

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
2A	INITIAL RELEASE	03JUL24	X
B	PER ECR-128443	05NOV25	CCORREA

HOLE TOLERANCE

UNLESS SPECIFIED


PLATED: +/- 3 MILS

NON PLATED: +/- 2 MIL

DRILL CHART: TOP to BOTTOM				
ALL UNITS ARE IN MILS				
FIGURE	FINISHED_SIZE	TOLERANCE_DRILL	PLATED	QTY
+	6.0	+3.0/-3.0	PLATED	18
@	10.0	+3.0/-3.0	PLATED	393
o	45.0	+0.0/-0.0	PLATED	6
Δ	100.0	+3.0/-3.0	PLATED	15
⌈	185.0	+2.0/-2.0	NON-PLATED	4

TOTAL HOLES: 436

PRIMARY SIDE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS    FRACTIONS    ANGLES .XX    -.010    -- 1/32    -- 2 .XXX    -.005 .XXXX    -.0050	APPROVAL		DATE		<div> <b>ANALOG DEVICES</b></div> <div>TITLE</div> <div>FABRICATION</div> <div>EVAL - LT83402 - AZ</div>				
	TEMPLATE ENGINEER X		ddMMMyy						
	HARDWARE SERVICES X		ddMMMyy						
	HARDWARE SYSTEMS X		ddMMMyy						
MATERIAL	TEST ENGINEER X		ddMMMyy						
	COMPONENT ENGINEER X		ddMMMyy						
	TEST PROCESS X		ddMMMyy						
	HARDWARE RELEASE X		ddMMMyy						
FINISH	DESIGNER CCORREA		05NOV25		SIZE	FSCM NO	DRAWING NUMBER	REV	
	PTD ENGINEER ELAMP		05NOV25						
	CHECKER X		ddMMMyy		C	24355	09 - 081769	B	
	DO NOT SCALE DWG								
				SCALE		1 / 1		SHEET 1 OF 2	

REVISIONS			
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2A	INITIAL RELEASE	03JUL24	X
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NOTES :UNLESS OTHERWISE SPECIFIED

1. DIMENSIONS ARE IN INCHES (EXCEPT WHERE NOTED).  
ALL DOCUMENTS & SPECIFICATIONS REFERRED TO BELOW SHOULD BE THE LATEST REVISIONS.

MATERIAL HOMOGENOUS MATERIALS IN THIS BOARD SHALL BE COMPLAINT WITH THE EU DIRECTIVE 2002/95/EC

2. BOARD MATERIAL:(USE CHECKED ITEMS)
- (X) ISOLA 370HR OR S1000-2 OR IT180 OR EQUIVALENT
- ( ) ISOLA-FR408HR OR EQUIVALENT
- ( ) ISOLA IS410
- ( ) MEGTRON 6
- ( ) NELCO-4000-13
- ( ) ROGERS 4350B
- ( ) ROGERS 3003
- ( ) ARLON 85N
- ( ) EM370D
- ( ) OTHER \_\_\_\_\_
3. ALL LAMINATES & BONDING MATERIALS SHOULD BE SELECTED FROM IPC-4101 OR IPC-4103,(Tg>170 DEGC TD>300 DEGC)  
UL FLAMMABILITY RATING 94V-0. BOARD MATERIAL & CONSTRUCTION SHALL MEET THE REQUIREMENTS OF UL796/UL796F.
4. REFER TO IPC-6010 SERIES, CLASS 2 FOR FABRICATION. WORKMANSHIP SHALL CONFORM TO IPC-A-600, CLASS 2.
5. REFER TO LAMINATION DIAGRAM FOR OVERALL BOARD THICKNESS, TOLERANCE APPLIES AFTER ALL LAMINATION AND PLATING PROCESSES. FINISHED THICKNESS MEASURED FROM TOP COPPER TO BOTTOM COPPER.
6. BOW & TWIST NOT TO EXCEED 0.0075 INCHES (0.75%) PER LINEAR INCH AND SHOULD BE MEASURED PER IPC-TM-650, METHOD 2.4.22.
7. ACCEPTABILITY PER ADI SPECIFICATION T500115.

TOOLING:

8. IMPEDANCE REQUIREMENTS: IF NO STACKUP IS DEFINED, THE VENDOR IS ALLOWED TO ADJUST THE DIELECTRIC THICKNESS & TRACE WIDTHS TO MEET THE IMPEDANCE REQUIREMENT. IF SPECIFIED, THE VENDOR MUST MEET THE REQUIREMENTS LISTED IN THE IMPEDANCE TABLE. ANY ADJUSTMENT MADE TO THE DEFINED STACKUP, TRACE WIDTH & SPACING THAT IMPACT THE REQUIREMENTS MUST HAVE WRITTEN APPROVAL FROM ADI.
9. FILLET OPTIONS TO ENHANCE RELIABILITY AT PAD JUNCTIONS WHERE SPACING PERMITS.  
( ) FILLETS ALLOWED  
(X) FILLETS NOT ALLOWED
10. THIEVING:  
( ) VENDOR MAY ADD THIEVING TO COMPENSATE FOR LOW COPPER DENSITY AREAS MAINTAINING A MINIMUM 0.100 INCH CLEARANCE FROM ALL COPPER FEATURES.  
(X) VENDOR MAY NOT ADD THIEVING TO COMPENSATE FOR LOW COPPER DENSITY AREAS.
11. LAYER TO LAYER REGISTRATION SHALL BE WITHIN 0.003 INCHES.

FINISH:

12. DRILL SIZES ARE FINISHED HOLE SIZES. ALL HOLES SHALL BE LOCATED WITHIN 0.005 INCHES DTP, UNLESS SPECIFIED. MINIMUM BARREL PLATING OF 0.001 INCHES. PLATED HOLES SHALL NOT BE ROUGH OR IRREGULAR SO AS TO HINDER PROPER SOLDER WICKING. BARREL RELIEF ON SOLDERMASK ALLOWED IN UNFILLED VIA IN PAD HOLES.
13. PLATING SPECIFICATION:
- (X) REFER TO LAMINATION DIAGRAM FOR FINISHED COPPER WEIGHT/THICKNESS REQUIREMENTS
- THE STARTING COPPER WEIGHT/THICKNESS CAN VARY AS LONG AS THE FINISHED COPPER WEIGHT/THICKNESS IS NOT LESS THAN THE SPECIFIED VALUE.
14. SURFACE FINISH:
- (X) IMMERSION GOLD (ENIG) 1.58-3.94 MICRO INCHES OVER 118-236 MICRO INCHES MIN. OF ELECTROLESS NICKEL PER IPC-4552
- ( ) OSP (ORGANIC SOLDERABILITY PRESERVATIVE)
- ( ) IMMERSION SILVER
- ( ) SOFT WIRE BONDABLE GOLD 30-50 MICRO INCHES OF SOFT WIRE
- BONDABLE GOLD OVER 100-150 MICRO INCHES OF NICKEL
- ( ) EDGE CONNECTOR FINGERS ARE TO BE PLATED WITH 100 MICRO-INCHES( .0001" ) OF LOW STRESS NICKEL UNDER 30 MICRO-INCHES ( .0003" ) OF GOLD
- ( ) OTHER \_\_\_\_\_
15. SOLDERMASK:
- SOLDERMASK OVER BARE COPPER OR BARE GOLD (BOTH SIDES) TO MEET IPC-SM-840.
- IF PRESENT, DO NOT MODIFY SOLDERMASK DEFINED PADS (MASK OPENINGS LESS THAN COPPER PAD) WITHOUT APPROVAL.
- (X) LPI
- ( ) OTHER \_\_\_\_\_
- COLOR
- (X) GREEN
- ( ) OTHER \_\_\_\_\_
16. APPLY SILKSCREEN TO BOTH SIDES USING A NON-CONDUCTIVE, EPOXY BASED INK PER ARTWORK.
- (X) WHITE
- ( ) OTHER

TESTING:

17. FINAL ELECTRICAL TEST TO BE PERFORMED USING PROVIDED IPC-D-356A NETLIST OR ODB++ FORMAT FILE. THE PCB SHALL HAVE A VERIFICATION STAMP.
18. A TIME DOMAIN REFLECTOMETER REPORT (TDR) FOR EACH IMPEDANCE CONTROLLED LAYER & A CERTIFICATE OF COMPLIANCE SHALL BE PROVIDED BY VENDOR AT TIME OF SHIPMENT. INSTANCES WHERE TDR TESTING CAN'T BE PERFORMED BECAUSE THE TRACE LENGTH IS TOO SHORT ON THE OUTER LAYERS AT THE PIN ESCAPES IS ACCEPTABLE, ALL OTHER INSTANCES MUST BE REPORTED.

MISCELLANEOUS :

19. IF PRESENT, ALL BLIND/BURIED VIAS WITH AN ASPECT RATIO  $<1:1$  TO BE PLATED SHUT WITH COPPER WHEN USED AS VIA-IN-PAD OR AS A STACKED VIA. BLIND/BURIED VIAS WITH AN ASPECT RATIO  $>1:1$  TO BE FILLED WITH NON-CONDUCTIVE EPOXY.
20. FOR VIA FILL INFORMATION REFER TO DRILL CHART:
  - (X) NON-CONDUCTIVE EPOXY FILL ALL LESS THAN 0.012 INCHES DRILLED VIAS
  - ( ) COPPER FILL ALL 0.012 INCHES DRILLED VIAS
21. INTENTIONAL SHORTS:
  - IF AN INTENTIONAL SHORT REPORT IS SUPPLIED AND DOES NOT MATCH THE FAB DATA THEN ADI APPROVAL IS REQUIRED.
22. PEMNUTS:
  - ( ) PEMNUTS TO BE INSTALLED BY FABRICATOR
  - ( ) PEMNUTS NOT TO BE INSTALLED BY FABRICATOR
  - (X) NOT APPLICABLE
23. MANUFACTURER TO ETCH/STAMP WITH PERMANENT NON-CONDUCTIVE INK ON SECONDARY SIDE UNLESS OTHERWISE SPECIFIED:
  - A. UL CODE-FLAMMABILITY RATING FOR THOSE APPROVED MATERIALS(IF APPLICABLE)
  - B. DATE CODE
  - C. LOT NUMBER
  - D. MANUFACTURER LOGO
25. PANELIZATION:
  - BOARDS TO BE SHIPPED IN ARRAY AND KEPT INTACT
  - PANEL TO BE SUBJECTED TO CUSTOMERS APPROVAL
  - PANEL SOLDER PASTE STENCIL GERBER TO BE PROVIDED TO ANALOG
27. MINIMUM DESIGN LINE WIDTH IS .010 INCH.
28. MINIMUM DESIGN LINE SPACING IS .006 INCH.


FAB NOTES REVISION: 2ND NOVEMBER 2022

LAMINATION DIAGRAM				
LAYER NUMBER	LAYER NAME	COPPER THICKNESS (OZ, INCH)	DIELECTRIC THICKNESS ( INCH )	MATERIALS

1	TOP	2 OZ, 0.0028"		FINAL CU (THICKNESS AFTER PLATING)
			0.006"	ISOLA 370HR/EQUIVALENT
2	LAYER_2	2 OZ, 0.0028"		CU CLAD
				ISOLA 370HR/EQUIVALENT
3	LAYER_3	2 OZ, 0.0028"		CU CLAD
			0.006"	ISOLA 370HR/EQUIVALENT
4	BOTTOM	2 OZ, 0.0028"		FINAL CU (THICKNESS AFTER PLATING)

THE FINISHED PCB THICKNESS TO BE: 0.062" +/-10%

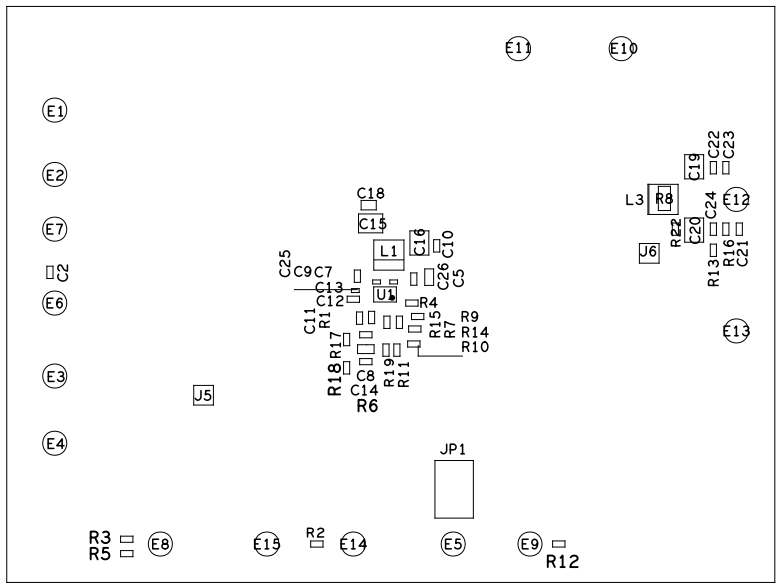
## PRIMARY SIDE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			APPROVAL		DATE		 <b>ANALOG DEVICES</b>	
TOLERANCES			TEMPLATE ENGINEER X		d d M M M y y			
DECIMALS      FRACTIONS      ANGLES .XX   -.010      +-1/32      +- 2 .XXX   -.005 .XXXX   -.0050			HARDWARE SERVICES X		d d M M M y y		TITLE  FABRICATION  EVAL - LT83402 - AZ	
MATERIAL			HARDWARE SYSTEMS X		d d M M M y y			
			TEST ENGINEER X		d d M M M y y			
			COMPONENT ENGINEER X		d d M M M y y			
			TEST PROCESS X		d d M M M y y			
			HARDWARE RELEASE X		d d M M M y y			
FINISH			DESIGNER CCORREA		05NOV25		SIZE      FSCM NO      DRAWING NUMBER      REV  C      24355      09      -081769      B	
			PTD ENGINEER ELAMP		05NOV25			
			CHECKER X		d d M M M y y			
DO NOT SCALE DWG					SCALE      1/1		SHEET 2 OF 2	

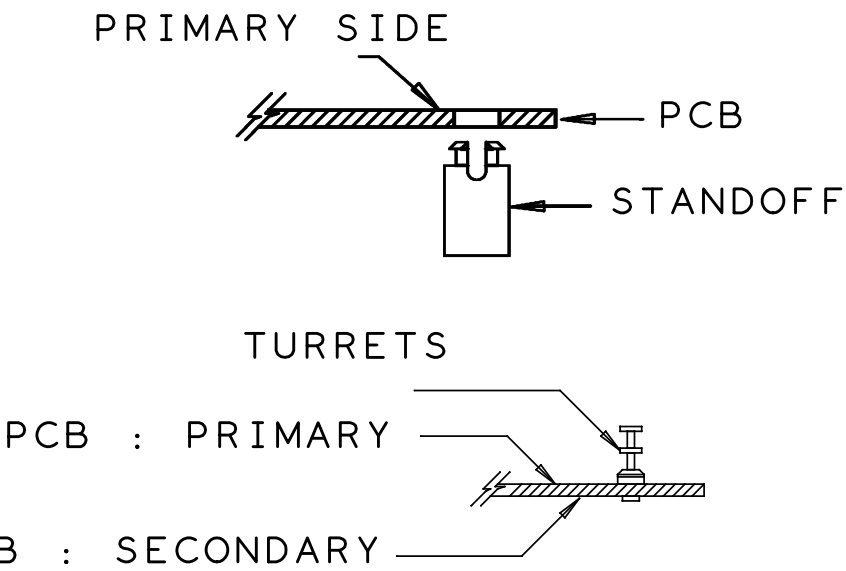
REVISIONS			
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2A	INITIAL RELEASE	03JUL24	X
B	PER ECR-128443	05NOV25	CCORREA

ASSEMBLY NOTES:

1. BOARD ACCEPTABILITY PER ANALOG DEVICES, INC. SPECIFICATION TST00119 (LATEST REVISION).
2. REPAIRS PER IPC-7711/21(LATEST REVISION) ARE ALLOWED.
3. REPAIRS ARE NOT ALLOWED IN SOLDERMASK FREE AREAS ON EITHER SIDE OF THE BOARD.
4. INSTALL STANDOFFS AS SHOWN BELOW:

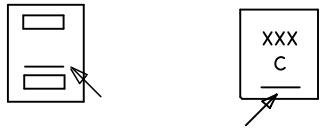


FOR JP1: INSTALL SHUNT ACROSS PIN5 AND PIN6.



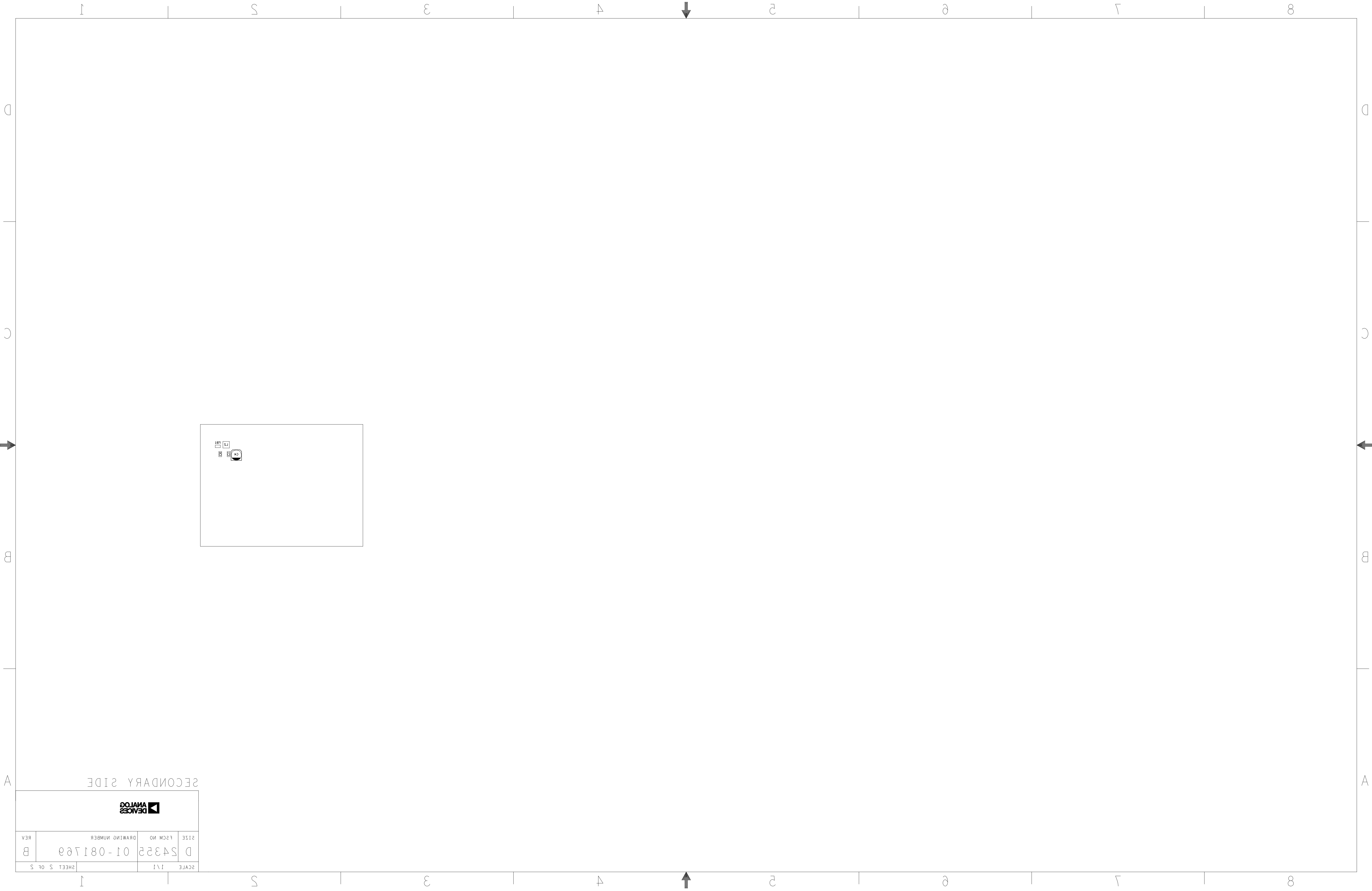
5. INSTALL INDUCTORS L1 AS SHOWN BELOW.

FOOTPRINT PART



PIN1 INDICATOR

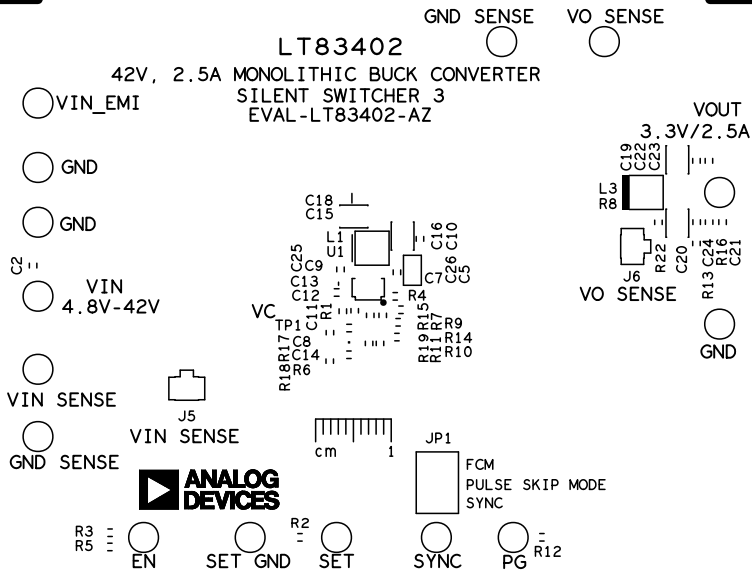
PRIMARY SIDE			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS FRACTIONS ANGLES .XX -.010 --1/32 -- 2 .XXX -.005 .XXXX -.0050	APPROVAL	DATE	<div><div></div><div>ANALOG DEVICES</div></div> <div>TITLE</div> <div>ASSEMBLY</div> <div>EVAL-LT83402-AZ</div>
	TEMPLATE ENGINEER	X	
	HARDWARE SERVICES	X	
	HARDWARE SYSTEMS	X	
MATERIAL	TEST ENGINEER	X	SIZE FSCM NO DRAWING NUMBER REV
	COMPONENT ENGINEER	X	
	TEST PROCESS	X	
	HARDWARE RELEASE	X	
FINISH	DESIGNER	CCORREA	C 24355 01 -081769 B
	PTD ENGINEER	ELAMP	
	CHECKER	X	
DO NOT SCALE DWG		SCALE 1 / 1	SHEET 1 OF 2



ANALOG DEVICES			
SCALE	1:1	SHEET 5 OF 5	
SIZE	D	DRAWING NUMBER	01-081769
REV	B		

SECONDARY SIDE

## REV B



# SILKSCREEN PRIMARY

08 - 081769-03

REV B



LT83402

42V, 2.5A MONOLITHIC BUCK CONVERTER  
SILENT SWITCHER 3  
EVAL-LT83402-AZ

GND SENSE E11

VO SENSE E10

E1 VIN\_EMI

E2 GND

E7 GND

E6 VIN  
4.8V-42V

E3 VIN SENSE

E4 GND SENSE

J5 VIN SENSE



JP1

FCM  
PULSE SKIP MODE  
SYNC

R3 E8  
R5 EN

E15 SET GND

R2 E14  
SET

E5 E9 SYNC  
PG R12

VOUT  
3.3V/2.5A

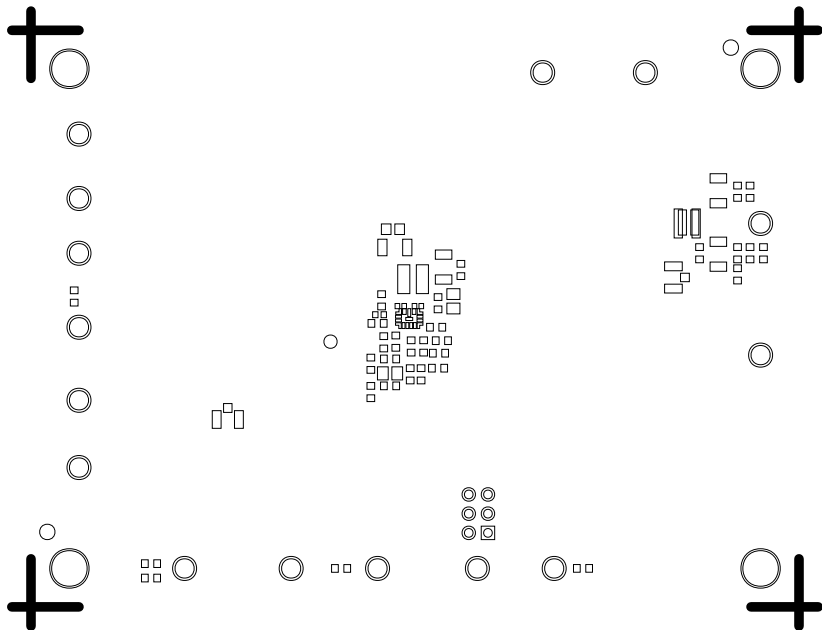
C19 C23  
L3 R8 E12

VO SENSE

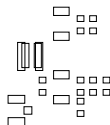
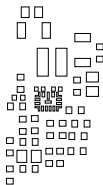
E13 GND



SOLDERMASK PRIMARY  
08-081769-04  
REV B

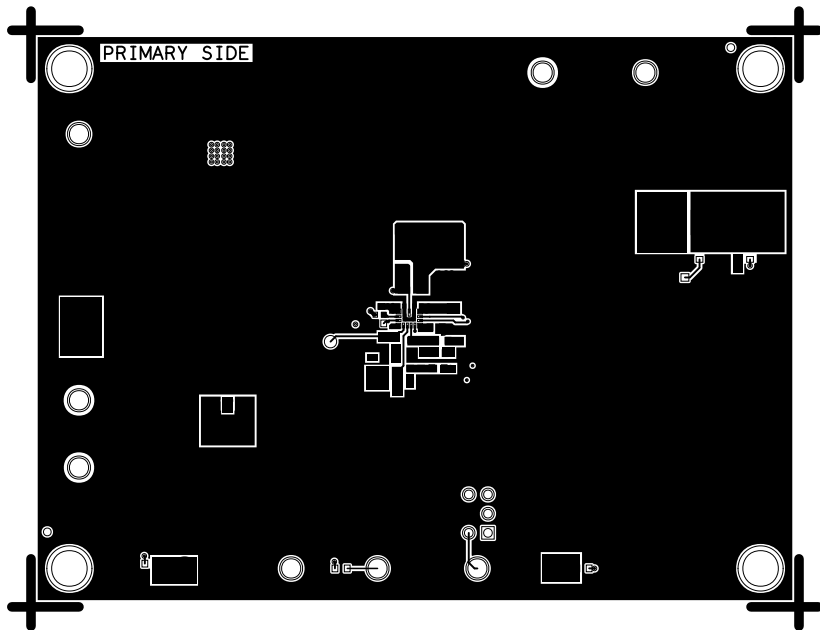


PASTEMASK PRIMARY  
08-081769-13  
REV B





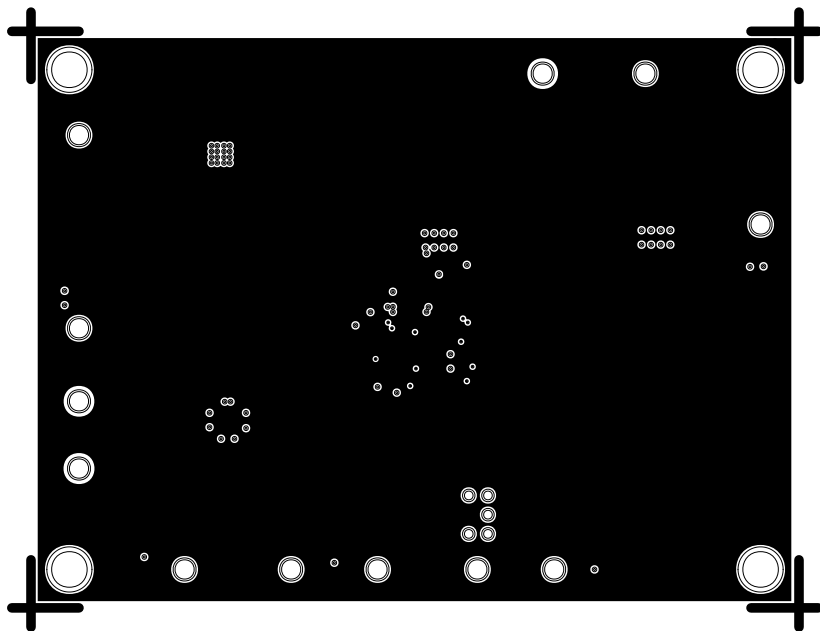
L1 PRIMARY  
08-081769-01  
REV B



L2 - SIGNAL / GND

08-081769-07

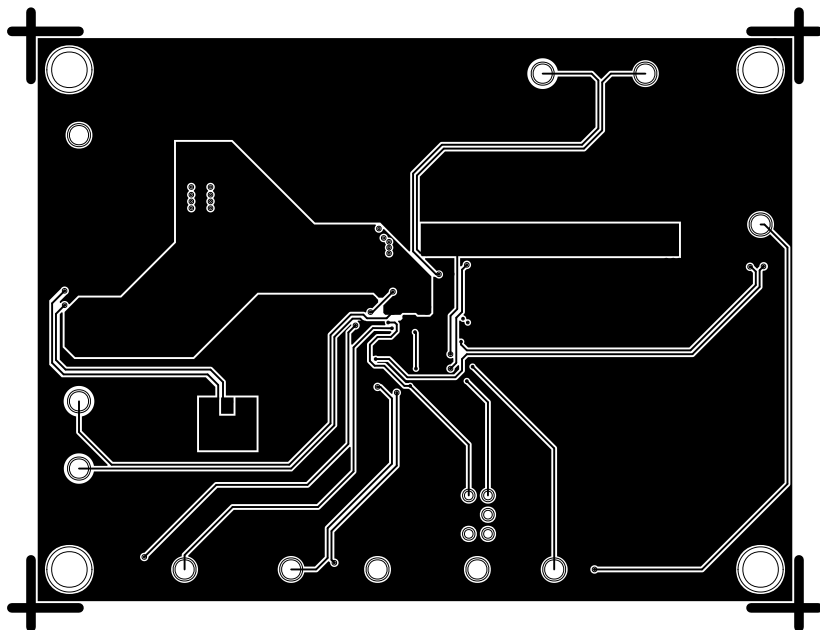
REV B



L3 - SIGNAL / GND

08-081769-08

REV B



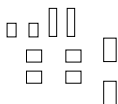
Secondary side of the PCB. Labels include: 08-081769 REV B, SECONDARY SIDE. Components include: 1x 10-pin header, 1x 12-pin header, 1x 16-pin header, 1x 20-pin header, 1x 24-pin header, 1x 28-pin header, 1x 32-pin header, 1x 36-pin header, 1x 40-pin header, 1x 44-pin header, 1x 48-pin header, 1x 52-pin header, 1x 56-pin header, 1x 60-pin header, 1x 64-pin header, 1x 68-pin header, 1x 72-pin header, 1x 76-pin header, 1x 80-pin header, 1x 84-pin header, 1x 88-pin header, 1x 92-pin header, 1x 96-pin header, 1x 100-pin header, 1x 104-pin header, 1x 108-pin header, 1x 112-pin header, 1x 116-pin header, 1x 120-pin header, 1x 124-pin header, 1x 128-pin header, 1x 132-pin header, 1x 136-pin header, 1x 140-pin header, 1x 144-pin header, 1x 148-pin header, 1x 152-pin header, 1x 156-pin header, 1x 160-pin header, 1x 164-pin header, 1x 168-pin header, 1x 172-pin header, 1x 176-pin header, 1x 180-pin header, 1x 184-pin header, 1x 188-pin header, 1x 192-pin header, 1x 196-pin header, 1x 200-pin header, 1x 204-pin header, 1x 208-pin header, 1x 212-pin header, 1x 216-pin header, 1x 220-pin header, 1x 224-pin header, 1x 228-pin header, 1x 232-pin header, 1x 236-pin header, 1x 240-pin header, 1x 244-pin header, 1x 248-pin header, 1x 252-pin header, 1x 256-pin header, 1x 260-pin header, 1x 264-pin header, 1x 268-pin header, 1x 272-pin header, 1x 276-pin header, 1x 280-pin header, 1x 284-pin header, 1x 288-pin header, 1x 292-pin header, 1x 296-pin header, 1x 300-pin header, 1x 304-pin header, 1x 308-pin header, 1x 312-pin header, 1x 316-pin header, 1x 320-pin header, 1x 324-pin header, 1x 328-pin header, 1x 332-pin header, 1x 336-pin header, 1x 340-pin header, 1x 344-pin header, 1x 348-pin header, 1x 352-pin header, 1x 356-pin header, 1x 360-pin header, 1x 364-pin header, 1x 368-pin header, 1x 372-pin header, 1x 376-pin header, 1x 380-pin header, 1x 384-pin header, 1x 388-pin header, 1x 392-pin header, 1x 396-pin header, 1x 400-pin header, 1x 404-pin header, 1x 408-pin header, 1x 412-pin header, 1x 416-pin header, 1x 420-pin header, 1x 424-pin header, 1x 428-pin header, 1x 432-pin header, 1x 436-pin header, 1x 440-pin header, 1x 444-pin header, 1x 448-pin header, 1x 452-pin header, 1x 456-pin header, 1x 460-pin header, 1x 464-pin header, 1x 468-pin header, 1x 472-pin header, 1x 476-pin header, 1x 480-pin header, 1x 484-pin header, 1x 488-pin header, 1x 492-pin header, 1x 496-pin header, 1x 500-pin header, 1x 504-pin header, 1x 508-pin header, 1x 512-pin header, 1x 516-pin header, 1x 520-pin header, 1x 524-pin header, 1x 528-pin header, 1x 532-pin header, 1x 536-pin header, 1x 540-pin header, 1x 544-pin header, 1x 548-pin header, 1x 552-pin header, 1x 556-pin header, 1x 560-pin header, 1x 564-pin header, 1x 568-pin header, 1x 572-pin header, 1x 576-pin header, 1x 580-pin header, 1x 584-pin header, 1x 588-pin header, 1x 592-pin header, 1x 596-pin header, 1x 600-pin header, 1x 604-pin header, 1x 608-pin header, 1x 612-pin header, 1x 616-pin header, 1x 620-pin header, 1x 624-pin header, 1x 628-pin header, 1x 632-pin header, 1x 636-pin header, 1x 640-pin header, 1x 644-pin header, 1x 648-pin header, 1x 652-pin header, 1x 656-pin header, 1x 660-pin header, 1x 664-pin header, 1x 668-pin header, 1x 672-pin header, 1x 676-pin header, 1x 680-pin header, 1x 684-pin header, 1x 688-pin header, 1x 692-pin header, 1x 696-pin header, 1x 700-pin header, 1x 704-pin header, 1x 708-pin header, 1x 712-pin header, 1x 716-pin header, 1x 720-pin header, 1x 724-pin header, 1x 728-pin header, 1x 732-pin header, 1x 736-pin header, 1x 740-pin header, 1x 744-pin header, 1x 748-pin header, 1x 752-pin header, 1x 756-pin header, 1x 760-pin header, 1x 764-pin header, 1x 768-pin header, 1x 772-pin header, 1x 776-pin header, 1x 780-pin header, 1x 784-pin header, 1x 788-pin header, 1x 792-pin header, 1x 796-pin header, 1x 800-pin header, 1x 804-pin header, 1x 808-pin header, 1x 812-pin header, 1x 816-pin header, 1x 820-pin header, 1x 824-pin header, 1x 828-pin header, 1x 832-pin header, 1x 836-pin header, 1x 840-pin header, 1x 844-pin header, 1x 848-pin header, 1x 852-pin header, 1x 856-pin header, 1x 860-pin header, 1x 864-pin header, 1x 868-pin header, 1x 872-pin header, 1x 876-pin header, 1x 880-pin header, 1x 884-pin header, 1x 888-pin header, 1x 892-pin header, 1x 896-pin header, 1x 900-pin header, 1x 904-pin header, 1x 908-pin header, 1x 912-pin header, 1x 916-pin header, 1x 920-pin header, 1x 924-pin header, 1x 928-pin header, 1x 932-pin header, 1x 936-pin header, 1x 940-pin header, 1x 944-pin header, 1x 948-pin header, 1x 952-pin header, 1x 956-pin header, 1x 960-pin header, 1x 964-pin header, 1x 968-pin header, 1x 972-pin header, 1x 976-pin header, 1x 980-pin header, 1x 984-pin header, 1x 988-pin header, 1x 992-pin header, 1x 996-pin header, 1x 1000-pin header.

08-081769 REV B  
SECONDARY SIDE

PASTEMASK SECONDARY

08-081769-14

REV B



SOLDERMASK SECONDARY

08-081769-06

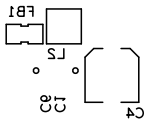
REV B



SILKSCREEN SECONDARY

08-081769-05

REV B



SILKSCREEN SECONDARY

08-081769-05

REV B

