

BOTTOM SOLDER MASK

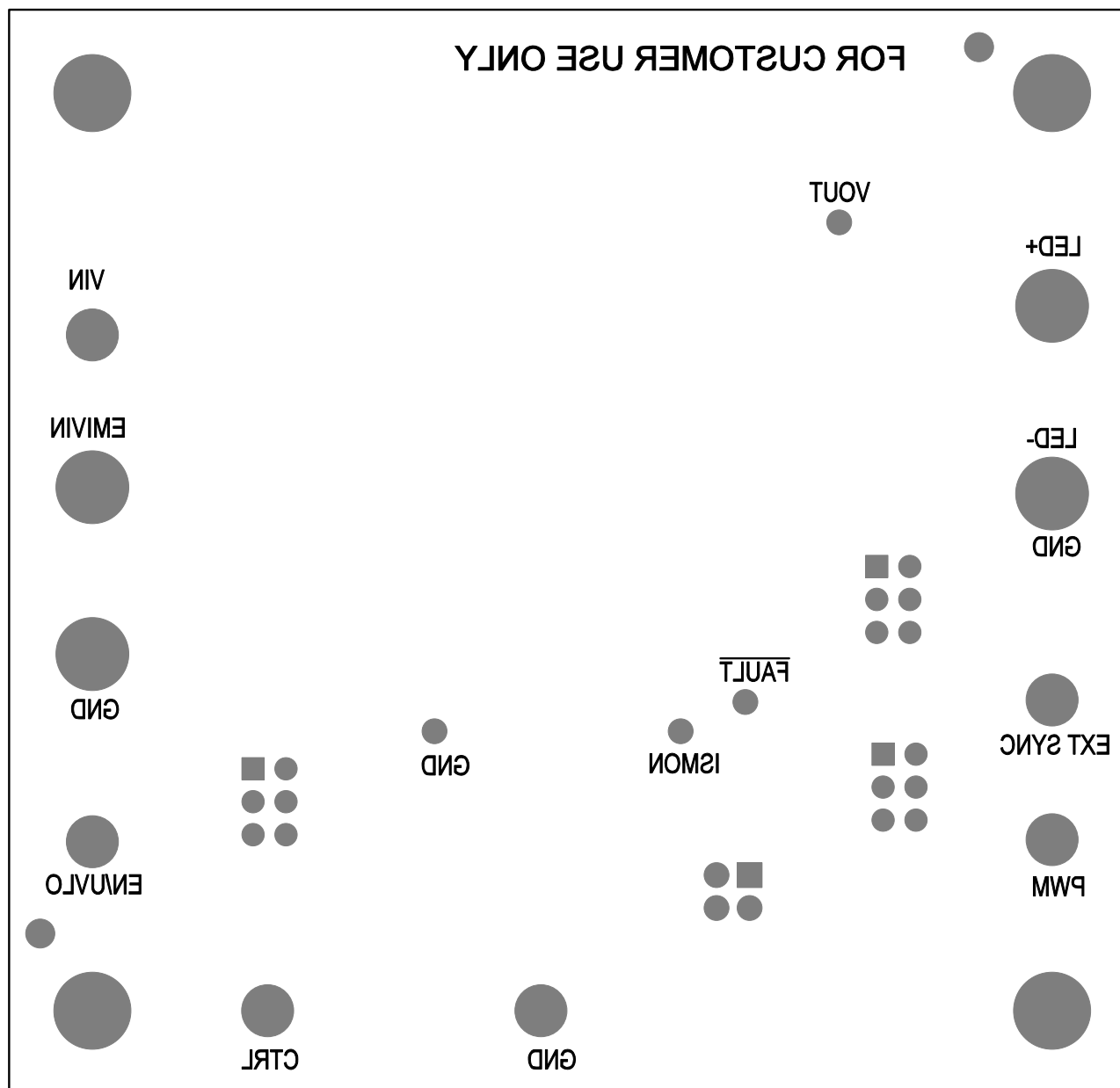
ANALOG DEVICES

DATE: 10-6-2021

EVAL-LT8376-AZ-3, LT8376RV

| ANALOG DEVICES                           |          |                    |                                                             |                                                |                                                                                                   |                        |                    |             |
|------------------------------------------|----------|--------------------|-------------------------------------------------------------|------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------|--------------------|-------------|
| MANUFACTURING BILL OF MATERIALS          |          |                    |                                                             |                                                |                                                                                                   |                        |                    |             |
| SKU# = EVAL-LT8376-AZ                    |          |                    |                                                             |                                                |                                                                                                   |                        |                    |             |
| IC NO. = LT8376RV                        |          |                    |                                                             |                                                |                                                                                                   |                        |                    |             |
| PCA BOM = 700-EVAL-LT8376-AZ_REV03       |          |                    |                                                             |                                                |                                                                                                   |                        |                    |             |
| PCA ASS'Y DWG = 705-EVAL-LT8376-AZ_REV03 |          |                    |                                                             |                                                |                                                                                                   |                        |                    |             |
| PCA SCHEMATIC = 710-EVAL-LT8376-AZ_REV03 |          |                    |                                                             |                                                |                                                                                                   |                        |                    |             |
| Item Number                              | Quantity | Part Reference     | Description                                                 | Manufacturer                                   | Manufacturer PN                                                                                   | Value                  | PART_NUMBER        | BOM Notes   |
| 1                                        | 1        | C1                 | CAP.,10uF,X7R,50V,10%,1206                                  | SAMSUNG                                        | CL31B106KBHNNNE                                                                                   | 10uF                   | 150-1796           | NO STUFF C9 |
| 2                                        | 3        | C2,C3,C14          | CAP.,4.7uF,X7S,100V,10%,1210                                | SAMSUNG<br>TDK<br>TDK<br>MURATA                | CL32Y475KCVZW6E<br>C3225X7S2A475K200AB<br>C3225X7S2A475K200AE<br>GRM32DC72A475KE01L               | 4.7uF                  | 150-2270           |             |
| 3                                        | 3        | C4,C5,C6           | CAP.,0.47uF,X7R,100V,10%,0805                               | AVX<br>MURATA                                  | 08051C474KAZ2A<br>GRM21BR72A474KA73L                                                              | 0.47uF                 | 150-2346           |             |
| 4                                        | 1        | C7                 | CAP.,2.2uF,X7R,10V,10%,0603                                 | MURATA<br>TDK<br>AVX<br>YAGEO                  | GRM188R71A225KE15D<br>C1608X7R1A225K080AC<br>0603ZC225KAT2A<br>CC0603KRX7R6BB225                  | 2.2uF                  | 150-2083           |             |
| 5                                        | 1        | C8                 | CAP.,2.2uF,X5R,10V,20%,0402                                 | WURTH ELEKTRONIK                               | 885012105013                                                                                      | 2.2uF                  | 150-2543           |             |
| 6                                        | 1        | C11                | CAP.,100pF,COG,50V,5%,0402,AEC-Q200                         | MURATA<br>TDK                                  | GCM1555C1H101JA16D<br>CGJ2B2C0G1H101J050BA                                                        | 100pF                  | 150-2673           |             |
| 7                                        | 1        | C12                | CAP.,0.01uF,X7R,25V,10%,0402,AEC-Q200                       | TAIYO YUDEN                                    | TMK105B7103KVHF                                                                                   | 0.01uF                 | 150-0954           |             |
| 8                                        | 1        | C13                | CAP.,0.1uF,X7R,100V,10%,0603                                | AVX<br>MURATA<br>SAMSUNG                       | 06031C104KAT2A<br>GRM188R72A104KA35D<br>CL10B104KC8NNNC                                           | 0.1uF                  | 150-3294           |             |
| 9                                        | 1        | C15                | CAP.,0.1uF,X7R,50V,10%,0402,AEC-Q200                        | MURATA<br>TAIYO YUDEN<br>TDK                   | GCM155R71H104KE02D<br>UMK105B7104KVHF<br>CGA2B3X7R1H104K050BB                                     | 0.1uF                  | 150-2620           |             |
| 10                                       | 1        | C16                | CAP.,1uF,X5R,10V,10%,0402                                   | MURATA<br>SAMSUNG<br>TAIYO YUDEN<br>AVX<br>TDK | GRM155R61A105KE15D<br>CL05A105KP5NNNC<br>LMK105BJ105KV-F<br>04022D105KAT2A<br>C1005X5R1A105K050BB | 1uF                    | 150-3493           |             |
| 11                                       | 1        | C17                | CAP.,47pF,COG,50V,10%,0402                                  | AVX<br>KEMET                                   | 04025A470KAT2A<br>C0402C470K5GACTU                                                                | 47pF                   | 150-3309           |             |
| 12                                       | 0        | C19,C22            | CAP., OPTION, 0402                                          |                                                |                                                                                                   | OPT                    | 150-3148           | NO STUFF    |
| 13                                       | 1        | C20                | CAP.,0.1uF,X5R,100V,10%,0402,SMD                            | MURATA                                         | GRM155R62A104KE14D                                                                                | 0.1uF                  | TMP-7802           |             |
| 14                                       | 1        | C24                | CAP.,47uF,ALUM ELECT,63V,20%,8x10.2mm,F,SMD,RADIAL          | PANASONIC                                      | EEEHA1J470UP                                                                                      | 47uF                   | 150-1798           |             |
| 15                                       | 1        | C26                | CAP.,2.2uF,X5R,25V,10%,0603,AEC-Q200                        | TAIYO YUDEN                                    | TMK107BBJ225KAHT                                                                                  | 2.2uF                  | 150-0955           |             |
| 16                                       | 6        | E1,E6,E7,E8,E9,E10 | TEST POINT,TURRET,0.064" MTG. HOLE,PCB 0.062" THK           | MILL-MAX                                       | 2308-2-00-80-00-00-07-0                                                                           | TEST POINT             | 260-0004           |             |
| 17                                       | 4        | E2,E3,E4,E5        | TEST POINT,TURRET,0.094" MTG. HOLE,PCB 0.062" THK           | MILL-MAX                                       | 2501-2-00-80-00-00-07-0                                                                           | TEST POINT             | 260-0003           |             |
| 18                                       | 0        | FB1                | IND.,1k OHM@100MHz,FERRITE BEAD,25%,1.5A,150mOhms,0805      | TDK                                            | MPZ2012S102AT000                                                                                  | 1k OHM@100MHz          | 200-0291           | NO STUFF    |
| 19                                       | 1        | FB2                | IND.,600 OHMS@100MHz,FERRITE BEAD,25%,2A,100mOHMS,0805      | TDK                                            | MPZ2012S601AT000                                                                                  | 600 OHMS@100MHz        | 200-0199           |             |
| 20                                       | 3        | JP1,JP2,JP3        | CONN.,HDR,MALE,2x3,2mm,VERT,ST,THT                          | WURTH ELEKTRONIK                               | 62000621121                                                                                       | HDR                    | 250-0483           |             |
| 21                                       | 1        | JP4                | CONN.,HDR,MALE,2x2,2mm,VERT,STR,THT                         | WURTH ELEKTRONIK                               | 62000421121                                                                                       | HDR                    | 250-0522           |             |
| 22                                       | 1        | L1                 | IND.,47uH,PWR,SHIELDED,20%,3.1A,167mOHMS,4040DD,IHLE-5A Ser | VISHAY                                         | IHLE4040DDER470M5A                                                                                | 47uH                   | 200-0885           |             |
| 23                                       | 1        | L2                 | IND.,15uH,PWD,20%,2.9A,109mOHMS,4mmX4mm,AEC-Q200            | COILCRAFT<br>COILCRAFT                         | XAL4040-153MEB<br>XAL4040-153MEC                                                                  | 15uH                   | 200-0898           |             |
| 24                                       | 1        | LB1                | LABEL SPEC, DEMO BOARD SERIAL NUMBER                        | BRADY                                          | THT-96-717-10                                                                                     | LABEL                  | 895-0154           |             |
| 25                                       | 1        | M1                 | XSTR.,MOSFET,P-CH,60V,16A,PowerPAK 1212-8,AEC-Q101          | VISHAY                                         | SQ7415AEN-T1-GE3                                                                                  | SQ7415AEN              | 240-0408           |             |
| 26                                       | 4        | MP1,MP2,MP3,MP4    | STANDOFF,NYLON,SNAP-ON,0.75" (19.1mm)                       | WURTH ELEKTRONIK                               | 702937000                                                                                         | STANDOFF               | 763-0030           |             |
| 27                                       | 1        | PCB1               | PCB, EVAL-LT8376-AZ                                         | ADI APPROVED SUPPLIER                          | 600-EVAL-LT8376-AZ                                                                                | PCB,600-EVAL-LT8376-AZ | 600-EVAL-LT8376-AZ | REV03       |
| 28                                       | 1        | R1                 | RES.,0.05 OHM,1%,1/2W,1206,SENSE                            | IRC<br>TT ELECTRONICS                          | LRC-LR1206LF-01-R050-F<br>LRC-LR1206LF-01-R050-F                                                  | 0.05                   | 100-0554           |             |
| 29                                       | 1        | R2                 | RES.,12.7k OHMS,1%,1/16W,0402                               | YAGEO                                          | RC0402FR-0712K7L                                                                                  | 12.7k                  | 100-1633           |             |
| 30                                       | 1        | R3                 | RES.,402k OHMS,1%,1/10W,0402,AEC-Q200                       | PANASONIC                                      | ERJ2RKF4023X                                                                                      | 402k                   | 100-0736           |             |
| 31                                       | 1        | R4                 | RES.,16K OHMS,5%,1/16W,0402,AEC-Q200                        | VISHAY                                         | CRCW040216K0JNED                                                                                  | 16k                    | 100-1875           |             |

| ANALOG DEVICES                           |          |                     |                                                           |                                                 |                                                                  |                          |                    |                      |
|------------------------------------------|----------|---------------------|-----------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------------|--------------------------|--------------------|----------------------|
| MANUFACTURING BILL OF MATERIALS          |          |                     |                                                           |                                                 |                                                                  |                          |                    |                      |
| SKU# = EVAL-LT8376-AZ                    |          |                     |                                                           |                                                 |                                                                  |                          |                    |                      |
| IC NO. = LT8376RV                        |          |                     |                                                           |                                                 |                                                                  |                          |                    |                      |
| PCA BOM = 700-EVAL-LT8376-AZ_REV03       |          |                     |                                                           |                                                 |                                                                  |                          |                    |                      |
| PCA ASS'Y DWG = 705-EVAL-LT8376-AZ_REV03 |          |                     |                                                           |                                                 |                                                                  |                          |                    |                      |
| PCA SCHEMATIC = 710-EVAL-LT8376-AZ_REV03 |          |                     |                                                           |                                                 |                                                                  |                          |                    |                      |
| Item Number                              | Quantity | Part Reference      | Description                                               | Manufacturer                                    | Manufacturer PN                                                  | Value                    | PART_NUMBER        | BOM Notes            |
| 32                                       | 1        | R5                  | RES.,287k OHMS,1%,1/16W,0402,AEC-Q200                     | VISHAY<br>NIC<br>STACKPOLE ELECTRONICS,<br>INC. | CRCW0402287KFKED<br>NRC04F2873TRF<br>RMCFO402FT287K              | 287K                     | 100-2867           |                      |
| 33                                       | 1        | R6                  | RES.,24.9k OHMS,1%,1/16W,0402,AEC-Q200                    | NIC<br>STACKPOLE ELECTRONICS,<br>INC.<br>VISHAY | NRC04F2492TRF<br>RMCFO402FT24K9<br>CRCW040224K9FKED              | 24.9k                    | 100-0242           |                      |
| 34                                       | 1        | R7                  | RES.,1M OHM,1%,1/10W,0603,AEC-Q200                        | NIC<br>PANASONIC<br>VISHAY                      | NRC06F1004TRF<br>ERJ3EKF1004V<br>CRCW06031M00FKEA                | 1M                       | 100-0119           |                      |
| 35                                       | 2        | R8,R15              | RES.,100k OHMS,1%,1/16W,0402,AEC-Q200                     | VISHAY<br>NIC                                   | CRCW0402100KFKED<br>NRC04F1003TRF                                | 100k                     | 100-2396           |                      |
| 36                                       | 1        | R9                  | RES.,47k OHMS,5%,1/16W,0402,AEC-Q200                      | NIC<br>VISHAY                                   | NRC04J473TRF<br>CRCW040247K0JNED                                 | 47k                      | 100-2814           |                      |
| 37                                       | 1        | R10                 | RES.,100k OHMS,5%,1/16W,0402,AEC-Q200                     | ROHM<br>VISHAY                                  | MCR01MZPJ104<br>CRCW0402100KJNED                                 | 100k                     | 100-0192           |                      |
| 38                                       | 1        | R11                 | RES.,91k OHMS,5%,1/16W,0402,AEC-Q200                      | NIC<br>VISHAY                                   | NRC04J913TRF<br>CRCW040291K0JNED                                 | 91k                      | 100-0520           |                      |
| 39                                       | 1        | R12                 | RES.,118k OHMS,1%,1/16W,0402,AEC-Q200                     | NIC<br>VISHAY                                   | NRC04F1183TRF<br>CRCW0402118KFKED                                | 118k                     | 100-0257           |                      |
| 40                                       | 1        | R13                 | RES.,1M OHMS,1%,1/10W,0402                                | NIC<br>YAGEO                                    | NRC04F1004TRF<br>RC0402FR-071ML                                  | 1M                       | 100-0070           |                      |
| 41                                       | 1        | R14                 | RES.,2M OHMS,1%,1/16W,0402,AEC-Q200                       | VISHAY                                          | CRCW04022M00FKED                                                 | 2M                       | 100-2884           |                      |
| 42                                       | 0        | R18                 | RES.,0 OHM,1/16W,0402                                     | NIC<br>ROHM<br>VISHAY<br>YAGEO                  | NRC04ZOTRF<br>MCR01MZPJ000<br>CRCW04020000Z0ED<br>RC0402JR-070RL |                          | 0 100-0025         | NO STUFF             |
| 43                                       | 0        | R19                 | RES., OPTION, 0603                                        |                                                 |                                                                  | OPT                      | 100-2374           | NO STUFF             |
| 44                                       | 0        | R20                 | RES., OPTION, 0402                                        |                                                 |                                                                  | OPT                      | 100-0357           | NO STUFF             |
| 45                                       | 1        | STNCL1              | TOOL, STENCIL, 700-EVAL-LT8376-AZ                         | ADI APPROVED SUPPLIER                           | 830-EVAL-LT8376-AZ                                               | TOOL,STENCIL,700-LT8376- | 830-EVAL-LT8376-AZ | REV03                |
| 46                                       | 0        | TP1,TP3,TP4         | TESTPOINT, PCB COPPER FEATURE                             | N/A                                             | N/A                                                              | COPPER FEATURE PAD       | PCBPADS-11         | NO STUFF TP1,TP3,TP4 |
| 47                                       | 0        | TP2,TP5,TP6,TP7     | TESTPOINT, PCB COPPER FEATURE                             | N/A                                             | N/A                                                              | TEST PAD                 | PCBPADS-1          | NO STUFF TP2,TP5-TP7 |
| 48                                       | 1        | U1                  | IC,60V 2A, SYNCHRONOUS BUCK LED DRIVER ,LQFN-28           | ANALOG DEVICES                                  | LT8376RV#PBF                                                     | LT8376                   | TMP-7777           |                      |
| 49                                       | 1        | VR1                 | RES.,100k OHMS,20%,1/4W,SMD 4mm SQ,1-TURN,TOP ADJ.,TRIMPO | BOURNS                                          | 3314J-1-104E                                                     | 100k                     | 103-0025           |                      |
| 50                                       | 4        | XJP1,XJP2,XJP3,XJP4 | CONN.,SHUNT,FEMALE,2-POS,2mm                              | Würth Elektronik                                | 60800213421                                                      | SHUNT                    | 250-0485           |                      |

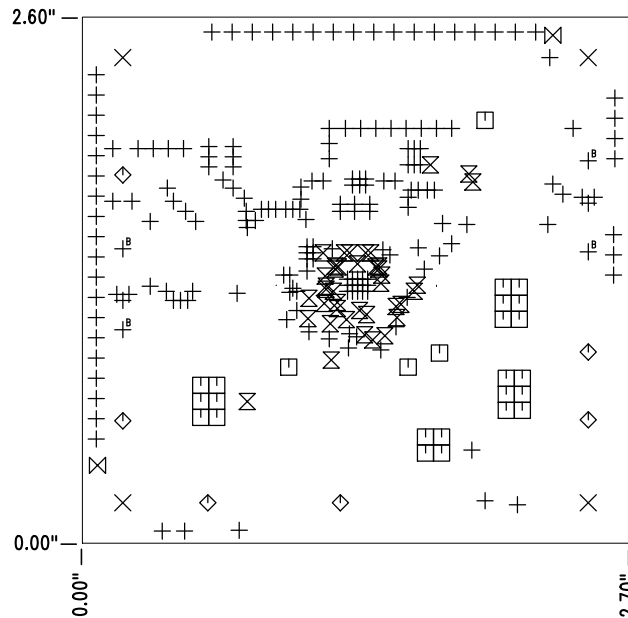


BOTTOM SILKSCREEN

ANALOG DEVICES

DATE: 10-13-2021

EVAL-LT8376-AZ-3, LT8376RV



| SIZE  | QTY | SYM            | PLATED | TOL      |
|-------|-----|----------------|--------|----------|
| 0.01  | 186 | +              | YES    | +/-0.003 |
| 0.187 | 4   | ×              | NO     | +/-0.003 |
| 0.035 | 26  | □              | YES    | +/-0.003 |
| 0.065 | 6   | ◇              | YES    | +/-0.003 |
| 0.006 | 40  | ⊗              | YES    | +/-0.003 |
| 0.07  | 2   | ⊠              | NO     | +/-0.003 |
| 0.095 | 4   | + <sup>B</sup> | YES    | +/-0.003 |

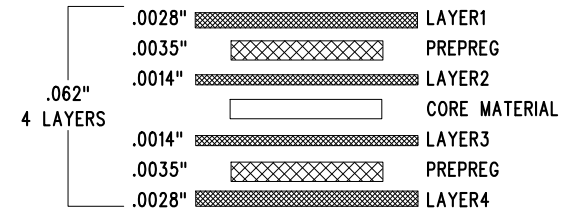
#### ADDITIONAL REQUIREMENT FOR PROTOTYPE FAB ONLY:

1. OUTGOING INSPECTION REPORT (BASED ON ACTUAL MEASUREMENTS AND CROSS SECTION).

#### ADDITIONAL REQUIREMENTS FOR PRODUCTION FAB ONLY:

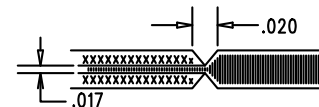
1. PROVIDE COMPLIANCE CERTIFICATES FOR RoHS, REACH AND CONFLICT-FREE MINERALS.
2. SOLDERABILITY BOARD WITH TEST RESULTS.
3. OUTGOING INSPECTION REPORT (BASED ON ACTUAL MEASUREMENTS AND CROSS SECTION).
4. VACUUM PACKED WITH DESICCANT.
5. FULL PANEL WITH NO REJECT

## LAYER STRUCTURE

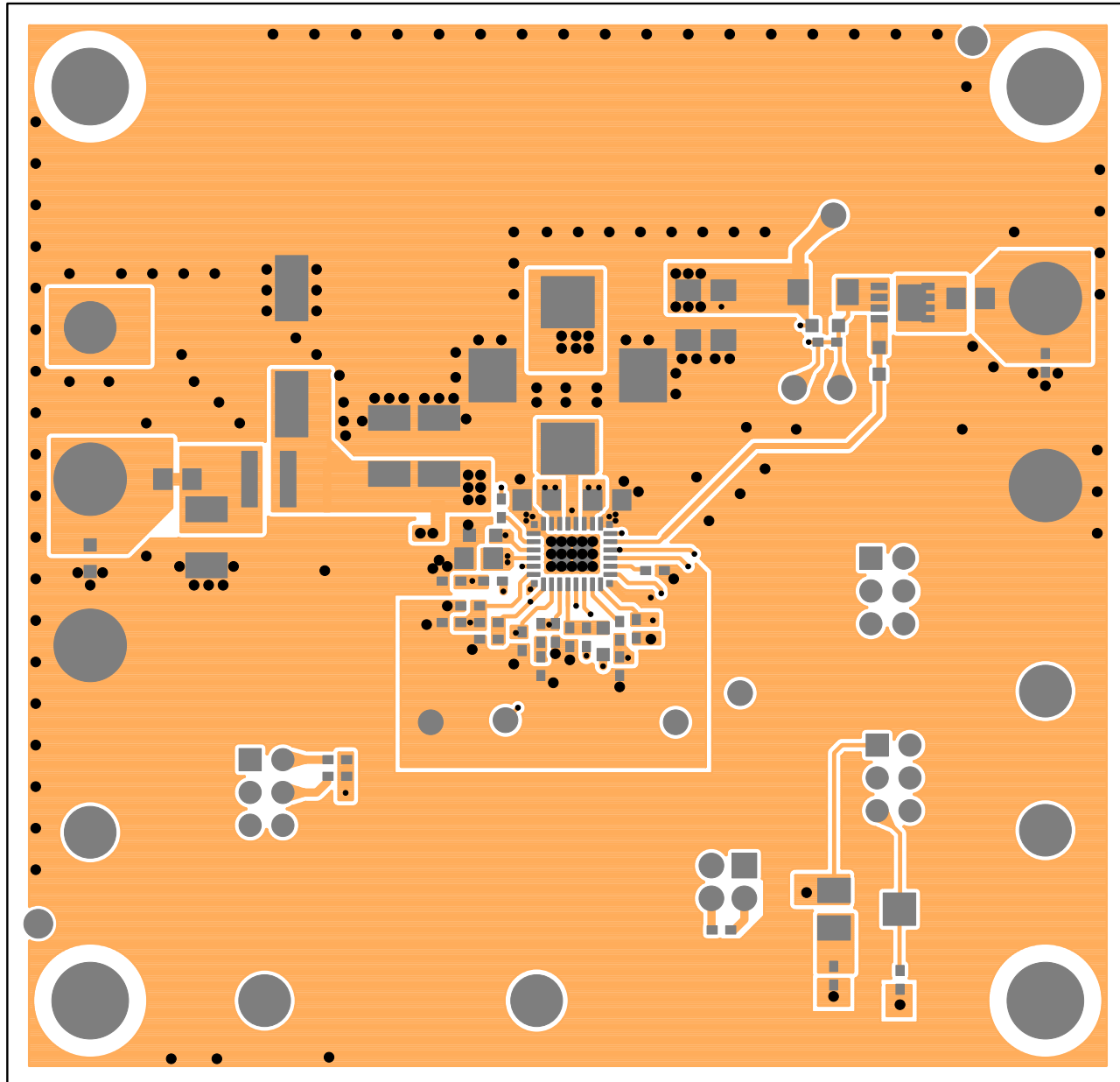


## NOTES: UNLESS OTHERWISE SPECIFIED

1. FAB PER IPC-A-600.
2. MATERIAL: -EPOXY FIBERGLASS, NEMA GRADE FR-4  
-FINISHED THICKNESS TO BE 0.062" +/- .005"  
-TOTAL OF 4 LAYERS WITH 2 OZ. FINISHED CU ON THE OUTER LAYERS AND 1 OZ. CU ON THE INNER LAYERS.  
-FLAMMABILITY RATING: 94 V-0 MINIMUM.
3. SIZE: CUT TO DIMENSIONS AND TOLERANCES SHOWN.  
0.00" ARE PRIMARY DATUMS.
4. DRILLING: -DRILL HOLES PER SCHEDULE. PLATE THROUGH HOLES WITH COPPER, 0.001" THICK MIN.  
-ALL HOLE SIZES ARE SPECIFIED AFTER PLATING.  
-HOLE LOCATION TOLERANCES ARE +/-0.003" IN RELATION TO CENTER  
-FOR VIAS SIZE LESS THAN 13MILS, VIAS NEED TO BE PLUGGED AND COVERED WITH SOLDERMASK.
5. FINISH: -SMOBC USING LPI BOTH SIDES, COLOR GLOSS GREEN  
-GOLD IMMERSION BOTH SIDES.  
(LEAD FREE SOLDER CAN BE USED FOR PROTOTYPE)  
-FOR SILKSCREEN: BOTH SIDES USE WHITE NON-CONDUCTIVE INK.
6. DO NOT ALTER ARTWORK e.g. TO ADD LOGO OR DATE CODE.  
PAD SIZE CAN BE MODIFIED TO MEET END FINISH.
7. PCBs ARE TO BE RoHS COMPLIANT.
8. SCORING FOR PANELIZED PCB:



|                                                                                                                                                          |                                      |                                                                                                   |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------------------|--|
| UNLESS OTHERWISE SPECIFIED                                                                                                                               |                                      |                                                                                                   |  |
| DIMENSIONS ARE IN INCHES<br>TOLERANCES:<br>0.XX" = ±0.01"<br>0.XXX" = ±0.005"<br>INTERPRET DIM AND TOL<br>PER ASME Y14.5M-1994<br>THIRD ANGLE PROJECTION |                                      | www.analog.com<br><b>TITLE: FABRICATION DRAWING</b><br><b>60V, 2A SYNCHRONOUS BUCK LED DRIVER</b> |  |
| SIZE<br>N/A                                                                                                                                              | IC NO.<br>LT8376JV<br>EVAL-LT8376-AZ | REV<br>3                                                                                          |  |
| FILENAME:                                                                                                                                                |                                      | SHT 1 OF 1                                                                                        |  |

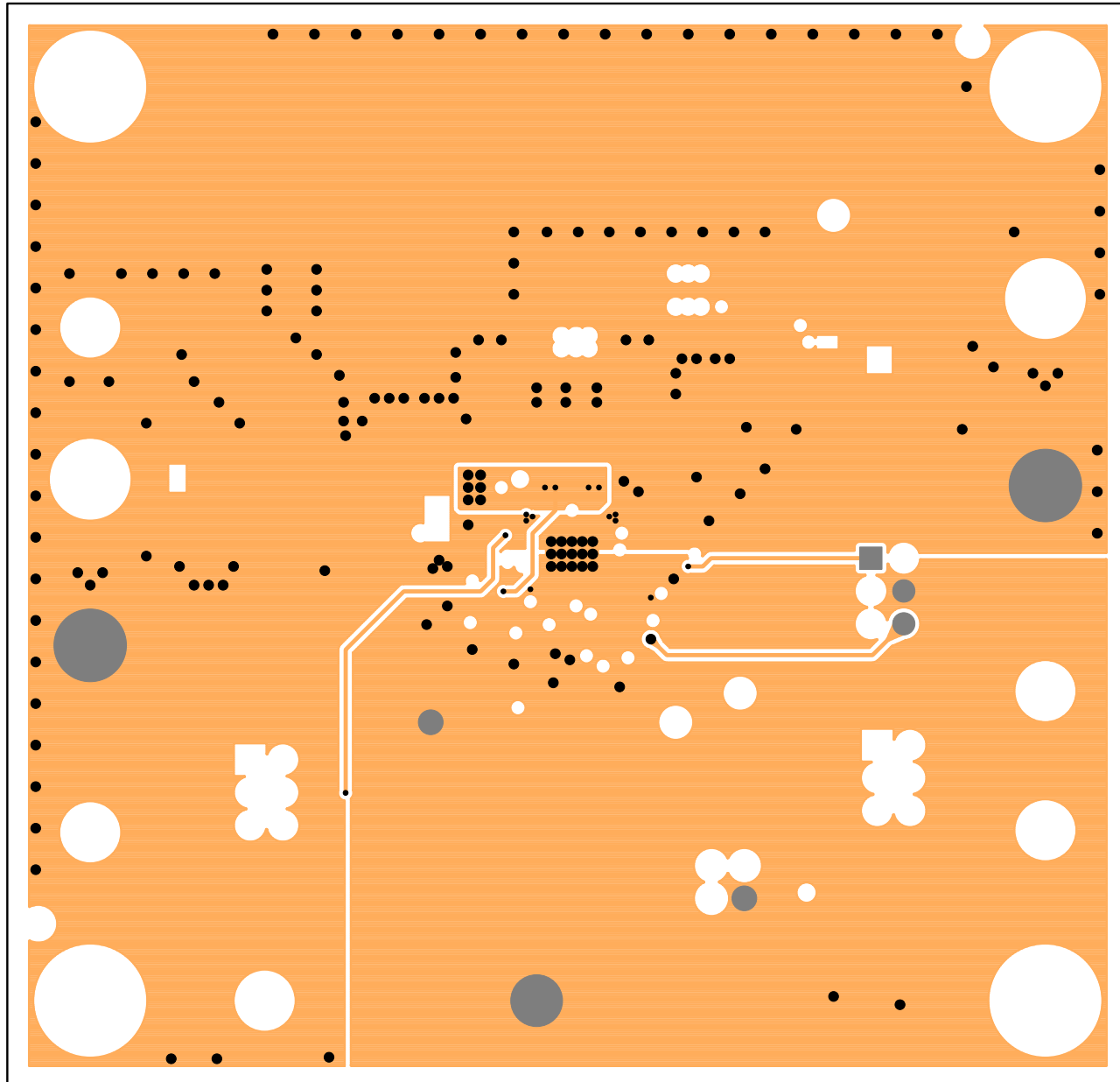


LAYER 1 – TOP LAYER

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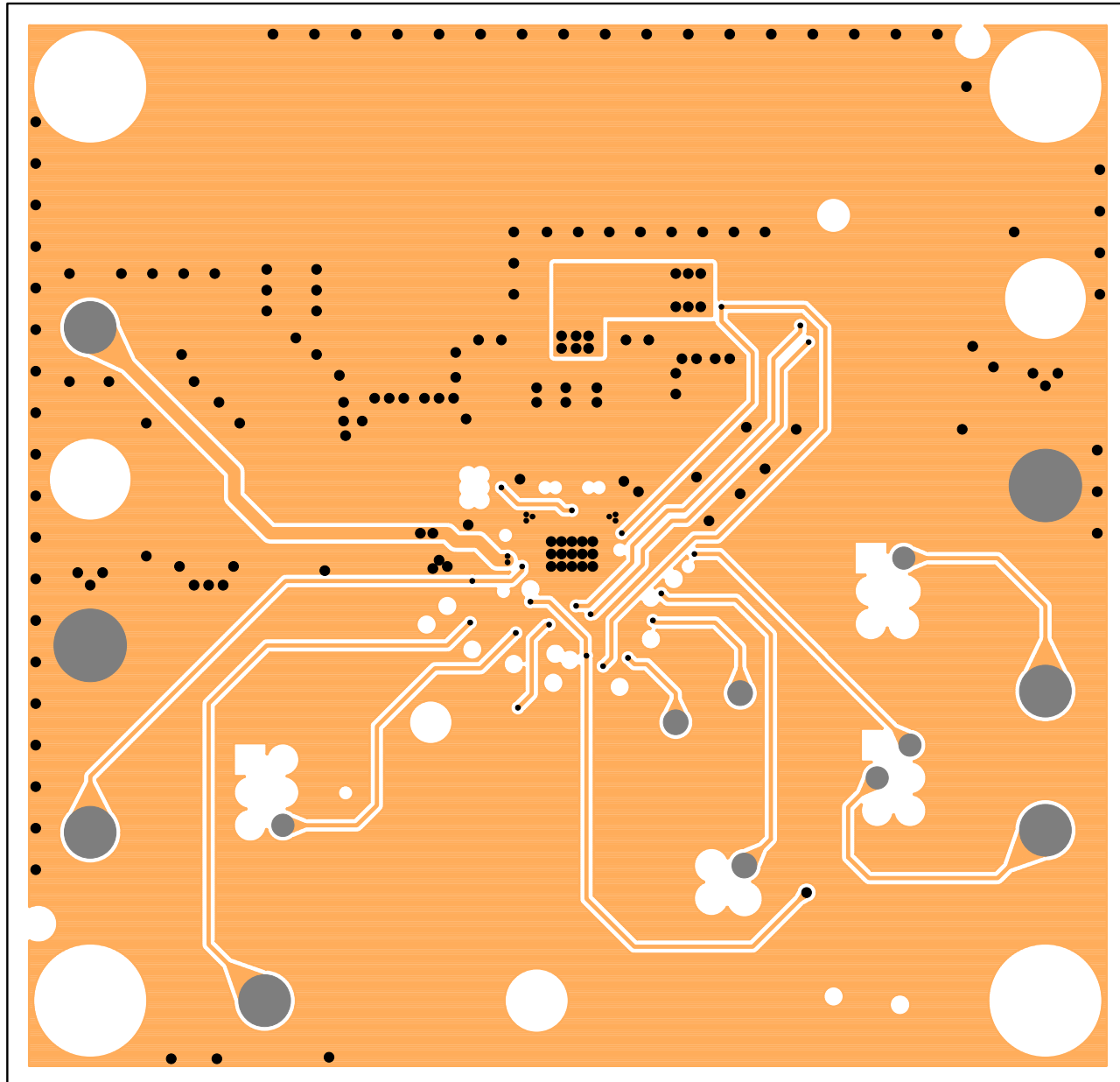


LAYER 2 - GND PLANE 1

ANALOG DEVICES

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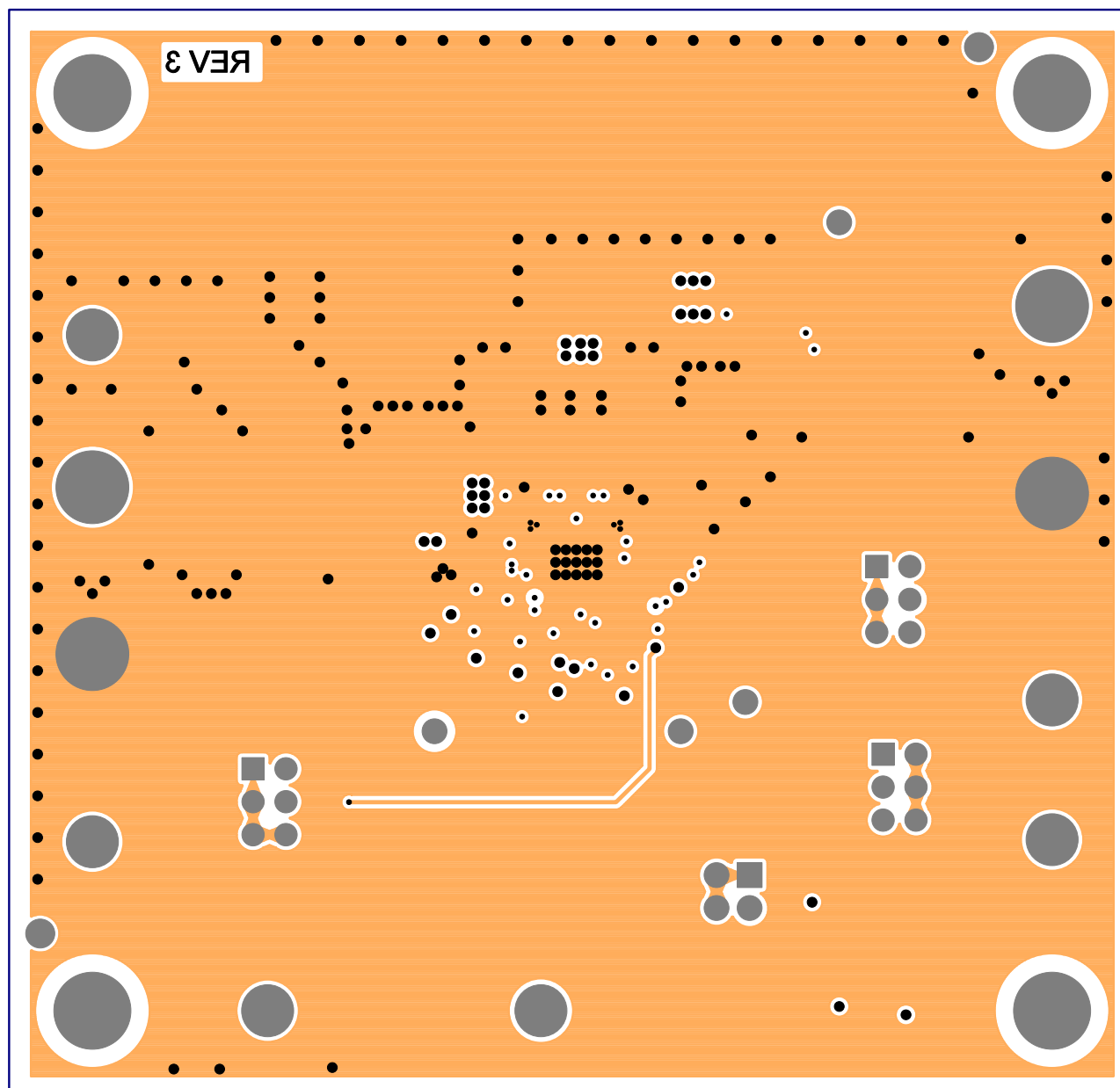


LAYER 3 – SIGNAL

ANALOG DEVICES

DATE: 10-13-2021

EVAL-LT8376-AZ-3, LT8376RV



LAYER 4 – BOTTOM LAYER

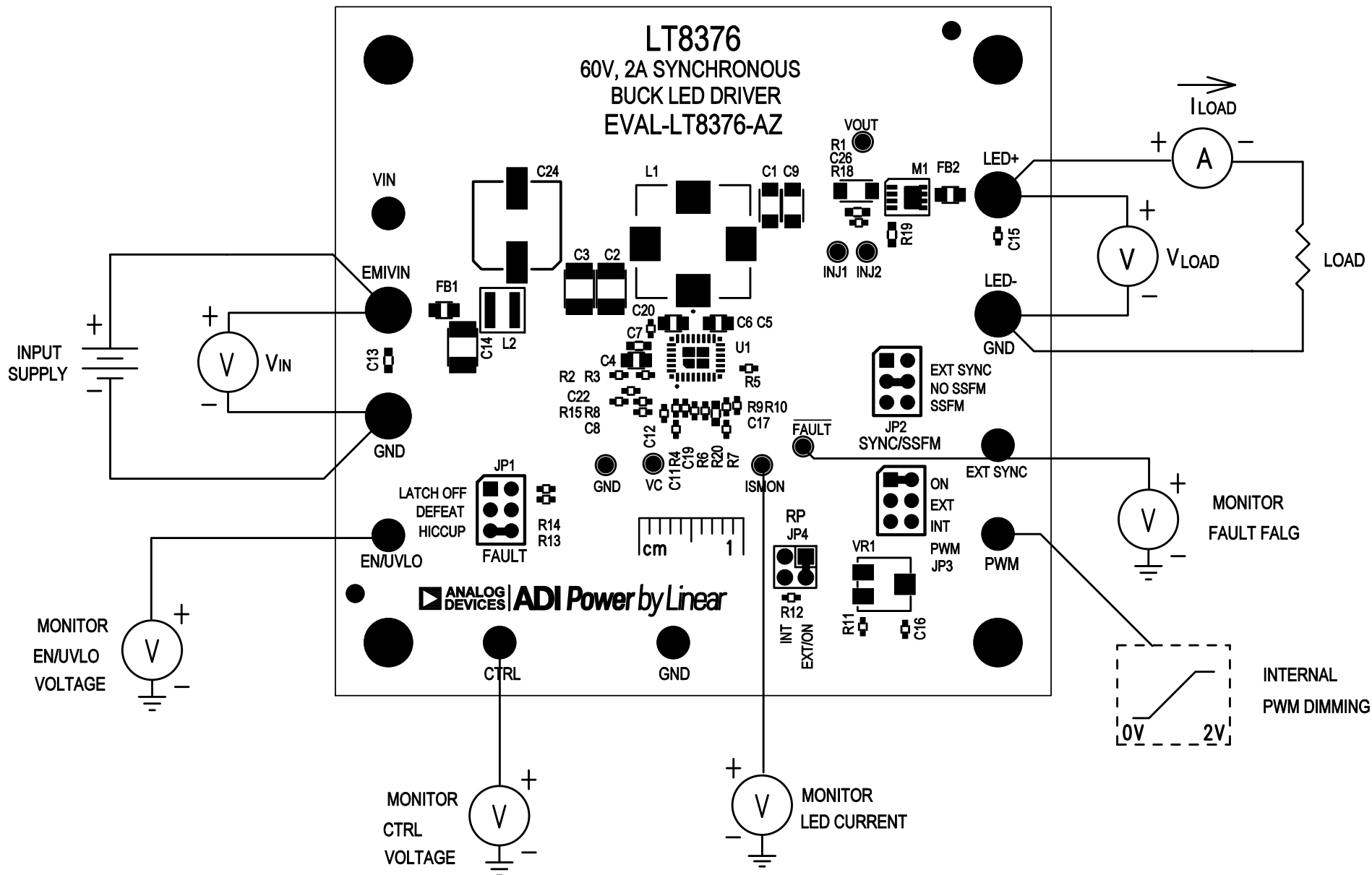
ANALOG DEVICES

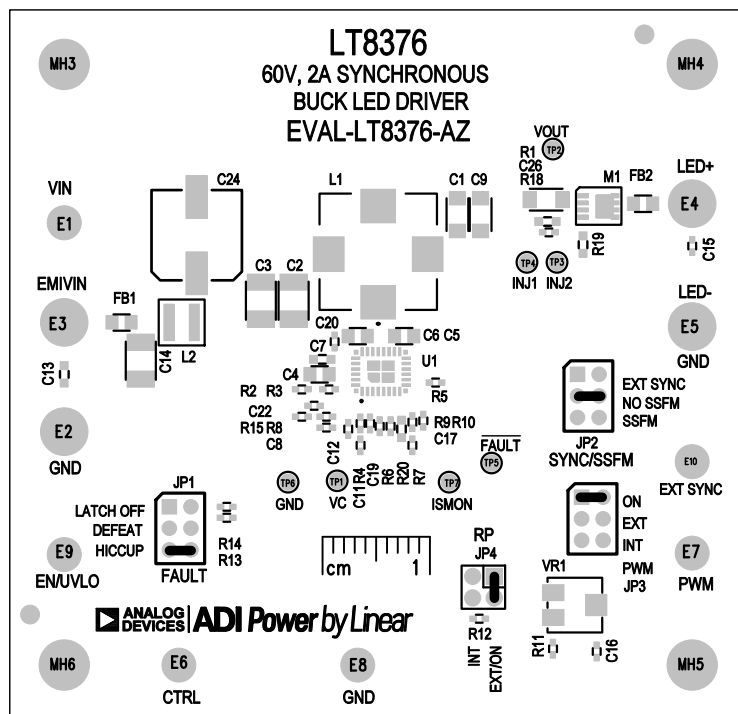
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EVAL-LT8376-AZ-3, LT8376RV



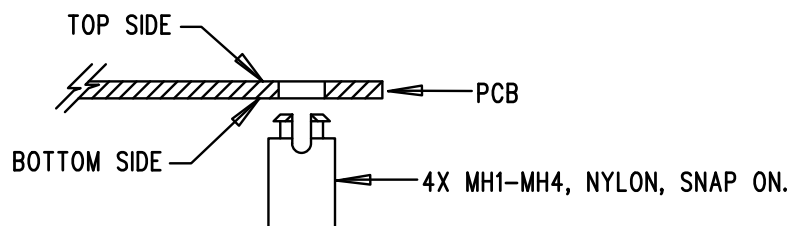
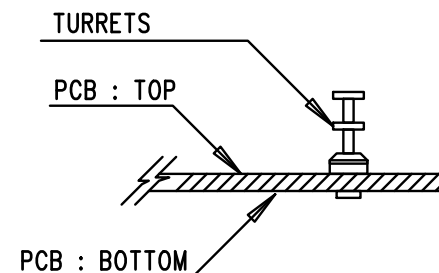
LT8376  
60V, 2A SYNCHRONOUS  
BUCK LED DRIVER  
EVAL-LT8376-AZ





## NOTES: UNLESS OTHERWISE SPECIFIED

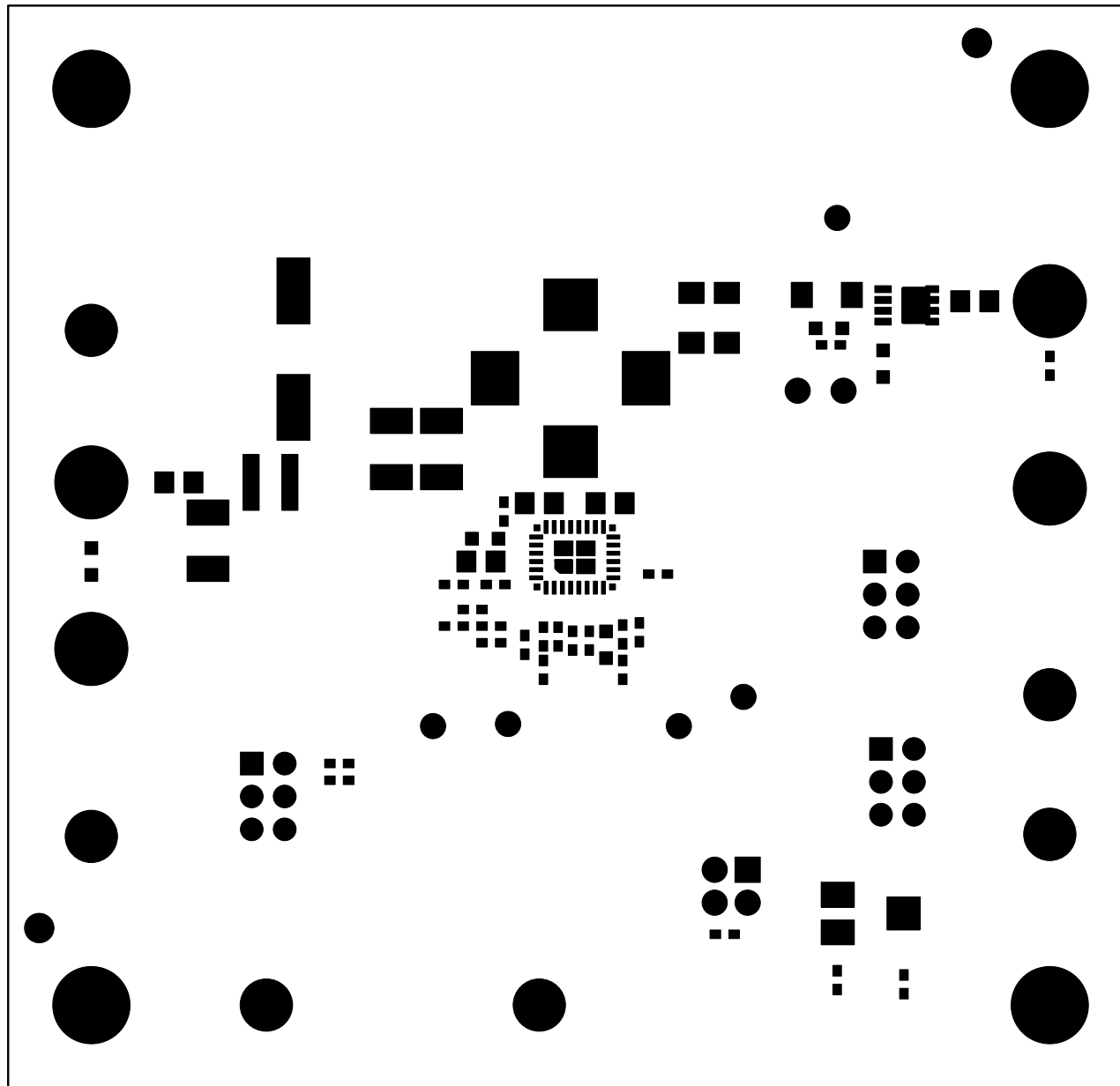
1. WORKMANSHIP SHALL BE IN ACCORDANCE WITH IPC-A-610.  
MAXIMUM SOLDER TEMPERATURE IS 240 DEG C.
2. ASSEMBLY PROCESS SHALL INCLUDE: REFLOW SOLDER TOP SIDE SMD.
3. PARTS TO OMIT WILL BE SPECIFIED ON THE BILL OF MATERIALS.  
LOCATIONS OF OMITTED PARTS SHALL BE FREE OF SOLDER.  
MASK THE SOLDER STENCIL WHERE SMT PARTS ARE OMITTED.
4. INSTALL SHUNTS AS SHOWN ON ASSY DRAWING.
5. DEPANELIZE BOARDS AFTER ASSEMBLY AND ROUTE-OUT THE  
BREAKOUT TABS ON FOUR SIDES OF THE BOARD EDGE.
6. DO NOT APPLY ANY KIND OF ASSEMBLY STAMP OR QA STAMP  
TO ANY BOARD.
7. INSTALL TURRETS AND STANDOFFS AS SHOWN BELOW:



TITLE: TOP ASSEMBLY DRAWING

60V, 2A SYNCHRONOUS BUCK LED DRIVER

|             |                                      |            |
|-------------|--------------------------------------|------------|
| SIZE<br>N/A | IC NO.<br>LT8376JV<br>EVAL-LT8376-AZ | REV.<br>3  |
| FILENAME:   |                                      | SHT 1 OF 1 |

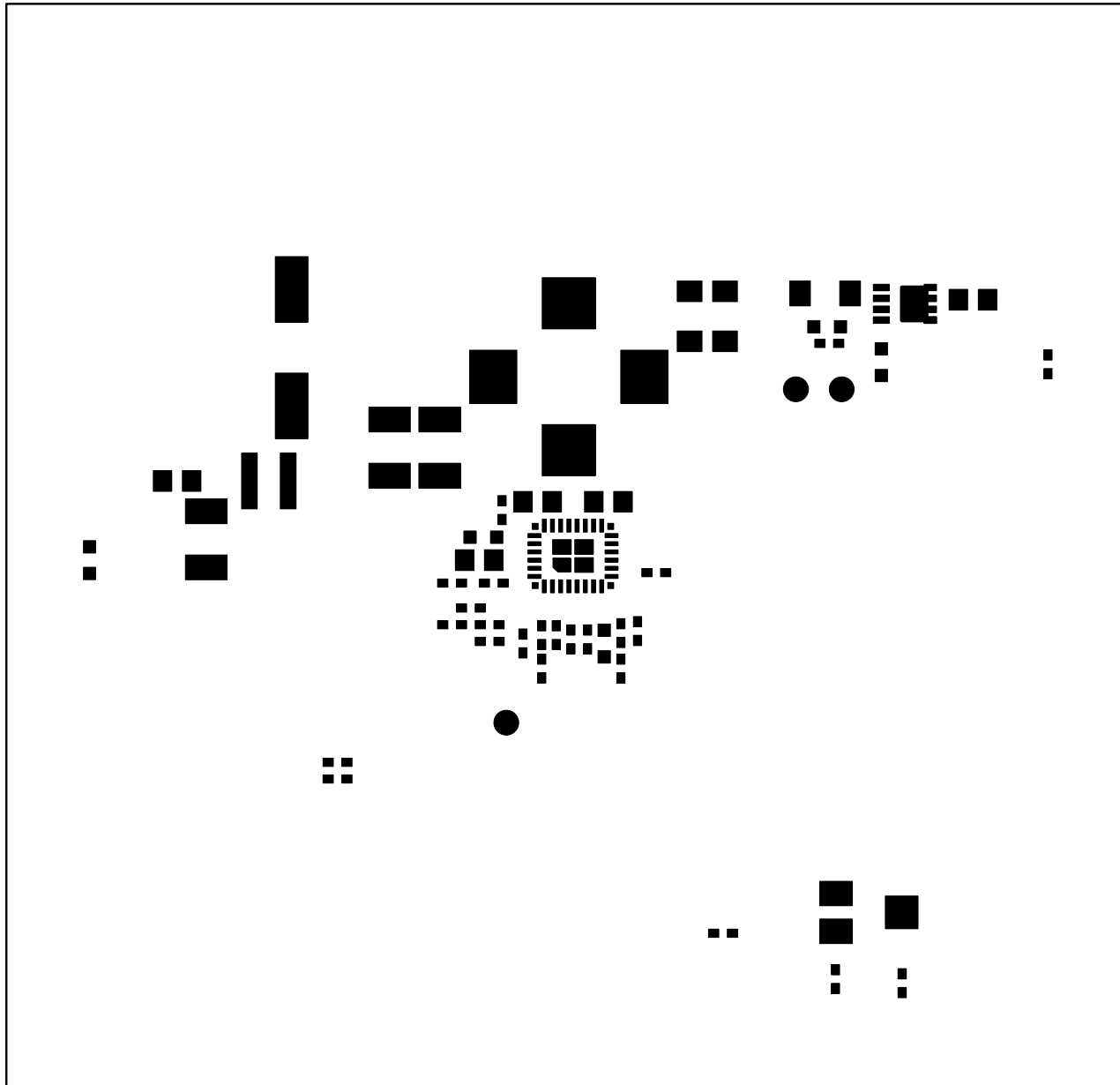


TOP SOLDER MASK

ANALOG DEVICES

DATE: 10-13-2021

EVAL-LT8376-AZ-3, LT8376RV



TOP SOLDER PASTE

ANALOG DEVICES

DATE: 10-13-2021

EVAL-LT8376-AZ-3, LT8376RV

