

PMP31182-UCC14130 Bill of Materials

| Designator | Quantity | Value | PartNumber | Manufacturer | Description | PackageReference |
|---|----------|---------|----------------------|----------------------|--|---------------------------------|
| 15VIN, 15VINF, HVIN, ISO15VH, ISO15VL, LDO5V | 6 | | 5005 | Keystone Electronics | Test Point, Compact, Red, TH | Red Compact Testpoint |
| C1, C11 | 2 | 10uF | TMK316AB7106KLHT | Taiyo Yuden | CAP, CERM, 10 µF, 25 V,+/- 10%, X7R, AEC-Q200 Grade 1, 1206 | 1206 |
| C2, C12 | 2 | 0.22uF | GCM155R71C224KE02D | MuRata | CAP, CERM, 0.22 µF, 16 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0402 | 402 |
| C3, C13 | 2 | 2.2uF | CGA4J3X7R1E225K125AB | TDK | CAP, CERM, 2.2 µF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805 | 805 |
| C4, C24, C31, C34, C47, C53 | 6 | 0.1uF | CGA3E3X8R1H104K080AE | TDK | CAP, CERM, 0.1 µF, 50 V,+/- 10%, X8R, AEC-Q200 Grade 0, 0603 | 603 |
| C5, C23 | 2 | 22pF | GCM1555C1H220JA16D | MuRata | CAP, CERM, 22 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402 | 402 |
| C6, C14 | 2 | 68pF | C1005C0G1H680J050BA | TDK | CAP, CERM, 68 pF, 50 V, +/- 5%, C0G/NP0, 0402 | 402 |
| C7, C32 | 2 | 2.2uF | CGA4J3X7R1H225K125AB | TDK | CAP, CERM, 2.2 µF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805 | 805 |
| C8 | 1 | 47uF | HHXC250ARA470MF61G | Chemi-Con | CAP, AL, 47 µF, 25 V, +/- 20%, 0.05 ohm, AEC-Q200 Grade 1, SMD | D6.3xL6.1mm |
| C9, C26 | 2 | 1uF | GRT155R6YA105KE13D | MuRata | CAP, CERM, 1 µF, 35 V,+/- 10%, X5R, AEC-Q200 Grade 3, 0402 | 402 |
| C10, C27 | 2 | 0.1uF | GCM155R71H104KE02D | MuRata | CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402 | 402 |
| C15, C16, C17, C18 | 4 | 0.022uF | CGA5K4X7R2J223K130AA | TDK | CAP, CERM, 0.022 µF, 630 V,+/- 10%, X7R, AEC-Q200 Grade 1, 1206 | 1206 |
| | | | C1206C223KDRACU | Kemet | CAP, CERM, 0.022 µF, 1000 V,+/- 10%, X7R, AEC-Q200 Grade 1, 1206 | 1206 |
| C22, C33 | 2 | 4.7uF | CGA6P3X7R1H475M250AB | TDK | CAP, CERM, 4.7 µF, 50 V, +/- 20%, X7R, AEC-Q200 Grade 1, 1210 | 1210 |
| C25 | 1 | 10uF | C1206C106J3RACAUTO | Kemet | CAP, CERM, 10 µF, 25 V,+/- 5%, X7R, AEC-Q200 Grade 1, 1206 | 1206 |
| C28, C29, C35, C36 | 4 | 10µF | CGA4J1X7S1E106K125AC | TDK Corporation | Cap Ceramic 10uF 25V X7S 10% Pad SMD 0805 +125°C Automotive T/R | 805 |
| C30, C37 | 2 | 330pF | 06035A331JAT2A | AVX | CAP, CERM, 330 pF, 50 V, +/- 5%, C0G/NP0, 0603 | 603 |
| C39, C40, C56, C57 | 4 | 43pF | GCQ1555C1H430JB01D | MuRata | CAP, CERM, 43 pF, 50 V,+/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402 | 402 |
| C41, C44 | 2 | 1uF | CGA3E1X7R1E105K080AD | TDK | CAP, CERM, 1 µF, 25 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0603 | 603 |
| C42, C43 | 2 | 100pF | CGA2B2C0G1H101J050BA | TDK | CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402 | 402 |
| C45, C46, C50, C51, C52, C55 | 6 | 39pF | GRM1885C1H390JA01D | MuRata | CAP, CERM, 39 pF, 50 V, +/- 5%, C0G/NP0, 0603 | 603 |
| C48 | 1 | 22uF | GRT32ER61E226KE13L | MuRata | CAP, CERM, 22 µF, 25 V,+/- 10%, X5R, AEC-Q200 Grade 3, 1210 | 1210 |
| C49 | 1 | 1uF | CKG57NX7T2J105M500JJ | TDK | CAP, CERM, 1 µF, 630 V,+/- 20%, X7R, AEC-Q200 Grade 1, 2220 | 2220 |
| | | | 2220Y6300105KXTWS2 | Knowles Capacitors | CAP, CERM, 1 µF, 630 V,+/- 10%, X7R, AEC-Q200 Grade 1, 2220 | 2220 |
| D1, D2 | 2 | 18V | BZT52C18-7-F | Diodes Inc. | Diode, Zener, 18 V, 500 mW, AEC-Q101, SOD-123 | SOD-123 |
| D11, D12 | 2 | 30V | BAT42WS-7-F | Diodes Inc. | Diode, Schottky, 30 V, 0.2 A, SOD-323 | SOD-323 |
| GND_LV, GNDHV, GNDLV, GNDLVF, ISO15VGND, ISO15VSW | 6 | | 5006 | Keystone | Test Point, Compact, Black, TH | Black Compact Testpoint |
| HS_FLT, LDO, LS_FLT | 3 | Red | LS L29K-G1J2-1-Z | OSRAM | LED, Red, SMD | SMD, 2-Leads, Body 1.3x0.8mm |
| HS_OC, LS_OC | 2 | Yellow | SML-E12Y8WT86 | Rohm | LED, Yellow, SMD | 1.6x0.8mm |
| J1, J4 | 2 | | 731375003 | Molex | Connector BNC Female 0Hz To 2GHz 50 Ohm Solder Right Angle Through Hole Gold Tray | CONN_BNC_RCPT |

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|----------------------------------|----------|-------|---------------------|-------------------|---|---------------------------------|
| J2, J3 | 2 | | TSW-103-07-G-S | Samtec | Header, 100mil, 3x1, Gold, TH | 3x1 Header |
| J5 | 1 | | 395443002 | Molex | Terminal Block, 5.08mm, 2x1, TH | Terminal Block, 5.08mm, 2x1, TH |
| J6 | 1 | | 282834-2 | TE Connectivity | Terminal Block, 2x1, 2.54mm, TH | Terminal Block, 2x1, 2.54mm, TH |
| J7 | 1 | | TSW-102-07-G-S | Samtec | Header, 100mil, 2x1, Gold, TH | 2x1 Header |
| L1, L2 | 2 | 4.7uH | MPIA2510V2-4R7-R | Eaton | 4.7µH Shielded Molded Inductor 1.22A 262mOhm Max 1008 (2520 Metric) | 1008 |
| L3 | 1 | 240nH | 0603AF-241KRB | Coilcraft | Inductor, Wirewound, Ferrite, 240 nH, 0.85 A, 0.119999 ohm, SMD | 1.8x0.91x1.12mm |
| L4, L5 | 2 | | 744231061 | Würth Elektronik | Common Mode Chokes / Filters WE-CNSW 0805 400mA 67Ohm 100MHz AECQ200 | |
| | | | ACM2012-900-2P-T001 | TDK | 2 Line Common Mode Choke Surface Mount 90 Ohms @ 100MHz 400mA DCR 190mOhm | SMD4 |
| R2, R5 | 2 | 200K | 3224X-1-204E | Bourns | Trimmer, 200 K, 0.25 W, SMD | 3.5x5.3x4.8mm |
| R4, R25 | 2 | 1.00k | RT0603BRD071KL | Yageo America | RES, 1.00 k, 0.1%, 0.1 W, 0603 | 603 |
| R6, R15, R19, R20, R39, R40 | 6 | 300 | CRCW0402300RJNED | Vishay-Dale | RES, 300, 5%, 0.063 W, AEC-Q200 Grade 0, 0402 | 402 |
| R7, R16 | 2 | 49.9 | CRCW040249R9FKED | Vishay-Dale | RES, 49.9, 1%, 0.063 W, AEC-Q200 Grade 0, 0402 | 402 |
| R8, R26 | 2 | 22.0k | RC0603FR-0722KL | Yageo | RES, 22.0 k, 1%, 0.1 W, 0603 | 603 |
| R9, R18, R24, R27, R31, R32, R41 | 7 | | ERJ-3GEY0R00V | Panasonic | 0 Ohms Jumper 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200 Thick Film | 603 |
| R10, R12, R14, R17, R21 | 5 | 3.3k | CRCW06033K30JNEA | Vishay-Dale | RES, 3.3 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603 | 603 |
| R11, R28 | 2 | 51.1k | RT0603BRD0751K1L | Yageo America | RES, 51.1 k, 0.1%, 0.1 W, 0603 | 603 |
| R13 | 1 | 0.33 | ERJ-3RQFR33V | Panasonic | RES, 0.33, 1%, 0.1 W, AEC-Q200 Grade 0, 0603 | 603 |
| R22, R29 | 2 | 10.0k | ERJ-3EKF1002V | Panasonic | RES, 10.0 k, 1%, 0.1 W, 0603 | 603 |
| R23, R30 | 2 | 10.2k | RT0603DRE0710K2L | Yageo America | RES, 10.2 k, 0.5%, 0.1 W, 0603 | 603 |
| R33, R37 | 2 | 5K | 3224X-1-502E | Bourns | Trimmer, 5 K, 0.25 W, SMD | 3.5x5.3x4.8mm |
| R34, R38 | 2 | 0 | CRCW06030000Z0EA | Vishay-Dale | RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603 | 603 |
| R35, R36 | 2 | 100k | CRCW0603100KJNEAC | Vishay-Dale | RES, 100 k, 5%, 0.1 W, 0603 | 603 |
| SH-J1, SH-J2, SH-J3 | 3 | 1x2 | SNT-100-BK-G | Samtec | Shunt, 100mil, Gold plated, Black | Shunt |
| T3 | 1 | | TPS7B8150QDRVRQ1 | Texas Instruments | 150-mA High-Voltage Ultralow-IQ Low-Dropout Regulator, DRV0006A (WSON-6) | DRV0006A |
| Top_FET_PWM | 1 | | 5007 | Keystone | Test Point, Compact, White, TH | White Compact Testpoint |
| TP1 | 1 | | 5016 | Keystone | Test Point, Compact, SMT | Testpoint_Keystone_Compact |
| TP2 | 1 | | S2751-46R | Harwin | Test Point, SMT | Test Point, SMT |
| U1, U2 | 2 | | LMG3525R030Q | Texas Instruments | 650-V 30-mΩ GaN FET with Integrated Driver and Protection | VQFN52 |
| U3, U4 | 2 | | ISO7741FQDBQRQ1 | Texas Instruments | General Purpose Digital Isolator 2500Vrms 4 Channel 100Mbps 85kV/µs CMTI 16-SSOP (0.154", 3.90mm Width) | SSOP16 |
| U5, U6 | 2 | | UCC14130DWNQ1 | Texas Instruments | 2W, 24V-Vin, 25V-Vout, High-Efficiency, 5 kVRMS Isolated DC-DC Converter | SOIC36 |
| U7, U10 | 2 | | SN74LVC3G14DCUTG4 | Texas Instruments | Triple Schmitt-Trigger Inverter, DCU0008A (VSSOP-8) | DCU0008A |
| U8, U9 | 2 | | SN74LVC2G08IDCTRQ1 | Texas Instruments | Automotive Catalog Dual 2-Input Positive-AND Gate, DCT0008A, LARGE T&R | DCT0008A |

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