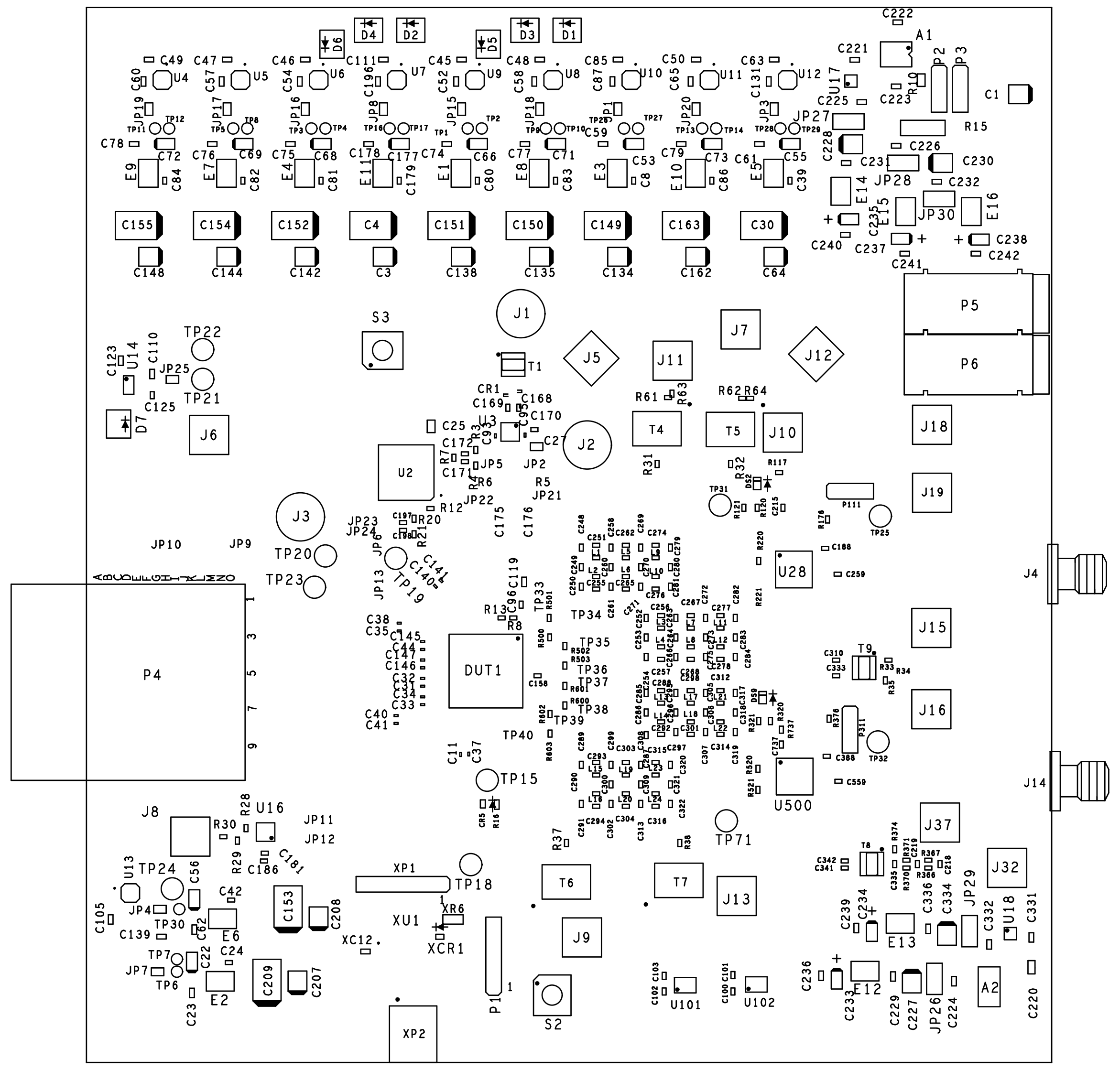
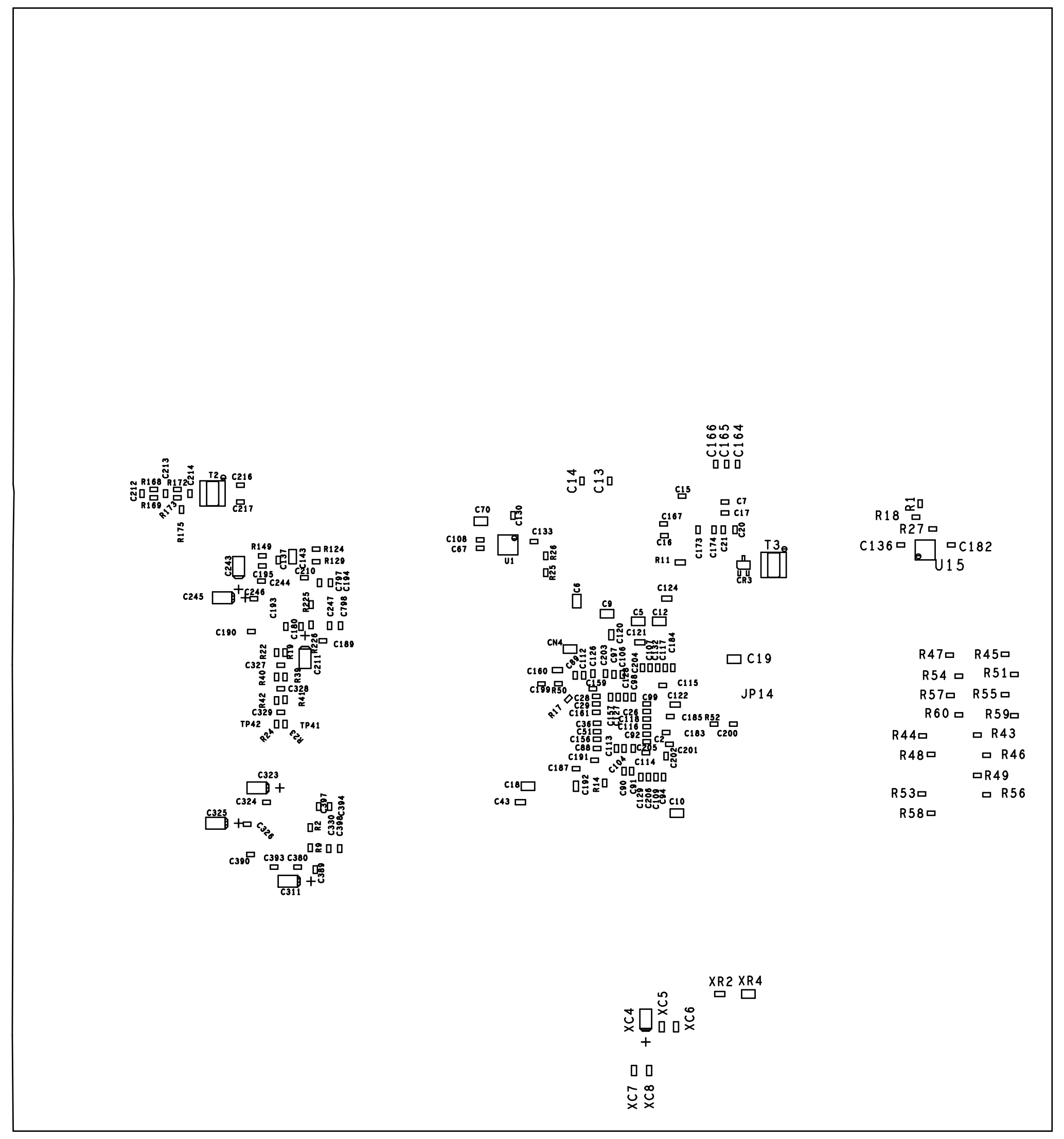
| REVISIONS | | | |
|---|---|---|---|
| REV | DESCRIPTION | DATE | APPROVED |
| A | INITIAL RELEASE | 26MAR13 | T.G. |



PRIMARY SIDE



SECONDARY SIDE

| | | | | | |
|---|---|---|---|---|---|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES<br>DECIMALS .XX +-.010 .XXX +-.005<br>FRACTIONS +-1/32<br>ANGLES +- 2 | ASSEMBLY | | ANALOG DEVICES | | HSC DIVISION<br>804 WOBURN STREET<br>WILMINGTON, MA 01887 |
| | APPROVAL | DATE | TITLE AD9154 EVAL BOARD SPLIT REFERENCE LAYER | | |
| MATERIAL | DRAWN BY P.M.A. | 14MAR13 | | | |
| | DESIGNED | | | | |
| | CHECKED | | | | |
| FINISH | APPROVED | | SIZE D | FSCM NO | DRAWING NUMBER HSC 13014 — REV A |
| | MFG ENGINEER | | | | |
| DO NOT SCALE DWG | | | SCALE 1/1 | | SHEET 1 OF 1 |

| REVISIONS | | | |
|---|---|---|---|
| REV | DESCRIPTION | DATE | APPROVED |
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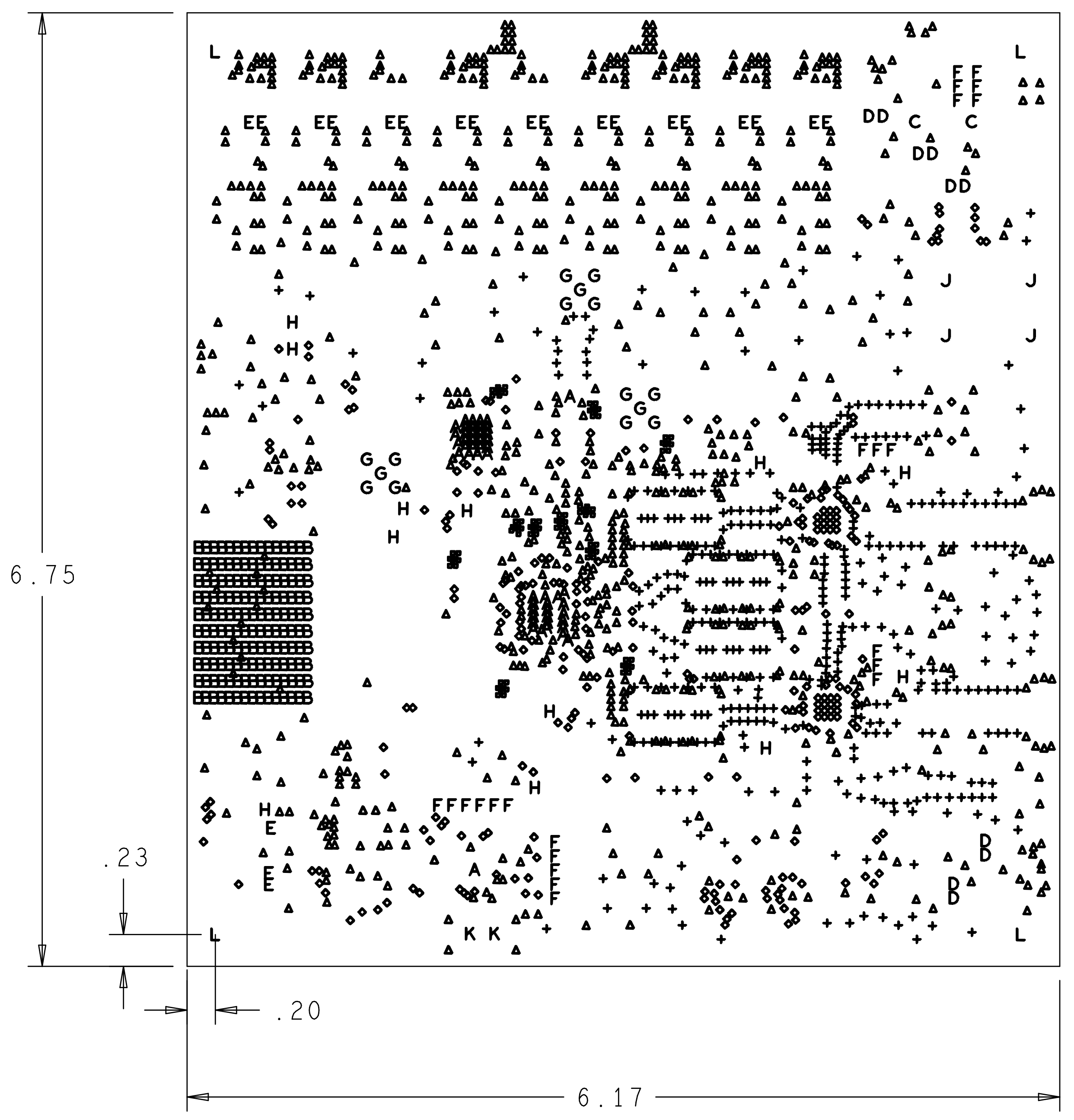


PRIMARY SIDE

NOTES:

MATERIALS; FR-408HR, IN ACCORDANCE WITH IS410 (LATEST REV.). GLASS FABRIC BASE, EPOXY RESIN, FIRE RESISTANT.
BONDING AGENT; PREIMPREGNATED B STAGE EPOXY GLASS CLOTH IN ACCORDANCE WITH IPC-L-109 (LATEST REV.).
CLADDING; EXTERNAL LAYERS 1/2 OZ. COPPER, OVERPLATE TO 1 1/2 OZ. INTERNAL PLANE LAYERS 1 OZ. COPPER.
SOLDER MASK; SHALL BE BLUE LIQUID PHOTOIMAGABLE (LPI) APPLIED ON BOTH SIDES OVER BARE COPPER AND SHALL MEET IPC-SM-840 (LATEST REV.) CLASS 3.
SILK SCREEN; SHALL BE PERMANENT NON-CONDUCTIVE EPOXY INK, COLOR WHITE.
U.L. RATING; 94VO MINIMUM.

FABRICATION:

1. REFER TO IPC-6010 SERIES (LATEST REV.), CLASS 2 FOR FABRICATION UNLESS OTHERWISE SPECIFIED.
2. UNDIMENSIONED HOLES TO BE LOCATED WITHIN +/-.005 OF THEIR TRUE POSITION WITH RESPECT TO ARTWORK.
3. PLATED HOLE WALL THICKNESS SHALL NOT BE LESS THAN .001 INCH MINIMUM AVERAGE, WITH NO READING LESS THAN .0008 BY CROSS SECTION.
4. HOLE DIAMETERS APPLY AFTER PLATING.
5. FINISHED CONDUCTOR WIDTHS SHALL NOT BE REDUCED FROM THE NOMINAL, INDICATED ON THE MASTER PATTERN, BY MORE THAN THE CONDUCTOR THICKNESS.
6. MINIMUM DESIGN LINE WIDTH IS .005 INCH.
7. MINIMUM DESIGN SPACING IS .005 INCH.
8. BOARD/PANEL MUST MEET IPC-A-600 (LATEST REV.) CLASS 2 FOR FLATNESS.
9. MFGR. TO LEGIBLY ETCH OR STAMP/SCREEN WITH PERMANENT NON-CONDUCTIVE INK ON SECONDARY SIDE IN A CLEAR AREA UNLESS OTHERWISE INDICATED;
   A. U.L. CODE D. MFGR. LOGO
   B. DATE CODE (STAMP) E. SUCCESSFUL ELECTRICAL BOARD TEST.
   C. FLAMMABILITY RATING
10. NON-FUNCTIONAL PADS MAY BE REMOVED FROM INNER SIGNAL LAYERS AT MFGR. DISCRETION.
11. IF PAD SIZES PROVIDED ARE NOT LARGE ENOUGH TO MAINTAIN ANNULAR RING REQUIREMENT, MFGR. MAY TEAR DROP PADS TO MAINTAIN ANNULAR RING AT PAD TO CIRCUIT INTERFACE ONLY AND MUST INSURE ELECTRICAL INTEGRITY.
12. REPAIRS PER IPC-R-700 ARE ALLOWED.
13. MODIFICATIONS TO THE ARTWORK, OTHER THAN THOSE DESCRIBED ON THE FABRICATION DRAWING, ARE NOT ALLOWED WITHOUT WRITTEN AUTHORIZATION.
14. FINISH: SURFACES SHALL HAVE ENIG FINISH PLATED WITH 2-6 MICROINCHES OF IMMERSION GOLD OVER 100-200 MICROINCHES OF ELECTROLESS NICKEL.
15. VIAS INDICATED TO BE NON-CONDUCTIVE EPOXY FILLED, AND GROUND FLUSH PRIOR TO OVER PLATING..

## 10 LAYER STACKUP

NOMINAL FINISHED BOARD THICKNESS 0.063" +/- .007

| | | |
|---|---|---|
| | PRIMARY SILKSCREEN | |
| | PRIMARY SOLDER MASK | |
| | PRIMARY SIDE | (LAYER 1) |
| 0.008" | GROUND PLANE | (LAYER 2) |
| 0.003" | POWER PLANE | (LAYER 3) |
| | GROUND PLANE | (LAYER 4) |
| | POWER LAYER | (LAYER 5) |
| | POWER PLANE | (LAYER 6) |
| | GROUND PLANE | (LAYER 7) |
| | POWER PLANE | (LAYER 8) |
| 0.003" | GROUND PLANE | (LAYER 9) |
| 0.008" | SECONDARY SIDE | (LAYER 10) |
| | SECONDARY SOLDER MASK | |
| | SECONDARY SILKSCREEN | |

CHARACTERISTIC IMPEDANCE = 50 OHMS +/- 10%
ARTWORK LINE WIDTH FOR
IMPEDANCE CONTROLLED LINES = 0.0155" FOR LAYER 1 AND 10.

DIFFERENTIAL IMPEDANCE = 100 OHMS +/- 10%
ARTWORK LINE WIDTH FOR
IMPEDANCE CONTROLLED LINES = 0.0100" FOR LAYER 1 AND 10.

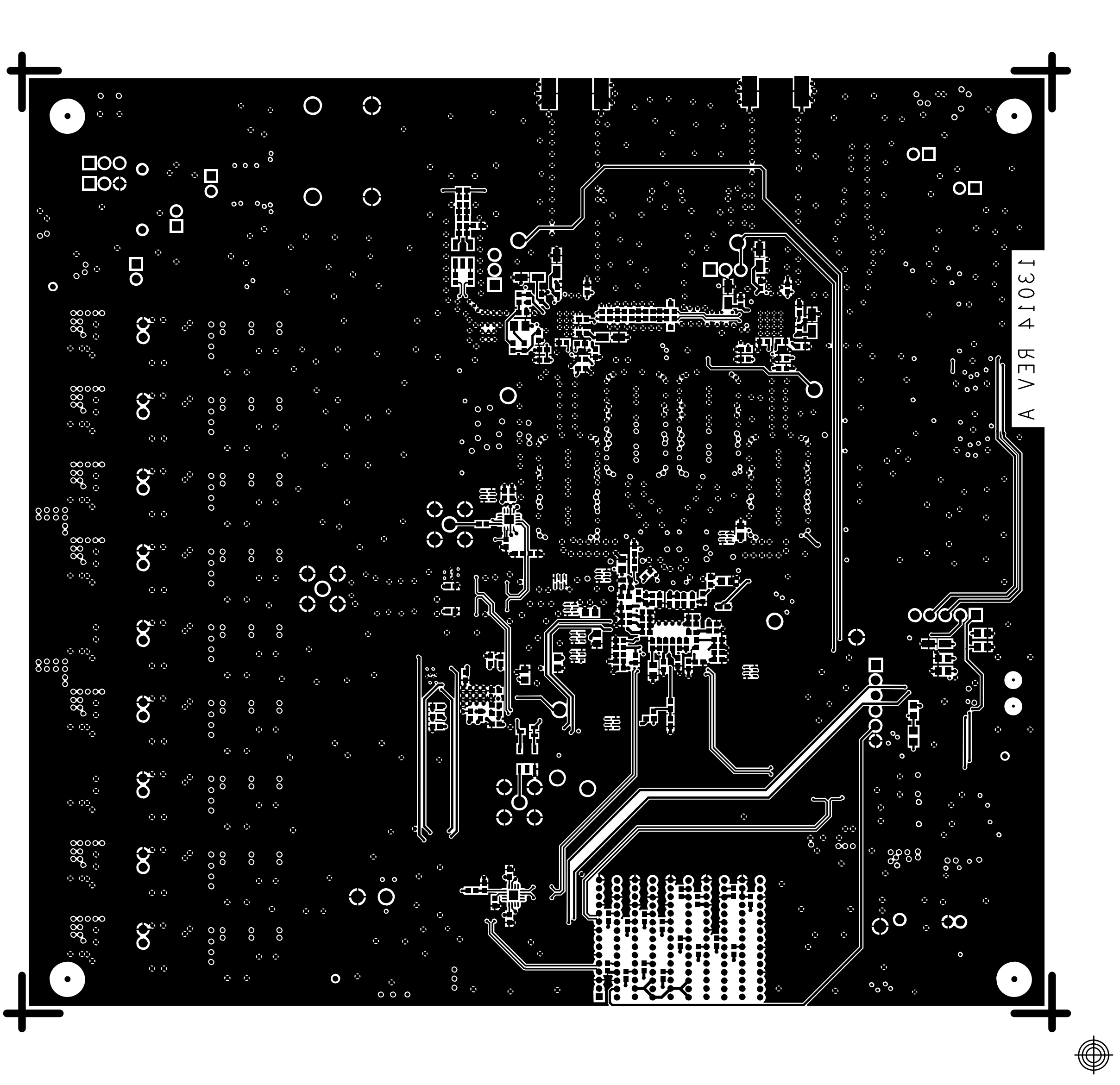
HOLE TOLERANCE

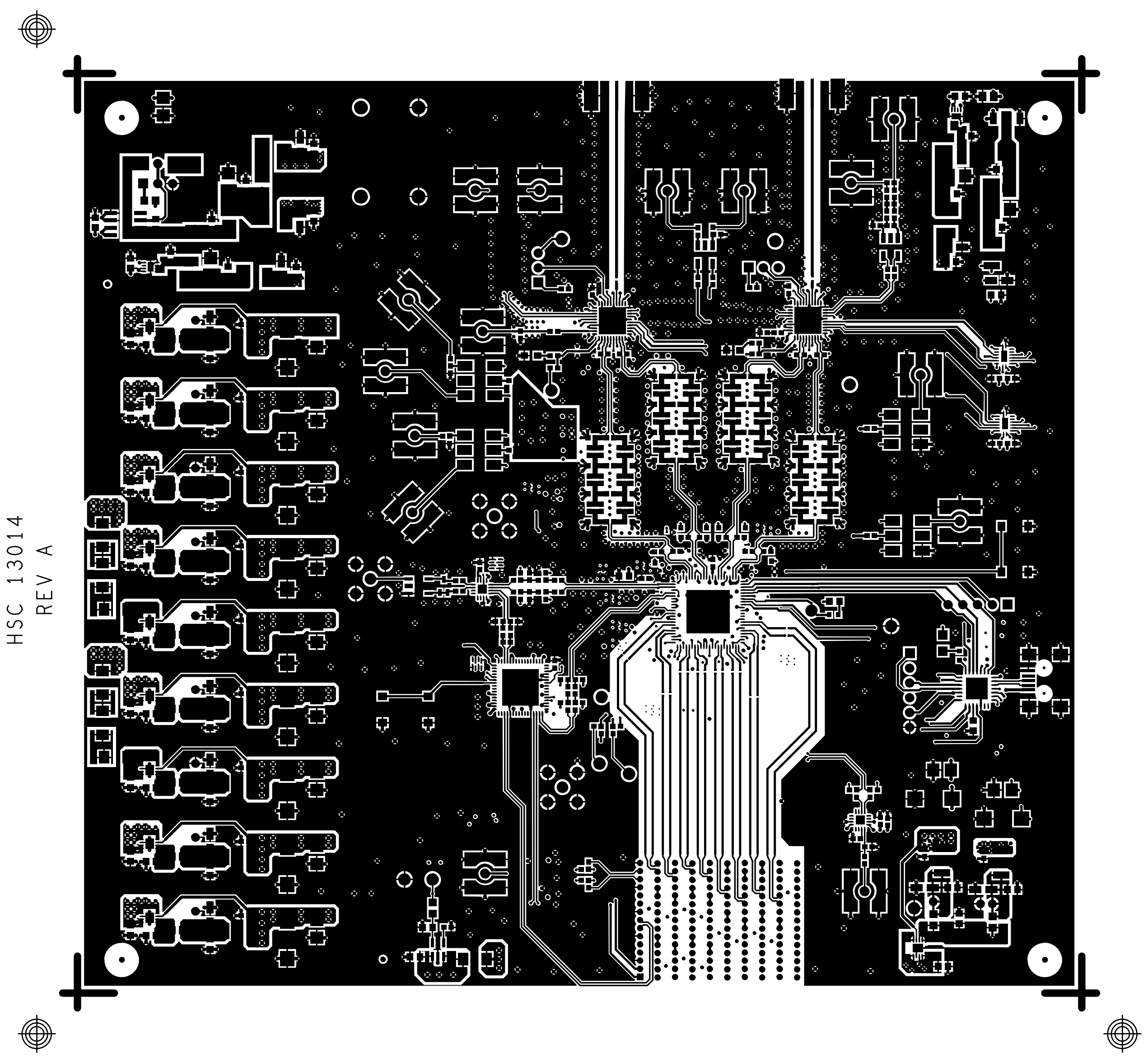
UNLESS SPECIFIED
PLATED: +/- .003
NON PLATED: +/- .001

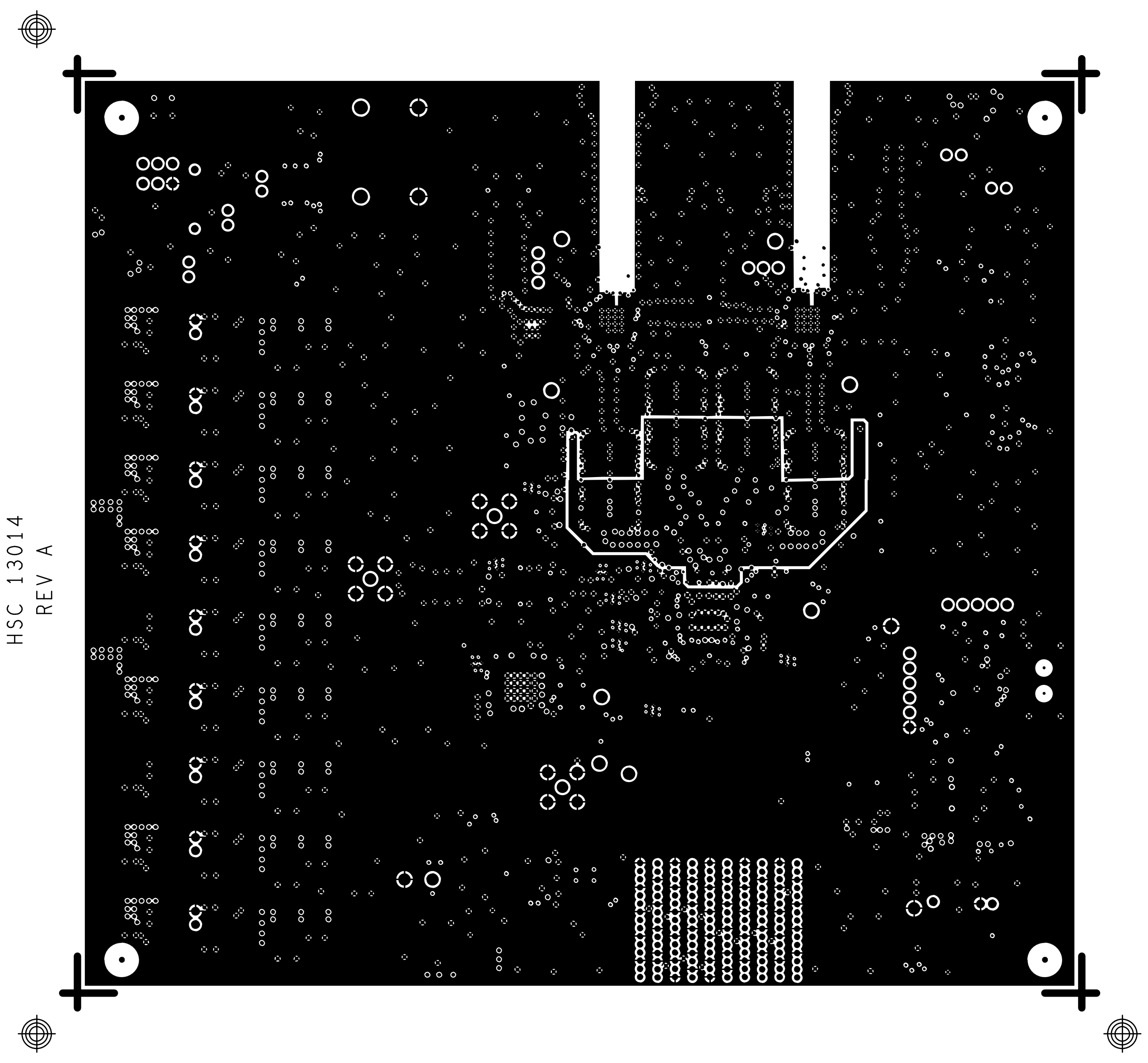
| FINISHED HOLES IN MILS | | | | |
|---|---|---|---|---|
| ALL UNITS ARE IN MILS | | | | |
| FIGURE | SIZE | PLATED | QTY | TOLERANCE/NOTES |
| • | 6.0 | PLATED | 88 | |
| ⋄ | 10.0 | PLATED | 272 | SEE NOTE 15 |
| + | 12.0 | PLATED | 456 | |
| ▲ | 15.0 | PLATED | 853 | SEE NOTE 15 |
| A | 16.0 | PLATED | 50 | SEE NOTE 15 |
| B | 25.0 | PLATED | 150 | |
| C | 35.0 | PLATED | 2 | |
| D | 40.0 | PLATED | 10 | |
| E | 42.0 | PLATED | 21 | |
| F | 45.0 | PLATED | 23 | |
| G | 60.0 | PLATED | 15 | |
| H | 63.0 | PLATED | 12 | |
| J | 75.0 | PLATED | 4 | |
| K | 40.0 | NON-PLATED | 2 | |
| L | 155.0 | NON-PLATED | 4 | |

| | | | |
|---|---|---|---|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES<br>DECIMALS .XX +-.010 .XXX +-.005<br>FRACTIONS +-1/32<br>ANGLES +- 2 | NCDRILL | | ANALOG DEVICES<br>HSC DIVISION<br>804 WOBURN STREET<br>WILMINGTON, MA 01887 |
| | APPROVAL | DATE | TITLE AD9154 EVAL BOARD<br>SPLIT REFERENCE LAYER |
| MATERIAL | DRAWN BY P.M.A. | 14MAR13 | |
| | DESIGNED | | |
| | CHECKED | | |
| FINISH | APPROVED | | SIZE D / FSCM NO / DRAWING NUMBER HSC 13014 / REV A |
| | MFG ENGINEER | | |
| DO NOT SCALE DWG | | | SCALE 1/1 / SHEET 1 OF 1 |

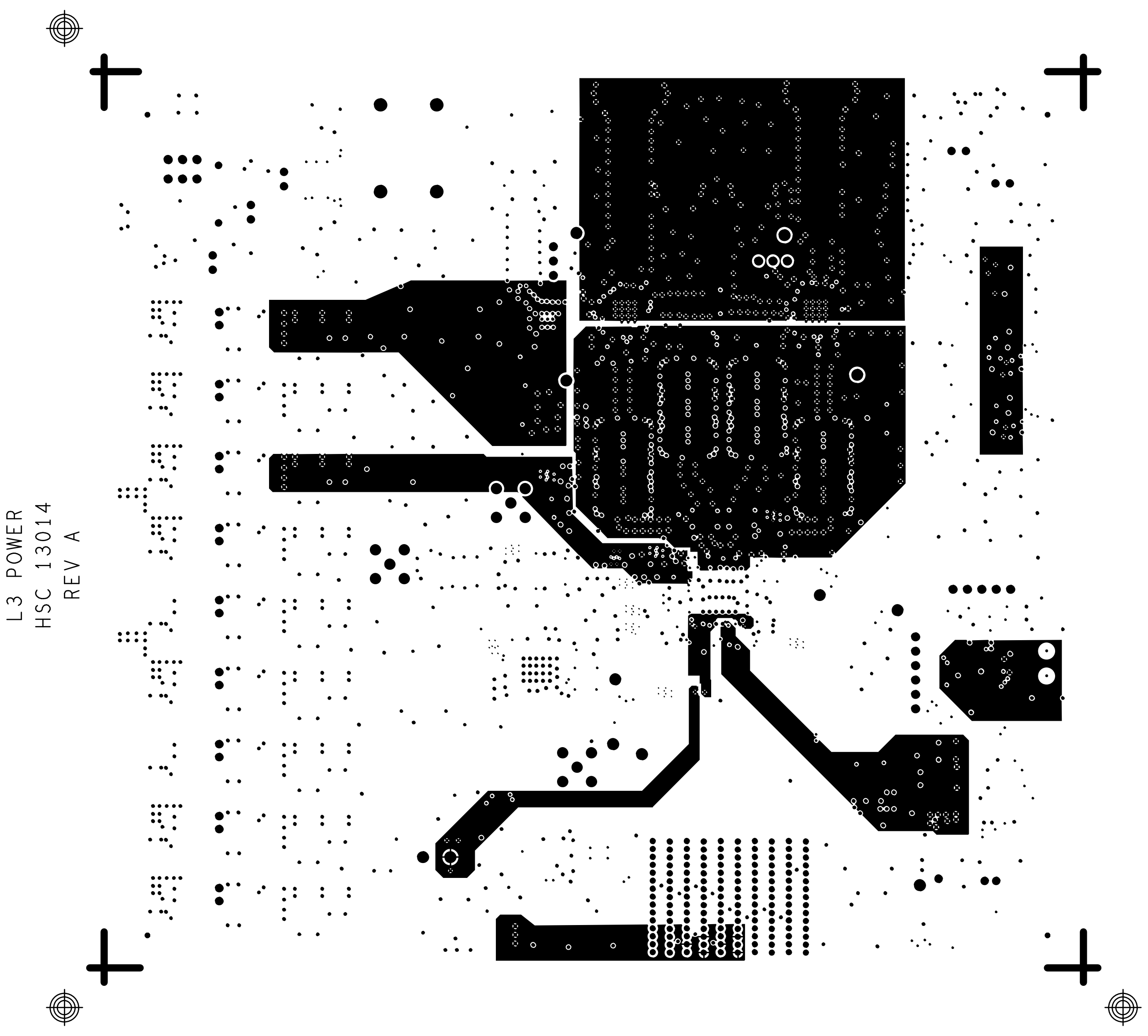
L10 SECONDARY
HSC 13014
REV A

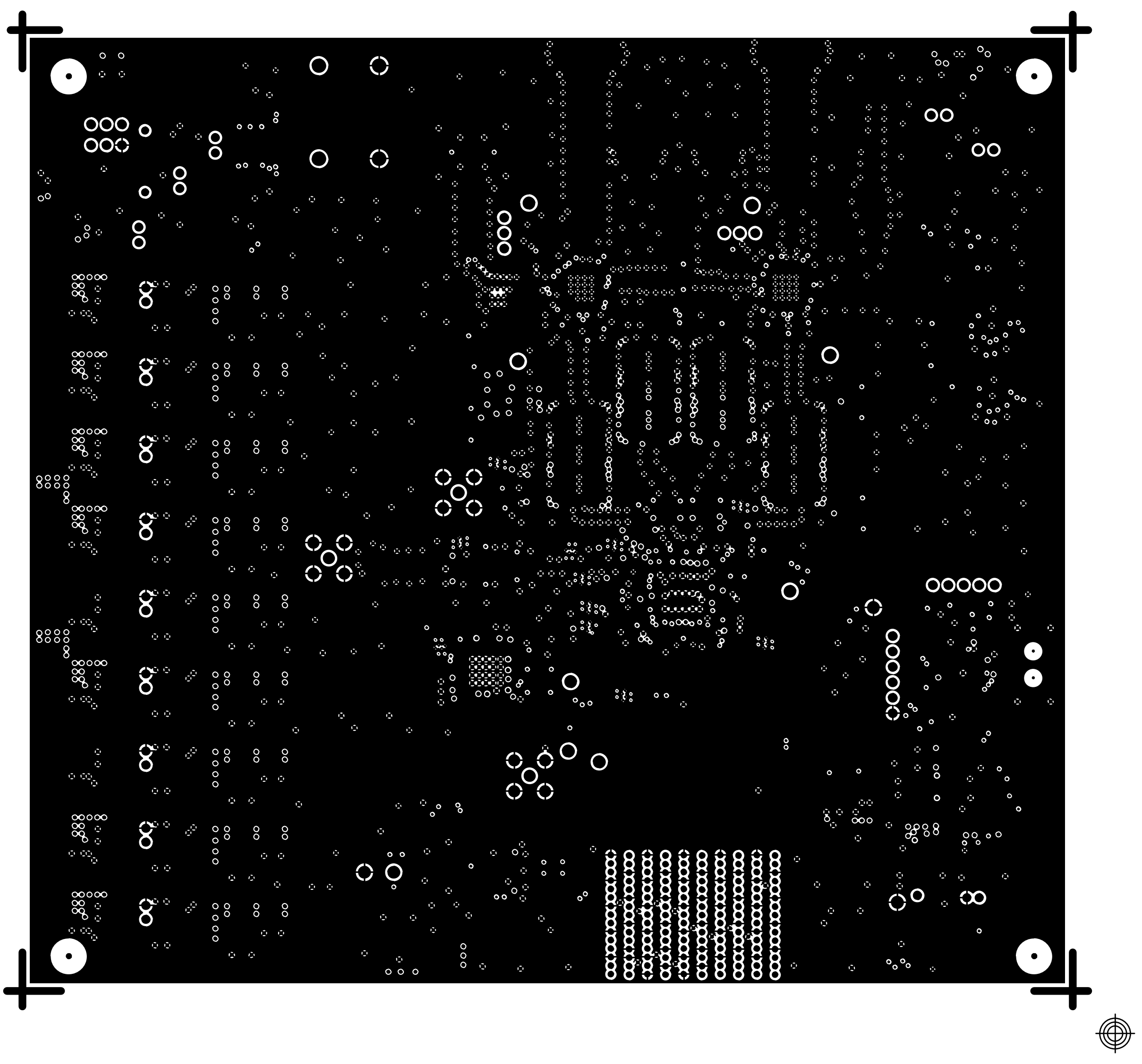



L1 PRIMARY
HSC 13014
REV A

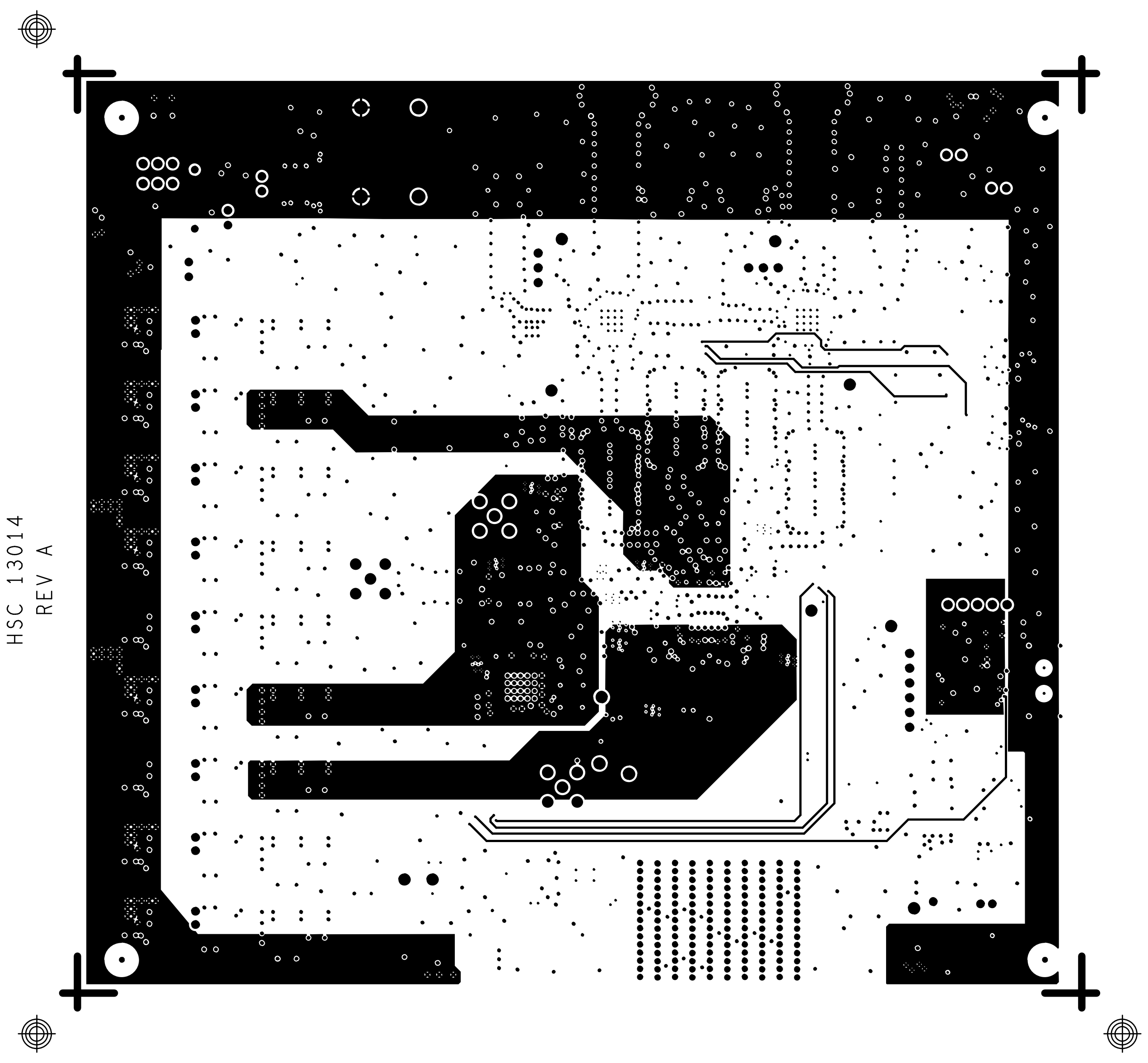


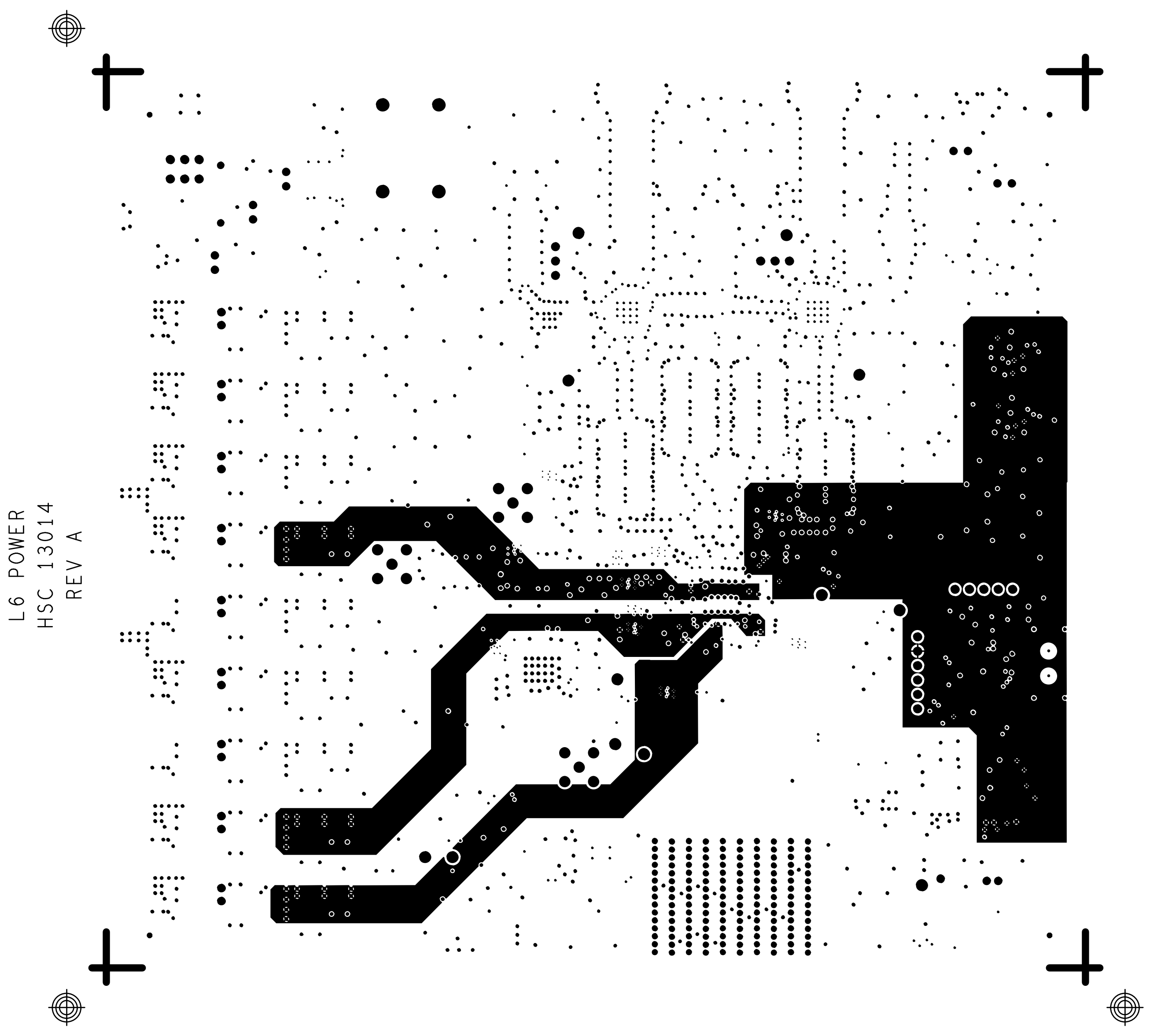
L2 GROUND
HSC 13014
REV A

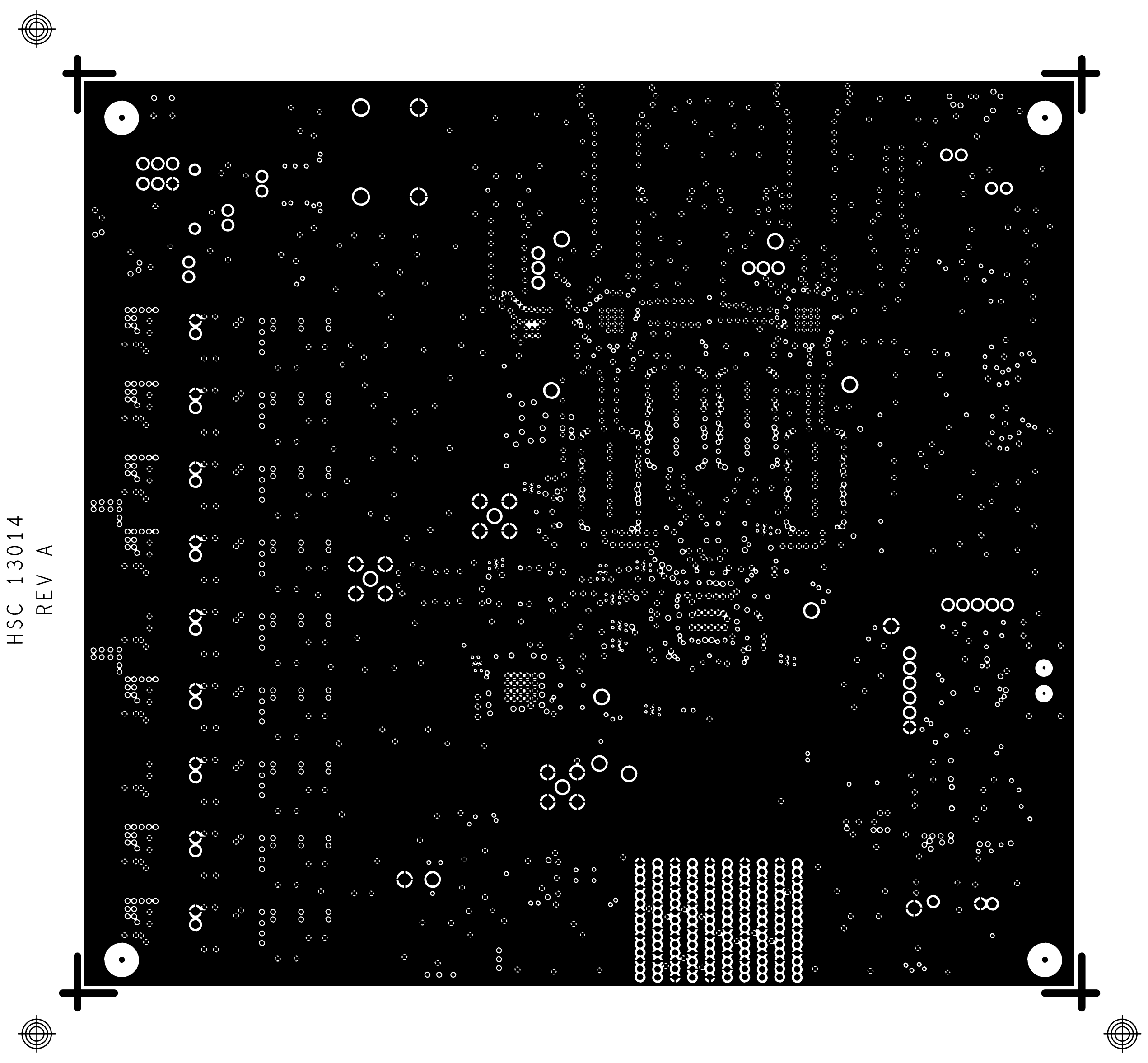

L3 POWER
HSC 13014
REV A



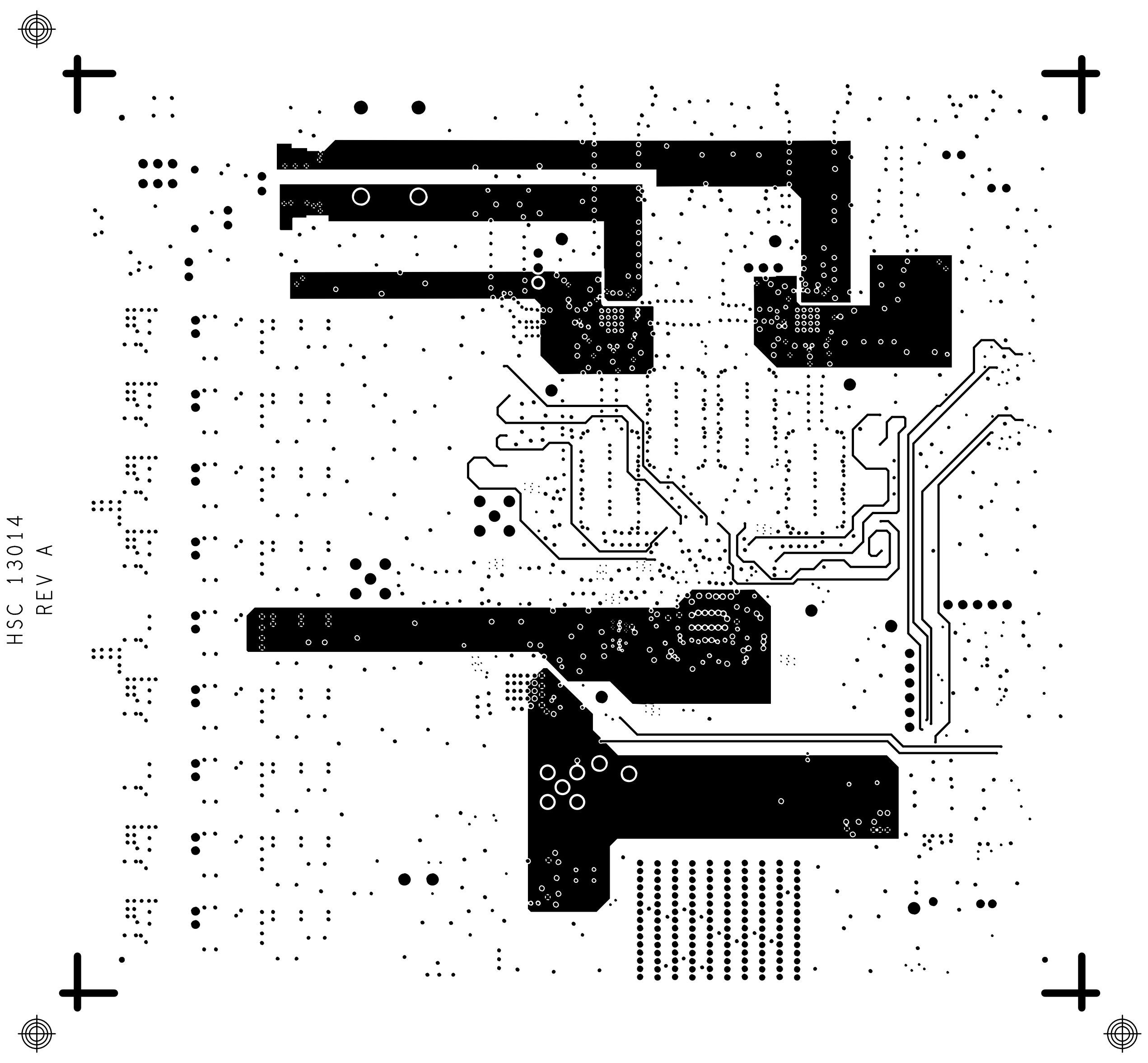
L4 GROUND
HSC 13014
REV A

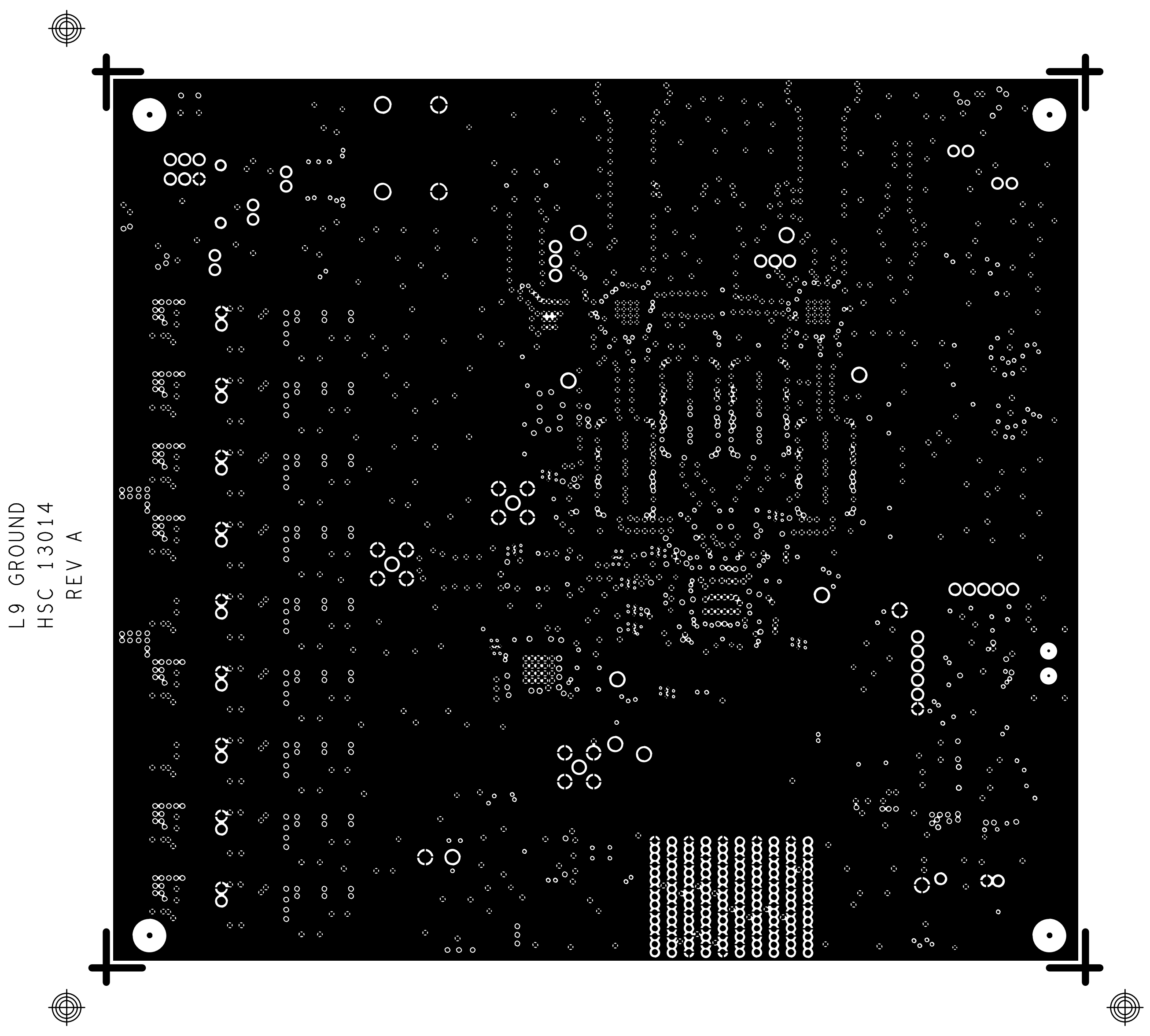

L5 POWER
HSC 13014
REV A


L6 POWER
HSC 13014
REV A

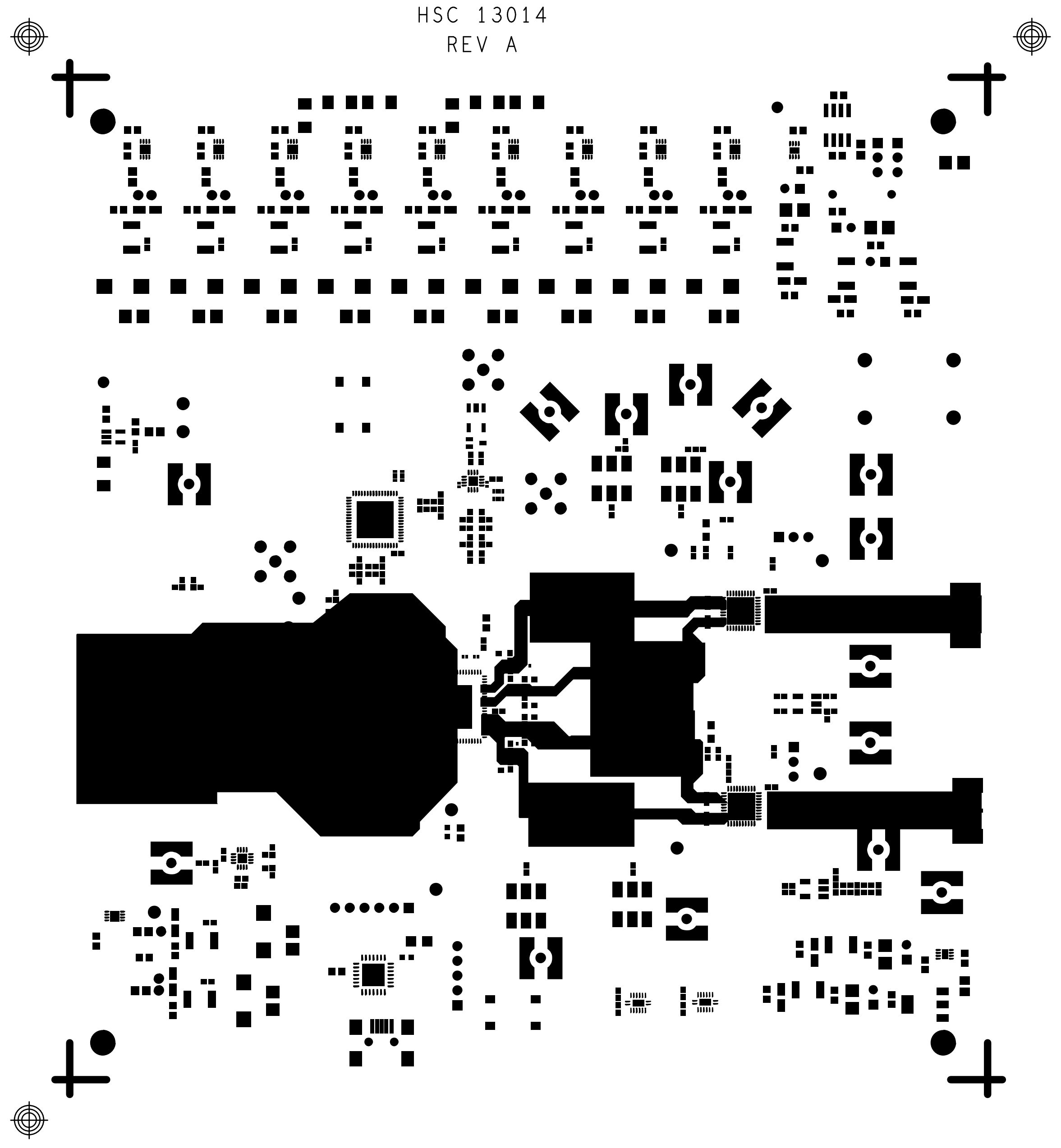


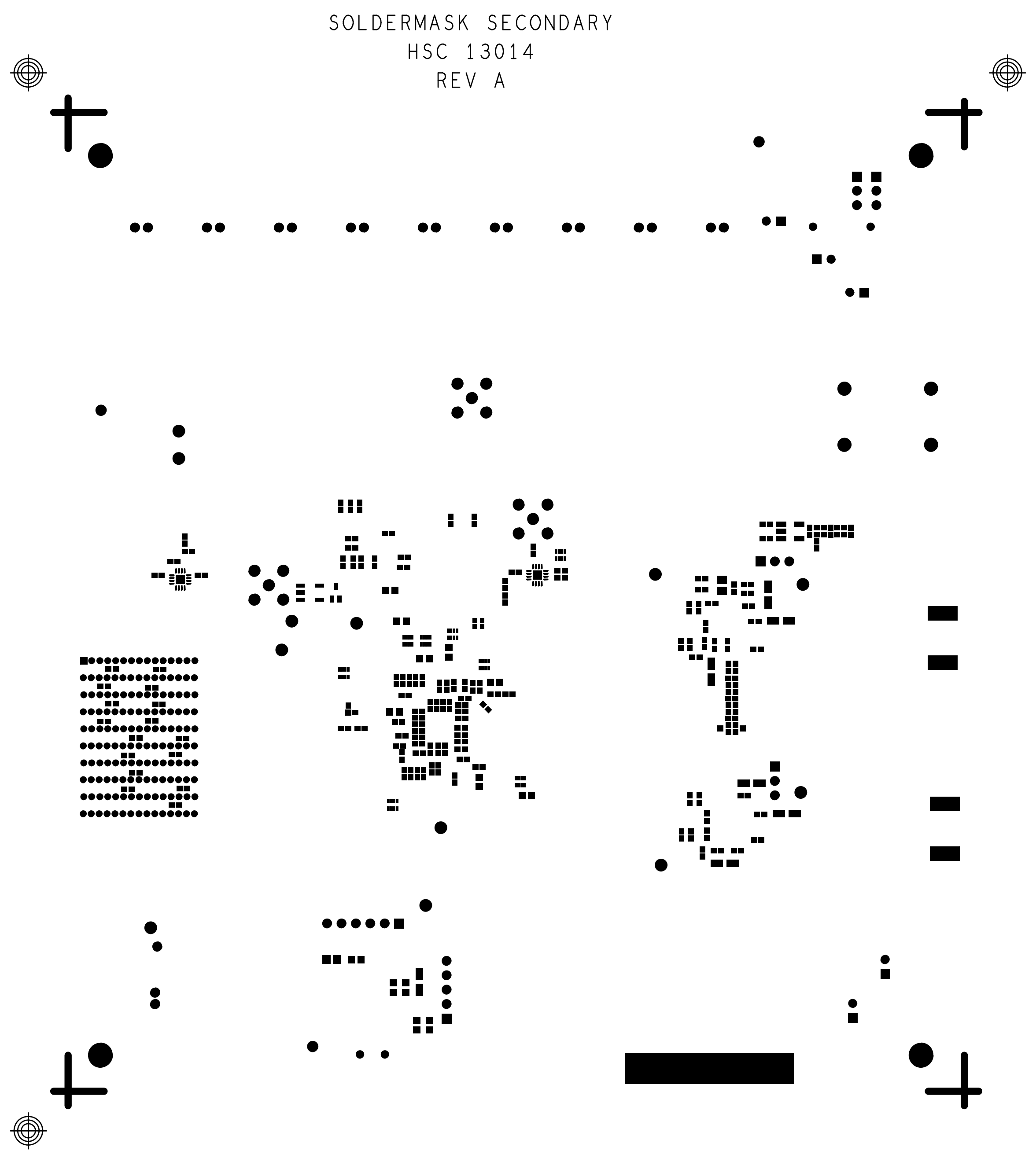
L7 GROUND
HSC 13014
REV A


L8 POWER
HSC 13014
REV A

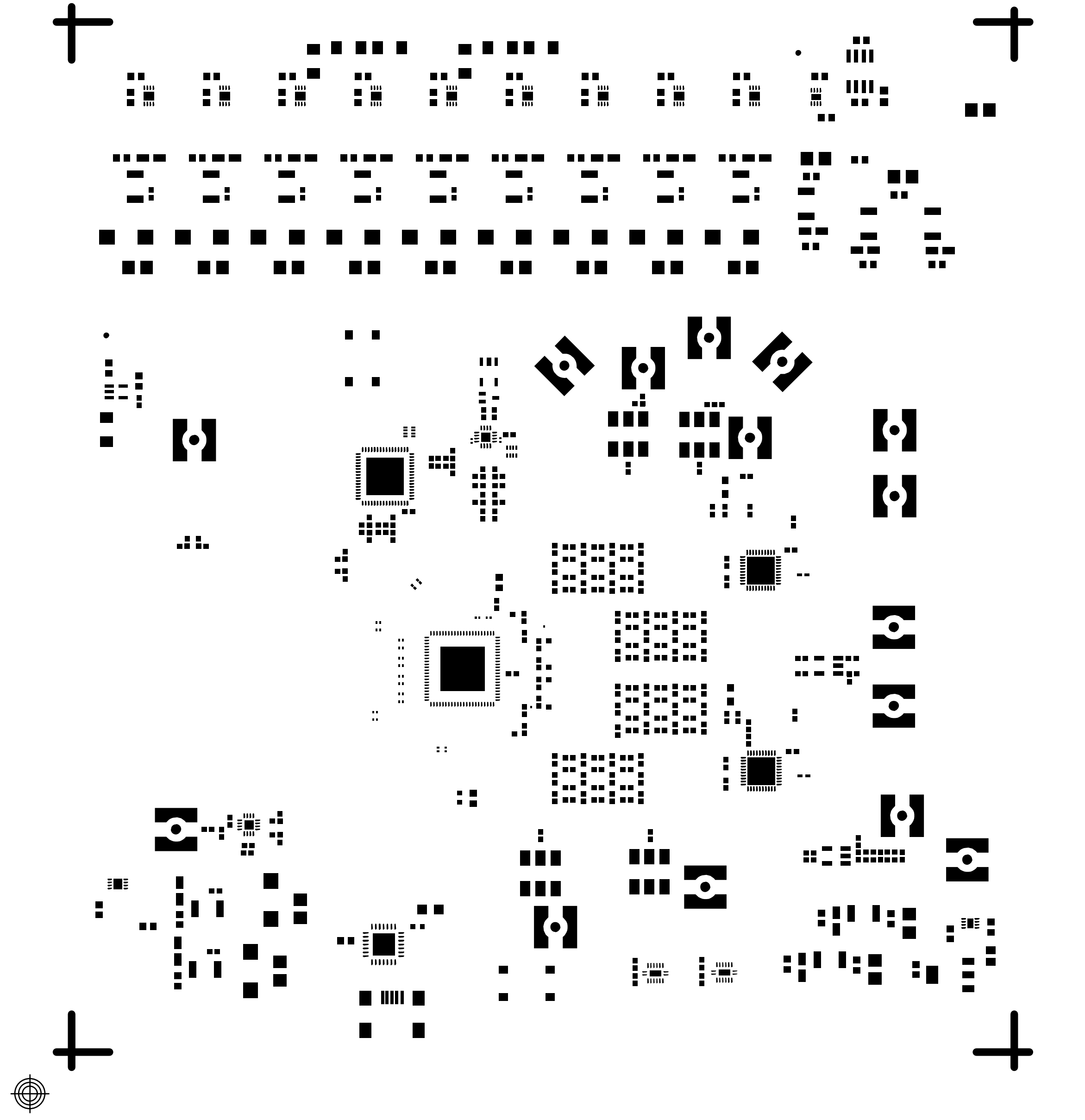

L9 GROUND
HSC 13014
REV A

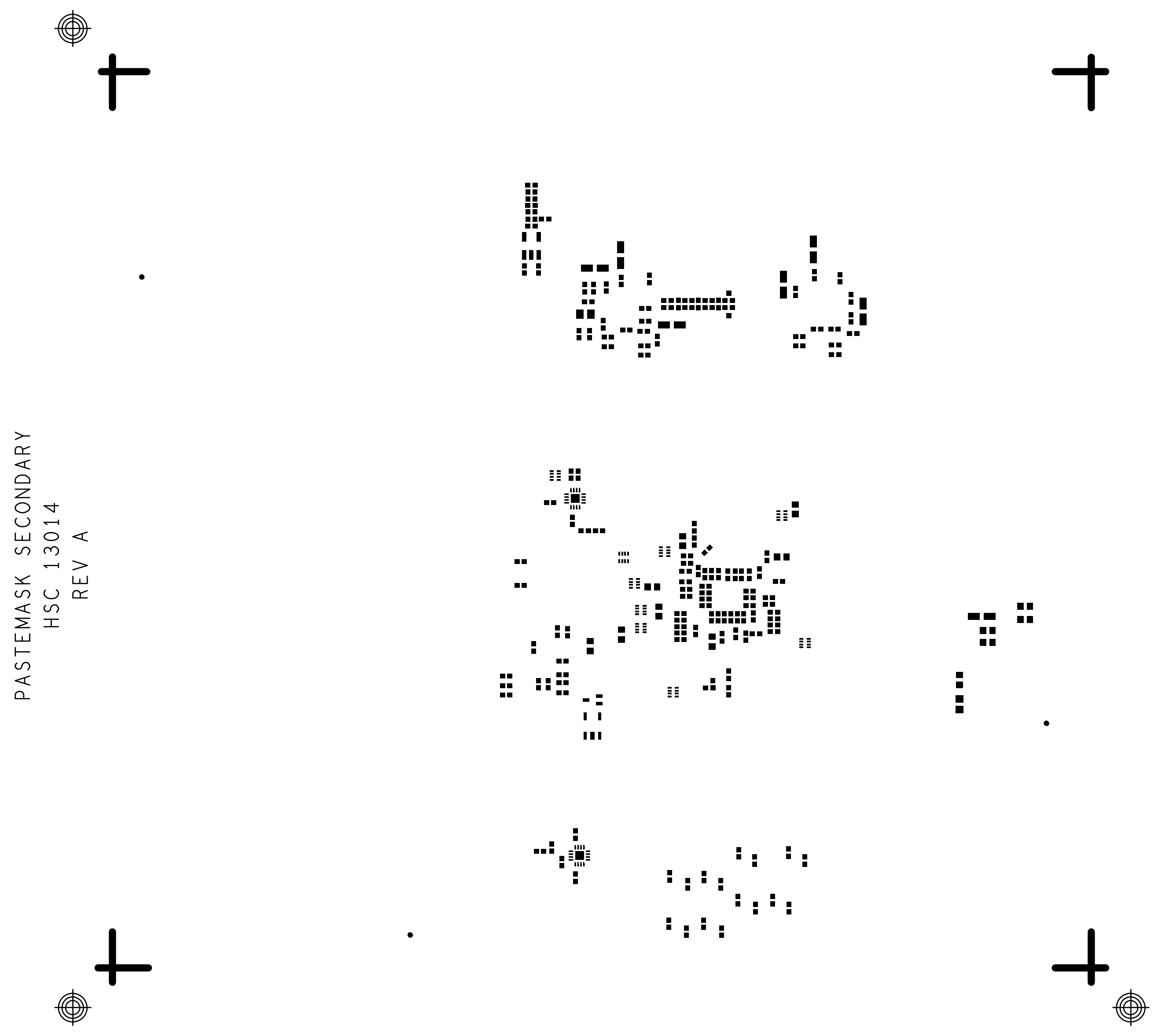
SOLDERMASK PRIMARY
HSC 13014
REV A



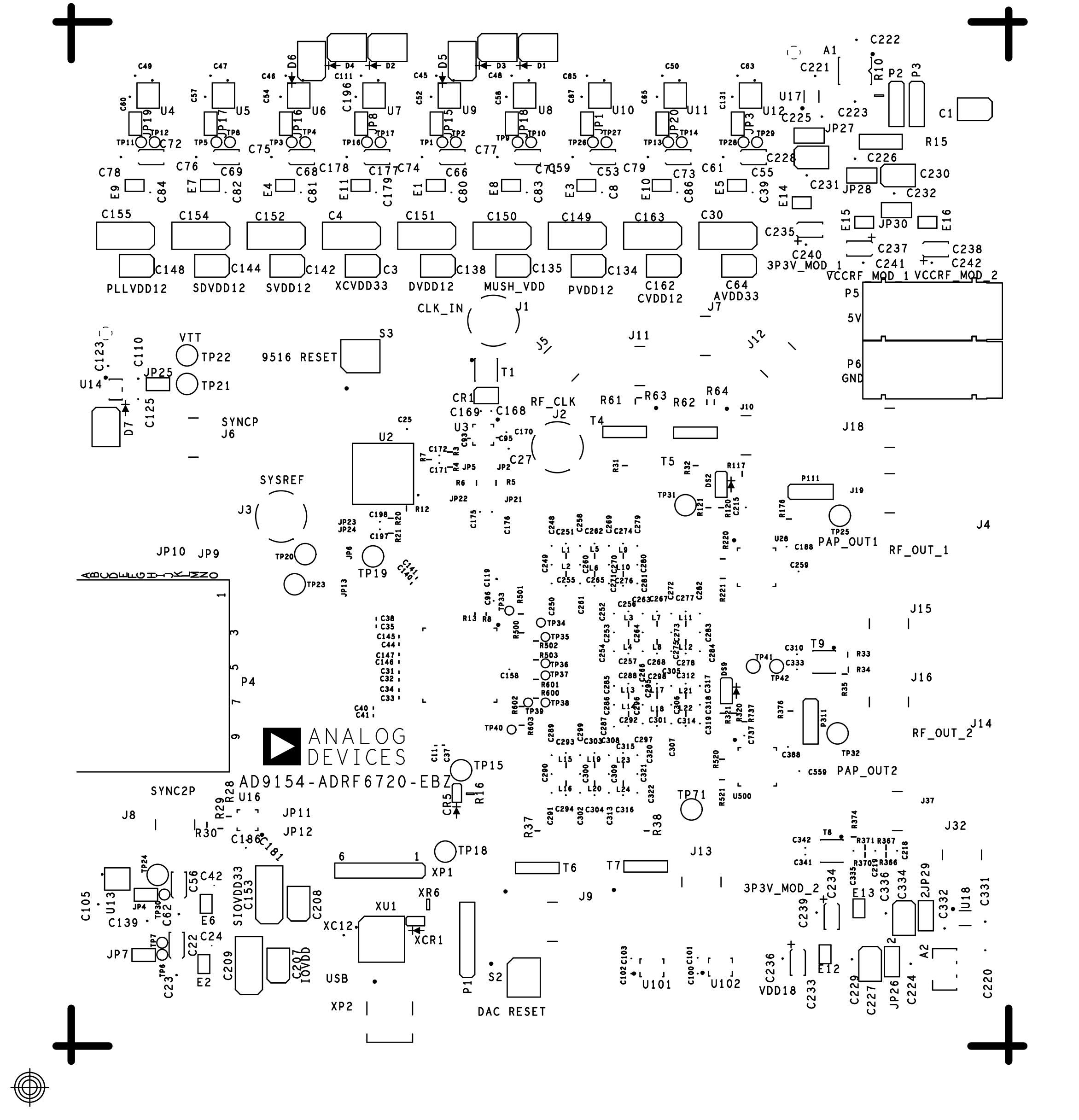

SOLDERMASK SECONDARY
HSC 13014
REV A

PASTEMASK PRIMARY
HSC 13014
REV A




PASTEMASK SECONDARY
HSC 13014
REV A

SILKSCREEN PRIMARY
HSC 13014
REV A



SILKSCREEN SECONDARY
HSC 13014
REV A