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## TIDA-000801

| Designator | Quantity | Value | Description | PackageReference | PartNumber | Manufacturer | Alternate PartNumber | Alternate Manufacturer |
|---|---|---|---|---|---|---|---|---|
| !PCB1 | 1 | | Printed Circuit Board | | TIDA-00801 | Any | - | - |
| C1, C15 | 2 | 10uF | CAP, CERM, 10 µF, 50 V, +/- 10%, X7R, 2220 | 2220 | CGA9N3X7R1H106K230KB | TDK | | |
| C3 | 1 | 220uF | CAP, AL, 220 µF, 63 V, +/- 20%, 0.26 ohm, SMD | SMT Radial H13 | EEE-TK1J221AQ | Panasonic | | |
| C4, C8 | 2 | 1uF | CAP, CERM, 1 µF, 25 V, +/- 5%, X7R, 1206_190 | 1206_190 | CL31B105JAHNNNE | Samsung Electro-Mechanics | | |
| C6, C7 | 2 | 560uF | CAP, AL, 560 µF, 50 V, +/- 20%, 0.05 ohm, TH | D12.5xL25mm | EEU-FC1H561 | Panasonic | | |
| C9, C19, C20 | 3 | 100uF | CAP, CERM, 100 µF, 10 V, +/- 20%, X5R, 1210 | 1210 | LMK325ABJ107MMHT | Taiyo Yuden | | |
| C10, C21 | 2 | 1uF | CAP, CERM, 1 µF, 25 V, +/- 10%, X7R, 1206 | 1206 | C1206C105K3RACTU | Kemet | | |
| C12, C27 | 2 | 47pF | CAP, CERM, 47 pF, 50 V, +/- 5%, C0G/NP0, 0603 | 0603 | GRM1885C1H470JA01D | MuRata | | |
| C13 | 1 | 470pF | CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, 0603 | 0603 | C0603C471K5RACTU | Kemet | | |
| C14, C26 | 2 | 0.22uF | CAP, CERM, 0.22 µF, 25 V, +/- 10%, X5R, 0603 | 0603 | GRM188R61E224KA88D | MuRata | | |
| C16 | 1 | 0.1uF | CAP, CERM, 0.1 µF, 25 V, +/- 5%, X7R, 0603 | 0603 | C0603C104J3RACTU | Kemet | | |
| C17 | 1 | 4.7uF | CAP, CERM, 4.7 µF, 25 V, +/- 10%, X5R, 0603_095 | 0603_095 | GRM188R61E475KE11D | MuRata | | |
| C18, C24, C25, C28 | 4 | 0.01uF | CAP, CERM, 0.01 µF, 25 V, +/- 10%, X7R, 0603 | 0603 | GRM188R71E103KA01D | MuRata | | |
| C22 | 1 | 1000pF | CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0603 | 0603 | GRM188R71H102KA01D | MuRata | | |
| C29 | 1 | 680pF | CAP, CERM, 680 pF, 25 V, +/- 5%, C0G/NP0, 0402 | 0402 | C1005C0G1E681J | TDK | | |
| C30 | 1 | 1000pF | CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0603 | 0603 | C0603X102K5RACTU | Kemet | | |
| C31 | 1 | 0.012uF | CAP, CERM, 0.012 µF, 25 V, +/- 5%, X7R, 0603 | 0603 | 06033C123JAT2A | AVX | | |
| C32 | 1 | 18pF | CAP, CERM, 18 pF, 50 V, +/- 5%, C0G/NP0, 0603 | 0603 | C1608C0G1H180J | TDK | | |
| C33 | 1 | 27pF | CAP, CERM, 27 pF, 50 V, +/- 5%, C0G/NP0, 0603 | 0603 | 06035A270JAT2A | AVX | | |
| C34 | 1 | 120pF | CAP, CERM, 120 pF, 50 V, +/- 5%, C0G/NP0, 0603 | 0603 | GRM1885C1H121JA01D | MuRata | | |
| C35, C44, C47, C49, C51, C53, C55, C65, C67 | 9 | 4.7uF | CAP, CERM, 4.7 µF, 25 V, +/- 10%, X5R, 0805 | 0805 | C2012X5R1E475K125AB | TDK | | |
| C36, C45 | 2 | 0.1uF | CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0402 | 0402 | GCM155R71C104KA55D | MuRata | | |
| C37 | 1 | 10uF | CAP, CERM, 10 µF, 16 V, +/- 20%, X5R, 0603 | 0603 | EMK107BBJ106MA-T | Taiyo Yuden | | |
| C38, C40, C41, C42, C43 | 5 | 2.2uF | CAP, CERM, 2.2 µF, 16 V, +/- 10%, X5R, 0603 | 0603 | GRM188R61C225KAAD | MuRata | | |
| C39, C46, C48, C50, C52, C54, C56, C66, C68 | 9 | 47uF | CAP, CERM, 47 µF, 10 V, +/- 10%, X7R, 1210 | 1210 | GRM32ER71A476KE15L | MuRata | | |
| C57, C58, C59, C60, C61, C62, C63, C64 | 8 | 2.2uF | CAP, CERM, 2.2 µF, 6.3 V, +/- 20%, X5R, 0402 | 0402 | GRM155R60J225ME15D | MuRata | | |
| C69 | 1 | 0.1uF | CAP, CERM, 0.1 µF, 16 V, +/- 10%, X5R, 0603 | 0603 | GRM188R61C104KA01D | MuRata | | |
| C70 | 1 | 1uF | CAP, CERM, 1 µF, 16 V, +/- 10%, X5R, 0603 | 0603 | GRM185R61C105KE44D | MuRata | | |
| C71 | 1 | 220pF | CAP, CERM, 220 pF, 50 V, +/- 10%, X7R, 0603 | 0603 | C1608X7R1H221K | TDK | | |
| C72 | 1 | 0.01uF | CAP, CERM, 0.01 µF, 10 V, +/- 10%, X5R, 0402 | 0402 | GRM155R61A103KA01D | MuRata | | |
| C73 | 1 | 10uF | CAP, CERM, 10 µF, 25 V, +/- 10%, X5R, 0805 | 0805 | C2012X5R1E106K125AB | TDK | | |
| C74, C75, C76, C82, C83 | 5 | 10uF | CAP, CERM, 10 µF, 6.3 V, +/- 10%, X7R, 0805 | 0805 | GRM21BR70J106KE76L | MuRata | | |
| C77 | 1 | 0.1uF | CAP, CERM, 0.1 µF, 25 V, +/- 10%, X8R, 0603 | 0603 | CGA3E2X8R1E104K080AA | TDK | | |
| C78 | 1 | 10pF | CAP, CERM, 10 pF, 100 V, +/- 5%, C0G/NP0, 0603 | 0603 | GRM1885C2A100JA01D | MuRata | | |
| C79, C80, C81 | 3 | 1000pF | CAP, CERM, 1000 pF, 50 V, +/- 1%, C0G/NP0, 0603 | 0603 | GRM1885C1H102FA01J | MuRata | | |
| D1, D2 | 2 | 45V | Diode, Schottky, 45 V, 15 A, CFP15 | CFP15 | PMEG045V150EPDAZ | NXP Semiconductor | | |
| D3 | 1 | Super Red | LED, Super Red, SMD | LED, 1.6x.6x.8mm | SML-LX0603SRW-TR | Lumex | | |
| D4 | 1 | Green | LED, Green, SMD | 1.7x0.65x0.8mm | LG L29K-G2J1-24-Z | OSRAM | | |
| H1, H2, H3, H4 | 4 | | Bumpon, Hemisphere, 0.375 X 0.235, Black | Black Bumpon | SJ61A2 | 3M | | |
| H5, H6 | 2 | | WASHER FLAT 1/4 NYLON | 0.260"ID x 0.437"OD x 0.062"THK | 3218 | Keystone | - | - |
| J1 | 1 | | BANANA JACK, SOLDER LUG, RED, TH | Red Insulated Banana Jack | SPC15363 | Tenma | | |
| J2 | 1 | | BANANA JACK, SOLDER LUG, BLACK, TH | Black Insulated Banana Jack | SPC15354 | Tenma | | |
| J3 | 1 | | Header, 100mil, 12x1, Gold, TH | 12x1 Header | TSW-112-07-G-S | Samtec | | |
| J4, J5 | 2 | | Header, 100mil, 2x1, Gold, TH | Header, 100mil, 2x1, TH | HTSW-102-07-G-S | Samtec | | |
| L1 | 1 | 1.8uH | Inductor, Shielded Drum Core, Superflux, 1.8uH, 16A, 0.0035 ohm, SMD | WE-HC6 | 744325180 | Wurth Elektronik eiSos | | |
| L2 | 1 | 10uH | Inductor, Shielded Drum Core, Powdered Iron, 10uH, 3A, 0.102 ohm, SMD | IHLP-2525CZ | IHLP2525CZER100M01 | Vishay-Dale | | |
| L3 | 1 | 4.7uH | Inductor, Shielded Drum Core, Powdered Iron, 4.7uH, 5.5A, 0.037 ohm, SMD | IHLP-2525CZ | IHLP2525CZER4R7M01 | Vishay-Dale | | |
| L4, L5, L6, L7, L8, L9, L10, L11, L12 | 9 | 1uH | Inductor, Shielded Drum Core, Powdered Iron, 1 µH, 4 A, 0.05 ohm, SMD | 4.7x1.2x4.3mm | IHLP1616ABER1R0M01 | Vishay-Dale | | |
| Q1 | 1 | -60V | MOSFET, P-CH, -60 V, -50 A, DPAK | DPAK | SUD50P06-15L-E3 | Vishay-Semiconductor | | None |
| Q2, Q3, Q5, Q6 | 4 | 40V | MOSFET, N-CH, 40 V, 19 A, SOIC-8 | SOIC-8 | Si4840BDY-T1-GE3 | Vishay-Siliconix | | None |
| Q4 | 1 | 40V | MOSFET, N-CH, 40 V, 42 A, DPAK | DPAK | IRLR3114ZTRPBF | International Rectifier | | None |
| R1 | 1 | 0.022 | RES, 0.022, 1%, 1 W, 0612 | 0612 | PRL1632-R022-F-T1 | Susumu Co Ltd | | |
| R3 | 1 | 432k | RES, 432 k, 1%, 0.1 W, 0603 | 0603 | CRCW0603432KFKEA | Vishay-Dale | | |
| R4 | 1 | 1.50k | RES, 1.50 k, 1%, 0.1 W, 0603 | 0603 | ERJ-3EKF1501V | Panasonic | | |
| R5, R11 | 2 | 82.5k | RES, 82.5 k, 1%, 0.1 W, 0603 | 0603 | CRCW060382K5FKEA | Vishay-Dale | | |
| R6 | 1 | 0.015 | RES, 0.015, 1%, 3 W, 4527 | 4527 | WSR3R0150FEA | Vishay-Dale | | |
| R7 | 1 | 49.9k | RES, 49.9 k, 0.1%, 0.1 W, 0603 | 0603 | RG1608P-4992-B-T5 | Susumu Co Ltd | | |
| R8 | 1 | 0.015 | RES, 0.015, 1%, 1 W, 0612 | 0612 | PRL1632-R015-F-T1 | Susumu Co Ltd | | |
| R10 | 1 | 255k | RES, 255 k, 1%, 0.1 W, 0603 | 0603 | CRCW0603255KFKEA | Vishay-Dale | | |
| R12 | 1 | 1.0k | RES, 1.0 k, 5%, 0.1 W, 0603 | 0603 | CRCW06031K00JNEA | Vishay-Dale | | |
| R13 | 1 | 39k | RES, 39 k, 5%, 0.1 W, 0603 | 0603 | RC0603JR-0739KL | Yageo America | | |
| R14 | 1 | 27.0k | RES, 27.0 k, 0.5%, 0.1 W, 0603 | 0603 | RT0603DRD0727KL | Yageo America | | |
| R15, R20, R25 | 3 | 10.0k | RES, 10.0 k, 1%, 0.1 W, 0603 | 0603 | RC0603FR-0710KL | Yageo America | | |
| R16, R17, R18, R19 | 4 | 2.2k | RES, 2.2 k, 5%, 0.063 W, 0402 | 0402 | CRCW04022K20JNED | Vishay-Dale | | |
| R23, R24 | 2 | 0 | RES, 0, 5%, 0.063 W, 0402 | 0402 | RC0402JR-070RL | Yageo America | | |
| R26, R29, R30 | 3 | 10.0k | RES, 10.0 k, 1%, 0.1 W, 0603 | 0603 | CRCW060310K0FKEA | Vishay-Dale | | |
| R27 | 1 | 100k | RES, 100 k, 5%, 0.1 W, 0603 | 0603 | CRCW0603100KJNEA | Vishay-Dale | | |
| R28 | 1 | 10.0 | RES, 10.0, 0.1%, 0.1 W, 0603 | 0603 | TNPW060310R0BEEA | Vishay-Dale | | |

| Designator | Quantity | Value | Description | PackageReference | PartNumber | Manufacturer | Alternate PartNumber | Alternate Manufacturer |
|---|---|---|---|---|---|---|---|---|
| R31 | 1 | 49.9 | RES, 49.9, 1%, 0.1 W, 0603 | 0603 | RC0603FR-0749R9L | Yageo America | | |
| R32 | 1 | 806 | RES, 806, 1%, 0.1 W, 0603 | 0603 | CRCW0603806RFKEA | Vishay-Dale | | |
| S1 | 1 | | Switch, 4PST, 0.25 A, 120 V, TH | 12.6x12.6mm | 15451 | MEC Switches | | |
| TP1, TP5, TP16, TP17, TP18, TP19, TP20, TP21, TP22, TP23, TP24, TP25, TP26, TP27 | 14 | | PCB Pin, Swage Mount, TH | PCB Pin(2505-2) | 2505-2-00-44-00-00-07-0 | Mill-Max | | |
| TP3, TP4 | 2 | Black | Test Point, Compact, Black, TH | Black Compact Testpoint | 5006 | Keystone | | |
| TP6, TP8, TP11, TP12 | 4 | White | Test Point, Miniature, White, TH | White Miniature Testpoint | 5002 | Keystone | | |
| U1 | 1 | | LOW IQ, SINGLE BOOST, DUAL SYNCHRONOUS BUCK CONTROLLER, DAP0038B | DAP0038B | TPS43330AQDAPRQ1 | Texas Instruments | | Texas Instruments |
| U2 | 1 | | Automotive Power Management Unit (PMU) for Processor, ZWS0169A | ZWS0169A | O9039A360IZWSRQ1 | Texas Instruments | | Texas Instruments |
| U3 | 1 | | 5.5-V, 4-A, 16-mO On-Resistance Load Switch, DSG0008A | DSG0008A | TPS22965TDSGRQ1 | Texas Instruments | TPS22965TDSGTQ1 | Texas Instruments |
| U4 | 1 | | Single Output Automotive LDO, 3 A, 2.3 to 3.5 V Input, with DDR Termination, 10-pin SON (DRC), -40 to 125 degC, Green (RoHS & no Sb/Br) | DRC0010A | TPS51200QDRCRQ1 | Texas Instruments | Equivalent | None |
| C2 | 0 | 220uF | CAP, AL, 220 µF, 63 V, +/- 20%, 0.26 ohm, SMD | SMT Radial H13 | EEE-TK1J221AQ | Panasonic | | |
| C5 | 0 | 560uF | CAP, AL, 560 µF, 50 V, +/- 20%, 0.05 ohm, TH | D12.5xL25mm | EEU-FC1H561 | Panasonic | | |
| C11 | 0 | 1000pF | CAP, CERM, 1000 pF, 25 V, +/- 5%, C0G/NP0, 0603 | 0603 | GRM1885C1E102JA01D | MuRata | | |
| C23 | 0 | 1000pF | CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0603 | 0603 | GRM188R71H102KA01D | MuRata | | |
| FID1, FID2, FID3, FID4, FID5, FID6 | 0 | | Fiducial mark. There is nothing to buy or mount. | Fiducial | N/A | N/A | | |
| R2, R9 | 0 | 10.0 | RES, 10.0, 1%, 0.1 W, 0603 | 0603 | CRCW060310R0FKEA | Vishay-Dale | | |
| R21, R22 | 0 | 0 | RES, 0, 5%, 0.063 W, 0402 | 0402 | RC0402JR-070RL | Yageo America | | |

Notes:

Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.

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