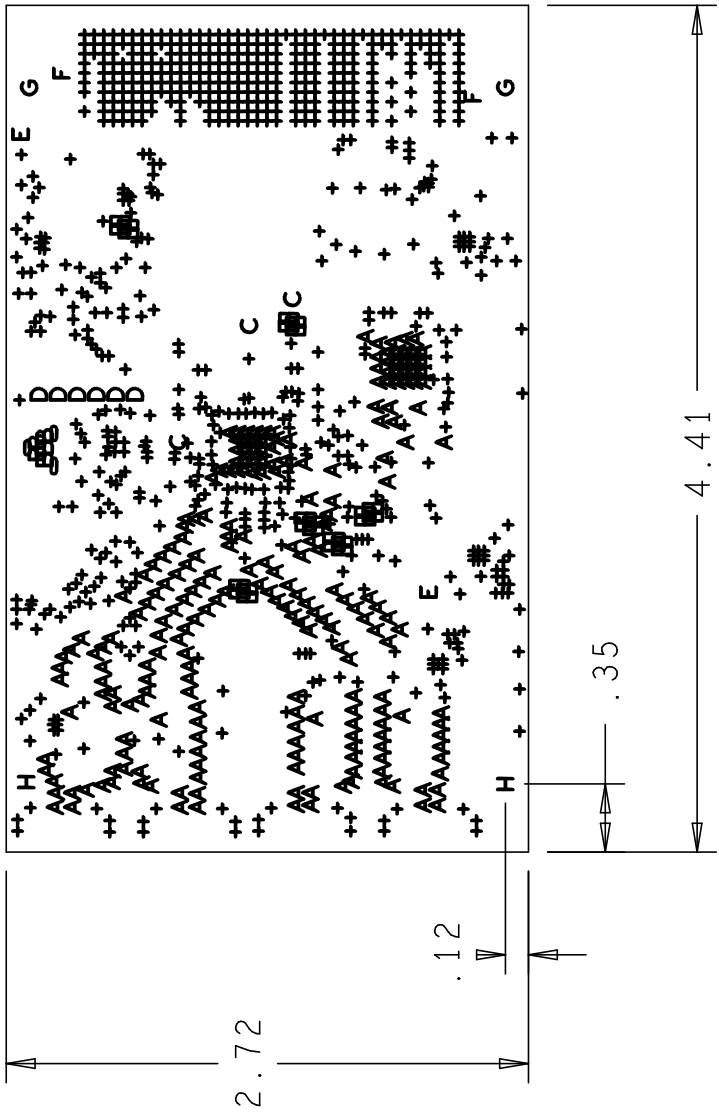




PRIMARY SIDE

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)	0.006"
	SIGNAL LAYER (LAYER 3)	0.006"
	GROUND PLANE (LAYER 4)	0.003"
	POWER LAYER (LAYER 5)	0.003"
	POWER PLANE (LAYER 6)	0.003"
	GROUND PLANE (LAYER 7)	0.006"
	SIGNAL LAYER (LAYER 8)	0.006"
	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.	
	IMPEDANCE CONTROLLED LINES = 0.0080" FOR LAYER 3 AND 8.	
	DIFFERENTIAL IMPEDANCE = 100 OHMS +/- 10%	
	ARTWORK LINE WIDTH FOR	
	IMPEDANCE CONTROLLED LINES = 0.0100" FOR LAYER 1 AND 10.	
	IMPEDANCE CONTROLLED LINES = 0.0050" FOR LAYER 3 AND 8.	

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	29SEP14	L.W.

NOTES:

- MATERIALS# FR-4, IN ACCORDANCE WITH IPC-L-130 (LATEST REV.). GLASS FABRIC BASE, EPOXY RESIN, FIRE RESISTANT.
- BONDING AGENT# IPC-L-109 (LATEST REV.).
- CLADDING# EXTERNAL LAYERS 1/2 OZ. COPPER, OVERPLATE TO 1 1/2 OZ. INTERNAL SIGNAL LAYERS 1 OZ. COPPER. INTERNAL PLANE LAYERS 1 OZ. COPPER.
- SOLDER MASK# SHALL BE LIQUID PHOTOIMAGABLE (LPI) APPLIED ON BOTH SIDES OVER BARE COPPER AND SHALL MEET IPC-SM-840 (LATEST REV.) CLASS 3. COLOR : BLUE.
- SILK SCREEN# SHALL BE PERMANENT NON-CONDUCTIVE EPOXY INK, COLOR WHITE.
- U.L. RATING# 94VO MINIMUM.

FABRICATION:

- REFER TO IPC-6010 SERIES (LATEST REV.), CLASS 2 FOR FABRICATION UNLESS OTHERWISE SPECIFIED.
- UNDIMENSIONED HOLES TO BE LOCATED WITHIN +/- .005 OF THEIR TRUE POSITION WITH RESPECT TO ARTWORK.
- PLATED HOLE WALL THICKNESS SHALL NOT BE LESS THAN .001 INCH MINIMUM AVERAGE, WITH NO READING LESS THAN .0008 BY CROSS SECTION.
- HOLE DIAMETERS APPLY AFTER PLATING.
- FINISHED CONDUCTOR WIDTHS SHALL NOT BE REDUCED FROM THE NOMINAL, INDICATED ON THE MASTER PATTERN, BY MORE THAN THE CONDUCTOR THICKNESS.
- MINIMUM DESIGN LINE WIDTH IS .005 INCH.
- MINIMUM DESIGN SPACING IS .005 INCH.
- BOARD/PANEL MUST MEET IPC-A-600 (LATEST REV.) CLASS 2 FOR FLATNESS.
- 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
E. SUCCESSFUL ELECTRICAL BOARD TEST.
- B. DATE CODE (STAMP)
C. FLAMMABILITY RATING
NON-FUNCTIONAL PADS MAY BE REMOVED FROM INNER SIGNAL LAYERS AT MFGR. DISCRETION.
- 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.
- REPAIRS PER IPC-R-700 ARE ALLOWED.
- MODIFICATIONS TO THE ARTWORK, OTHER THAN THOSE DESCRIBED ON THE FABRICATION DRAWING, ARE NOT ALLOWED WITHOUT WRITTEN AUTHORIZATION.
- FINISH: SURFACES SHALL HAVE ENIG FINISH PLATED WITH 2-6 MICROINCHES OF IMMERSION GOLD OVER 100-200 MICROINCHES OF ELECTROLESS NICKEL.
- VIAS TO BE NON-CONDUCTIVE EPOXY FILLED AND GROUND FLUSH PRIOR TO OVER PLATING.

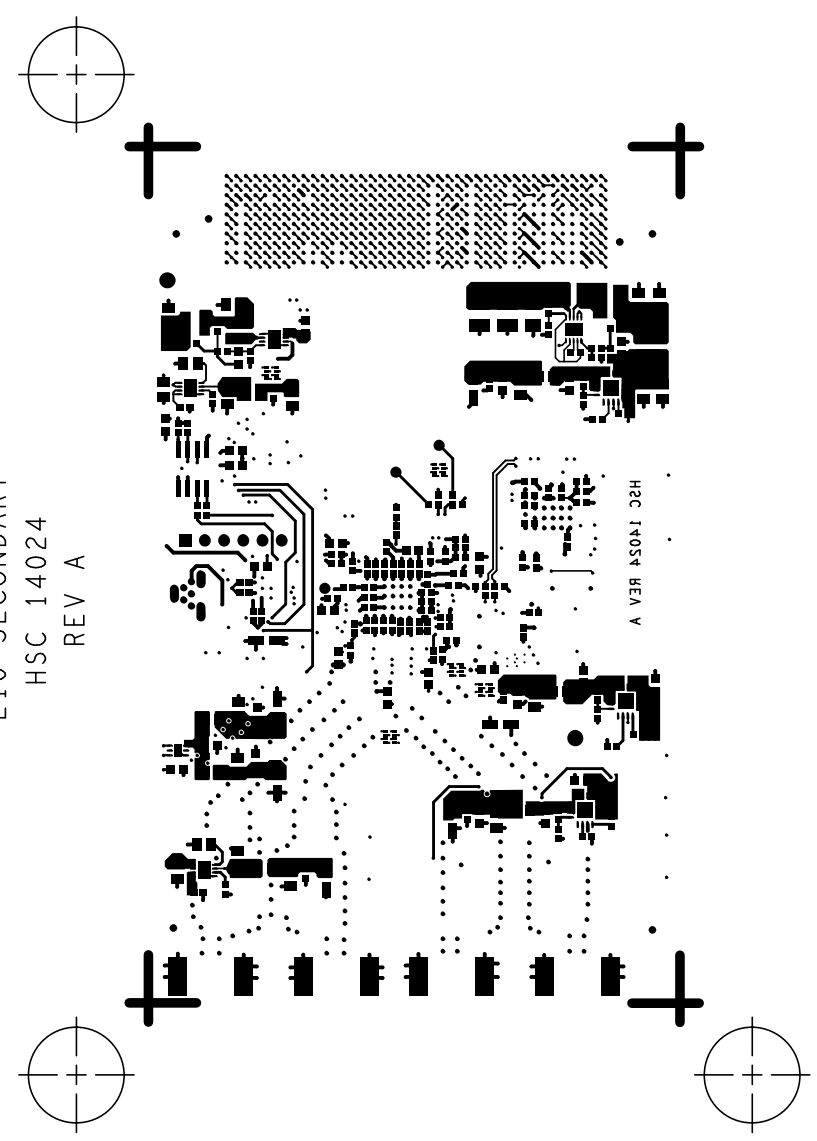
HOLE TOLERANCE

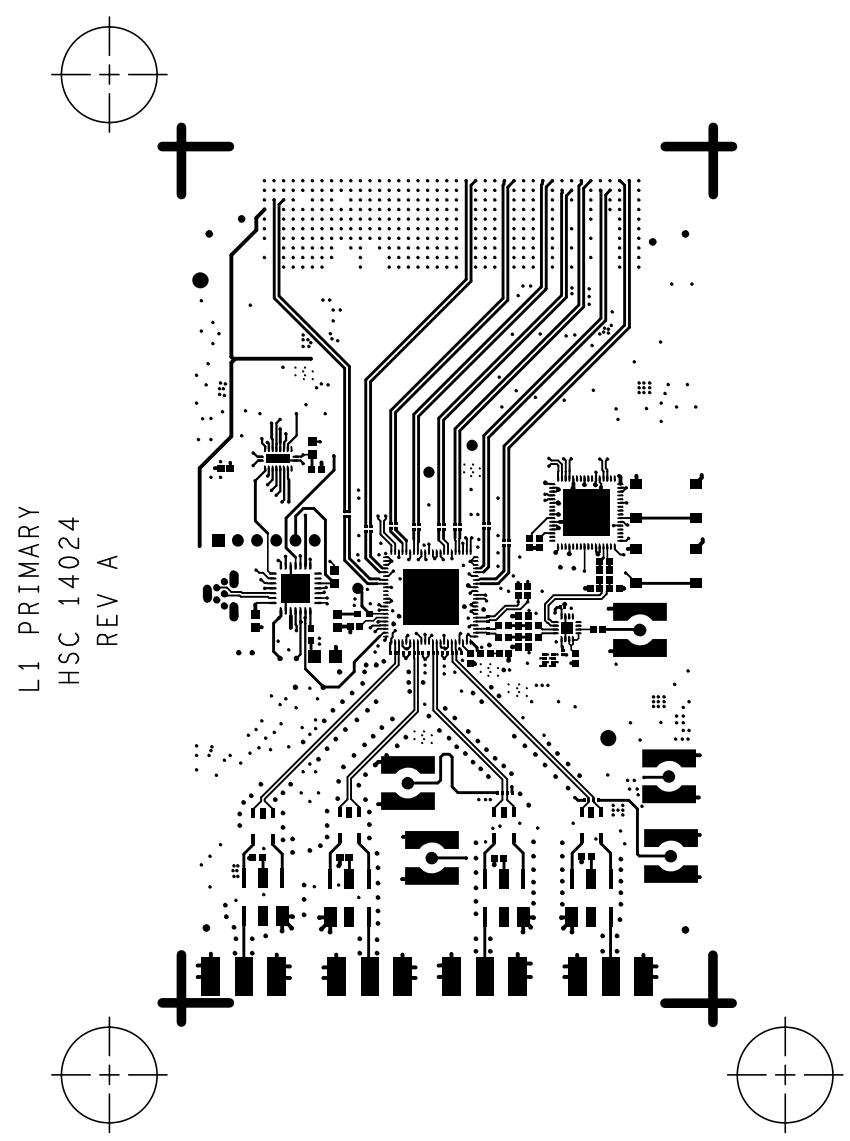
UNLESS SPECIFIED
PLATED: +/- .003
NON PLATED: +/- .001

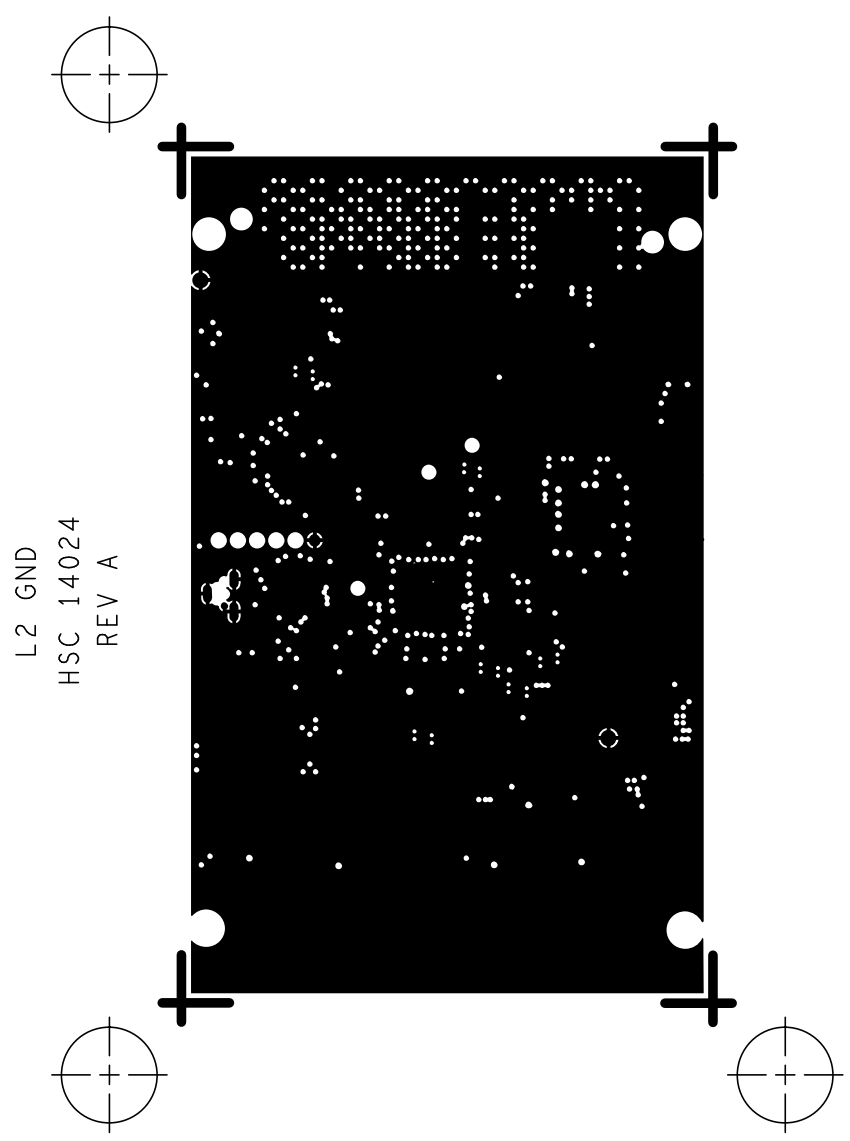
FINISHED HOLES IN MILS			
ALL UNITS ARE IN MILS			
FIGURE	SIZE	PLATED	QTY TOLERANCE/NOTES
□	6.0	PLATED	48
+	10.0	PLATED	744 SEE NOTE 15
A	15.0	PLATED	232 SEE NOTE 15
B	28.0	PLATED	5
C	40.0	PLATED	3
D	45.0	PLATED	6
E	63.0	PLATED	2
F	50.0	NON-PLATED	2
G	105.0	NON-PLATED	2
H	125.0	NON-PLATED	2
○	75.0x28.0	PLATED	2
⊖	85.0x28.0	PLATED	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS FRACTIONS ANGLES .XX +/- .010 +/- 1/32 +/- 2 .XXX +/- .005 +/- 2	NCDRILL		HSC DIVISION 804 WOBURN STREET WILMINGTON, MA 01887	
	APPROVAL	DATE	TITLE	
	DRAWN BY P. M. A	25SEP14	AD9154 FMC	
	DESIGNED		EVALUATION BOARD	
FINISH	CHECKED W. D. B	29SEP14	SIZE	FSCM NO
	APPROVED		C	DRAWING NUMBER
	MFGR ENGINEER			HSC 14024
			SCALE	1/1
DO NOT SCALE DWG				SHEET 1 OF 1

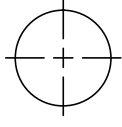
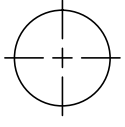
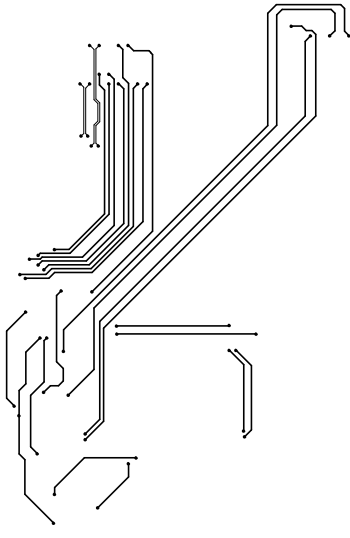
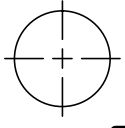
L10 SECONDARY
HSC 14024
REV A

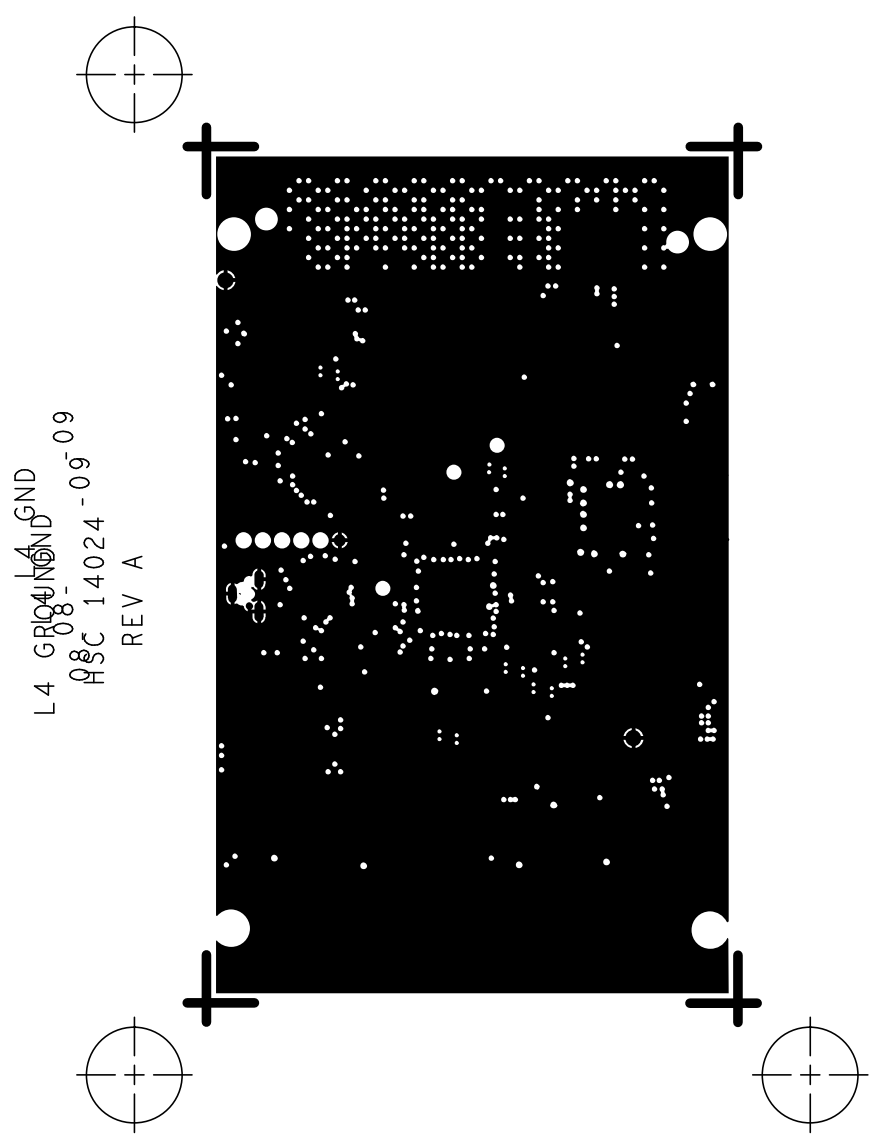


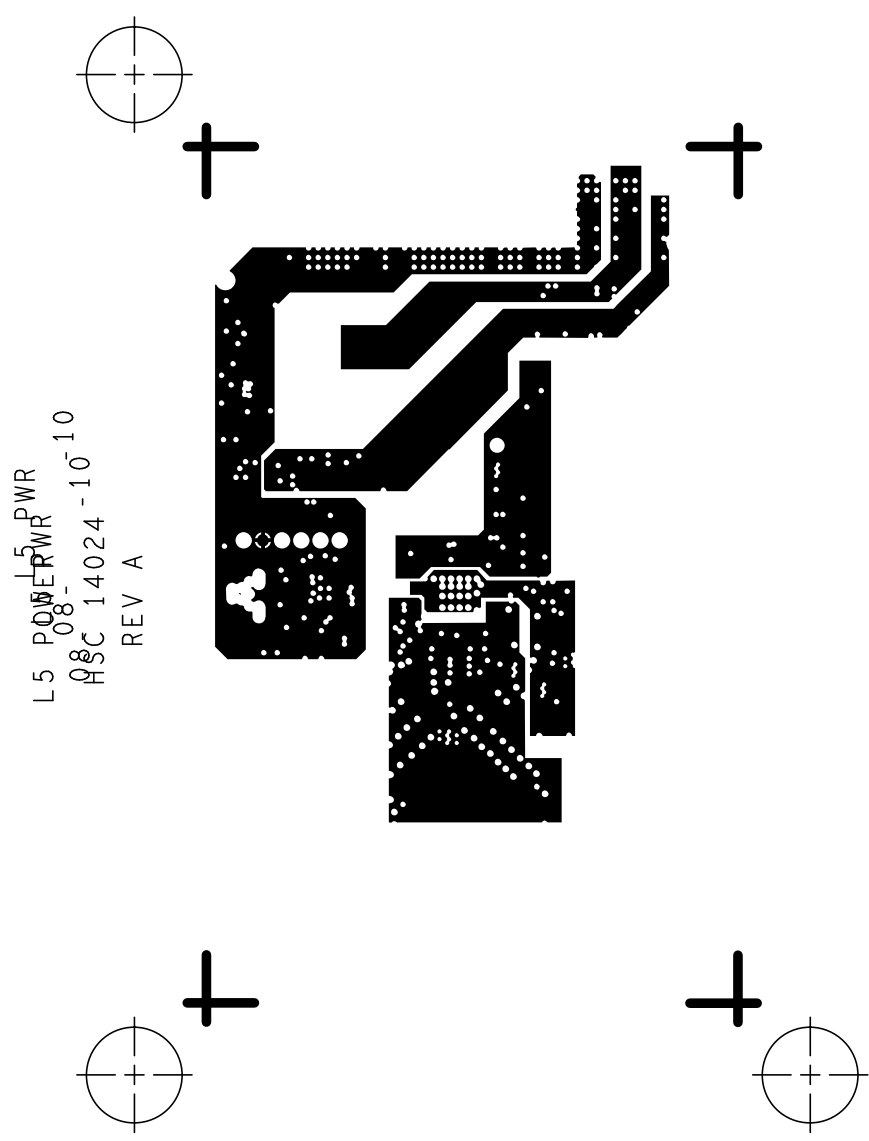


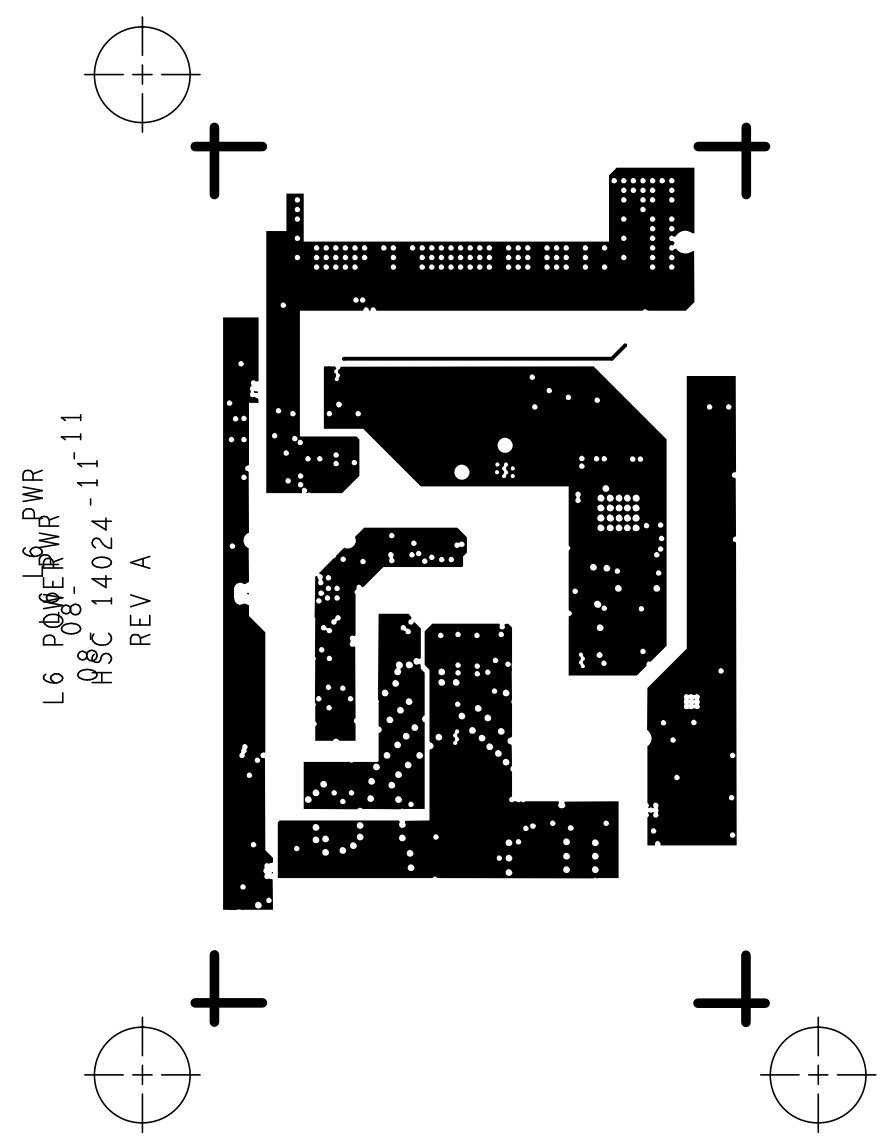


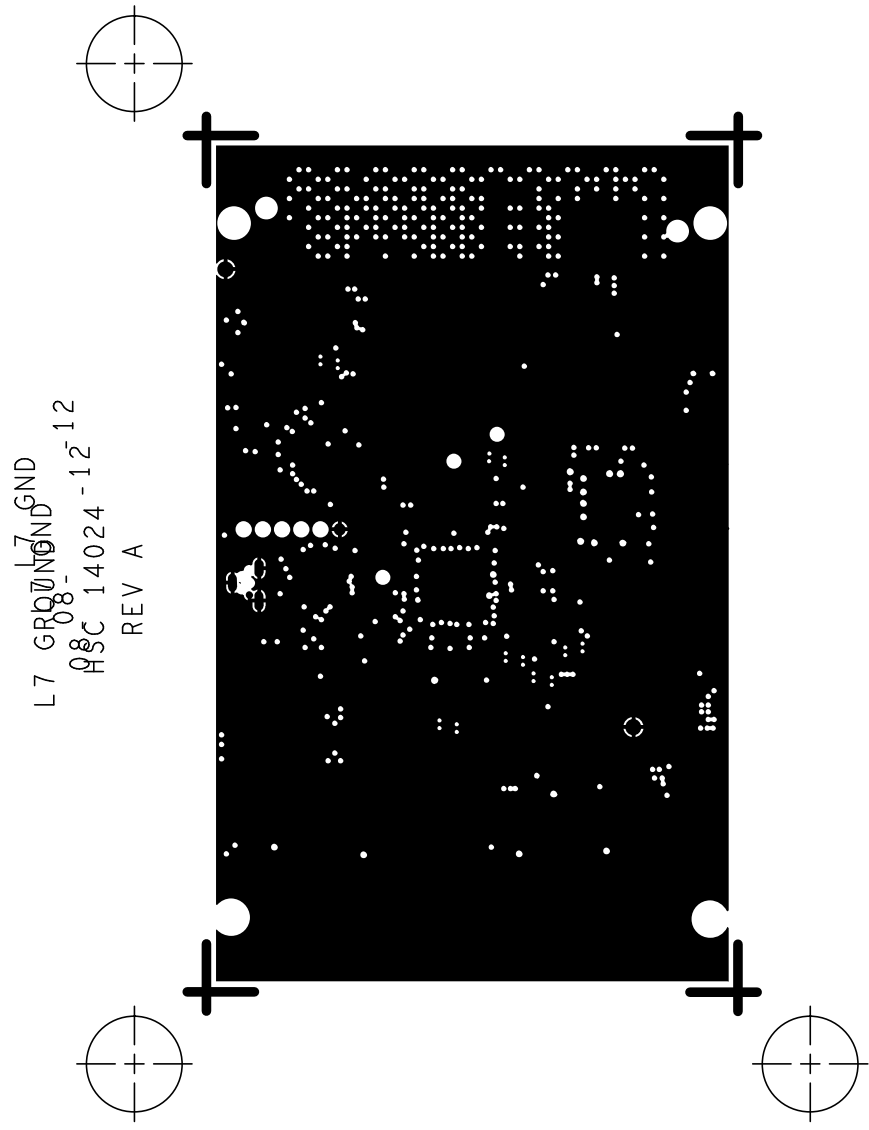
L3 SIG
08-08-08
HSC 14024-08-08
REV A



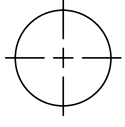
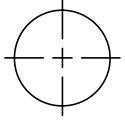
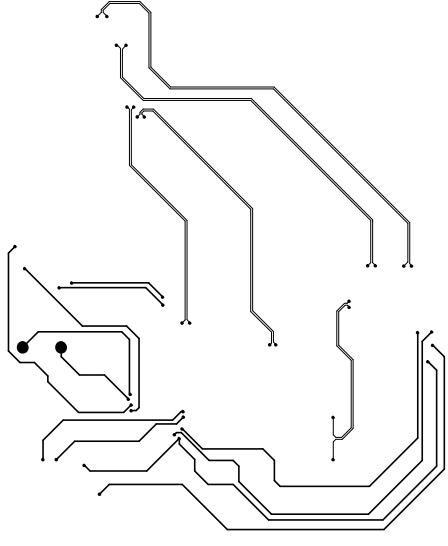
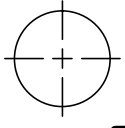


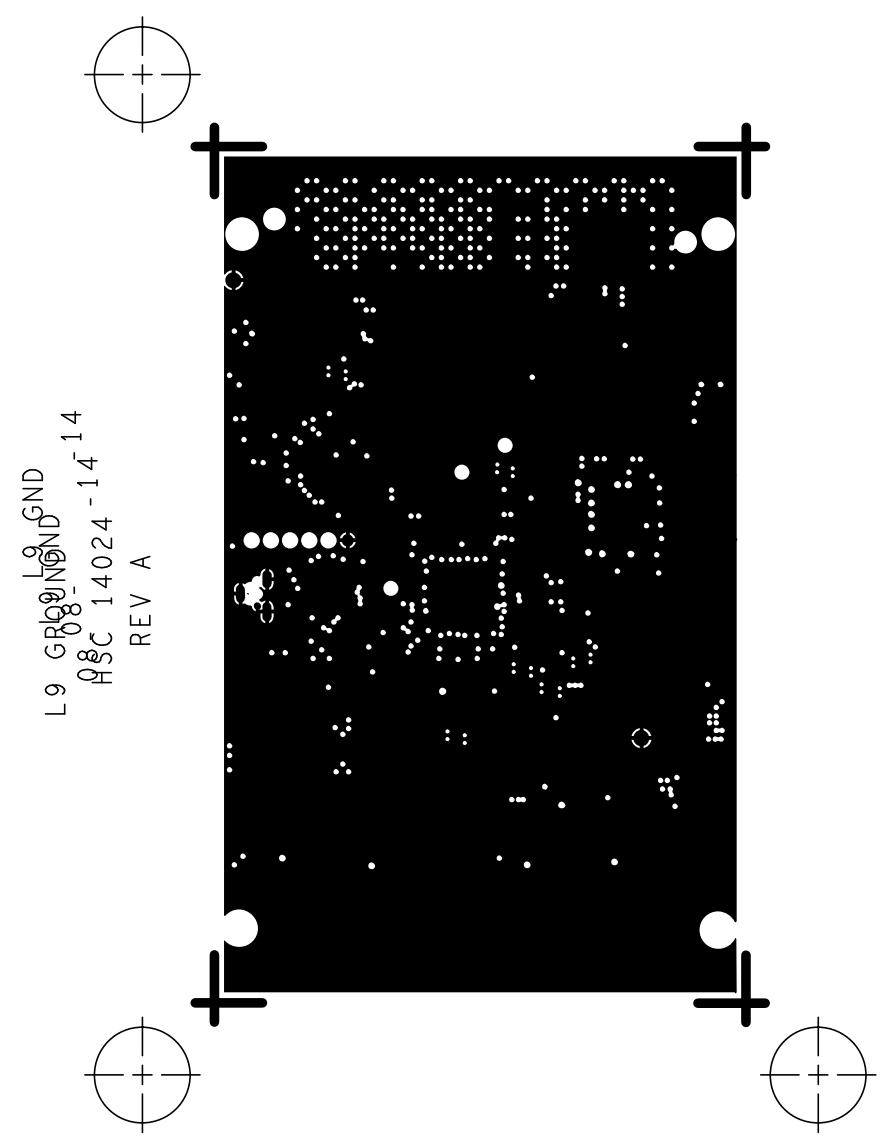


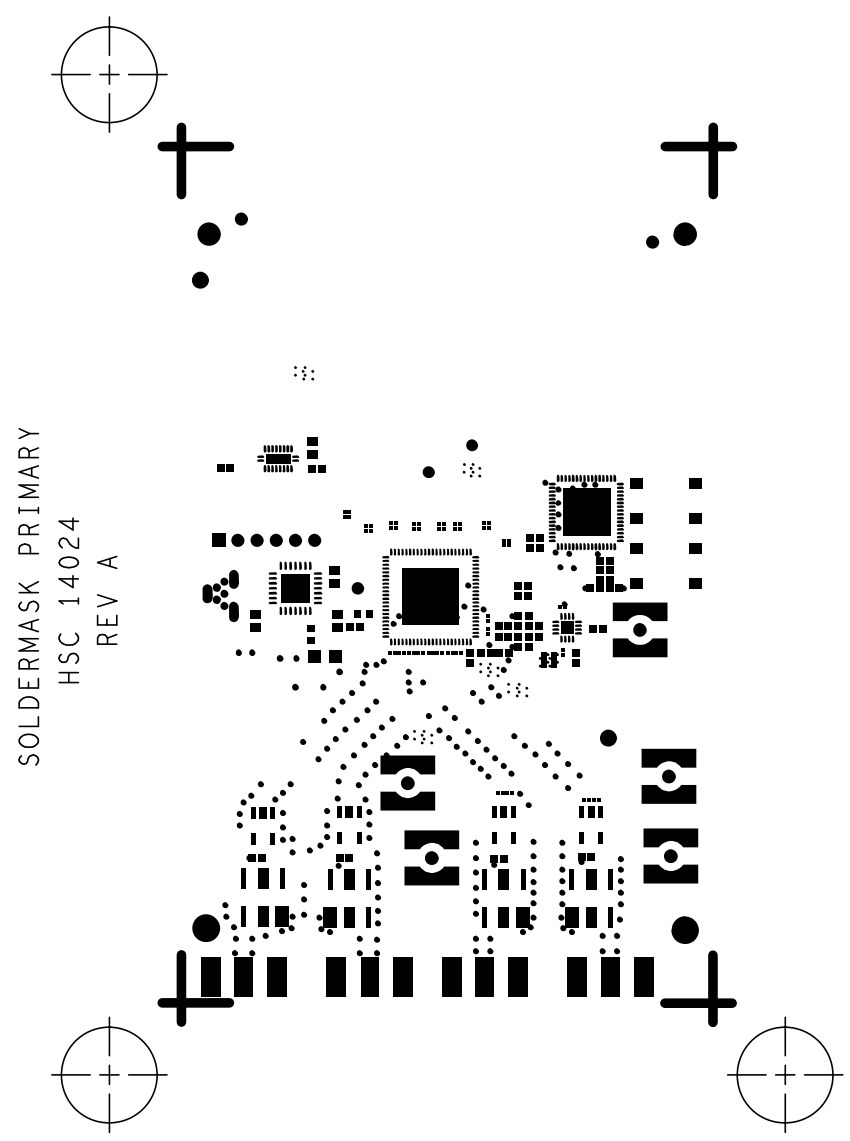




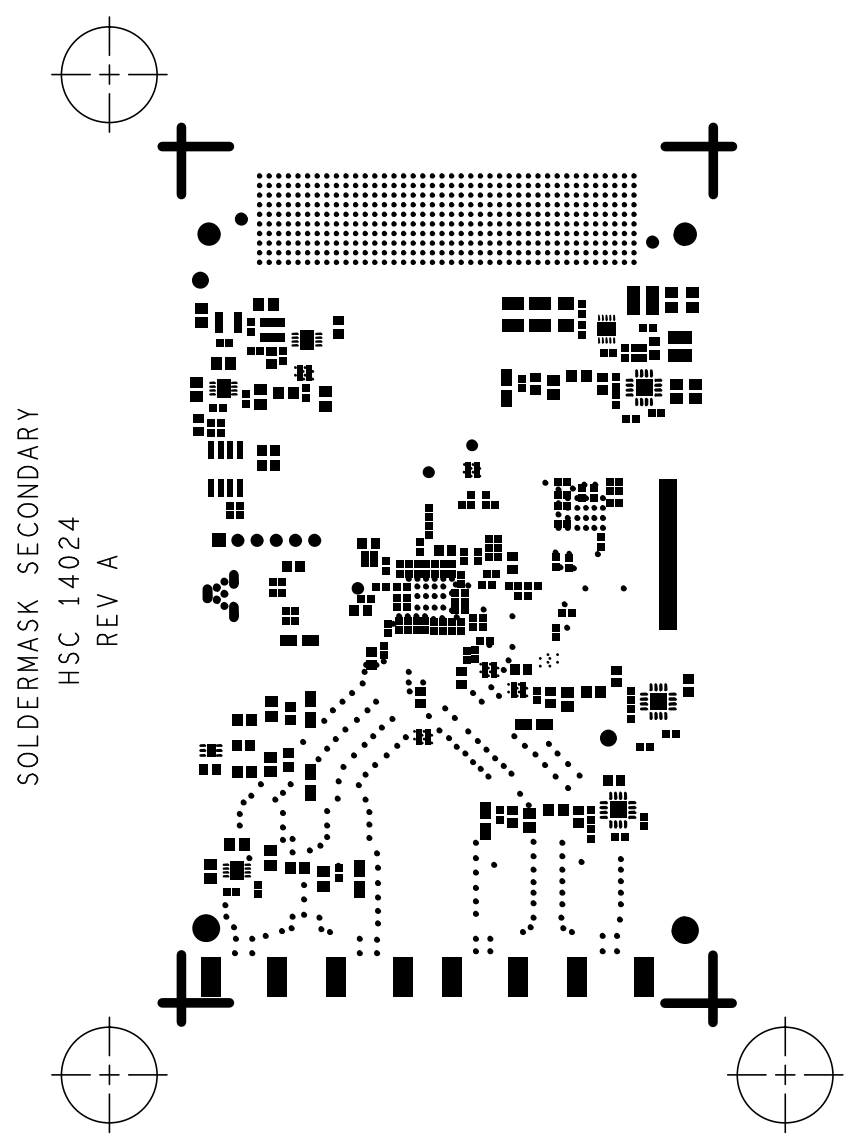
L8 SIG
HSC 14024-13-13
REV A



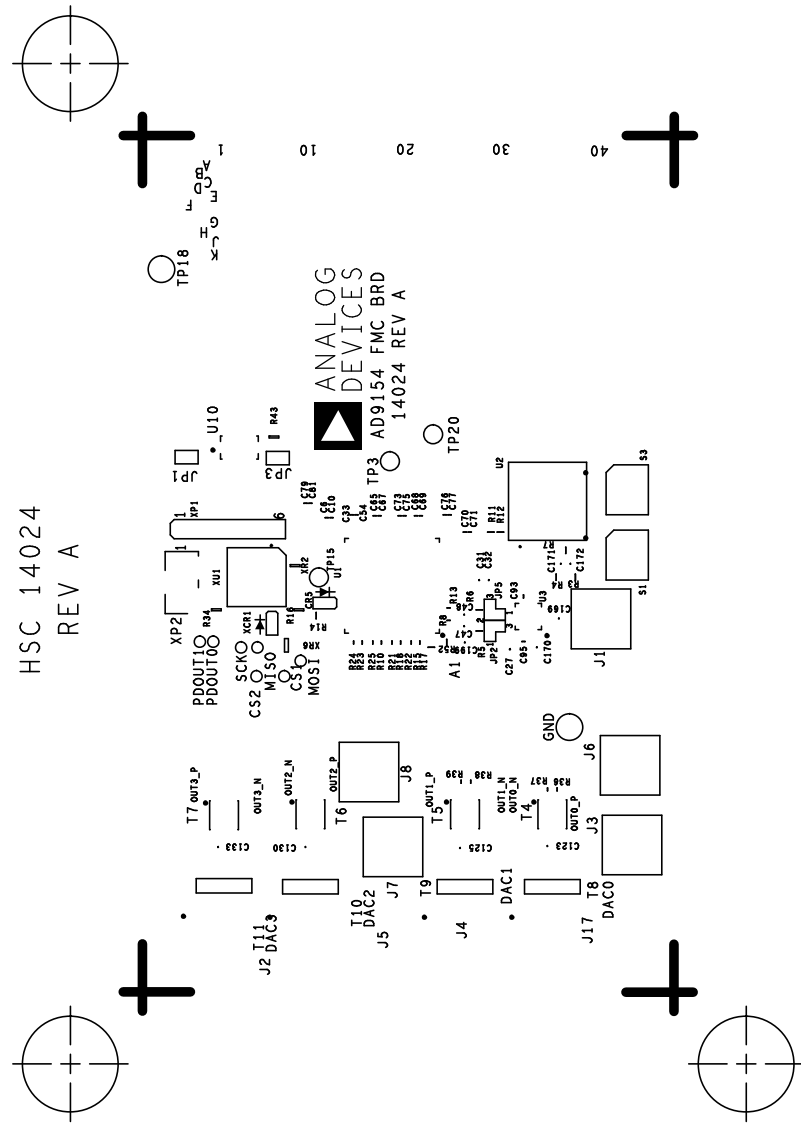




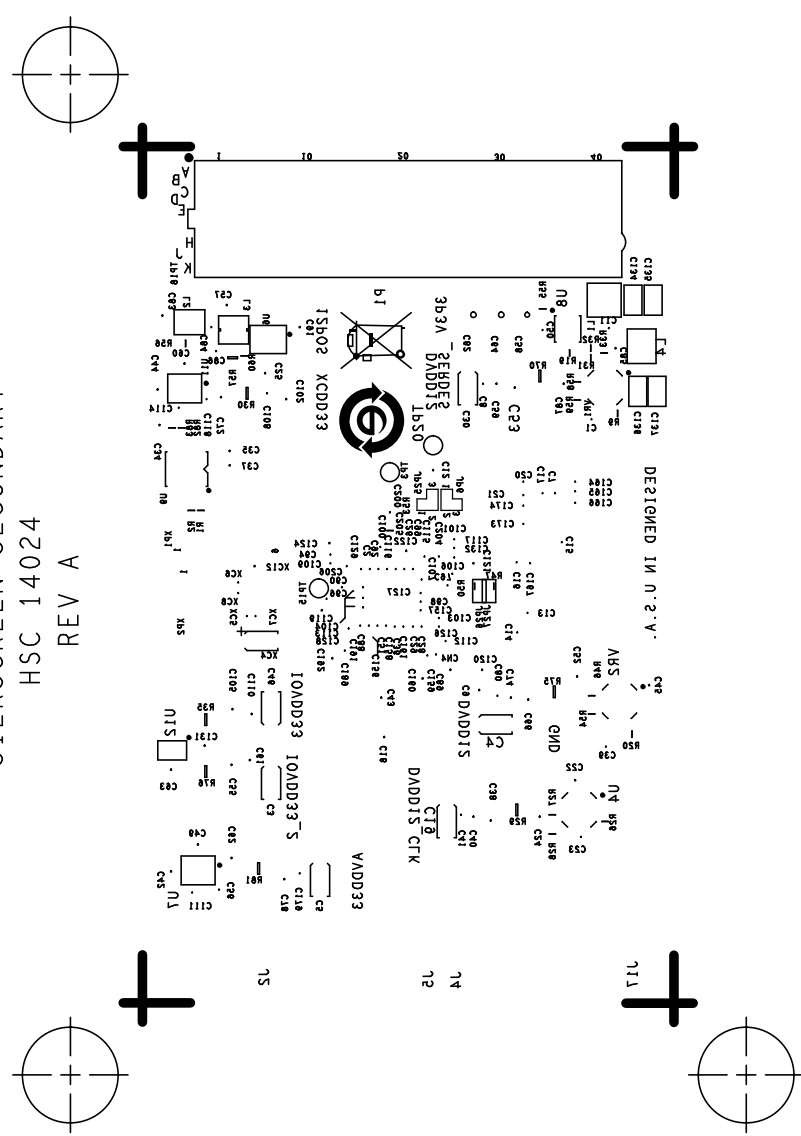
SOLDERMASK PRIMARY
HSC 14024
REV A

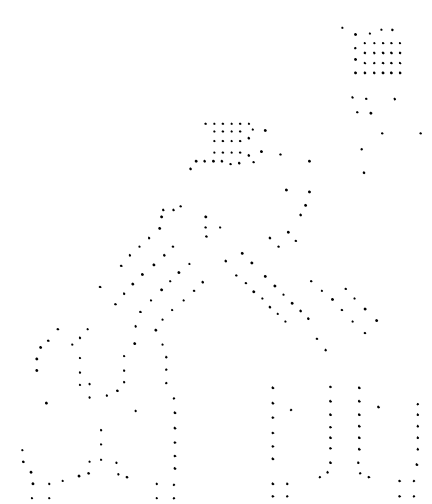


SILKSCREEN PRIMARY
HSC 14024
REV A



SILKSCREEN SECONDARY
HSC 14024
REV A





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