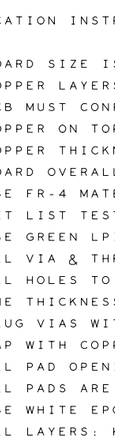
FABRICATION INSTRUCTIONS:

1. BOARD SIZE IS SHOWN IN FIGURE 2.
   COPPER LAYERS ARE DEFINED IN THE CROSS SECTION CHART.
2. PCB MUST CONFORM TO IPC-6012 CLASS 2.
3. COPPER ON TOP AND BOTTOM LAYER'S FINISHED THICKNESS SHOULD BE PER THE CROSS SECTION CHART.
   COPPER THICKNESS ON INNER LAYERS MUST BE PER THE CROSS SECTION CHART.
4. BOARD OVERALL THICKNESS IS SHOWN IN THE CROSS SECTION CHART +/-10%.
5. USE FR-4 MATERIAL FOR BOTH PREPREG AND CORE.
6. NET LIST TEST BARE BOARDS.
7. USE GREEN LPI SOLDER MASK.
8. ALL VIA & THRU-HOLES ARE SPECIFIED IN THE DRILL LEGEND.
9. ALL HOLES TO BE PLATED THROUGH, THE WALL PLATING THICKNESS MUST BE 2 MIL MINIMUM.
   THE THICKNESS OF COPPER PLATING ON THE WALL OF PLATED THROUGH HOLES SHALL BE IAW IPC-RB-276, CLASS 1.
10. PLUG VIAS WITH NON-CONDUCTIVE EPOXY AND CAP WITH COPPER.
    CAP WITH COPPER ON TOP AND BOTTOM LAYER OF ALL FILLED VIA. MINIMUM THICKNESS OF CAPPING COPPER IS 8UM FOR EACH LAYER.
11. ALL PAD OPENING MUST BE FINISHED 100% ENIG(Electroless Nickel immersion gold)
12. ALL PADS ARE SOLDERMASK DEFINED.
13. USE WHITE EPOXY NON-CONDUCTIVE INK ON SILKSCREEN ON ALL LAYERS.
14. ALL LAYERS: KEEP SILKSCREEN AWAY FROM COMPONENT PADS.
15. NOMINAL TRACE LINE WIDTH IS 15MIL +/-0.5MIL AND SPACE IS 15MIL +/- 0.5MIL.
16. DO NOT CHANGE LAYOUT WITHOUT PRIOR NOTIFICATION AND APPROVAL BY INFINEON.
17. PLEASE NOTIFY US IMMEDIATELY IF YOU EXPERIENCE ANY ERRORS WITH ANY FILES.
18. NO SHORTED NETS ON THIS BOARD.
19. MARK BOARD WITH VENDOR ID, REQUIRED UL MARKINGS AND DATE CODE.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	eGaN_MB2-HS	07/14/2016	Mark Stem
B	Moved "output resonance caps" away from HS	06/30/2017	Mark Stem
B1	Regenerated Gerber files	07/10/2017	Mark Stem
C	Fiducials; Updated BOM; FET Footprint	11/01/2017	Mark Stem
D	Test Points	11/13/2017	Mark Stem
D1	HS holes 228 dia were 218 dia	01/02/2018	Mark Stem
E	Changed TPs from SMD to Thru-hole	03/26/2018	Mark Stem
F	Respaced output FETs; Clearance for L3 & C51	10/31/2019	Mark Stem

FIGURE 1: DRILL LEGEND



* SURFACE - AIR 0 MIL
L1: TOP CONDUCTOR - 4OZ_COPPER 5.5 MIL
* DIELECTRIC - FR-4 6 MIL
L2: MID1 CONDUCTOR - 5OZ_COPPER 6.88 MIL
* DIELECTRIC - CORE_FR-4 5 MIL
L3: MID2 CONDUCTOR - 5OZ_COPPER 6.88 MIL
* DIELECTRIC - FR-4 8 MIL
L4: MID3 CONDUCTOR - 5OZ_COPPER 6.88 MIL
* DIELECTRIC - CORE_FR-4 5 MIL
L5: MID4 CONDUCTOR - 5OZ_COPPER 6.88 MIL
* DIELECTRIC - FR-4 8 MIL
L6: MID5 CONDUCTOR - 5OZ_COPPER 6.88 MIL
* DIELECTRIC - CORE_FR-4 5 MIL
L7: MID6 CONDUCTOR - 5OZ_COPPER 6.88 MIL
* DIELECTRIC - FR-4 6 MIL
L8: BOTTOM CONDUCTOR - 4OZ_COPPER 5.5 MIL
* SURFACE - AIR 0 MIL

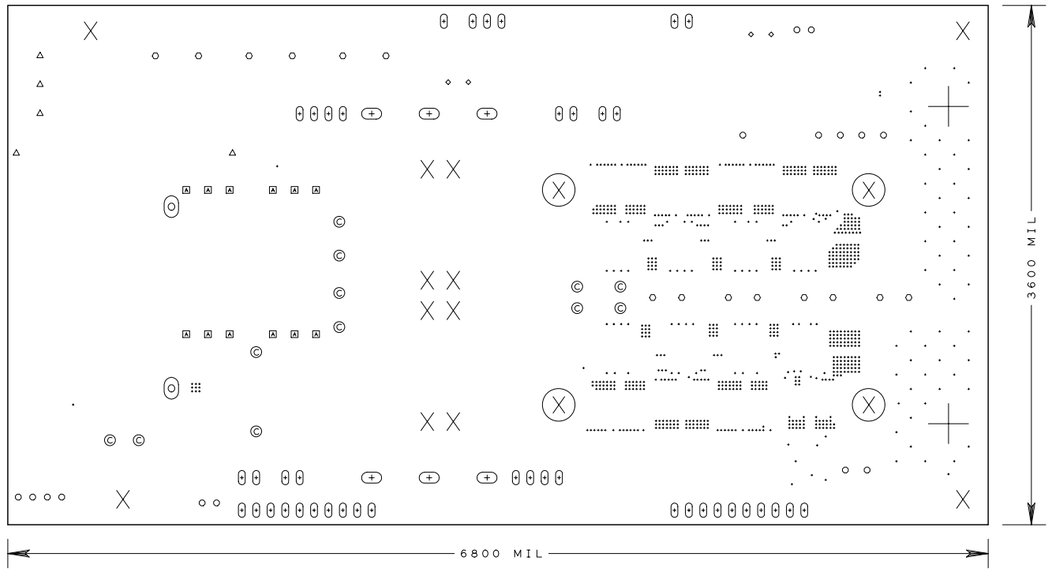
DESIGN CROSS SECTION CHART
TOTAL THICKNESS 95.28 MIL

DRILL LEGEND: TOP to BOTTOM			
ALL UNITS ARE IN MILS			
FIGURE	SIZE	PLATED	QTY
·	13.0	PLATED	835
◇	35.0	PLATED	4
○	40.0	PLATED	15
○	45.0	PLATED	14
▣	49.0	PLATED	12
△	51.0	PLATED	5
©	80.0	PLATED	12
X	125.0	PLATED	12
⊗	228.0	PLATED	4
+	280.0	PLATED	2
⊕	100.0x48.0	PLATED	42
⊕	140.0x74.0	PLATED	6
⓪	150.0x100.0	NON-PLATED	2

TOTAL HOLES: 965

NOTES:
HOLE SIZES IN LEGEND ARE FINISHED.

FIGURE 2: BOARD LAYOUT



UNLESS OTHERWISE SPECIFIED	SIGNATURES	DATE
DIMENSIONS ARE IN INCHES	STEM	07/14/2016
TOLERANCES ON:		
2 PL DECIMALS +/- .010		
3 PL DECIMALS +/- .005		
MILS +/- 5 MILS		
HOLES +/- 3 MILS		
ANGLES +		
FRACTIONS +		

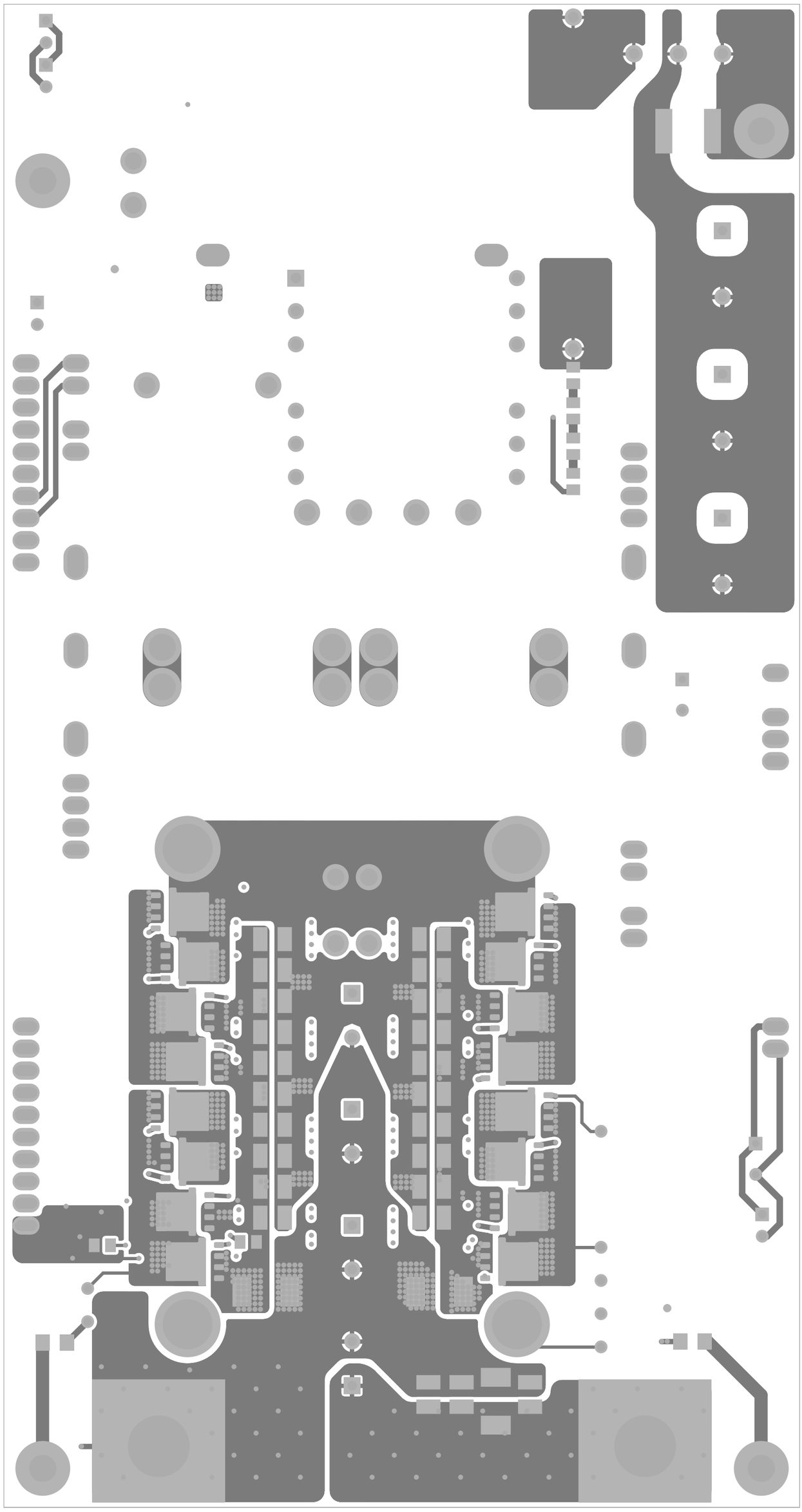
INFINEON TECHNOLOGIES
101 N. Sepulveda BL, El Segundo, CA 90245

TITLE: 3600W-eGaN_MB2-HS

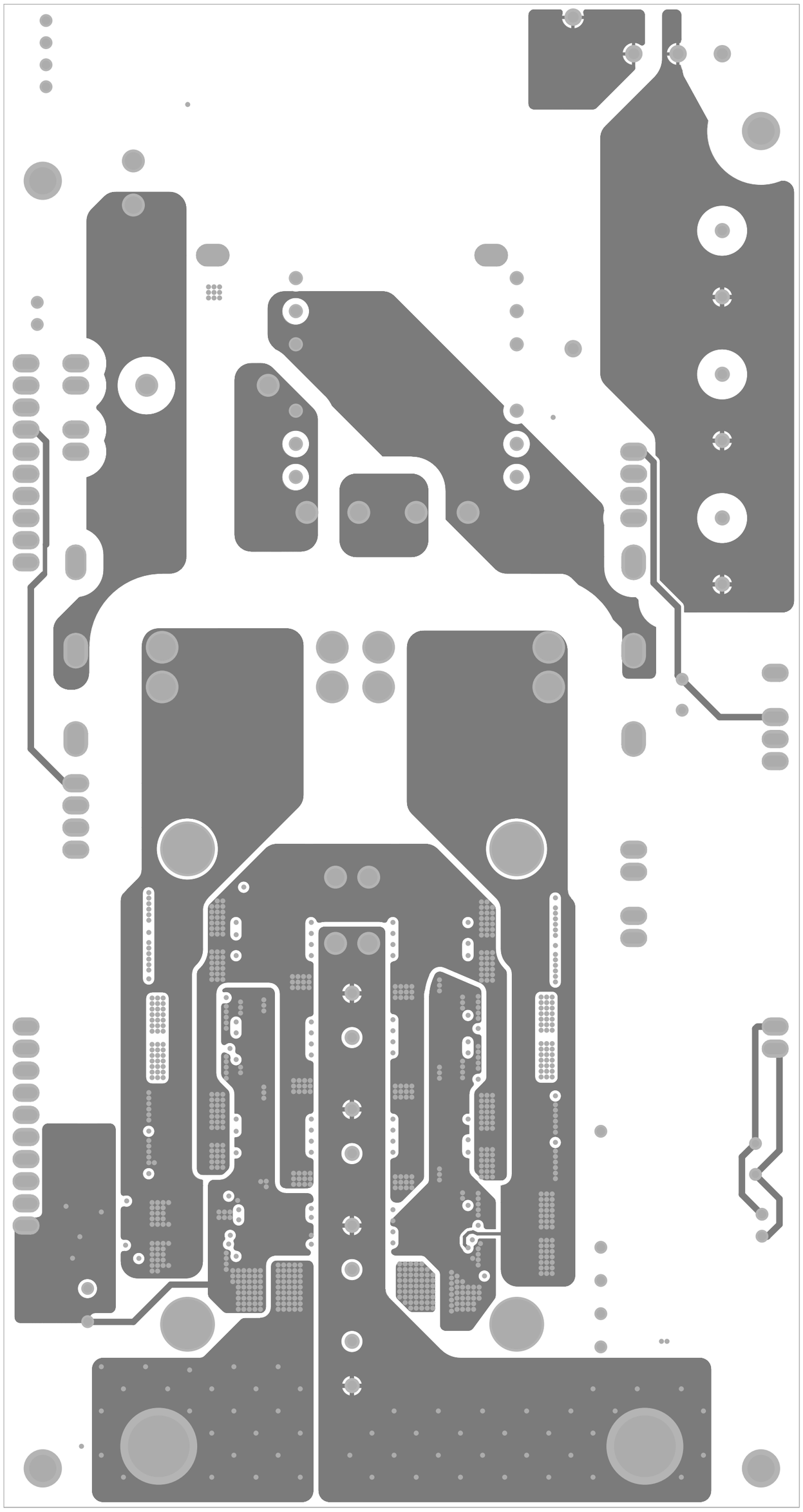
SIZE	DWG NO	REV
	P100040	F

SCALE		SHEET

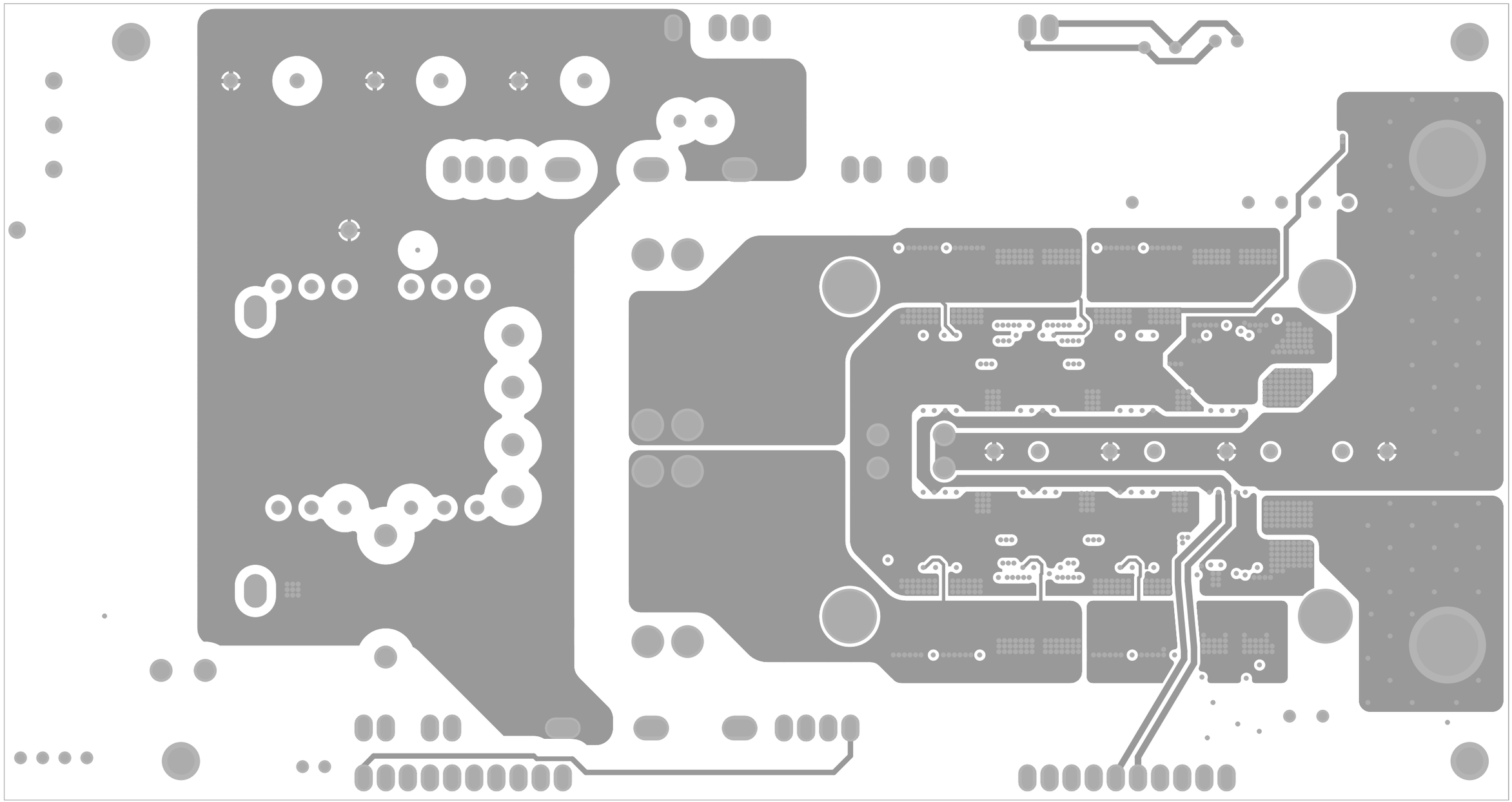
Top



Mid1

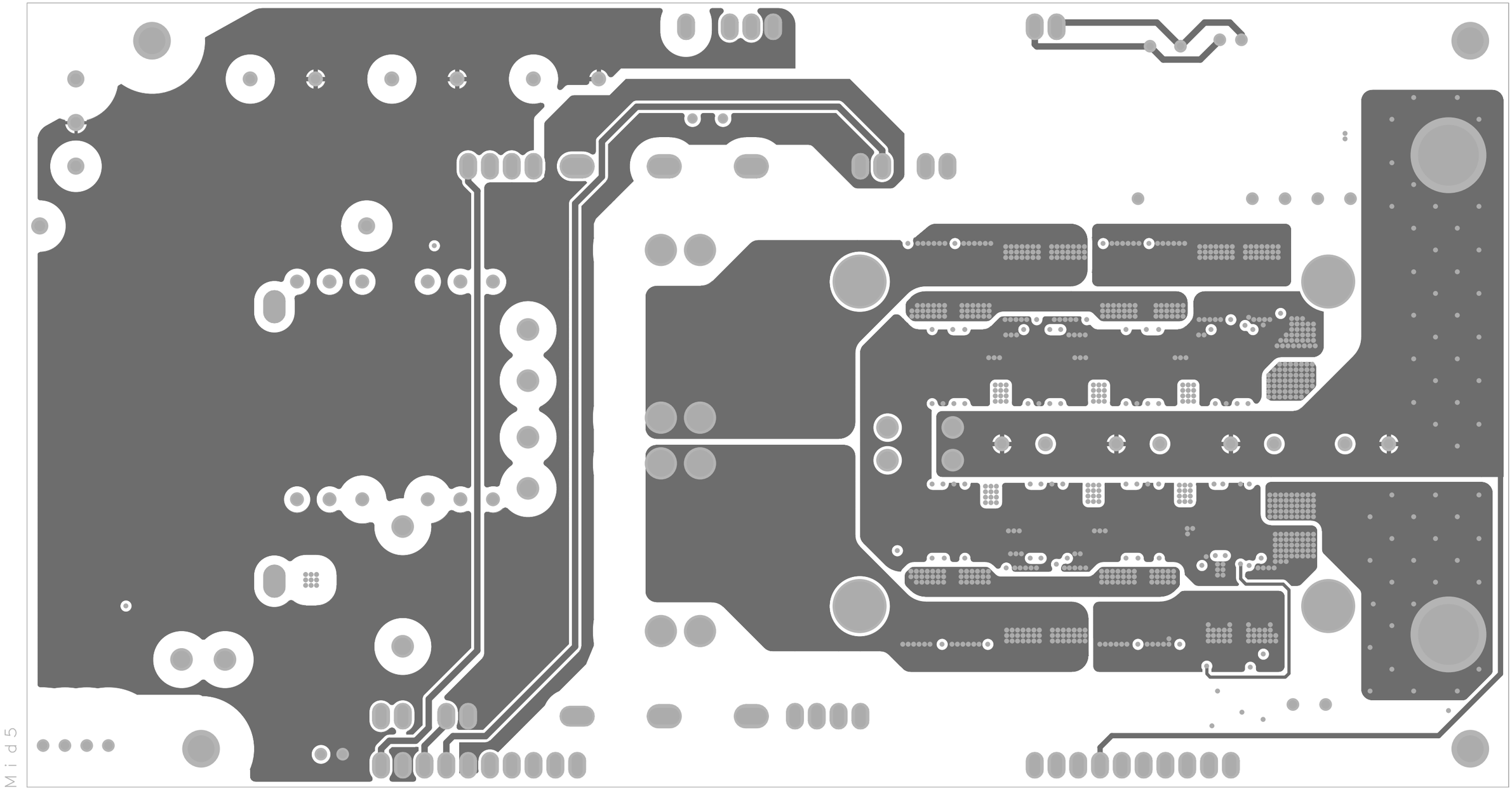


Mid2

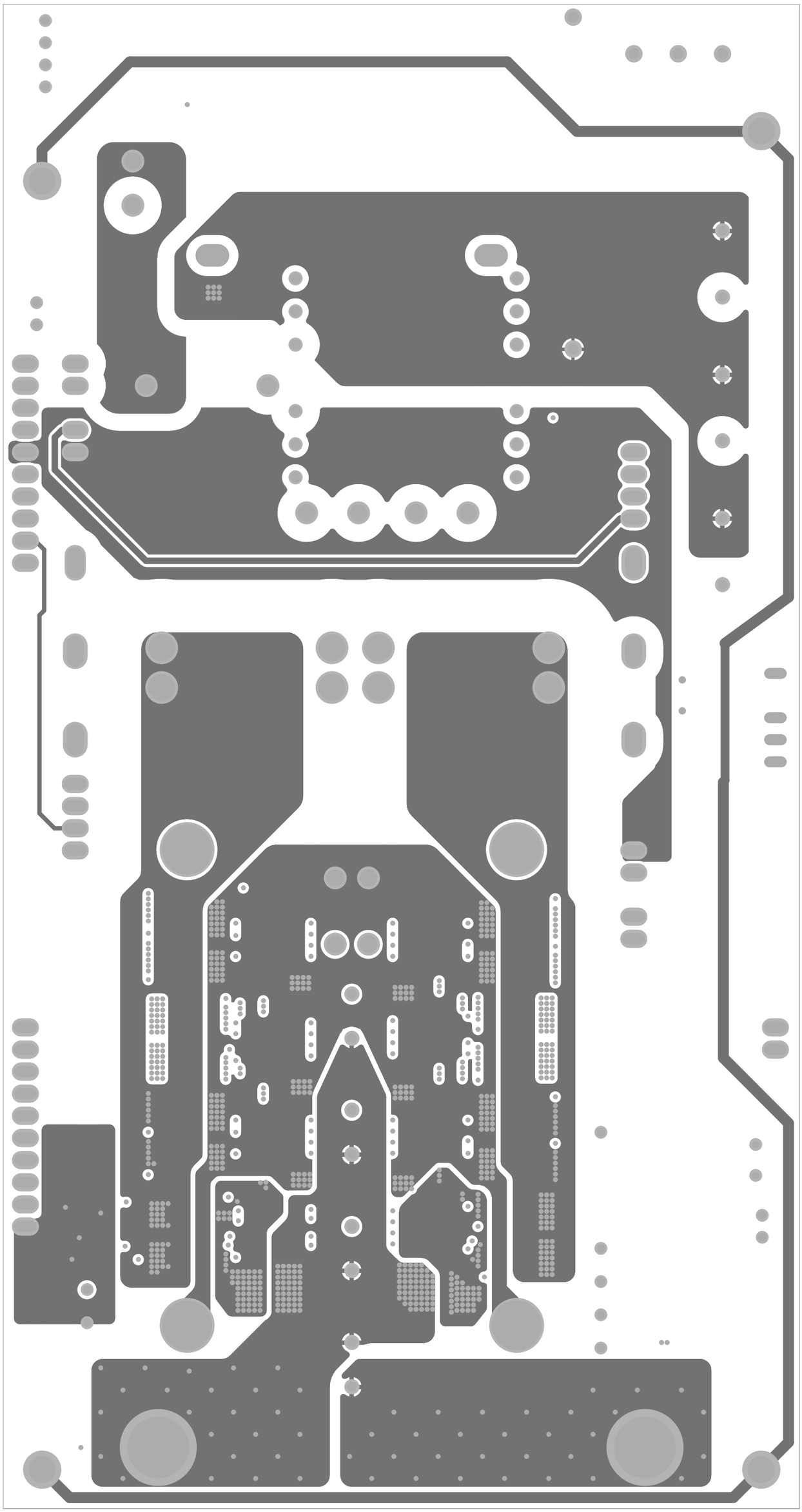


Mid3

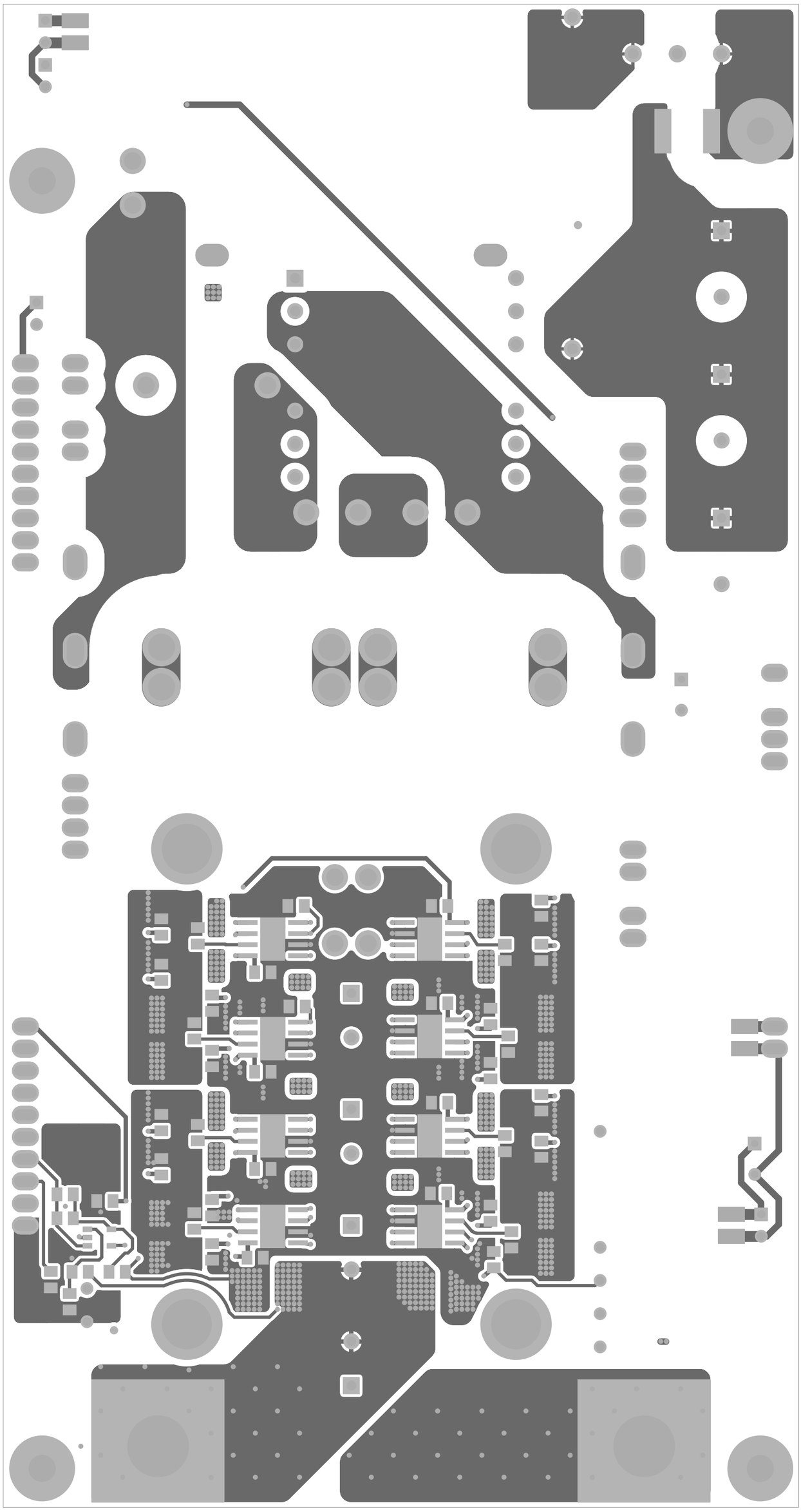
Mid4


Mid5

Mid6



Bottom



INFINEON TECHNOLOGIES

3600W
385V to 52V
LLC DC/DC
EGaN Evaluation Board

15A 250VAC

+48V

RTN

+12V

Silkscreen_Top

Silkscreen_Bottom

b1000040 E

+ −

+ − + −

+ −

C24

+ −

+ −

+48VOUT

48V Q4-S Q4-G Q4-D

Q1-G

R14 R12 C38 C32 R18 R16 C46 C34 R10 R25 C50 C36 R6 R5

U2 U1 U8 U9 C31 C35 C45 C39

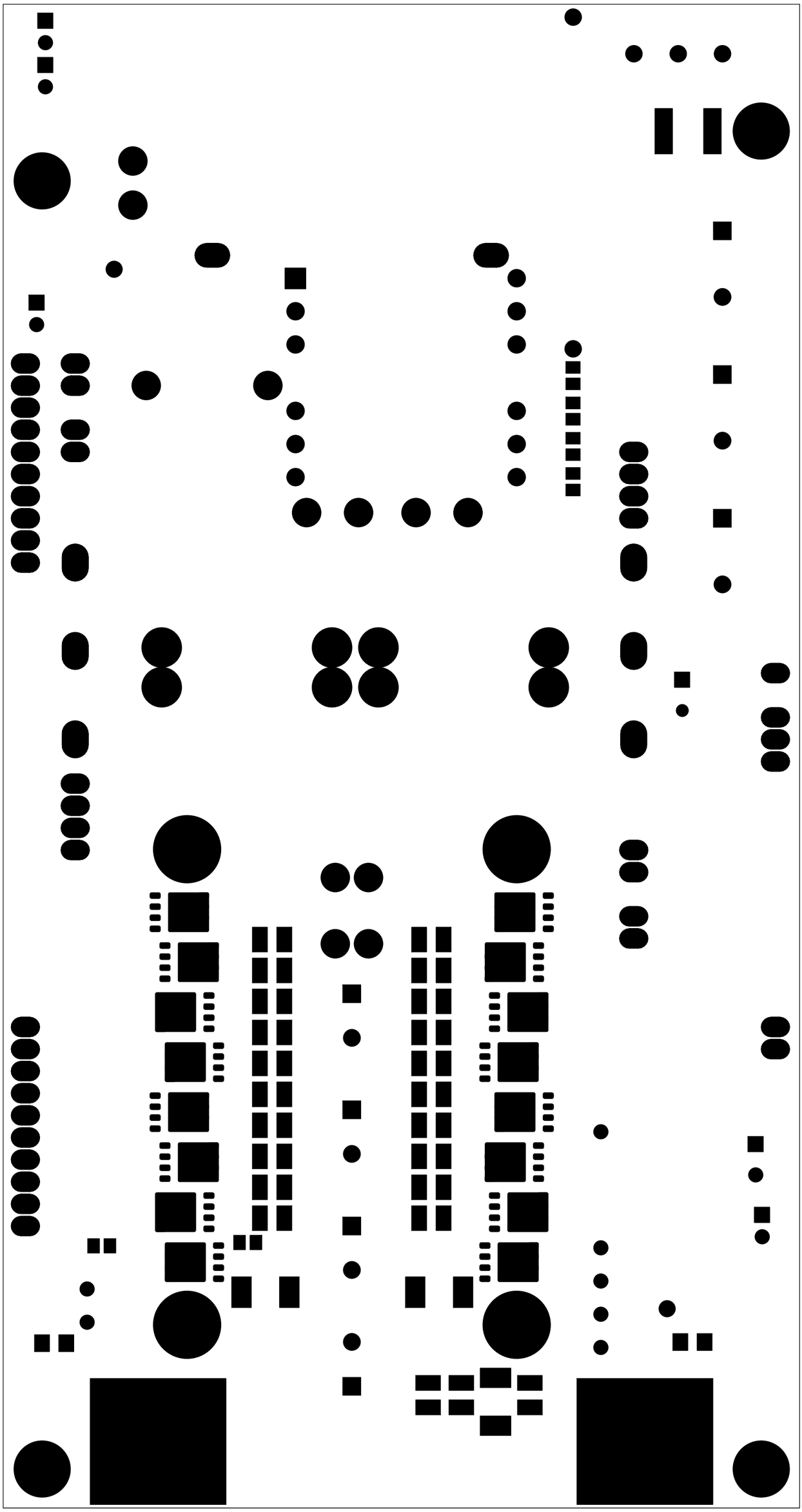
RTN

R19 R15 C48 C40 R20 R1 C42 C44 R9 R8 C43 C41 R11 R13 U5 U4 U3 U7 C33 C37

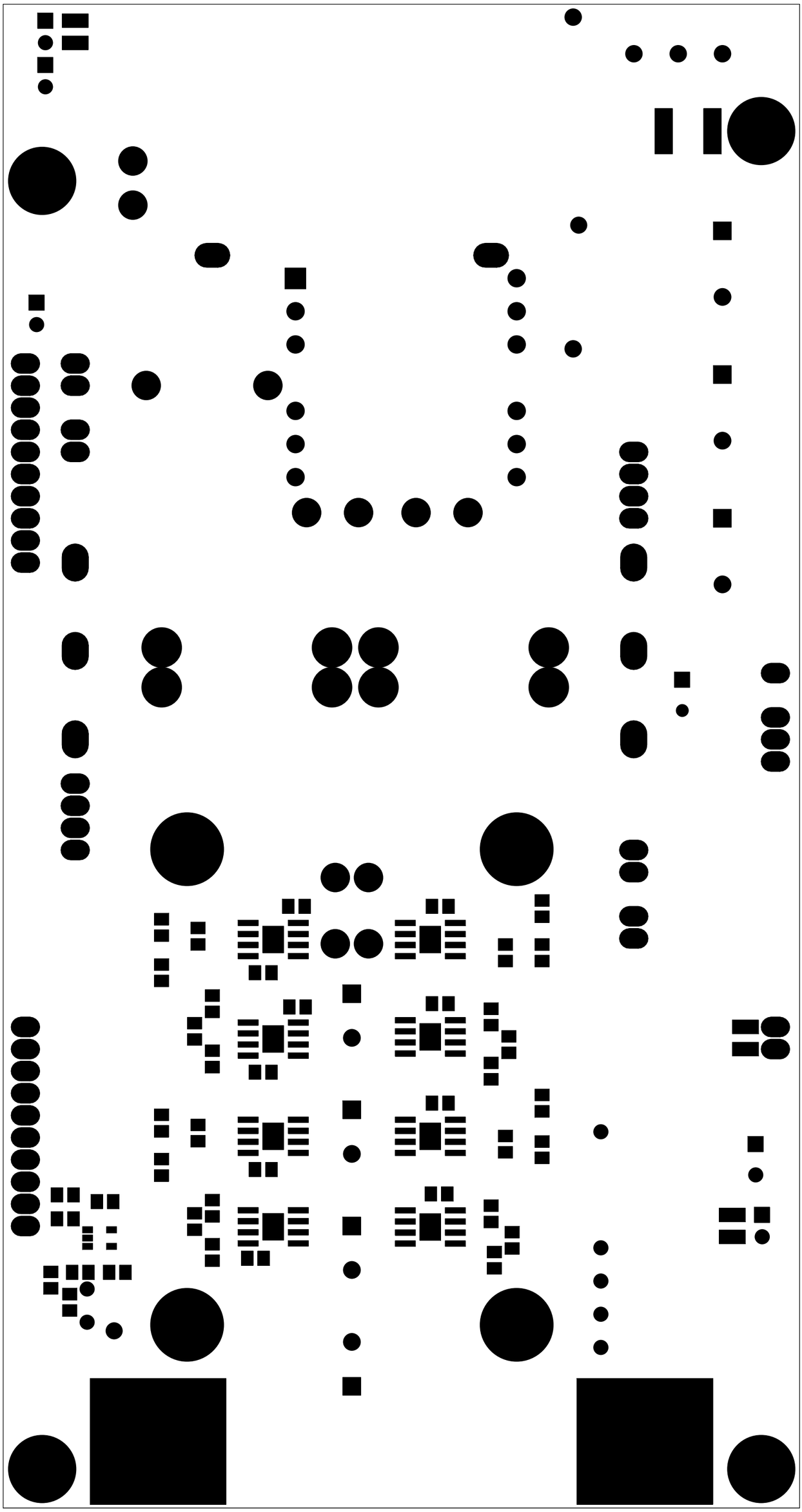
R24 R32 R29 R28 C27 C33 U10 R30

Q8-S Q8-D

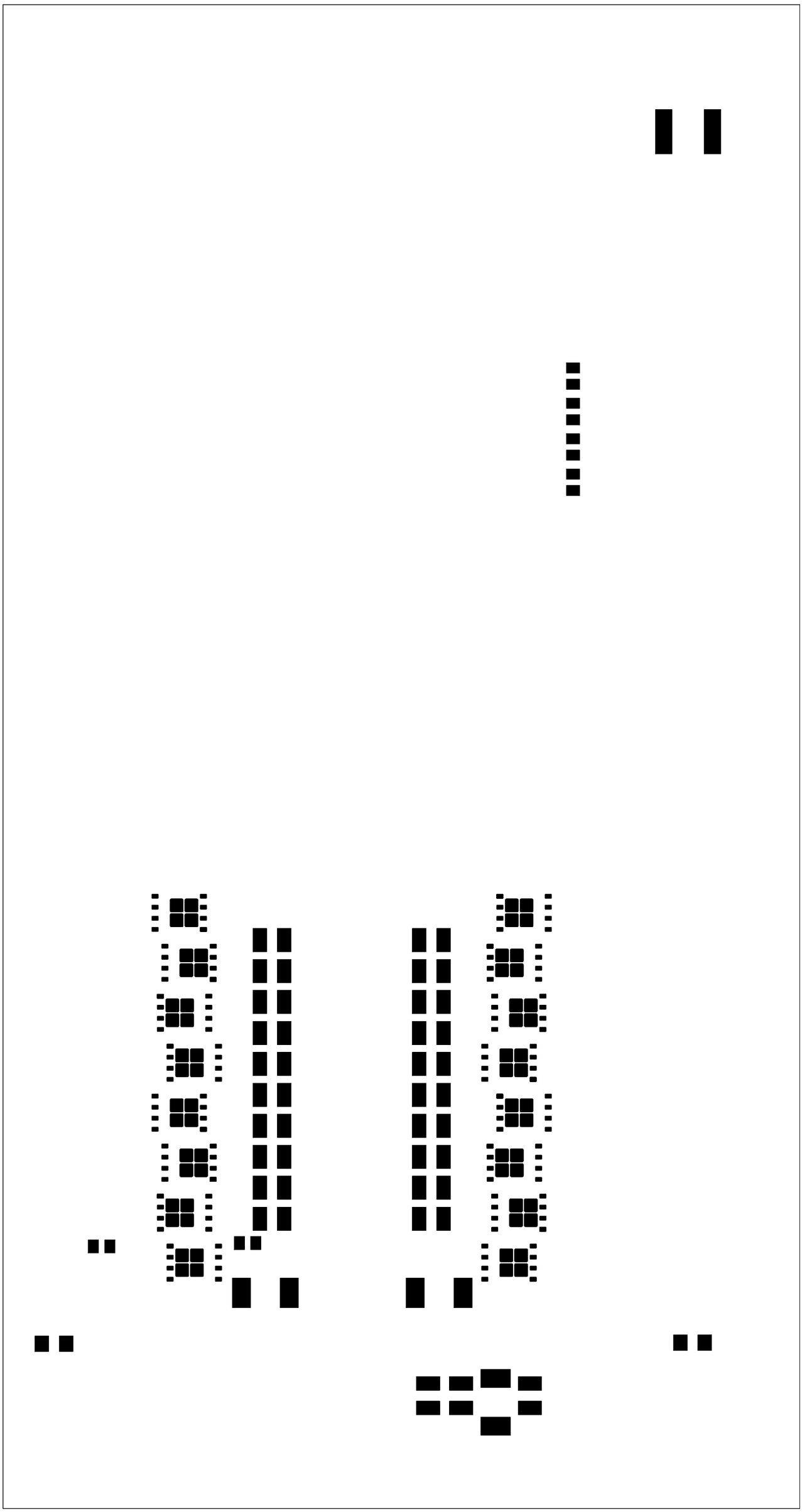
Soldermask_Top



Soldermask_Bottom



Pastemask_Top



Pastemask_Bottom

