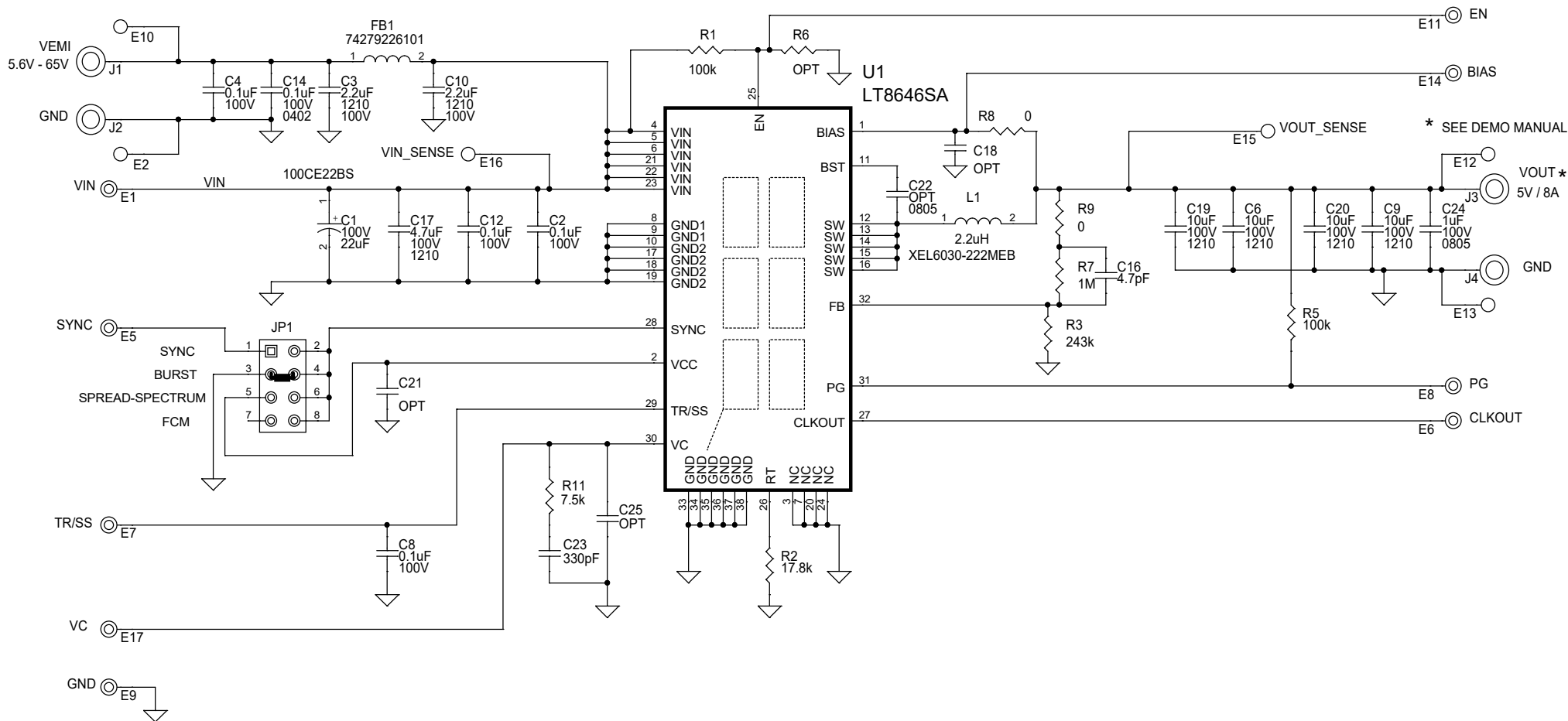


					Capture CIS Standard Bill Of Materials - Standard Report						
						Report Created on Wednesday May 17 16:48:50 2023					
STEP-DOWN SILENT SWITCHER 2											
SKU# = EVAL-LT8646SA-AZ											
IC NO. = LT8646SA											
PCA BOM = 700-EVAL-LT8646SA-AZ_REV01											
PCA ASS'Y DWG = 705-EVAL-LT8646SA-AZ_REV01											
PCA SCHEMATIC = EVAL-LT8646SA-AZ_REV 1											
Item Number	Quantity	Part Reference	Description	Manufacturer	Manufacturer PN	MFR PN Status	Value	PART_NUMBER	BOM Notes		
1	1	C1	CAP.,22uF,ALUM,100V,20%,8x10.2mm,SMD,RADIAL,AEC-Q200,CE-BS	SUN ELECTRONIC INDUSTRIES	100CE22B5	Y	22uF	150-0327			
2	4	C2,C4,C8,C12	CAP.,0.1uF,X7S,100V,10%,0603,AEC-Q200	TDK	CGA3E3X7S2A104K080AB	Y	0.1uF	150-2322			
3	2	C3,C10	CAP.,2.2uF,X7R,100V,10%,1210	MURATA AVX MURATA NIC TDK	GRM32ER72A225KA35L 12101C225KAT2A GRM32ER72A225KA35K NMC1210X7R225K100TRP LPF C3225X7R2A225K230AB	S Y S Y Y	2.2uF	150-3049			
4	4	C6,C9,C19,C20	CAP.,10uF,X7S,100V,10%,1210	MURATA	GRM32EC72A106KE05L	Y	10uF	150-2537			
5	1	C14	CAP.,0.1uF,X5R,100V,10%,0402,NO SUBS. ALLOWED	MURATA	GRM155R62A104KE14D	Y	0.1uF	150-2279			
6	1	C16	CAP.,4.7pF,C0G/NP0,50V,+/-0.25pF,0603	MURATA NIC AVX	GRM1885C1H4R7CA01D NMC0603NPO4R7C50TRPF 06035A4R7CAT2A	S Y Y	4.7pF	150-2223			
7	1	C17	CAP.,4.7uF,X7S,100V,10%,1210	SAMSUNG TDK TDK MURATA	CL32Y475KCVZW6E C3225X7S2A475K200AB C3225X7S2A475K200AE GRM32DC72A475KE01L	Y Y Y S	4.7uF	150-2270			
8	0	C18,C21,C25	CAP., OPTION, 0603				OPT	150-3038	NO STUFF		
9	0	C22	CAP., OPTION, 0805				OPT	150-3036	NO STUFF		
10	1	C23	CAP.,330pF,C0G/NP0,50V,10%,0603,AEC-Q200	AVX	06035A331K4T2A	Y	330pF	150-1000			
11	1	C24	CAP.,1uF,X7R,100V,10%,0805,AEC-Q200	AVX	08051C105K4T2A	Y	1uF	150-0903			
12	9	E1,E5,E6,E7,E8,E9,E11,E14	TEST POINT,TURRET,0.094" MTG. HOLE,PCB 0.062" THK	MILL-MAX	2501-2-00-80-00-00-07-C	Y		TEST POINT	260-0003		
13	6	E2,E10,E12,E13,E15,E16	TEST POINT,TURRET,0.064" MTG. HOLE,PCB 0.062" THK	MILL-MAX	2308-2-00-80-00-00-07-C	Y		TEST POINT	260-0004		
14	1	FB1	IND.,100 OHMS@100MHz,FERRITE BEAD,25%,8A,6mOHMS,1812	WURTH ELEKTRONIK	74279226101	Y		100 OHMS@100MHz	200-0280		
15	4	J1,J2,J3,J4	CONN.,BANANA JACK,FEMALE,THT,NON-INSULATED,SWAGE,0.218"	KEYSTONE	575-4	Y		BANANA JACK	250-0428		
16	1	JP1	CONN.,HDR,MALE,2x4,2mm,VERT,STR,THT	WURTH ELEKTRONIK	62000821121	Y		HDR	250-0581		
17	1	L1	IND.,2.2uH,PWR,SHIELDED,20%,10A,13.97mOhms,6.56mmX6.36mm,AEC-Q200	COILCRAFT COILCRAFT	XEL6030-222MEB XEL6030-222MEC	Y Y	2.2uH	200-0673			
18	4	MP1,MP2,MP3,MP4	STANDOFF,NYLON,SNAP-ON,0.50"	KEYSTONE	8833	Y		STANDOFF	763-0007		
19	1	R1	RES.,100k OHMS,5%,1/10W,0603,AEC-Q200	NIC PANASONIC VISHAY	NRC06J104TRF ERJ3GEYJ104V CRCW0603100KJNEA	Y Y Y	100k	100-0312			
20	1	R2	RES.,17.8k OHMS,1%,1/10W,0603,AEC-Q200	NIC PANASONIC VISHAY	NRC06F1782TRF ERJ3KEF1782 CRCW060317K8FKEA	Y Y Y	17.8k	100-0867			
21	1	R3	RES.,243k OHMS,1%,1/10W,0603	VISHAY YAGEO	CRCW0603243KFKEA RC0603FR-07243KL	Y Y	243k	100-2672			
22	1	R5	RES.,100k OHMS,1%,1/10W,0603,AEC-Q200	VISHAY NIC PANASONIC YAGEO	CRCW0603100KFKEA NRC06F1003TRF ERJ3KEF1003V RC0603FR-07100KL	Y Y Y Y	100k	100-0343			
23	0	R6	RES., OPTION, 0603				OPT	100-2374	NO STUFF		
24	1	R7	RES.,1M OHM,1%,1/10W,0603,AEC-Q200	NIC PANASONIC VISHAY STACKPOLE ELECTRONICS, INC.	NRC06F1004TRF ERJ3KEF1004V CRCW06031M00FKEA RMCF0603F11M00	Y Y Y Y	1M	100-0119			
25	2	R8,R9	RES.,0 OHM,1/10W,0603,AEC-Q200	PANASONIC VISHAY	ERJ3GEYR00V CRCW06030000Z0EA	Y Y		0	100-0204		
26	1	R11	RES.,7.5k OHMS,1%,1/10W,0603,AEC-Q200	NIC PANASONIC VISHAY	NRC06F7501TRF ERJ3KEF7501V CRCW06037K50FKEA	Y Y Y	7.5k	100-1007			
27	1	U1	IC., 65V, 8A Synchronous Step-Down Silent Switcher 2	ANALOG DEVICES	LT8646SAEV#PBF			LT8646SAEV#PBF	LT8646SAEV#PBF-LOCAL		
28	1	XJP1	CONN.,SHUNT,FEMALE,2 POS,2mm	Wurth Elektronik	60800213421	Y		SHUNT	250-0485		



# NOTES: UNLESS OTHERWISE SPECIFIED

- ALL RESISTORS ARE 0603.
- ALL CAPACITORS ARE 0603.

## CUSTOMER NOTICE

ANALOG DEVICES HAS MADE A BEST EFFORT TO DESIGN A CIRCUIT THAT MEETS CUSTOMER-SUPPLIED SPECIFICATIONS; HOWEVER, IT REMAINS THE CUSTOMER'S RESPONSIBILITY TO VERIFY PROPER AND RELIABLE OPERATION IN THE ACTUAL APPLICATION. COMPONENT SUBSTITUTION AND PRINTED CIRCUIT BOARD LAYOUT MAY SIGNIFICANTLY AFFECT CIRCUIT PERFORMANCE OR RELIABILITY. CONTACT ANALOG DEVICES APPLICATIONS ENGINEERING FOR ASSISTANCE.

THIS CIRCUIT IS PROPRIETARY TO ANALOG DEVICES AND SUPPLIED FOR USE WITH ANALOG DEVICES PARTS.

## APPROVALS

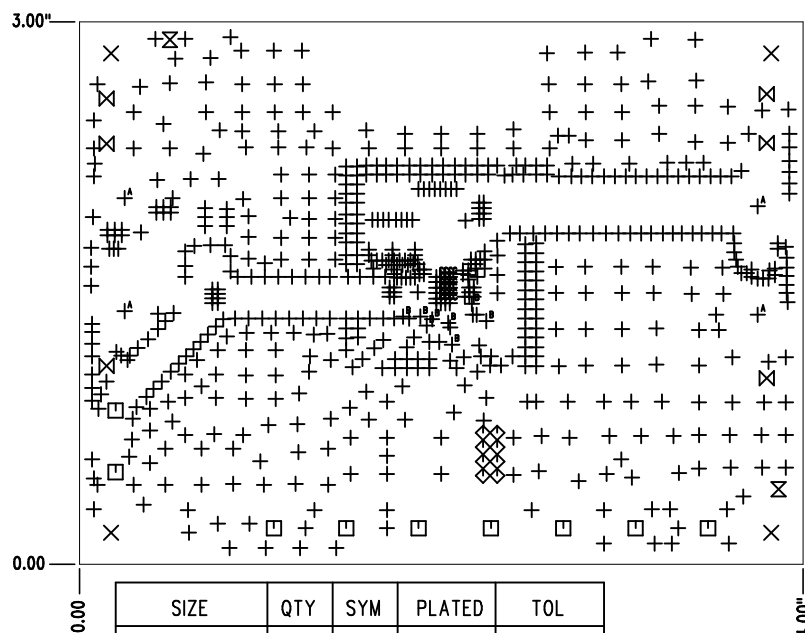
PCB DES.	J W
APP ENG.	X H



TITLE: SCHEMATIC  
65V, 8A HIGH EFFICIENCY SYNCHRONOUS  
STEP-DOWN SILENT SWITCHER 2

IC NO. LT8646SA  
SKU NO. EVAL-LT8646SA-AZ  
SCHEMATIC NO. AND REVISION:  
EVAL-LT8646SA-AZ\_REV 1

SIZE: N/A  
DATE: Friday, May 12, 2023  
SHEET 1 OF 1



SIZE	QTY	SYM	PLATED	TOL
0.01	636	+	YES	+/-0.003
0.187	4	×	NO	+/-0.003
0.094	9	□	YES	+/-0.003
0.035	8	◇	YES	+/-0.003
0.07	2	⊗	NO	+/-0.003
0.065	6	⊗	YES	+/-0.003
0.215	4	+ <sup>A</sup>	YES	+/-0.003
0.006	8	+ <sup>B</sup>	YES	+/-0.003
0.012	24	+ <sup>C</sup>	YES	+/-0.003

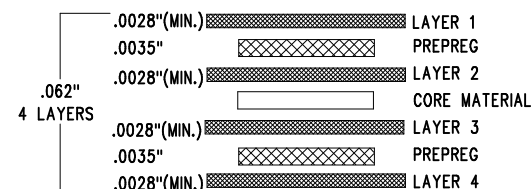
**ADDITIONAL REQUIREMENT FOR PROTOTYPE FAB ONLY:**

1. OUTGOING INSPECTION REPORT (BASED ON ACTUAL MEASUREMENTS AND CROSS SECTION).

**ADDITIONAL REQUIREMENTS FOR PRODUCTION FAB ONLY:**

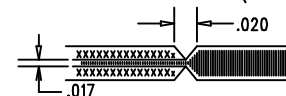
1. PROVIDE COMPLIANCE CERTIFICATES FOR RoHS, REACH AND CONFLICT-FREE MINERALS.
2. SOLDERABILITY BOARD WITH TEST RESULTS.
3. OUTGOING INSPECTION REPORT (BASED ON ACTUAL MEASUREMENTS AND CROSS SECTION).
4. VACUUM PACKED WITH DESICCANT.
5. FULL PANEL WITH NO REJECT.

## LAYER STRUCTURE

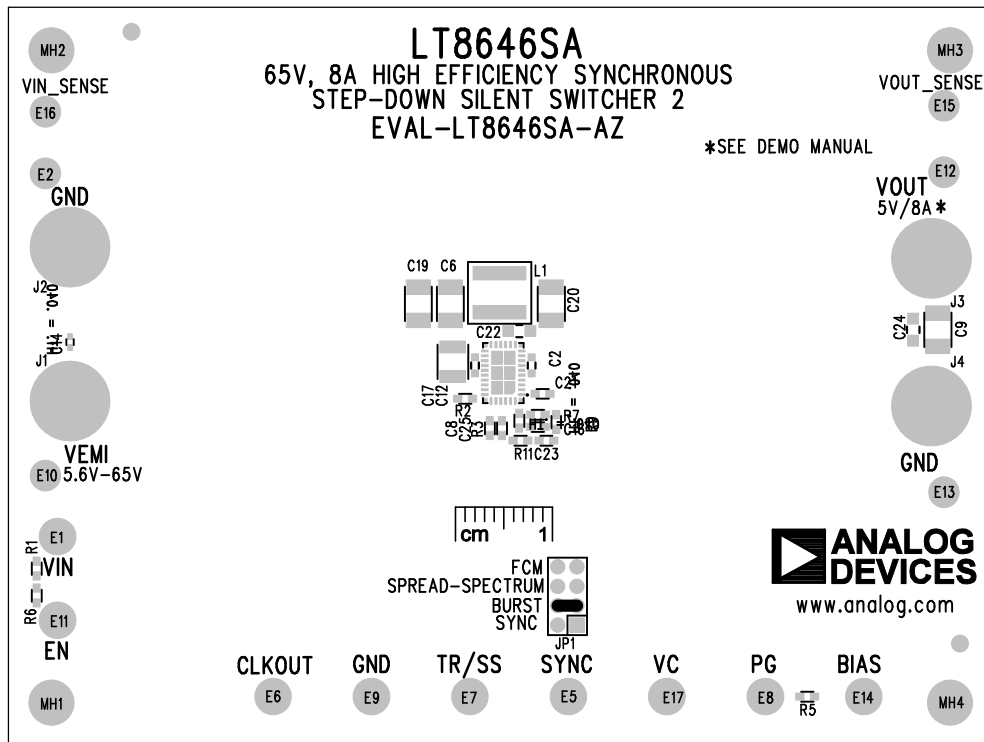


## NOTES: UNLESS OTHERWISE SPECIFIED

1. FAB PER IPC-A-600.
2. MATERIAL: -LEAD FREE ASSEMBLY COMPLIANT, ISOLA FR-370HR OR EQUIVALENT.  
-FINISHED THICKNESS TO BE 0.062 +/- .005  
-TOTAL OF 4 LAYERS WITH 2 OZ. CU ON ALL LAYERS.  
-FLAMMABILITY RATING: 94 V-0 MINIMUM.
3. SIZE: CUT TO DIMENSIONS AND TOLERANCES SHOWN.  
0.00" ARE PRIMARY DATUMS.
4. DRILLING: -DRILL HOLES PER SCHEDULE. PLATE THROUGH HOLES WITH COPPER, 0.001 THICK MIN.  
-ALL HOLE SIZES ARE SPECIFIED AFTER PLATING.  
-HOLE LOCATION TOLERANCES ARE +/-0.003 IN RELATION TO CENTER
5. FINISH: -SMOBC USING LPI BOTH SIDES, COLOR GREEN(GLOSS).  
-GOLD IMMERSION BOTH SIDES.  
-FOR SILKSCREENS: USE WHITE NON-CONDUCTIVE INK.
6. DO NOT ALTER ARTWORK e.g. TO ADD LOGO OR DATE CODE.  
PAD SIZE CAN BE MODIFIED TO MEET END FINISH.
7. PCBs ARE TO BE RoHS COMPLIANT.
8. SCORING FOR PANELIZED PCB (PRODUCTION FAB ONLY):

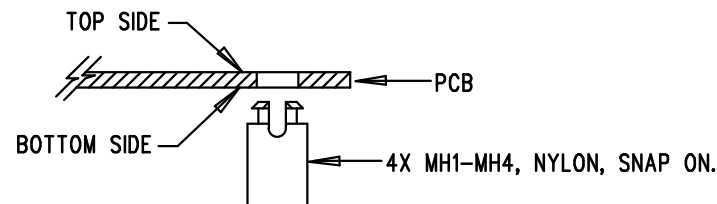


UNLESS OTHERWISE SPECIFIED		<b>ANALOG DEVICES</b> www.analog.com	
DIMENSIONS ARE IN INCHES		TITLE: FABRICATION DRAWING	
TOLERANCES: 0.XX = ± 0.01 0.XXX = ± 0.005		65V, 8A HIGH EFFICIENCY SYNCHRONOUS STEP-DOWN SILENT SWITCHER 2	
INTERPRET DIM AND TOL PER ASME Y14.5M-1994 THIRD ANGLE PROJECTION		SIZE N/A	IC NO. LT8646SA EVAL-LT8646SA-AZ
		FILENAME: EVAL-LT8646SA-1.PCB	REV 1 SHT 1 OF 1



## NOTES: UNLESS OTHERWISE SPECIFIED

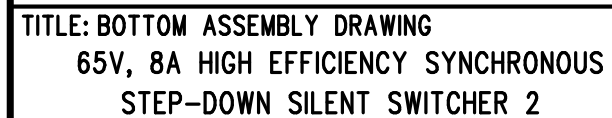
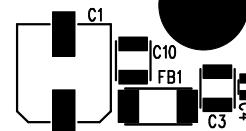
1. WORKMANSHIP SHALL BE IN ACCORDANCE WITH IPC-A-610.
2. ASSEMBLY PROCESS SHALL INCLUDE: REFLOW SOLDER TOP SIDE SMD. MAXIMUM SOLDER TEMPERATURE IS 240 DEGREES CELSIUS.
3. PARTS TO OMIT WILL BE SPECIFIED ON THE BILL OF MATERIALS. LOCATIONS OF OMITTED PARTS SHALL BE FREE OF SOLDER. MASK THE SOLDER STENCIL WHERE SMT PARTS ARE OMITTED.
4. INSTALL SHUNTS AS SHOWN ON ASSY DRAWING.
5. DEPANELIZE BOARDS AFTER ASSEMBLY AND ROUTE-OUT THE BREAKOUT TABS ON FOUR SIDES OF THE BOARD EDGE.
6. DO NOT APPLY ANY KIND OF ASSEMBLY STAMP OR QA STAMP TO ANY BOARD.
7. INSTALL 4 STANDOFFS AS SHOWN BELOW:

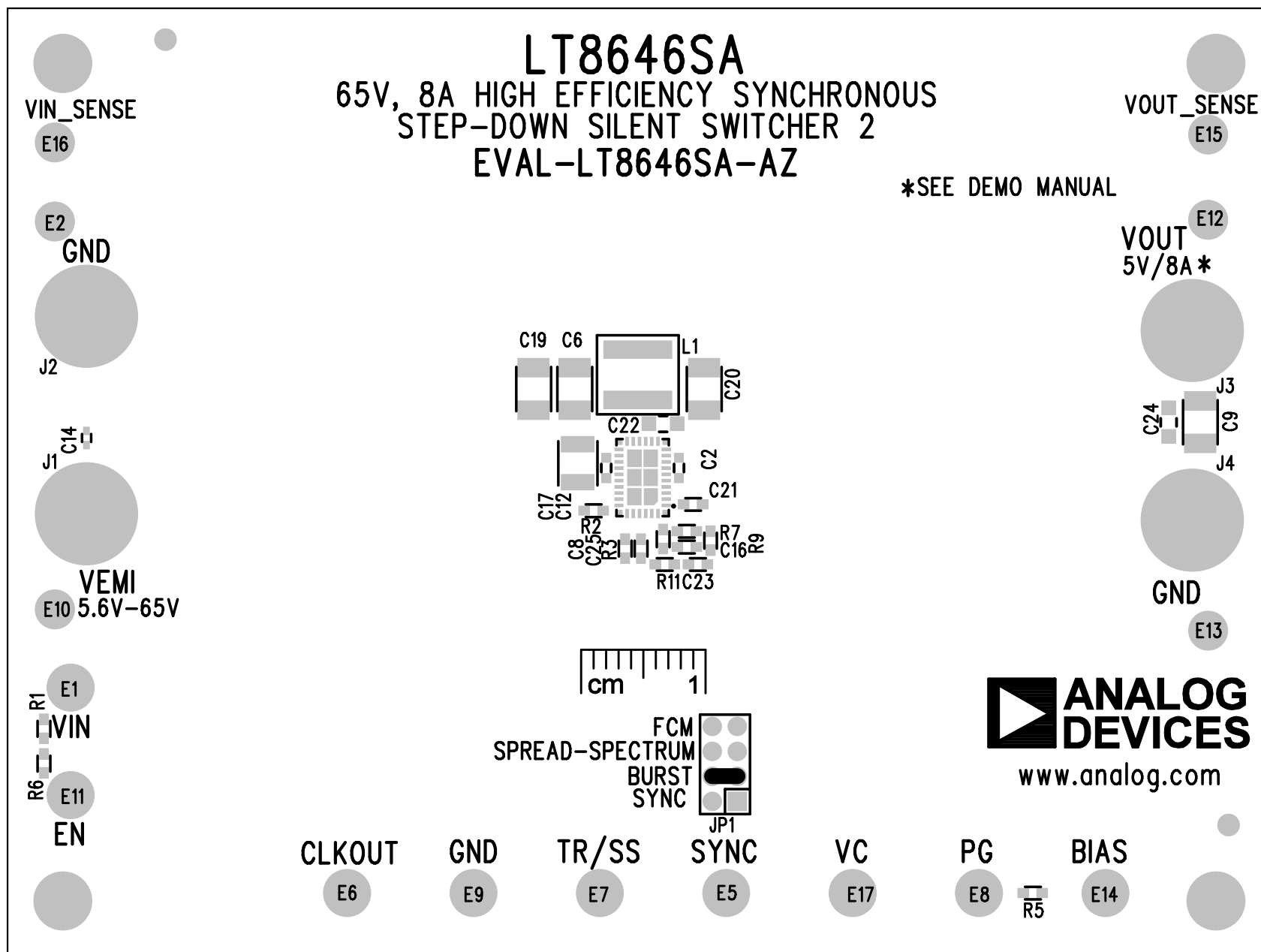


TITLE: TOP ASSEMBLY DRAWING  
65V, 8A HIGH EFFICIENCY SYNCHRONOUS  
STEP-DOWN SILENT SWITCHER 2

SIZE N/A	IC NO. LT8646SA EVAL-LT8646SA-AZ	REV. 1
-------------	--	-----------

FILENAME: EVAL-LT8646SA-1.PCB	SHT 1 OF 2
-------------------------------	------------



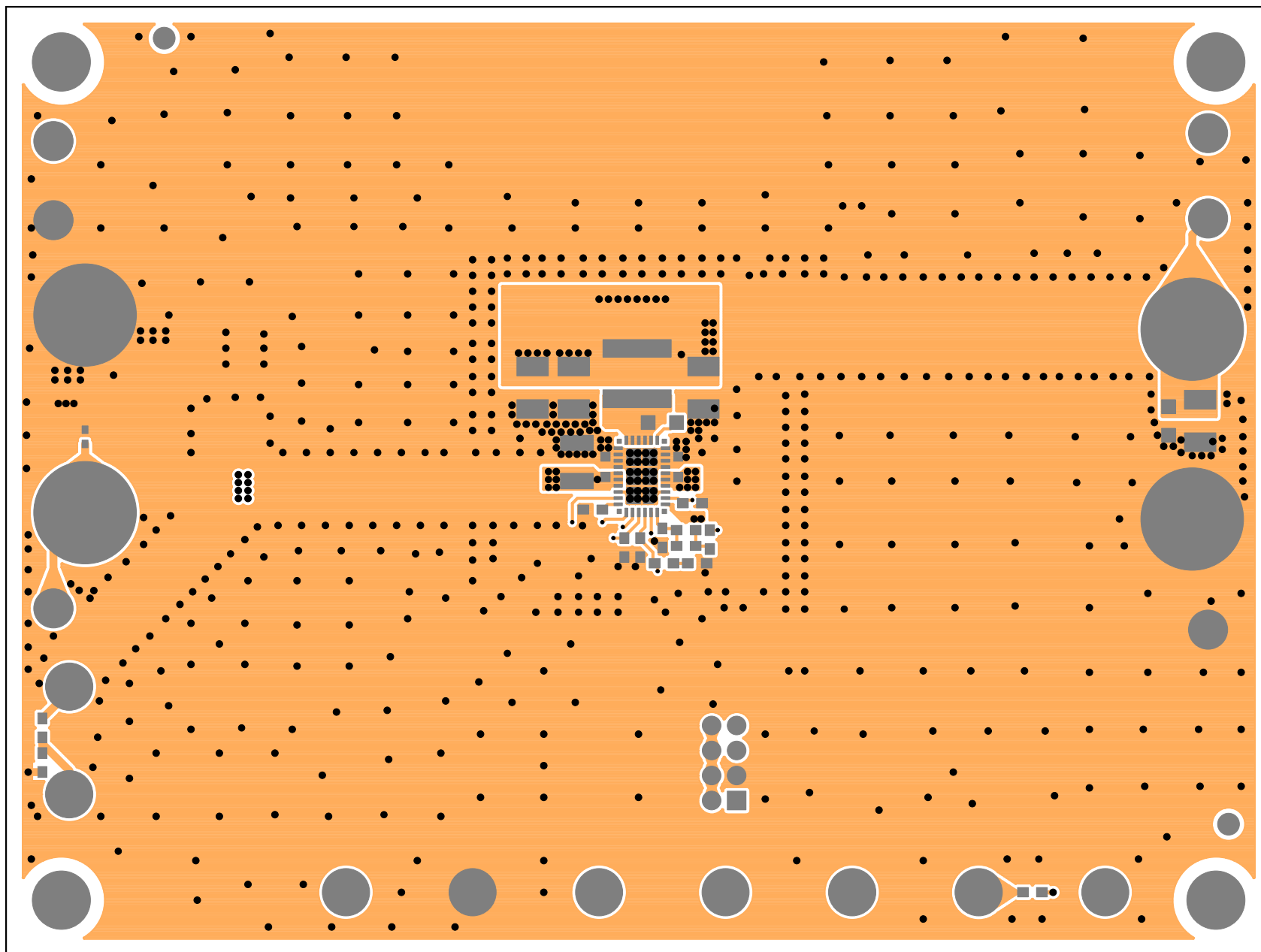


TOP SILKSCREEN

ANALOG DEVICES

DATE: 5-12-2023

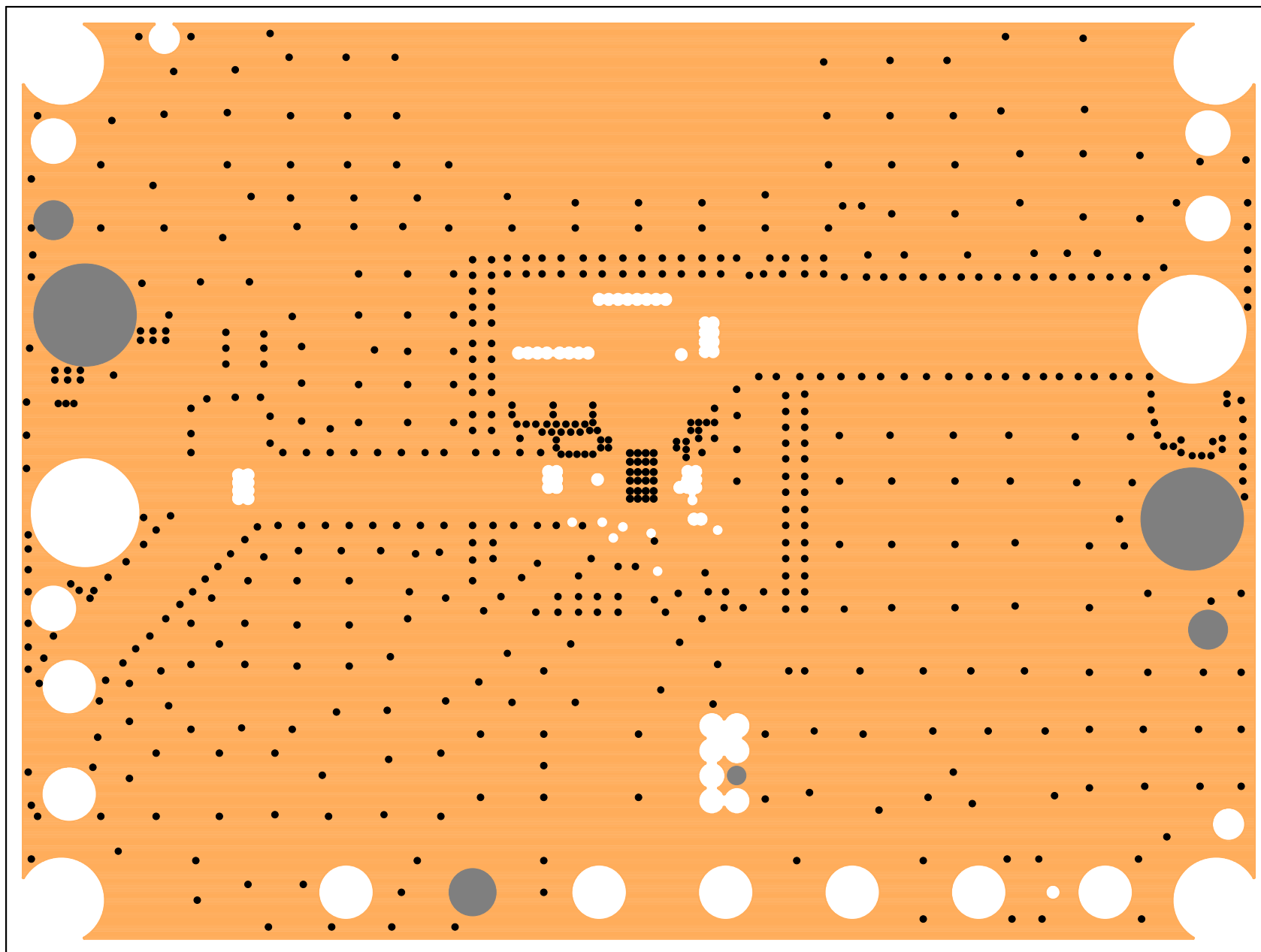
EVAL-LT8646SA-AZ, REV 1



LAYER 1 – TOP LAYER

ANALOG DEVICES      DATE: 5-12-2023

EVAL-LT8646SA-AZ, REV 1



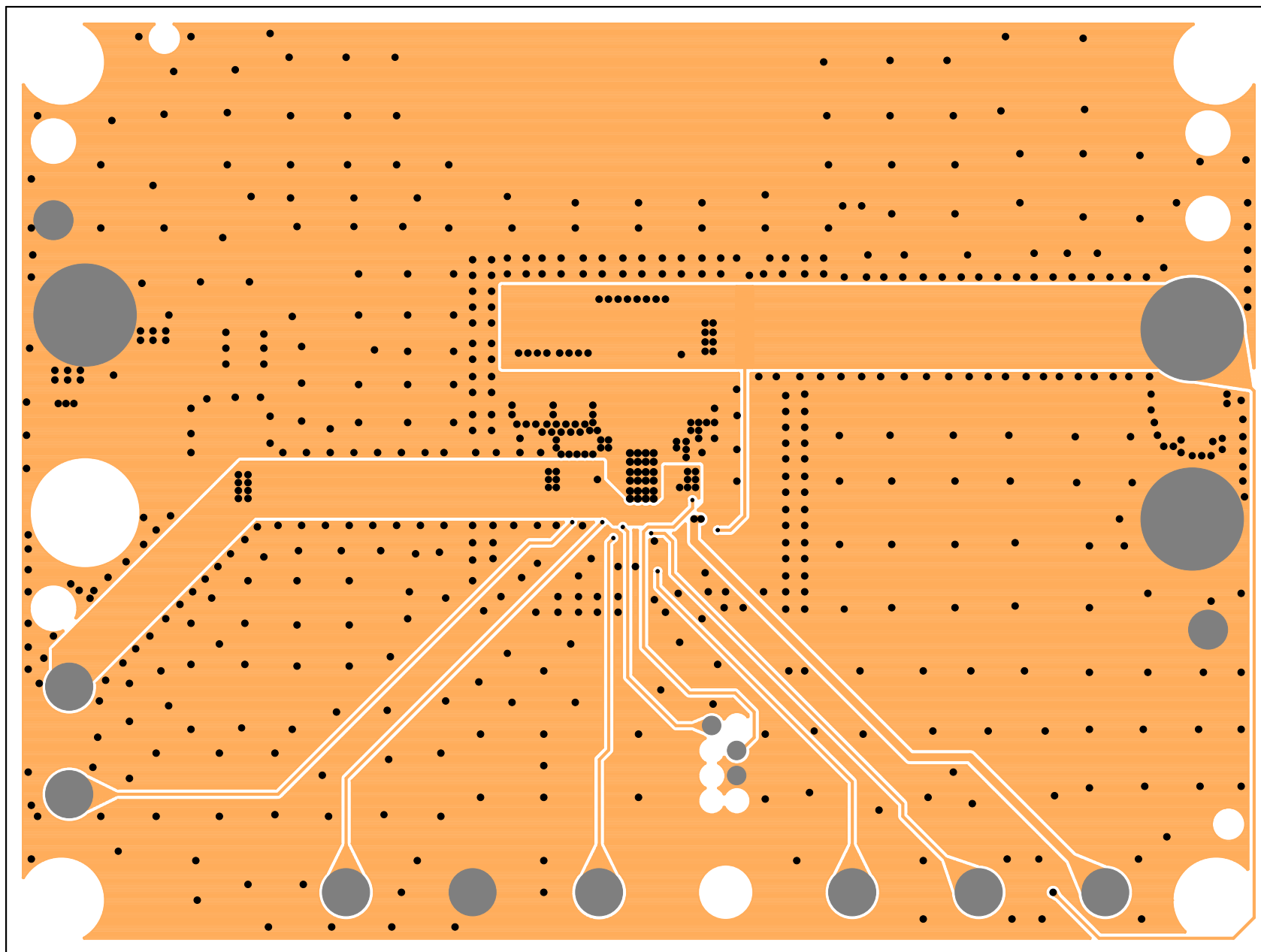
LAYER 2 – GND PLANE

ANALOG DEVICES

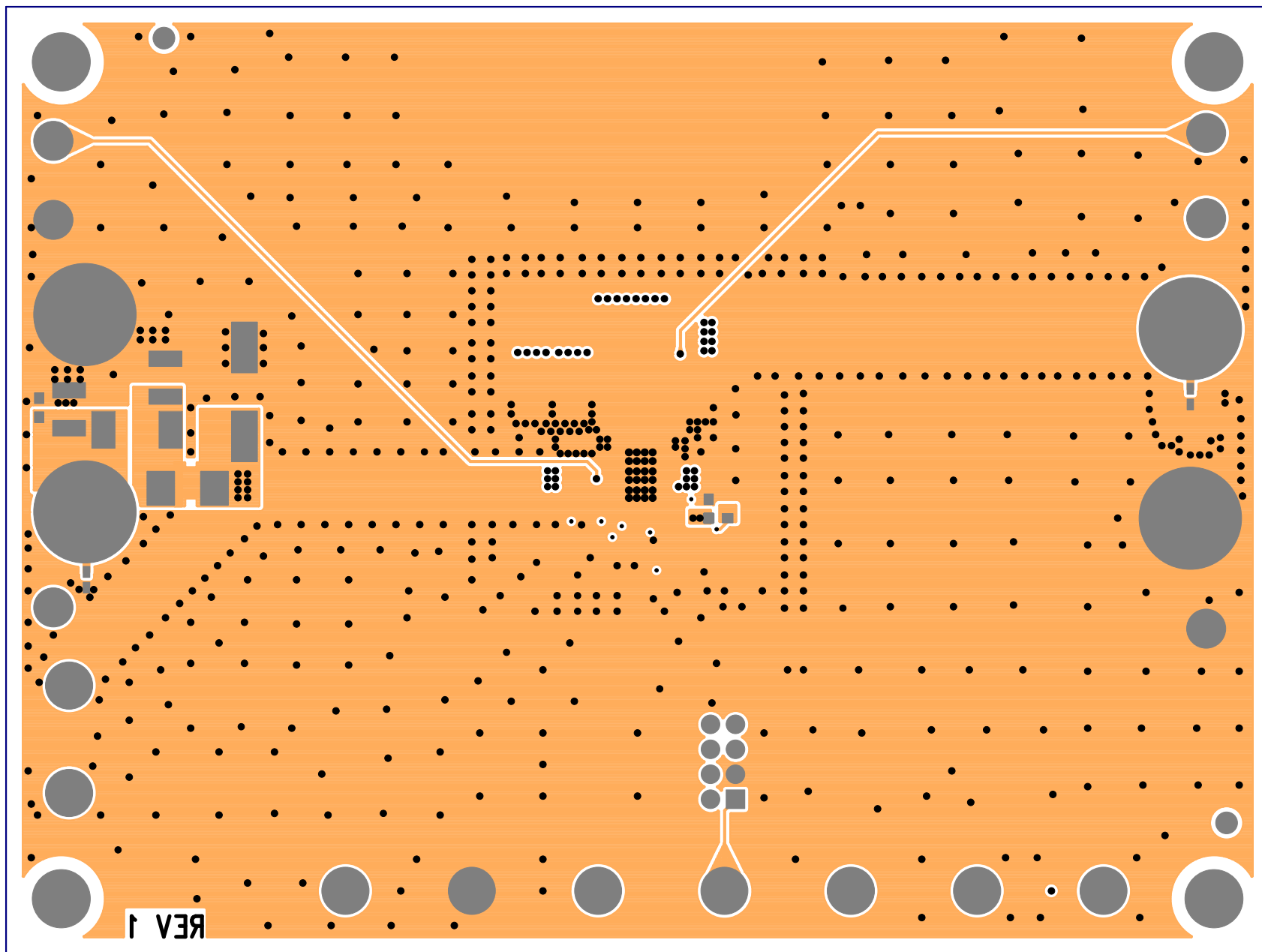
DATE: 5-12-2023

EVAL-LT8646SA-AZ, REV 1

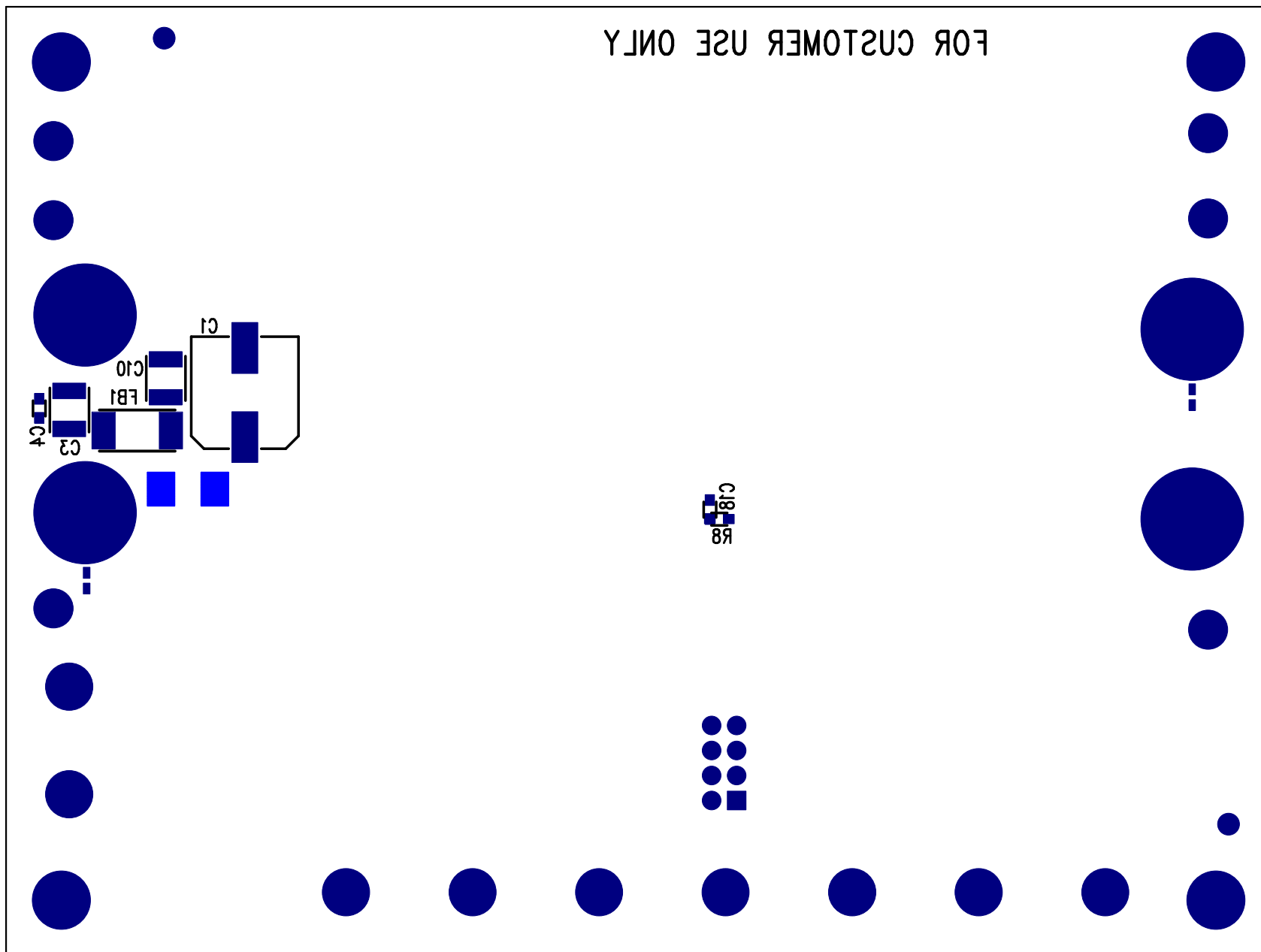




LAYER 3 – GND PLANE/SIGNAL  
ANALOG DEVICES      DATE: 5-12-2023  
EVAL-LT8646SA-AZ, REV 1



LAYER 4 – BOTTOM LAYER  
ANALOG DEVICES      DATE: 5-12-2023  
EVAL-LT8646SA-AZ, REV 1

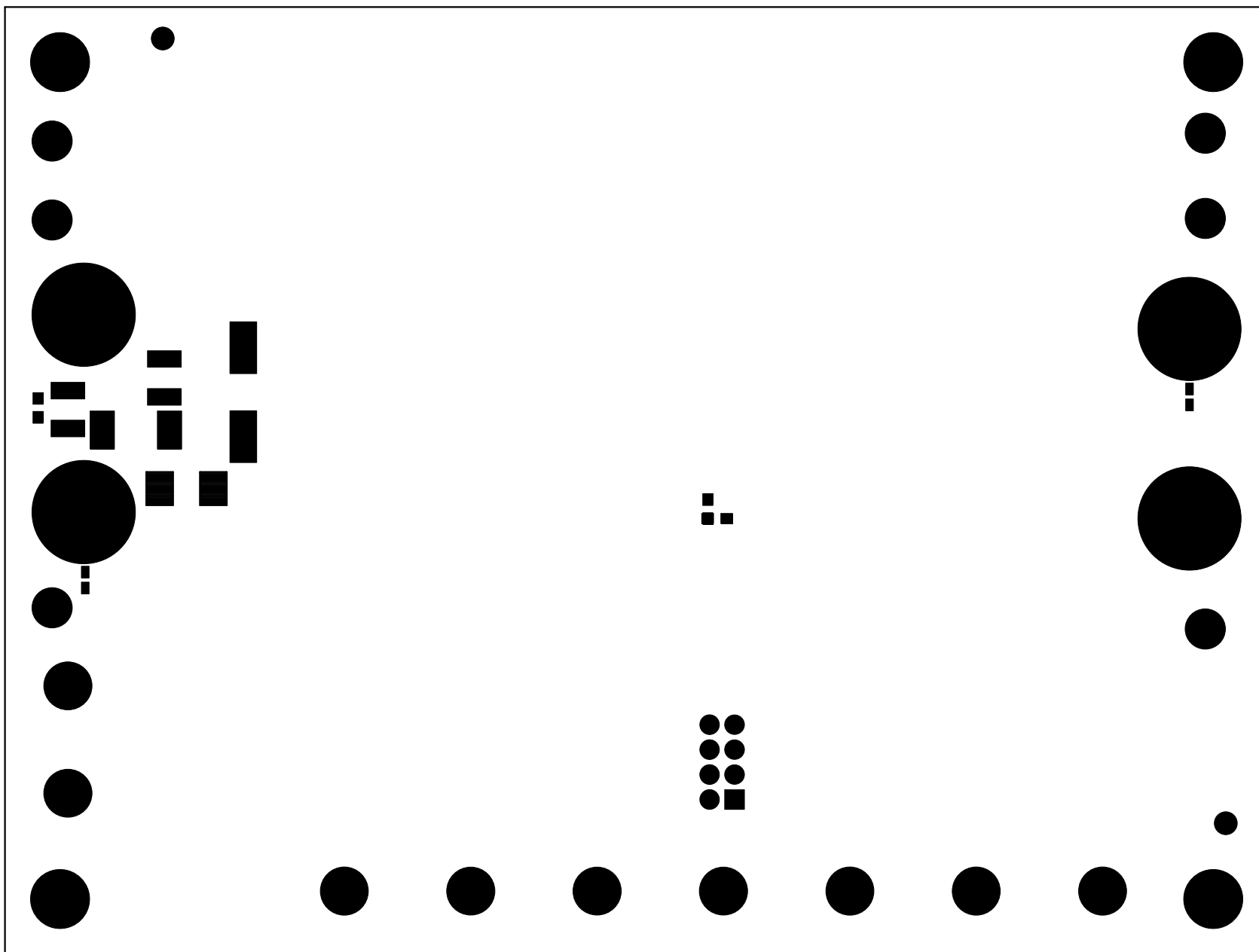


BOTTOM SILKSCREEN

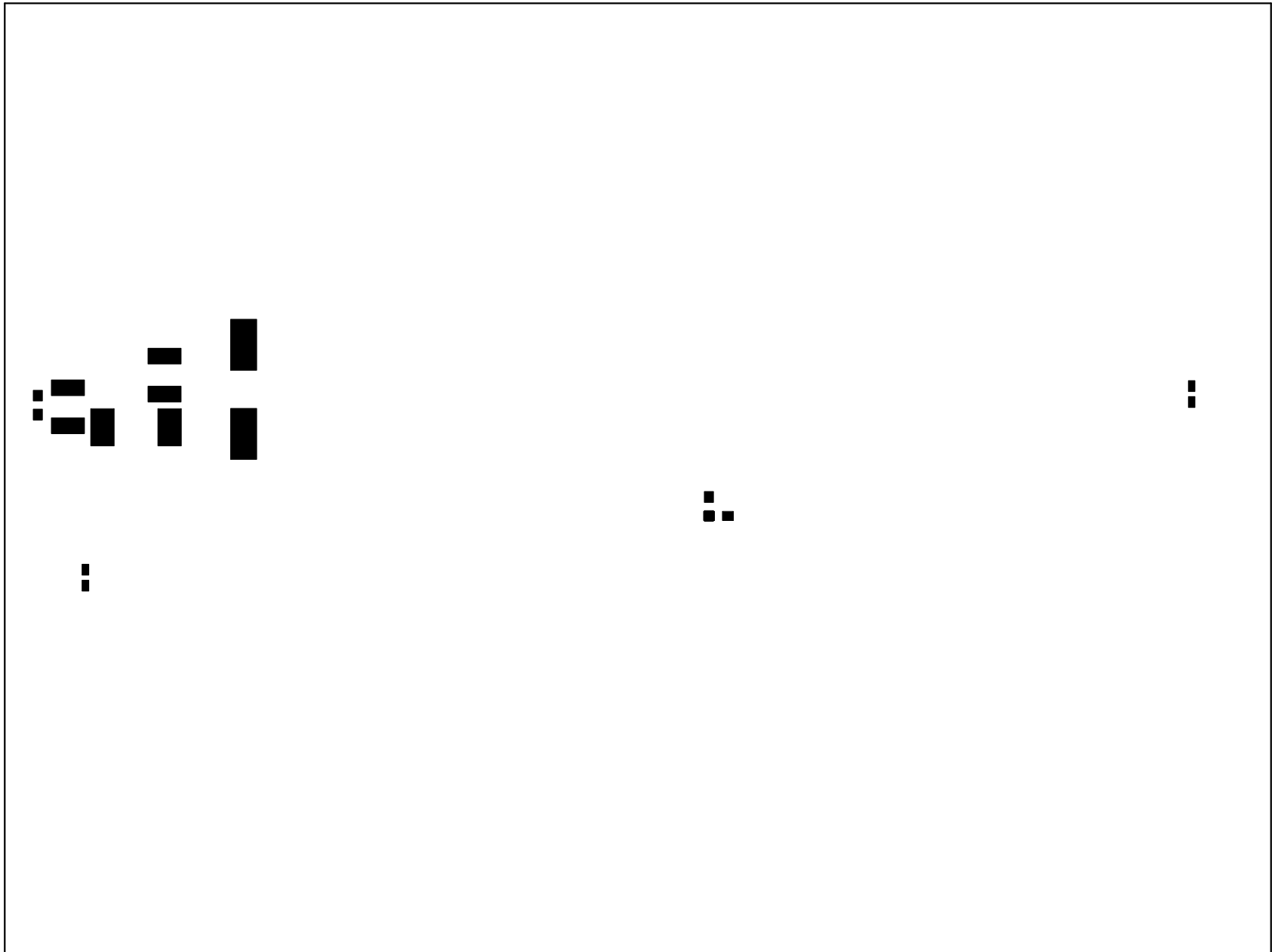
ANALOG DEVICES

DATE: 5-12-2023

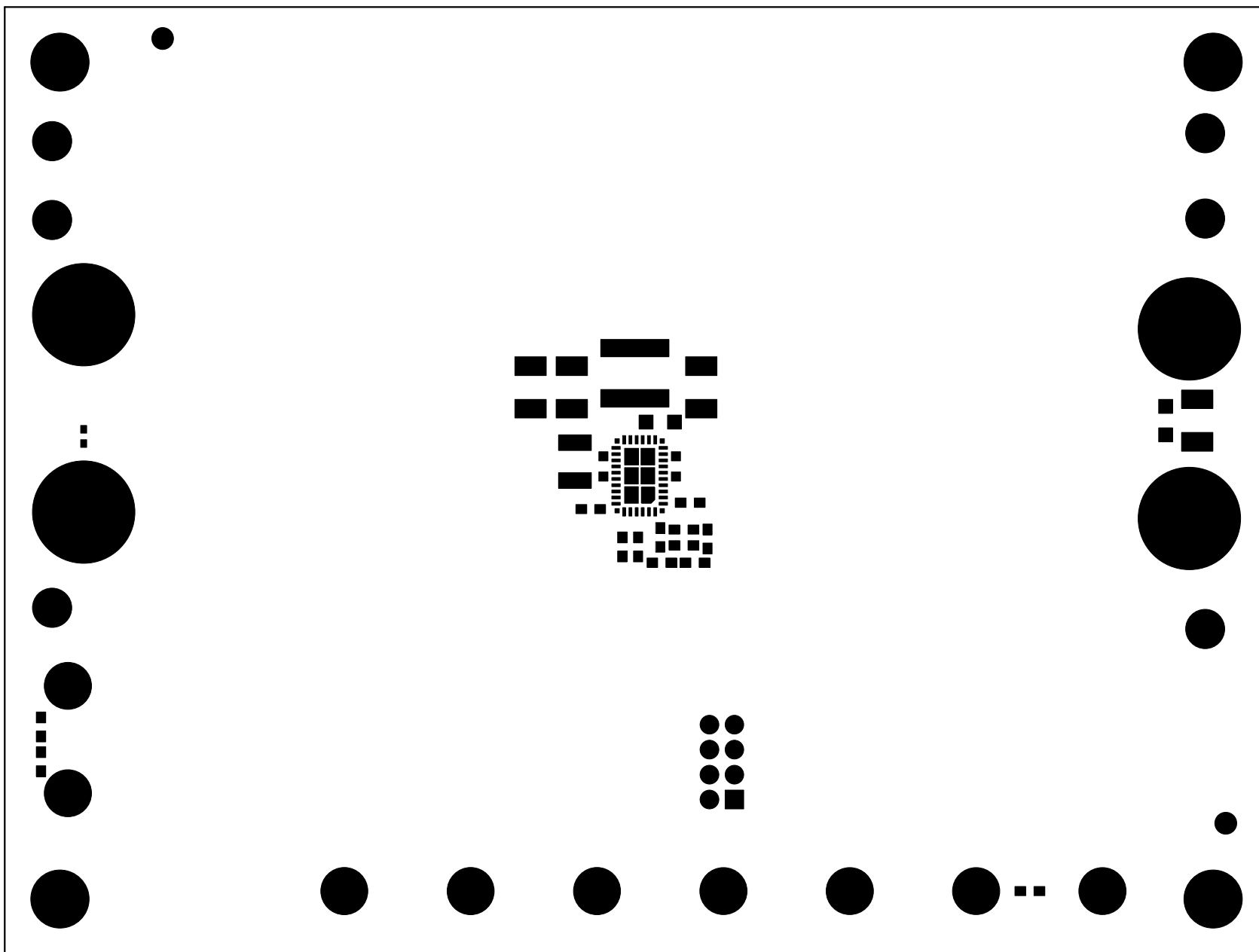
EVAL-LT8646SA-AZ, REV 1



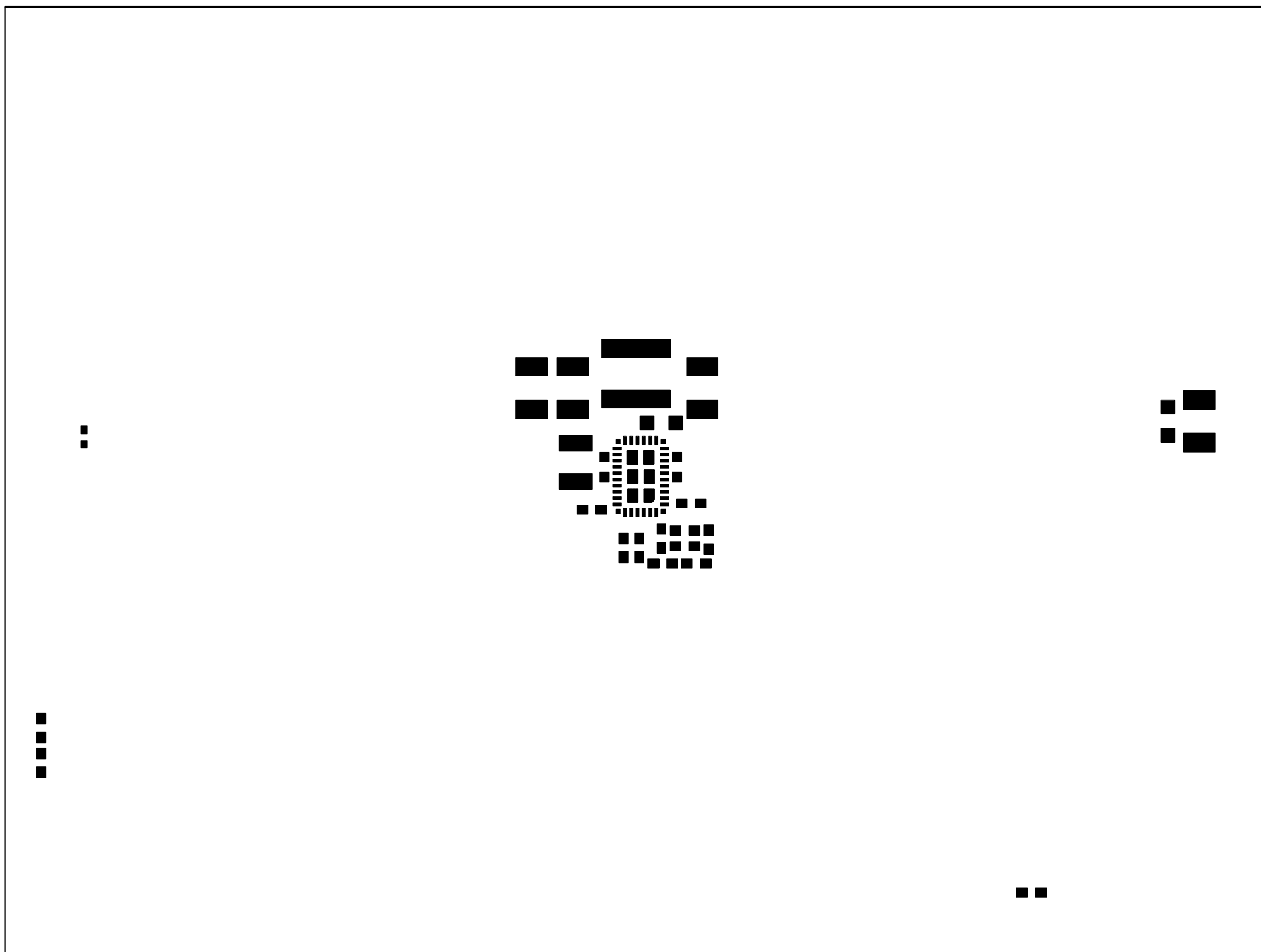
BOTTOM SOLDER MASK  
ANALOG DEVICES      DATE: 5-12-2023  
EVAL-LT8646SA-AZ, REV 1



BOTTOM SOLDER PASTE  
ANALOG DEVICES      DATE: 5-12-2023  
EVAL-LT8646SA-AZ, REV 1



TOP SOLDER MASK  
ANALOG DEVICES      DATE: 5-12-2023  
EVAL-LT8646SA-AZ, REV 1



TOP SOLDER PASTE  
ANALOG DEVICES      DATE: 5-12-2023  
EVAL-LT8646SA-AZ, REV 1