

Variant: None
Generated: 03/06/2026 16:06
TID #: TIDA-011012-GD



TIDA-011012-GD REV E1 Bill of Materials

| Item # | Designator | Quantity | Value | PartNumber | Manufacturer | Description | PackageReference |
|--------|--|----------|-------|----------------------|----------------------|---|------------------|
| 1 | PCB | 1 | | TIDA-011012-GD | Any | Printed Circuit Board | |
| 2 | C1, C14, C30, C43 | 4 | 0.1uF | GCM188R71E104KA57D | MuRata | CAP, CERM, 0.1 µF, 25 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0603 | 0603 |
| 3 | C2, C15 | 2 | 10µF | KGM31HR71E106KU | KYOCERA AVX | 10 µF ±10% 25V Ceramic Capacitor X7R 1206 (3216 Metric) | 1206 |
| 4 | C3, C4, C16, C17, C35, C48 | 6 | 10µF | GMC31X7R106K50NT | Cal-Chip Electronics | 10 µF ±10% 50V Ceramic Capacitor X7R 1206 (3216 Metric) | 1206 |
| 5 | C5, C18 | 2 | 1µF | C1206C105J5RECAUTO | KEMET | 1 µF ±5% 50V Ceramic Capacitor X7R 1206 (3216 Metric) | 1206 |
| 6 | C6, C19 | 2 | 470pF | C0603X471F5GACTU | KEMET | Cap Ceramic 470pF 50V C0G 1% SMD 0603 125°C Paper T/R | 0603 |
| 7 | C7, C20 | 2 | 22pF | VJ0603D220JLAAJ32 | Vishay | 22 pF ±5% 50V Ceramic Capacitor C0G, NP0 0603 (1608 Metric) | 0603 |
| 8 | C8, C9, C21, C22 | 4 | 100nF | KGM15BR71H104JT | KYOCERA AVX | 0.1 µF ±5% 50V Ceramic Capacitor X7R 0603 (1608 Metric) | 0603 |
| 9 | C10, C23 | 2 | 2.2µF | GRT188C71E225KE13D | Murata | Multi-Layer Ceramic Capacitor 2.2uF 25V X7S ±10% 0603 Paper T/R | 0603 |
| 10 | C11, C24 | 2 | 2.2µF | CGA5L2X7R1E225K160AA | TDK | Cap Ceramic 2.2uF 25V X7R 10% Pad SMD 1206 +125°C Automotive T/R | 1206 |
| 11 | C12, C27, C28, C31, C32, C33, C46, C47, C98, C99 | 10 | 220pF | C0603C221K5RACTU | Kemet | CAP, CERM, 220 pF, 50 V, +/- 10%, X7R, 0603 | 0603 |
| 12 | C25, C26, C44, C45 | 4 | 2.2uF | GRT188R61H225KE13D | MuRata | CAP, CERM, 2.2 uF, 50 V, +/- 10%, X5R, AEC-Q200 Grade 3, 0603 | 0603 |
| 13 | C29, C42 | 2 | 4.7µF | GRM188R61E475KE15D | Murata | 4.7µF ±10% 25V Ceramic Capacitor X5R 0603 (1608 Metric) | 0603 |
| 14 | C36, C39, C49, C52 | 4 | 100nF | C0805C104K5RAC7800 | KEMET | 0.1 µF ±10% 50V Ceramic Capacitor X7R 0805 (2012 Metric) | 0805 |
| 15 | C37, C50 | 2 | 1µF | CL10B105KB9VPJC | Samsung | 1 µF ±10% 50V Ceramic Capacitor X7R 0603 (1608 Metric) | 0603 |
| 16 | C38, C51 | 2 | 10µF | C1206C106J4RACAUTO | KEMET | 10 µF ±5% 16V Ceramic Capacitor X7R 1206 (3216 Metric) | 1206 |
| 17 | C40, C53 | 2 | 1µF | GRM188C71C105KA12D | Murata | 1 µF ±10% 16V Ceramic Capacitor X7S 0603 (1608 Metric) | 0603 |
| 18 | C41, C54 | 2 | 100pF | 06033C101KAT2A | AVX | CAP, CERM, 100 pF, 25 V, +/- 10%, X7R, 0603 | 0603 |
| 19 | C55, C56, C57, C58 | 4 | 100nF | C0603C104K5RAC3121 | KEMET | 0.1 µF ±10% 50V Ceramic Capacitor X7R 0603 (1608 Metric) | 0603 |
| 20 | D1, D2 | 2 | 40V | RB060M-40TFTR | Rohm | Diode, Schottky, 40 V, 2 A, SOD-123 | SOD-123 |
| 21 | D3, D4 | 2 | Red | LH R974-LP-1 | OSRAM | LED, Red, SMD | 1.2x2mm |
| 22 | D10, D15 | 2 | 2.7V | BZT52C2V7T-7 | Diodes Inc. | Diode, Zener, 2.7 V, 300 mW, SOD-523 | SOD-523 |
| 23 | D11, D16 | 2 | 14V | MMSZ4701-HE3-08 | Vishay-Semiconductor | Diode, Zener, 14 V, 500 mW, AEC-Q101, SOD-123 | SOD-123 |
| 24 | D12, D17 | 2 | 30V | DFLZ30-7 | Diodes Inc. | Diode, Zener, 30 V, 1 W, PowerDI123 | PowerDI123 |
| 25 | FID1, FID2 | 2 | | N/A | N/A | Fiducial mark. There is nothing to buy or mount. | N/A |
| 26 | J1, J3 | 2 | | TSM-103-04-T-DV | Samtec | Connector Header Surface Mount 6 position 0.100" (2.54mm) | HDR10 |
| 27 | J2 | 1 | | TSM-105-04-T-DV | Samtec | Connector Header Surface Mount 10 position 0.100" (2.54mm) | HDR10 |
| 28 | L1, L2 | 2 | 3.3uH | AIML-0603-3R3K-T | Abrakon Corporation | Inductor, Multilayer, Ferrite, 3.3 uH, 0.015 A, 1.55 ohm, SMD | 0603 |
| 29 | Q1, Q3, Q4, Q6 | 4 | | BUK6D23-40EX | Nexperia | N-Channel 40 V 8A (Ta), 19A (Tc) 2.3W (Ta), 15W (Tc) Surface Mount DFN2020MD-6 | SOT1220 |
| 30 | Q2, Q5 | 2 | | BUK6D43-40PX | Nexperia | P-Channel 40 V 6A (Ta) 15W (Tc) Surface Mount DFN2020MD-6 | SOT1220 |
| 31 | R1, R8, R37, R38, R39, R44, R54, R55, R56, R125 | 10 | 10.0k | ERJ-3EKF1002V | Panasonic | RES, 10.0 k, 1%, 0.1 W, 0603 | 0603 |
| 32 | R2, R20, R25, R26, R33, R45 | 6 | 1 | CRM1206-JW-1R0ELF | Bourns | RES, 1.0, 5%, 0.5 W, 1206 | 1206 |
| 33 | R3, R11 | 2 | 15k | RC0603JR-0715KL | Yageo | RES, 15 k, 5%, 0.1 W, 0603 | 0603 |
| 34 | R4, R12 | 2 | 51k | ERA-3AED513V | Panasonic | 51 kOhms ±0.5% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200 Thin Film | 0603 |
| 35 | R5, R13 | 2 | 10.0k | RT0603DRE0710KL | Yageo America | RES, 10.0 k, 0.5%, 0.1 W, 0603 | 0603 |
| 36 | R6, R14 | 2 | 2.40k | RT0603DRE072K4L | Yageo America | RES, 2.40 k, 0.5%, 0.1 W, 0603 | 0603 |
| 37 | R10, R58 | 2 | 15.0k | RT0603BRD0715KL | Yageo America | RES, 15.0 k, 0.1%, 0.1 W, 0603 | 0603 |
| 38 | R15, R16, R35, R36, R52, R59 | 6 | 5.6k | RC0603JR-075K6L | Yageo | RES, 5.6 k, 5%, 0.1 W, 0603 | 0603 |
| 39 | R17, R21, R27, R30, R46, R49 | 6 | 3,3 | CRCW12063R30JNEA | Vishay-Dale | RES, 3.3, 5%, 0.25 W, AEC-Q200 Grade 0, 1206 | 1206 |
| 40 | R18, R19, R28, R47 | 4 | | ERJ-3GEYJ102V | Panasonic | 1 kOhms ±5% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200 Thick Film | 0603 |
| 41 | R22, R23, R29, R32, R41, R42, R48, R51 | 8 | 120 | RT0603BRD07120RL | Yageo America | RES, 120, 0.1%, 0.1 W, 0603 | 0603 |
| 42 | R24, R43 | 2 | 32,4 | CRCW120632R4FKEA | Vishay-Dale | RES, 32.4, 1%, 0.25 W, AEC-Q200 Grade 0, 1206 | 1206 |
| 43 | R34, R53 | 2 | 10 | RC0603FR-0710RL | Yageo | RES, 10.0, 1%, 0.1 W, 0603 | 0603 |
| 44 | R40, R57 | 2 | 1.00k | ERJ-3EKF1001V | Panasonic | RES, 1.00 k, 1%, 0.1 W, 0603 | 0603 |
| 45 | U1, U3 | 2 | | UCC35131QDCHARQ1 | Texas Instruments | Automotive 2.0W, 12V VIN, High-Density, > 5kVRMS, Isolated DC/DC Module | SSOP16 |
| 46 | U4, U5 | 2 | | PUCC218915AQDFPQ1 | Texas Instruments | Single Channel Isolated Pre-Driver for SiC/IGBT with Active Protection | SSOP28 |