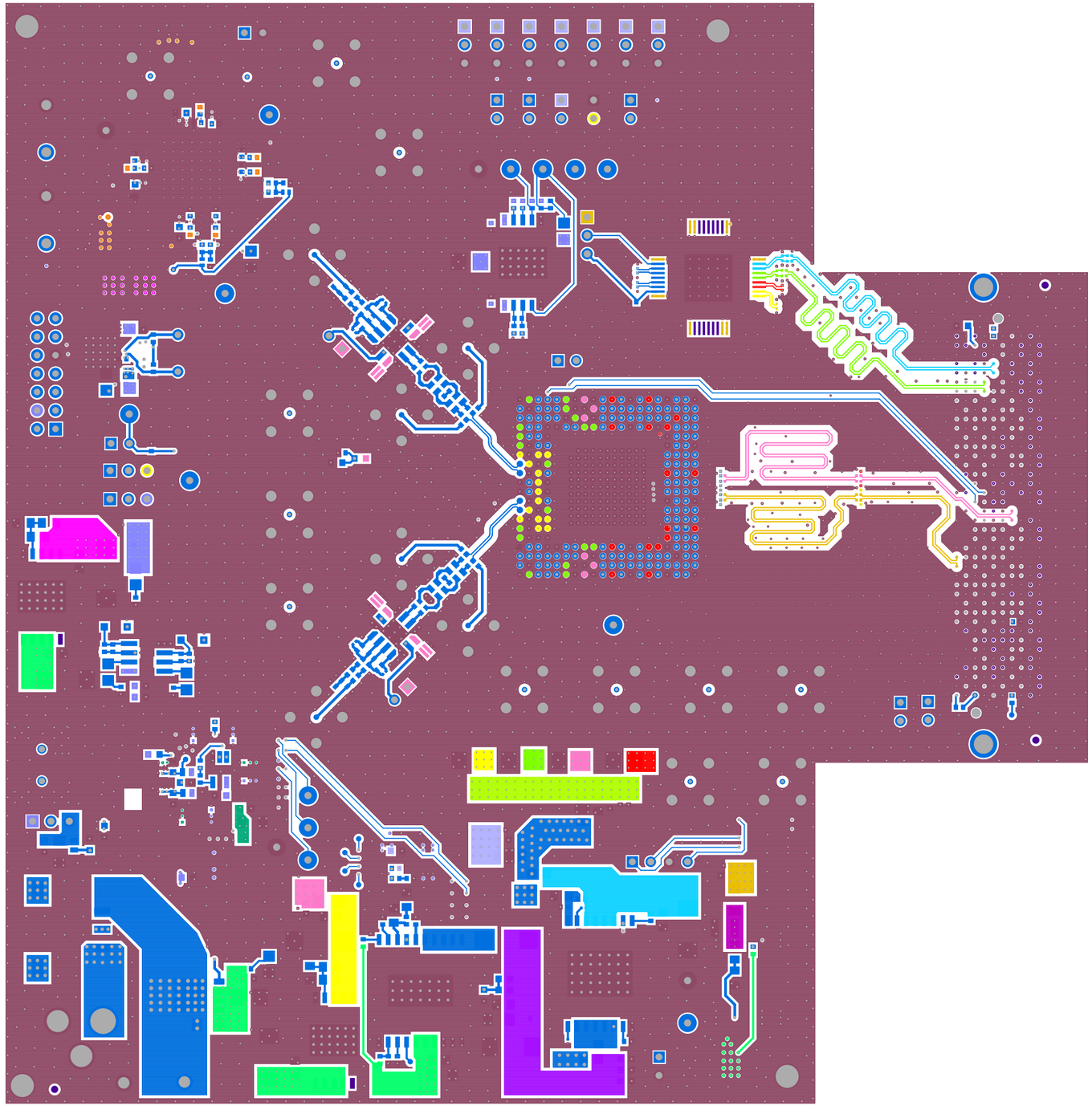
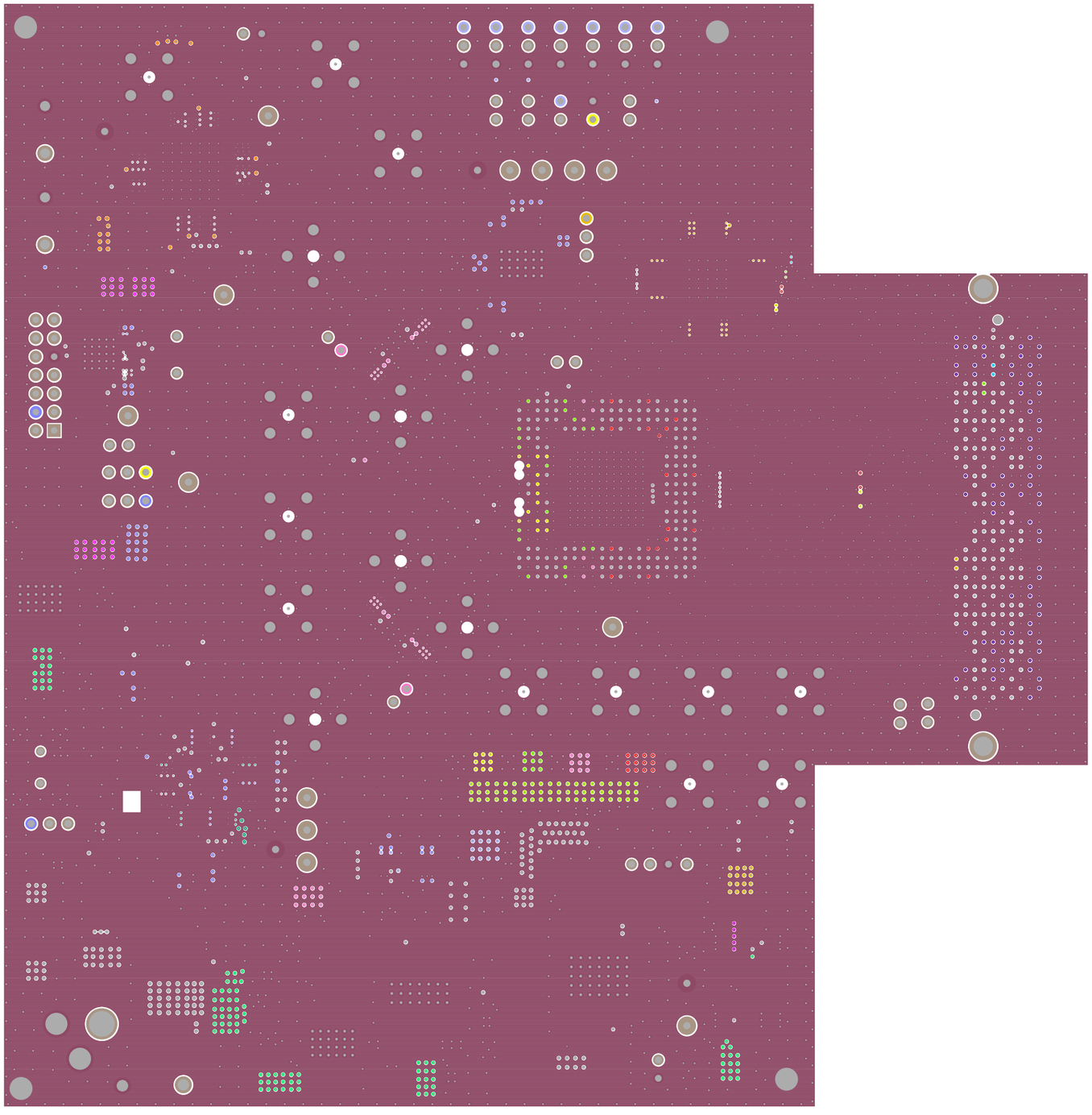


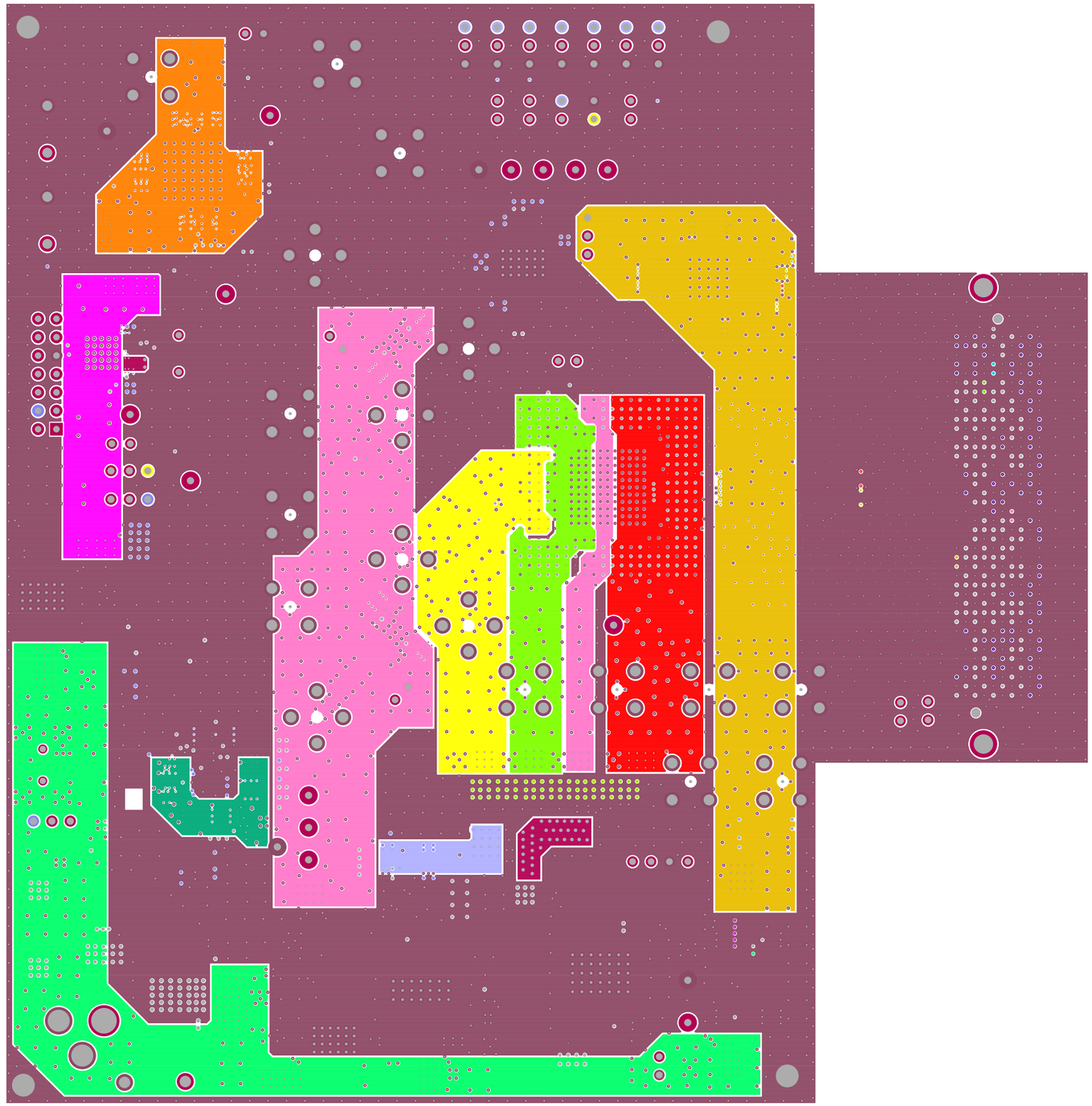
TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

LAYER 1 (TOP SIDE)



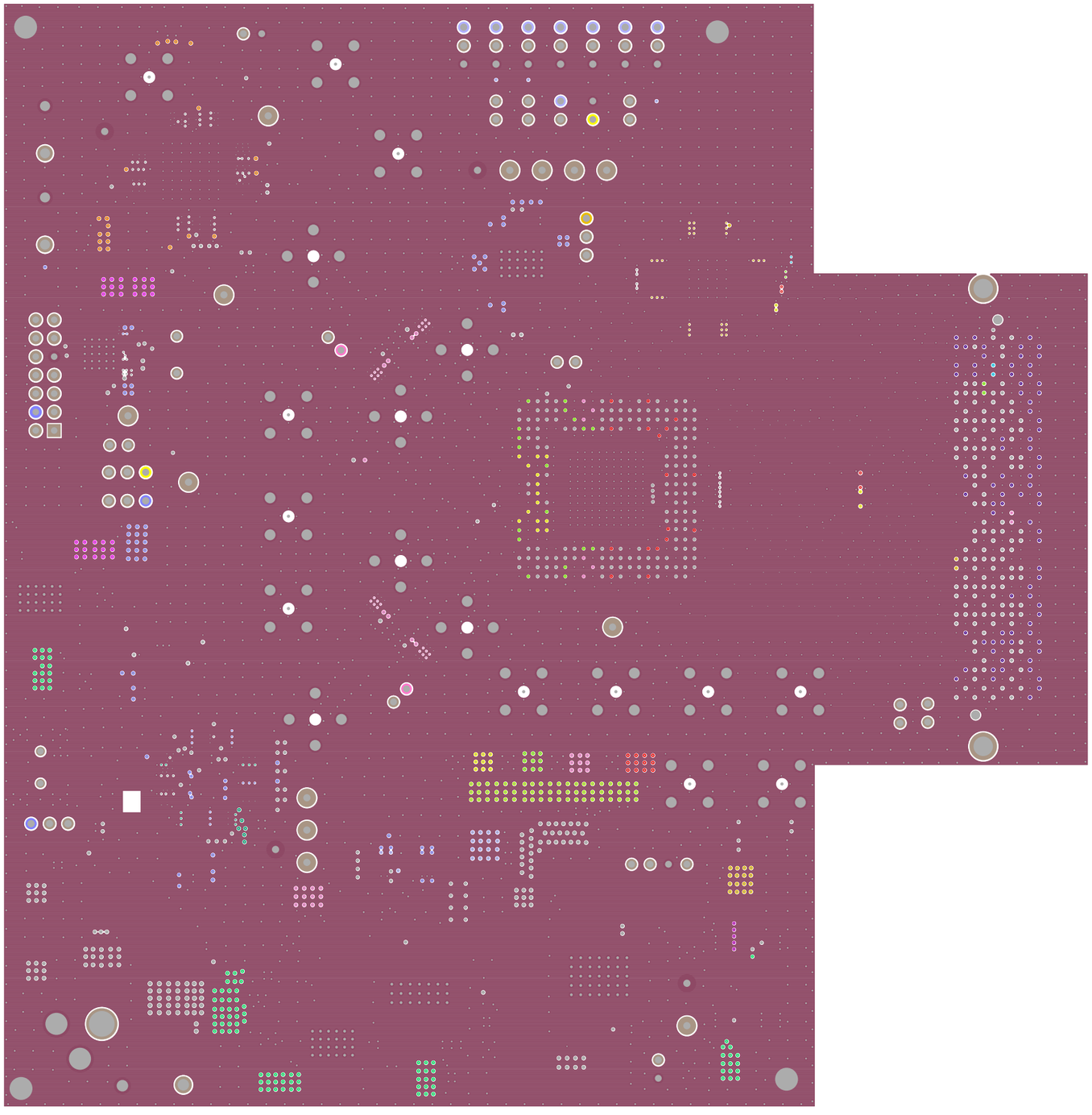
TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

LAYER 2 - GND



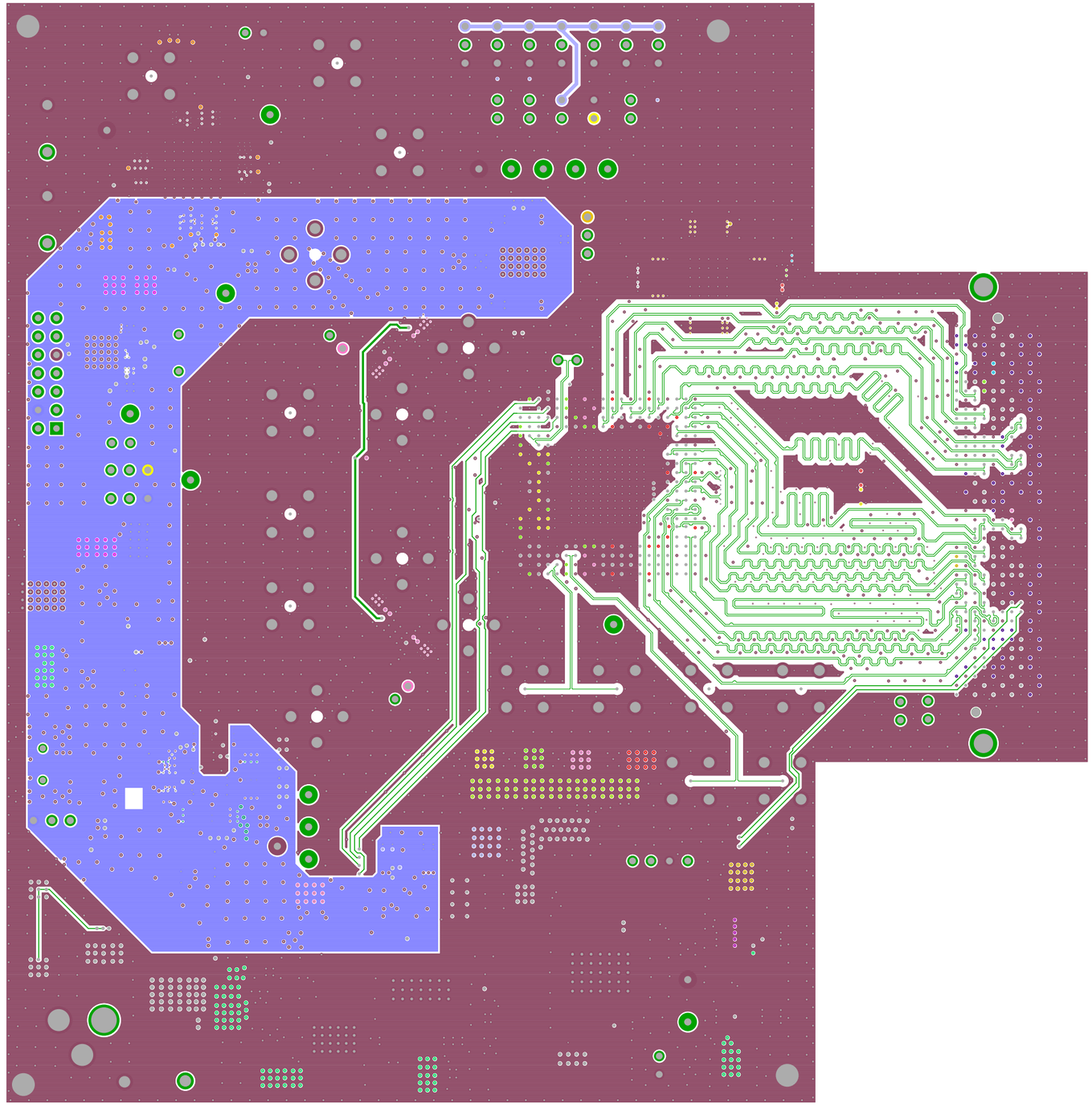
TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

LAYER 3 - PWR



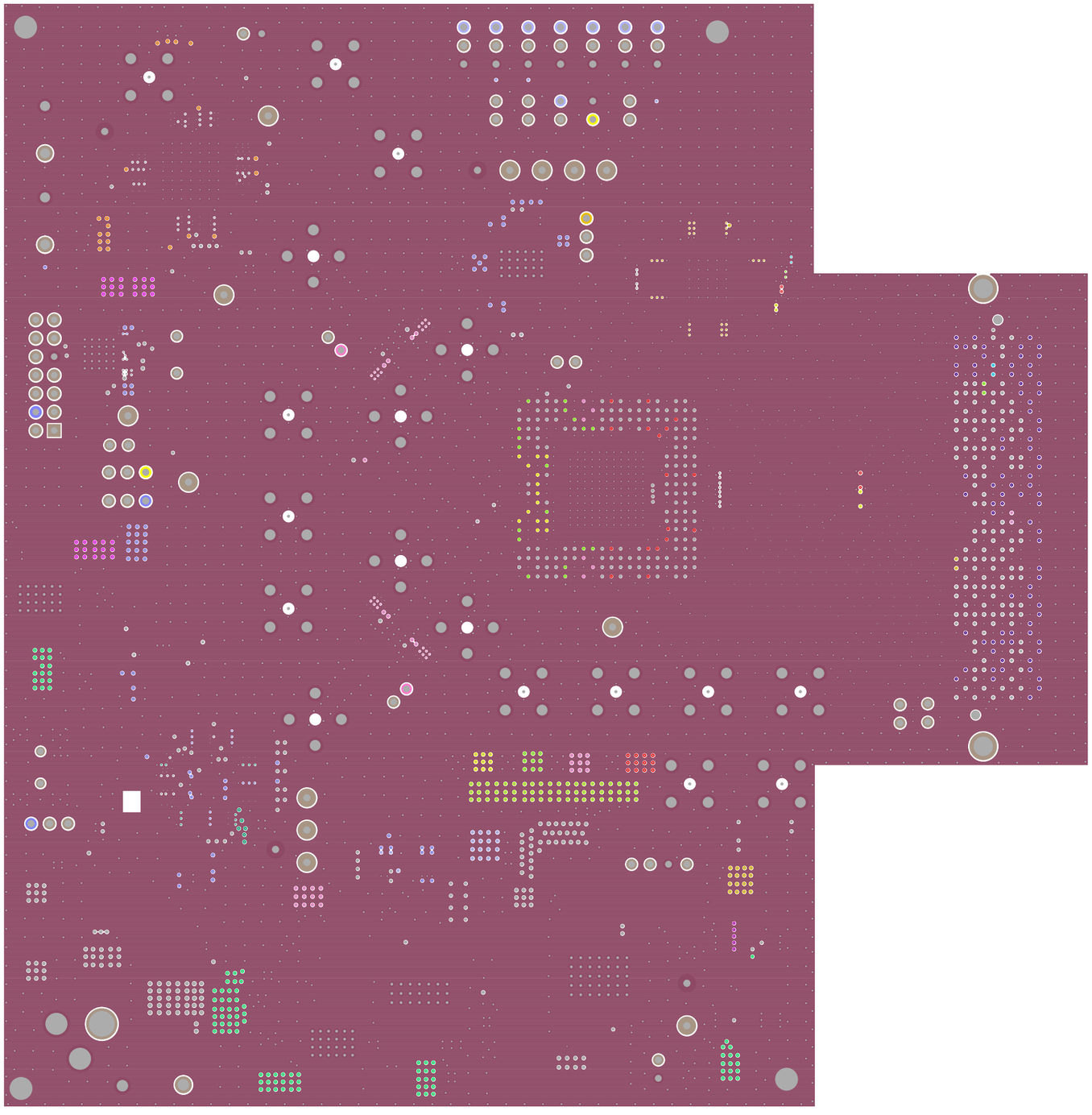
TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

LAYER 4 - GND



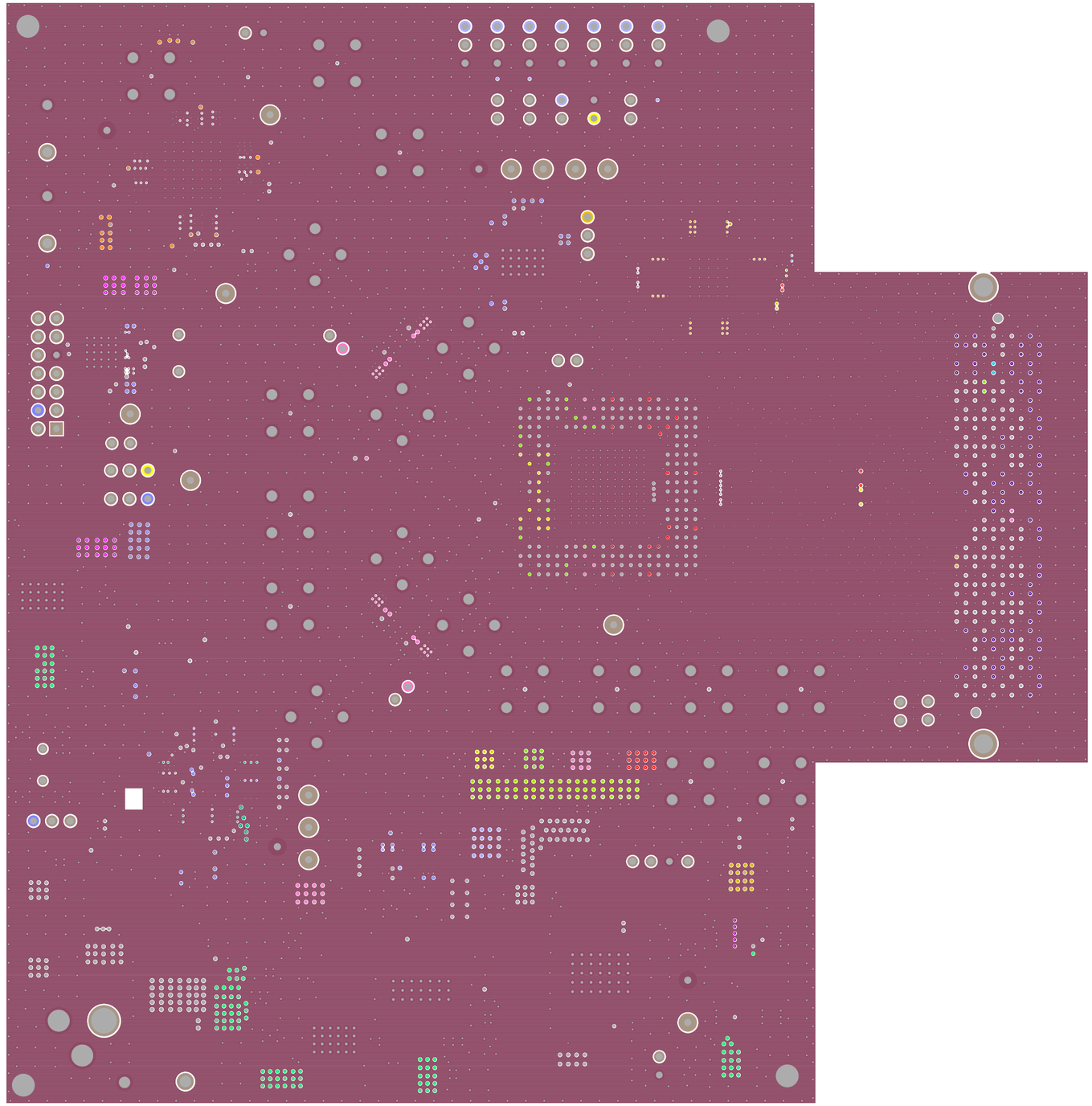
TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

LAYER 5 - SIG1



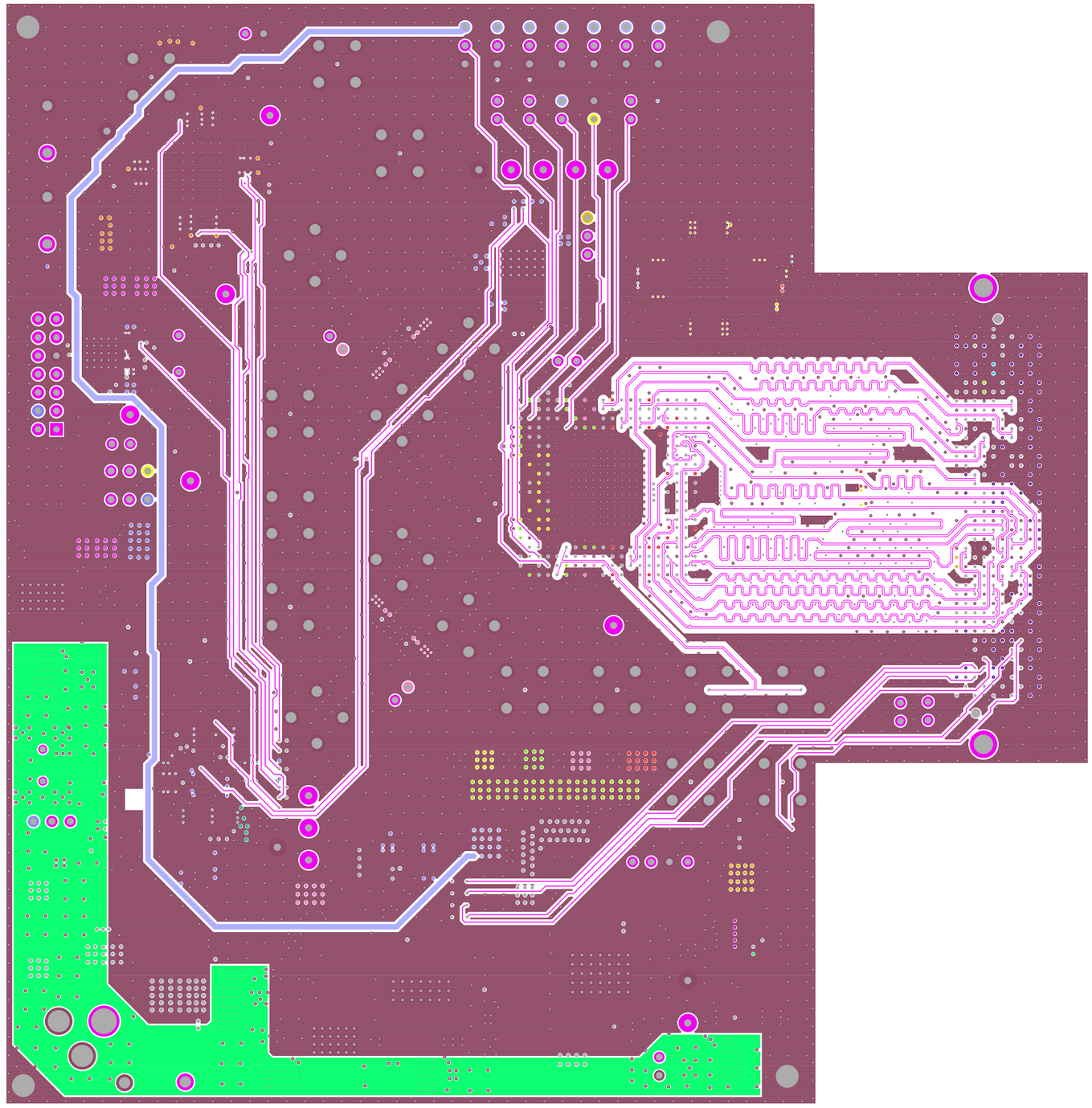
TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

LAYER 6 - GND



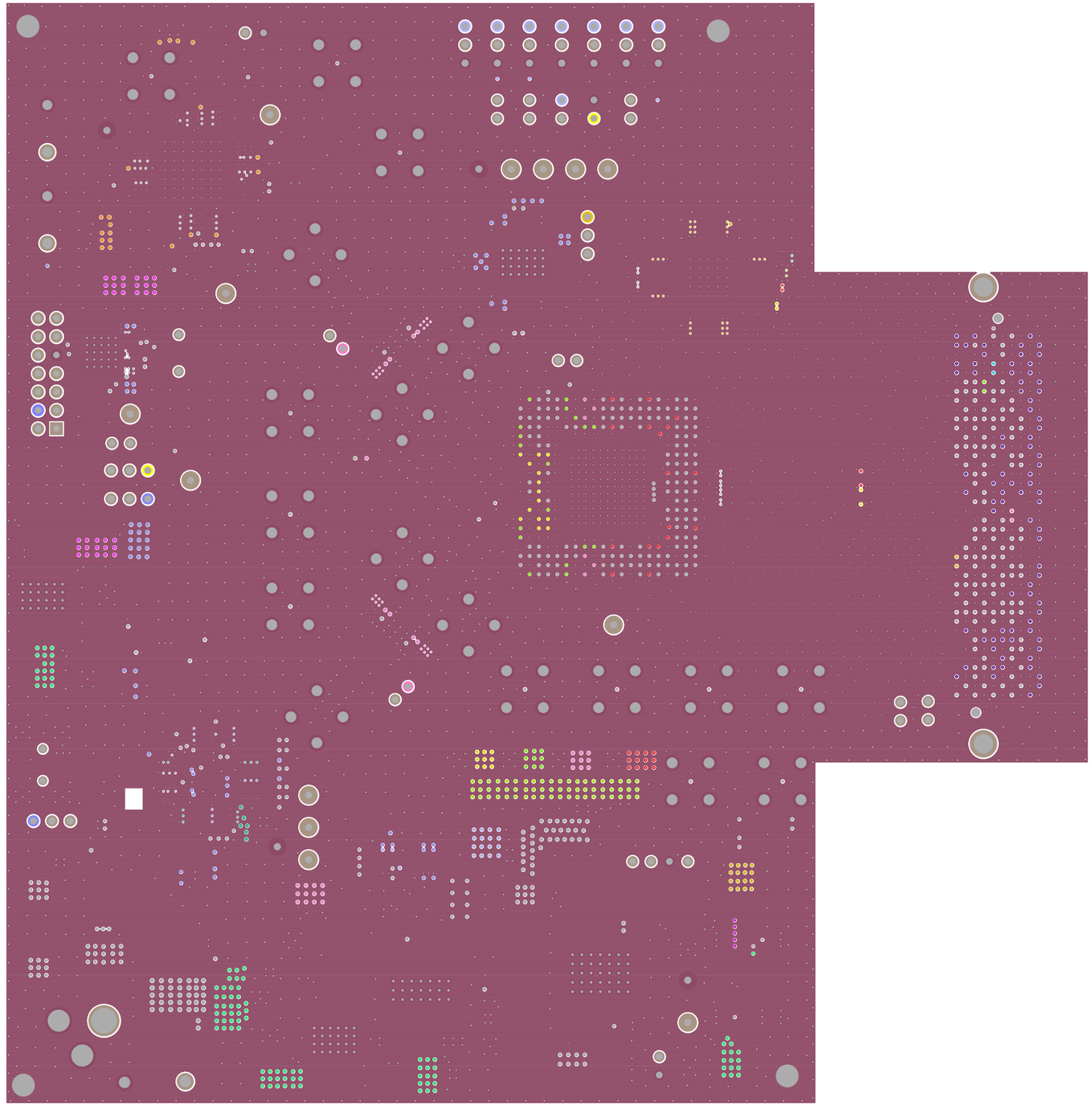
TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

LAYER 7 - GND



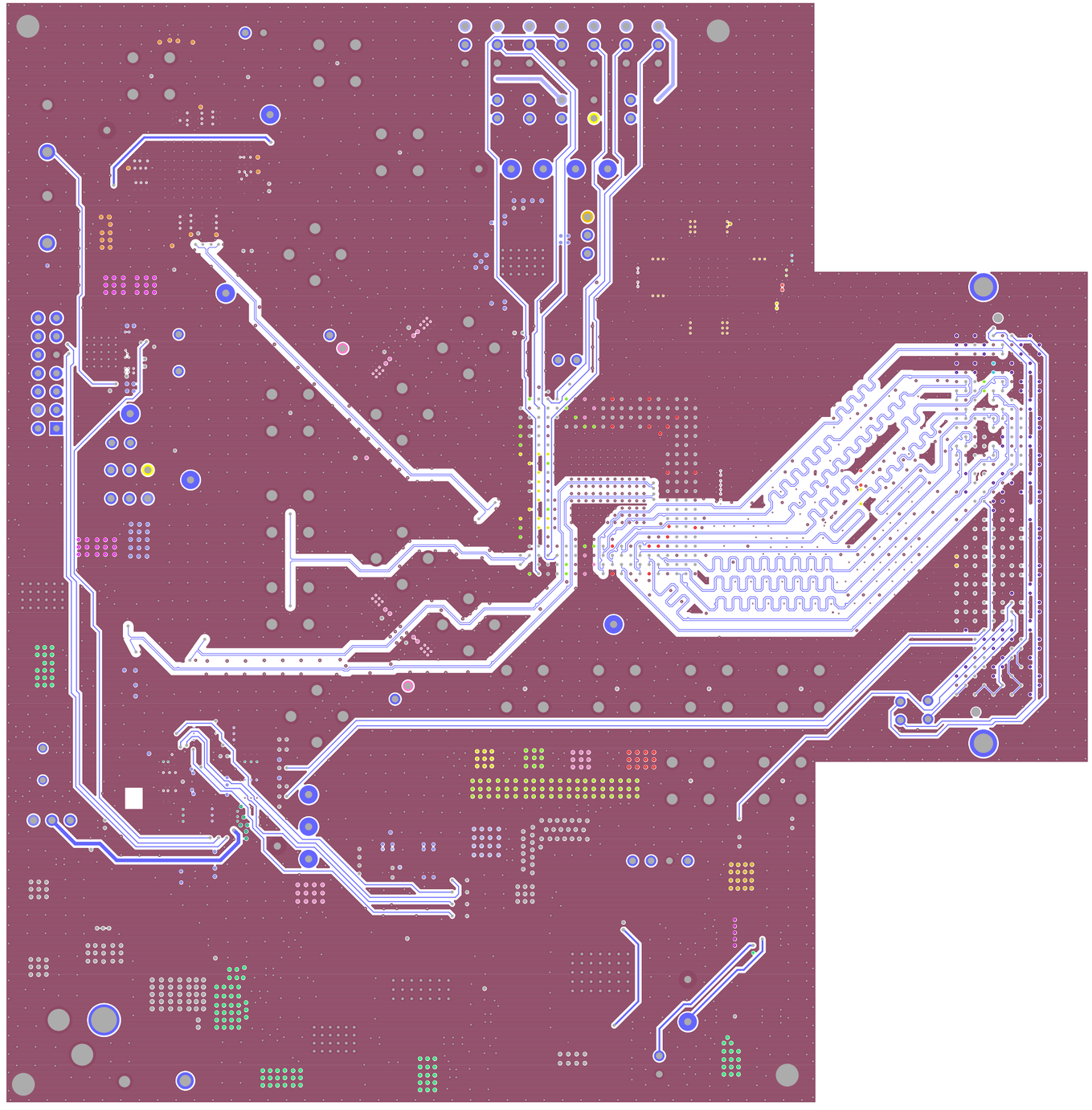
TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

LAYER 8 - SIG2



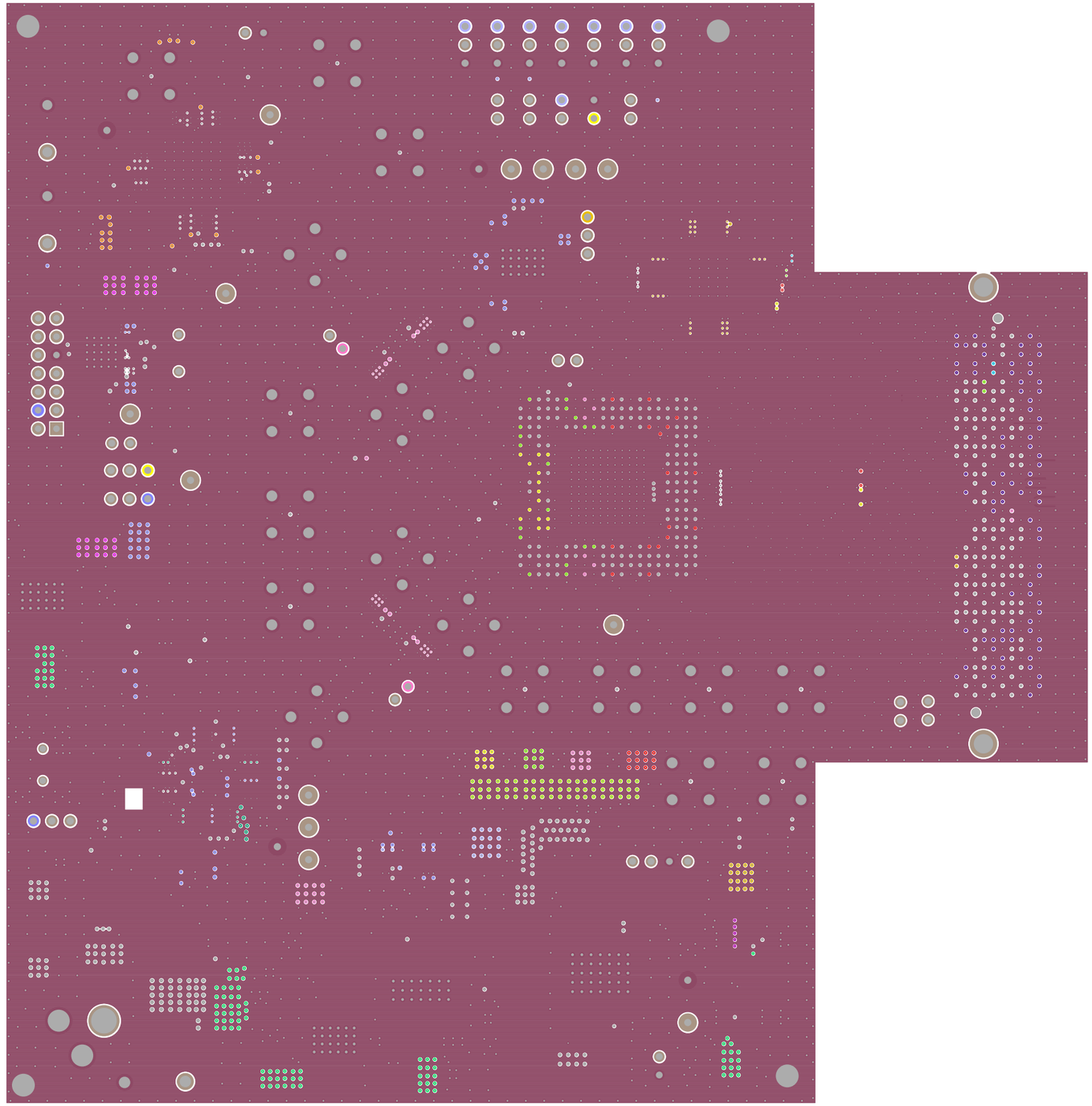
TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

LAYER 9 - GND



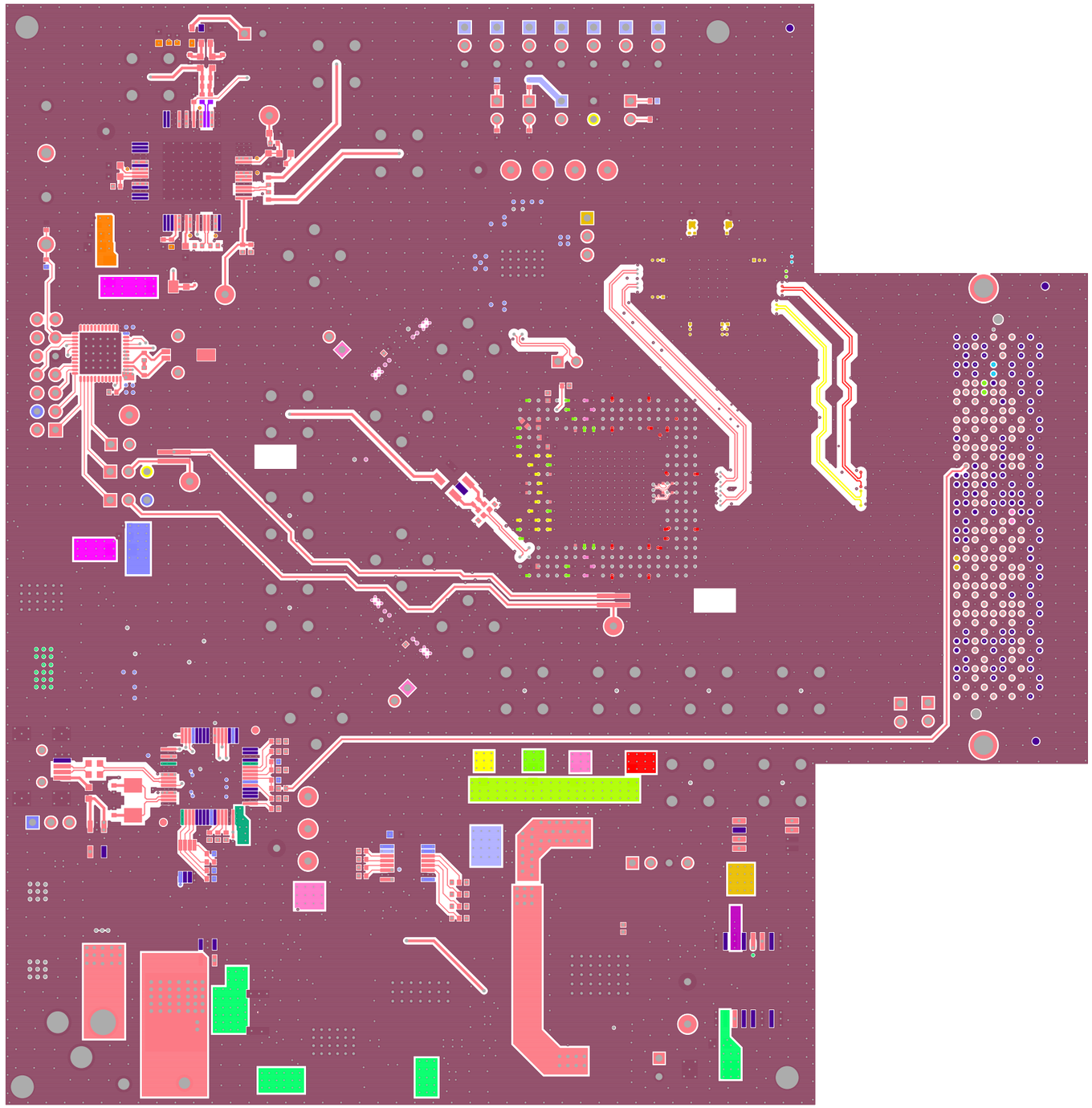
TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

LAYER 10 - SIG3



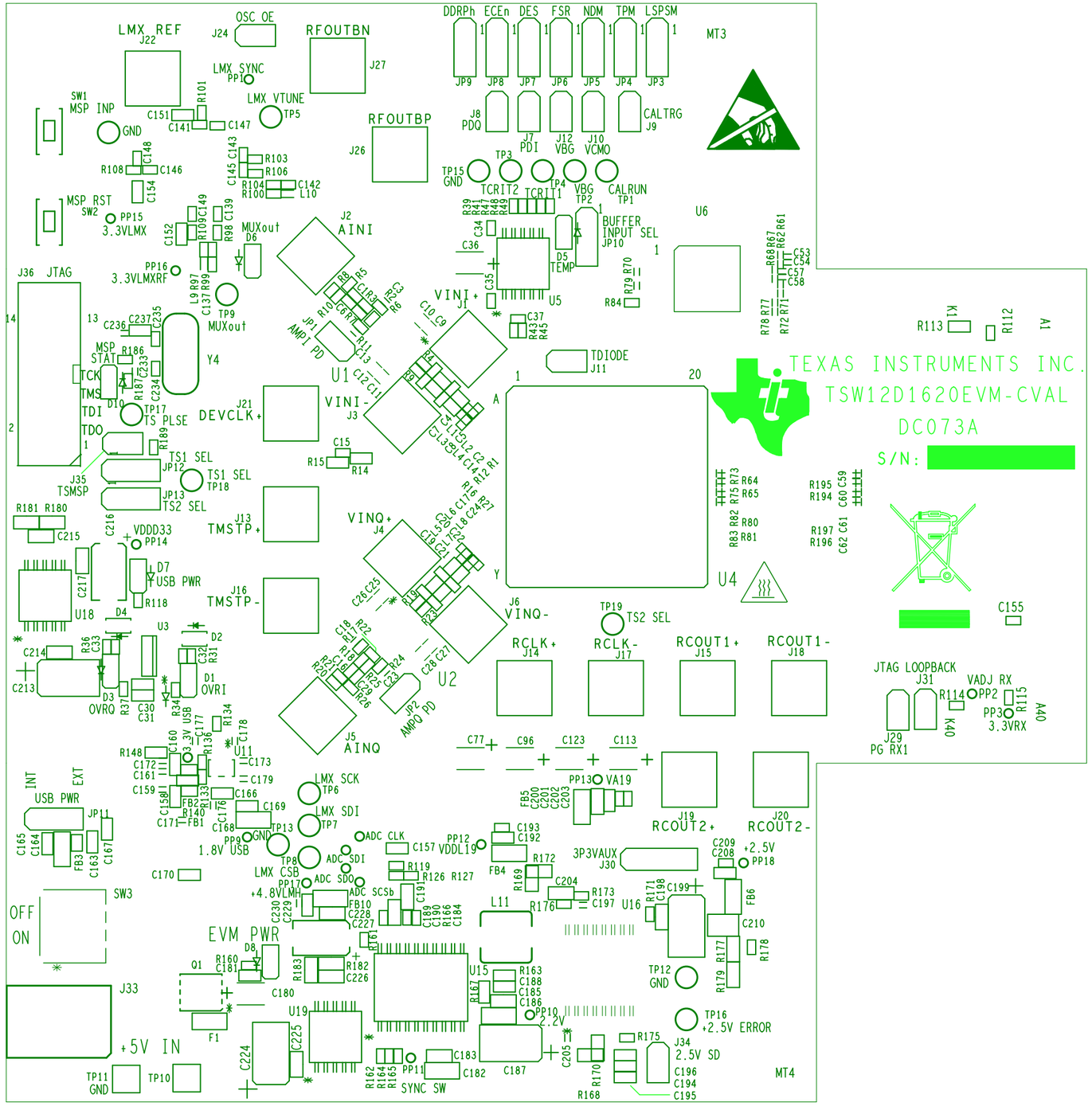
TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

LAYER 11 - GND



TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

LAYER 12 (BOTTOM SIDE)

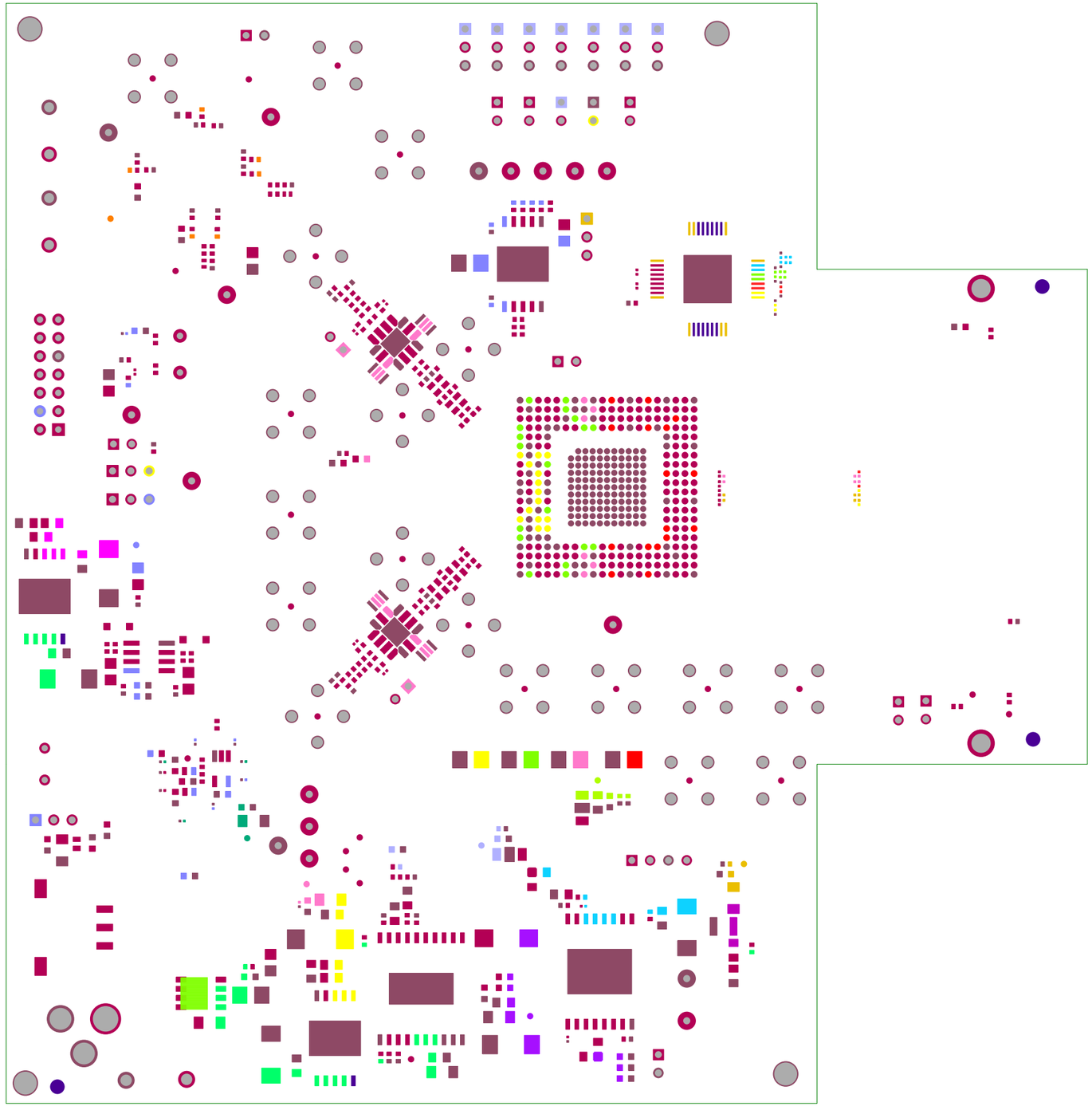


TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

SILKSCREEN TOP

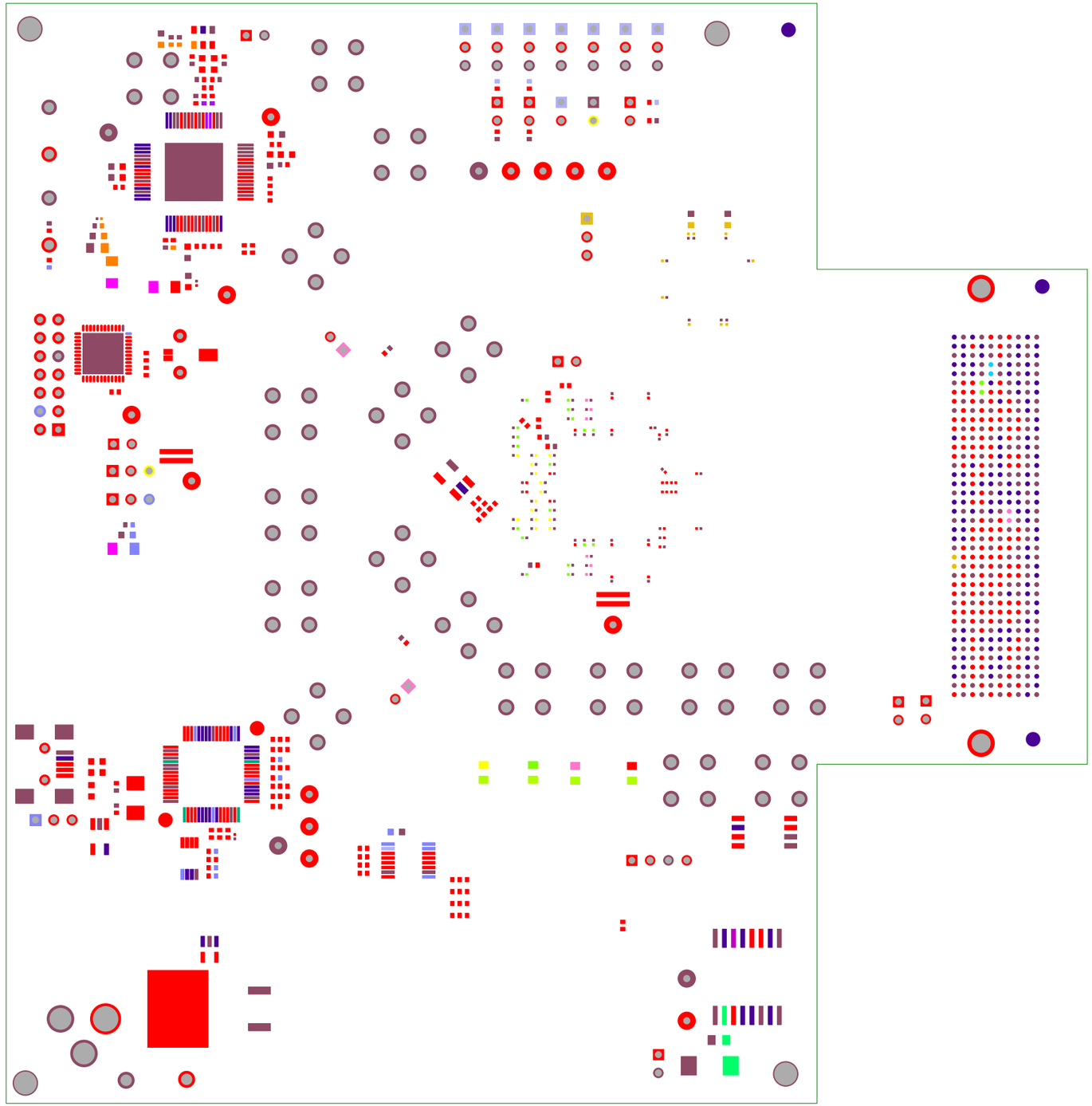
TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

SILKSCREEN BOTTOM



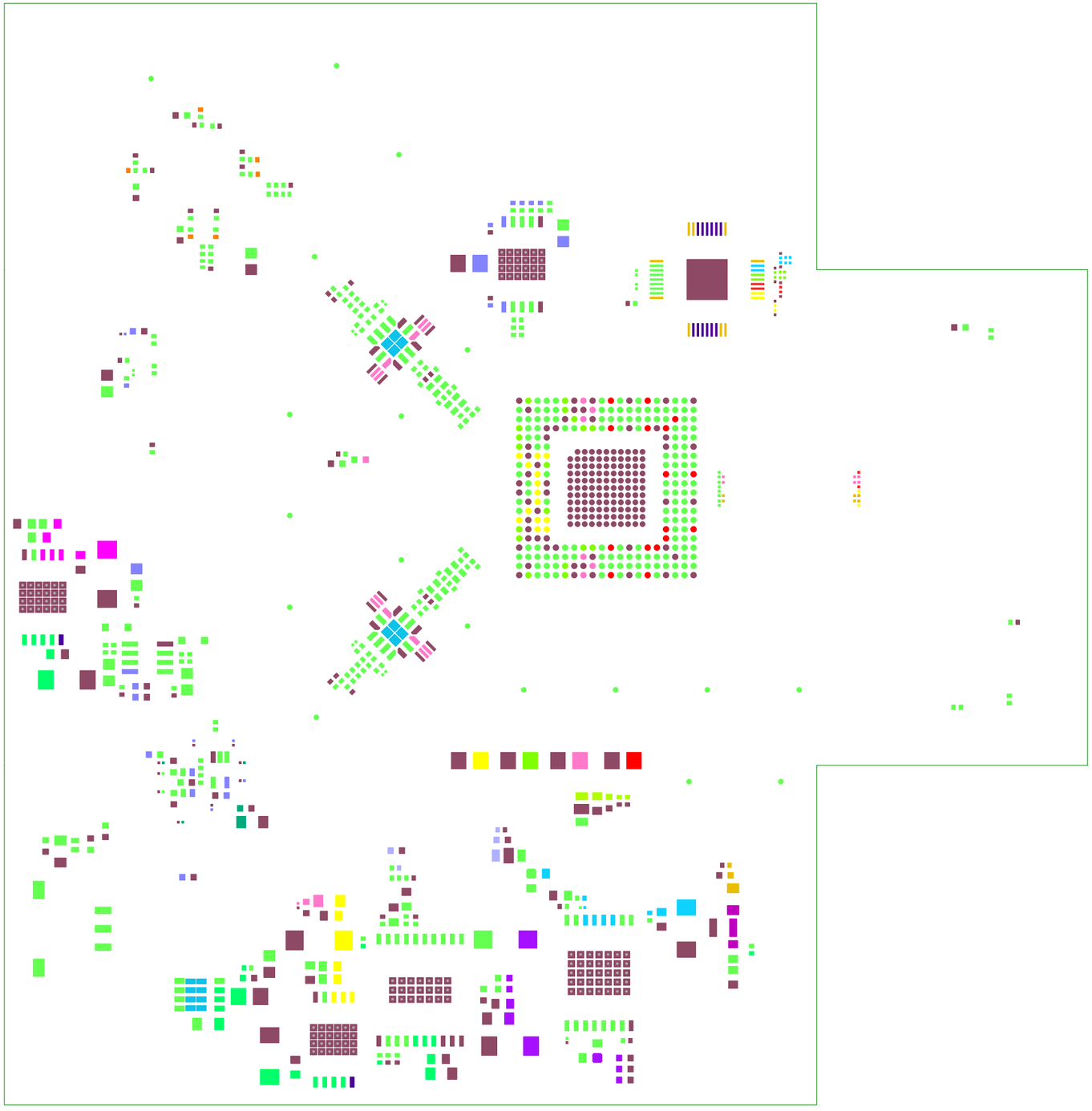
TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

SOLDERMASK TOP



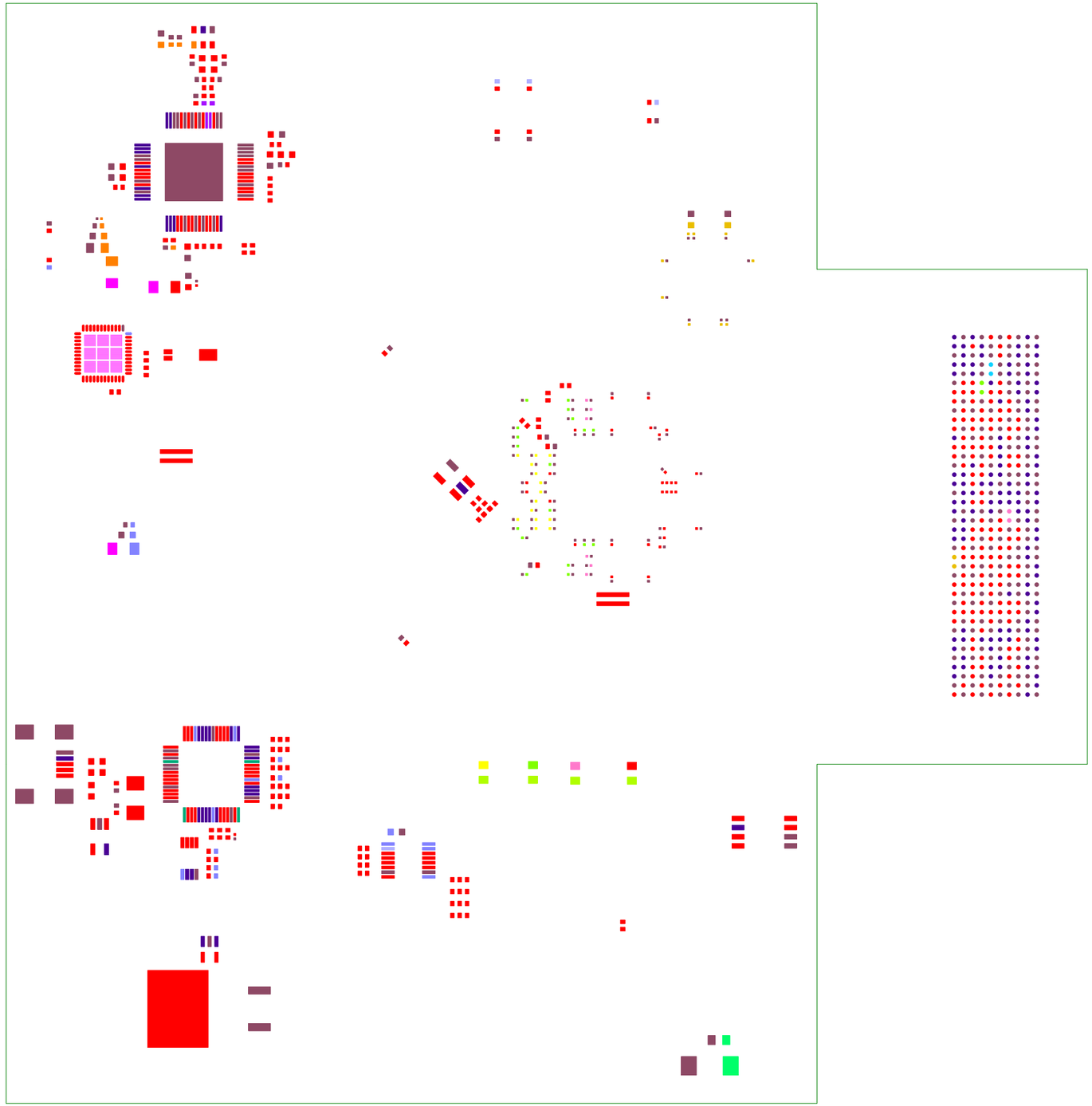
TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

SOLDERMASK BOTTOM



TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

PASTEMASK TOP



TEXAS INSTRUMENTS, INC.
TSW12D1620CVAL EVM REV A
DC073

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.
   ASSEMBLY MUST BE RoHS COMPLIANT AND LEAD FREE.
3. MARK BOARD'S SILKSCREEN WITH THE APPROPRIATE EVM PART NUMBER AND SERIAL NUMBER.
4. IPC-A-610 / ACCEPTABILITY OF ELECTRONIC ASSEMBLIES, CLASS2, CURRENT REVISION.

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

MATERIAL
SEE NOTE 5

FINISH
SEE NOTES 7, 8, 9

DO NOT SCALE DRAWING

CONTRACT NO.

APPROVALS	DATE
DRAWN L NGUYEN	06-08-18
ENGR J BRINKHURST	06-08-18

TEXAS INSTRUMENTS INC.

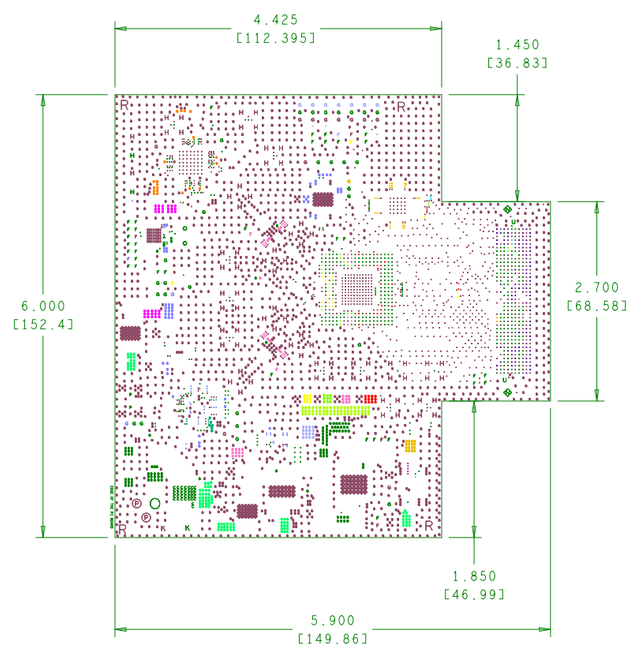
ASSEMBLY DRAWING
TSW12D1620EVM-CVAL

SIZE	CODE IDENT NO.	DRAWING NO.	REV.
B		DC073	A
SCALE 2:1			SHEET 1 OF 1

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

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-6012 / QUALIFICATION AND PERFORMANCE SPECIFICATION FOR RIGID PRINTED BOARD, CLASS 2, CURRENT REVISION.
   IPC-A-600 / ACCEPTABILITY OF PRINTED BOARDS, CLASS 2, CURRENT REVISION.
2. VIA SIZE APPLY AFTER PLATING. TOLERANCE TO BE +.003/-.008.
   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 - 5 uIN OVER 118-236 uIN NICKEL PLATING.
8. SOLDERMASK BOTH SIDES USING TAIYO (OR EQUIVALENT)
   COLOR = RED.
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. MINIMUM COPPER CONDUCTOR WIDTH IS: 5MIL.
    MINIMUM COPPER CONDUCTOR SPACING IS: 4.5MIL.
14. ALL INNER LAYER UNCONNECTED PADS SHALL BE REMOVED.
15. PWB MUST BE ROHS COMPLIANT AND SURVIVE LEAD FREE ASSEMBLY, MAX REFLOW OF 260 DEGREES C (6 PASSES).
16. 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.



DRILL CHART: TOP to BOTTOM			
ALL UNITS ARE IN MILS			
FIGURE	SIZE	PLATED	QTY
·	6.0	PLATED	387
·	8.0	PLATED	1383
SEE NOTE 16	10.0	PLATED	2337
SEE NOTE 16	12.0	PLATED	37
SEE NOTE 16	12.0	PLATED	25
SEE NOTE 16	15.0	PLATED	128
SEE NOTE 16	36.0	PLATED	14
o	36.0	PLATED	2
r	38.0	PLATED	30
o	40.0	PLATED	50
H	55.0	PLATED	4
H	59.0	PLATED	72
K	63.0	PLATED	2
◈	106.0	PLATED	2
Ⓟ	120.0	PLATED	2
R	125.0	PLATED	4
O	140.0	PLATED	1
•	35.0	NON-PLATED	2
u	50.0	NON-PLATED	2

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS +/- DECIMALS .XX +/-.01 .XXX +/-.005 ANGLES +/-	CONTRACT NO.	TEXAS INSTRUMENTS INC.
	APPROVALS / DATE	FABRICATION DRAWING TSW12D1620EVM-CVAL
	DRAWN L NGUYEN 06-08-18	
	ENG J BRINKHURST 06-08-18	
MATERIAL SEE NOTE 5		SIZE D · CODE IDENT NO. · DRAWING NO. DC073 · REV. A
FINISH SEE NOTE 7, 8, 9		SCALE NONE · SHEET 1 OF 1
DO NOT SCALE DRAWING		

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