



TIDA-020014 REV E1 Bill of Materials

| Item # | Designator | Quantity | Value | PartNumber | Manufacturer | Description | PackageReference |
|--------|--|----------|-----------|---------------------|-----------------------|---|-------------------------|
| 1 | IPCB1 | 1 | | TIDA-020014 | Any | Printed Circuit Board | |
| 2 | C1, C2 | 2 | 0.1uF | GRM21BR71H104KA01L | MuRata | CAP, CERM, 0.1 uF, 50 V,+/- 10%, X7R, 0805 | 0805 |
| 3 | C3 | 1 | 1uF | GRM188R61H105KAALD | MuRata | CAP, CERM, 1 uF, 50 V,+/- 10%, X5R, 0603 | 0603 |
| 4 | C5, C6, C22 | 3 | 10uF | C5750X7S2A106K230KB | TDK | CAP, CERM, 10 uF, 100 V,+/- 10%, X7S, 2220 | 2220 |
| 5 | C7, C24 | 2 | 4.7uF | GCM32DC72A475KE02L | MuRata | CAP, CERM, 4.7 uF, 100 V,+/- 10%, X7S, AEC-Q200 Grade 1, 1210 | 1210 |
| 6 | C8, C25 | 2 | 0.1uF | GRM21BR72A104KAC4L | MuRata | CAP, CERM, 0.1 uF, 100 V,+/- 10%, X7R, 0805 | 0805 |
| 7 | C9, C26 | 2 | 220pF | GRM1885C2A221JA01D | MuRata | CAP, CERM, 220 pF, 100 V,+/- 5%, C0G/NP0, 0603 | 0603 |
| 8 | C10, C11, C13, C14, C27, C28, C30, C31 | 8 | 22uF | GRM21BR61E226ME44L | MuRata | CAP, CERM, 22 uF, 25 V,+/- 20%, X5R, 0805 | 0805 |
| 9 | C12, C15, C29, C32 | 4 | 0.22uF | GRM21BR71H224KA01L | MuRata | CAP, CERM, 0.22 uF, 50 V,+/- 10%, X7R, 0805 | 0805 |
| 10 | C16 | 1 | 100pF | GRM1885C2A101JA01D | MuRata | CAP, CERM, 100 pF, 100 V,+/- 5%, C0G/NP0, 0603 | 0603 |
| 11 | C18 | 1 | 0.1uF | GRM155R61A104KA01D | MuRata | CAP, CERM, 0.1 uF, 10 V, +/- 10%, X5R, 0402 | 0402 |
| 12 | C20, C35 | 2 | 0.047uF | GRM188R71C473KA01D | MuRata | CAP, CERM, 0.047 uF, 16 V,+/- 10%, X7R, 0603 | 0603 |
| 13 | D1 | 1 | 26V | SMBJ26A-13-F | Diodes Inc. | Diode, TVS, Uni, 26 V, 42.1 Vc, SMB | SMB |
| 14 | D2 | 1 | 14V | SMBJ14A-13-F | Diodes Inc. | Diode, TVS, Uni, 14 V, 23.2 Vc, SMB | SMB |
| 15 | D3, D11 | 2 | 24V | DFLZ24-7 | Diodes Inc. | Diode, Zener, 24 V, 1 W, PowerDI123 | PowerDI123 |
| 16 | D4, D12 | 2 | Green | 150060GS75000 | Würth Elektronik | LED, Green, SMD | LED_0603 |
| 17 | D5, D13 | 2 | 200V | DFLU1200-7 | Diodes Inc. | Diode, Superfast Rectifier, 200 V, 1 A, AEC-Q101, PowerDI123 | PowerDI123 |
| 18 | D6, D14 | 2 | 18V | BZT52C18-7-F | Diodes Inc. | Diode, Zener, 18 V, 500 mW, AEC-Q101, SOD-123 | SOD-123 |
| 19 | D7, D15 | 2 | 75V | CMDD4448 | Central Semiconductor | Diode, Ultrafast, 75 V, 0.25 A, SOD-323 | SOD-323 |
| 20 | D8, D16 | 2 | 100V | PMEG10010ELRX | Nexperia | Diode, Schottky, 100 V, 1 A, AEC-Q101, SOD-123W | SOD-123W |
| 21 | D9, D17 | 2 | 8.2V | BZT52C8V2-7-F | Diodes Inc. | Diode, Zener, 8.2 V, 500 mW, SOD-123 | SOD-123 |
| 22 | D10 | 1 | Super Red | 150060SS75000 | Würth Elektronik | LED, Super Red, SMD | LED_0603 |
| 23 | J1 | 1 | | TSW-103-08-G-S | Samtec | Header, 2.54mm, 3x1, Gold, TH | Header, 2.54mm, 3x1, TH |
| 24 | J5, J6, J7, J8 | 4 | | TSW-102-08-G-S | Samtec | Header, 2.54mm, 2x1, Gold, TH | Header, 2.54mm, 2x1, TH |
| 25 | Q1 | 1 | 60V | CSD18543Q3A | Texas Instruments | MOSFET, N-CH, 60 V, 35 A, DNH0008A (VSONP-8) | DNH0008A |
| 26 | Q2 | 1 | 45 V | BC857C-7-F | Diodes Inc. | Transistor, PNP, 45 V, 0.1 A, SOT-23 | SOT-23 |
| 27 | R1, R16 | 2 | 10.0k | CRCW060310K0FKEA | Vishay-Dale | RES, 10.0 k, 1%, 0.1 W, 0603 | 0603 |
| 28 | R2, R17 | 2 | 100 | CRCW0805100RFKEA | Vishay-Dale | RES, 100, 1%, 0.125 W, 0805 | 0805 |
| 29 | R4 | 1 | 49.9k | CRCW040249K9FKED | Vishay-Dale | RES, 49.9 k, 1%, 0.063 W, 0402 | 0402 |
| 30 | R5 | 1 | 240k | CRCW0402240KFKEA | Vishay-Dale | RES, 240 k, 1%, 0.063 W, 0402 | 0402 |
| 31 | R6 | 1 | 10.0k | CRCW040210K0FKED | Vishay-Dale | RES, 10.0 k, 1%, 0.063 W, 0402 | 0402 |
| 32 | R7, R19 | 2 | 100k | CRCW0805100KFKEA | Vishay-Dale | RES, 100 k, 1%, 0.125 W, 0805 | 0805 |
| 33 | R8 | 1 | 1.82k | CRCW04021K82FKED | Vishay-Dale | RES, 1.82 k, 1%, 0.063 W, 0402 | 0402 |
| 34 | R9 | 1 | 15.0k | CRCW060315K0FKEA | Vishay-Dale | RES, 15.0 k, 1%, 0.1 W, 0603 | 0603 |
| 35 | R10, R20 | 2 | 154k | CRCW0603154KFKEA | Vishay-Dale | RES, 154 k, 1%, 0.1 W, 0603 | 0603 |
| 36 | R11, R21 | 2 | 301k | CRCW0603301KFKEA | Vishay-Dale | RES, 301 k, 1%, 0.1 W, 0603 | 0603 |
| 37 | R13 | 1 | 5.76k | CRCW04025K76FKED | Vishay-Dale | RES, 5.76 k, 1%, 0.063 W, 0402 | 0402 |
| 38 | R15, R24 | 2 | 12.1k | CRCW080512K1FKEA | Vishay-Dale | RES, 12.1 k, 1%, 0.125 W, 0805 | 0805 |
| 39 | R23 | 1 | 976k | CRCW0603976KFKEA | Vishay-Dale | RES, 976 k, 1%, 0.1 W, 0603 | 0603 |
| 40 | T1, T2 | 2 | 30uH | YA8916-BL | Coilcraft | Transformer, 30 uH, SMT | 9.3x10.2mm |
| 41 | TP1, TP3 | 2 | | 5005 | Keystone | Test Point, Compact, Red, TH | Red Compact Testpoint |
| 42 | TP2 | 1 | | 5006 | Keystone | Test Point, Compact, Black, TH | Black Compact Testpoint |
| 43 | U1 | 1 | | LM74700QDBVTQ1 | Texas Instruments | Low Iq Always ON Smart Diode Controller, DBV0006A (SOT-23-6) | DBV0006A |
| 44 | U2 | 1 | | TPS3700QDDCRQ1 | Texas Instruments | Automotive, High-Voltage (18V) Window Comparator with Over- and Undervoltage Detection, DDC0006A (SOT-23-T-6) | DDC0006A |
| 45 | U3, U4 | 2 | | LM5180QNGURQ1 | Texas Instruments | 70-V PSR Flyback Converter With 100-V, 1.2-A Power Switch and Ultra-Low IQ, NGU0008C (WSON-8) | NGU0008C |
| 46 | C19, C34 | 0 | 1000pF | S102M59Z5UU83L0R | Vishay-Bccomponents | CAP, CERM, 1000 pF, 6000 V,+/- 20%, Z5U, 15x8mm | 15x8mm |
| 47 | FID1, FID2, FID3 | 0 | | N/A | N/A | Fiducial mark. There is nothing to buy or mount. | N/A |
| 48 | R14 | 0 | 976k | CRCW0603976KFKEA | Vishay-Dale | RES, 976 k, 1%, 0.1 W, 0603 | 0603 |