# Bill of materials

**Table 1. STEVAL-TTPPFC01 bill of materials**

| Item | Q.ty | Ref. | Part/Value | Description | Manufacturer | Order code |
|---|---|---|---|---|---|---|
| 1 | 1 | - | Table 2 | Power board | ST | Not available for separate sale |
| 2 | 1 | - | Table 3 | Control board | ST | Not available for separate sale |
| 3 | 1 | - | Table 4 | Auxiliary board | ST | Not available for separate sale |
| 4 | 3 | - | Table 5 | High-frequency Half-bridge board | ST | Not available for separate sale |
| 5 | 1 | - | Table 6 | Low-frequency Half-bridge board | ST | Not available for separate sale |

**Table 2. Power board bill of materials**

| Item | Q.ty | Ref. | Part/Value | Description | Manufacturer | Order code |
|---|---|---|---|---|---|---|
| 1 | 1 | C100 | 0.33uF | CAP FILM 0.33UF 20% 305VAC RAD | EPCOS (TDK) | B32922C3334M000 |
| 2 | 1 | C101 | 4.7uF | CAP FILM 4.7UF 20% 630VDC RADIAL | EPCOS - TDK Electronics | B32924H3475M |
| 3 | 2 | C102 C103 | 100pF | CAP CER 100PF 50V C0G/NP0 0603 | Würth Elektronik | 885012006057 |
| 4 | 10 | C104 C116 C120 C124 C133 C134 C143 C144 C153 C154 | * | CAPACITOR CERAMIC SMD 0603 | | |
| 5 | 6 | C105 C106 C107 C108 C109 C110 | 330uF | CAP ALUM 330uF 20% 450V SNAP | EPCOS - TDK Electronics | B43548B5337M060 |
| 6 | 4 | C111 C117 C121 C127 | 1uF | Film Capacitors FILM CAP MKP PFC 1.0F 10% 630Vdc LS 22.5mm | EPCOS / TDK | B32673P6105K289 |
| 7 | 6 | C112 C113 C118 C119 C122 C123 | 100pF | CAP CER 100PF 630V C0G/NP0 1812 | AVX Corporation | 1812CA101JAT2A |
| 8 | 5 | C114 C115 C135 C145 C155 | 10nF | CAP CER 10000PF 25V X7R 0603 | Würth Elektronik | 885012206065 |
| 9 | 4 | C125 C158 C159 C160 | 1000pF | CAP CER 1000PF 25V C0G/NP0 0603 | Würth Elektronik | 885012006044 |
| 10 | 10 | C126 C128 C129 C136 C138 C139 C146 C148 C149 C156 | 0.1uF | CAP CER 0.1UF 25V X7R 0603 | Würth Elektronik | 885012206071 |
| 11 | 3 | C130 C140 C150 | 2.2nF | CAP CER 2200PF 25V X7R 0603 | Würth Elektronik | 885012206061 |
| 12 | 3 | C131 C141 C151 | 10uF | CAP CER 10UF 16V X5R 0805 | Wurth Electronics Inc. | 885012107014 |
| 13 | 3 | C132 C142 C152 | 10pF | CAP CER 10PF 50V C0G/NP0 0603 | Würth Elektronik | 885012006051 |
| 14 | 3 | C137 C147 C157 | 1uF | CAP CER 1UF 16V X7R 0603 | Würth Elektronik | 885012206052 |

| Item | Q.ty | Ref. | Part/Value | Description | Manufacturer | Order code |
|---|---|---|---|---|---|---|
| 15 | 1 | D100 | STPS1L30A, SMA | DIODE SCHOTTKY 30V 1A SMA | STMicroelectronics | STPS1L30A |
| 16 | 2 | D101 D102 | BAS70-04FILM, SOT23 | DIODE ARRAY SCHOTTKY 70V SOT23-3 | STMicroelectronics | BAS70-04FILM |
| 17 | 1 | D103 | STPS1L30A, SMA | DIODE SCHOTTKY 30V 1A SMA | STMicroelectronics | STPS1L30A |
| 18 | 1 | F100 | 20A 250Vac | FUSE BOARD MNT 20A 250VAC 72VDC | Bel Fuse Inc. | 0678L9200-02 |
| 19 | 1 | FAN100 | DC FAN | DC Fans DC Fan, 40x10mm, 12VDC, 7CFM, 0.48W, 20.6dBA, 5800RPM, 0.12inch H2O, Vapo Bearing, MagLev Motor | Sunon | MF40101V2-1000U-A99 |
| 20 | 1 | GT100 | B88069X0780S102 | GDT 540V 5KA THROUGH HOLE | EPCOS (TDK) | B88069X0780S102 |
| 21 | 1 | J100 | 1717033 | SCREW TERM BLOCK PCB 3POS 7.5MM GREEN | Phoenix Contact | 1717033 |
| 22 | 1 | J101 | AUX-PS | | | |
| 23 | 1 | J102 | VOUT | SCREW TERM BLOCK PCB 2POS 7.62MM | RS Pro | 7901130 |
| 24 | 4 | J103 J116 J129 J143 | CON10F | CONN RCPT 10POS 0.079 GOLD SMD | Samtec Inc. | CLT-105-02-L-D-BE-A-K-TR |
| 25 | 48 | J104 J105 J106 J107 J108 J109 J110 J111 J112 J113 J114 J115 J117 J118 J119 J120 J121 J122 J123 J124 J125 J126 J127 J128 J130 J131 J132 J133 J134 J135 J136 J137 J138 J139 J140 J141 J144 J145 J146 J147 J148 J149 J150 J151 J152 J153 J154 J155 | CON1 | ZERO PROFILE RECEPTACLE WITH EAR | Mill-Max Manufacturing Corp. | 0640-0-15-15-48-27-10-0 |
| 26 | 1 | J142 | con70-2x35-strip-female | CONN HEADER FEMALE .100 DUAL STR 70POS | SAMTEC | SSW-135-01-F-D |
| 27 | 1 | L100 | 2x4.5mH | CMC 4.5MH 18A 2LN TH | Wurth Electronics Inc. | 7448051804 |
| 28 | 3 | L101 L102 L103 | 1891.0010 | PFC INDUCTOR 1891 SERIES | MAGNETICA | 1891.0010 |
| 29 | 3 | M100 M101 M102 | HF | HF HALF BRIDGE MODULES | | |
| 30 | 1 | M103 | LF | LF HALF BRIDGE MODULE | | |
| 31 | 6 | N1 N2 N3 N4 N5 N6 | NUT M3 | HEX NUT 0.217" NYLON M3 | Keystone Electronics | 4688 |
| 32 | 1 | Q100 | STS6NF20V, SO-8 | MOSFET N-CH 20V 6A 8SOIC | STMicroelectronics | STS6NF20V |
| 33 | 1 | Q101 | STS6NF20V, SO-8 | MOSFET N-CH 20V 6A 8SOIC | STMicroelectronics | STS6NF20V |
| 34 | 4 | Q102 Q103 Q104 Q105 | STR2N2VH5, SOT-23 | MOSFET N-CH 20V 2.3A SOT-23 | STMicroelectronics | STR2N2VH5 |

| Item | Q.ty | Ref. | Part/Value | Description | Manufacturer | Order code |
|---|---|---|---|---|---|---|
| 35 | 3 | R100 R101 R102 | 330k | RES 330K OHM 5% 1/4W 1206 | YAGEO | RC1206JR-07330KL |
| 36 | 1 | R103 | 150 | RES 150 OHM 5W 5% RADIAL | TE Connectivity Passive Product | SQMW5150RJ |
| 37 | 8 | R104 R186 R187 R188 R189 R190 R194 R195 | 10k | RES SMD 10K OHM 1% 1/10W 0603 | Yageo | RC0603FR-0710KL |
| 38 | 6 | R105 R106 R107 R108 R114 R115 | 470k | RES SMD 470K OHM 1% 1/4W 1206 | Yageo | RC1206FR-07470KL |
| 39 | 1 | R109 | 1k | RES SMD 1K OHM 1% 1/10W 0603 | Yageo | RC0603FR-071KL |
| 40 | 1 | R110 | 0 | RES SMD 0 OHM JUMPER 1/8W 0805 | Yageo | RC0805JR-070RL |
| 41 | 1 | R111 | 33K | RES SMD 33K OHM 1% 1/10W 0603 | Yageo | RC0603FR-0733KL |
| 42 | 1 | R112 | 0 | RES SMD 0 OHM JUMPER 1/8W 0805 | Yageo | RC0805JR-070RL |
| 43 | 2 | R113 R116 | 11k | RES SMD 11K OHM 0.1% 1/10W 0603 | Panasonic Electronic Components | ERA-3AEB113V |
| 44 | 14 | R117 R118 R129 R130 R133 R135 R136 R137 R150 R151 R166 R167 R182 R183 | 10 | RES SMD 10 OHM 0.1% 1/10W 0603 | Bourns Inc. | CRT0603-BY-10R0ELF |
| 45 | 3 | R119 R121 R124 | 1M | RES 1M OHM 1% 1/4W 1206 | YAGEO | RC1206FR-071ML |
| 46 | 1 | R120 | 6m | RES 0.006 OHM 1% 3W 2512 | Panasonic Electronic Components | ERJ-MS4HF6M0U |
| 47 | 2 | R122 R123 | 100 | RES SMD 100 OHM 0.1% 1/10W 0603 | Yageo | RT0603BRD07100RL |
| 48 | 1 | R125 | 20k | RES SMD 20K OHM 0.1% 1/10W 0603 | Yageo | RT0603BRD0720KL |
| 49 | 2 | R126 R127 | 1.5k | RES SMD 1.5K OHM 0.1% 1/10W 0603 | Yageo | RT0603BRD071K5L |
| 50 | 2 | R128 R131 | 75k | RES SMD 75K OHM 0.1% 1/10W 0603 | Panasonic Electronic Components | ERA-3AEB753V |
| 51 | 1 | R132 | 1k | RES SMD 1K OHM 1% 1/10W 0603 | Yageo | RC0603FR-071KL |
| 52 | 1 | R134 | 33K | RES SMD 33K OHM 1% 1/10W 0603 | Yageo | RC0603FR-0733KL |
| 53 | 15 | R138 R146 R147 R148 R152 R154 R162 R163 R164 R168 R170 R178 R179 R180 R184 | 10k | RES SMD 10K OHM 0.1% 1/10W 0603 | Panasonic Electronic Components | ERA-3AEB103V |
| 54 | 3 | R139 R155 R171 | 47k | RES SMD 47K OHM 1% 1/10W 0603 | Yageo | RC0603FR-0747KL |
| 55 | 16 | R140 R144 R149 R153 R156 R160 R165 R169 R172 R176 R181 R185 R191 R192 R193 R196 | 0 | RES 0 OHM JUMPER 1/10W 0603 | YAGEO | RC0603FR-070RL |
| 56 | 3 | R141 R157 R173 | 100 | RES SMD 100 OHM 1% 1/10W 0603 | Yageo | RC0603FR-07100RP |

| Item | Q.ty | Ref. | Part/Value | Description | Manufacturer | Order code |
|---|---|---|---|---|---|---|
| 57 | 3 | R142 R158 R174 | 0 | CHIP RESISTOR SMD 1% 1/10W 0603 | YAGEO | RC0603FR-070RL |
| 58 | 3 | R145 R161 R177 | 10k | RES SMD 10K OHM 1% 1/10W 0603 | Yageo | RC0603FR-0710KL |
| 59 | 1 | RL100 | 250Vac-16A | RELAY GEN PURPOSE SPDT 16A 18V | TE Connectivity Potter & Brumfield Relays | RT314018 |
| 60 | 1 | RT100 | 16 | ICL 16 OHM 20% 1.7A 8.5MM | EPCOS (TDK) | B57153S0160M000 |
| 61 | 4 | RV100 RV101 RV102 RV103 | S14K385E2K1 | VARISTOR 620V 6KA DISC 14MM | EPCOS (TDK) | B72214P2381K101 |
| 62 | 6 | S4 S5 S6 S7 S8 S9 | SPACER M3x20 | HEX STANDOFF M3 NYLON 20MM | Keystone Electronics | 25505 |
| 63 | 7 | T100 T101 T102 T103 T104 T105 T106 | B82801B0504A050 | CURR SENSE XFMR 1:50 SMD | EPCOS - TDK Electronics | B82801B0504A050 |
| 64 | 1 | U100 | TSV911ILT | IC OPAMP GP 8MHZ RRO SOT23-5 | STMicroelectronics | TSV911ILT |
| 65 | 4 | U101 U102 U105 U108 | ACHS-7122-000E | HALL EFFECT IC LF | Broadcom Limited | ACHS-7122-000E |
| 66 | 3 | U103 U106 U109 | LMV358IDT, SO-8 | Low cost, low power, input/ output rail-to-rail operational amplifiers | STMicroelectronics | LMV358IDT |
| 67 | 3 | U104 U107 U110 | TSV911AILT, SOT23-5L | IC OPAMP GP 1 CIRCUIT SOT23-5 | STMicroelectronics | TSV911AILT |
| 68 | 4 | Y100 Y101 Y102 Y103 | 2.2nF | CAP CER 2200PF 250VAC RADIAL | Murata Electronics North America | DE2E3KY222MA3BM02F |

**Table 3. Control board bill of materials**

| Item | Q.ty | Ref. | Part/Value | Description | Manufacturer | Order code |
|---|---|---|---|---|---|---|
| 1 | 1 | C300 | 4.7uF | CAP CER 4.7UF 16V X5R 0805 | Wurth Electronics Inc. | 885012107013 |
| 2 | 21 | C301 C302 C303 C304 C305 C306 C307 C308 C309 C312 C321 C323 C324 C331 C336 C346 C348 C349 C350 C351 C352 | 0.1uF | CAP CER 0.1UF 25V X7R 0603 | Würth Elektronik | 885012206071 |
| 3 | 3 | C310 C313 C347 | 1 uF | CAP CER 1UF 16V X7R 0603 | Wurth Electronics Inc. | 885012206052 |
| 4 | 2 | C311 C332 | 10000pF | CAP CER 10000PF 25V X7R 0603 | Würth Elektronik | 885012206065 |
| 5 | 2 | C314 C315 | 4.3pF | CAP CER 4.3PF 50V C0G/NP0 0603 | Murata Electronics | GRM1885C1H4R3CA01D |
| 6 | 2 | C316 C325 | 8pF | CAP CER 8PF 50V C0G/NPO 0603 | Yageo | CC0603DRNPO9BN8R0 |
| 7 | 1 | C317 | 470pF | CAP CER 470PF 25V C0G/NP0 0603 | Würth Elektronik | 885012006042 |

| Item | Q.ty | Ref. | Part/Value | Description | Manufacturer | Order code |
|---|---|---|---|---|---|---|
| 8 | 4 | C319 C322 C326 C353 | 22pF | CAP CER 22PF 25V C0G/NP0 0603 | Würth Elektronik | 885012006034 |
| 9 | 1 | C320 | 10uF | CAP CER 10UF 16V X5R 0805 | Wurth Electronics Inc. | 885012107014 |
| 10 | 5 | C333 C338 C339 C340 C341 | 0.22uF | CAP CER 0.22UF 25V X7R 0603 | Würth Elektronik | 885012206073 |
| 11 | 2 | C334 C335 | 1000pF | CAP CER 1000PF 25V C0G/NP0 0603 | Würth Elektronik | 885012006044 |
| 12 | 4 | C342 C343 C344 C345 | 22pF | CAP CER 22PF 25V C0G/NP0 0603 | Würth Elektronik | 885012006034 |
| 13 | 2 | D300 D301 | BAS70-05FILM, SOT23 | DIODE ARRAY SCHOTTKY 70V SOT23-3 | STMicroelectronics | BAS70-05FILM |
| 14 | 3 | D302 D303 D304 | BAS70-05FILM, SOT23 | DIODE ARRAY SCHOTTKY 70V SOT23-3 | STMicroelectronics | BAS70-05FILM |
| 15 | 1 | D306 | RED 2mA | LED RED DIFFUSED 0603 SMD | OSRAM Opto Semiconductors Inc. | LS L29K-G1J2-1-Z |
| 16 | 1 | D307 | YELLOW 2mA | LED YELLOW DIFFUSED 0603 SMD | OSRAM Opto Semiconductors Inc. | LY L29K-J1K2-26-Z |
| 17 | 1 | D308 | GREEN 2mA | LED GREEN DIFFUSED 0603 SMD | OSRAM Opto Semiconductors Inc. | LG L29K-G2J1-24-Z |
| 18 | 2 | J300 J304 | con3-strip-male | CONN HEADER VERT 3POS 2.54MM | Amphenol ICC (FCI) | 68001-203HLF |
| 19 | 1 | J301 | con70-2x35-strip-male-R/A | CONN HEADER R/A 70POS 2.54MM | Amphenol ICC (FCI) | 68020-172HLF |
| 20 | 1 | J302 | CONN 10 | CONN HEADER SMD 10POS 1.27MM | Samtec Inc. | FTSH-105-01-L-DV-K-TR |
| 21 | 1 | J303 | con4-strip-male | CONN HEADER .100 STR 4POS | Amphenol ICC (FCI) | 68001-204HLF |
| 22 | 1 | JP1 | SHORT | 2 PIN SHORTED TO CONNECT DIFFERENT NETS | | |
| 23 | 1 | L300 | 600Ohm@100MHz | FERRITE BEAD 600 OHM 0603 1LN | Wurth Electronics Inc. | 742863160 |
| 24 | 10 | R301 R302 R328 R334 R338 R341 R342 R343 R352 R413 | 0 | RES 0 OHM JUMPER 1/10W 0603 | YAGEO | RC0603FR-070RL |
| 25 | 1 | R303 | * | CHIP RESISTOR SMD 1% 1/10W 0603 | | |
| 26 | 5 | R304 R329 R330 R331 R332 | 10k | RES SMD 10K OHM 1% 1/10W 0603 | Yageo | RC0603FR-0710KL |
| 27 | 1 | R305 | 470 | RES 470 OHM 1% 1/10W 0603 | YAGEO | RC0603FR-10470RL |
| 28 | 6 | R307 R308 R320 R321 R372 R374 | 0 | 0 OHM JUMPER 0603 | YAGEO | RC0603FR-070RL |
| 29 | 14 | R309 R310 R377 R378 R381 R382 R385 R386 R389 R390 | 10k | RES SMD 10K OHM 0.1% 1/10W 0603 | Panasonic Electronic Components | ERA-3AEB103V |

| Item | Q.ty | Ref. | Part/Value | Description | Manufacturer | Order code |
|---|---|---|---|---|---|---|
| | | R393 R394 R397 R398 | | | | |
| 30 | 7 | R311 R353 R354 R355 R356 R357 R358 | 100 | RES SMD 100 OHM 1% 1/10W 0603 | Yageo | RC0603FR-07100RP |
| 31 | 3 | R313 R314 R315 | 1k | RES SMD 1K OHM 1% 1/10W 0603 | Yageo | RC0603FR-071KL |
| 32 | 1 | R316 | 75 | RES 75 OHM 1% 1/10W 0603 | YAGEO | RC0603FR-0775RL |
| 33 | 4 | R326 R336 R339 R344 | 100K | RES SMD 100K OHM 1% 1/10W 0603 | Yageo | RC0603FR-07100KL |
| 34 | 5 | R327 R337 R340 R345 R409 | 1k | RES SMD 1K OHM 1% 1/10W 0603 | Yageo | RC0603FR-071KL |
| 35 | 5 | R359 R360 R361 R362 R363 | 680 | RES 680 OHM 1% 1/10W 0603 | YAGEO | RC0603FR-10680RL |
| 36 | 2 | R373 R375 | 0 | 0 OHM JUMPER 0603 | YAGEO | RC0603FR-070RL |
| 37 | 12 | R376 R379 R380 R383 R384 R387 R388 R391 R392 R395 R396 R399 | 15k | RES SMD 15K OHM 0.1% 1/10W 0603 | Panasonic Electronic Components | ERA-3AEB153V |
| 38 | 4 | R400 R401 R402 R403 | 1.5k | RES SMD 1.5K OHM 0.1% 1/10W 0603 | Yageo | RT0603BRD071K5L |
| 39 | 4 | R404 R405 R406 R407 | 3k | RES SMD 3K OHM 0.1% 1/10W 0603 | Panasonic Electronic Components | ERA-3AEB302V |
| 40 | 1 | R408 | 100K | RES SMD 100K OHM 1% 1/10W 0603 | Yageo | RC0603FR-07100KL |
| 41 | 1 | SW300 | Switch-WE-430483025816 | SWITCH TACTILE SPST-NO 0.05A 12V | Wurth Electronics Inc. | 430483025816 |
| 42 | 15 | TP300 TP301 TP304 TP308 TP311 TP314 TP323 TP324 TP325 TP326 TP327 TP331 TP332 TP333 TP334 | 5001 | TEST POINT PC MINI .040"D BLACK | Keystone Electronics | 5001 |
| 43 | 1 | U205 | STLM20W87F, SOT323-5L | SENS TEMP ANLG VOLT SOT-323-5 | STMicroelectronics | STLM20W87F |
| 44 | 1 | U300 | STM32G474QET6, LQFP 128 14x14x1.4 mm | MAINSTREAM ARM CORTEX-M4 CORE WI | STMicroelectronics | STM32G474QET6 |
| 45 | 3 | U302 U305 U306 | TSV912IDT, SO-8 | IC OPAMP GP 8MHZ RRO 8SO | STMicroelectronics | TSV912IDT |
| 46 | 3 | U303 U304 U307 | TSV911ILT, SOT23-5L | IC OPAMP GP 8MHZ RRO SOT23-5 | STMicroelectronics | TSV911ILT |
| 47 | 1 | U308 | LMV321RILT, SOT23-5L | IC OPAMP GP 1 CIRCUIT SOT23-5 | STMicroelectronics | LMV321RILT |
| 48 | 1 | Y300 | 32.768kHz | CRYSTAL 32.7680KHZ 12.5PF SMD | CTS-Frequency Controls | TFE322P32K7680R |

| Item | Q.ty | Ref. | Part/Value | Description | Manufacturer | Order code |
|---|---|---|---|---|---|---|
| 49 | 1 | Y301 | 24MHz | CRYSTAL 24.0000MHZ 9PF SMD | IQD Frequency Products | LFXTAL071177REEL |

**Table 4. Auxiliary power supply board bill of materials**

| Item | Q.ty | Ref. | Part/Value | Description | Manufacturer | Order code |
|---|---|---|---|---|---|---|
| 1 | 1 | C1 | 1nF | CAP CER 1000PF 760VAC Y5U RADIAL | Vishay BC Components | VY1102M35Y5UG63V0 |
| 2 | 1 | C3 | 220pF | CAP CER 220PF 1KV C0G/NP0 1206 | Murata Electronics | GRM31A5C3A221JW01D |
| 3 | 3 | C6 C10 C19 | 10uF | CAP CER 10UF 35V X5R 0805 | Murata Electronics | GRM21BR6YA106KE43K |
| 4 | 3 | C7 C26 C28 | 220uF | CAP ALUM 220UF 20% 16V RADIAL | Wurth Electronics Inc. | 860020373010 |
| 5 | 1 | C9 | 0.1uF | CAP FILM 0.1UF 20% 305VAC RADIAL | EPCOS (TDK) | B32921C3104M000 |
| 6 | 1 | C13 | 1000pF | CAP CER 1000PF 25V C0G/NP0 0603 | Würth Elektronik | 885012006044 |
| 7 | 1 | C14 | 33nF | CAP CER 0.033UF 25V X7R 0603 | Würth Elektronik | 885012206068 |
| 8 | 2 | C15 C24 | 0.1uF | CAP CER 0.1UF 50V X7R 0603 | Würth Elektronik | 885012206095 |
| 9 | 1 | C18 | 1uF | CAP CER 1UF 50V X7R 0805 | Würth Elektronik | 885012207103 |
| 10 | 2 | C22 C23 | 10uF | 10 µF Tantalum Capacitors 16 V 0805 20% | KYOCERA AVX | F981C106MSUAJ6 |
| 11 | 1 | C25 | 22uF | CAP ALUM 22UF 20% 400V RADIAL | Rubycon | 400PX22MEFCG412.5X20 |
| 12 | 1 | C27 | 22nF | CAP CER 0.022UF 25V X7R 0603 | Würth Elektronik | 885012206067 |
| 13 | 1 | D1 | STPS6M100DEE, PowerFLAT&#8482 | DIODE SCHOTTKY 100V 6A POWERFLAT | STMicroelectronics | STPS6M100DEE-TR |
| 14 | 1 | D2 | 800V 2.2A | BRIDGE RECT 1PHASE 800V 2.2A YBS | Taiwan Semiconductor Corporation | YBS2206G RAG |
| 15 | 1 | D3 | STTH1R06A, SMA | DIODE GEN PURP 600V 1A SMA | STMicroelectronics | STTH1R06A |
| 16 | 2 | D4 D6 | BAT41ZFILM, SOD-123 | DIODE SCHOTTKY 100V 200MA SOD123 | STMicroelectronics | BAT41ZFILM |
| 17 | 1 | D7 | 18V | DIODE ZENER 18V 500MW SOD80 | Vishay Semiconductor Diodes Division | BZT55C18-GS08 |
| 18 | 1 | D8 | STPS1L60A | DIODE SCHOTTKY 60V 1A SMA | STMicroelectronics | STPS1L60A |
| 19 | 1 | F2 | 2.5A 250V | FUSE BRD MNT 250VAC/125VDC SMD | Littelfuse Inc. | 047602.5MR |
| 20 | 1 | ISO1 | SFH6106-2T | OPTOISOLATOR 5.3KV TRANS 4-SMD | Vishay Semiconductor Opto Division | SFH6106-2T |
| 21 | 1 | J2 | CON2 | CONN HEADER R/A 2POS 5.08MM | Samtec Inc. | TSW-202-08-T-S-RA |
| 22 | 1 | J4 | CON4 | CONN HEADER R/A 4POS 2.54MM | Samtec Inc. | TSW-104-08-T-S-RA |
| 23 | 1 | L2 | 3.3uH | FIXED IND 3.3UH 4.7A 25 MOHM TH | Wurth Electronics Inc. | 7447462033 |
| 24 | 2 | R2 R3 | 100k | RES 100K OHM 5% 1/4W 1206 | YAGEO | RC1206JR-07100KL |
| 25 | 1 | R5 | 0 | RES 0 OHM JUMPER 1/4W 1206 | YAGEO | RC1206JR-070RL |
| 26 | 1 | R6 | 4.7 | RES 4.7 OHM 5% 1/4W 1206 | YAGEO | RC1206JR-074R7L |
| 27 | 1 | R14 | 620k | RES 620K OHM 1% 1/10W 0603 | YAGEO | RC0603FR-07620KL |
| 28 | 1 | R15 | 82k | RES 82K OHM 1% 1/10W 0603 | YAGEO | RC0603FR-0782KL |

| Item | Q.ty | Ref. | Part/Value | Description | Manufacturer | Order code |
|---|---|---|---|---|---|---|
| 29 | 1 | R16 | 22k | RES SMD 22K OHM 1% 1/10W 0603 | Yageo | RC0603FR-0722KL |
| 30 | 1 | R17 | 33K | RES SMD 33K OHM 1% 1/10W 0603 | Yageo | RC0603FR-0733KL |
| 31 | 1 | R18 | 3.9 | RES 3.9 OHM 1% 1/10W 0603 | YAGEO | RC0603FR-073R9L |
| 32 | 1 | R19 | 1k | RES SMD 1K OHM 1% 1/10W 0603 | Yageo | RC0603FR-071KL |
| 33 | 1 | R20 | 100K | RES SMD 100K OHM 1% 1/10W 0603 | Yageo | RC0603FR-07100KL |
| 34 | 1 | R21 | 200k | RES 200K OHM 1% 1/10W 0603 | YAGEO | RC0603FR-07200KL |
| 35 | 1 | R22 | 130k | RES 130K OHM 1% 1/10W 0603 | YAGEO | RC0603FR-07130KL |
| 36 | 1 | R23 | 15k | RES SMD 15K OHM 1% 1/10W 0603 | Yageo | RC0603FR-0715KL |
| 37 | 1 | R24 | 12k | RES 12K OHM 5% 1/8W 0805 | YAGEO | RC0805JR-0712KL |
| 38 | 1 | T1 | 750319460R01 | TRANSFORMER REV.01 | WURTH ELEKTRONIK | 750319460 |
| 39 | 1 | U1 | LD29080DT50R | IC REG LINEAR 5V 800MA DPAK | STMicroelectronics | LD29080DT50R |
| 40 | 1 | U2 | VIPER35LD, SO-16 | IC OFFLINE SWITCH FLYBACK 16SO | STMicroelectronics | VIPER35LD |
| 41 | 1 | U3 | LD29080S33R, SOT-223 | IC REG LINEAR 3.3V 800MA SOT223 | STMicroelectronics | LD29080S33R (Contact our sales office) |
| 42 | 1 | U4 | TS432ILT, SOT23 | IC VREF SHUNT 10V 1% SOT23-3 | STMicroelectronics | TS432ILT |

**Table 5. High-frequency half-bridge board bill of materials**

| Item | Q.ty | Ref. | Part/Value | Description | Manufacturer | Order code |
|---|---|---|---|---|---|---|
| 1 | 5 | C1 C3 C6 C9 C13 | 0.1uF | CAP CER 0.1UF 50V X7R 0603 | Würth Elektronik | 885012206095 |
| 2 | 5 | C2 C4 C8 C10 C14 | 1uF | CAP CER 1UF 50V X7R 0805 | Würth Elektronik | 885012207103 |
| 3 | 2 | C5 C11 | * | CAPACITOR CERAMIC SMD 0603 | | |
| 4 | 2 | C7 C12 | 100pF | CAP CER 100PF 50V C0G/NP0 0603 | Würth Elektronik | 885012006057 |
| 5 | 12 | J1 J2 J3 J4 J5 J7 J8 J9 J10 J11 J12 J13 | CON1 | CONN PC PIN CIRC 0.040DIA GOLD | Mill-Max Manufacturing Corp. | 3301-2-14-21-00-00-08-0 |
| 6 | 1 | J6 | CON10 | CONN HEADER SMD R/A 10POS 2MM | Amphenol ICC (FCI) | 10112690-G03-05ULF |
| 7 | 1 | Q1 | STR2N2VH5, SOT-23 | MOSFET N-CH 20V 2.3A SOT-23 | STMicroelectronics | STR2N2VH5 |
| 8 | 2 | Q2 Q3 | STW70N60DM6, TO-247 | MOSFET N-CH 600V 62A TO247 | STMicroelectronics | STW70N60DM6 |
| 9 | 2 | R1 R2 | 10k | RES SMD 10K OHM 1% 1/10W 0603 | Yageo | RC0603FR-0710KL |
| 10 | 1 | R3 | 0 | RES SMD 0 OHM JUMPER 1/8W 0805 | Yageo | RC0805JR-070RL |
| 11 | 2 | R4 R11 | * | CHIP RESISTOR SMD 1% 1/10W 0603 | | |
| 12 | 2 | R5 R12 | 22 | RES 22 OHM 5% 1/4W 1206 | YAGEO | RC1206JR-0722RL |
| 13 | 1 | R6 | 0 | RES SMD 0 OHM JUMPER 1/8W 0805 | Yageo | RC0805JR-070RL |

| Item | Q.ty | Ref. | Part/Value | Description | Manufacturer | Order code |
|---|---|---|---|---|---|---|
| 14 | 4 | R7 R9 R13 R15 | 0 | RES 0 OHM JUMPER 1/10W 0603 | YAGEO | RC0603FR-070RL |
| 15 | 2 | R8 R14 | 4.7 | RES 4.7 OHM 5% 1/4W 1206 | YAGEO | RC1206JR-074R7L |
| 16 | 2 | R10 R16 | 6.8k | RES 6.8K OHM 1% 1/10W 0603 | YAGEO | RC0603FR-076K8L |
| 17 | 1 | U1 | ISE1212A | DC DC CONVERTER 12V 1W | XP Power | ISE1212A |
| 18 | 2 | U2 U3 | STGAP2SM, SO-8 | DGTL ISO 4A single Gate Drive | STMicroelectronics | STGAP2SMTR |

**Table 6. Low-frequency half-bridge board bill of materials**

| Item | Q.ty | Ref. | Part/Value | Description | Manufacturer | Order code |
|---|---|---|---|---|---|---|
| 1 | 5 | C1 C3 C6 C9 C13 | 0.1uF | CAP CER 0.1UF 50V X7R 0603 | Würth Elektronik | 885012206095 |
| 2 | 5 | C2 C4 C8 C10 C14 | 1uF | CAP CER 1UF 50V X7R 0805 | Würth Elektronik | 885012207103 |
| 3 | 2 | C5 C11 | * | CAPACITOR CERAMIC SMD 0603 | | |
| 4 | 2 | C7 C12 | 100pF | CAP CER 100PF 50V C0G/NP0 0603 | Würth Elektronik | 885012006057 |
| 5 | 12 | J1 J2 J3 J4 J5 J7 J8 J9 J10 J11 J12 J13 | CON1 | CONN PC PIN CIRC 0.040DIA GOLD | Mill-Max Manufacturing Corp. | 3301-2-14-21-00-00-08-0 |
| 6 | 1 | J6 | CON10 | CONN HEADER SMD R/A 10POS 2MM | Amphenol ICC (FCI) | 10112690-G03-05ULF |
| 7 | 1 | Q1 | STR2N2VH5, SOT-23 | MOSFET N-CH 20V 2.3A SOT-23 | STMicroelectronics | STR2N2VH5 |
| 8 | 2 | Q2 Q3 | STY145N65M5, Max247 | MOSFET N-CH 650V 138A MAX247 | STMicroelectronics | STY145N65M5 |
| 9 | 2 | R1 R2 | 10k | RES SMD 10K OHM 1% 1/10W 0603 | Yageo | RC0603FR-0710KL |
| 10 | 1 | R3 | 0 | RES SMD 0 OHM JUMPER 1/8W 0805 | Yageo | RC0805JR-070RL |
| 11 | 2 | R4 R11 | * | CHIP RESISTOR SMD 1% 1/10W 0603 | | |
| 12 | 2 | R5 R12 | 1k | RES 1K OHM 5% 1/4W 1206 | YAGEO | RC1206JR-101KL |
| 13 | 1 | R6 | 0 | RES SMD 0 OHM JUMPER 1/8W 0805 | Yageo | RC0805JR-070RL |
| 14 | 4 | R7 R9 R13 R15 | 0 | RES 0 OHM JUMPER 1/10W 0603 | YAGEO | RC0603FR-070RL |
| 15 | 2 | R8 R14 | 33 | RES 33 OHM 5% 1/4W 1206 | YAGEO | RC1206JR-0733RL |
| 16 | 2 | R10 R16 | 6.8k | RES 6.8K OHM 1% 1/10W 0603 | YAGEO | RC0603FR-076K8L |
| 17 | 1 | U1 | ISE1212A | DC DC CONVERTER 12V 1W | XP Power | ISE1212A |
| 18 | 2 | U2 U3 | STGAP2SM, SO-8 | DGTL ISO 4A single Gate Drive | STMicroelectronics | STGAP2SMTR |

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