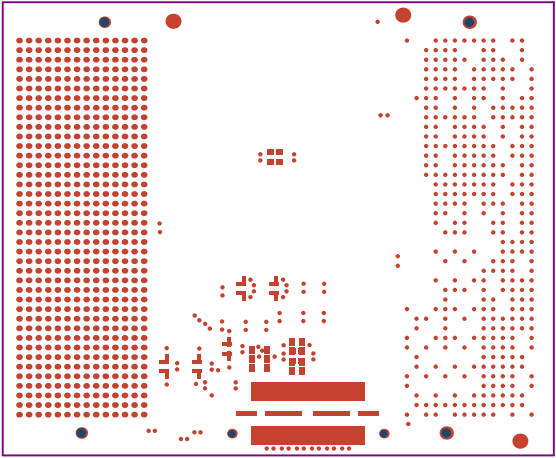
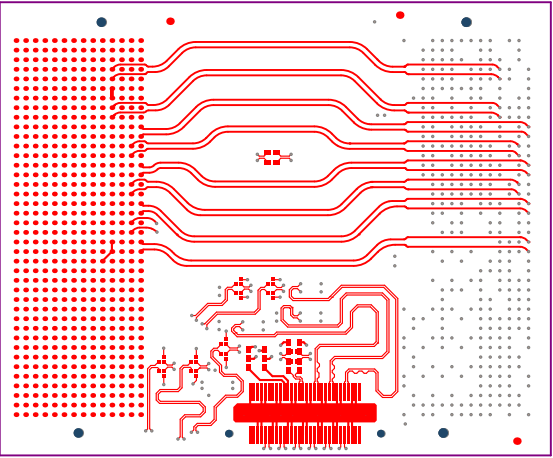


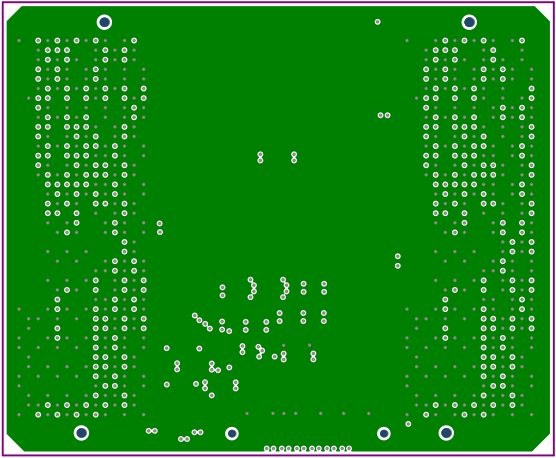
| | | | |
|----------------------------------|-----------------------------------|---------|-------------------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = TOP OVERLAY | TID #: 010131 | | |
| PLOT NAME = Top Overlay | GENERATED : 2/12/2019 12:02:29 PM | | TEXAS INSTRUMENTS |



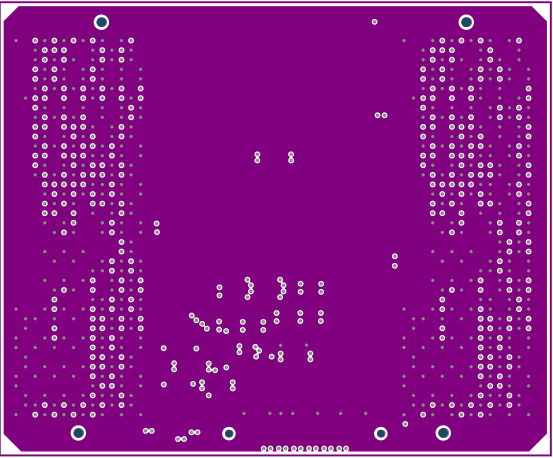
| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = TOP SOLDER | TID #: 010131 | | |
| PLOT NAME = Top Solder Mask | GENERATED : 2/12/2019 12:02:30 PM | TEXAS INSTRUMENTS | |



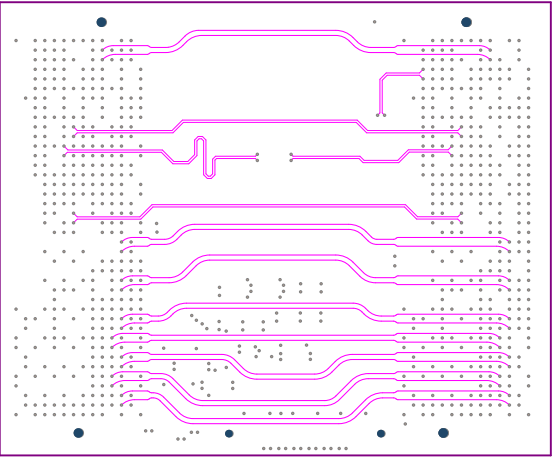
| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = L1_Top Layer | TID #: 010131 | | |
| PLOT NAME = Top Layer | GENERATED : 2/12/2019 12:02:30 PM | TEXAS INSTRUMENTS | |



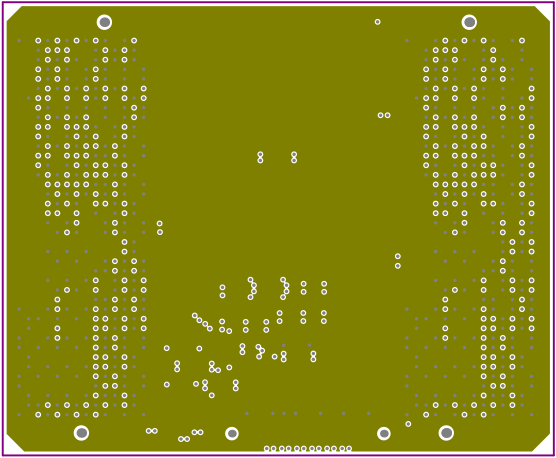
| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = L2_GND | TID #: 010131 | | |
| PLOT NAME = L2_GND | GENERATED : 2/12/2019 12:02:30 PM | TEXAS INSTRUMENTS | |



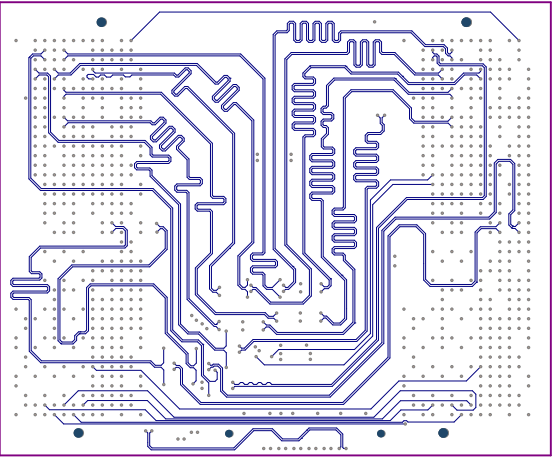
| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = L3_GND | TID #: 010131 | | |
| PLOT NAME = L3_GND | GENERATED : 2/12/2019 12:02:30 PM | TEXAS INSTRUMENTS | |



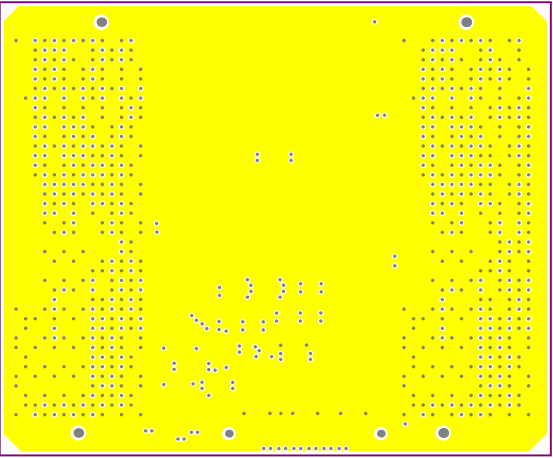
| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = L4_Signal layer1 | TID #: 010131 | | |
| PLOT NAME = L4_Signal Layer1 | GENERATED : 2/12/2019 12:02:30 PM | TEXAS INSTRUMENTS | |



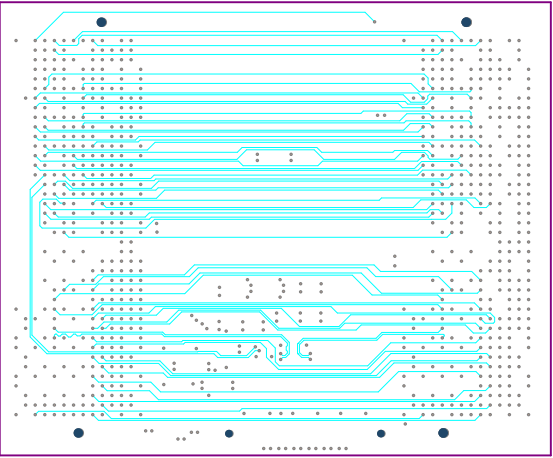
| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = L5_GND | TID #: 010131 | | |
| PLOT NAME = L5_GND | GENERATED : 2/12/2019 12:02:30 PM | TEXAS INSTRUMENTS | |



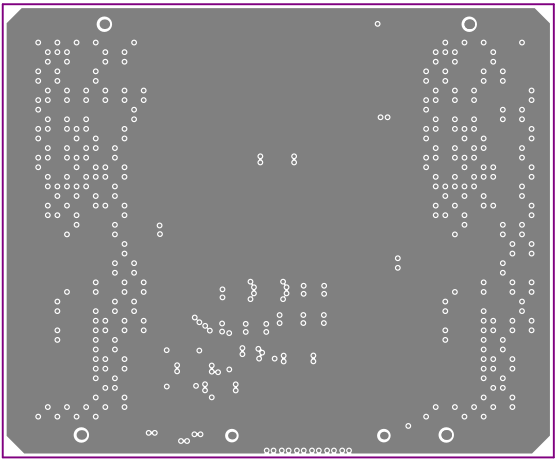
| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = L6_Signal Layer2 | TID #: 010131 | | |
| PLOT NAME = L6_Signal Layer2 | GENERATED : 2/12/2019 12:02:30 PM | TEXAS INSTRUMENTS | |



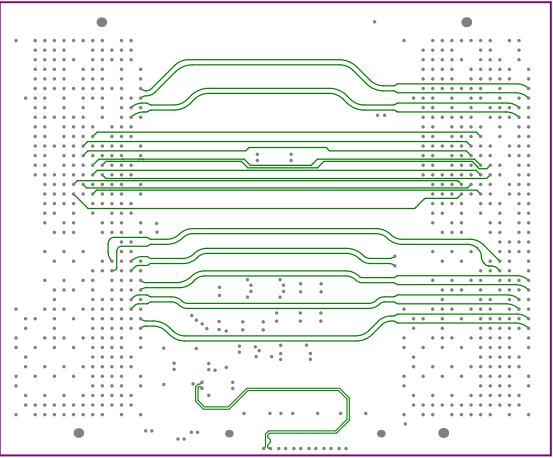
| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = L7_GND | TID #: 010131 | | |
| PLOT NAME = L7_GND | GENERATED : 2/12/2019 12:02:30 PM | TEXAS INSTRUMENTS | |



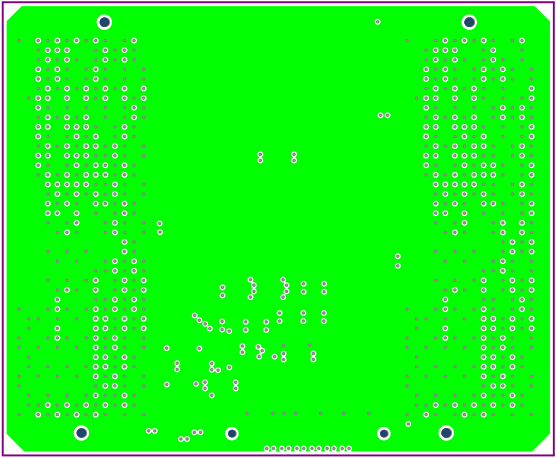
| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = L8_Signal Layer3 | TID #: 010131 | | |
| PLOT NAME = L8_Signal Layer3 | GENERATED : 2/12/2019 12:02:30 PM | TEXAS INSTRUMENTS | |



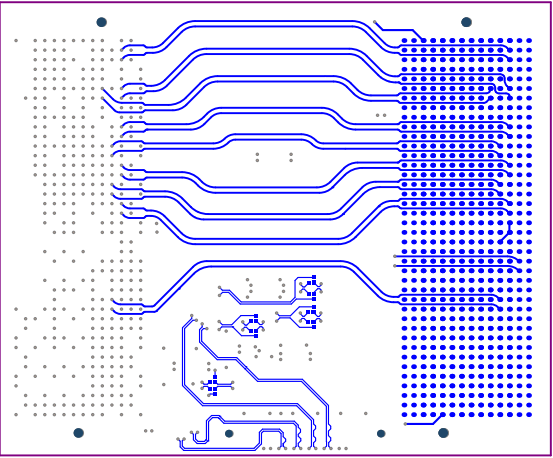
| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = L9_GND | TID #: 010131 | | |
| PLOT NAME = L9_GND | GENERATED : 2/12/2019 12:02:31 PM | TEXAS INSTRUMENTS | |



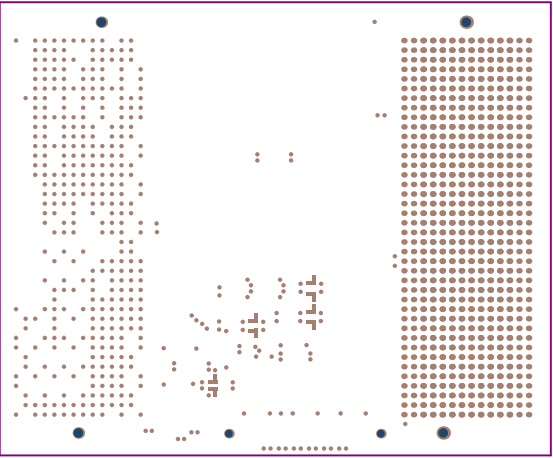
| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = L10_Signal Layer4 | TID #: 010131 | | |
| PLOT NAME = L10_Signal Layer4 | GENERATED : 2/12/2019 12:02:31 PM | TEXAS INSTRUMENTS | |



| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = L11_GND | TID #: 010131 | | |
| PLOT NAME = L11_GND | GENERATED : 2/12/2019 12:02:31 PM | TEXAS INSTRUMENTS | |



| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = L12_Bottom Layer | TID #: 010131 | | |
| PLOT NAME = Bottom Layer | GENERATED : 2/12/2019 12:02:31 PM | TEXAS INSTRUMENTS | |



| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = BOTTOM SOLDER | TID #: 010131 | | |
| PLOT NAME = Bottom Solder Mask | GENERATED : 2/12/2019 12:02:31 PM | TEXAS INSTRUMENTS | |

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C

D

IMPEDANCE TABLE:-

| Layer | 50 OHM SE TRACE WIDTH (MILS) +/-10% | 100 OHM DIFF TIGHTLY COUPLED WIDTH/SPACING (MILS) +/-10% | 100 OHM DIFF LOOSELY COUPLED WIDTH/SPACING (MILS) +/-10% | REFERENCE Layer |
|-------------------|--|--|--|--------------------|
| L1_Top Layer | 11mils | 6mil trace/ 5mil space | 10mil trace/ 18mil space | L2_GND |
| L4_SIGNAL Layer1 | | 4.9mil trace/ 7.1mil space | 5.5mil trace/ 21.1mil space | L3_GND, L5_GND |
| L6_SIGNAL Layer2 | 3.75MILS | 3.5mil trace/ 6.5mil space | | L5_GND, L7_GND |
| L8_SIGNAL Layer3 | 4.25mils | 4mil trace/ 6mil space | | L7_GND, L9_GND |
| L10_SIGNAL Layer4 | 6.5mils | 5.5mil trace/ 6.7mil space | 6.3mil trace/ 20.1mil space | L9_GND, L11_GND |
| L12_BOTTOM Layer | 11mils | 6mil trace/ 5mil space | 10mil trace/ 18mil space | L11_GND |

| Symbol | Count | Hole Size | Plated | Hole Type |
|--------|-----------|--------------------|--------|-----------|
| ○ | 2 | 40.16mil (1.020mm) | NPTH | Round |
| □ | 6 | 50.00mil (1.270mm) | NPTH | Round |
| ⊗ | 791 | 8.00mil (0.203mm) | PTH | Round |
| | 799 Total | | | |

FOR 8MIL DRILL +0/-8MIL
FOR NPTH DRILL +/-2MIL

| Layer | Name | Material | Thickness | Constant | Board Layer Stack |
|-------|-------------------|---------------|-----------|----------|-------------------|
| 1 | Top Overlay | | | | |
| 2 | Top Solder | Solder Resist | 0.40mil | 3.5 | |
| 3 | L1_Top Layer | Copper | 2.00mil | | |
| 4 | Dielectric1 | R-5670K | 5.60mil | 3.22 | |
| 5 | L2_GND | Copper | 0.60mil | | |
| 6 | Dielectric 2 | R-5775K | 5.00mil | 3.58 | |
| 7 | L3_GND | Copper | 0.60mil | | |
| 8 | Dielectric 3 | R-5670K | 7.50mil | 3.23 | |
| 9 | L4_Signal layer1 | Copper | 0.60mil | | |
| 10 | Dielectric 4 | R-5775K | 4.00mil | 3.39 | |
| 11 | L5_GND | Copper | 0.60mil | | |
| 12 | Dielectric 5 | R-5670K | 4.20mil | 3.18 | |
| 13 | L6_Signal Layer2 | Copper | 0.60mil | | |
| 14 | Dielectric 6 | R-5775K | 3.00mil | 3.42 | |
| 15 | L7_GND | Copper | 0.60mil | | |
| 16 | Dielectric 7 | R-5670K | 4.20mil | 3.18 | |
| 17 | L8_Signal Layer3 | Copper | 0.60mil | | |
| 18 | Dielectric 8 | R-5775K | 4.00mil | 3.39 | |
| 19 | L9_GND | Copper | 0.60mil | | |
| 20 | Dielectric 9 | R-5670K | 7.50mil | 3.23 | |
| 21 | L10_Signal Layer4 | Copper | 0.60mil | | |
| 22 | Dielectric 10 | R-5775K | 5.00mil | 3.58 | |
| 23 | L11_GND | Copper | 0.60mil | | |
| 24 | Dielectric 11 | R-5670K | 5.60mil | 3.22 | |
| 25 | L12_Bottom Layer | Copper | 2.00mil | | |
| 26 | Bottom Solder | Solder Resist | 0.40mil | 3.5 | |
| 27 | Bottom Overlay | | | | |

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)
73MM X 60mm
Number of Layers : 12
MIN. TRACK WIDTH: 3.5 MIL
MIN. CLEARANCE: 5 MIL
MIN. VIA PAD SIZE: 18 MIL
MINIMUM ANNULAR RING 5MIL 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 R-5775K , R-5670K
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: 1.2MIL (1oz) 2MIL (1.4oz) 2.8MIL (2oz)
INNER SIGNAL: 0.6MIL 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: IMMERSSION 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

LAYER NAME = DRILL DRAWING

PLOT NAME = Drill Drawing

BOARD #: FMC+ TO FMC

TID #: 010131

GENERATED : 2/12/2019 12:02:31 PM

REV: E3

SUN REV:

TEXAS INSTRUMENTS

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ENGINEER: Ajeet Pal

SCALE: 1.00

LAYOUT BY: Avinash N

ALTUM DESIGNER VERSION: 18.1.9.240

FMC+ TO FMC

DESIGNED FOR: Public Release

FILE NAME: TIDA-010131-FMC+ TO FMC_Adapter Card.PcbDoc

1

2

3

4

5

6



1000 mil

| | | | |
|----------------------------------|-----------------------------------|-------------------|----------|
| ALL ARTWORK VIEWED FROM TOP SIDE | BOARD #: FMC+ TO FMC | REV: E3 | SUN REV: |
| LAYER NAME = | TID #: 010131 | | |
| PLOT NAME = Board Dimensions | GENERATED : 2/12/2019 12:02:34 PM | TEXAS INSTRUMENTS | |

