Ø 360-2624

→ C2 C0H 2 ← P101

→ E2 C1L 3 ← P101

→ E4 C1H 4 ← P101

→ A4 C2L 5 ← P101

→ C4 C2H 6 ← P101

→ A6 C3L 7 ← P101

→ C6 C3H 8 ← P101

→ E6 C4L 9 ← P101

→ E8 C4H 10 ← P101

NC — 11 ← P101

NC — 12 ← P101

→ A8 C5L 1 ← P102
 Ø 360-2624

→ C8 C5H 2 ← P102

→ A10 C6L 3 ← P102

→ C10 C6H 4 ← P102

→ E10 C7L 5 ← P102

→ E12 C7H 6 ← P102

→ A12 C8L 7 ← P102

→ C12 C8H 8 ← P102

→ A14 C9L 9 ← P102

→ C14 C9H 10 ← P102

NC — 11 ← P102

NC — 12 ← P102

→ A18 C10L 12 ← P103
 Ø 360-2624

→ C18 C10H 11 ← P103

→ E18 C11L 10 ← P103

→ E20 C11H 9 ← P103

→ A20 C12L 8 ← P103

→ C20 C12H 7 ← P103

→ A22 C13L 6 ← P103

→ C22 C13H 5 ← P103

→ E22 C14L 4 ← P103

→ E24 C14H 3 ← P103

LOW_COMMON
 → A16 — 2 ← P103

HIGH_COMMON
 → E16 — 1 ← P103

→ A24 C15L 12 ← P104
 Ø 360-2624

→ C24 C15H 11 ← P104

→ A26 C16L 10 ← P104

→ C26 C16H 9 ← P104

→ E26 C17L 8 ← P104

→ E28 C17H 7 ← P104

→ A28 C18L 6 ← P104

→ C28 C18H 5 ← P104

→ A30 C19L 4 ← P104

→ C30 C19H 3 ← P104

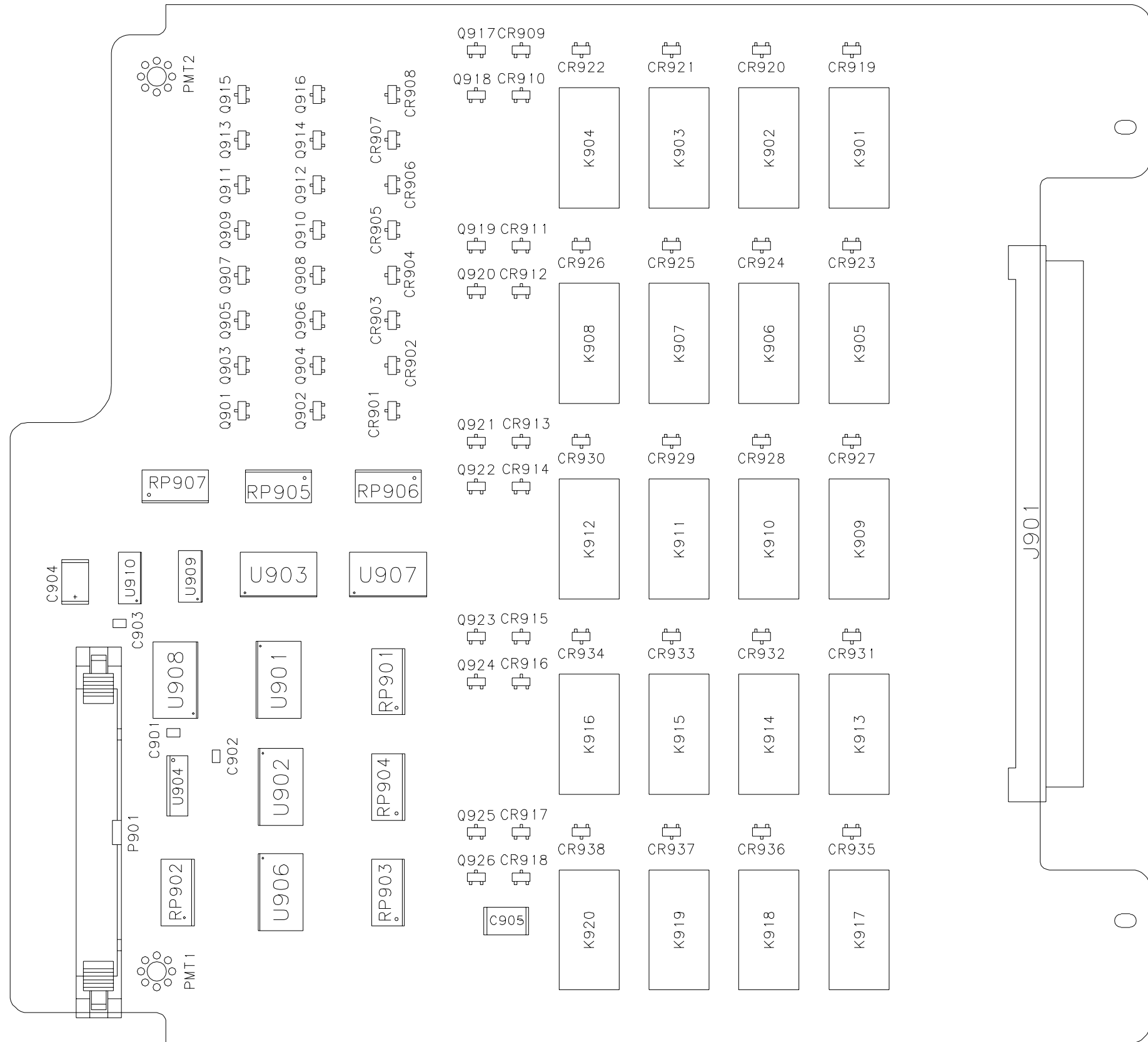
NC — 2 ← P104

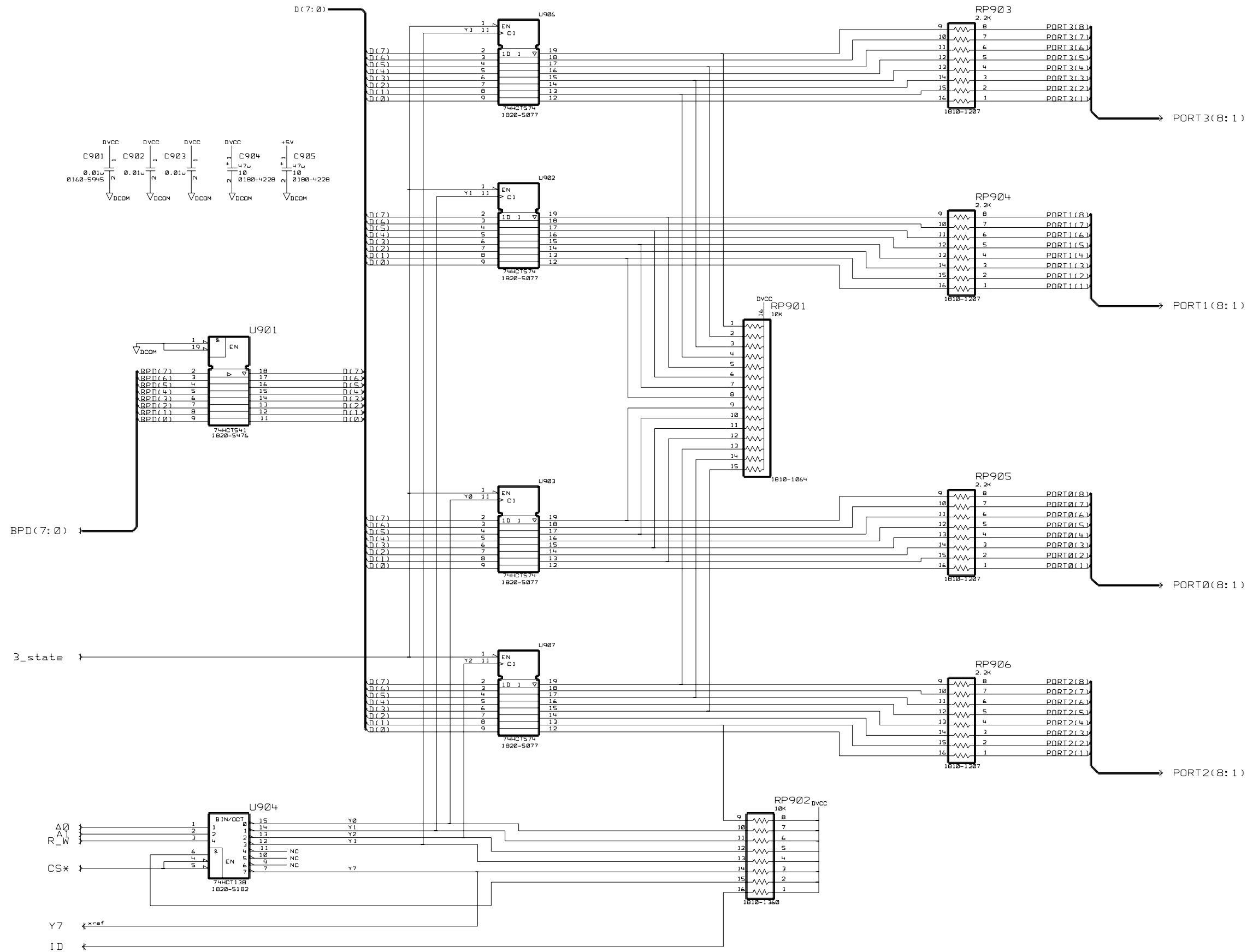
NC — 1 ← P104

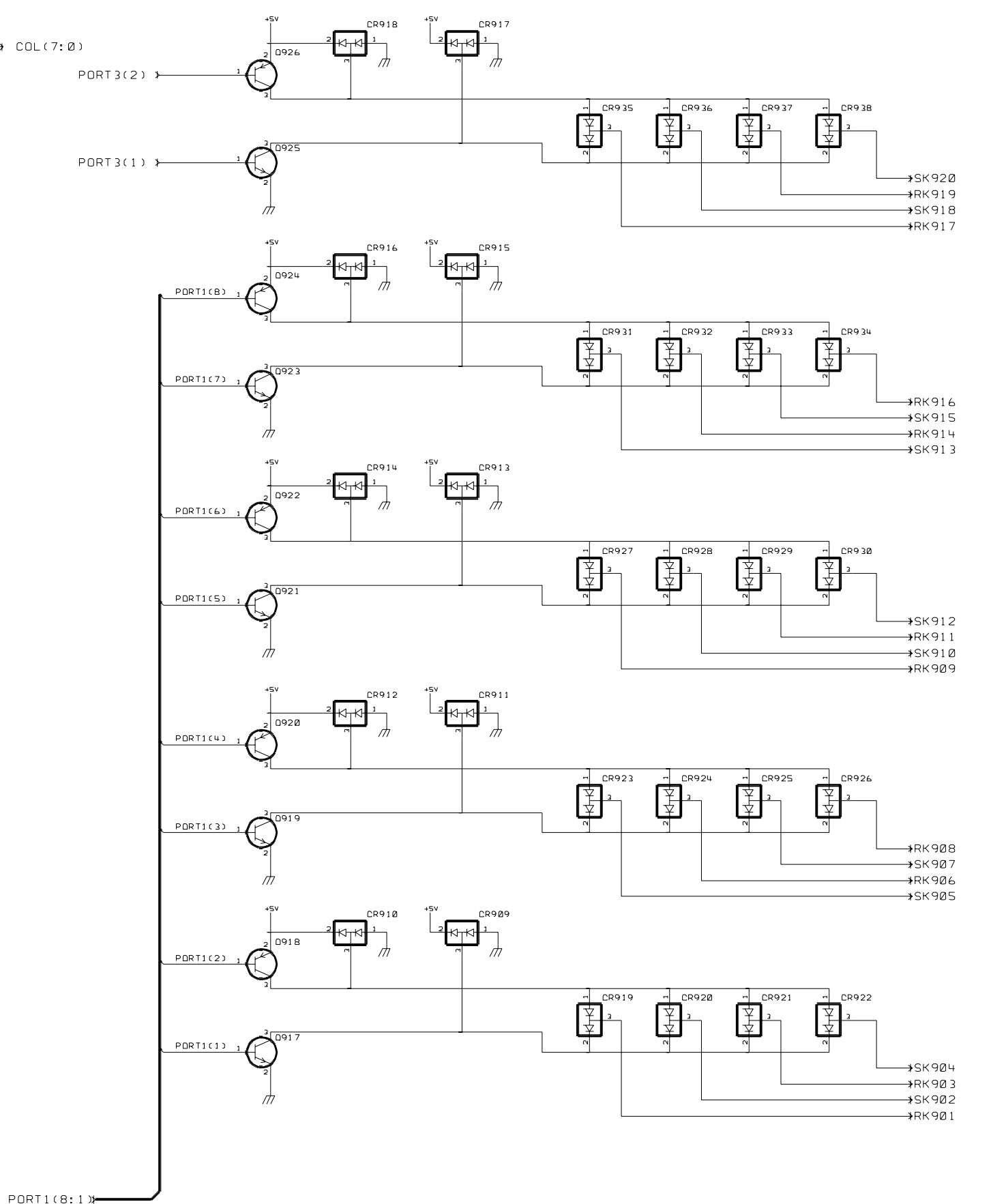
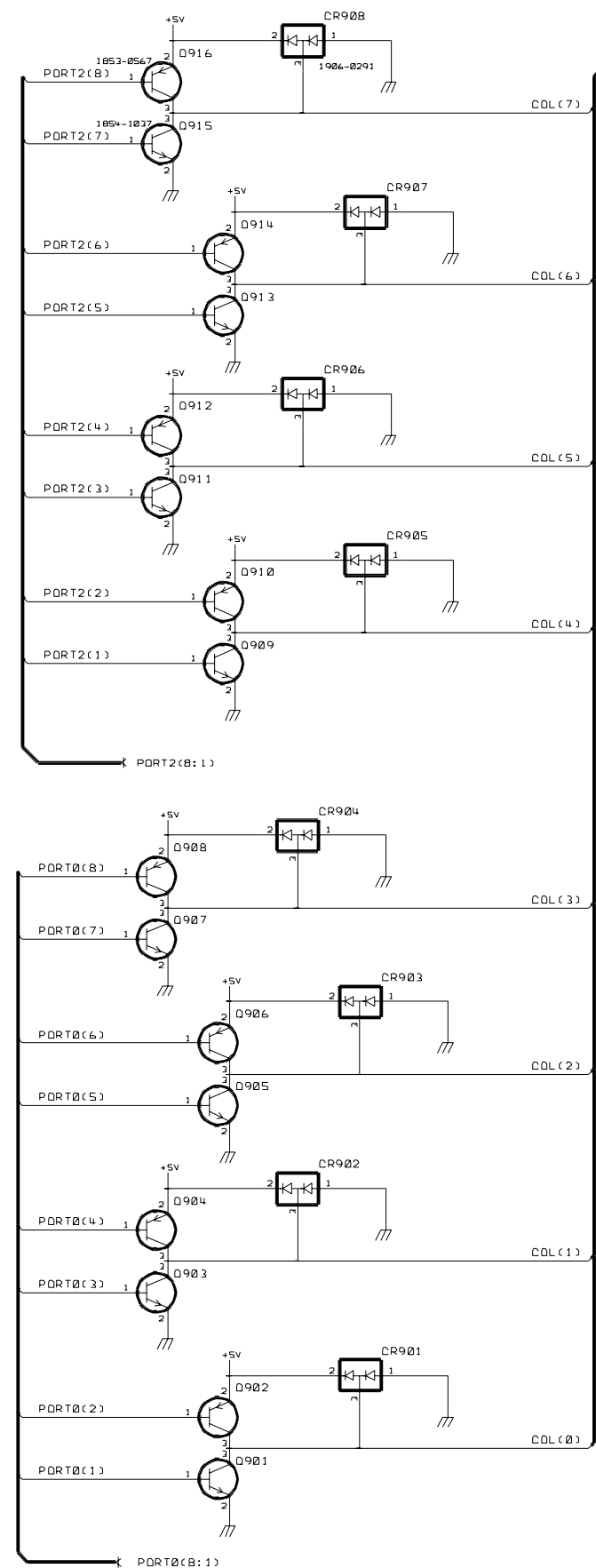
→ A32 NC → C16 NC → E14 NC

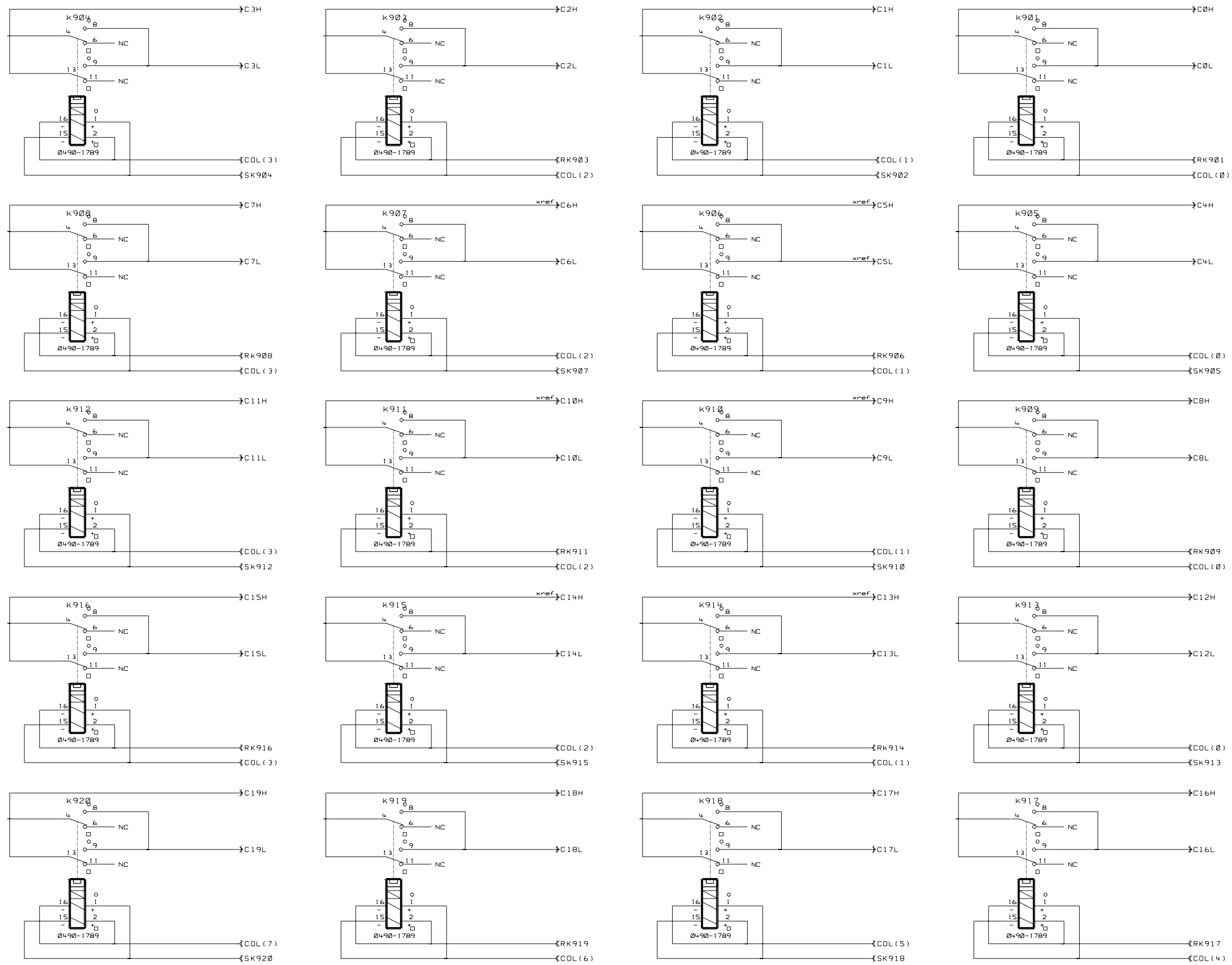
 → C32 NC → E30 NC

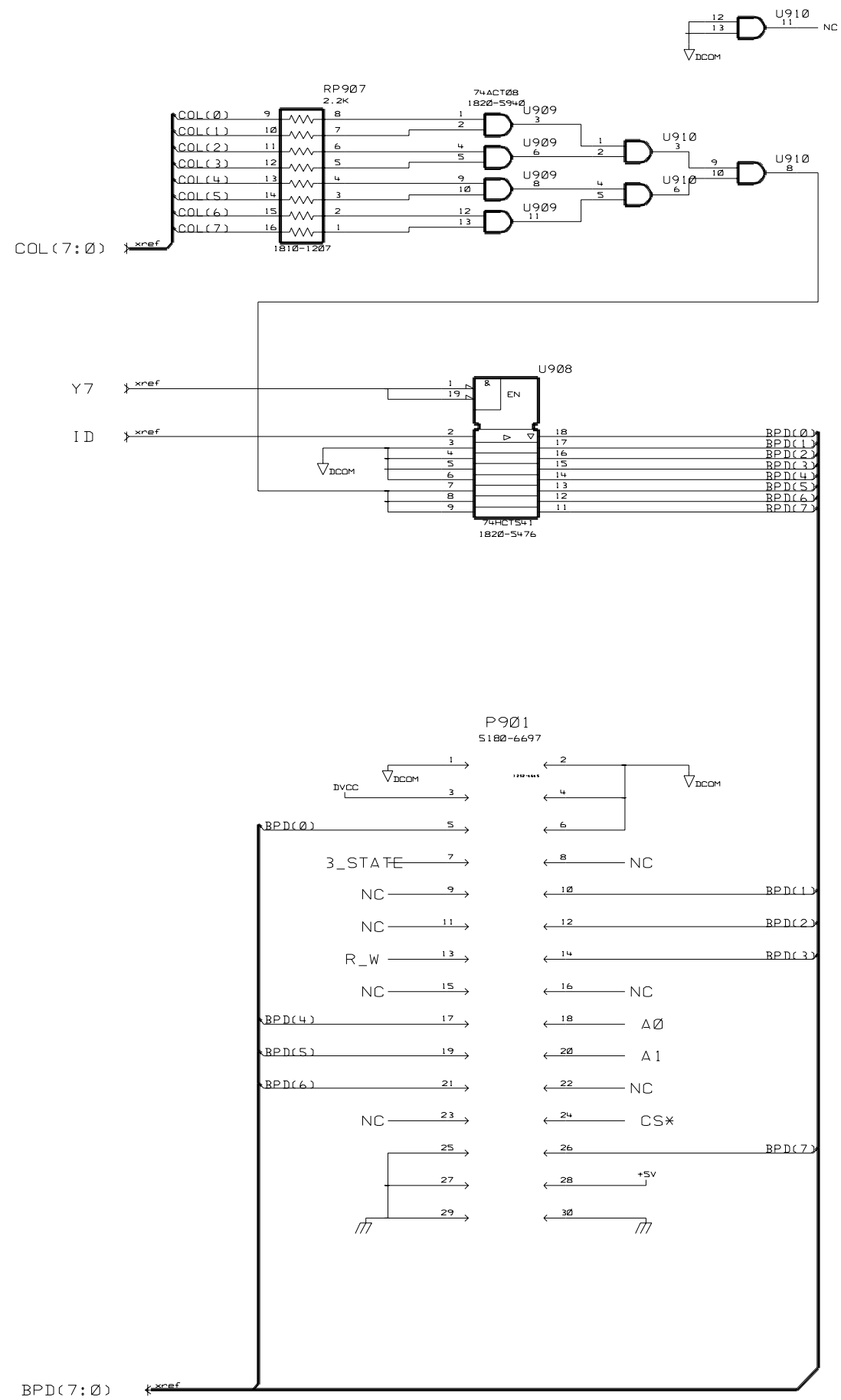
 → E32 NC





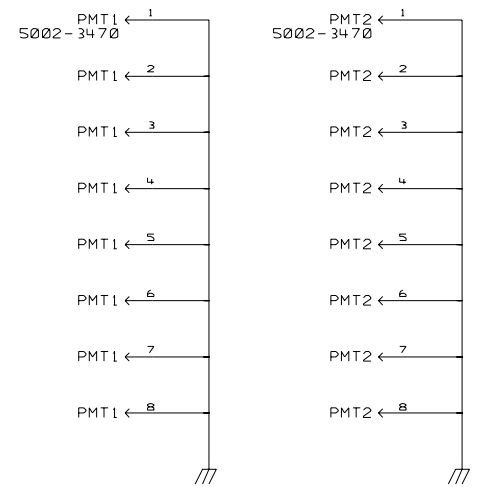


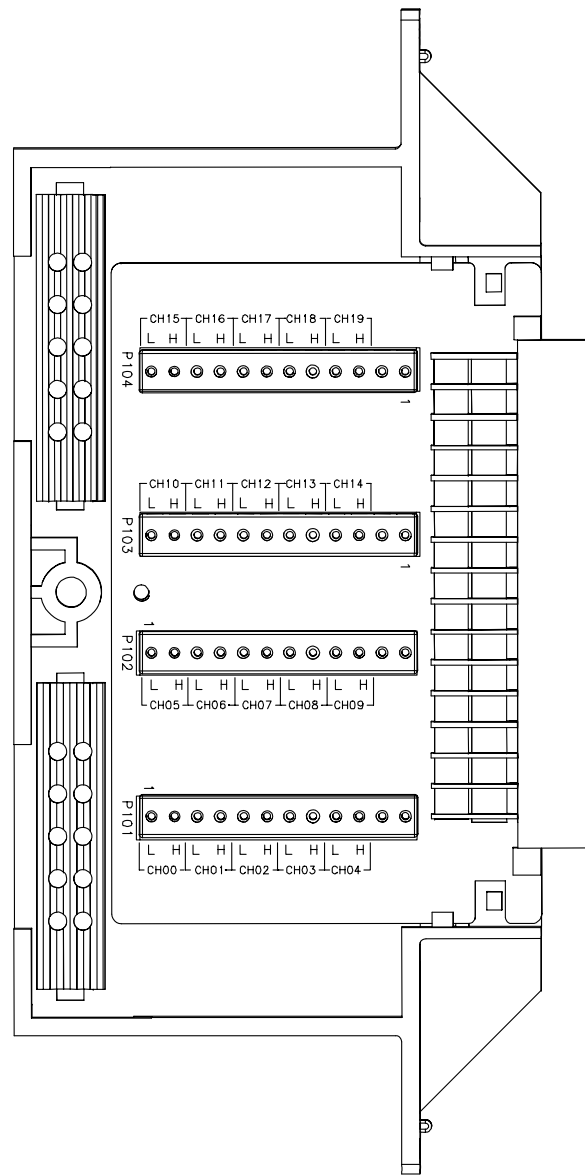




J901
1252-1575

← A2	C0L	← C2	C0H	← E2	C1L
← A4	C2L	← C4	C2H	← E4	C1H
← A6	C3L	← C6	C3H	← E6	C4L
← A8	C5L	← C8	C5H	← E8	C4H
← A10	C6L	← C10	C6H	← E10	C7L
← A12	C8L	← C12	C8H	← E12	C7H
← A14	C9L	← C14	C9H	← E14	NC
← A16	NC	← C16	NC	← E16	NC
← A18	C10L	← C18	C10H	← E18	C11L
← A20	C12L	← C20	C12H	← E20	C11H
← A22	C13L	← C22	C13H	← E22	C14L
← A24	C15L	← C24	C15H	← E24	C14H
← A26	C16L	← C26	C16H	← E26	C17L
← A28	C18L	← C28	C18H	← E28	C17H
← A30	C19L	← C30	C19H	← E30	NC
← A32	NC	← C32	NC	← E32	NC





J101 1252-1577

A2 C0L 1 P101
 Ø 360-2624
 C2 C0H 2 P101
 E2 C1L 3 P101
 E4 C1H 4 P101
 A4 C2L 5 P101
 C4 C2H 6 P101
 A6 C3L 7 P101
 C6 C3H 8 P101
 E6 C4L 9 P101
 E8 C4H 10 P101
 NC 11 P101
 NC 12 P101

A8 C5L 1 P102
 Ø 360-2624
 C8 C5H 2 P102
 A10 C6L 3 P102
 C10 C6H 4 P102
 E10 C7L 5 P102
 E12 C7H 6 P102
 A12 C8L 7 P102
 C12 C8H 8 P102
 A14 C9L 9 P102
 C14 C9H 10 P102
 NC 11 P102
 NC 12 P102

A18 C10L 12 P103
 Ø 360-2624
 C18 C10H 11 P103
 E18 C11L 10 P103
 E20 C11H 9 P103
 A20 C12L 8 P103
 C20 C12H 7 P103
 A22 C13L 6 P103
 C22 C13H 5 P103
 E22 C14L 4 P103
 E24 C14H 3 P103
 NC 2 P103
 NC 1 P103

A24 C15L 12 P104
 Ø 360-2624
 C24 C15H 11 P104
 A26 C16L 10 P104
 C26 C16H 9 P104
 E26 C17L 8 P104
 E28 C17H 7 P104
 A28 C18L 6 P104
 C28 C18H 5 P104
 A30 C19L 4 P104
 C30 C19H 3 P104
 NC 2 P104
 NC 1 P104

A16 NC C16 NC E14 NC
 A32 NC C32 NC E16 NC
 E30 NC
 E32 NC



Agilent Technologies, Inc.
Printed in Malaysia
Revision E
March 2009 E0309



Service Manual

03499-90002S