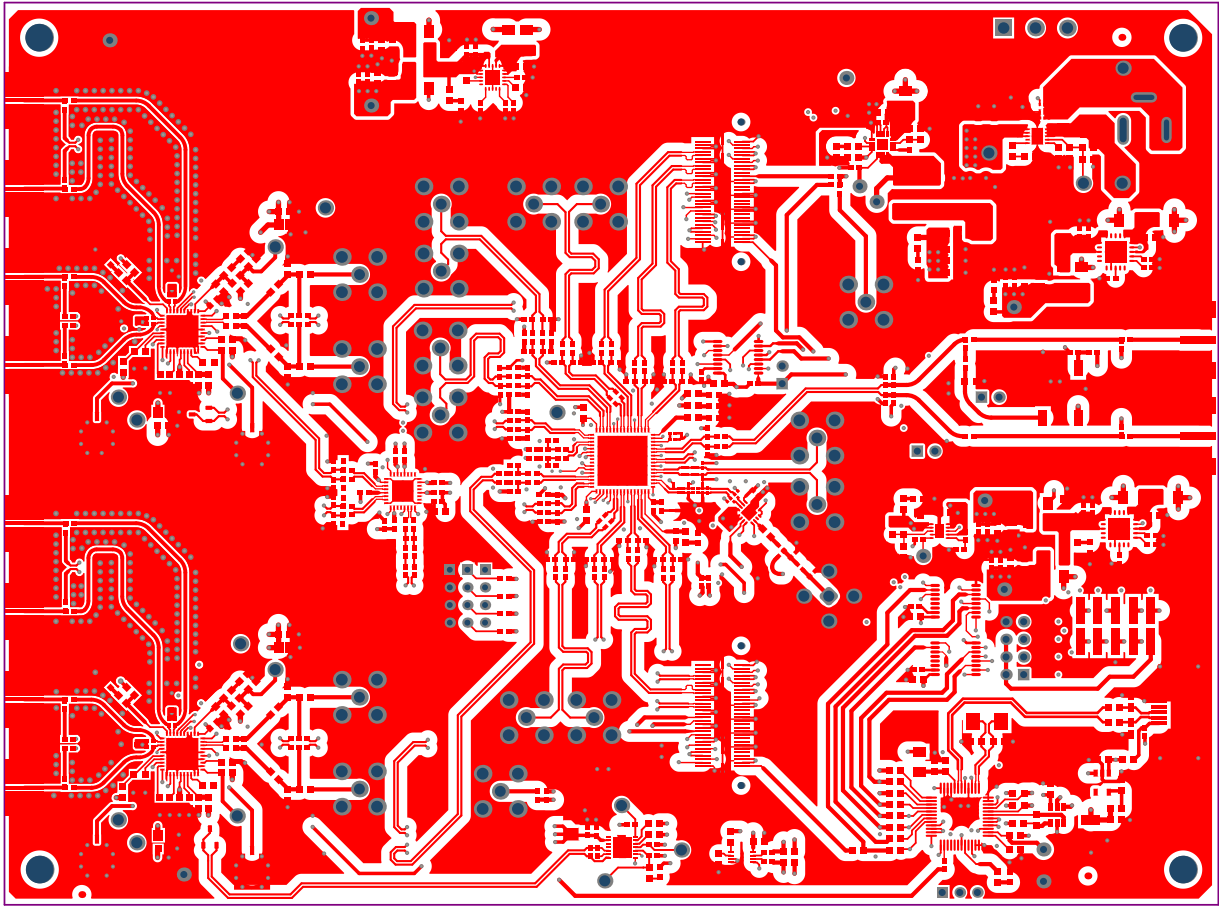
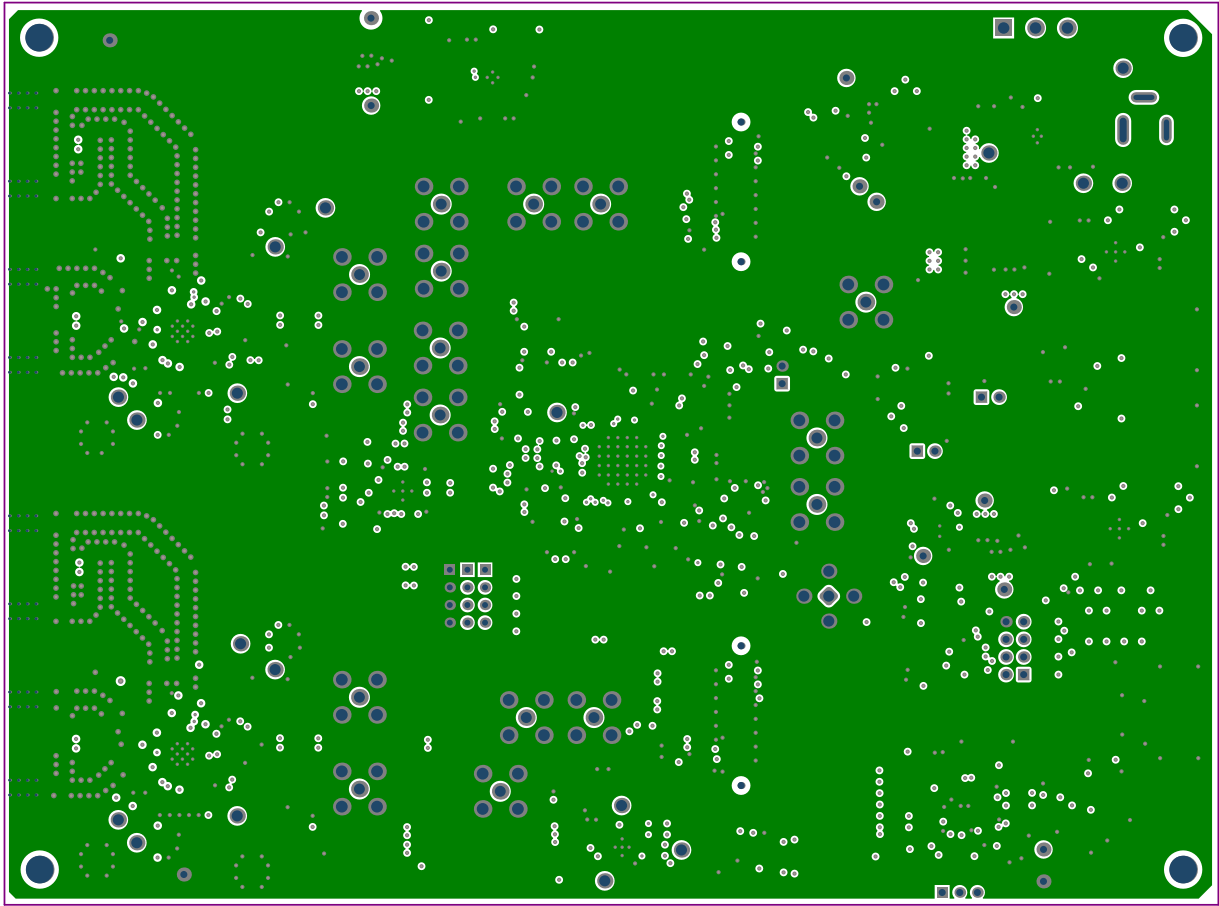


ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010131	REV: E3	SUN REV:
LAYER NAME = TOP SOLDER	TID #:010131		
PLOT NAME = Top Solder Mask	GENERATED : 2/13/2019 3:49:10 PM	TEXAS INSTRUMENTS	

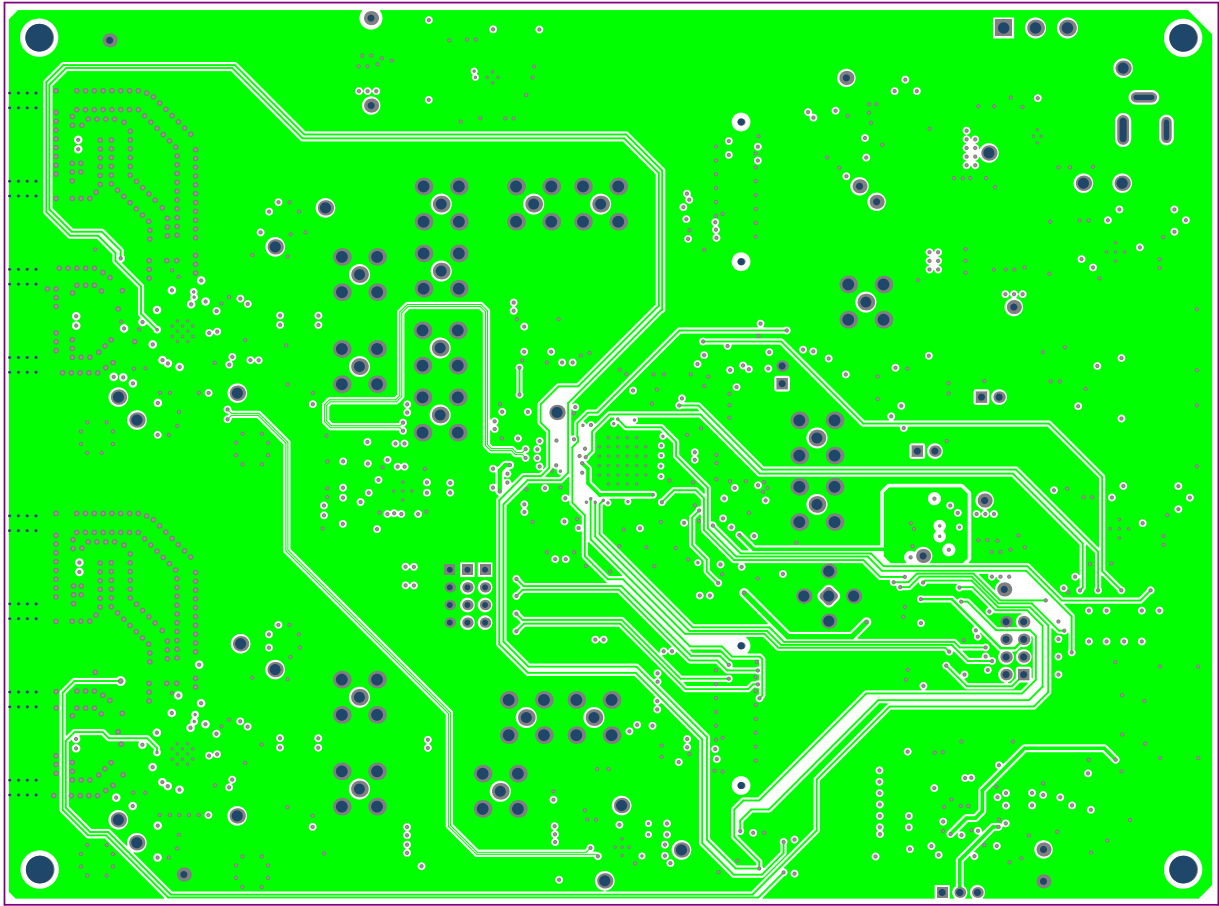


ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010131	REV: E3	SUN REV:
LAYER NAME = TOP LAYER	TID #:010131		
PLOT NAME = Top Layer	GENERATED : 2/13/2019 3:49:11 PM		TEXAS INSTRUMENTS

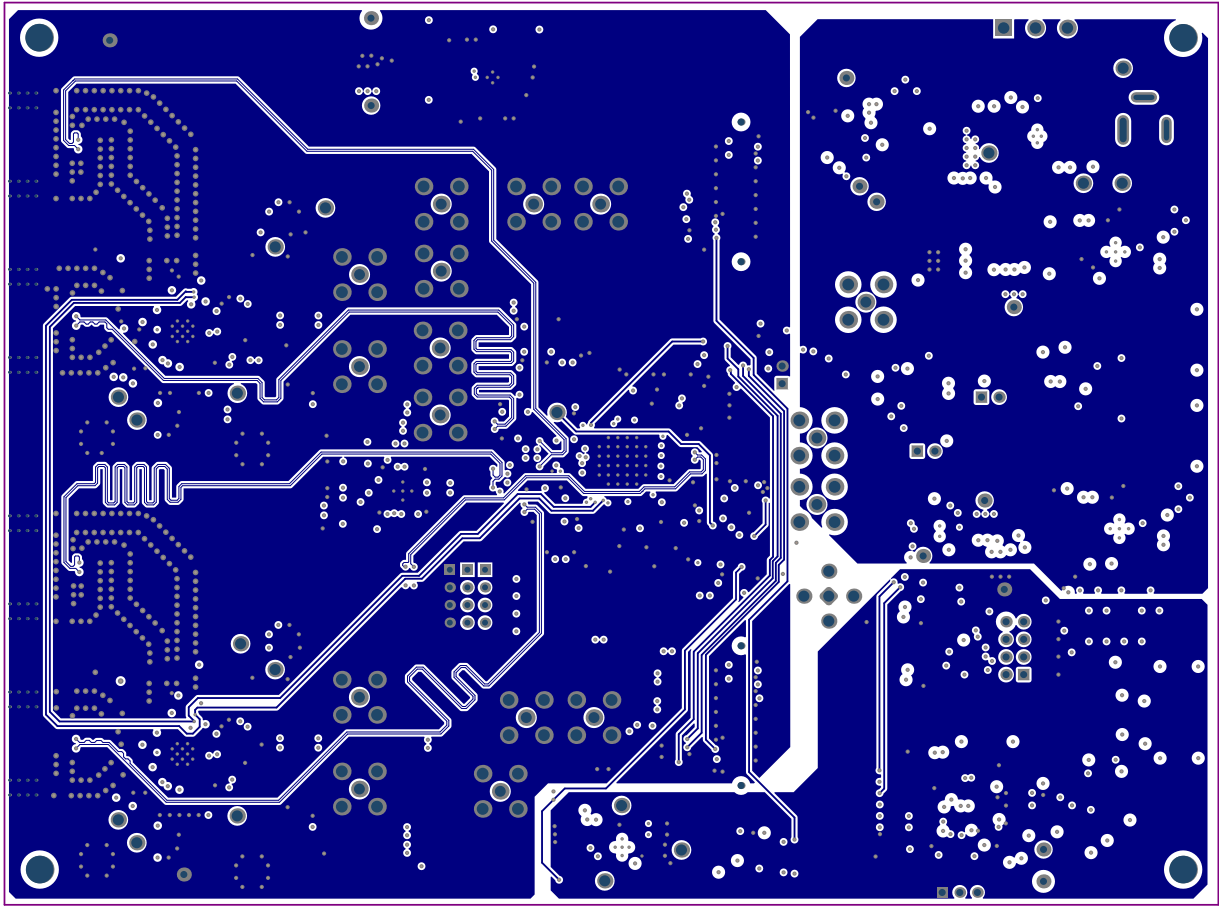


ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010131	REV: E3	SUN REV:
LAYER NAME = GND Layer	TID #:010131		
PLOT NAME = GND LAYER	GENERATED : 2/13/2019 3:49:11 PM	TEXAS INSTRUMENTS	

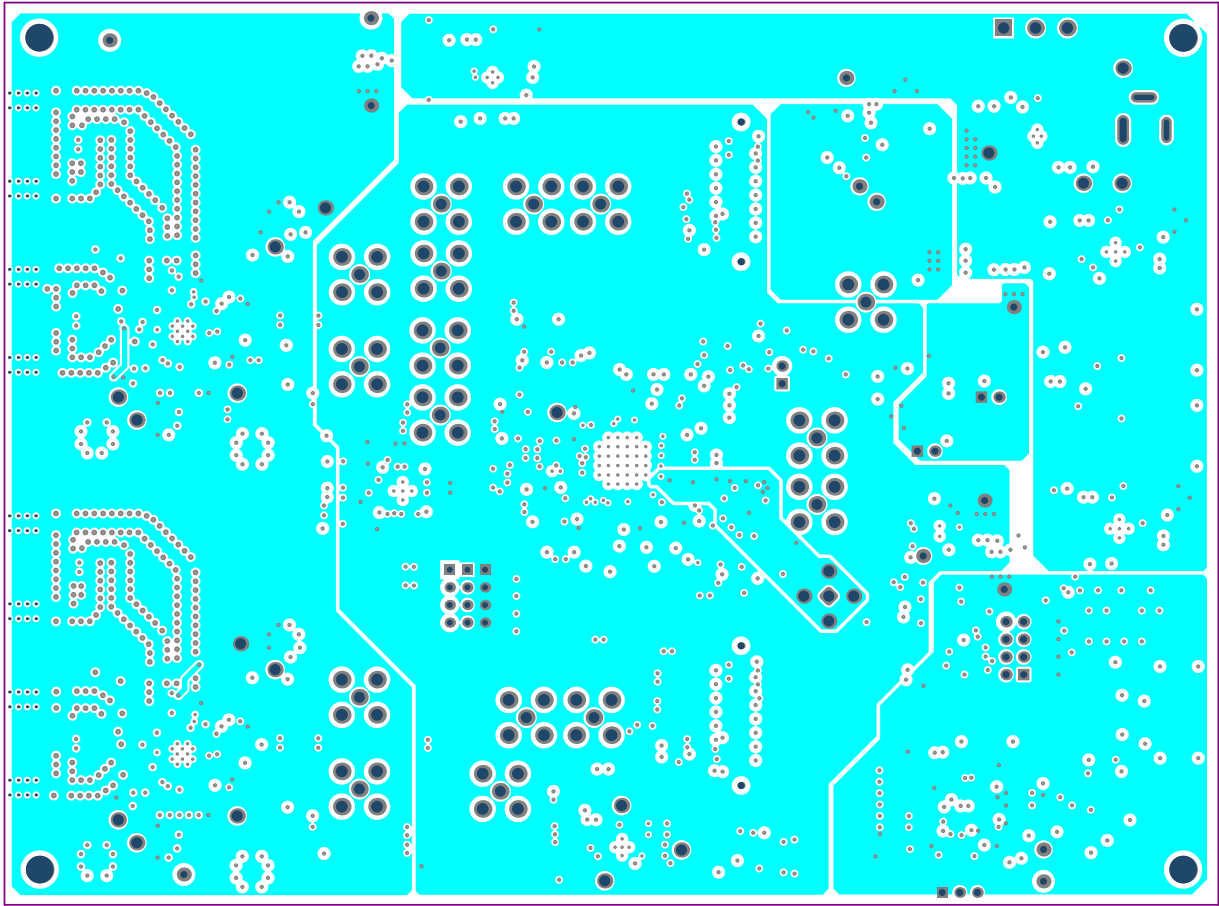




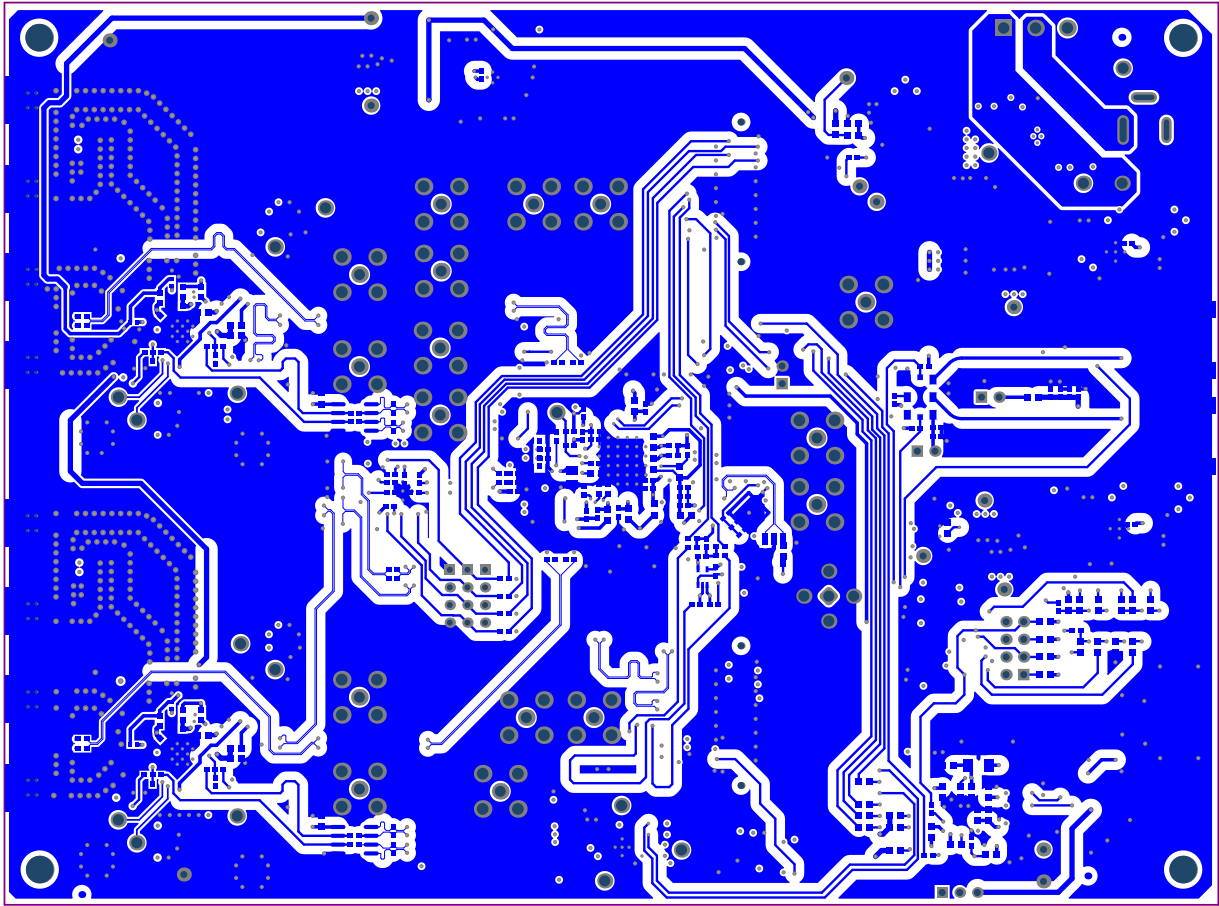
ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010131	REV: E3	SUN REV:
LAYER NAME = Signal Layer2	TID #:010131		
PLOT NAME = Signal Layer 2	GENERATED : 2/13/2019 3:49:11 PM	TEXAS INSTRUMENTS	



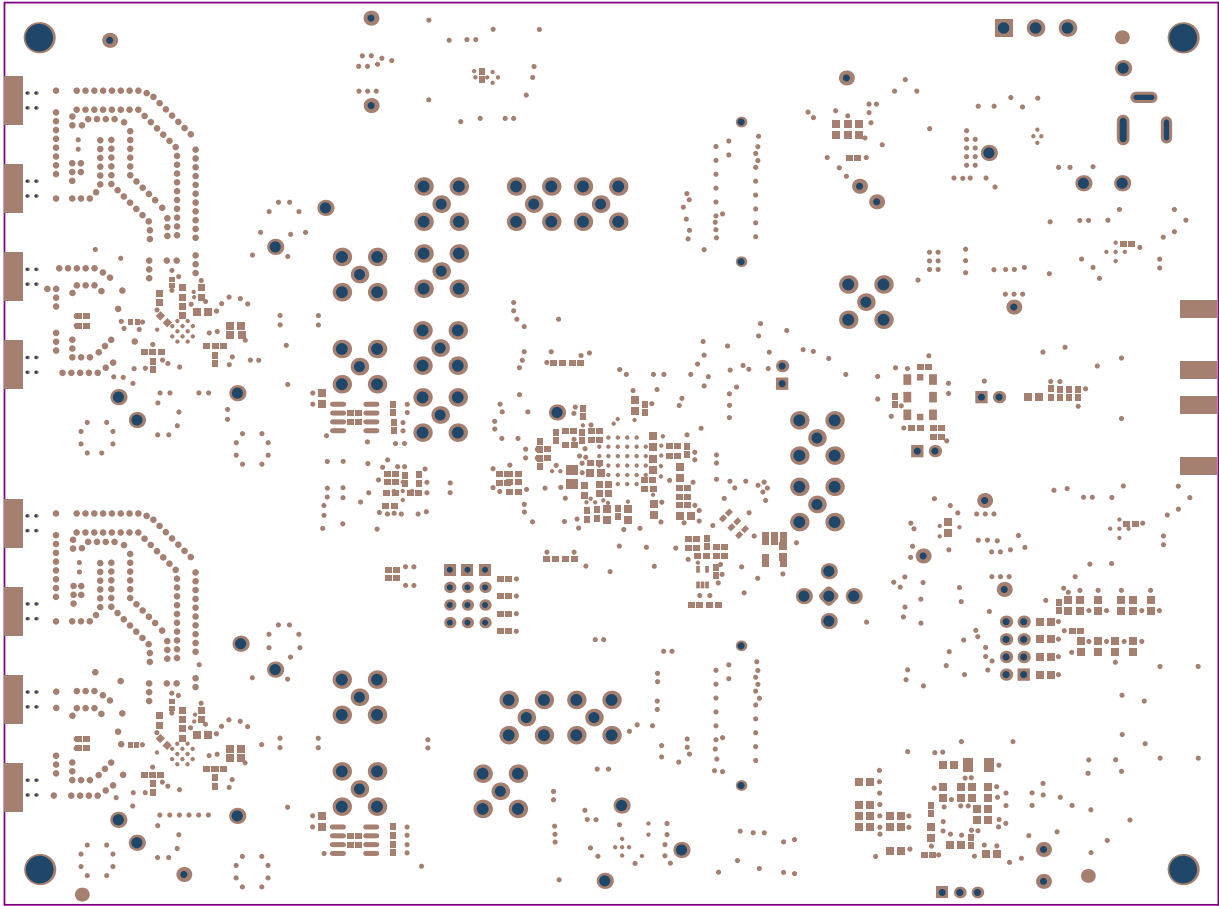
ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010131	REV: E3	SUN REV:
LAYER NAME = Signal Layer1	TID #:010131		
PLOT NAME = Signal Layer 3	GENERATED : 2/13/2019 3:49:11 PM	TEXAS INSTRUMENTS	



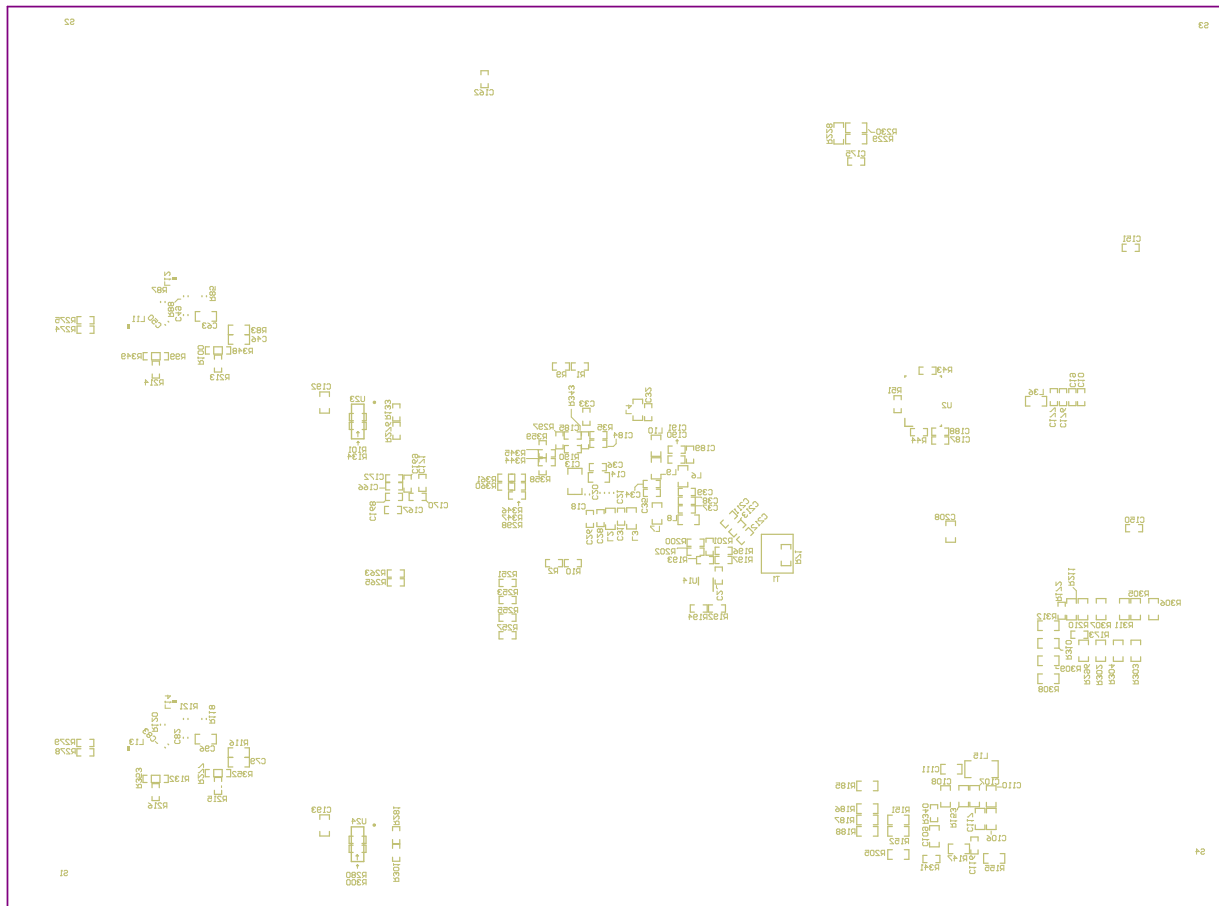
ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010131	REV: E3	SUN REV:
LAYER NAME = PWR Layer	TID #:010131		
PLOT NAME = PWR LAYER	GENERATED : 2/13/2019 3:49:12 PM	TEXAS INSTRUMENTS	



ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010131	REV: E3	SUN REV:
LAYER NAME = BOTTOM LAYER	TID #:010131		
PLOT NAME = Bottom Layer	GENERATED : 2/13/2019 3:49:12 PM	TEXAS INSTRUMENTS	



ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010131	REV: E3	SUN REV:
LAYER NAME = BOTTOM SOLDER	TID #:010131		
PLOT NAME = Bottom Solder Mask	GENERATED : 2/13/2019 3:49:12 PM		TEXAS INSTRUMENTS



ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010131	REV: E3	SUN REV:
LAYER NAME = BOTTOM OVERLAY	TID #: 010131		
PLOT NAME = Bottom Overlay	GENERATED : 2/13/2019 3:49:12 PM		TEXAS INSTRUMENTS

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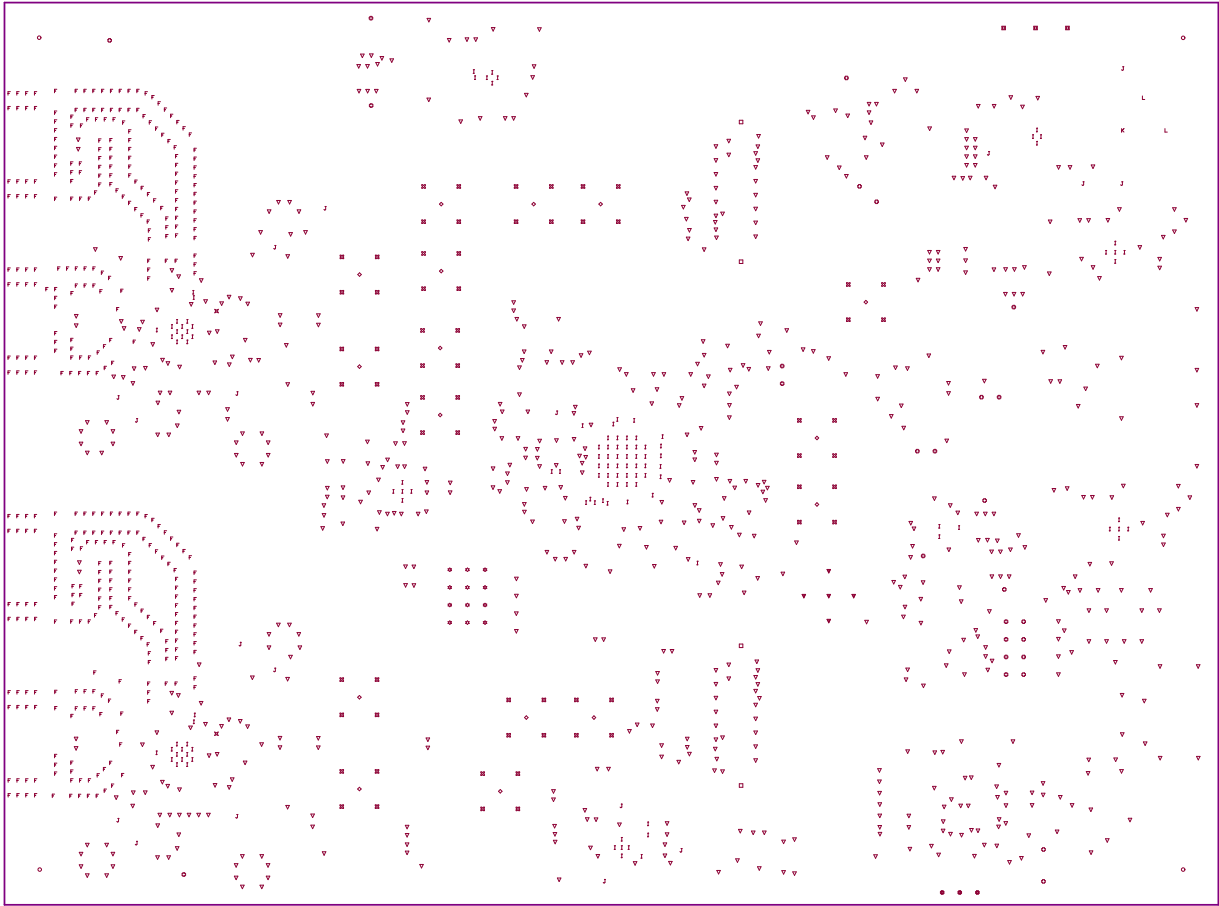
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Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.40mil	3.5	
3	Top Layer	Copper	1.40mil		
4	Dielectric1	Rogers4003C	12.00mil	4.2	
5	GND Layer	Copper	0.70mil		
6	Dielectric 4	FR4 370	8.50mil	4.2	
7	Signal Layer 1	Copper	1.40mil		
8	Dielectric 3	FR4 370	14.50mil	4.2	
9	Signal Layer 2	Copper	1.40mil		
10	Dielectric 5	FR4 370	8.50mil	4.2	
11	PWR Layer	Copper	0.70mil		
12	Dielectric 2	FR4 370	8.00mil	4.2	
13	Bottom Layer	Copper	1.40mil		
14	Bottom Solder	Solder Resist	0.40mil	3.5	
15	Bottom Overlay				

IMPEDANCE TABLE:-

Layer	SE IMP <OHM> +/-10%	SE TRACE WIDTH IN MILS	DIFF IMP <OHM> +/-10%	DIFF TRACE WIDTH/SPACING IN MILS	DIFF IMP <OHM> +/-10%	WIDTH/SPACING IN MILS	REFERENCE Layer
Top Layer	50(CPW) 50	22mil 24mil	90 ohms	15mil trace/ 7mil space	100 ohms	12mil trace/ 8mil space	GND Layer
SIGNAL Layer1	50	10.5 mil	90 ohms	-	100 ohms	5.5mil trace/ 6mil space	GND Layer
SIGNAL Layer2	50	10.5 mil	90 ohms	-	100 ohms	5.5mil trace/ 6mil space	PWR Layer
BOTTOM Layer	50	13.5 mil	90 ohms	-	100 ohms	4.25mil trace/ 4.25mil space	PWR Layer

22 mil <CPW> width on top layer should be controlled 50 ohms +/- 5%  
ALL SMA CONNECTORS TO FLUSH TO THE EDGE OF THE BOARD, NO GAP ALLOWED.  
This is especially critical for: RFoutAP, RFoutAM, RFoutBP, and RFoutBM SMA connectors

Symbol	Count	Hole Size	Plated	Hole Type	Via/Pad	Hole Length
I	117	7.87mil (0.200mm)	PTH	Round	Via	-
⊠	2	10.00mil (0.254mm)	PTH	Round	Via	-
▽	726	12.00mil (0.305mm)	PTH	Round	Via	-
F	375	16.00mil (0.406mm)	PTH	Round	<Mixed>	-
L	2	29.92mil (0.760mm)	PTH	Slot	Pad	120.08mil (3.050mm)
⊛	12	33.47mil (0.850mm)	PTH	Round	Pad	-
K	1	39.76mil (1.010mm)	PTH	Slot	Pad	140.16mil (3.560mm)
⊙	27	40.00mil (1.016mm)	PTH	Round	Pad	-
□	4	40.16mil (1.020mm)	NPTH	Round	Pad	-
⊛	3	40.16mil (1.020mm)	PTH	Round	Pad	-
◇	16	62.00mil (1.575mm)	PTH	Round	Pad	-
▽	5	62.99mil (1.600mm)	PTH	Round	Pad	-
J	18	63.00mil (1.600mm)	PTH	Round	Pad	-
▣	3	64.96mil (1.650mm)	PTH	Round	Pad	-
⊠	64	67.00mil (1.702mm)	PTH	Round	Pad	-
O	4	157.00mil (3.988mm)	NPTH	Round	Pad	-
	1379 Total					

Slot definitions : Routed Path Length = Calculated from tool start centre position to tool end centre position.  
Hole Length = Routed Path Length + Tool Size = Slot length as defined in the PCB layout

Drill Table  
FOR 7.874MIL DRILL +0/-7.874MIL  
FOR 10MIL DRILL +0/-10MIL  
FOR 12MIL DRILL +0/-12MIL  
FOR 16MIL DRILL +0/-16MIL  
FOR PTH DRILL +/-3MIL  
FOR NPTH DRILL +/-2MIL

ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010131	REV: E3	SUN REV:	Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.
LAYER NAME = DRILL DRAWING	TID #:010131			
PLOT NAME = Drill Drawing	GENERATED : 2/13/2019 3:49:14 PM		TEXAS INSTRUMENTS	

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)  
175MM X 130mm

Number of Layers : 6  
MIN. TRACK WIDTH: 4.25 MIL  
MIN. CLEARANCE: 4.25 MIL  
MIN. VIA PAD SIZE: 16 MIL

MINIMUM ANNULAR RING 5.90 MIL EXTERNAL  
PER IPC-D-275 CLASS 2 LEVEL C  
REGISTRATION TOLERANCES: METAL +/- .5 MIL, HOLES +/- .3 MIL

MATERIAL:  
☐ FR-408 ☐ FR-4 High Tg ☒ OTHER Rogers4003C and FR4 370

THICKNESS: ☒ 63 MIL (1.6mm) +/-10% ☐ OTHER

TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2  
☐ OTHER +/-

BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2  
☐ OTHER +/-

COPPER THICKNESS (FINISHED):  
OUTER: ☒ 1.4MIL (1oz) ☐ 2MIL (1.4oz) ☐ 2.8MIL (2oz)  
INNER SIGNAL: ☒ 1.4MIL (1oz) ☒ 0.7MIL (1/2oz) ☐ N/A

DRILLING:  
REFERENCE: ☒ AS SHOWN ☒ NC\_DRILL FILES  
PTH MIN COPPER THICKNESS: ☒ 1MIL ☐ OTHER

BOARD FINISH:  
SILKSCREEN: ☒ TOP ☒ BOTTOM  
SILKSCREEN COLOR: ☒ WHITE ☐ OTHER  
SOLDER RESIST COLOR:  
☐ GREEN ☒ BLUE ☐ OTHER

SURFACE FINISH: ☒ IMMERSION GOLD (ENIG) ☐ ENEPIG  
☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER

ARRAY/PANEL: ☐ CUT AND TRIM PER MECH LAYER 1  
☐ N.C. ROUTE ☒ V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:  
☒ ANSI IPC-A-600F CLASS -> ☐ 1 ☒ 2 ☐ 3  
☒ UL 94V-0 ☒ RoHS ☐ OTHER PER ORDER

ADDITIONAL REQUIREMENTS: VIA TENTING: YES ☐ NO ☒  
MICROSECTION: ☐ YES IMPEDANCE CONTROL: YES ☒ NO ☐  
BARE BOARD ELEC. TEST: ☐ NONE ☒ REQUIRED ☐ PER ORDER  
MANUFACTURER'S UL: ☐ RAIL ☐ METAL ☒ SILK



TIDA-010131	
DESIGNED FOR: Public Release	
FILE NAME: TIDA-010131-E3.PcbDoc	
ENGINEER: Ajeet Pal	LAYOUT BY: Avinash N
SCALE: 0.92	ALTUM DESIGNER VERSION: 18.1.9.240

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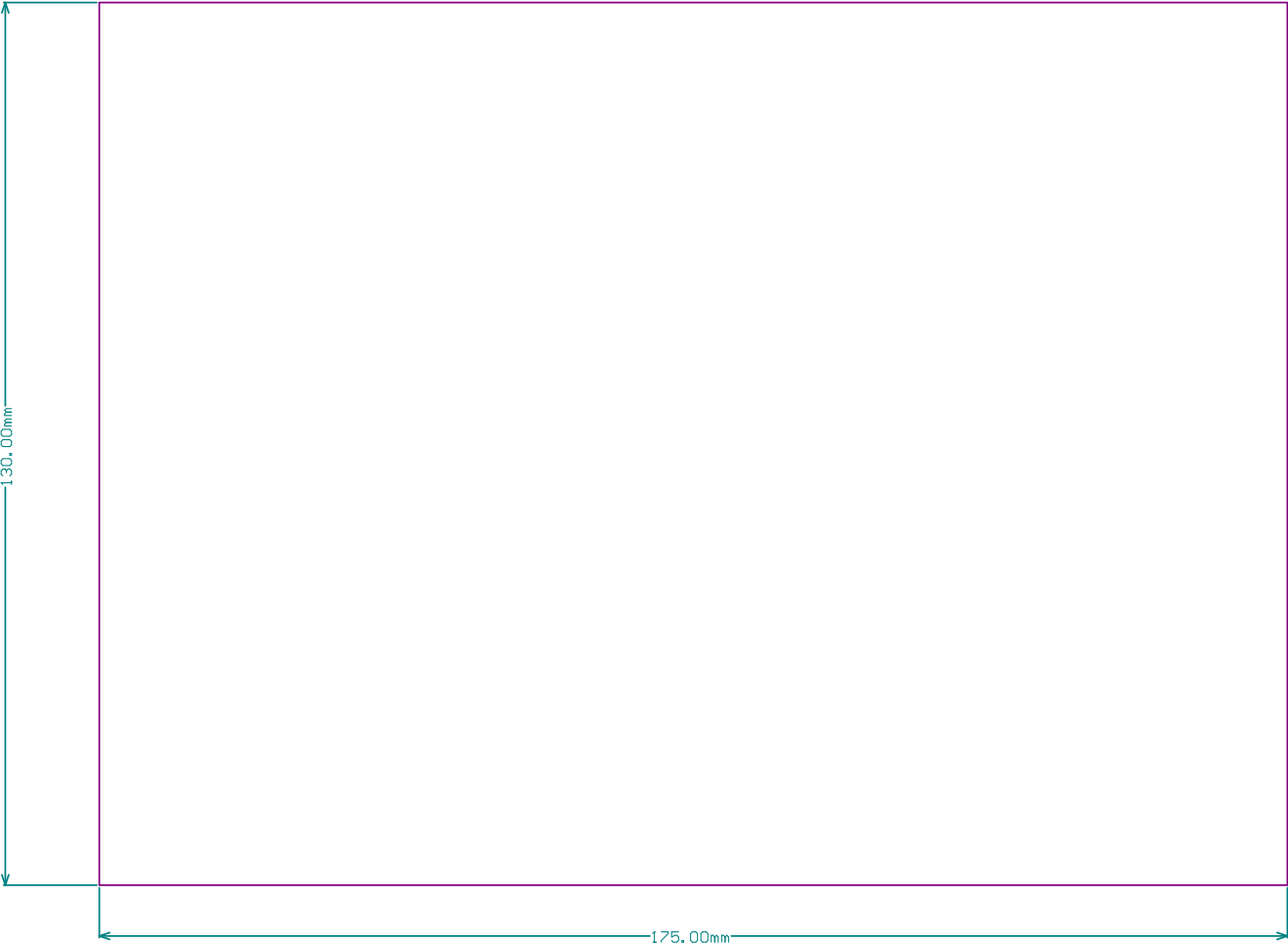
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ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010131	REV: E3	SUN REV:
LAYER NAME =	TID #:010131		
PLOT NAME = Board Dimensions	GENERATED : 2/13/2019 3:49:27 PM		TEXAS INSTRUMENTS