

TIDA-010951 REV E1 Bill of Materials

| Item # | Designator         | Quantity | Value            | PartNumber          | Manufacturer                | Description                                                                              | PackageReference              |
|--------|--------------------|----------|------------------|---------------------|-----------------------------|------------------------------------------------------------------------------------------|-------------------------------|
| 1      | C1                 | 1        | 0.47uF           | 450MPK474J          | Rubycon                     | CAP. Film, 0.47 uF, 450 V, +/- 5%, TH                                                    | 18x6.5mm                      |
| 2      | C2                 | 1        | 2200pF           | GRM31BR73A222KW01L  | MuRata                      | CAP. CERM, 2200 pF, 1000 V, +/- 10%, X7R, 1206                                           | 1206                          |
| 3      | C3                 | 1        | 0.1uF            | GRM55DR73A104KW01L  | MuRata                      | CAP. CERM, 0.1 uF, 1000 V, +/- 10%, X7R, 2220                                            | 2220                          |
| 4      | C4                 | 1        | DNP              | DNP                 | DNP                         |                                                                                          | 0805                          |
| 5      | C5                 | 1        |                  |                     |                             | 890180575031 WCAP-ATLL Aluminum Electrolytic Capacitors 35VDC                            |                               |
| 6      | C6, C7             | 2        |                  |                     |                             | 890180575031 WCAP-ATLL Aluminum Electrolytic Capacitors                                  |                               |
| 7      | C8                 | 1        | 1uF              | UMK107AB7105KA-T    | Taiyo Yuden                 | CAP. CERM, 1 uF, 50 V, +/- 10%, X7R, 0603                                                | 0603                          |
| 8      | C9                 | 1        | 22uF             | UVR2A220MED1TD      | Nichicon                    | CAP. AL, 22 uF, 100 V, +/- 20%, TH                                                       | Dia 6.3mm                     |
| 9      | C11                | 1        | 0.01uF           | C1608X7R1H103K080AA | TDK                         | CAP. CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603                                             | 0603                          |
| 10     | C12, C16           | 2        | 10pF             | GRM188R31H100JA01D  | MuRata                      | CAP. CERM, 10 pF, 50 V, +/- 5%, COG/NP0, 0603                                            | 0603                          |
| 11     | C13                | 1        | 1000pF           | C0603X102K5RACTU    | Kemet                       | CAP. CERM, 1000 pF, 50 V, +/- 10%, X7R, 0603                                             | 0603                          |
| 12     | C14                | 1        | 0.1uF            | GRM188R71H104KA93D  | MuRata                      | CAP. CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603                                              | 0603                          |
| 13     | C15                | 1        | 100pF            | C1608C0G1H101J080AE | TDK                         | CAP. CERM, 100 pF, 50 V, +/- 5%, COG/NP0, 0603                                           | 0603                          |
| 14     | C17                | 1        | 2.2uF            | C1608XSR1V225K080AC | TDK                         | CAP. CERM, 2.2 uF, 35 V, +/- 10%, XSR, 0603                                              | 0603                          |
| 15     | C18                | 1        | 4.7uF            | C2012X7R1V475K125AC | TDK                         | CAP. CERM, 4.7 uF, 35 V, +/- 10%, X7R, 0805                                              | 0805                          |
| 16     | C19                | 1        | 2.2uF            | C2012X6S1H225K125AB | TDK                         | CAP. CERM, 2.2 uF, 50 V, +/- 10%, X6S, 0805                                              | 0805                          |
| 17     | C20                | 1        | 10uF             | UMK316BBJ106KL-T    | Taiyo Yuden                 | CAP. CERM, 10 uF, 50 V, +/- 10%, XSR, 1206                                               | 1206                          |
| 18     | C21                | 1        | 0.1uF            | C1005X7R1H104K050BB | TDK                         | CAP. CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0402                                              | 0402                          |
| 19     | C22, C31           | 2        | 22uF             | GRM31CR71A226KE15L  | MuRata                      | CAP. CERM, 22 uF, 10 V, +/- 10%, X7R, 1206                                               | 1206                          |
| 20     | C23                | 1        | 10uF             | GRM155R60J106ME11   | MuRata                      | CAP. CERM, 10 uF, 6.3 V, +/- 20%, XSR, 0402                                              | 0402                          |
| 21     | C24                | 1        |                  |                     | Murata                      | 0.1uF ±10% 6.3V Ceramic Capacitor XSR 0201 (0603 Metric)                                 | 0201                          |
| 22     | C25                | 1        | 0.47uF           | GRM033R60J474KE90D  | MuRata                      | CAP. CERM, 0.47 uF, 6.3 V, +/- 10%, XSR, 0201                                            | 0201                          |
| 23     | C26                | 1        | 1uF              | GRM188R71C105KE15D  | MuRata                      | CAP. CERM, 1 uF, 16 V, +/- 10%, X7R, 0603                                                | 0603                          |
| 24     | C27                | 1        | 1uF              | GRM155R60J105KE19D  | MuRata                      | CAP. CERM, 1 uF, 6.3 V, +/- 10%, XSR, 0402                                               | 0402                          |
| 25     | C28                | 1        | 2.2uF            | UMK107B322KA-T      | Taiyo Yuden                 | CAP. CERM, 2.2 uF, 10 V, +/- 10%, XSR, 0603                                              | 0603                          |
| 26     | C29                | 1        | 0.047uF          | C1005X7R1H473K050BB | TDK                         | CAP. CERM, 0.047 uF, 50 V, +/- 10%, X7R, 0402                                            | 0402                          |
| 27     | C30                | 1        | 1000pF           | GCM155R71H102KA37D  | MuRata                      | CAP. CERM, 1000 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402                           | 0402                          |
| 28     | C32                | 1        | 470pF            | 8.85012E+11         | Würth Elektronik            | CAP. CERM, 470 pF, 10 V, +/- 5%, COG/NP0, 0603                                           | 0603                          |
| 29     | D1                 | 1        | 600V             | DF1506S-T           | Diodes Inc.                 | Diode, Switching Bridge, 600 V, 1.5 A, DF-S                                              | DF-S                          |
| 30     | D2                 | 1        | 150V             | SMCJ150A-TP         | Micro Commercial Components | Diode, TVS, Uni, 150 V, 243 Vc, SMC                                                      | SMC                           |
| 31     | D3, D4             | 2        | 600V             | CGRM4005-G          | Comchip Technology          | Diode, P-N, 600 V, 1 A, MINI-SMA                                                         | MINI-SMA                      |
| 32     | D5                 | 1        | 600V             | MURA160T3G          | ON Semiconductor            | Diode, Ultrafast, 600 V, 1 A, AEC-Q101, SMA                                              | SMA                           |
| 33     | D6                 | 1        | 200V             | STTH802B-TR         | STMicroelectronics          | Diode, Ultrafast, 200 V, 8 A, DPAK                                                       | DPAK                          |
| 34     | D7, D8, D11        | 3        | BAS20HT1G        | BAS20HT1G           | ON Semiconductor            | Diode, Switching, 200 V, 0.2 A, AEC-Q101, SOD-323                                        | SOD-323                       |
| 35     | D8                 | 1        | 18V              | MMS24705-E3-08      | Vishay-Semiconductor        | Diode, Zener, 18 V, 500 mW, SOD-123                                                      | SOD-123                       |
| 36     | D14                | 1        | Red              | 150060RS75000       | Würth Elektronik            | LED, Red, SMD                                                                            | LED_0603                      |
| 37     | F1                 | 1        | 3.15A            | 39213150000         | Littelfuse                  | Fuse, 3.15 A, 250VAC/VDC, TH                                                             | 8x8.5x4mm                     |
| 38     | J2                 | 1        |                  | 61300311121         | Würth Elektronik            | Header, 2.54 mm, 3x1, Gold, TH                                                           | Header, 2.54mm, 3x1, TH       |
| 39     | J4                 | 1        |                  | 61300411121         | Würth Elektronik            | Header, 2.54 mm, 4x1, Gold, TH                                                           | Header, 2.54mm, 4x1, TH       |
| 40     | L1                 | 1        | 1.8mH            | 744861018           | Würth Elektronik            | Coupled inductor, 1.8 mH, 1 A, 0.31 ohm, TH                                              | 17x12.32x15.32 mm             |
| 41     | L2                 | 1        | 1mH              | 7447231102          | Würth Elektronik            | Inductor, Wirewound, 1 mH, 0.8 A, 0.75 ohm, TH                                           | 01x1x1.9mm                    |
| 42     | L3                 | 1        | 47uH             | 7843835470          | Würth Elektronik            | Inductor, Shielded, Powdered Iron, 47 uH, 0.39 A, 2.3 ohm, AEC-Q200 Grade 1, SMD         | SMD, 2-Leads, Body 3x3mm      |
| 43     | MOV1               | 1        |                  | MOV-20D471K         | Bourns Inc.                 | 470 V 6.5 kA Varistor 1 Circuit Through Hole Disc 20mm                                   | RADIAL                        |
| 44     | Q1                 | 1        | 700V             | IPD70R360P7SAUMA1   | Infineon Technologies       | MOSFET, N-CH, 700 V, 12.5 A, DPAK                                                        | DPAK                          |
| 45     | Q2                 | 1        | 40 V             | MMBT3904-7-F        | Diodes Inc.                 | Transistor, NPN, 40 V, 0.2 A, SOT-23                                                     | SOT-23                        |
| 46     | Q3                 | 1        | 40 V             | MMBT3906-7-F        | Diodes Inc.                 | Transistor, PNP, 40 V, 0.2 A, SOT-23                                                     | SOT-23                        |
| 47     | R1, R4             | 2        | 200k             | RC1210JR-07200KL    | Yageo                       | RES, 200 k, 5%, 0.5 W, 1210                                                              | 1210                          |
| 48     | R2                 | 1        | 22               | CRCW251222R0JNEGHP  | Vishay-Dale                 | RES, 22, 5%, 1.5 W, AEC-Q200 Grade 0, 2512                                               | 2512                          |
| 49     | R3                 | 1        | 47               | CRCW120647R0JNEA    | Vishay-Dale                 | RES, 47, 5%, 0.25 W, AEC-Q200 Grade 0, 1206                                              | 1206                          |
| 50     | R5, R10            | 2        | 510k             | RC1206FR-07510KL    | Yageo America               | RES, 510 k, 1%, 0.25 W, 1206                                                             | 1206                          |
| 51     | R6                 | 1        | 3.3              | RC0805JR-073R3L     | Yageo America               | RES, 3.3, 5%, 0.125 W, 0805                                                              | 0805                          |
| 52     | R7                 | 1        | 301k             | RC0603FR-07301KL    | Yageo                       | RES, 301 k, 1%, 0.1 W, 0603                                                              | 0603                          |
| 53     | R8                 | 1        | 30.1k            | RC0603FR-0730K1L    | Yageo                       | RES, 30.1 k, 1%, 0.1 W, 0603                                                             | 0603                          |
| 54     | R9                 | 1        | 47.0k            | RC0603FR-0747KL     | Yageo                       | RES, 47.0 k, 1%, 0.1 W, 0603                                                             | 0603                          |
| 55     | R11                | 1        | 2.2              | RC0805JR-072R2L     | Yageo America               | RES, 2.2, 5%, 0.125 W, 0805                                                              | 0805                          |
| 56     | R12                | 1        | 4.7              | RPC0805JT4R70       | Stackpole Electronics Inc   | RES, 4.7, 5%, 0.25 W, 0805                                                               | 0805                          |
| 57     | R13                | 1        | 6.8k             | RC0603FR-076K8L     | Yageo                       | RES, 6.80 k, 1%, 0.1 W, 0603                                                             | 0603                          |
| 58     | R14                | 1        | 4.7k             | CR0603-JW-472GLF    | Bourns                      | RES, 4.7 k, 5%, 0.1 W, 0603                                                              | 0603                          |
| 59     | R15, R19           | 2        | 1.0k             | RC0603JR-071KL      | Yageo                       | RES, 1.0 k, 5%, 0.1 W, 0603                                                              | 0603                          |
| 60     | R16                | 1        | 412k             | RC0603FR-07412KL    | Yageo                       | RES, 412 k, 1%, 0.1 W, 0603                                                              | 0603                          |
| 61     | R17                | 1        | 0.68             | ERJ-1TRQJR68U       | Panasonic                   | RES, 0.68, 5%, 1 W, 2512                                                                 | 2512                          |
| 62     | R18                | 1        | 10.0k            | ERJ-2RKFI002X       | Panasonic                   | RES, 10.0 k, 1%, 0.1 W, 0402                                                             | 0402                          |
| 63     | R20                | 1        | 20k              | ERJ-2GEJ203X        | Panasonic                   | RES, 20 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0402                                             | 0402                          |
| 64     | R21                | 1        | 18.0k            | RC0603FR-0718KL     | Yageo                       | RES, 18.0 k, 1%, 0.1 W, 0603                                                             | 0603                          |
| 65     | R22                | 1        | 4.99k            | RC0402FR-074K99L    | Yageo America               | RES, 4.99 k, 1%, 0.063 W, 0402                                                           | 0402                          |
| 66     | R23                | 1        | 47.5k            | RC0603FR-0747K5L    | Yageo                       | RES, 47.5 k, 1%, 0.1 W, 0603                                                             | 0603                          |
| 67     | R24                | 1        | 47.0k            | RC0402FR-0747KL     | Yageo America               | RES, 47.0 k, 1%, 0.0625 W, 0402                                                          | 0402                          |
| 68     | R25, R35           | 2        | 10k              | CRCW040210K0JNED    | Vishay-Dale                 | RES, 10 k, 5%, 0.063 W, 0402                                                             | 0402                          |
| 69     | R26, R27, R34      | 3        | 5.10k            | RC0603FR-075K1L     | Yageo                       | RES, 5.10 k, 1%, 0.1 W, 0603                                                             | 0603                          |
| 70     | R28, R30, R31, R32 | 4        | 180              | CRCW0402180R0JNED   | Vishay-Dale                 | RES, 180, 5%, 0.063 W, AEC-Q200 Grade 0, 0402                                            | 0402                          |
| 71     | R29                | 1        | 5.1k             | CRCW06035K10JNEA    | Vishay-Dale                 | RES, 5.1 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603                                            | 0603                          |
| 72     | R33                | 1        | 0                | CRCW25120000Z0EGHP  | Vishay-Dale                 | RES, 0, 5%, 1.5 W, AEC-Q200 Grade 0, 2512                                                | 2512                          |
| 73     | R36                | 1        | 1.00k            | ERA2AED102X         | Panasonic                   | RES, 1.00 k, 0.5%, 0.063 W, AEC-Q200 Grade 0, 0402                                       | 0402                          |
| 74     | R11                | 1        | 5                | SKC205ROMSBY502     | TKS                         | Thermistor NTC, 5 ohm, 20%, D20xT6mm                                                     | D20xT6mm                      |
| 75     | T1                 | 1        |                  | G084231             | GCI Technologies            | FLYBACK TRANSFORMER                                                                      | PTH_TRANSFORMER_31MM50_24MM50 |
| 76     | U1                 | 1        | UCC28810DR       | UCC28810DR          | Texas Instruments           | LED Lighting Power Controller, -40 to +105 degC, 8-pin SOIC (D), Green (RoHS & no Sb/Br) | D0008A                        |
| 77     | U2                 | 1        | VOS617A-7X001T   | VOS617A-7X001T      | Vishay-Semiconductor        | Optocoupler, 3.75 kV, 80-160% CTR, SMT                                                   | 7x2.12x2.6mm                  |
| 78     | U3                 | 1        | ATL431AIDBZR     | ATL431AIDBZR        | Texas Instruments           | 2.5V Low Iq Adjustable Precision Shunt Regulator, DBZ0003A (SOT-23-3)                    | DBZ0003A                      |
| 79     | U4                 | 1        | MCF8315A1VRGFR   | MCF8315A1VRGFR      | Texas Instruments           | Sensorless Field Oriented Control (FOC) Integrated FET BLDC Driver VQFN40                | VQFN40                        |
| 80     | U5                 | 1        | MSPM0L1306SDGS20 | MSPM0L1306SDGS20    | Texas Instruments           | Mixed-Signal Microcontrollers                                                            | VSSOP20                       |
| 81     | U6                 | 1        | TSOP32238        | TSOP32238           | Vishay Semiconductor Opto   | IR RECEIVER, 35M, 950NM, SiP                                                             | SIP3                          |

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Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265  
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