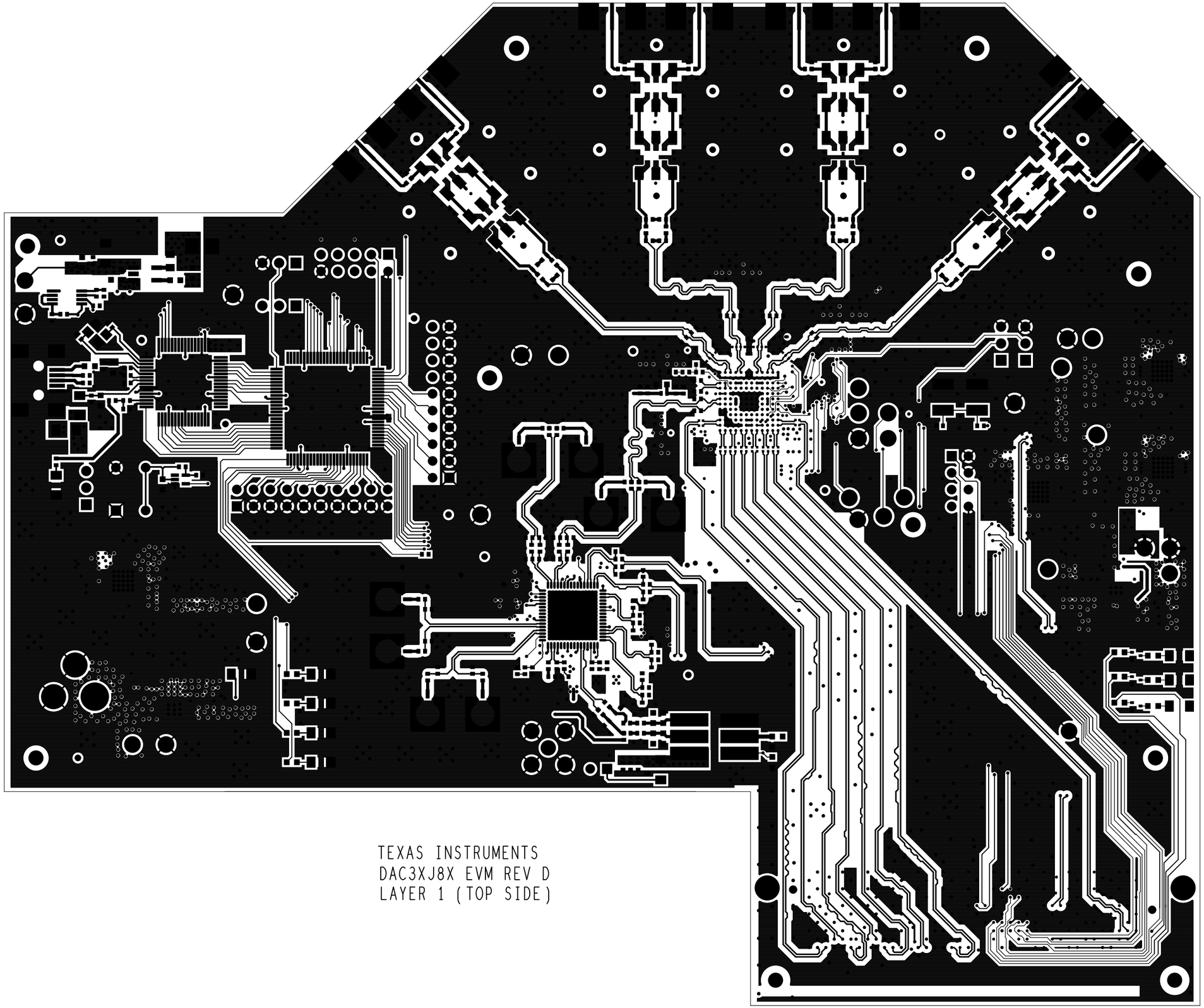
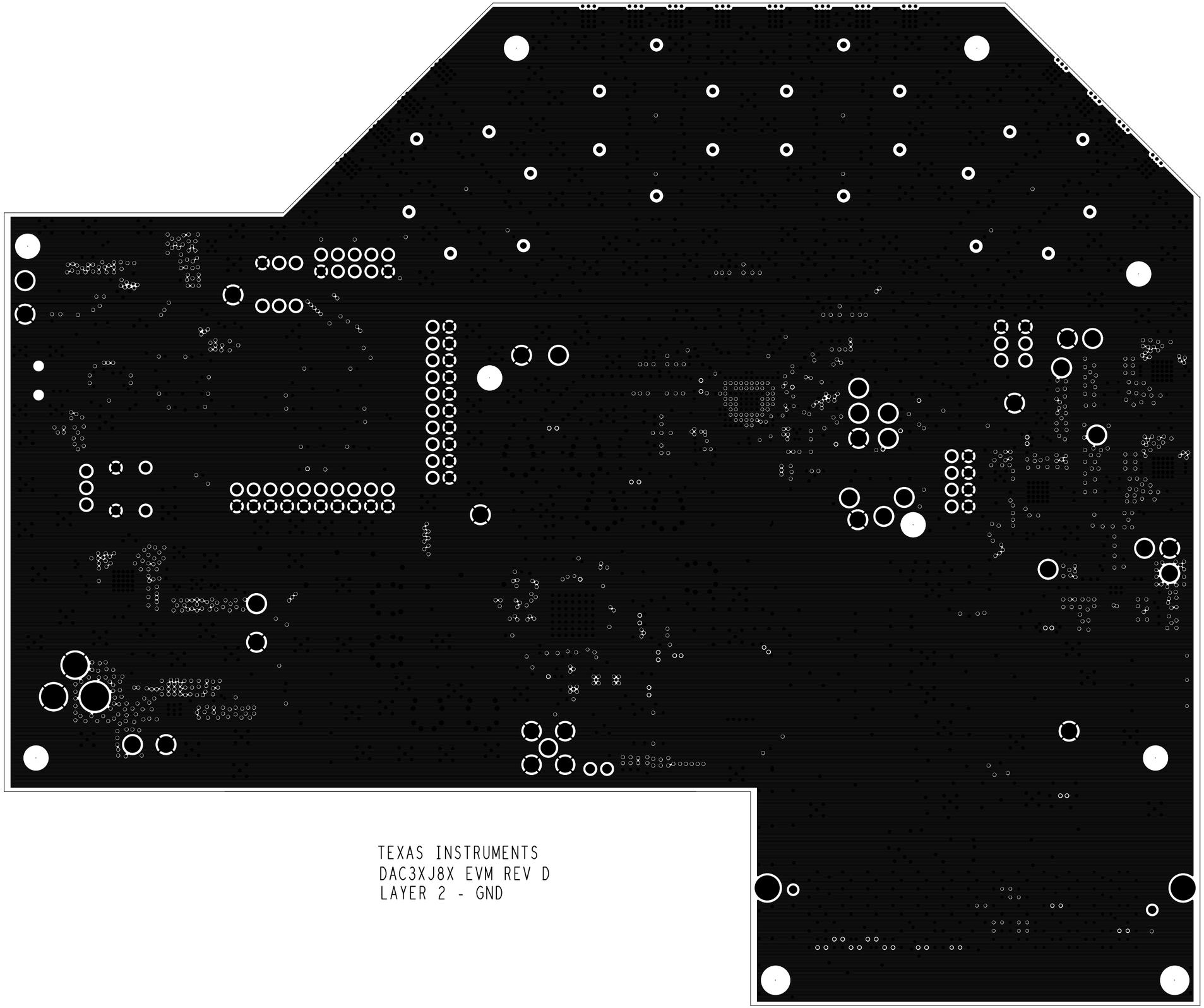
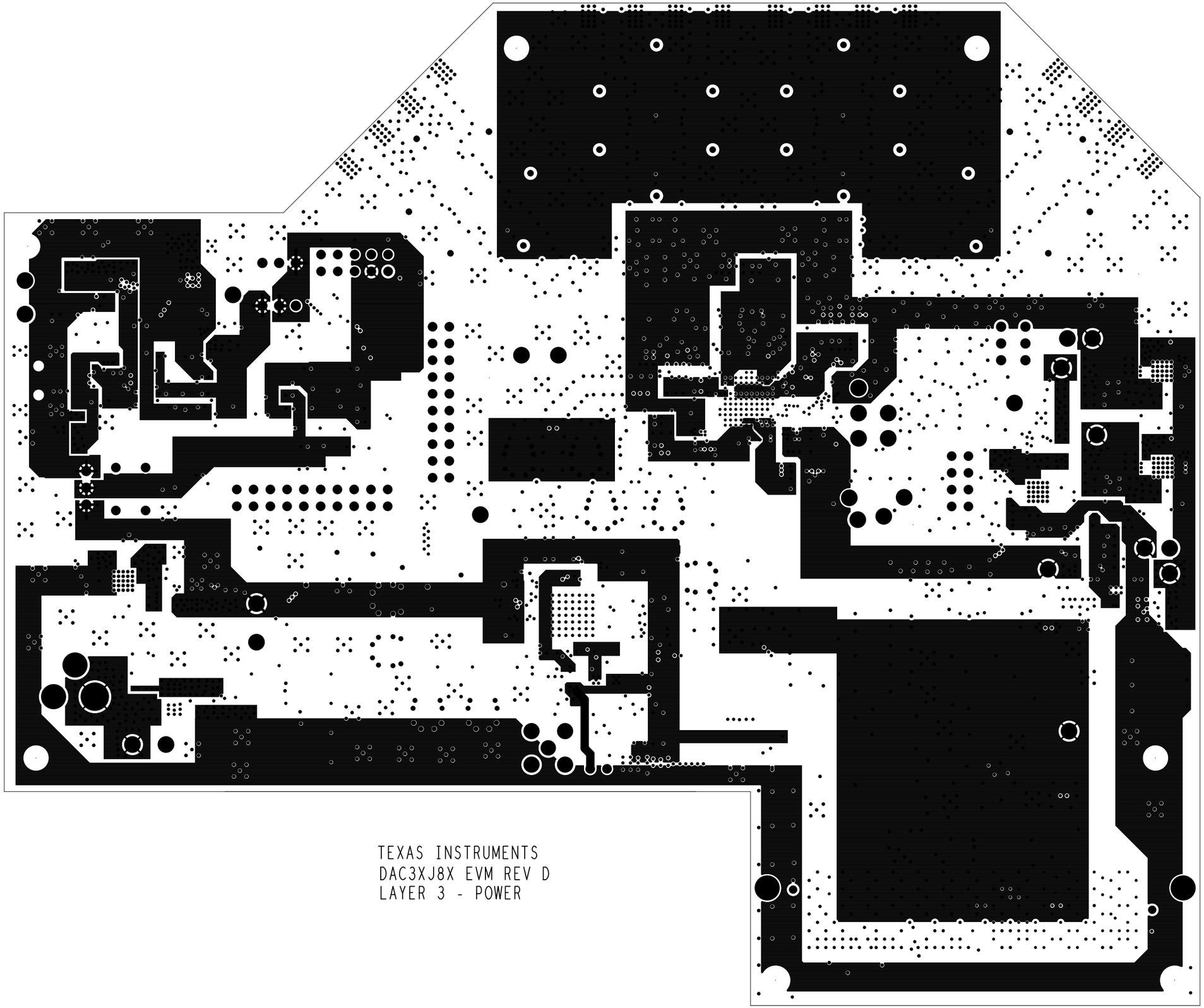


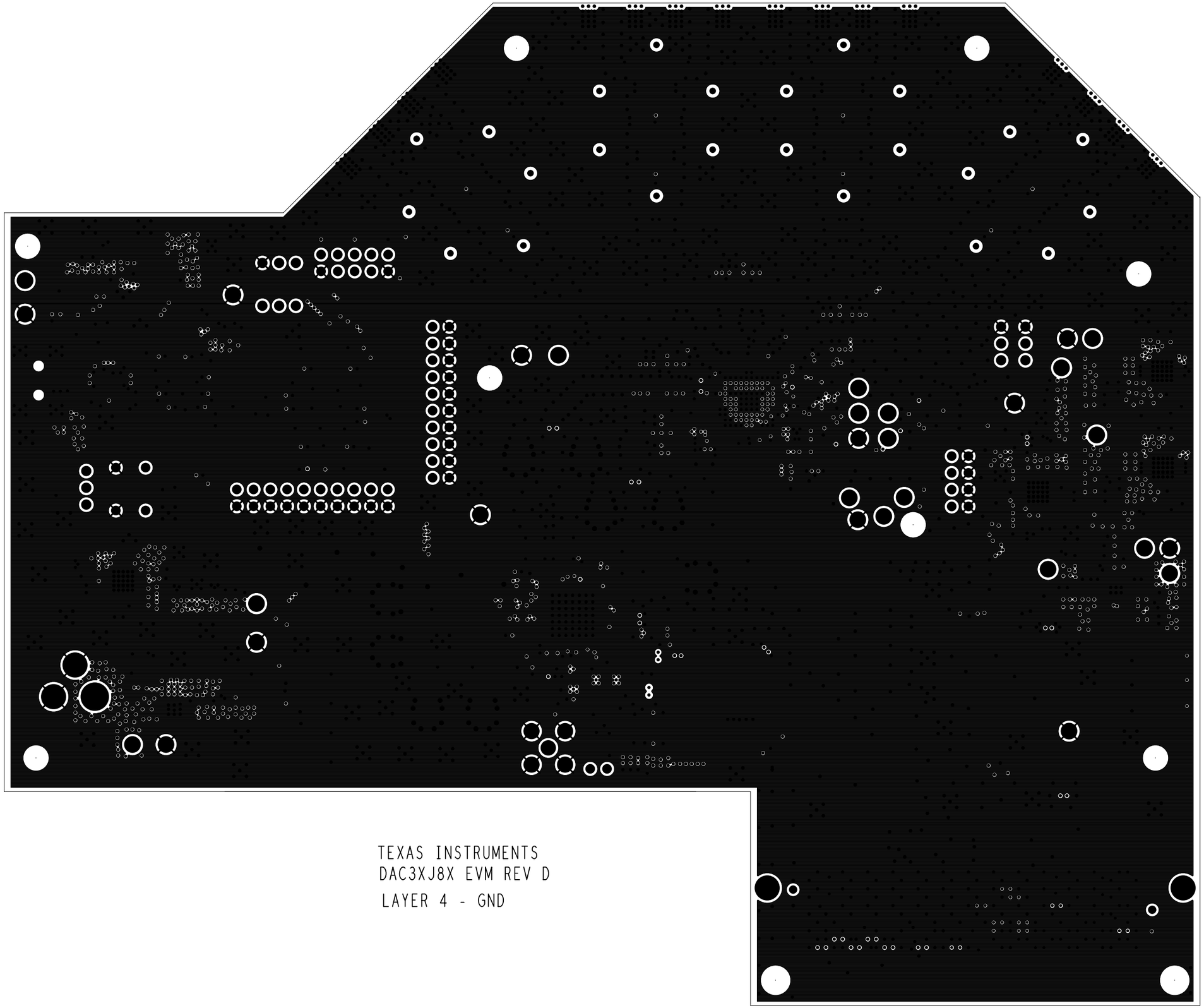
TEXAS INSTRUMENTS
DAC3XJ8X EVM REV D
LAYER 1 (TOP SIDE)



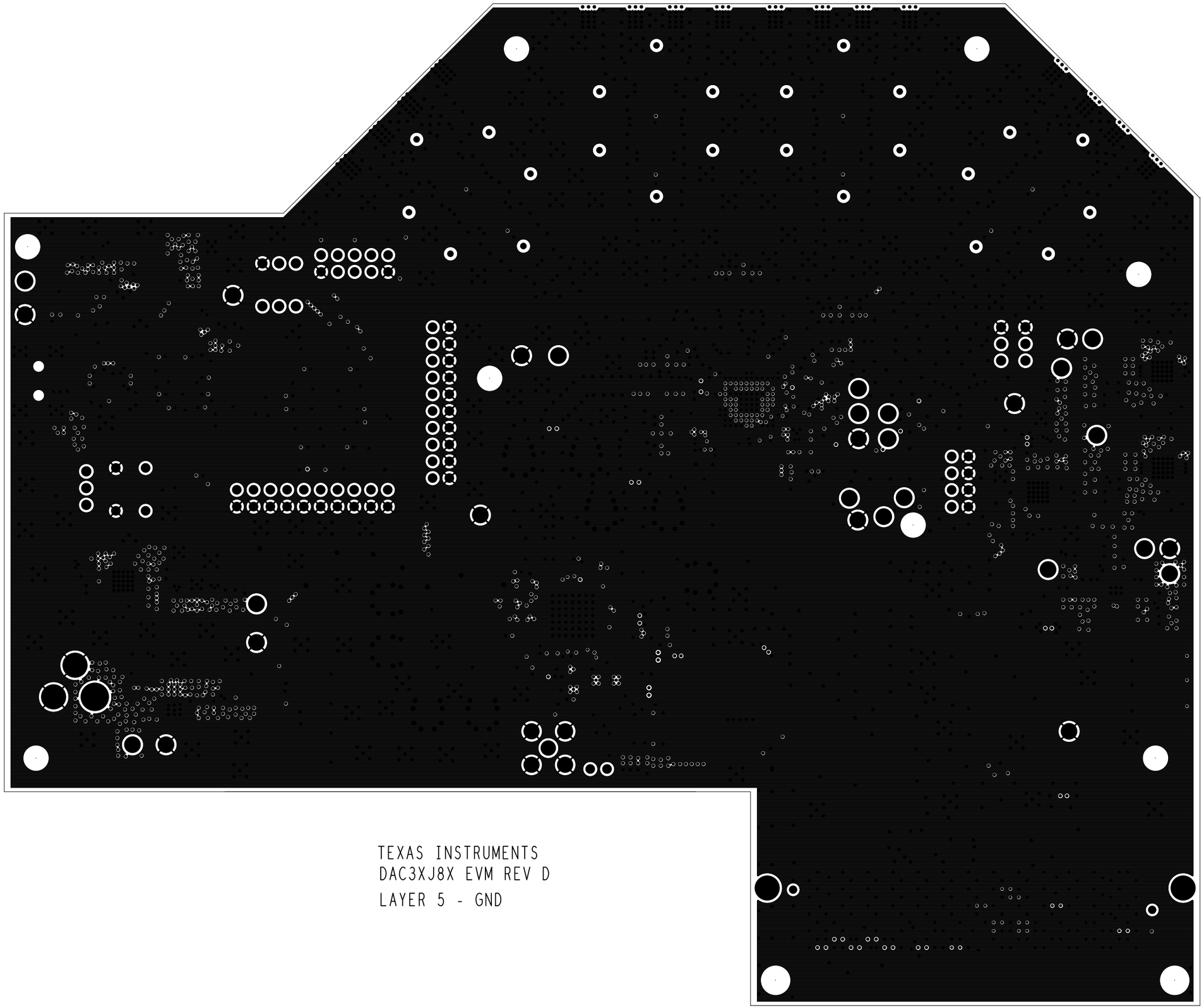
TEXAS INSTRUMENTS
DAC3XJ8X EVM REV D
LAYER 2 - GND



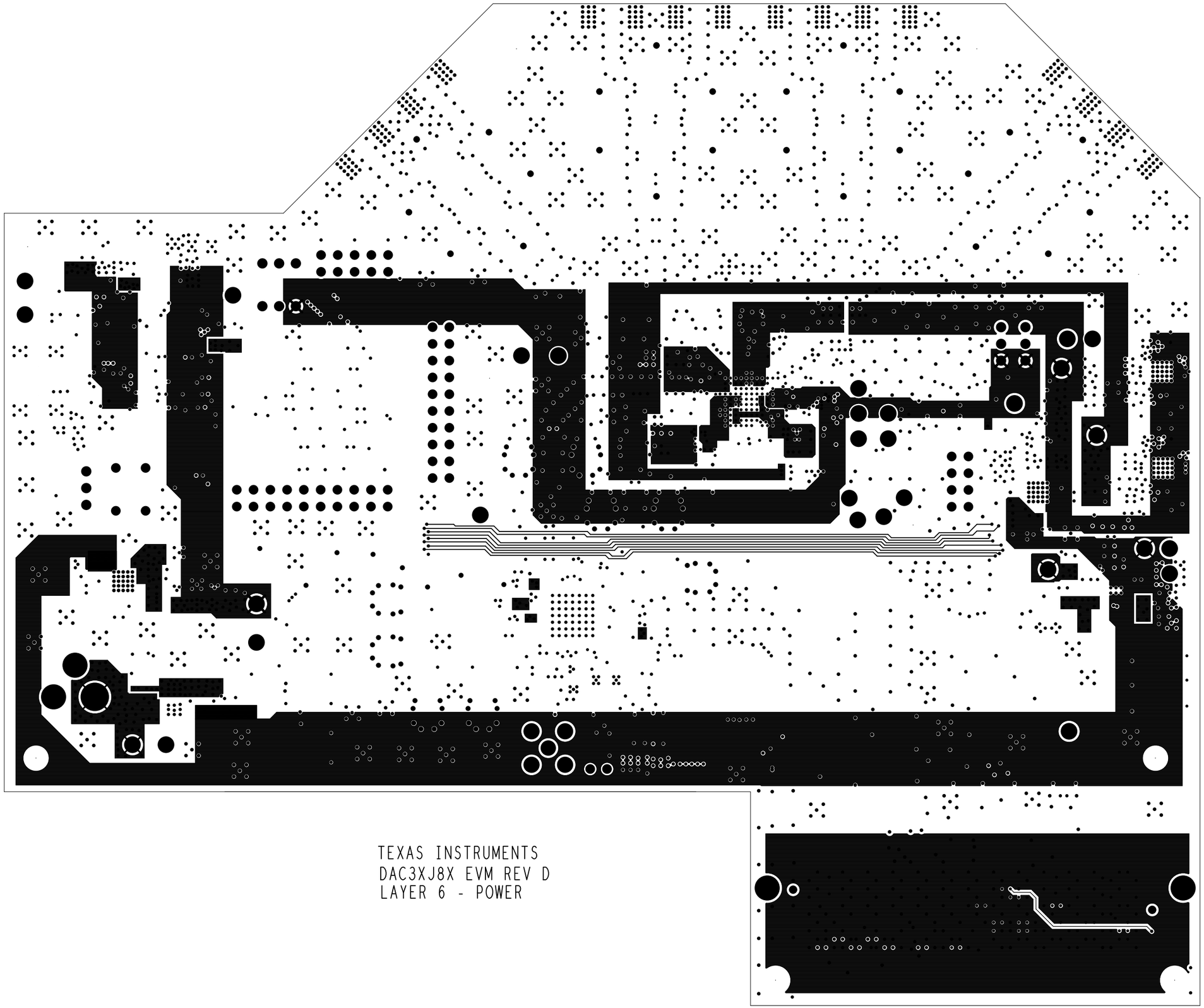
TEXAS INSTRUMENTS
DAC3XJ8X EVM REV D
LAYER 3 - POWER



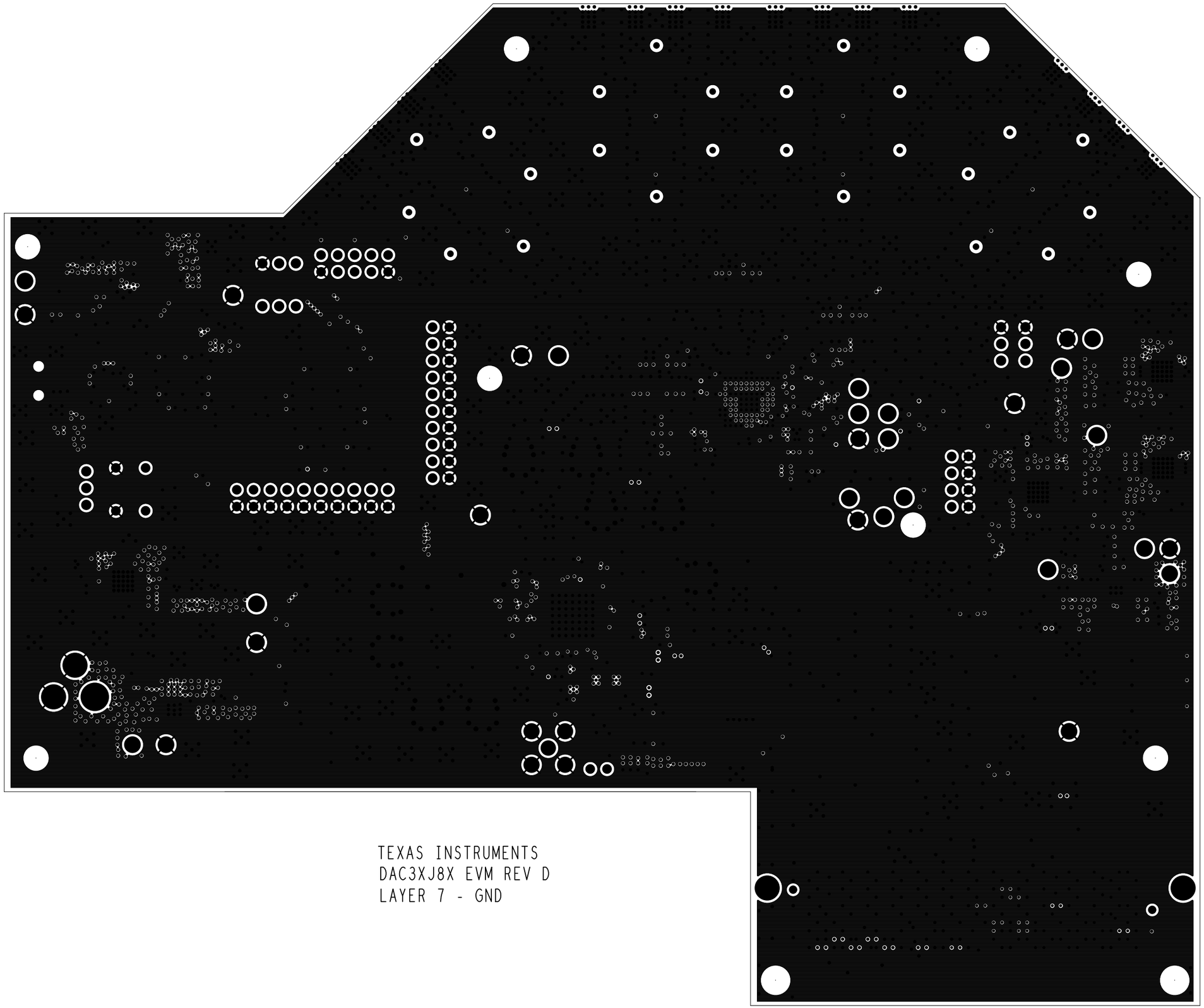
TEXAS INSTRUMENTS
DAC3XJ8X EVM REV D
LAYER 4 - GND



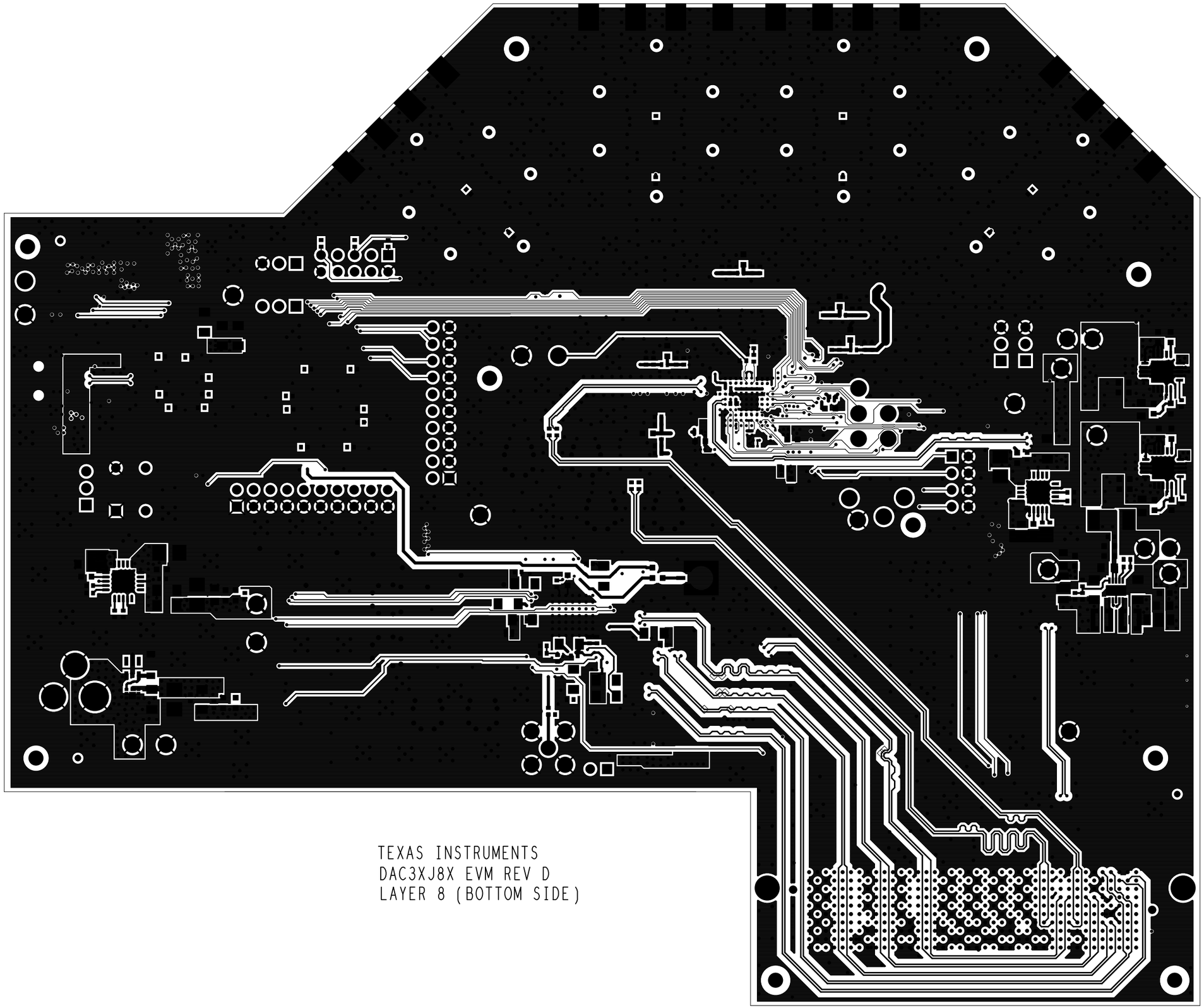
TEXAS INSTRUMENTS
DAC3XJ8X EVM REV D
LAYER 5 - GND



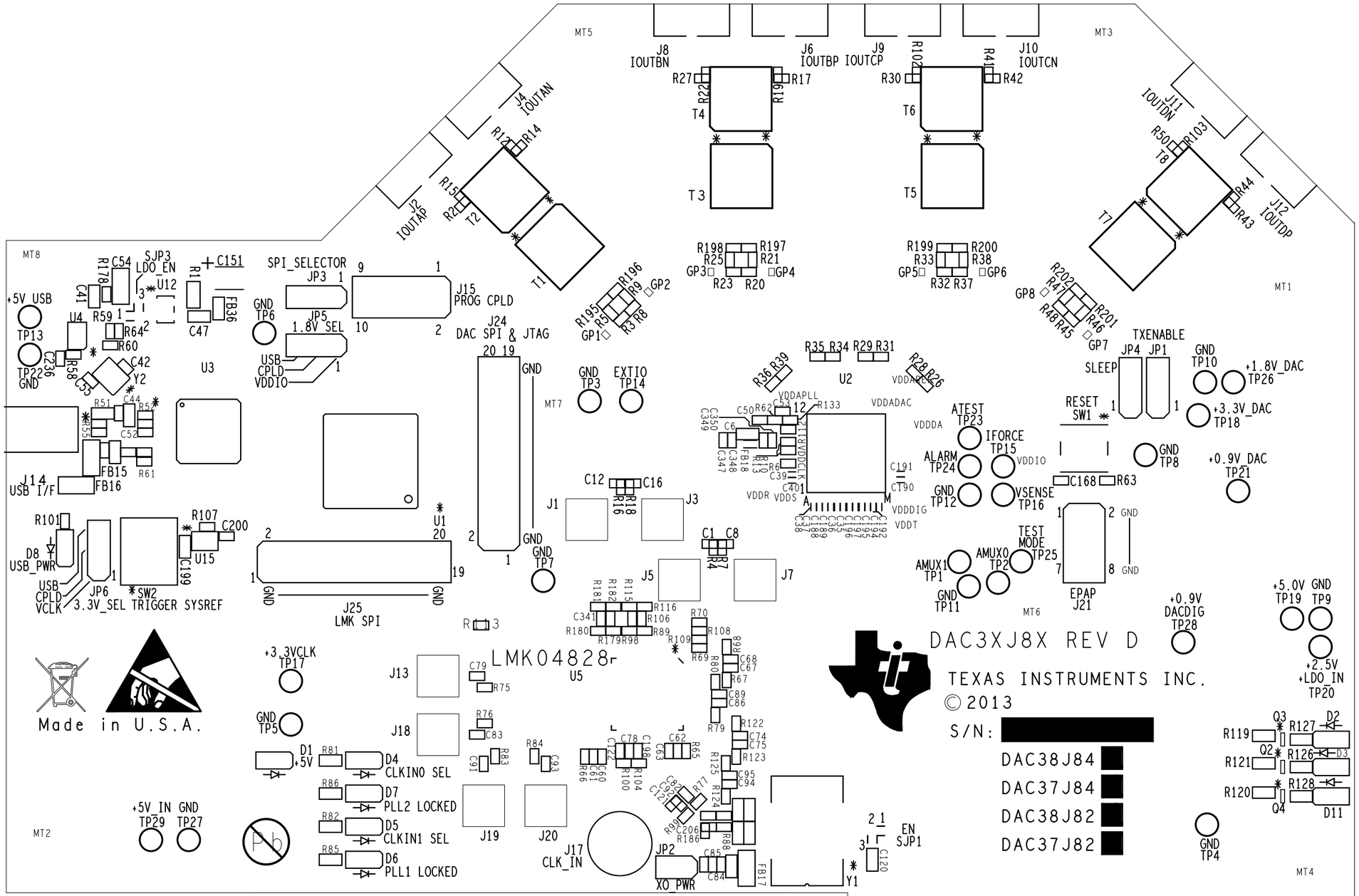
TEXAS INSTRUMENTS
DAC3XJ8X EVM REV D
LAYER 6 - POWER



TEXAS INSTRUMENTS
DAC3XJ8X EVM REV D
LAYER 7 - GND



TEXAS INSTRUMENTS
DAC3XJ8X EVM REV D
LAYER 8 (BOTTOM SIDE)


MT5
MT3
MT8
MT1
MT7
MT6
MT4
MT2
J8 IOUTBN
J6 IOUTBP
J9 IOUTCP
J10 IOUTCN
J4 IOUTAN
J2 IOUTAP
J11 IOUTDN
J12 IOUTDP
T1
T2
T3
T4
T5
T6
T7
T8
SJP3 LDO_EN
U12
U4
U3
U2
U1
U5
U15
SPI_SELECTOR JP3
JP5 1.8V SEL
J15 PROG CPLD
USB CPLD VDDIO
J24 DAC SPI & JTAG
GND TP3
EXTIO TP14
GND TP6
GND TP7
GND TP5
J14 USB I/F
D8 USB_PWR
JP6 3.3V_SEL
SW2 TRIGGER SYSREF
J25 LMK SPI
LMK04828
J1
J3
J5
J7
J13
J18
J19
J20
J17 CLK_IN
JP2 XO_PWR
Y1
EN SJP1
+3.3VCLK TP17
D1 +5V
D4 CLKIN0 SEL
D7 PLL2 LOCKED
D5 CLKIN1 SEL
D6 PLL1 LOCKED
+5V_IN TP29
GND TP27
+5V USB TP13
TP22 GND
VDDAPLL
VDDADAC
VDDA
VDDIO
VDDR
VDDS
VDDIGV
VDDT
ATEST TP23
IFORCE TP15
ALARM TP24
GND TP12
VSENSE TP16
TXENABLE
JP4 JP1
SLEEP
RESET SW1
GND TP10
+1.8V_DAC TP26
+3.3V_DAC TP18
GND TP8
+0.9V_DAC TP21
TEST MODE TP25
AMUX1 TP1
AMUX0 TP2
GND TP11
EPAP J21
+0.9V DACDIG TP28
+5.0V TP19
GND TP9
+2.5V +LDO_IN TP20
GND TP4
DAC3XJ8X REV D
TEXAS INSTRUMENTS INC.
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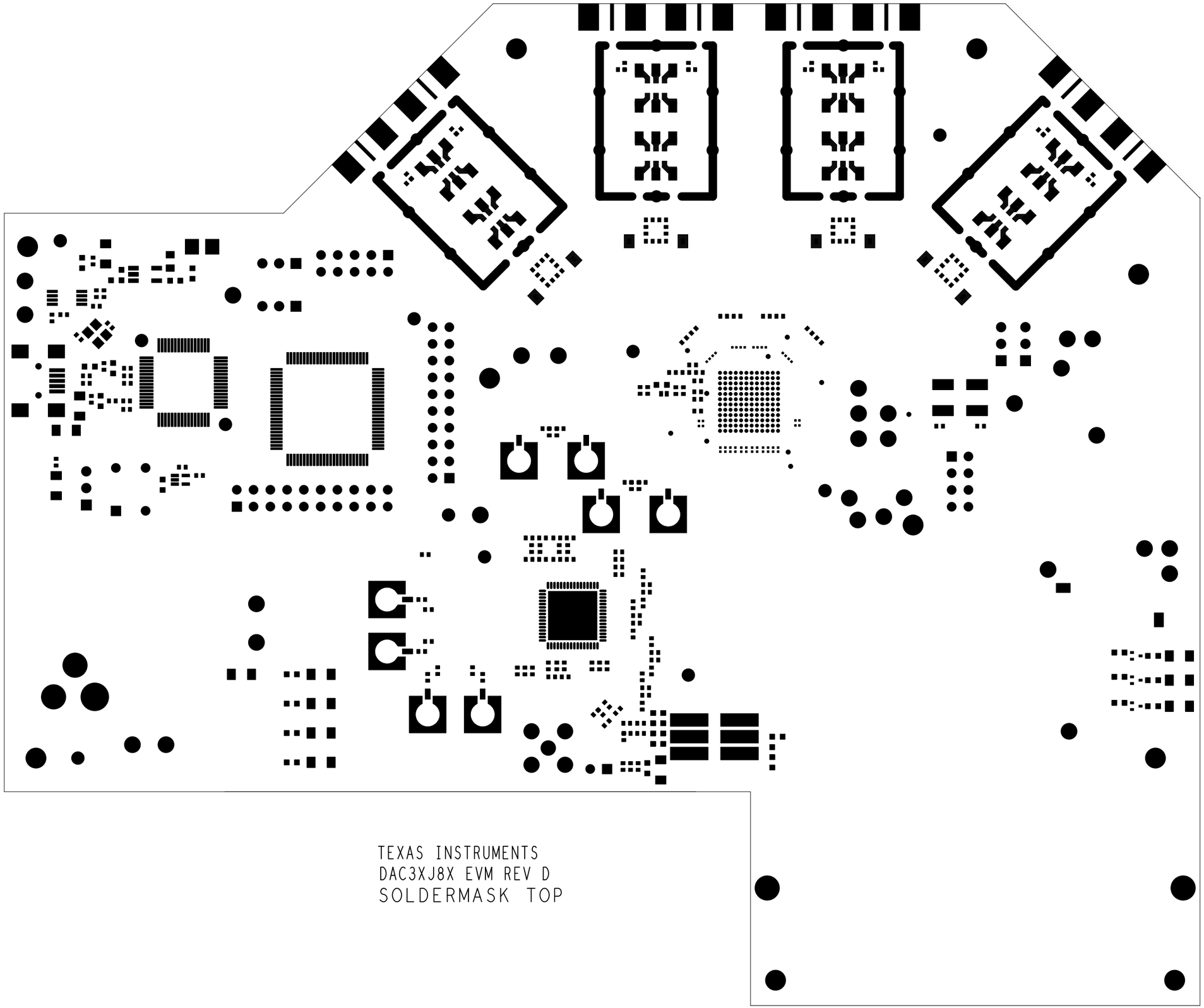
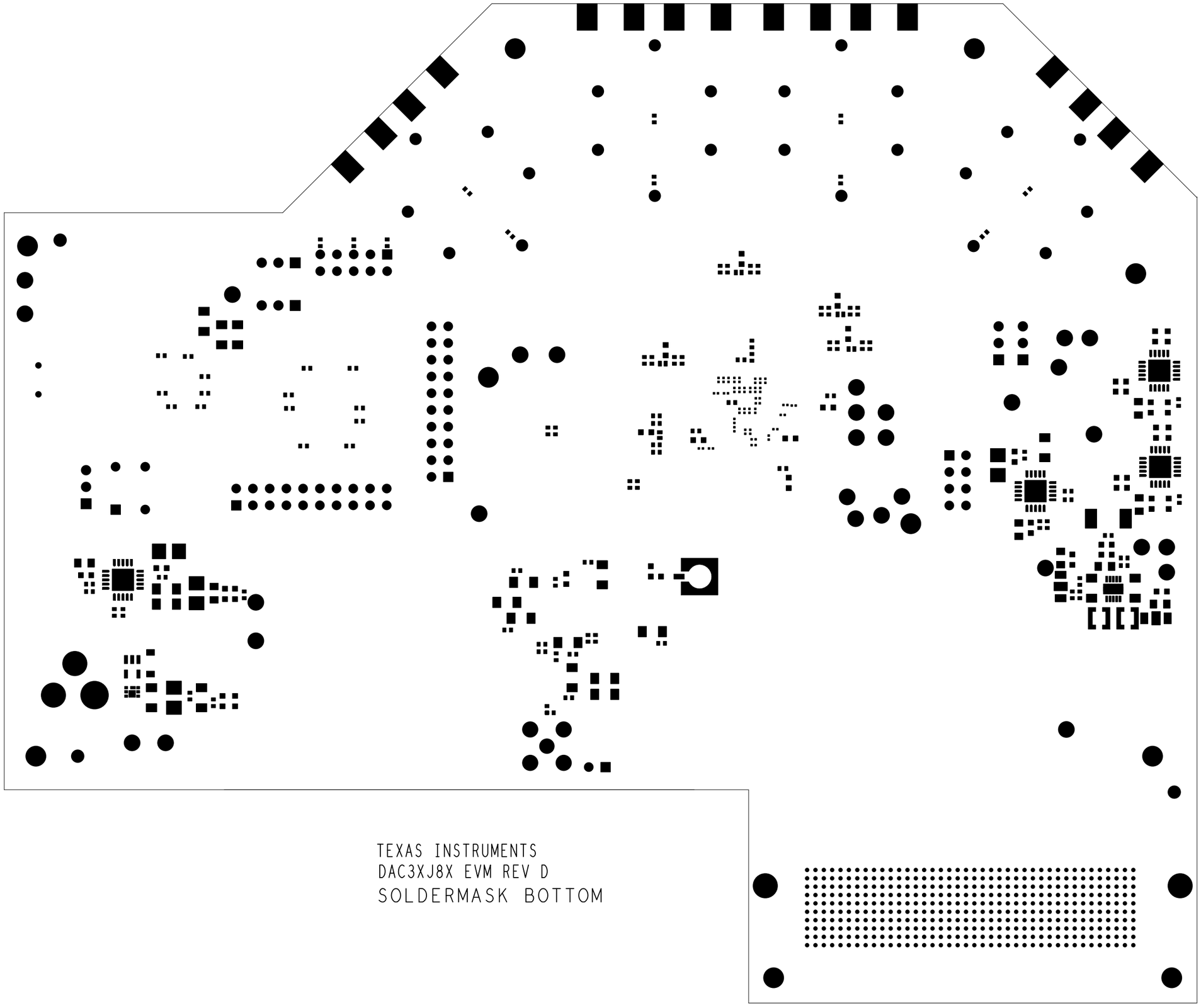
S/N:
DAC38J84
DAC37J84
DAC38J82
DAC37J82
Made in U.S.A.
TEXAS INSTRUMENTS
DAC3XJ8X EVM REV D
SILKSCREEN TOP

TEXAS INSTRUMENTS
DAC3XJ8X EVM REV D
SILKSCREEN BOTTOM

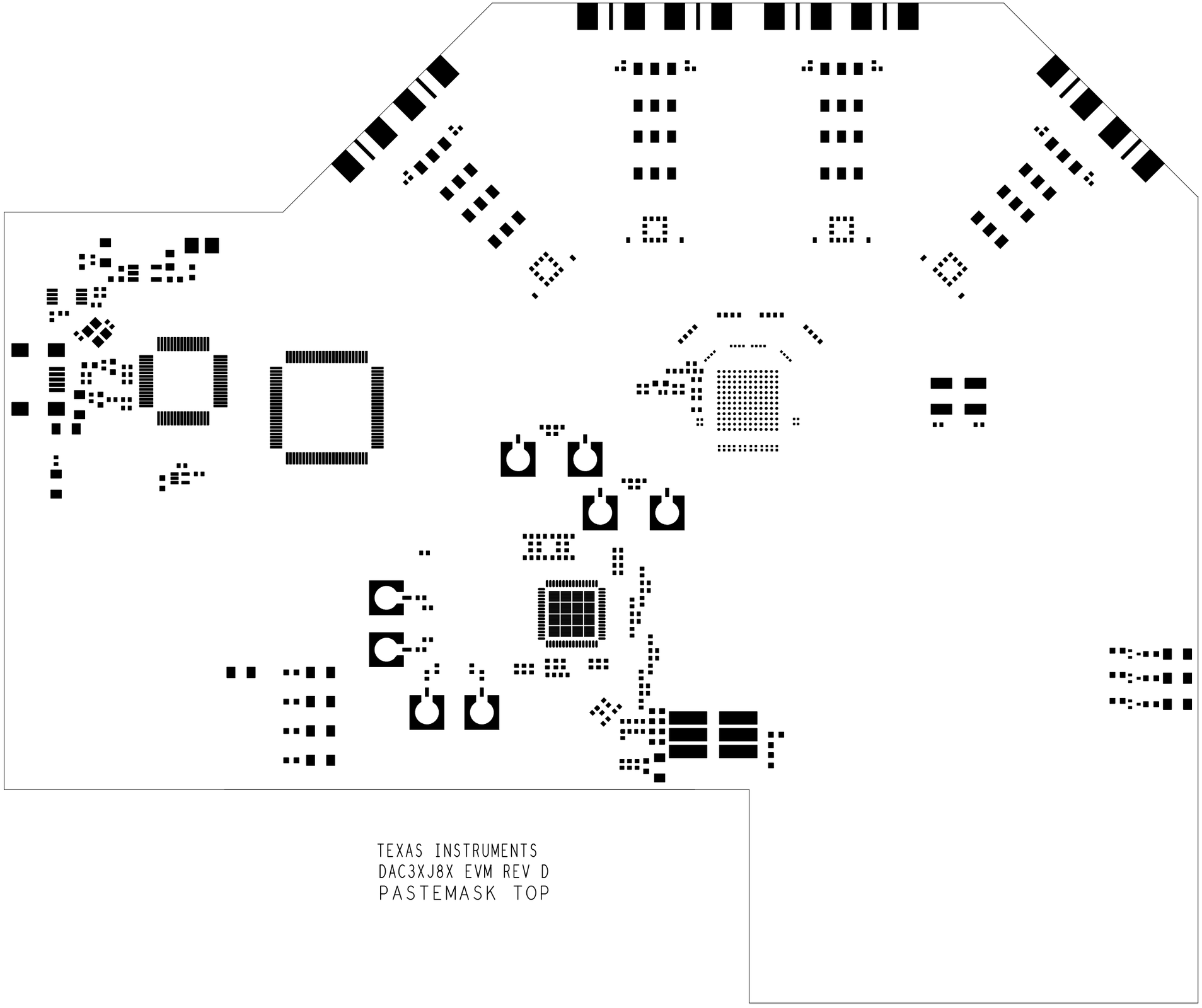
MATES W\ J22
J16



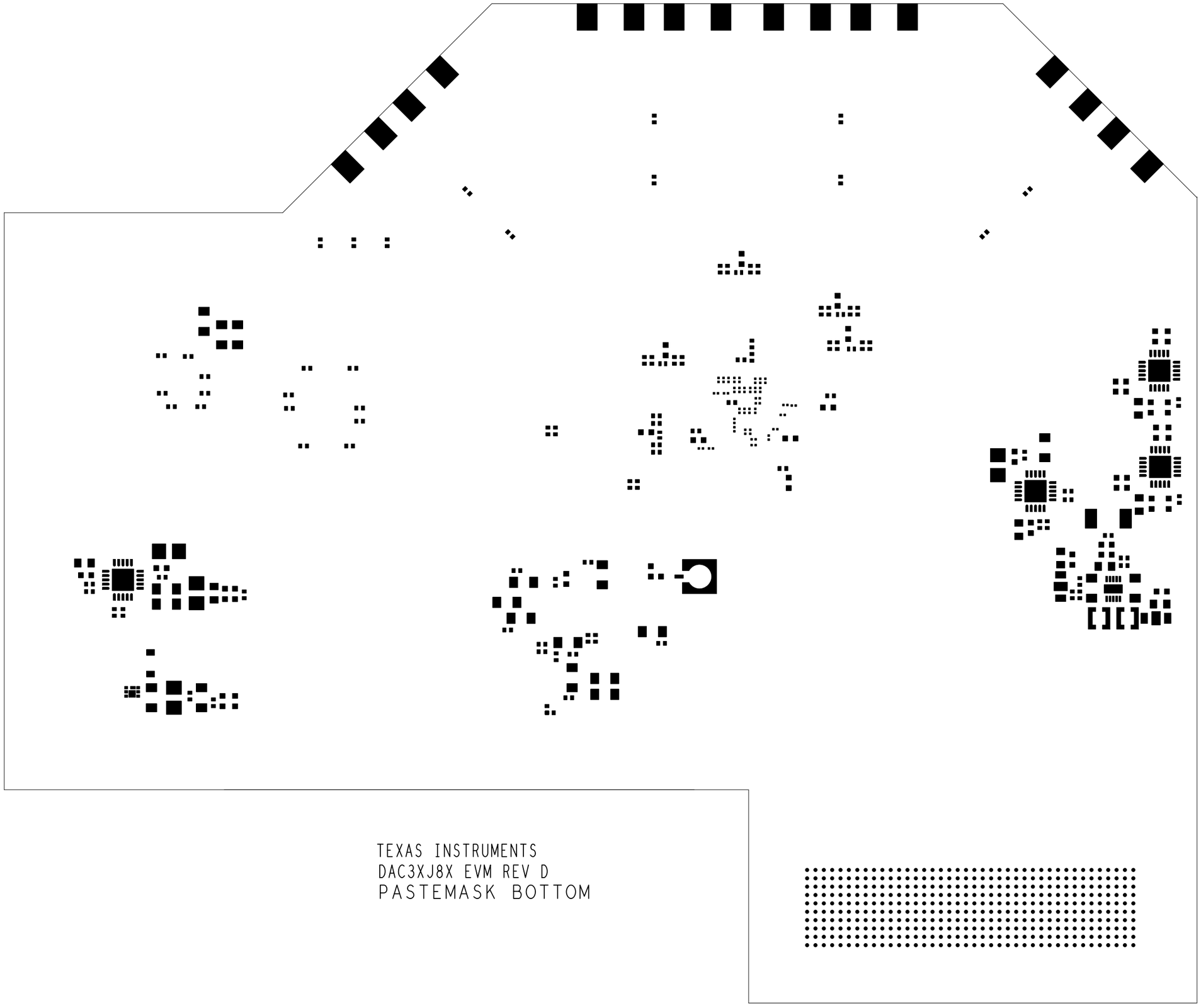
TEXAS INSTRUMENTS
DAC3XJ8X EVM REV D
SOLDERMASK TOP



TEXAS INSTRUMENTS
DAC3XJ8X EVM REV D
SOLDERMASK BOTTOM



TEXAS INSTRUMENTS
DAC3XJ8X EVM REV D
PASTEMASK TOP

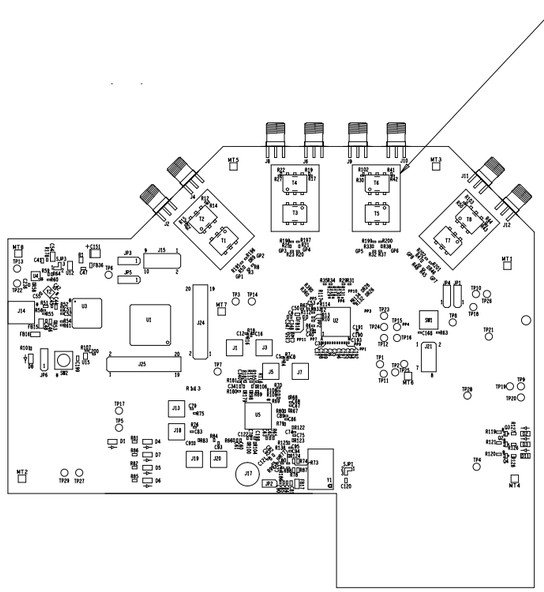


TEXAS INSTRUMENTS
DAC3XJ8X EVM REV D
PASTEMASK BOTTOM

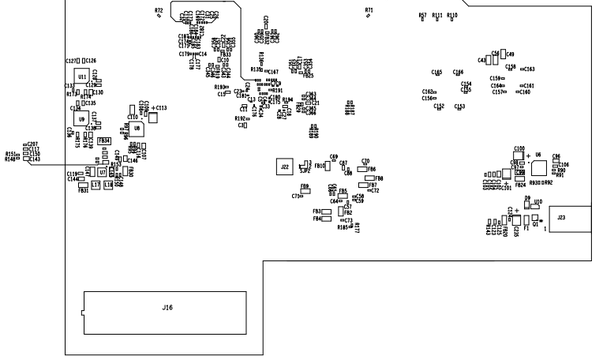
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

THIS DRAWING IS INTENDED TO HELP IN THE ASSEMBLY OF THE DESIGN.

1. REFER TO ODB++ FILE FOR SPECIFIC COMPONENT LOCATION INFORMATION.
2. USE WATER SOLUBLE FLUX DURING BOARD ASSEMBLY.
   RoHS COMPLIANT AND LEAD FREE.
3. MOUNT THE RF FENCE ON THE TOP OF THE PCB AFTER BOARD ASSEMBLY.
   SOLDER THE FENCE DOWN TO THE BOARD AROUND THE EDGES. NO GAPS.
   PLACE THE RF COVER ON THE FENCE.

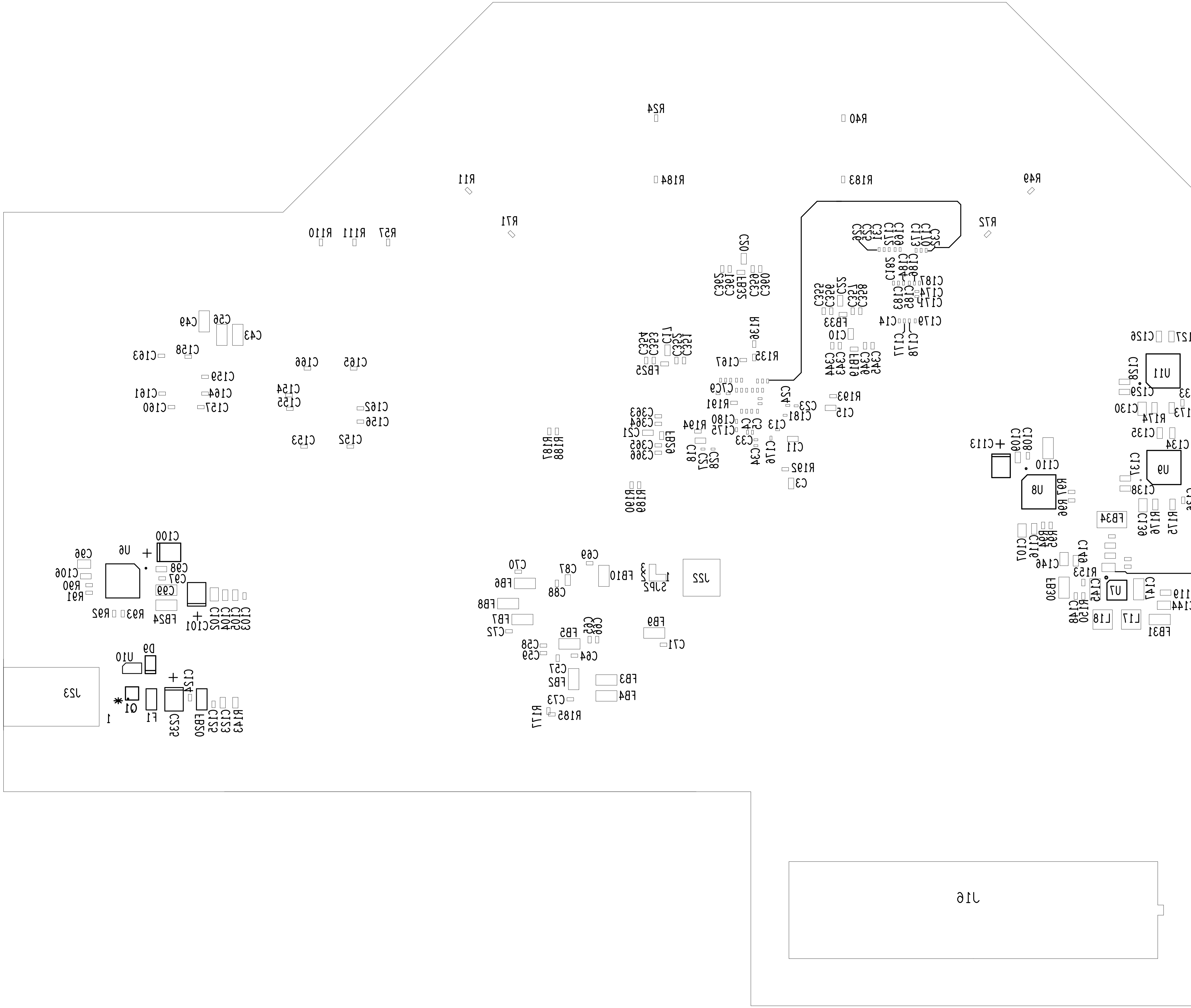


TOP VIEW



BOTTOM VIEW

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS +/- DECIMALS .XX +/-.01 .XXX +/-.005 ANGLES +/-	CONTRACT NO.	TEXAS INSTRUMENTS INC.
	APPROVALS / DATE	ASSEMBLY DRAWING DAC3XJ8X EVM
	DRAWN JV SMITH 12-18-12	
MATERIAL SEE NOTE 5	ENGR M GUIBORD 12-18-12	
FINISH SEE NOTES 7, 8, 9		SIZE B / CODE IDENT NO. / DRAWING NO. / REV. D
DO NOT SCALE DRAWING		SCALE NONE / SHEET 1 OF 1

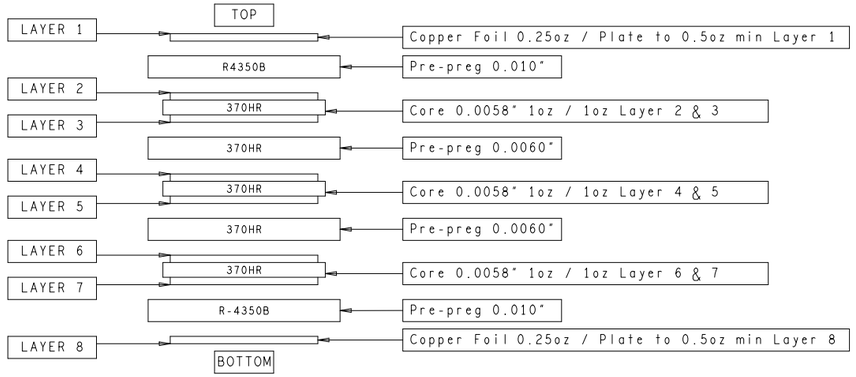

R24
R40
R11
R184
R183
R49
R71
R72
R110 R111 R57
C20
C26 C25 C31 C172 C169 C173 C170 C35
C182 C184 C186
C187 C174 C171 C183 C185
C392 C391 FB32 C359 C390
C355 C356 C22 C357 C358
FB33
C14 C179
C10
C177 C178
C344 C343 FB16 C346 C345
R136
R135
C167
C354 C353 C17 C352 C351
FB25
C7C9
C24
C23
R193
C15
R191
C181
C363 C364 C21 C365 C366
FB26
R194
C180 C175
C5 C4
C13
C33
C18 C27 C28
C34
C176
C11
R192
C3
R187 R188
R190 R189
C49 C56 C43
C163 C158
C166 C165
C159
C161 C164
C160 C157
C154 C155
C162 C156
C153 C152
C126 C127
U11
C128 C129 C133
C130 R174 R173
C135
C134
C113
C109 C108
C110
U9
C137 C138
C136
U8
R97 R96
FB34
C139 R176 R175
C107 C116 R95 R94
C149
C146
R153
FB30
U7
C145
C147
C119
C144
C148 R150
L18 L17
FB31
C207 C117 C150 C143
R151 R148
C100
U6
C96
C106
R90
R91
C98
C97
C99
FB24
R92 R93
C101 C102 C104 C105 C103
D9
U10
J23
Q1
1
F1
C235
C124
FB20
C125 C123 R143
C69
C70
C87
FB10
SJP2
J22
FB6
C88
FB8
FB7
C72
FB9
FB5
C65 C66
C71
C58
C59
C64
C57
FB2
FB3
FB4
C73
R177
R185
J16

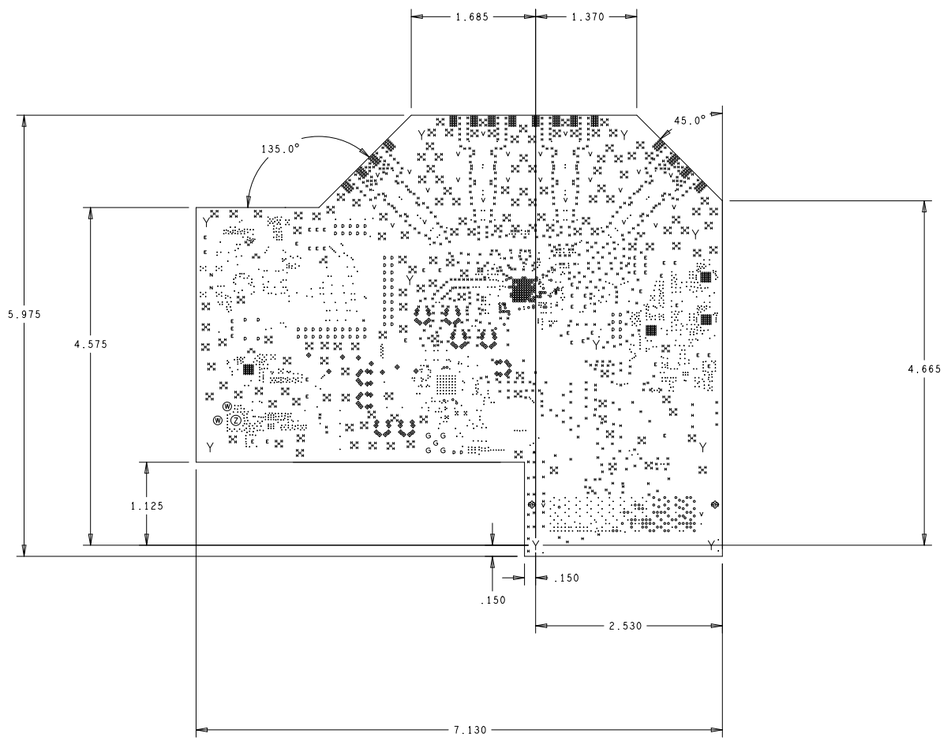
UNLESS OTHERWISE SPECIFIED. ALL NOTES ARE APPLICABLE.

1. APPLICATION DESIGN, MANUFACTURING AND INSPECTION DOCUMENTS.
   IPC-2221A & IPC-2222 / DESIGN STANDARD FOR RIGID PRINTED CIRCUIT BOARDS AND RIGID PRINTED BOARD ASSEMBLIES.
   IPC-6012B / QUALIFICATION AND PERFORMANCE SPECIFICATION FOR RIGID PRINTED BOARD.
   IPC-A-600G / ACCEPTABILITY OF PRINTED BOARDS.
2. VIA 8, 10 & 12MIL SIZES APPLY AFTER PLATING. TOLERANCE TO BE +.003/-.010.
   HOLE SIZE APPLY AFTER PLATING. TOLERANCE TO BE +/-.003.
3. REGISTRATION TOLERANCE: ARTWORK +/- .002.
   ALL HOLE CENTERS +/-.005 FROM DIMENSION DATUM.
4. MINIMUM COPPER WALL THICKNESS SHALL BE .001 INCH.
   FOR ALL PLATED THROUGH HOLES. BREAKOUT NOT ALLOWED.
5. PROCESS AND MATERIAL MUST CONFORM TO UL 796. MATERIAL MUST MEET OR EXCEED UL FLAMMABILITY RATING 94V-0.
   MATERIAL: MULTI-LAYER (SEE DETAIL 'A')
   SEE LAYER STACKUP FOR ALL PRE-PREG & CORE THICKNESSES, COPPER OZ AND MATERIAL. FINISHED BOARD THICKNESS: .062 +/- 10%
6. MANUFACTURE'S UL MARKING, FLAMMABILITY RATING, LOGO AND DATE CODE TO BE PLACED IN SILKSCREEN ON BOTTOM SIDE OF THE BOARD.
7. SMOBC/IMMERSION GOLD: 2 - 8 uIN OVER 118-236 uIN NICKEL PLATING.
8. SOLDERMASK BOTH SIDES USING TAIYO (OR EQUIVALENT)
   COLOR = RED (0.001 TO 002" THICK OVER METAL.
9. SILKSCREEN BOTH SIDES USING WHITE NPI LEADFREE.
   REGISTRATION TOLERANCE TO BE +/-.005.
   INK IS NOT ALLOWED ON EXPOSED PLATED AREA.
10. P.C. BOARD TO BE FREE OF DIRT, OIL, FINGER PRINTS, ETC.
11. BOARD WARPAGE: WARP AND TWIST SHALL NOT EXCEED .007 INCH PER INCH MEASURED AT ANY LOCATION OR DIRECTION ON THE BOARD.
12. BOARD MUST BE 100% ELECTRICALLY TESTED TO ENSURE NO SHORTS OR OPEN CIRCUITS AT 20V.
13. ALL OUTER LAYERS USING A 19MIL TRACE WIDTH SHALL BE 50 OHMS SINGLE ENDED +/- 10%.
14. ALL OUTER LAYERS USING A 9MIL TRACE WIDTH AND 6MIL SPACING SHALL BE 100 OHMS DIFFERENTIAL +/- 10%.
15. MINIMUM COPPER CONDUCTOR WIDTH IS: 4MIL.
    MINIMUM COPPER CONDUCTOR SPACING IS: 5MIL.
16. ALL INNER LAYER UNCONNECTED PADS SHALL BE REMOVED.
17. PWB MUST BE ROHS COMPLIANT AND SURVIVE LEAD FREE ASSEMBLY, MAX REFLOW OF 230 DEGREES C (6 PASSES).
18. ALL THROUGH VIAS TO BE PLUGGED WITH NON-CONDUCTIVE EPOXY MATERIAL. PLUGGED VIAS TO BE PLATED AFTER PLUGGING TO PRESENT FLAT SURFACE TO DEVICE. NO POTHOLES.

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

USE DDI/VIASYSTEMS STACKUP JOB NAME: DAC38J84 RO4350
THIS STACK UP DETAIL IS FOR REFERENCE ONLY





DRILL CHART: TOP to BOTTOM			
ALL UNITS ARE IN MILS			
FIGURE	SIZE	PLATED	QTY
•	8.0	PLATED	221
·	10.0	PLATED	1424
▪	10.0	PLATED	3
▪	12.0	PLATED	1754
◆	15.0	PLATED	80
▫	38.0	PLATED	64
▫	40.0	PLATED	44
G	62.0	PLATED	1
G	67.0	PLATED	4
◍	106.0	PLATED	2
Ⓦ	120.0	PLATED	2
Ⓩ	140.0	PLATED	1
N	39.0	NON-PLATED	2
V	50.0	NON-PLATED	2
V	53.0	NON-PLATED	24
Y	125.0	NON-PLATED	10

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS +/- DECIMALS .XX +/-.01 .XXX +/-.005 ANGLES +/-

MATERIAL: SEE NOTE 5

FINISH: SEE NOTE 7, 8, 9

DO NOT SCALE DRAWING

CONTRACT NO.

APPROVALS	DATE
DRAWN JV SMITH	12-18-12
ENG M GUIBORD	12-18-12

TEXAS INSTRUMENTS INC.

FABRICATION DRAWING
DAC3XJ8X EVM

SIZE	CODE IDENT NO.	DRAWING NO.	REV.
B			D

SCALE NONE SHEET 1 OF 1