

# Bill of Materials

TI DESIGNS

TIDA-00472

| Quantity | Designator                                  | Description   | Manufacturer              | Part Number          | Package Reference             | Fitted |
|----------|---|---|---------------------------|----------------------|-------------------------------|--------|
| 2        | C1, C6                                      | CAP CER 3300PF 440VAC 20% RADIAL  | Vishay-Bccomponents       | VY2332M41Y5US63V7    | TH, 12.5x5mm                  | Fitted |
| 1        | C2  | CAP ALUM 150UF 20% 400V SNAP  | Rubycon                   | 400MXK150MEFC5N22X25 | D22xL45                       | Fitted |
| 2        | C3, C4                                      | CAP FILM 0.33UF 630VDC RADIAL   | EPCOS(TDK)                | B32922C3334M189      |                               | Fitted |
| 2        | C5, C7                                      | CAP CER 1000PF 440VAC Y5U RADIAL  | KEMET                     | C901U102MZWD8A7317   | Radial Disc D10.5x7mm         | Fitted |
| 2        | C8, C50                                     | CAP, AL, 22uF, 25V, +/-20%, TH  | Nichicon                  | URZ1E220MDD1TD       | 5.0x9.0mm                     | Fitted |
| 7        | C9, C16, C17, C19, C47, C48, C51            | CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603   | AVX                       | 06033C104JAT2A       | 0603                          | Fitted |
| 4        | C10, C12, C13, C56                          | CAP, CERM, 10uF, 16V, +/-20%, X5R, 0805   | AVX                       | 0805YD106MAT2A       | 0805                          | Fitted |
| 9        | C11, C14, C15, C18, C52, C53, C55, C58, C59 | CAP, CERM, 0.1uF, 16V, +/-5%, X7R, 0603   | AVX                       | 0603YC104JAT2A       | 0603                          | Fitted |
| 1        | C20   | CAP, CERM, 33 pF, 50 V, +/- 5%, COG/NP0, 0603   | AVX                       | 06035A330JAT2A       | 0603                          | Fitted |
| 5        | C21, C22, C23, C36, C40                     | CAP, CERM, 10 pF, 50 V, +/- 5%, COG/NP0, 0603   | AVX                       | 06035A100JAT2A       | 0603                          | Fitted |
| 6        | C24, C29, C32, C35, C41, C44                | CAP, CERM, 220 pF, 50 V, +/- 1%, COG/NP0, 0603  | AVX                       | 06035A221FAT2A       | 0603                          | Fitted |
| 3        | C25, C26, C27                               | CAP CER 0.1UF 1KV X7R 1812  | KEMET                     | C1812V104KDRACU      | 1812                          | Fitted |
| 3        | C28, C34, C43                               | CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0805   | MuRata                    | GRM21BR71E104KA01L   | 0805                          | Fitted |
| 6        | C30, C31, C37, C38, C45, C46                | CAP, CERM, 1uF, 25V, +/-10%, X7R, 0805  | MuRata                    | GRM21BR71E105KA99L   | 0805                          | Fitted |
| 3        | C33, C39, C42                               | CAP, CERM, 1000 pF, 50 V, +/- 10%, X5R, 0603  | MuRata                    | GRM188R61H102KA01D   | 0603                          | Fitted |
| 1        | C54   | CAP, CERM, 0.47 uF, 16 V, +/- 10%, X7R, 0805  | Kemet                     | C0805C474KRACTU      | 0805                          | Fitted |
| 1        | C57   | CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, 0603  | Kemet                     | C0603C222K5RAC       | 0603                          | Fitted |
| 1        | D1  | RECT BRIDGE GPP 8A 1000V GBU  | Micro Commercial Co       | GBU8M-BP             |                               | Fitted |
| 1        | D2  | LED RED CLEAR 1206 SMD  | Stanley Electric Co., LTD | HBR1105W-TR          | 1.6x1.85x3.2                  | Fitted |
| 3        | D3, D4, D5                                  | Diode, Ultrafast, 1000V, 1A, SMA  | Diodes Inc.               | US1M-13-F            | SMA                           | Fitted |
| 1        | D6  | LED GREEN CLEAR 1206 SMD  | Stanley Electric Co., LTD | HPG1105W-TR          | 1.6x1.85x3.2                  | Fitted |
| 1        | D7  | LED YELLOW CLEAR 1206 SMD   | Stanley Electric Co., LTD | HAY1105W-TR          | 1.6x1.85x3.2                  | Fitted |
| 1        | D8  | Diode, Schottky, 40 V, 1 A, SOD-123   | Diodes Inc.               | 1N5819HW-7-F         | SOD-123                       | Fitted |
| 4        | D9, D10, D11, D12                           | Diode, Schottky, 30 V, 0.1 A, SOD-723   | Comchip Technology        | CDBP0130L-G          | SOD-723                       | Fitted |
| 6        | D13, D14, D15, D16, D17, D18                | Diode, Schottky, 40 V, 0.25 A, SOD-523  | Diodes Inc.               | SDM20U40-7-F         | SOD-523                       | Fitted |
| 1        | F1  | FUSE BOARD MOUNT 5A 250VAC RAD  | Littelfuse Inc            | 37015000430          | Radial, Can, Vertical         | Fitted |
| 4        | H1, H2, H3, H4                              | MACHINE SCREW PAN SLOTTED M3  | Keystone Electronics      | 29344                | Screw                         | Fitted |
| 2        | J1, J4                                      | TERMINAL BLOCK 7.50MM 3POS PCB, TH  | On-Shore Technology       | OSTV1034152          |                               | Fitted |
| 1        | J2  | CONN HEADER XH TOP 3POS 2.5MM   | JST Sales America Inc.    | B3B-XH-A(LF)(SN)     | Header, 3x1, 100mil, TH       | Fitted |
| 2        | J3, J5                                      | Header, Male 4-pin, 100mil spacing,   | Sullins                   | PEC045AAN            | 0.100 inch x 4                | Fitted |
| 1        | J6  | Header (Shrouded), 5.08 mm, 2x1, Tin, R/A, TH   | Phoenix Contact           | 1757242              | Header, 5.08 mm, 2x1, R/A, TH | Fitted |
| 1        | L1  | FIXED IND 1.5UH 3.3A 16 MOHM TH   | ABRACON                   | AIUR-03-1R5M         | Inductor, 9x12mm              | Fitted |
| 1        | L2  | CHOKE TORROID 2.2MH 6A VERTICAL   | Wurth Elektronik eiSos    | 744824622            | 18.5x33x27.5 mm               | Fitted |
| 1        | LBL1  | Printed Circuit Board   | Any                       | TIDA-00472           |                               | Fitted |
| 6        | Q1, Q2, Q3, Q4, Q5, Q6                      | IGBT 600V, 10A, TO220-3   | Fairchild Semiconductor   | FGP10N60UNDG         | TO-220-3                      | Fitted |
| 2        | R1, R4                                      | RES, 499k ohm, 1%, 0.25W, 1206  | Vishay-Dale               | RCRW1206499KFKEA     | 1206                          | Fitted |
| 9        | R50, R62                                    | RES, 5.11, 1%, 0.1 W, 0603  | Yageo America             | RC0603FR-075R11L     | 0603                          | Fitted |
| 2        | R7, R67                                     | RES, 5.11 k, 1%, 0.1 W, 0603  | Vishay-Dale               | RCRW06035K11FKEA     | 0603                          | Fitted |
| 3        | R8, R13, R18                                | RES, 499 k, 1%, 0.25 W, 1206  | Yageo America             | RC1206FR-07499KL     | 1206                          | Fitted |
| 9        | R9, R10, R11, R14, R15, R16, R19, R20, R21  | RES, 150k ohm, 1%, 0.25W, 1206  | Vishay-Dale               | RCRW1206150KFKEA     | 1206                          | Fitted |
| 1        | R12   | RES, 47k ohm, 5%, 0.1W, 0603  | Vishay-Dale               | RCRW060347K0JNEA     | 0603                          | Fitted |
| 1        | R17   | TRIMMER, 20k ohm, 0.5W, TH  | Bourns                    | 3386P-1-203LF        | 375x190x375mil                | Fitted |
| 1        | R22   | RES, 1.0Meg ohm, 5%, 0.1W, 0603   | Vishay-Dale               | RCRW06031M00JNEA     | 0603                          | Fitted |
| 1        | R23   | RES SMD 0.0OHM JUMPER 1/10W 0603  | Yageo                     | RC0603FR-070RL       | 0603                          | Fitted |
| 1        | R27   | RES, 12.0 k, 1%, 0.1 W, 0603  | Yageo America             | RC0603FR-0712KL      | 0603                          | Fitted |
| 3        | R28, R29, R30                               | RES, 3.6 k, 5%, 0.1 W, 0603   | Vishay-Dale               | RCRW06033K60JNEA     | 0603                          | Fitted |
| 3        | R31, R41, R55                               | RES, 3.3, 5%, 0.1 W, 0603   | Vishay-Dale               | RCRW06033R30JNEA     | 0603                          | Fitted |
| 6        | R32, R33, R42, R45, R56, R59                | RES, 5.11, 1%, 0.1 W, 0603  | Vishay-Dale               | RCRW060351R1FKEA     | 0603                          | Fitted |
| 6        | R34, R37, R46, R51, R60, R63                | RES, 10.0, 1%, 0.25 W, 0603   | Vishay-Dale               | RCRW060310R0FKEAHP   | 0603                          | Fitted |
| 6        | R35, R38, R48, R53, R61, R64                | RES, 20.0k ohm, 1%, 0.1W, 0603  | Vishay-Dale               | RCRW060320K0FKEA     | 0603                          | Fitted |
| 1        | R39   | RES SMD 0.06 OHM 1% 2W 2512   | YAGEO                     | PE2512FKE7WOR06L     | 2512                          | Fitted |
| 4        | R43, R44, R52, R57                          | RES, 100, 1%, 0.1 W, 0603   | Vishay-Dale               | RCRW0603100RFKEA     | 0603                          | Fitted |
| 2        | R47, R58                                    | RES, 20.0 k, 0.1%, 0.1 W, 0603  | Susumu Co Ltd             | RG1608P-203-B-T5     | 0603                          | Fitted |
| 2        | R49, R54                                    | RES, 1.00 k, 1%, 0.1 W, 0603  | Vishay-Dale               | RCRW06031K00FKEA     | 0603                          | Fitted |
| 2        | R65, R66                                    | RES, 10.0 k, 1%, 0.1 W, 0603  | Vishay-Dale               | RCRW060310K0FKEA     | 0603                          | Fitted |
| 1        | RT1   | ICL 5 OHM 20% 4A 12MM   | AMETHERM                  | SL12 5R004           |                               | Fitted |
| 1        | RV1   | Varistor 275V RMS 10MM Radial, TH   | EPCOS                     | S10K275E2            | 10mm Radial                   | Fitted |
| 4        | TP1, TP2, TP3, TP4                          | Pin, Thru Hole, Tin Plate, for 0.062 PCB's  | Vector                    | K24A/M               | 0.039 inch                    | Fitted |
| 1        | U1  | 25 MHz Mixed Signal Microcontroller with 8 KB Flash, 1024 B SRAM and 29 GPIOs, -40 to 85 degC, 38-pin SOP (DA), Green (RoHS & no Sb/Br) | Texas Instruments         | MSP430F5132IDA       | DA0038A                       | Fitted |

| Quantity | Designator        | Description   | Manufacturer      | Part Number      | Package Reference | Fitted     |
|----------|-------------------|---|-------------------|------------------|-------------------|------------|
| 1        | U2                | Single Output LDO, 150 mA, Fixed 3.3 V Output, 2.5 to 24 V Input, with Ultra-Low IQ, 5-pin SOT-23 (DBV), -40 to 125 degC, Green (RoHS & no Sb/Br) | Texas Instruments | TLV70433DBVR     | DBV0005A          | Fitted     |
| 4        | U3, U11, U12, U13 | ESD in 0402 Package with 10 pF Capacitance and 6 V Breakdown, 1 Channel, -40 to +125 degC, 2-pin X2SON (DPY), Green (RoHS & no Sb/Br)             | Texas Instruments | TPD1E10B06DPYR   | DPY0002A          | Fitted     |
| 3        | U4, U5, U7        | High-Speed Low-side Gate Driver Device, D0014A  | Texas Instruments | UCC27714D14      | D0014A            | Fitted     |
| 1        | U6                | 6.5 MHz, 585 uA, Rail-to-Rail I/O CMOS Operational Amplifier, 2.3 to 5.5 V, -40 to 125 degC, 5-pin SOT23 (DBV0005A), Green (RoHS & no Sb/Br)      | Texas Instruments | OPA374AIDBVR     | DBV0005A          | Fitted     |
| 1        | U8                | Analog Temperature Sensors with Class-AB Output, LPC0003A   | Texas Instruments | LMT87LP          | LPC0003A          | Fitted     |
| 1        | U9                | 1 Mbps Dual Channels, 1 / 1, Digital Isolator, 3.3 V / 5 V, -40 to +105 degC, 8-pin SOIC (D), Green (RoHS & no Sb/Br)                             | Texas Instruments | ISO7421D         | D0008A            | Fitted     |
| 0        | C49               | CAP, CERM, 220 pF, 50 V, +/- 1%, COG/NP0, 0603  | AVX               | 06035A221FAT2A   | 0603              | Not Fitted |
| 0        | R68               | RES, 100, 1%, 0.1 W, 0603   | Vishay-Dale       | CRCW0603100RFKEA | 0603              | Not Fitted |
| 0        | U10               | 3-Pin Voltage Supervisors with Active-Low, Open-Drain Reset, DBZ0003A   | Texas Instruments | TLV803MDBZR      | DBZ0003A          | Not Fitted |

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