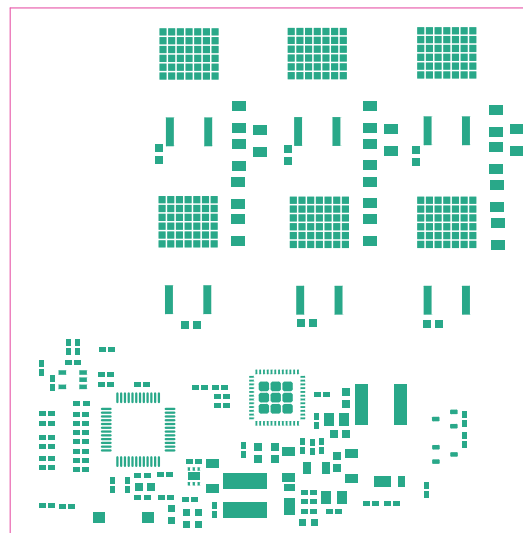
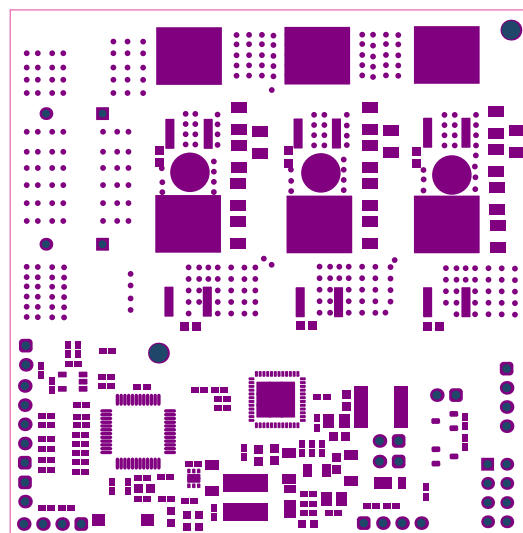


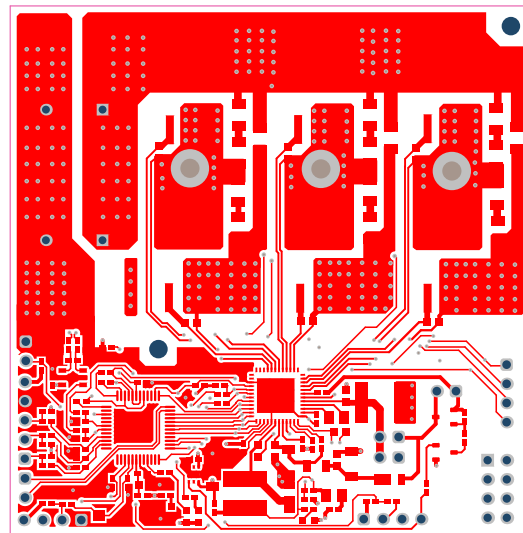
ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010056	REV: E2	SUN REV: Not In VersionControl
LAYER NAME = Top Overlay	TID #: 010056		
Top Overlay	GENERATED : 5/28/2019 8:54:04 PM	TEXAS INSTRUMENTS	



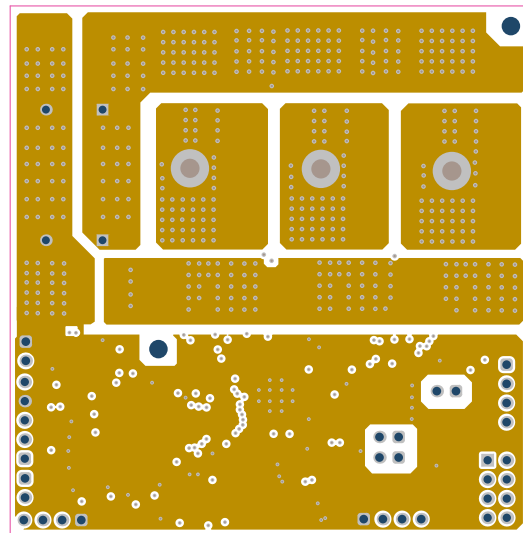
ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010056	REV: E2	SUN REV: Not In VersionControl
LAYER NAME = Top Paste	TID #: 010056		
Top Paste	GENERATED : 5/28/2019 8:54:05 PM	TEXAS INSTRUMENTS	



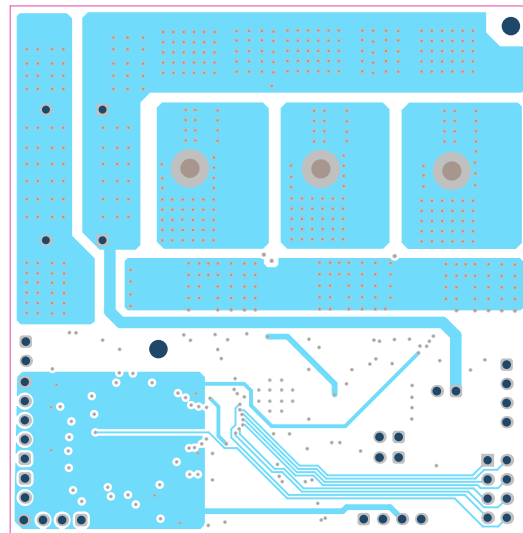
ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010056	REV: E2	SUN REV: Not In VersionControl
LAYER NAME = Top Solder	TID #: 010056		
Top Solder Mask	GENERATED : 5/28/2019 8:54:06 PM	TEXAS INSTRUMENTS	



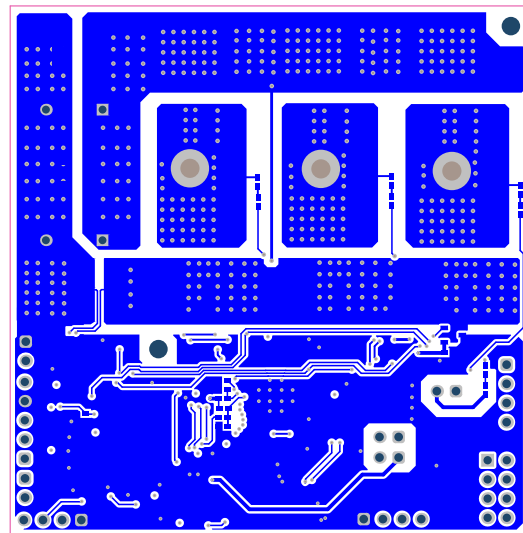
ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010056	REV: E2	SUN REV: Not In VersionControl
LAYER NAME = Top Layer	TID #: 010056		
Top Layer	GENERATED : 5/28/2019 8:54:07 PM	TEXAS INSTRUMENTS	



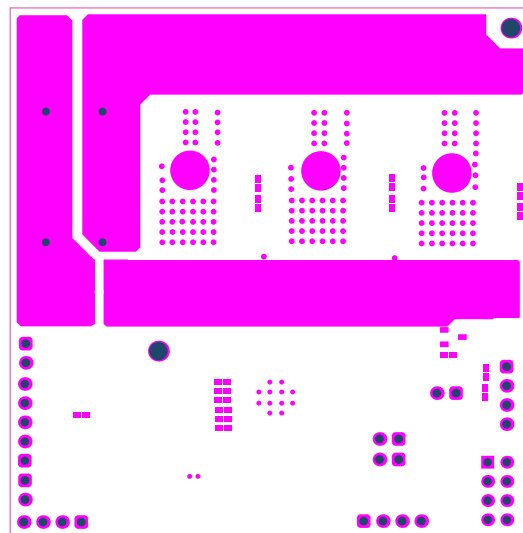
ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010056	REV: E2	SUN REV: Not In VersionControl
LAYER NAME = GND	TID #: 010056		
GND	GENERATED : 5/28/2019 8:54:08 PM	TEXAS INSTRUMENTS	



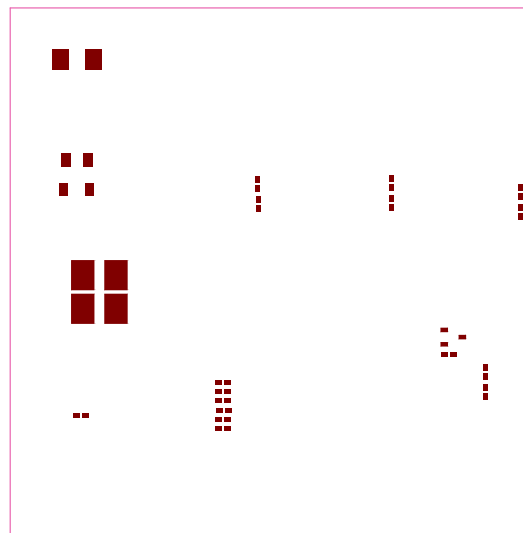
ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010056	REV: E2	SUN REV: Not In VersionControl
LAYER NAME = PWR	TID #: 010056		
PWR	GENERATED : 5/28/2019 8:54:09 PM	TEXAS INSTRUMENTS	



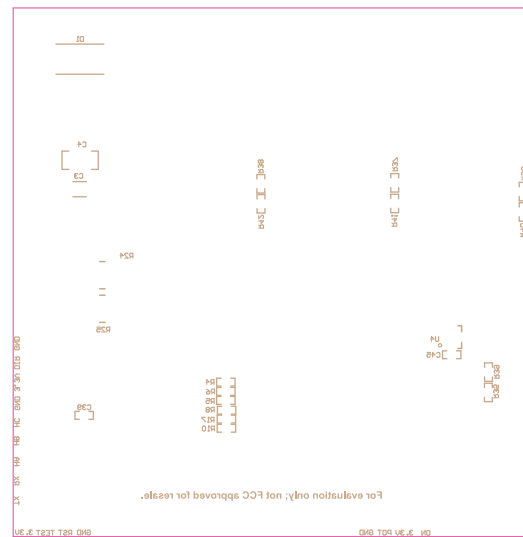
ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010056	REV: E2	SUN REV: Not In VersionControl
LAYER NAME = Bottom Layer	TID #: 010056		
Bottom Layer	GENERATED : 5/28/2019 8:54:10 PM	TEXAS INSTRUMENTS	



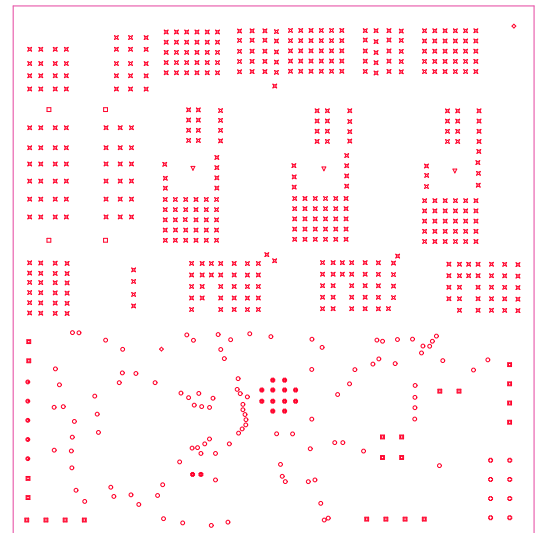
ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010056	REV: E2	SUN REV: Not In VersionControl
LAYER NAME = Bottom Solder	TID #: 010056		
Bottom Solder Mask	GENERATED : 5/28/2019 8:54:11 PM	TEXAS INSTRUMENTS	



ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010056	REV: E2	SUN REV: Not In VersionControl
LAYER NAME = Bottom Paste	TID #: 010056		
Bottom Paste	GENERATED : 5/28/2019 8:54:12 PM	TEXAS INSTRUMENTS	



ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010056	REV: E2	SUN REV: Not In VersionControl
LAYER NAME = Bottom Overlay	TID #: 010056		
Bottom Overlay	GENERATED : 5/28/2019 8:54:14 PM	TEXAS INSTRUMENTS	



Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.40mil	3.5	
3	Top Layer	Copper	2.80mil		
4	Dielectric1	FR-4 High Tg	20.00mil	4.2	
5	GND	Copper	2.80mil		
6	Dielectric 3	FR-4 High Tg	12.00mil	4.2	
7	PWR	Copper	2.80mil		
8	Dielectric 2	FR-4 High Tg	20.00mil	4.2	
9	Bottom Layer	Copper	2.80mil		
10	Bottom Solder	Solder Resist	0.40mil	3.5	
11	Bottom Overlay				

Symbol	Count	Hole Size	Plated	Drill Layer Pair
⊕	14	7.87mil (0.200mm)	PTH	Top Layer - Bottom Layer
○	108	10.00mil (0.254mm)	PTH	Top Layer - Bottom Layer
⊗	476	12.00mil (0.305mm)	PTH	Top Layer - Bottom Layer
□	4	41.34mil (1.050mm)	PTH	Top Layer - Bottom Layer
⊕	8	43.31mil (1.100mm)	PTH	Top Layer - Bottom Layer
⊙	5	43.31mil (1.100mm)	PTH	Top Layer - Bottom Layer
■	22	45.28mil (1.150mm)	PTH	Top Layer - Bottom Layer
◇	2	96.46mil (2.450mm)	NPTH	Top Layer - Bottom Layer
▽	3	100.00mil (2.540mm)	PTH	Top Layer - Bottom Layer
	642 Total			

FOR 7.874MIL DRILL +0/-7.874MIL
 FOR 10MIL DRILL +0/-10MIL
 FOR 10MIL DRILL +0/-10MIL
 FOR PTH DRILL +/-3MIL
 FOR NPTH DRILL +/-2MIL

NOTE :
 Only 10 mil vias are tented , others are not tented.

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)
69mm X 70mm

Number of Layers : 4
 MIN. TRACK WIDTH: 8 MIL
 MIN. CLEARANCE: 7 MIL
 MIN. VIA DRILL SIZE: 7.87 MIL

MINIMUM ANNULAR RING 5.91 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 _____

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) 2.8MIL (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

ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010056	REV: E2	SUN REV: Not In VersionControl
LAYER NAME = Drill Drawing	TID #: 010056		
Drill Drawing	GENERATED : 5/28/2019 8:54:16 PM	TEXAS INSTRUMENTS	

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TEXAS INSTRUMENTS

PROJECT TITLE:
54U, 1.5kW, 3-Phase BLDC Drive Power stage

DESIGNED FOR:
Public Release

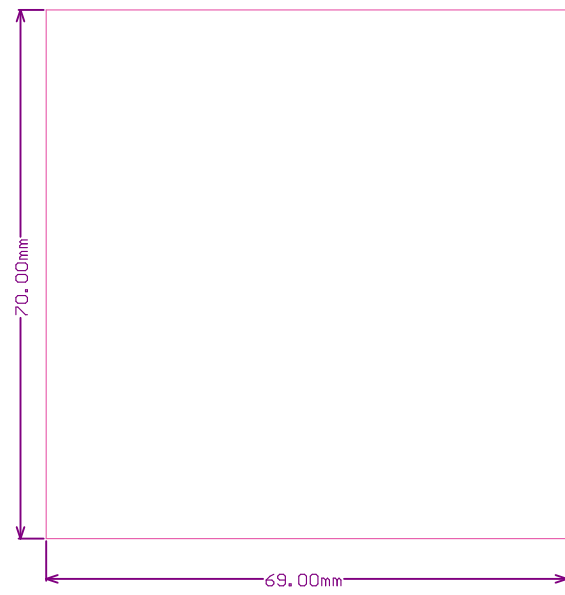
FILE NAME:
TIDA-010056.PcbDoc

ENGINEER:
Manu Balakrishnan

LAYOUT BY:
Manu Balakrishnan

SCALE: 1.00

ALTIM DESIGNER VERSION:
18.1.9.240



ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-010056	REV: E2	SUN REV: Not In VersionControl
LAYER NAME =	TID #: 010056		
Board Dimensions	GENERATED : 5/28/2019 8:54:18 PM	TEXAS INSTRUMENTS	

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