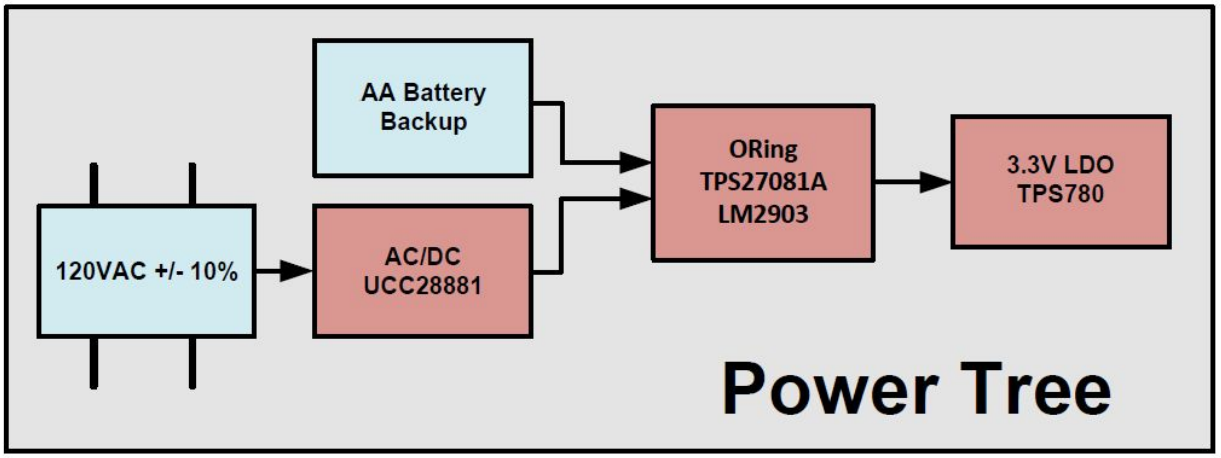
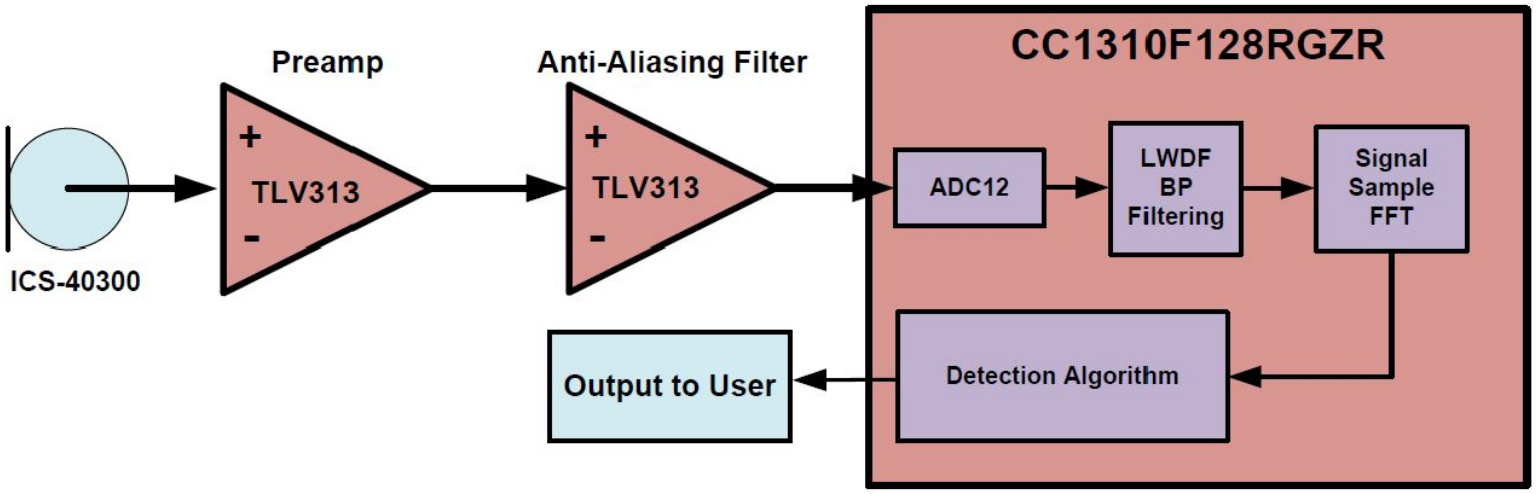
Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A





Orderable: Default build	Designed for: Public Release	Mod. Date: 10/9/2017
TID #: 01519	Project Title: Alarm detector	
Number: TIDA-01519 Rev: E1	Sheet Title:	
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 1 of 5
Drawn By:	File: TIDA-01519_CoverSheet.SchDoc	Size: B
Engineer: Brian Dempsey	Contact: http://www.ti.com/support	

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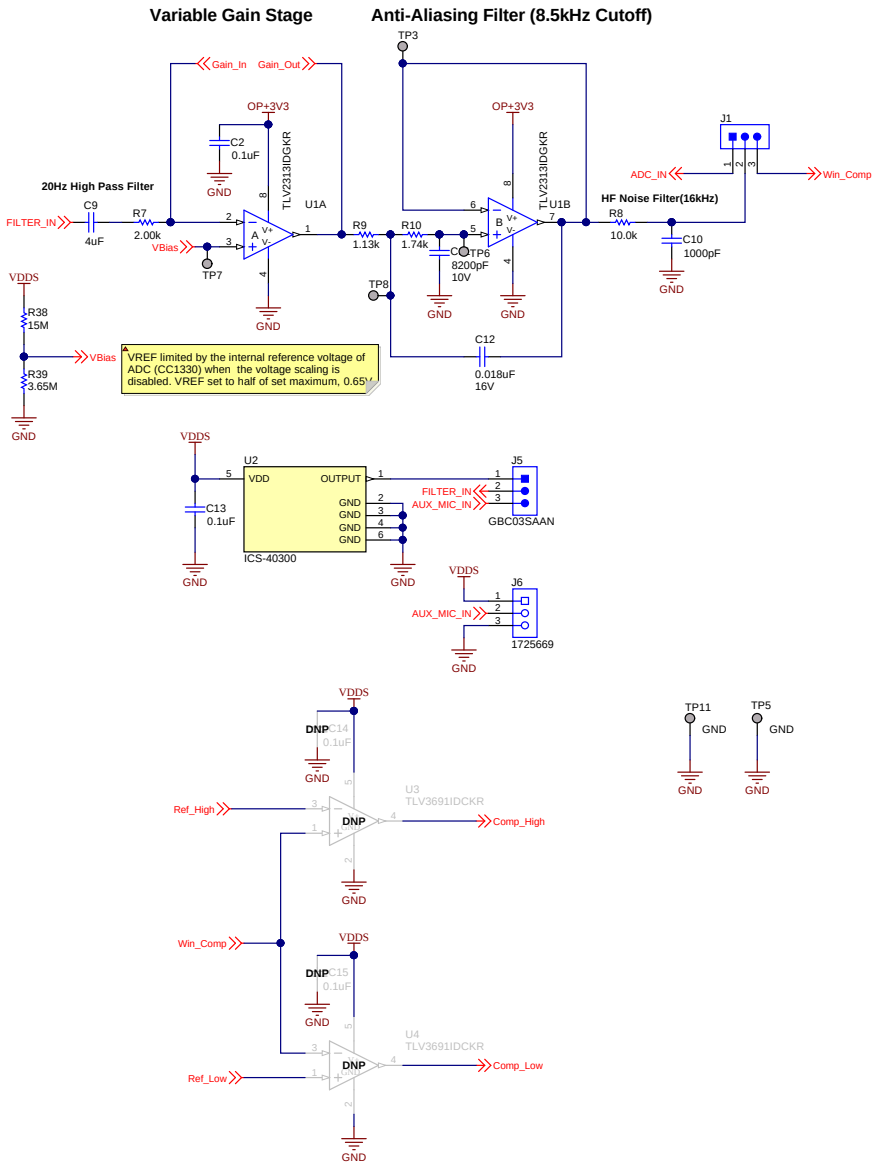

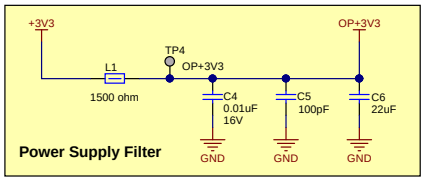

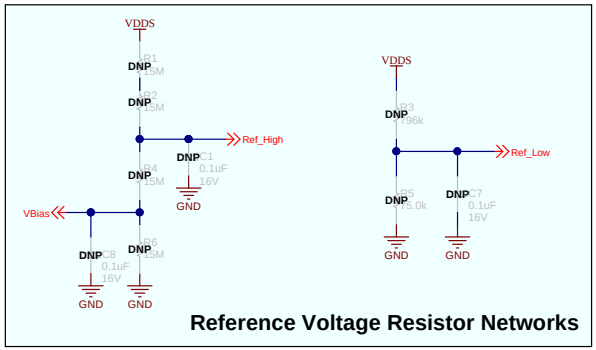

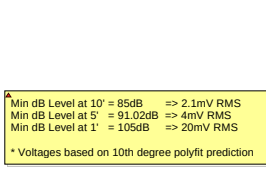

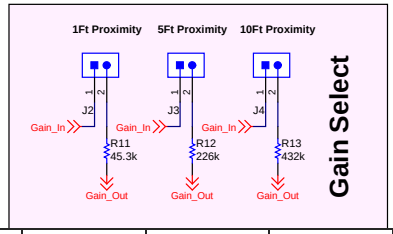

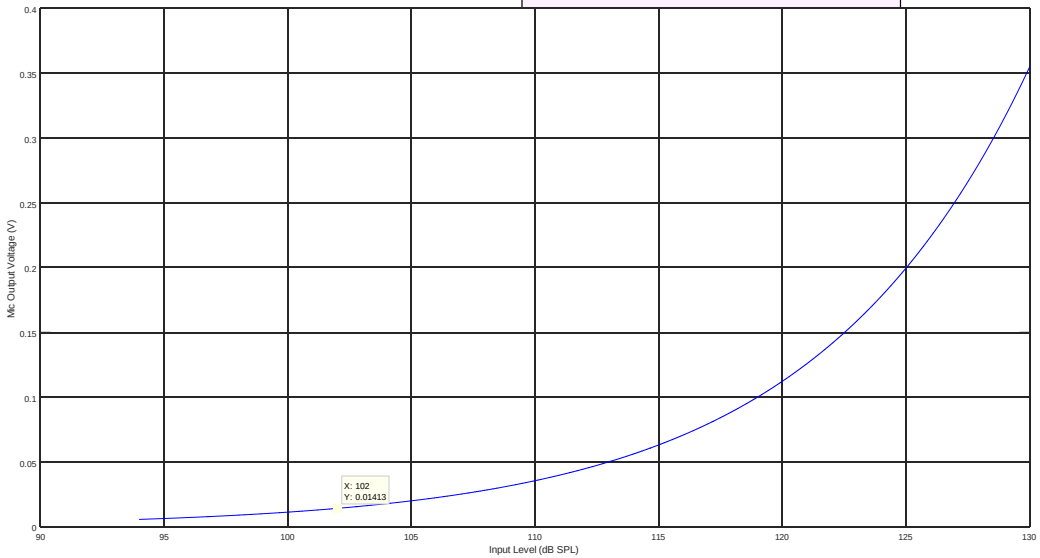

Orderable: Default build		Designed for: Public Release	Mod. Date: 9/7/2017
TID #: 01519		Project Title: Alarm detector	
Number: TIDA-01519	Rev: E1	Sheet Title:	
SVN Rev: Version control disabled		Assembly Variant: 001	Sheet: 2 of 5
Drawn By:		File: TIDA-01519_Analog_FE.SchDoc	Size: B
Engineer: Brian Dempsey		Contact: http://www.ti.com/support	

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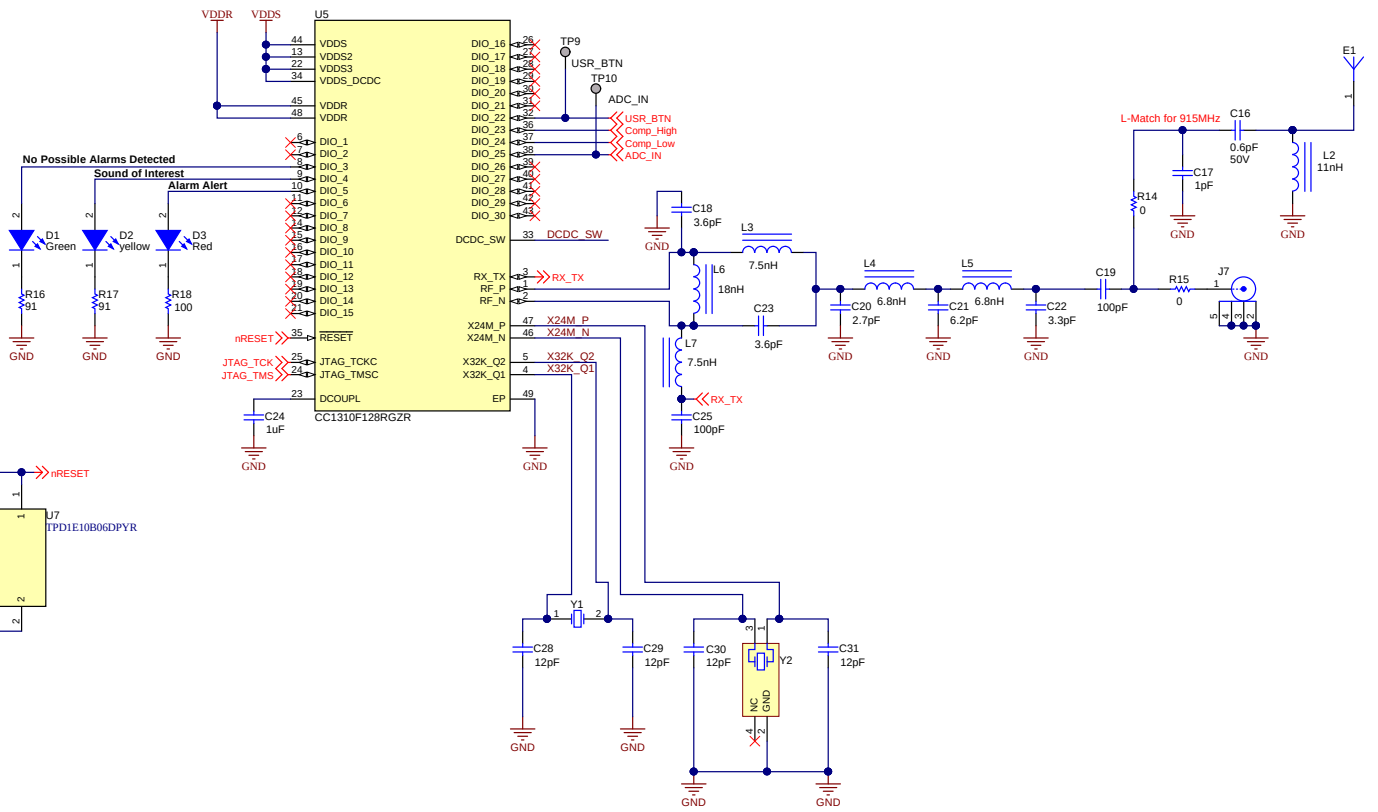
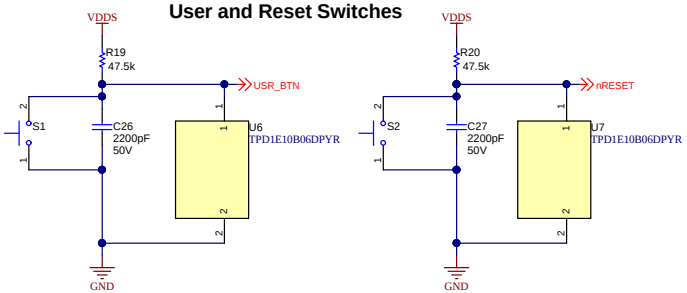
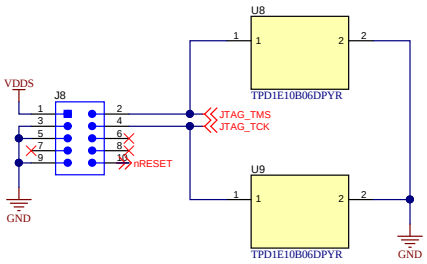
Wireless MCU



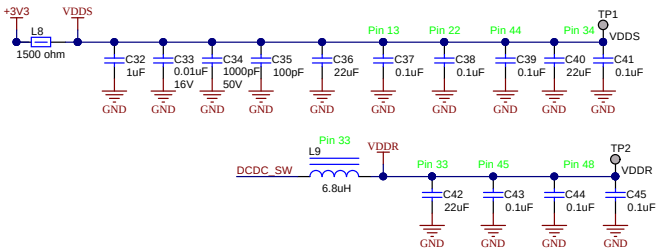
User and Reset Switches



JTAG Programming Interface



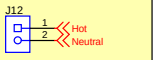
Wireless MCU Bypass Capacitors & DC-DC Passives

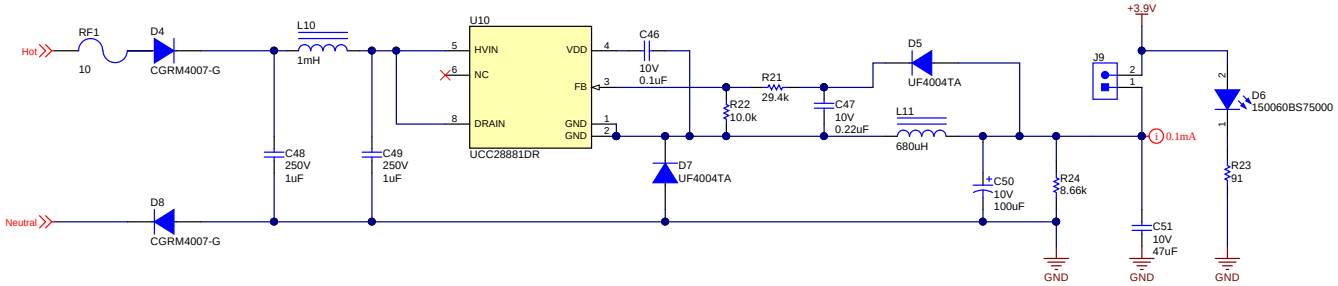


Orderable: Default build		Designed for: Public Release	Mod. Date: 9/7/2017
TID #: 01519		Project Title: Alarm detector	
Number: TIDA-01519	Rev: E1	Sheet Title:	
SVN Rev: Version control disabled		Assembly Variant: 001	Sheet: 3 of 5
Drawn By:		File: TIDA-01519_Power-MCU.SchDoc	Size: B
Engineer: Brian Dempsey		Contact: http://www.ti.com/support	

Wall Power Supply Rectification & Smoothing

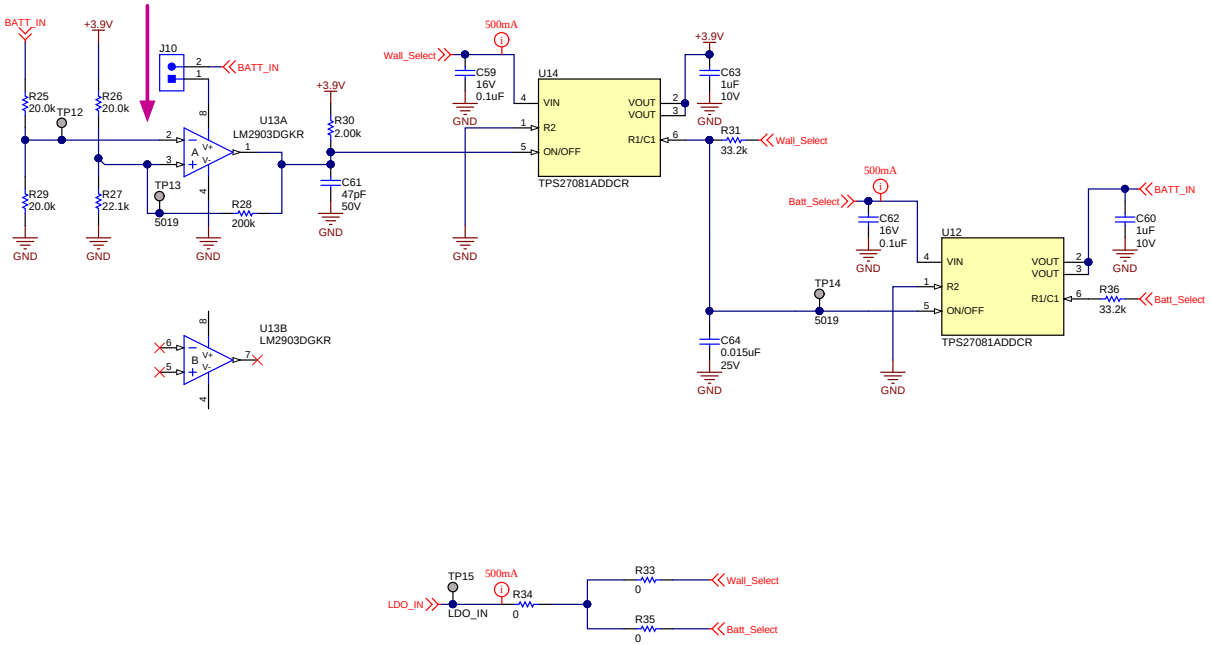
Main Wall Power In



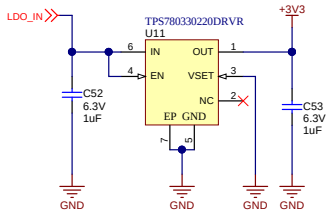


2.14V Required on Inverting Input to Switch from Wall to Batt. This is equivalent to 4.28V from the battery. This ensures that the battery is only used once the wall supply is absent.

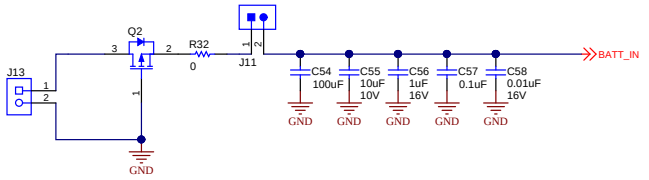
Power Supply ORing



Main Power Supply 3.3V LDO



Battery & Reservoir Capacitors



Orderable: Default build	Designed for: Public Release	Mod. Date: 8/31/2017
TID #: 01519	Project Title: Alarm detector	
Number: TIDA-01519 Rev: E1	Sheet Title:	
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 4 of 5
Drawn By:	File: TIDA-01519_WallPowerV2p0.SchDoc	Size: B
Engineer: Brian Dempsey	Contact: http://www.ti.com/support	

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H1
SJ-5003 (BLACK)

H2
SJ-5003 (BLACK)

H3
SJ-5003 (BLACK)

H4
SJ-5003 (BLACK)

DNP FID1

DNP FID2

DNP FID3

DNP FID4

DNP FID5

DNP FID6

PCB LOGO
Pb-Free Symbol

PCB LOGO
FCC disclaimer

SH-J1 SH-J2 SH-J3 SH-J4 SH-J5 SH-J9 SH-J10 SH-J11

Variant/Label Table	
Variant	Label Text
001	Default Build
002	Minimum BOM

LBL1
PCB Label
THT-14-423-10

ZZ1
Label Assembly Note
This Assembly Note is for PCB labels only

ZZ2
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ3
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ4
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

ZZ5
Assembly Note
Microphone U2 requires special precautions for mounting and board cleaning. See datasheet for full details.

Orderable: Default build	Designed for: Public Release	Mod. Date: 9/5/2017
TID #: 01519	Project Title: Alarm detector	
Number: TIDA-01519 Rev: E1	Sheet Title:	
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 5 of 5
Drawn By:	File: TIDA-01519_Hardware.SchDoc	Size: B
Engineer: Brian Dempsey	Contact: http://www.ti.com/support	

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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	FR-4 High TG	9.00mil	4.2	
5	Signal Layer 1	Copper	1.42mil		
6	Dielectric 2	FR-4 High TG	9.00mil	4.2	
7	Signal Layer 2	Copper	1.42mil		
8	Dielectric 3	FR-4 High TG	9.00mil	4.2	
9	Bottom Layer	Copper	1.40mil		
10	Bottom Solder	Solder Resist	0.40mil	3.5	
11	Bottom Overlay				

Top Layer contains 50 ohm single-ended using 18 mil trace.

DESIGN INFORMATION

MIN. TRACK WIDTH: 8 MIL
MIN. CLEARANCE: 6 MIL
MIN. VIA PAD SIZE: 18 MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL
PER IPC-D-275 CLASS 2 LEVEL C
REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL
HOLE SIZE TOLERANCE (UNLESS OTHERWISE SPECIFIED): +/- 3 MIL

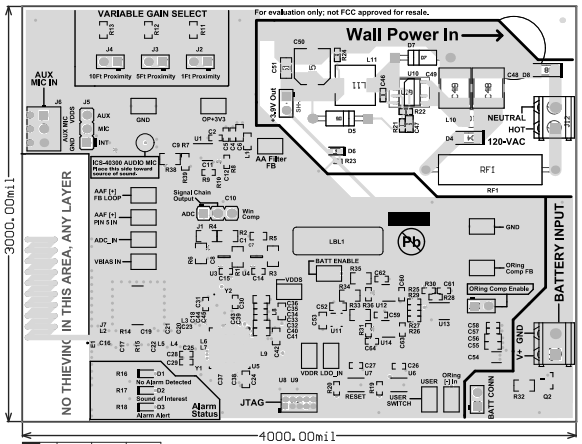
MATERIAL:
[ ] FR-408 [X] FR-4 High Tg [ ] OTHER
THICKNESS: [X] 31 MIL (0.8mm) +/-10% [ ] OTHER
TOLERANCE: [X] ANSI IPC-6012 TYPE 3 CLASS 2
[ ] OTHER +/-
BOW & TWIST: [X] ANSI IPC-6012 TYPE 3 CLASS 2
[ ] OTHER +/-

DRILLING:
REFERENCE: [X] AS SHOWN [X] NC_DRILL FILES
PTH COPPER THICKNESS: [X] 20-30 um [ ] OTHER

BOARD FINISH:
SILKSCREEN: [X] TOP [X] BOTTOM
SILKSCREEN COLOR: [X] WHITE [ ] OTHER
SOLDER RESIST COLOR: [ ] GREEN [X] OTHER Purple
[ ] MATTE [X] SEMI-GLOSS
SURFACE FINISH: [X] IMMERSION GOLD (ENIG) [ ] ENEPIG
[ ] IMM. TIN/SILVER OR EQUIV [ ] OTHER
ARRAY/PANEL: [ ] CUT AND TRIM PER M1 BOARD OUTLINE
[ ] N.C. ROUTE [X] V. SCORE
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBS TO MEET OR EXCEED THE REQUIREMENTS OF:
[X] ANSI IPC-A-600F CLASS -> [ ] 1 [X] 2 [ ] 3
[X] RoHS [ ] OTHER PER ORDER
ALL BOARDS MUST MEET OR EXCEED UL94-V0 REQUIREMENTS.
PCB MUST BEAR THE UL94V-0 UL REGISTERED MATERIAL ID NUMBER

ADDITIONAL REQUIREMENTS:
MICROSECTION: [ ] YES
BARE BOARD ELEC. TEST: [ ] NONE [X] REQUIRED [ ] PER ORDER

Z21 ■Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
Z22 ■These assemblies are ESD sensitive, ESD precautions shall be observed.
Z23 ■These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
Z24 ■These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.
Z25 ■Microphone U2 requires special precautions for mounting and board cleaning. See datasheet for full details.



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED
ASSEMBLY VARIANT: [No Variations]

BOARD #: TIDA-01519	REV: E1	SIZE: D			
TID #: 01519					
GENERATED: 10/28/2015 2:10:48 PM	Composite Print	TEXAS INSTRUMENTS			

TEXAS INSTRUMENTS

PROJECT TITLE: Alarm detector
DESIGNED FOR: Public Release
FILE NAME: TIDA-01519.PcbDoc

ENGINEER:	LAYOUT BY:
Brian Dempsey	Krypton Solutions/RS
SCALE: 1.00	ALTIUM DESIGNER VERSION: 17.1.5.472

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