

# ALESIS DM5 (D5) Service Manual

P/N: 8-31-0016-B

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THIS DOCUMENT CONTAINS SENSITIVE  
PROPRIETARY INFORMATION.  
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## **Preface**

This document is intended to assist the service technician in the operation, maintenance and repair of the Alesis device. Together with the User Reference Manual, this document provides a complete description of the functionality and serviceability of the Device. Any comments or suggestions you may have pertaining to the document are welcome and encouraged.

### **READ THIS!**

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## ***Warnings***

**TO REDUCE THE RISK OF ELECTRIC SHOCK OR FIRE, DO NOT EXPOSE THIS PRODUCT TO WATER OR MOISTURE.**



The arrowhead symbol on a lightning flash inside a triangle is intended to alert the user to the presence of un-insulated "dangerous voltage" within the enclosed product which may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point inside a triangle is intended to alert the user to the presence of important operating, maintenance and servicing instructions in the literature which accompanies the product.

**REPAIR BY ANY PERSON OR ENTITY OTHER THAN AN AUTHORIZED ALESIS SERVICE CENTER WILL VOID THE ALESIS WARRANTY.**

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### ***Regarding the Power Supply Fuse***



**CAUTION:** The product under service may employ the use of a replaceable fuse. Danger of fire or electrocution if fuse is incorrectly replaced. Replace with only the same type or equivalent type recommended by the equipment manufacturer.

### ***Regarding the Internal Battery***



**CAUTION:** The product under service may employ the use of a internal battery. Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instruction.

## ***Safety Instructions***

Carefully read the applicable items of the operating instructions and these safety suggestions before using this product. Use extra care to follow the warnings written on the product itself and in the operating instructions. Keep the operating instructions and safety suggestions for reference in the future.

1. Power Source. The product should only be connected to a power supply which is described either in the operating instructions or in markings on the product.
2. Power Cord Protection. AC power supply cords should be placed such that no one is likely to step on the cords and such that nothing will be placed on or against them.
3. Periods of Non-use. If the product is not used for any significant period of time, the product's AC power supply cord should be unplugged from the AC outlet.
4. Foreign Objects and Liquids. Take care not to allow liquids to spill or objects to fall into any openings of the product.
5. Water or Moisture. The product should not be used near any water or in moisture.
6. Heat. Do not place the product near heat sources such as stoves, heat registers, radiators or other heat producing equipment.
7. Ventilation. When installing the product, make sure that the product has adequate ventilation. Improperly ventilating the product may cause overheating, which may damage the product.
8. Mounting. The product should only be used with a rack which the manufacturer recommends. The combination of the product and rack should be moved carefully. Quick movements, excessive force or uneven surfaces may overturn the combination which may damage the product and rack combination.
9. Cleaning. The product should only be cleaned as the manufacturer recommends.
10. Service. The user should only attempt the limited service or upkeep specifically described in the operating instructions for the user. For any other service required, the product should be taken to an authorized service center as described in the operating instructions.
11. Damage to the Product. Qualified service personnel should service the unit in certain situations including without limitation when:
  - a. Liquid has spilled or objects have fallen into the product,
  - b. The product is exposed to water or excessive moisture,
  - c. The AC power supply plug or cord is damaged,
  - d. The product shows an inappropriate change in performance or does not operate normally, or
  - e. The enclosure of the product has been damaged.

# ALESIS DM5 (D5)

# SCHEMATIC AND PCB FILES

6

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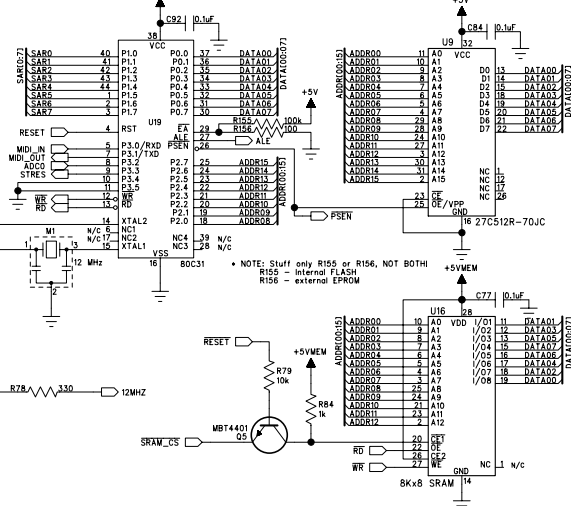
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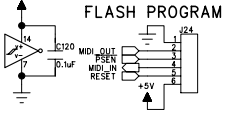
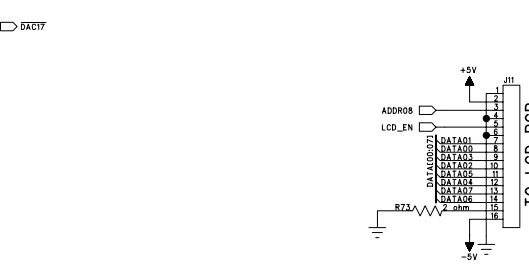
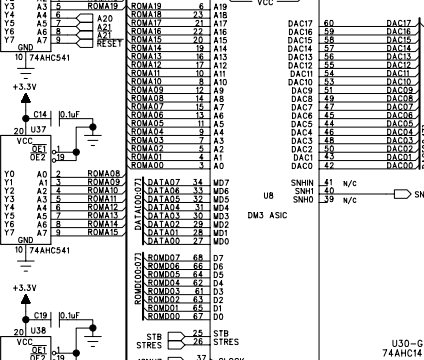
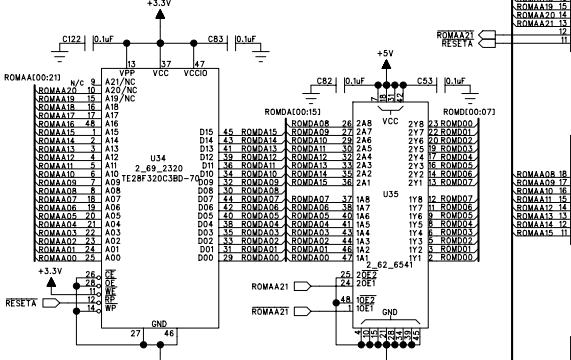
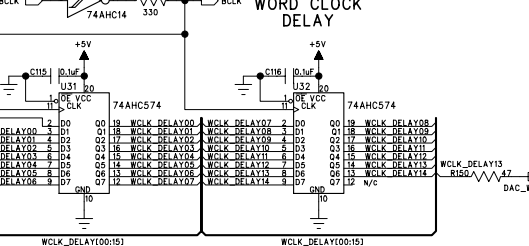
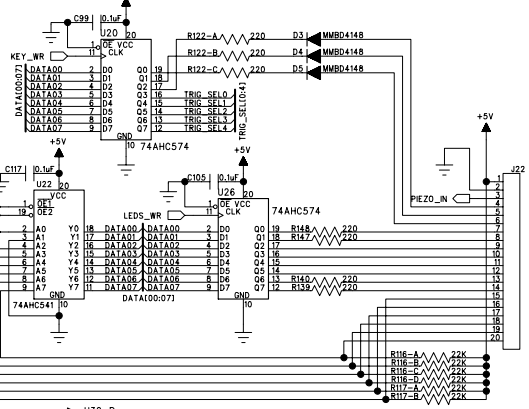
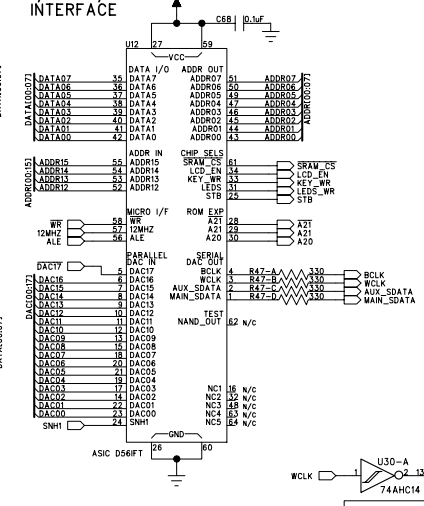
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MICRO



DSP/MICRO/DAC INTERFACE



|              |  |                            |  |
|--------------|--|----------------------------|--|
| COMPANY:     |  | ALESIS                     |  |
| TITLE:       |  | D5 MAIN PCB<br>MICRO / DSP |  |
| PART NUMBER: |  | 9-40-1174-H                |  |
| ASSY NUMBER: |  | 9-79-1174                  |  |
| FILENAME:    |  | D5MNH01A.SCH               |  |
| SCALE:       |  | SHEET: 1 OF 3              |  |

DRAWN: A. MEYER/J.KHO  
 RELEASED:  
 DATED: 04/30/04  
 DATED:

TO KEYPAD PCB

TO LCD PCB

D

C

B

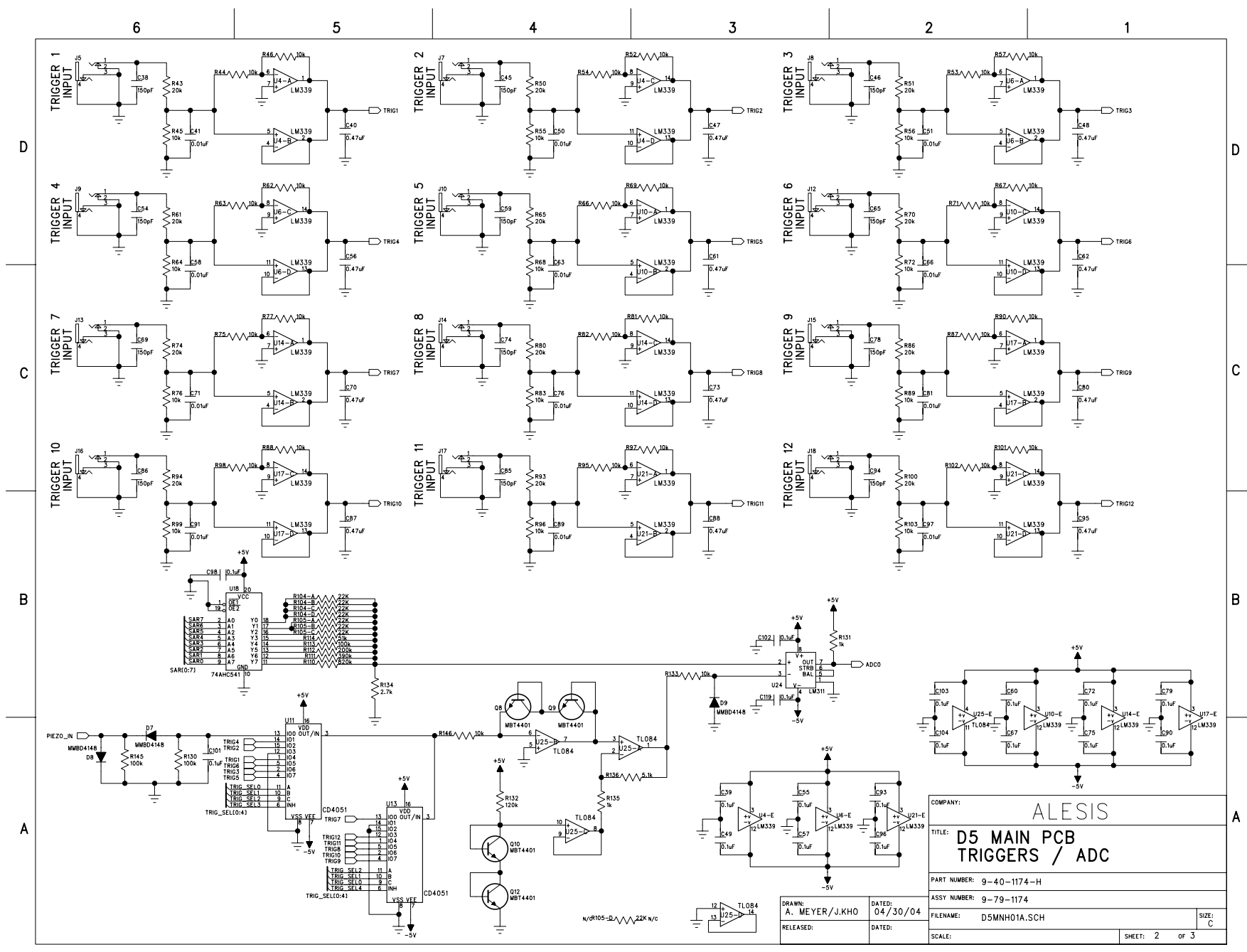
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|              |                |                            |          |
|--------------|----------------|----------------------------|----------|
| COMPANY:     |                | ALESIS                     |          |
| TITLE:       |                | D5 MAIN PCB TRIGGERS / ADC |          |
| PART NUMBER: |                | 9-40-1174-H                |          |
| ASSY NUMBER: |                | 9-79-1174                  |          |
| FILENAME:    |                | D5MNH01A.SCH               |          |
| SCALE:       |                | SHEET: 2 OF 3              |          |
| DRAWN:       | A. MEYER/J.KHO | DATED:                     | 04/30/04 |
| RELEASED:    |                | DATED:                     |          |
|              |                | SIZE:                      | C        |

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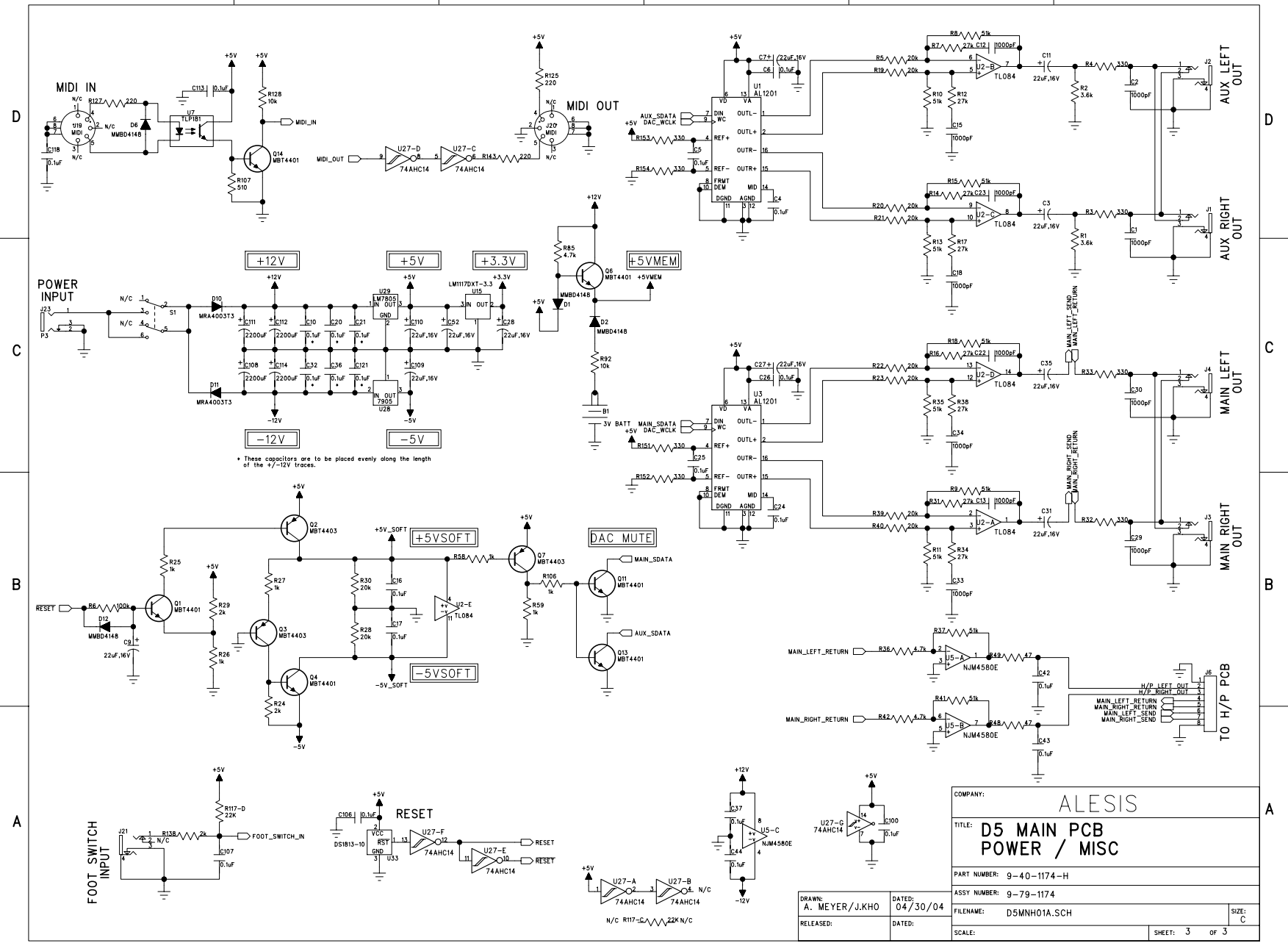
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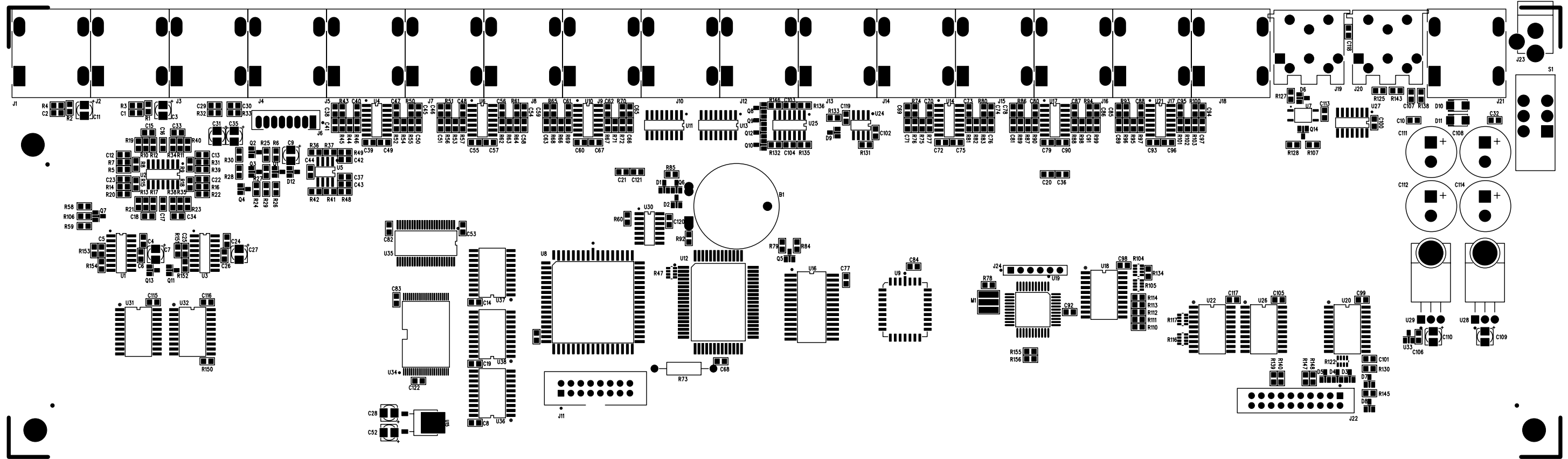


\* These capacitors are to be placed evenly along the length of the +/-12V traces.

|              |                |                             |          |
|--------------|----------------|-----------------------------|----------|
| COMPANY:     |                | ALESIS                      |          |
| TITLE:       |                | D5 MAIN PCB<br>POWER / MISC |          |
| PART NUMBER: |                | 9-40-1174-H                 |          |
| ASSY NUMBER: |                | 9-79-1174                   |          |
| DRAWN:       | A. MEYER/J.KHO | DATED:                      | 04/30/04 |
| RELEASED:    |                | DATED:                      |          |
| FILENAME:    |                | D5MNH01A.SCH                |          |
| SCALE:       |                | SHEET:                      | 3 OF 3   |



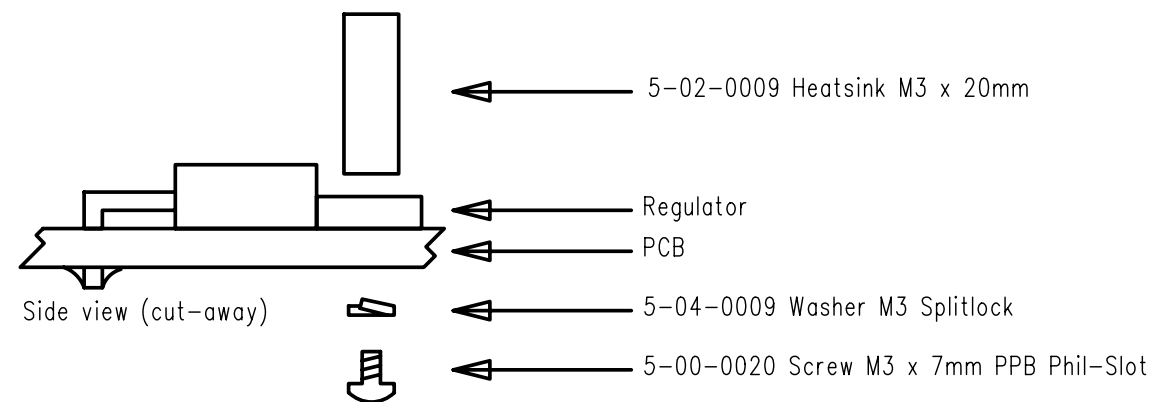
# ALESIS 9-79-1174-H "TOP ASSEMBLY DRAWING"

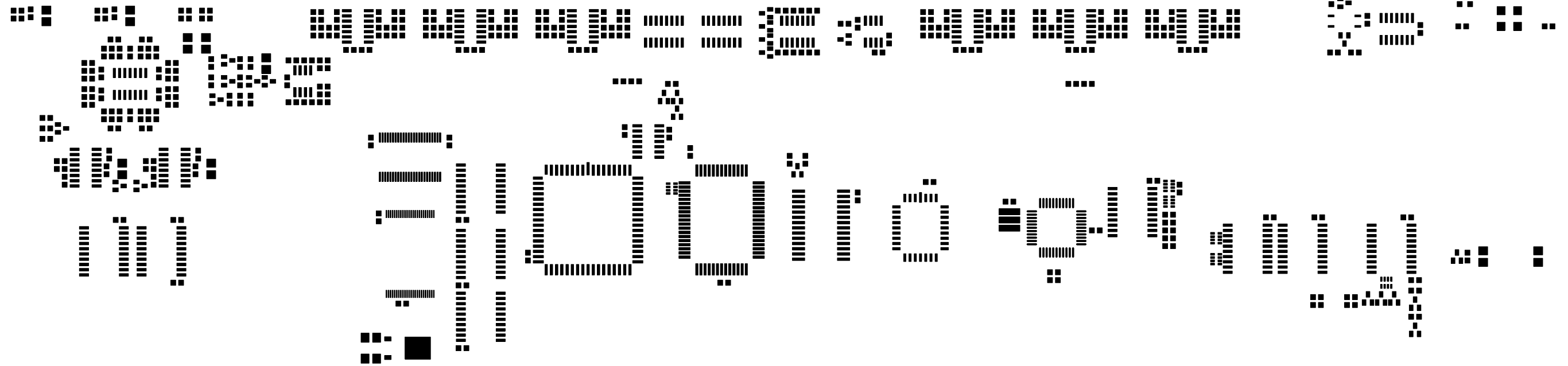


## ASSEMBLY NOTES:

1. Install solder lugs (9-03-1036) on 1/4" jacks (4-02-0001) before soldering jacks onto PCB.
2. Install crystal spacer (5-04-0045) between crystal M1 (7-01-0009) and PCB.
3. Install IC socket (4-06-0028) for U15 before installing EPROM. DO NOT INSTALL EPROM DIRECTLY ON PCB!
4. Install U28 and U29 as shown in drawing to the right.
5. Stuff only R155 or R156, NOT BOTH.  
R155 = Run code from internal FLASH.  
R156 = Run code from external EPROM.
6. Do NOT stuff J24 (for development only).

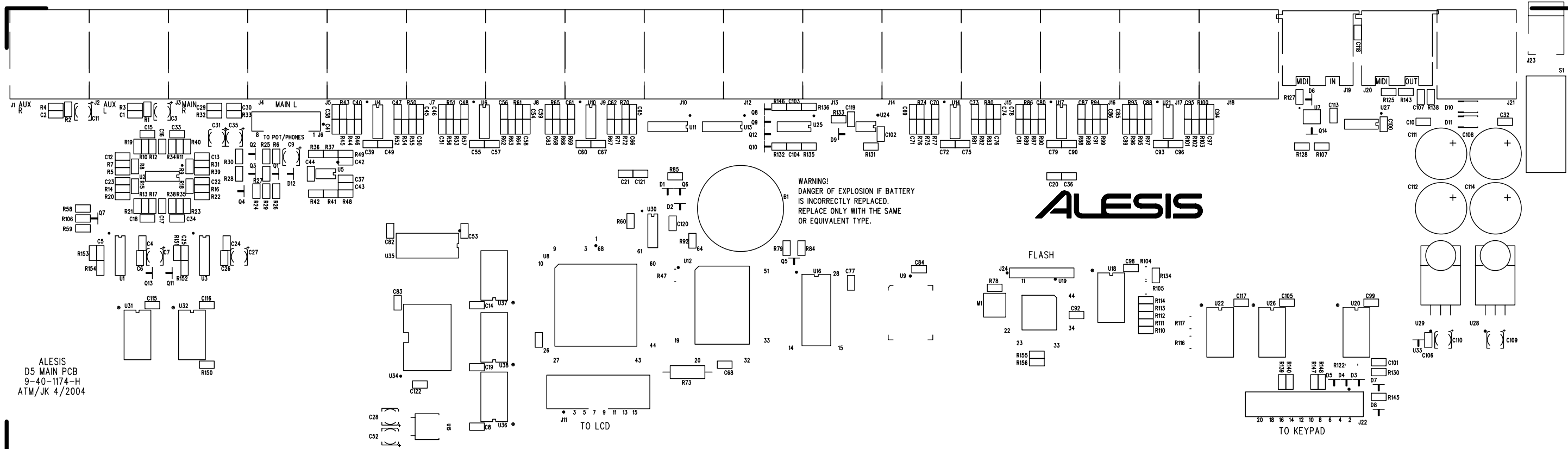
## Mounting Instructions for U28 and U29 (to be assembled before soldering).





ALESIS 9-40-1174-H "TOPPASTE"



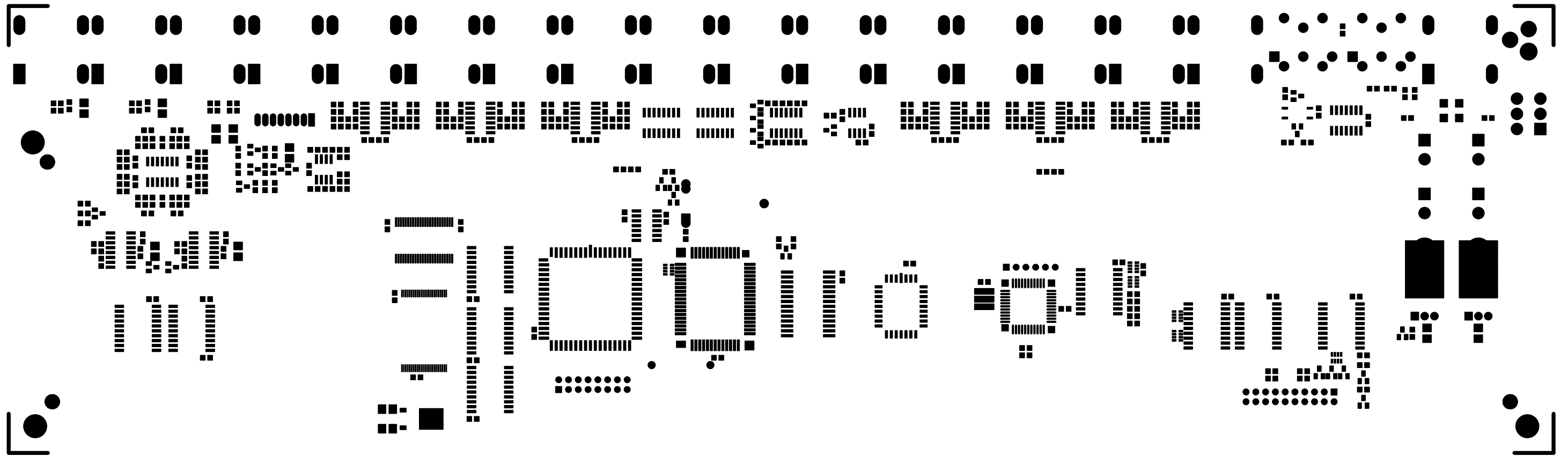


ALESIS  
D5 MAIN PCB  
9-40-1174-H  
ATM/JK 4/2004

WARNING!  
DANGER OF EXPLOSION IF BATTERY  
IS INCORRECTLY REPLACED.  
REPLACE ONLY WITH THE SAME  
OR EQUIVALENT TYPE.

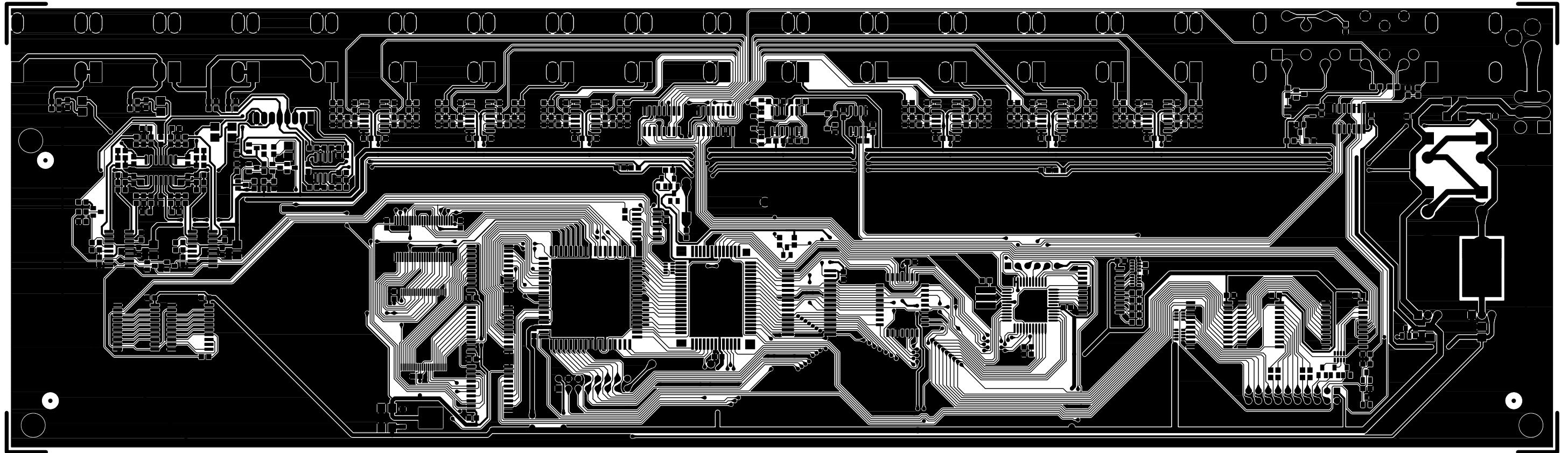
**ALESIS**

ALESIS 9-40-1174-H "TOPSILK"



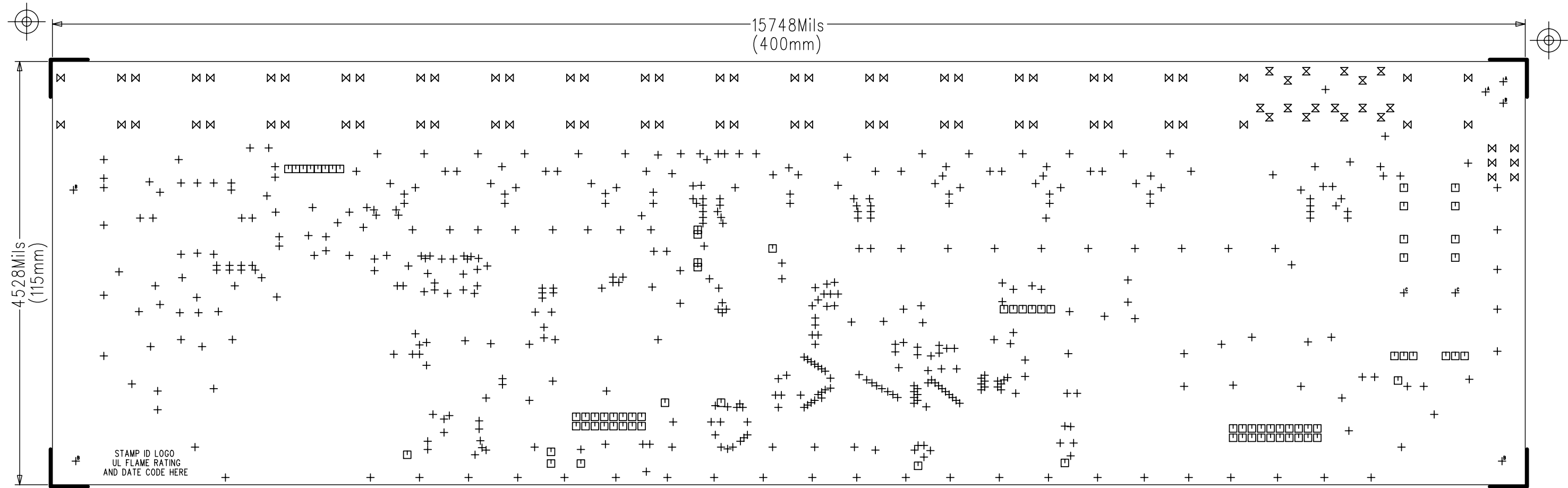
ALESIS 9-40-1174-H "TOPSMK"





ALESIS 9-40-1174-H "TOPTRACE"

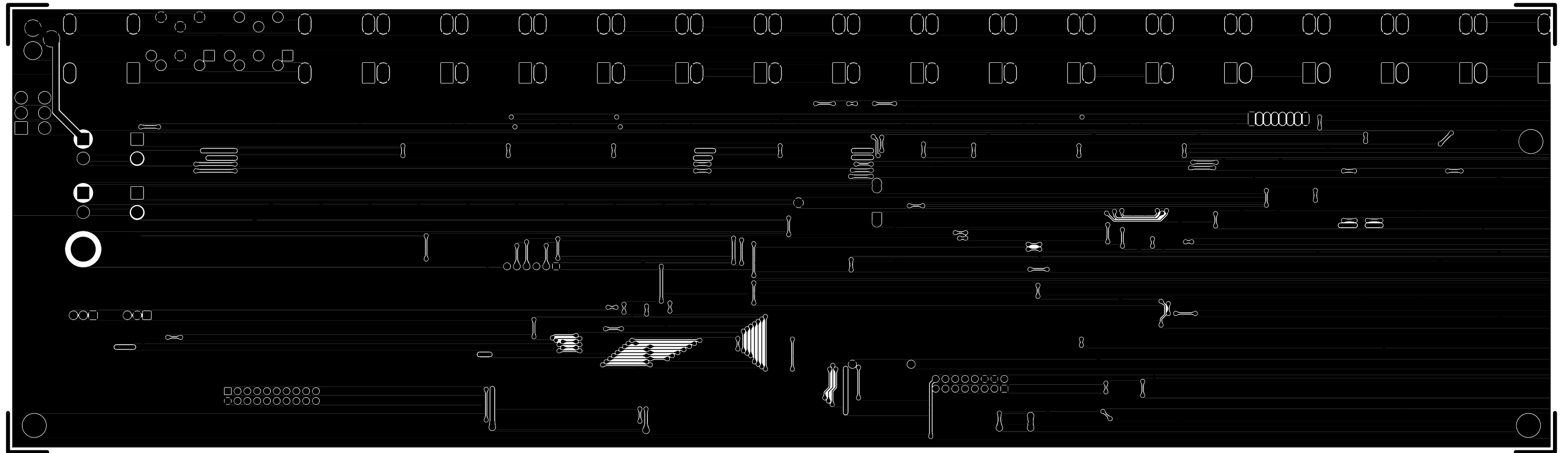
# ALESIS 9-40-1174-H "DRILLDWG"



STAMP ID LOGO  
UL FLAME RATING  
AND DATE CODE HERE

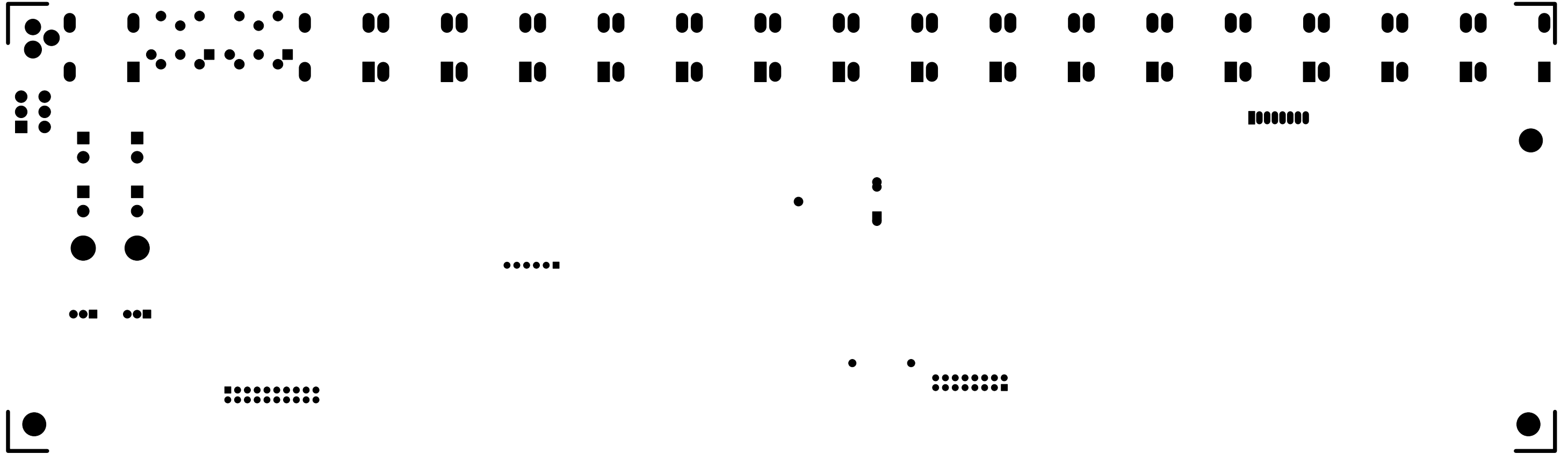
| SIZE  | QTY | SYM | PLTD |
|-------|-----|-----|------|
| 20    | 490 | +   | PLTD |
| 37    | 78  | □   | PLTD |
| 51.2  | 16  | ⊗   | PLTD |
| 59.1  | 74  | ⊗   | PLTD |
| 100.4 | 2   | A   | PLTD |
| 125   | 4   | B   | PLTD |
| 156.2 | 2   | C   | PLTD |

1. Design rules used: 0.008" lines. 0.008" space
2. Double layer design.
3. Surface-mount parts on top side only.
4. Material: 0.062" (+/- 0.007") thick glass epoxy FR-4 (green)  
1 oz. copper all layers, finished.
5. Finish: SMOBC, Hot Air Level
6. Hole sizes are finished diameter after plating  
with 0.0010" minimum plating all surfaces.  
Drilled holes are +/- 0.003" tolerance.  
(Except 20 mil via whose finished size is unimportant.)
7. Layer-to-layer registration to be +/- 0.005"
8. Soldermask all exposed copper, LPI, green.
9. Silkscreen using epoxy-based ink (white).
10. Surface to be flat within 0.010" in/in of diagonal measurement.
11. Vendor shall etch or stamp I.D. logo and date code,  
type designation and UL flame rating on component side of PCB.  
**NO COPPER MAY BE DELETED**
12. Soldercoat both sides to standard J-STD-003.
13. Finished pcb shall have 0.0035" min dielectric material  
between consecutive conductor layers when cured.
14. Mechanical dims are +/- 0.005" tolerance.
15. Workmanship and acceptance criteria shall be in accordance  
with IPC-A-600, Class 1.



ALESIS 9-40-1174-H "BOTTRACE"

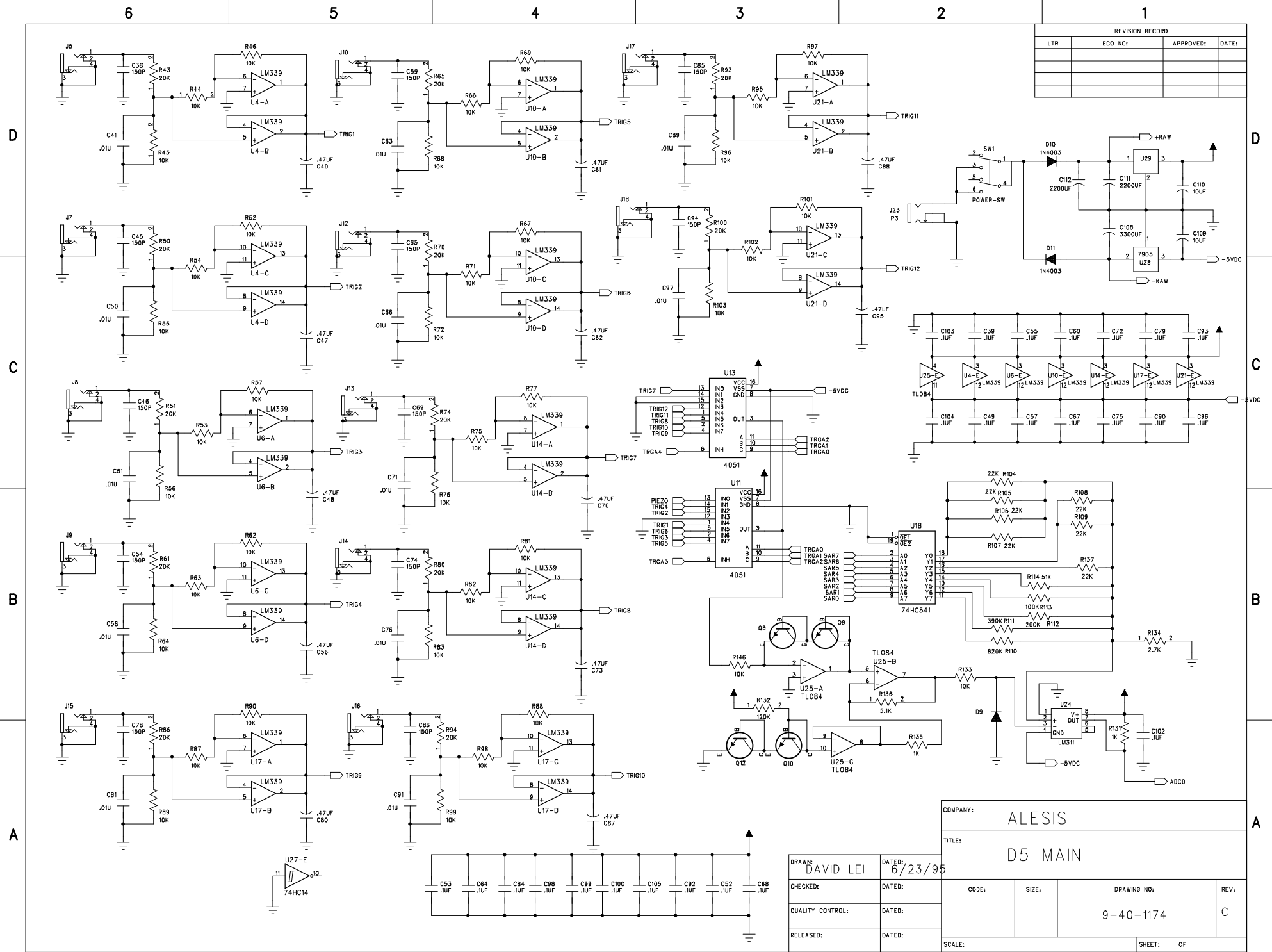




ALESIS 9-40-1174-H "BOTSMK"

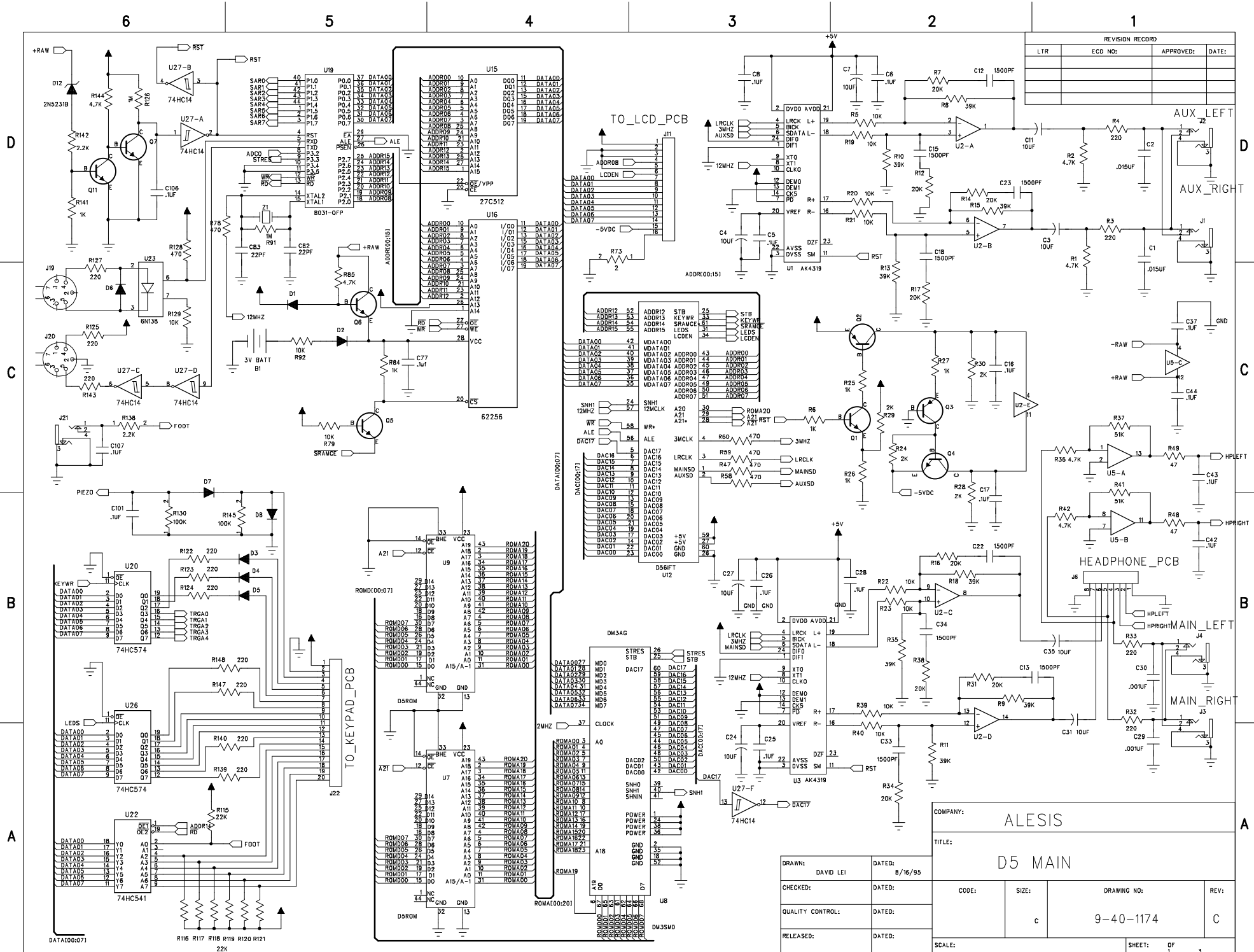


| D5 MAIN PCB Rev H<br>RevChange Document |     |     |               | Last Revised:<br>4/30/2004 |               |           |   |   |  |
|---|-----|-----|---------------|----------------------------|---------------|-----------|---|---|--|
| SCH                                     | PCB | CAM | Suggested by: | DATE                       | Performed by: | DATE      | Description of change:  | Reason for change:  | Comments   |
|   |     |     |               |                            |               |           | <b>TOP LEVEL CHANGES</b>  |   |  |
|   |     |     |               |                            |               |           | Change all text from Rev G to H   |   |  |
|   |     |     |               |                            |               |           | Update all Part Types   |   |  |
|   |     |     |               |                            |               |           | Review/Integrate all outstanding ECNs   |   |  |
|   |     |     |               |                            |               |           | Note: ***A new solderpaste stencil IS required***                                       | Parts were added/removed.   |  |
|   |     |     |               |                            |               |           | <b>SCHEMATIC CHANGES</b>  |   |  |
|   |     |     | JK            | 2/20/2004                  |               |           |   | As it stands, the audio outputs are out of phase with respect to the audio outputs of the old Rev.C pcb.  | Phase reversal was a mistake. Leave with the unit in phase                   |
|   |     |     | JK            | 2/20/2004                  |               |           |   | These bits have nothing to do with the audio and may actually be causing audible digital artifacts.   | No sign of artifacts during testing. Additional circuit adds costs and risk. |
|   |     |     | ATM           | 3/11/2004                  |               |           | Consider disconnecting the Left and Right Main outputs from their normalling connection | The current output circuit will normal the left to the right or the right to the left. However, you need to consider the case where the headphone is only connected. In this case, the left and right are mixed, and being sent to the headphone. The condition gets worse when the pot level is lower. |  |
| x                                       | x   |     | ATM           | 4/30/2004                  | ATM           | 4/30/2004 | Change 1-08-0222 to 1-60-2222   | The factory doesn't like the pitch of the pins for our thru-hole caps. Switch to a similar sized SMD part in order to maintain the same layout and to ease manufacturing  |  |
| x                                       | x   |     | ATM           | 4/30/2004                  | ATM           | 4/30/2004 | For the \RESET signal, buffer the signal thru U36 before sending it to the Flash, U34.  | The flash cannot tolerate a 5V input. Convert to 3.3V first.  |  |
|   |     |     |               |                            |               |           | <b>PCB CHANGES</b>  |   |  |



| REVISION RECORD |         |           |       |
|-----------------|---------|-----------|-------|
| LTR             | ECO NO: | APPROVED: | DATE: |
|                 |         |           |       |
|                 |         |           |       |

|                  |           |           |         |
|------------------|-----------|-----------|---------|
| COMPANY:         |           | ALESIS    |         |
| TITLE:           |           | D5 MAIN   |         |
| DRAWN:           | DAVID LEI | DATE:     | 6/23/95 |
| CHECKED:         |           | DATE:     |         |
| QUALITY CONTROL: |           | DATE:     |         |
| RELEASED:        |           | DATE:     |         |
| CODE:            |           | SIZE:     |         |
| DRAWING NO:      |           | 9-40-1174 |         |
| SCALE:           |           | SHEET: OF |         |



| REVISION RECORD |         |           |       |
|-----------------|---------|-----------|-------|
| LTR             | ECO NO: | APPROVED: | DATE: |
|                 |         |           |       |
|                 |         |           |       |

COMPANY: ALESIS

TITLE: D5 MAIN

|                  |                |        |       |             |      |
|------------------|----------------|--------|-------|-------------|------|
| DRAWN: DAVID LEI | DATED: 8/16/95 | CODE:  | SIZE: | DRAWING NO: | REV: |
| CHECKED:         | DATED:         | c      |       | 9-40-1174   | C    |
| QUALITY CONTROL: | DATED:         | SCALE: |       | SHEET: OF   | 3    |
| RELEASED:        | DATED:         |        |       |             |      |

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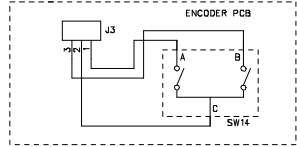
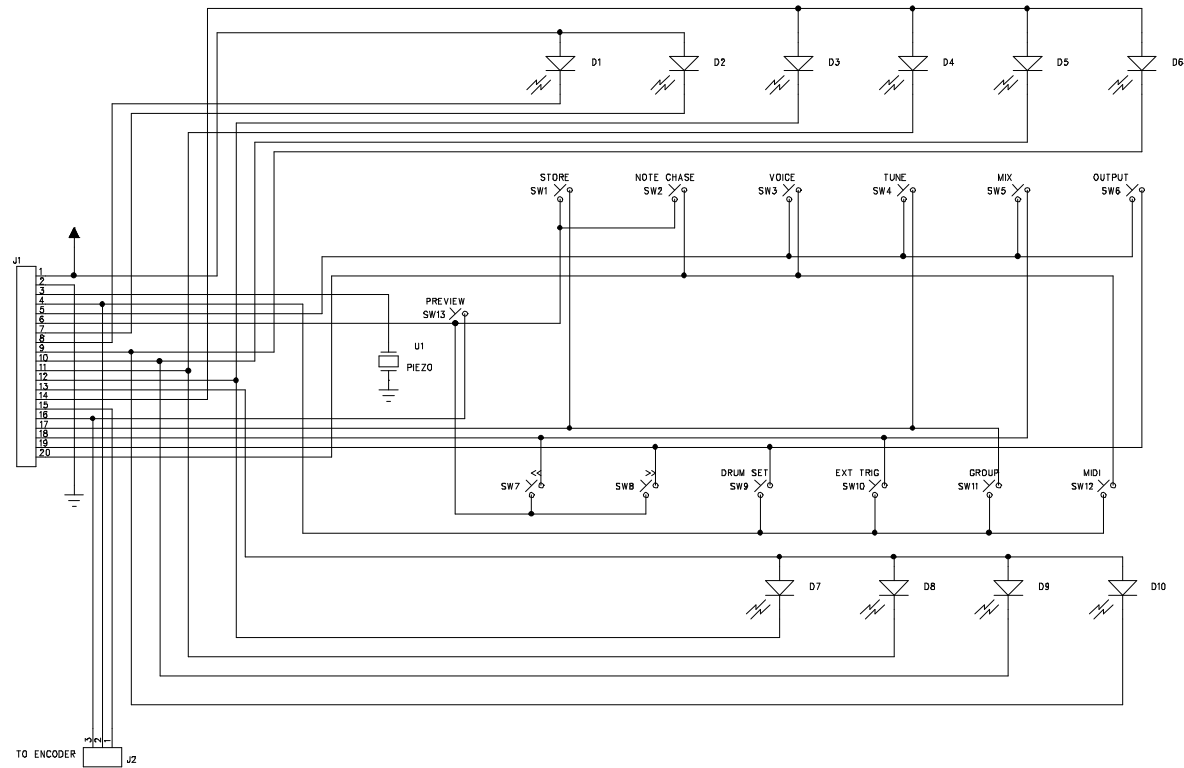
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| REVISION RECORD |         |           |       |
|-----------------|---------|-----------|-------|
| LTR             | ECO NO: | APPROVED: | DATE: |
|                 |         |           |       |
|                 |         |           |       |
|                 |         |           |       |



COMPANY: ALESIS

TITLE: D5 FRONT PANEL PCB  
P/N 9-40-1215

|                   |                   |
|-------------------|-------------------|
| DRAWN:<br>C. HERN | DATED:<br>11-9-94 |
| CHECKED:          | DATED:            |
| QUALITY CONTROL:  | DATED:            |
| RELEASED:         | DATED:            |

|            |            |                            |               |
|------------|------------|----------------------------|---------------|
| CODE:      | SIZE:<br>C | DRAWING NO:<br>9-40-1215-1 | REV:<br>X1    |
| SCALE: n/a |            |                            | SHEET: 1 of 1 |

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| REVISION RECORD |         |           |       |
|-----------------|---------|-----------|-------|
| LTR             | ECO NO: | APPROVED: | DATE: |
|                 |         |           |       |
|                 |         |           |       |
|                 |         |           |       |

D

D

C

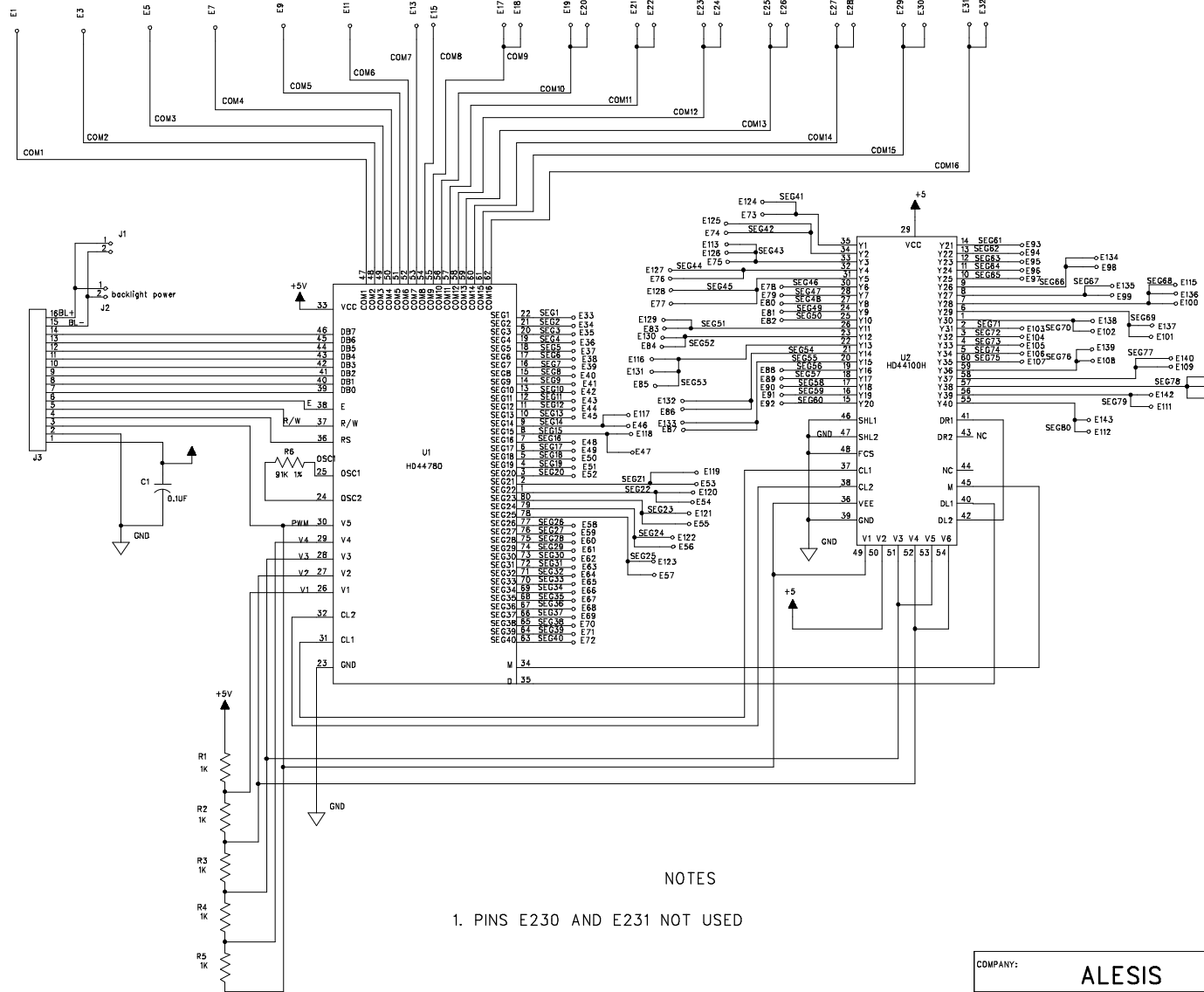
C

B

B

A

A



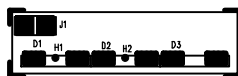
NOTES  
1. PINS E230 AND E231 NOT USED

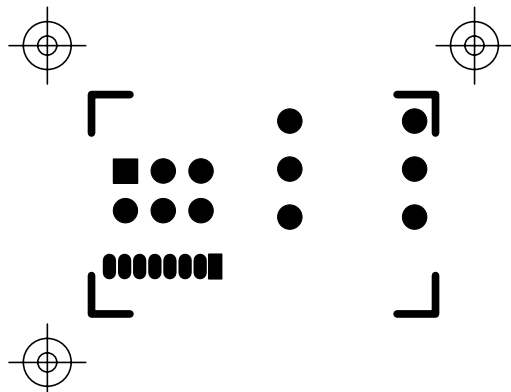
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|------------------|--|----------------|--|----------------------|---------|-----------------------|---------|
| DRAWN: NATE LEE  |  | DATED: 2-28-95 |  | COMPANY: ALESIS      |         |                       |         |
| CHECKED:         |  | DATED:         |  | TITLE: D5 LCD DRIVER |         |                       |         |
| QUALITY CONTROL: |  | DATED:         |  | CODE:                | SIZE: C | DRAWING NO: 9-40-1214 | REV: X2 |
| RELEASED:        |  | DATED:         |  | SCALE:               |         | SHEET: 1 OF 1         |         |

A/W 9-40-1216 "TOP ASSEMBLY" REV.A

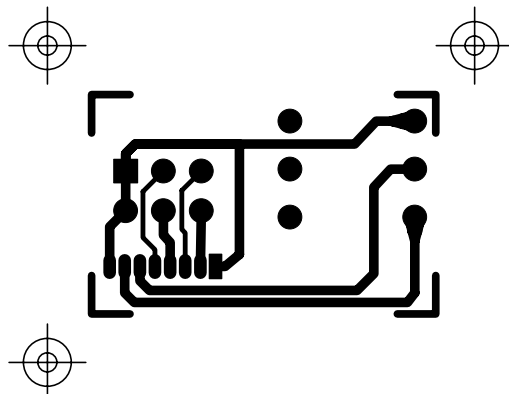


6-29-95





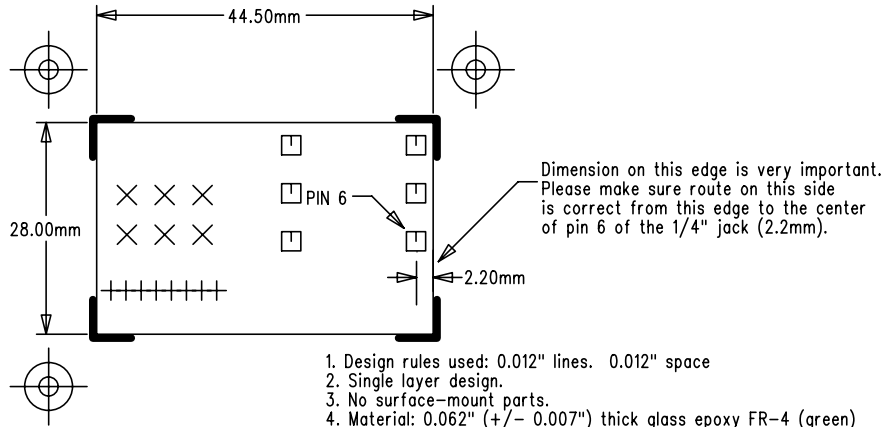
ALESIS 9-40-1219-A "TOPSMK"



ALESIS 9-40-1219-A "TOPTRACE"

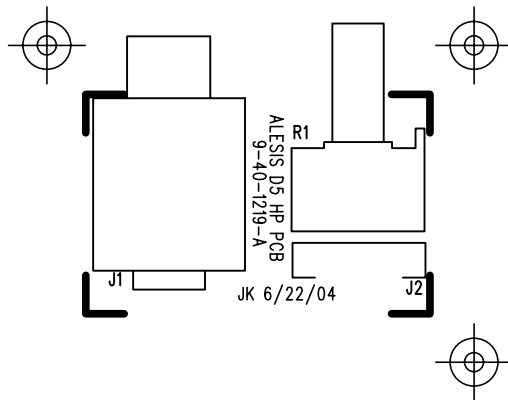


# ALESIS 9-40-1219-A "DRILLDWG"



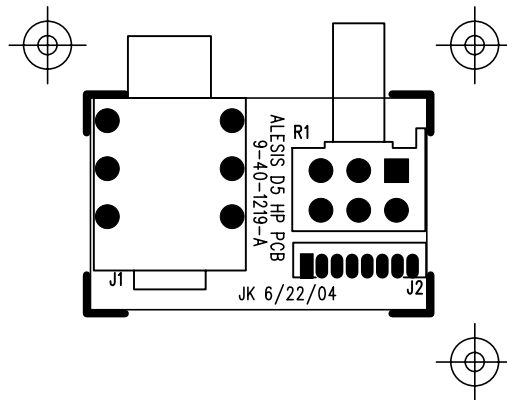
| SIZE | QTY | SYM | PLTD  |
|------|-----|-----|-------|
| 31   | 8   | +   | NPLTD |
| 46.5 | 6   | ×   | NPLTD |
| 52   | 6   | □   | NPLTD |

- Design rules used: 0.012" lines. 0.012" space
  - Single layer design.
  - No surface-mount parts.
  - Material: 0.062" (+/- 0.007") thick glass epoxy FR-4 (green)  
1 oz. copper all layers, finished.
  - Finish: SMOBC, Hot Air Level
  - Drilled holes are +/- 0.003" tolerance.
  - Layer-to-layer registration to be +/- 0.005"
  - Soldermask all exposed copper, LPI, green.
  - Silkscreen using epoxy-based ink (white).
  - Surface to be flat within 0.010" in/in of diagonal measurement.
  - Vendor shall etch or stamp I.D. logo and date code, type designation and UL flame rating on solder side of PCB.
- NO COPPER MAY BE DELETED**
- Soldercoat top side to standard J-STD-003.
  - Mechanical dims are +/- 0.005" tolerance.
  - Workmanship and acceptance criteria shall be in accordance with IPC-A-600, Class 1.



ALESIS 9-40-1219-A "BOTSILK"

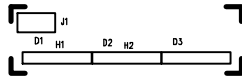
ALESIS 9-40-1219-A "BOTTOM ASSEMBLY DRAWING"

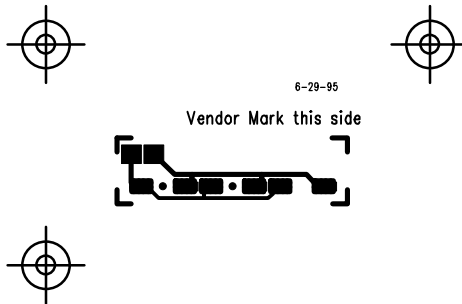




6-29-95

A/W 9-40-1216 "TOP SILK" REV.A



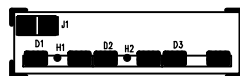


A/W 9-40-1216 "TOPTRACE" REV.A

A/W 9-40-1216 "TOP ASSEMBLY" REV.A



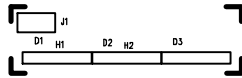
6-29-95





6-29-95

A/W 9-40-1216 "TOP SILK" REV.A





6-29-95

A.VER 01-0-0 "BOT2LK" REV.A



A\W 0-4-0-1210 "BOT2LK" REV.A



# ALESIS DM5 (D5)

## BOM

| D5 Main PCB BOM - Rev H |  |     |   |   |  |                            |
|-------------------------|--|-----|---|---|--|----------------------------|
| P/N                     | Description  | Qty | Ref. Des.   | Approved Mfr.   | Mfr's P/N  | PADsMfr.                   |
| 0-05-0209               | RES 2 OHM 1/2W 5%                                      | 1   | R73   |   |  |                            |
| 0-15-0101               | RES 100 OHM 1/10W 5% 0805                              | 1   | R156  |   |  |                            |
| 0-15-0102               | RES 1K OHM 1/10W 5% 0805                               | 9   | R25-27 R58-59 R84 R106 R131 R135  |   |  |                            |
| 0-15-0103               | RES 10K OHM 1/10W 5% 0805                              | 41  | R44-46 R52-57 R62-64 R66-69 R71-72 R75-77 R79 R81-83 R87-90 R92 R95-99 R101-103 R128 R133 R146  |   |  |                            |
| 0-15-0104               | RES 100K OHM 1/10W 5% 0805                             | 5   | R6 R113 R130 R145 R155  |   |  |                            |
| 0-15-0124               | RES 120K OHM 1/10W 5% 0805                             | 1   | R132  |   |  |                            |
| 0-15-0202               | RES 2K OHM 1/10W 5% 0805                               | 3   | R24 R29 R138  |   |  |                            |
| 0-15-0203               | RES 20K OHM 1/10W 5% 0805                              | 22  | R5 R19-23 R28 R30 R39-40 R43 R50-51 R61 R65 R70 R74 R80 R86 R93-94 R100   |   |  |                            |
| 0-15-0204               | RES 200K OHM 1/10W 5% 0805                             | 1   | R112  |   |  |                            |
| 0-15-0221               | RES 220 OHM 1/10W 5% 0805                              | 7   | R125 R127 R139-140 R143 R147-148  |   |  |                            |
| 0-15-0272               | RES 2.7K OHM 1/10W 5% 0805                             | 1   | R134  |   |  |                            |
| 0-15-0273               | RES 27K OHM 1/10W 5% 0805                              | 8   | R7 R12 R14 R16-17 R31 R34 R38   |   |  |                            |
| 0-15-0331               | RES 330 OHM 1/10W 5% 0805                              | 10  | R3-4 R32-33 R60 R78 R151-154  |   |  |                            |
| 0-15-0362               | RES 3.6K OHM 1/10W 5% 0805                             | 2   | R1-2  |   |  |                            |
| 0-15-0394               | RES 390K OHM 1/10W 5% 0805                             | 1   | R111  |   |  |                            |
| 0-15-0470               | RES 47 OHM 1/10W 5% 0805                               | 3   | R48-49 R150   |   |  |                            |
| 0-15-0472               | RES 4.7K OHM 1/10W 5% 0805                             | 3   | R36 R42 R85   |   |  |                            |
| 0-15-0511               | RES 510 OHM 1/10W 5% 0805                              | 1   | R107  |   |  |                            |
| 0-15-0512               | RES 5.1K OHM 1/10W 5% 0805                             | 1   | R136  |   |  |                            |
| 0-15-0513               | RES 51K OHM 1/10W 5% 0805                              | 11  | R8-11 R13 R15 R18 R35 R37 R41 R114  |   |  |                            |
| 0-15-0824               | RES 820K OHM 1/10W 5% 0805                             | 1   | R110  |   |  |                            |
| 0-17-0221               | RES CHIP ARRAY 4 X 220 OHM 1/16W 5% ISOLATED c-c=0.8mm | 1   | R122  | PANASONIC INDUSTRIAL CO<br>VENKEL<br>CTS<br>SEI ELECTRONICS<br>SKYWELL TECHNOLOGY | EXBV8V221J<br>CRN16-4-221JCT<br>742C083221J<br>RAC16-4D 220 5%<br>RA03J221-4       | TAD COMPONENTS, INC.       |
| 0-17-0223               | RES CHIP ARRAY 4x22K OHM 1/16W 5% ISOLATED c-c=0.8mm   | 4   | R104-105 R116-117   | PANASONIC INDUSTRIAL CO<br>VENKEL<br>SKYWELL TECHNOLOGY<br>SEI ELECTRONICS<br>CTS | EXBV8V223JV<br>CRN16-4-223JCT<br>RA03J223-4<br>RAC16-4D-22K 5%<br>742C083223JCT-ND | TAD COMPONENTS, INC.       |
| 0-17-0331               | RES CHIP ARRAY 4 x 330 OHM 1/16W 5% ISOLATED c-c=0.8mm | 1   | R47   | CTS<br>PANASONIC INDUSTRIAL CO<br>SEI ELECTRONICS                                 | 742C083331J<br>EXBV8V331JV<br>RAC16-4D331J   | TAD COMPONENTS, INC.       |
| 1-08-0228               | CAP 2200uF ELEC 16V 5x13.2x24mm                        | 4   | C108 C111-112 C114  | XICON   | XRL-16V-2200   |                            |
| 1-56-0102               | CAP 1000pF NPO 0805 5% 100V                            | 12  | C1-2 C12-13 C15 C18 C22-23 C29-30 C33-34  |   |  |                            |
| 1-56-0103               | CAP 0.01uF X7R 0805                                    | 12  | C41 C50-51 C58 C63 C66 C71 C76 C81 C89 C91 C97  |   |  |                            |
| 1-56-0104               | CAP 0.1uF X7R 0805 10% 50V                             | 59  | C4-6 C8 C10 C14 C16-17 C19-21 C24-26 C32 C36-37 C39 C42-44 C49 C53 C55 C57 C60 C64 C67-68 C72 C75 C77 C79 C82-84 C90 C92-93 C96 C98-107 C113 C115-122 | SIEMENS-MATSUSHITA (EPCOS)  | B37941K5104K62   |                            |
| 1-56-0151               | CAP 150pF NPO 0805                                     | 12  | C38 C45-46 C54 C59 C65 C69 C74 C78 C85-86 C94   |   |  |                            |
| 1-56-0474               | CAP 0.47uF X7R 0805 16V                                | 12  | C40 C47-48 C56 C61-62 C70 C73 C80 C87-88 C95  |   |  |                            |
| 1-60-3222               | CAP 22uF ELEC 16V SMD-C                                | 11  | C3 C7 C9 C11 C27-28 C31 C35 C52 C109-110  | ELNA  | RV2-16V220M-R  | PANASONIC INDUSTRIAL CORP. |

| D5 Main PCB BOM - Rev H |   |     |                       |   |   |                        |
|-------------------------|---|-----|-----------------------|---|---|------------------------|
| P/N                     | Description   | Qty | Ref. Des.             | Approved Mfr.   | Mfr's P/N                               | PADsMfr.               |
| 2-11-7805               | REG VOLTAGE LM7805C +5V TO-220                            | 1   | U29                   | NATIONAL SEMICONDUCTOR<br>NATIONAL SEMICONDUCTOR<br>MOTOROLA                  | LM340T5<br>LM7805CT-5.0<br>340T-5.0     | NATIONAL               |
| 2-11-7905               | REG VOLTAGE LM7905 -5V TO-220                             | 1   | U28                   | MOTOROLA<br>MOTOROLA<br>FAIRCHILD SEMI<br>NATIONAL SEMICONDUCTOR              | MC7905CT<br>MC7905ACT<br>LM7905<br>7905 | NATIONAL               |
| 2-27-0015               | ASIC DM3 ETO  | 1   | U8                    | AMI   |   | ALESIS                 |
| 2-27-0039               | ASIC D56IFT D5/D6 (64PQFPRECT)                            | 1   | U12                   | AMI   |   | ALESIS                 |
| 2-50-4149               | DIODE SIGNAL 1N4148 100V 200mA SOT-23                     | 10  | D1-9 D12              | TAITRON COMPONENTS INCORPOR   | MMBD4148                                | TAITRON                |
| 2-51-4003               | DIODE POWER 300V 1A SMA                                   | 2   | D10-11                | ON SEMICONDUCTOR  | MRA4003T3                               | ON SEMI                |
| 2-51-4401               | TRANS NPN 2N4401 40V 1A SOT-23                            | 11  | Q1 Q4-6 Q8-14         | FAIRCHILD SEMI  | MMBT4401                                |                        |
| 2-51-4403               | TRANS PNP 2N4403 40V 800mA SOT-23                         | 3   | Q2-3 Q7               | FAIRCHILD SEMI  | MMBT4403                                |                        |
| 2-61-2117               | REG VOLTAGE LM1117DTX-3.3 3.3V TO-252                     | 1   | U15                   | NATIONAL SEMICONDUCTOR  | LM1117DTX-3.3                           | NATIONAL SEMICONDUCTOR |
| 2-62-0014               | IC 74AHC14 HEX SCHMITT-TRIGGER INVERTERS SOP-14           | 2   | U27 U30               | TEXAS INSTRUMENTS INC.  | 74AHC14                                 |                        |
| 2-62-0541               | IC 74AHC541 OCTAL BUFFERS/DRIVERS W/TRI-STATE OUTS SOP-20 | 5   | U18 U22 U36-38        | TEXAS INSTRUMENTS INC.  | 74AHC541                                |                        |
| 2-62-0574               | IC 74AHC574 OCTAL D FF W/TRI-STATE OUTS SOP-20            | 4   | U20 U26 U31-32        | TEXAS INSTRUMENTS INC.  | SN74AHC574DW<br>SN74AHC574DWR           |                        |
| 2-62-6541               | IC 74AHCT16541 16-BIT BUFFER/DRIVER W/TRI OUTS SOP-48     | 1   | U35                   | TEXAS INSTRUMENTS INC.  | SN74AHCT16541DLR                        | TEXAS INSTRUMENTS      |
| 2-67-5169               | IC SRAM 8Kx8 70NS SOP-28                                  | 1   | U16                   | HUNDAI<br>TM TECH   | HY6264ALJ-70<br>T15M64A-70D             |                        |
| 2-69-2320               | IC FLASH-ROM 2Mx16 70nS TSOP-48                           | 1   | U34                   | INTEL   | TE28F320C3BD70                          | INTEL                  |
| 2-69-2512               | IC EPROM 512K 64Kx8 PLCC-32 OTP 5.0V 70ns                 | 1   | U9                    | HOLTEK<br>ATMEL   | HT27C512-70JC<br>AT27C512R-70JC         | ATMEL                  |
| 2-70-8033               | IC MPU 80C31 PQFP-44                                      | 1   | U19                   | INTEL<br>TEMIC  | S80C31BH<br>TSC80C31-12CC               |                        |
| 2-71-0084               | IC TL084 QUAD OPAMP SOP-14                                | 2   | U2 U25                | TEXAS INSTRUMENTS INC.  | TL084CD                                 | TEXAS INST             |
| 2-71-4580               | IC NJM4580E DUAL AUDIO OP-AMP SOP-8                       | 1   | U5                    | JRC (NEW JAPAN RADIO COMPANY)   | NJM4580E                                | JRC                    |
| 2-72-0311               | IC LM311 ANALOG COMP SOP-8                                | 1   | U24                   | FAIRCHILD SEMI<br>NATIONAL SEMICONDUCTOR<br>TEXAS INSTRUMENTS INC.            | LM311M<br>LM311M<br>LM311 (SO-8)        | NATIONAL               |
| 2-72-0339               | IC LM339 ANALOG COMP SOP-14                               | 6   | U4 U6 U10 U14 U17 U21 | TEXAS INSTRUMENTS INC.<br>NATIONAL SEMICONDUCTOR                              | LM339<br>LM339                          |                        |
| 2-72-4051               | IC CD4051 SINGLE 8-CHAN MUX SOIC-16                       | 2   | U11 U13               | FAIRCHILD SEMI  | CD4051BCM                               |                        |
| 2-74-0181               | IC OPTO-ISOLATOR TLP181 TRANS-OUT SMD                     | 1   | U7                    | TOSHIBA AMERICA INC.  | TLP181                                  | Toshiba                |
| 2-75-1201               | IC CONVERTER D/A 24-BIT AL1201 SOP-16                     | 2   | U1 U3                 |   |   | ALESIS                 |
| 2-79-1814               | IC CONTROLLER RESET W/OVERRIDE DS1813-10 +5V SOT-23       | 1   | U33                   |   |   | DALLAS                 |
| 4-00-0002               | JACK DIN 5-PIN MIDI PCB MOUNT 180° W/SHIELD               | 2   | J19-20                | SINGATRON ENTERPRISE CO. LTD<br>SINGATRON ENT.CO. LTD.                        | 2DJ-0065PSA2                            | SINGATRON              |
| 4-02-0001               | JACK 1/4 MONO   | 17  | J1-5 J7-10 J12-18 J21 | LIH SHENG PRECISION IND. CO.,<br>LTD.<br>CLIFF ELECTRONIC COMPONENTS          | LJB0661-4SS<br>S2 BNB BLK PC-C          | CLIFF                  |
| 4-14-0020               | HEADER DIL 20-PIN 0.1                                     | 1   | J22                   | AMP INC.<br>WIESON ELECTRONICS CO   | 1-103186-0<br>2100-2*10SF1              |                        |
| 4-15-0006               | HEADER SIL 6-PIN 0.1                                      | 1   | J24                   | SAMTEC<br>JAWS ELECTRONIC LTD.<br>AMP INC.                                    | TSW-106-07-T-S                          |                        |
| 4-15-1008               | HEADER SIL 8-PIN 2mm SHRD                                 | 1   | J6                    | JAE ELECTRONICS   | IL-S-8P-S2T2-EF                         |                        |
| 4-16-0002               | JACK 6.3mm BARREL (P3) 2.5mm CENTER PIN                   | 1   | J23                   |   |   |                        |
| 4-18-1627               | CABLE DIL 16-PIN 0.1 210mm M-F                            | 1   | J11                   | JYE TAI PRECISION IND.CO. LTD.  | DJ-0702B-025                            |                        |
| 6-02-0003               | SWITCH PUSH DPDT  | 1   | S1                    | ITT SHADOW<br>HWA SHENG CHANG CO. LTD.<br>TAIWAN ALPHA ELECTRONICS CO.<br>LTD | 6PLB<br>PS-9AN-022-18                   | SHADOW ITT             |
| 7-01-0038               | RESONATOR 12 MHz CERAMIC W/CAPACITORS SMD                 | 1   | M1                    |   |   | YOKETANT CORP.         |
| 7-05-0003               | BATTERY 3V LITHIUM COIN-TYPE PCB-MNT 23mmOD 2.5mmTHK      | 1   | B1                    | PANASONIC INDUSTRIAL CO   | BR2325/1HG                              | PANASONIC, alt:RAYOVAC |

ALESIS D5 BOM

4-22-02

| Parent    | Part.Number | Description                              | Quantity | Ref.Designator |
|-----------|-------------|--|----------|----------------|
|           | D5-UL       | DRUM MODULE D5 - UL                      | 1        |                |
| D5-UL     | 7-40-0903   | TRANSFORMER P3-UL                        | 1        |                |
| D5-UL     | 7-51-1219-B | SHEET "WELCOME TO ALESIS FAMILY" 5 x 8"  | 1        |                |
|           |             |  |          |                |
|           | D5          | DRUM MODULE D5                           | 1        |                |
| D5        | 4-18-1627   | CABLE DIL 16-PIN 0.1" 210mm M-F          | 1        |                |
| D5        | 4-18-2020   | CABLE DIL RIBBON 20-PIN 200mm            | 1        |                |
| D5        | 4-19-1331   | CABLE SIL 8-PIN 2mm 150mm F-F - REV B    | 1        |                |
| D5        | 4-19-1403   | CABLE 3-LEAD 40mm STRIPPED & TINNED      | 1        |                |
| D5        | 5-00-0020   | SCREW M3 x 7mm PPB PHIL-SLOT             | 11       |                |
| D5        | 7-50-0068   | STICKER BARCODE S/N D5                   | 1        |                |
| D5        | 7-51-1169   | CHART SOUND D5                           | 1        |                |
| D5        | 7-51-1170   | CHART QUICK SET-UP D5                    | 1        |                |
| D5        | 7-51-1175   | MANUAL REFERENCE D5                      | 1        |                |
| D5        | 7-53-0018   | STICKER QC W/ MFR DATE (UL APPROVED)     | 1        |                |
| D5        | 7-80-0005   | BOX CARDHOLDER P/S                       | 1        |                |
| D5        | 7-80-0153   | BOX GIFT STANDARDIZED D5                 | 1        |                |
| D5        | 7-81-0104   | FOAM ENDCAP RIGHT SINGLE-RACK STD        | 1        |                |
| D5        | 7-81-0105   | FOAM ENDCAP LEFT SINGLE-RACK STD         | 1        |                |
| D5        | 7-91-1002   | GEL SILICA 5G PACKET                     | 2        |                |
| D5        | 7-94-0709   | POLYBAG 7 x 9 - 4 MIL                    | 1        |                |
| D5        | 7-94-0924   | POLYBAG 9 x 24 - 4 MIL                   | 1        |                |
| D5        | 9-03-0003   | PANEL REAR D5                            | 1        |                |
| D5        | 9-03-1060   | CASE TOP 150mm D4/D5/M4/7R               | 1        |                |
| D5        | 9-10-0005   | BEZEL BACKLIGHT D5/D6                    | 1        |                |
| D5        | 9-13-1040   | STRIP ZEBRA 99L x 8.2H x 2.5W D5/D6      | 2        |                |
| D5        | 9-15-1078   | BUTTON POWER D5/D6/M4/Q2/S4/S8/7R        | 1        |                |
| D5        | 9-15-1117   | EXTENDER SWITCH D5/D6/M4/Q2/S4/S8/7R     | 1        |                |
| D5        | 9-23-1017   | STRIP FOAM SIDE 7 x 95mm                 | 4        |                |
| D5        | 9-58-1007   | PANEL SIDE/RACK EAR 150mm D5/D6/M4/D4/7R | 2        |                |
| D5        | 9-79-0159   | ASSY LCD D5                              | 1        |                |
|           |             |  |          |                |
| D5        | 9-79-0158   | ASSY PCB FRONT-PANEL D5                  | 1        |                |
| 9-79-0158 | 0-09-1022   | POT 10KA DUAL CONTROL                    | 1        |                |
| 9-79-0158 | 3-02-0021   | LED GREEN HLMP-1540 T1                   | 10       |                |
| 9-79-0158 | 4-02-0005   | JACK 1/4" STEREO 6-PIN FEMALE RAISED     | 1        |                |
| 9-79-0158 | 4-14-0020   | HEADER DIL 20-PIN 0.1"                   | 1        |                |
| 9-79-0158 | 4-15-1008   | HEADER SIL 8-PIN 2mm SHRD                | 1        |                |
| 9-79-0158 | 7-00-0001   | PIEZO 4.6kHz 27mmOD BRASS                | 1        |                |
| 9-79-0158 | 9-00-1011   | ENCODER ROTARY 11mm-SHAFT HORIZONTAL     | 1        |                |
| 9-79-0158 | 9-03-0005   | EXTRUSION FRONT-PANEL D5                 | 1        |                |

ALESIS D5 BOM

4-22-02

|           |             |  |    |   |
|-----------|-------------|--|----|---|
| 9-79-0158 | 9-03-1165   | CLIP STRIP RETAINER                                    | 8  |   |
| 9-79-0158 | 9-10-0003   | BEZEL FRONT-PANEL A D5/D6/7R                           | 1  |   |
| 9-79-0158 | 9-10-0004   | BEZEL FRONT-PANEL B D5/7R                              | 1  |   |
| 9-79-0158 | 9-10-0006   | BEZEL FRONT LCD D5                                     | 1  |   |
| 9-79-0158 | 9-13-0020   | STRIP RETAINER 6.35x20mm D5                            | 4  |   |
| 9-79-0158 | 9-13-0130   | STRIP RETAINER 130mm D5/7R                             | 2  |   |
| 9-79-0158 | 9-15-0087   | KNOB DATA D5/D6/C4/M4/7R                               | 1  |   |
| 9-79-0158 | 9-15-1112   | KNOB STANDARD  | 1  |   |
| 9-79-0158 | 9-23-1014   | STRIP FOAM FRONT-PANEL 7 x 180mm                       | 4  |   |
| 9-79-0158 | 9-23-1061   | KEYPAD RUBBER D5                                       | 1  |   |
| 9-79-0158 | 9-40-1215   | PCB FRONT-PANEL D5                                     | 1  |   |
| 9-79-0158 | 9-40-1219-A | PCB HEADPHONE D5/7R - REV A                            | 1  | PCB   |
|           |             |  |    |   |
| D5        | 9-79-1174   | ASSY PCB MAIN D5                                       | 1  |   |
| 9-79-1174 | 0-05-0209   | RES 2 OHM 1/2W 5%                                      | 1  | R73   |
| 9-79-1174 | 0-15-0102   | RES 1K OHM 1/10W 5% 0805                               | 9  | R6 R25-27 R84 R131 R135 R155-156  |
|           |             |  |    | R7-18 R31 R34-35 R38 R44-46 R52-57 R62-64 R66-69 R71-72<br>R75-77 R79 R81-83 R87-90 R92 R95-99 R101-103 R129 R133 |
| 9-79-1174 | 0-15-0103   | RES 10K OHM 1/10W 5% 0805                              | 57 | R146  |
| 9-79-1174 | 0-15-0104   | RES 100K OHM 1/10W 5% 0805                             | 3  | R113 R130 R145  |
| 9-79-1174 | 0-15-0105   | RES 1M OHM 1/10W 5% 0805                               | 1  | R91   |
| 9-79-1174 | 0-15-0124   | RES 120K OHM 1/10W 5% 0805                             | 1  | R132  |
| 9-79-1174 | 0-15-0202   | RES 2K OHM 1/10W 5% 0805                               | 3  | R24 R29 R138  |
|           |             |  |    | R28 R30 R43 R50-51 R61 R65 R70 R74 R80 R86 R93-94<br>R100   |
| 9-79-1174 | 0-15-0203   | RES 20K OHM 1/10W 5% 0805                              | 14 | R112  |
| 9-79-1174 | 0-15-0204   | RES 200K OHM 1/10W 5% 0805                             | 1  | R112  |
| 9-79-1174 | 0-15-0221   | RES 220 OHM 1/10W 5% 0805                              | 7  | R125 R127 R139-140 R143 R147-148  |
| 9-79-1174 | 0-15-0272   | RES 2.7K OHM 1/10W 5% 0805                             | 1  | R134  |
| 9-79-1174 | 0-15-0331   | RES 330 OHM 1/10W 5% 0805                              | 11 | R3-4 R32-33 R60 R78 R128 R151-154   |
| 9-79-1174 | 0-15-0362   | RES 3.6K OHM 1/10W 5% 0805                             | 10 | R1-2 R5 R19-23 R39-40   |
| 9-79-1174 | 0-15-0394   | RES 390K OHM 1/10W 5% 0805                             | 1  | R111  |
| 9-79-1174 | 0-15-0470   | RES 47 OHM 1/10W 5% 0805                               | 3  | R48-49 R150   |
| 9-79-1174 | 0-15-0472   | RES 4.7K OHM 1/10W 5% 0805                             | 3  | R36 R42 R85   |
| 9-79-1174 | 0-15-0512   | RES 5.1K OHM 1/10W 5% 0805                             | 1  | R136  |
| 9-79-1174 | 0-15-0513   | RES 51K OHM 1/10W 5% 0805                              | 3  | R37 R41 R114  |
| 9-79-1174 | 0-15-0824   | RES 820K OHM 1/10W 5% 0805                             | 1  | R110  |
|           |             |  |    |   |
| 9-79-1174 | 0-17-0221   | RES CHIP ARRAY 4 X 220 OHM 1/16W 5% ISOLATED c-c=0.8mm | 1  | R122  |
| 9-79-1174 | 0-17-0223   | RES CHIP ARRAY 4x22K OHM 1/16W 5% ISOLATED c-c=0.8mm   | 4  | R104-105 R116-117   |
| 9-79-1174 | 0-17-0331   | RES CHIP ARRAY 4 x 330 OHM 1/16W 5% ISOLATED c-c=0.8mm | 1  | R47   |

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|-----------|-----------|---|----|--|
| 9-79-1174 | 1-08-0222 | CAP 22uF ELEC 16V 20% 1.5x4x7mm                           | 8  | C3 C7 C11 C27 C31 C35 C109-110   |
| 9-79-1174 | 1-08-0228 | CAP 2200uF ELEC 16V 5x13.2x24mm                           | 4  | C108 C111-112 C114   |
| 9-79-1174 | 1-55-0561 | CAP 560pF NPO 0805  | 8  | C1-2 C8 C14 C19 C28-30   |
| 9-79-1174 | 1-56-0101 | CAP 100pF NPO 0805 5% 50V                                 | 8  | C12-13 C15 C18 C22-23 C33-34   |
| 9-79-1174 | 1-56-0103 | CAP 0.01uF X7R 0805                                       | 12 | C41 C50-51 C58 C63 C66 C71 C76 C81 C89 C91 C97   |
| 9-79-1174 | 1-56-0104 | CAP 0.1uF X7R 0805 10% 50V                                | 48 | C4-6 C16-17 C24-26 C37 C39 C42-44 C49 C52-53 C55 C57 C60 C64 C67-68 C72 C75 C77 C79 C84 C90 C92-93 C96 C98-107 C113 C115-120 |
| 9-79-1174 | 1-56-0151 | CAP 150pF NPO 0805  | 12 | C38 C45-46 C54 C59 C65 C69 C74 C78 C85-86 C94  |
| 9-79-1174 | 1-56-0220 | CAP 22pF NPO 0805 5% 50V                                  | 2  | C82-83   |
| 9-79-1174 | 1-56-0474 | CAP 0.47uF X7R 0805 16V                                   | 12 | C40 C47-48 C56 C61-62 C70 C73 C80 C87-88 C95   |
| 9-79-1174 | 2-01-4003 | DIODE POWER 1N4003 200V 1A                                | 2  | D10-11   |
| 9-79-1174 | 2-11-7805 | REG VOLTAGE LM7805C +5V TO-220                            | 1  | U29  |
| 9-79-1174 | 2-11-7905 | REG VOLTAGE LM7905 -5V TO-220                             | 1  | U28  |
| 9-79-1174 | 2-24-0138 | IC OPTO-ISOLATOR 6N138                                    | 1  | U23  |
| 9-79-1174 | 2-27-0015 | ASIC DM3 ETO  | 1  | U8   |
| 9-79-1174 | 2-27-0039 | ASIC D56IFT D5/D6 (64PQFPRECT)                            | 1  | U12  |
| 9-79-1174 | 2-31-0064 | IC SOFTWARE EPROM D5 (V1.02)                              | 1  | U15  |
| 9-79-1174 | 2-50-4149 | DIODE SIGNAL 1N4148 100V 200mA SOT-23                     | 9  | D1-9   |
| 9-79-1174 | 2-51-4401 | TRANS NPN 2N4401 40V 1A SOT-23                            | 8  | Q1 Q4-6 Q8-10 Q12  |
| 9-79-1174 | 2-51-4403 | TRANS PNP 2N4403 40V 800mA SOT-23                         | 2  | Q2-3   |
| 9-79-1174 | 2-62-0014 | IC 74AHC14 HEX SCHMITT-TRIGGER INVERTERS SOP-14           | 2  | U27 U30  |
| 9-79-1174 | 2-62-0541 | IC 74AHC541 OCTAL BUFFERS/DRIVERS W/TRI-STATE OUTS SOP-20 | 2  | U18 U22  |
| 9-79-1174 | 2-62-0574 | IC 74AHC574 OCTAL D FF W/TRI-STATE OUTS SOP-20            | 4  | U20 U26 U31-32   |
| 9-79-1174 | 2-67-5168 | IC SRAM 8Kx8 CL62C064F-10 SOP-28                          | 1  | U16  |
| 9-79-1174 | 2-70-8033 | IC MPU 80C31 PQFP-44                                      | 1  | U19  |
| 9-79-1174 | 2-71-0084 | IC TL084 QUAD OPAMP SOP-14                                | 2  | U2 U25   |
| 9-79-1174 | 2-71-4580 | IC NJM4580E DUAL AUDIO OP-AMP SOP-8                       | 1  | U5   |
| 9-79-1174 | 2-72-0311 | IC LM311 ANALOG COMP SOP-8                                | 1  | U24  |
| 9-79-1174 | 2-72-0339 | IC LM339 ANALOG COMP SOP-14                               | 6  | U4 U6 U10 U14 U17 U21  |
| 9-79-1174 | 2-72-4051 | IC CD4051 SINGLE 8-CHAN MUX SOIC-16                       | 2  | U11 U13  |
| 9-79-1174 | 2-75-1201 | IC CONVERTER D/A 24-BIT AL1201 SOP-16                     | 2  | U1 U3  |
| 9-79-1174 | 2-77-0030 | IC MASK ROM D5-1  | 1  | U7   |
| 9-79-1174 | 2-77-0043 | IC MASK ROM D5-2  | 1  | U9   |
| 9-79-1174 | 2-79-1814 | IC CONTROLLER RESET W/OVERRIDE DS1813-10 +5V SOT-23       | 1  | U33  |
| 9-79-1174 | 4-00-0002 | JACK DIN 5-PIN MIDI PCB MOUNT 180ø W/SHIELD               | 2  | J19-20   |
| 9-79-1174 | 4-02-0001 | JACK 1/4" MONO  | 17 | J1-5 J7-10 J12-18 J21  |
| 9-79-1174 | 4-06-0028 | SOCKET 28-PIN DIP 0.6"                                    | 1  | U15  |
| 9-79-1174 | 4-14-0020 | HEADER DIL 20-PIN 0.1"                                    | 1  | J22  |
| 9-79-1174 | 4-15-0006 | HEADER SIL 6-PIN 0.1"                                     | 1  | J24  |

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|-----------|-------------|---|----|-----|
| 9-79-1174 | 4-15-1008   | HEADER SIL 8-PIN 2mm SHRD                               | 1  | J6  |
| 9-79-1174 | 4-16-0002   | JACK 3.5mm BARREL (P3)                                  | 1  | J23 |
| 9-79-1174 | 5-02-0009   | HEATSINK M3 x 20  | 2  |     |
| 9-79-1174 | 5-04-0009   | WASHER M3 SPLITLOCK                                     | 2  |     |
| 9-79-1174 | 5-04-0045   | SPACER CRYSTAL 5x11.25x1mm (TQ-06 PIN-GOOD)             | 1  |     |
| 9-79-1174 | 6-02-0003   | SWITCH PUSH DPDT  | 1  | S1  |
| 9-79-1174 | 7-01-0009   | CRYSTAL 12 MHz 13mm                                     | 1  | M1  |
| 9-79-1174 | 7-05-0003   | BATTERY 3V LITHIUM COIN-TYPE PCB-MNT 23mmOD<br>2.5mmTHK | 1  | B1  |
| 9-79-1174 | 9-03-1036   | LUG SOLDER PCB MNT                                      | 17 |     |
| 9-79-1174 | 9-23-1059   | SPACER PCB S4   | 1  |     |
| 9-79-1174 | 9-40-1174-D | PCB MAIN D5 - REV D                                     | 1  |     |

D5 Main PCB ASSY Rev C  
9-79-0157

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| Parent    | Part.Number | Description                         | Quantity | Ref.Designator   |
|-----------|-------------|-------------------------------------|----------|--|
| D5        | 9-79-0157   | ASSY PCB MAIN D5 - Rev C            | 1        |  |
| 9-79-0157 | 0-05-0020   | RES 2 OHM 1/2W 5%                   | 1        | JUMP FROM PIN-2 TO PIN-16 OF J4  |
| 9-79-0157 | 0-10-0102   | RES 1K OHM 1/8W 5% 1206             | 8        | R6, 25-27, 84, 131, 135, 141   |
| 9-79-0157 | 0-10-0103   | RES 10K OHM 1/8W 5% 1206            | 49       | R5,19-23,39,40,44-46,52-57,62-64,66-69,71,72,75-77,79,81-83,87-90,92,95-99,101-103,129,133, R146 |
| 9-79-0157 | 0-10-0104   | RES 100K OHM 1/8W 5% 1206           | 3        | R113, 130, 145   |
| 9-79-0157 | 0-10-0105   | RES 1M OHM 1/8W 5% 1206             | 2        | R91, 126   |
| 9-79-0157 | 0-10-0124   | RES 120K OHM 1/8W 5% 1206           | 1        | R132   |
| 9-79-0157 | 0-10-0202   | RES 2K OHM 1/8W 5% 1206             | 4        | R24, 28-30   |
| 9-79-0157 | 0-10-0203   | RES 20K OHM 1/8W 5% 1206            | 20       | R7,12,14,16,17,31,34,38,43,50,51,61,65,70,74,80,86,93,94,100                                     |
| 9-79-0157 | 0-10-0204   | RES 200K OHM 1/8W 5% 1206           | 1        | R112   |
| 9-79-0157 | 0-10-0221   | RES 220 OHM 1/8W 5% 1206            | 14       | R3,4,32,33,122-125,127,139,140,143,147,148   |
| 9-79-0157 | 0-10-0222   | RES 2.2K OHM 1/8W 5% 1206           | 2        | R138, 142  |
| 9-79-0157 | 0-10-0223   | RES 22K OHM 1/8W 5% 1206            | 14       | R104-109, 115-121, 137   |
| 9-79-0157 | 0-10-0272   | RES 2.7K OHM 1/8W 5% 1206           | 1        | R134   |
| 9-79-0157 | 0-10-0393   | RES 39K OHM 1/8W 5% 1206            | 8        | R8-11, 13, 15, 18, 35  |
| 9-79-0157 | 0-10-0394   | RES 390K OHM 1/8W 5% 1206           | 1        | R111   |
| 9-79-0157 | 0-10-0470   | RES 47 OHM 1/8W 5% 1206             | 2        | R48, 49  |
| 9-79-0157 | 0-10-0471   | RES 470 OHM 1/8W 5% 1206            | 6        | R47, 58-60, 78, 128  |
| 9-79-0157 | 0-10-0472   | RES 4.7K OHM 1/8W 5% 1206           | 6        | R1, 2, 36, 42, 85, 144   |
| 9-79-0157 | 0-10-0512   | RES 5.1K OHM 1/8W 5% 1206           | 1        | R136   |
| 9-79-0157 | 0-10-0513   | RES 51K OHM 1/8W 5% 1206            | 3        | R37, 41, 114   |
| 9-79-0157 | 0-10-0824   | RES 820K OHM 1/8W 1206              | 1        | R110   |
| 9-79-0157 | 1-07-1474   | CAP 0.47uF ELEC 50V 2x5x11mm        | 12       | C40,47,48,56,61,62,70,73,80,87,88,95   |
| 9-79-0157 | 1-08-0101   | CAP 10uF ELEC 16V 2x5x11mm          | 10       | C3,4,7,11,24,27,31,35,109,110  |
| 9-79-0157 | 1-08-0228   | CAP 2200uF ELEC 16V 5x13.2x24mm     | 2        | C111, 112  |
| 9-79-0157 | 1-08-0334   | CAP 3300uF ELEC 16V                 | 1        | C108   |
| 9-79-0157 | 1-50-0103   | CAP 0.01uF NPO 1206                 | 12       | C41,50,51,58,63,66,71,76,81,89,91,97   |
| 9-79-0157 | 1-50-0104   | CAP 0.1uF NPO 1206                  | 41       | C5,6,8,16,17,25,26,28,37,39,42-44,49,52,53,55,57,60,64,67,68,72,75,77,79,84,90,92,93,96,98-107   |
| 9-79-0157 | 1-50-0152   | CAP 1500pF NPO 1206 50V             | 8        | C12, 13, 15, 18, 22, 23, 33, 34  |
| 9-79-0157 | 1-50-0220   | CAP 22pF NPO 1206                   | 2        | C82, 83  |
| 9-79-0157 | 1-50-1500   | CAP 150pF NPO 1206                  | 12       | C38, 45, 46, 54, 59, 65, 69, 74, 78, 85, 86, 94  |
| 9-79-0157 | 1-51-0015   | CAP 0.001uF NPO 1206                | 2        | C29, 30  |
| 9-79-0157 | 1-51-0156   | CAP 0.015uF X7R 1206                | 2        | C1, 2  |
| 9-79-0157 | 2-01-4003   | DIODE POWER 1N4003 200V 1A          | 2        | D10, 11  |
| 9-79-0157 | 2-02-5231   | DIODE ZENER 1N5231B 5.1V 1/2W DO-35 | 1        | D12  |
| 9-79-0157 | 2-11-7805   | REG VOLTAGE LM7805C +5V TO-220      | 1        | U29  |
| 9-79-0157 | 2-11-7905   | REG VOLTAGE LM7905 -5V TO-220       | 1        | U28  |
| 9-79-0157 | 2-24-0138   | IC OPTO-ISOLATOR 6N138              | 1        | U23  |



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|           |           |   |    |                       |
|-----------|-----------|---|----|-----------------------|
| 9-79-0157 | 2-27-0015 | ASIC DM3 ETO  | 1  | U8                    |
| 9-79-0157 | 2-27-0039 | ASIC D56IFT D5/D6 (64PQFPRECT)                          | 1  | U12                   |
| 9-79-0157 | 2-31-0064 | IC SOFTWARE EPROM D5 (V1.02)                            | 1  | U15                   |
| 9-79-0157 | 2-50-4148 | DIODE SIGNAL LS4148 MELF                                | 9  | D1-9                  |
| 9-79-0157 | 2-51-4401 | TRANS NPN 2N4401 40V 1A SOT-23                          | 10 | Q1, 4-12              |
| 9-79-0157 | 2-51-4403 | TRANS PNP 2N4403 40V 800mA SOT-23                       | 2  | Q2, 3                 |
| 9-79-0157 | 2-64-0541 | IC 74HC541 OCTAL BUFFER SOP-20                          | 2  | U18, 22               |
| 9-79-0157 | 2-64-0574 | IC 74HC574 OCTAL D-FF W/ TRI-STATE OUTS SOP-20          | 2  | U20, 26               |
| 9-79-0157 | 2-64-7414 | IC 74HC14 HEX INVERTER SOP-14                           | 1  | U27                   |
| 9-79-0157 | 2-67-5168 | IC SRAM 8Kx8 CL62C064F-10 SOP-28                        | 1  | U16                   |
| 9-79-0157 | 2-70-8033 | IC MPU 80C31 PQFP-44                                    | 1  | U19                   |
| 9-79-0157 | 2-71-0084 | IC TL084 QUAD OPAMP SOP-14                              | 2  | U2, 25                |
| 9-79-0157 | 2-71-5532 | IC NE5532 DUAL OP-AMP SOP-16                            | 1  | U5                    |
| 9-79-0157 | 2-72-0311 | IC LM311 ANALOG COMP SOP-8                              | 1  | U24                   |
| 9-79-0157 | 2-72-0339 | IC LM339 ANALOG COMP SOP-14                             | 6  | U4,6,10,14,17,21      |
| 9-79-0157 | 2-72-4051 | IC CD4051 SINGLE 8-CHAN MUX SOIC-16                     | 2  | U11, 13               |
| 9-79-0157 | 2-76-4319 | IC CONVERTER D/A AKM4319 18-BIT SCF SSOP-24             | 2  | U1, 3                 |
| 9-79-0157 | 2-77-0030 | IC MASK ROM D5-1  | 1  | U9                    |
| 9-79-0157 | 2-77-0043 | IC MASK ROM D5-2  | 1  | U7                    |
| 9-79-0157 | 4-00-0001 | JACK DIN 5-PIN MIDI                                     | 2  | J19, 20               |
| 9-79-0157 | 4-02-0001 | JACK 1/4" MONO  | 17 | J1-5, 7-10, 12-18, 21 |
| 9-79-0157 | 4-06-0028 | SOCKET 28-PIN DIP 0.6"                                  | 1  |                       |
| 9-79-0157 | 4-14-0116 | HEADER DIL 16-PIN 0.1" SHRD                             | 1  | J11                   |
| 9-79-0157 | 4-15-1008 | HEADER SIL 8-PIN 2mm SHRD                               | 1  |                       |
| 9-79-0157 | 4-16-0002 | JACK 3.5mm BARREL (P3)                                  | 1  | J23                   |
| 9-79-0157 | 5-02-0009 | HEATSINK M3 x 20  | 2  | ATTACH TO U28, 29     |
| 9-79-0157 | 5-04-0009 | WASHER M3 SPLITLOCK                                     | 2  |                       |
| 9-79-0157 | 5-04-0045 | SPACER CRYSTAL 5x11.25x1mm (TQ-06 PIN-GOOD)             | 1  |                       |
| 9-79-0157 | 6-02-0003 | SWITCH PUSH DPDT  | 1  | SW1                   |
| 9-79-0157 | 7-01-0009 | CRYSTAL 12 MHz 13mm                                     | 1  | Z1                    |
| 9-79-0157 | 7-05-0003 | BATTERY 3V LITHIUM COIN-TYPE PCB-MNT 23mmOD<br>2.5mmTHK | 1  | B1                    |
| 9-79-0157 | 9-03-1036 | LUG SOLDER PCB MNT                                      | 17 |                       |
| 9-79-0157 | 9-23-1059 | SPACER PCB S4   | 1  |                       |
| 9-79-0157 | 9-40-1174 | PCB MAIN D5 - Rev C                                     | 1  |                       |