

## PMP11438 REV A Bill of Materials

| Designator                                 | Quantity | Value   | PartNumber          | Manufacturer        | Description   | PackageReference           |
|--|----------|---------|---------------------|---------------------|---|----------------------------|
| C1, C7                                     | 2        | 0.047uF | GRM155R61A473KA01D  | MuRata              | CAP, CERM, 0.047 $\mu$ F, 10 V, +/- 10%, X5R, 0402                                | 0402                       |
| C2, C3                                     | 2        | 10uF    | GRM188R61E106MA73   | MuRata              | CAP, CERM, 10 $\mu$ F, 25 V, +/- 20%, X5R, 0603                                   | 0603                       |
| C4, C30, C37                               | 3        | 0.1uF   | C1005X7R1H104K050BB | TDK                 | CAP, CERM, 0.1 $\mu$ F, 50 V, +/- 10%, X7R, 0402                                  | 0402                       |
| C5, C25, C31                               | 3        | 100uF   | 293D107X9020E2TE3   | Vishay-Sprague      | CAP, TA, 100uF, 20V, +/-10%, 0.5 ohm, SMD   | 7343-43                    |
| C6   | 1        | 1uF     | GRM31MR71H105KA88L  | MuRata              | CAP, CERM, 1 $\mu$ F, 50 V, +/- 10%, X7R, 1206                                    | 1206                       |
| C8, C9, C33, C34,<br>C35, C36, C40,<br>C41 | 8        | 47uF    | GRM21BR61A476ME15   | MuRata              | CAP, CERM, 47 $\mu$ F, 10 V, +/- 20%, X5R, 0805                                   | 0805                       |
| C10, C11, C21,<br>C22, C23, C24            | 6        | DNP     | GRM21BR61A476ME15   | MuRata              | CAP, CERM, 47 $\mu$ F, 10 V, +/- 20%, X5R, 0805                                   | 0805                       |
| C12, C13                                   | 2        | DNP     | GRM188R60J226MEA0J  | MuRata              | CAP, CERM, 22 $\mu$ F, 6.3 V, +/- 20%, X5R, 0603                                  | 0603                       |
| C14, C26                                   | 2        | 470pF   | GRM1555C1H471JA01D  | MuRata              | CAP, CERM, 470 pF, 50 V, +/- 5%, COG/NPO, 0402                                    | 0402                       |
| C15  | 1        | 1uF     | GRM188R71E105KA12D  | MuRata              | CAP, CERM, 1 $\mu$ F, 25 V, +/- 10%, X7R, 0603                                    | 0603                       |
| C16  | 1        | 1uF     | C1005X5R1C105K050BC | TDK                 | CAP, CERM, 1 $\mu$ F, 16 V, +/- 10%, X5R, 0402                                    | 0402                       |
| C17, C18                                   | 2        | 470uF   | 2TPE470MAJGB        | Panasonic           | CAP, Tantalum Polymer, 470 $\mu$ F, 2 V, +/- 20%, 0.011 ohm,<br>3.5x1.9x2.8mm SMD | 3.5x1.9x2.8mm              |
| C19, C20, C28,<br>C29                      | 4        | 22uF    | C3216X5R1E226M160AB | TDK                 | CAP, CERM, 22 $\mu$ F, 25 V, +/- 20%, X5R, 1206_190                               | 1206_190                   |
| C27  | 1        | 3300pF  | GRM155R71H332KA01D  | MuRata              | CAP, CERM, 3300 pF, 50 V, +/- 10%, X7R, 0402                                      | 0402                       |
| C32  | 1        | 470pF   | C1005X7R1H471K      | TDK                 | CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, 0402                                       | 0402                       |
| C38  | 1        | 4.7uF   | GRM188R61C475KAAJ   | MuRata              | CAP, CERM, 4.7uF, 16V, +/-10%, X5R, 0603  | 0603                       |
| C39  | 1        | 1uF     | GRM188R61H105KAALD  | MuRata              | CAP, CERM, 1 $\mu$ F, 50 V, +/- 10%, X5R, 0603                                    | 0603                       |
| C42, C43                                   | 2        | 22uF    | GRM188R60J226MEA0J  | MuRata              | CAP, CERM, 22 $\mu$ F, 6.3 V, +/- 20%, X5R, 0603                                  | 0603                       |
| J1, J2, J3, J4, J5,<br>J6                  | 6        |         | OSTTE020161         | On-Shore Technology | Terminal Block, 2x1, 3.5mm, TH  | 2x1 Terminal Block         |
| L1   | 1        | 220nH   | PIFE32251B-R22MS    | Cyntec              | Inductor, Drum Core, Powdered Iron, 220 nH, xx A, xxx ohm, SMD                    | Inductor,<br>3.2x1.2x2.5mm |
| L2   | 1        | 220nH   |                     | Cyntec              | Inductor, Drum Core, Powdered Iron, 220 nH, xx A, xxx ohm, SMD                    | Inductor,<br>3.2x1.2x2.5mm |
| L3, L4                                     | 2        | 1uH     | DFE252012F-1R0M     | Toko                | Inductor, Shielded, 1 $\mu$ H, 3.3 A, 0.040 ohm                                   | 1008                       |
| L5   | 1        | 680nH   | PIMB065T-R68        | Cyntec              | Inductor, Drum Core, Ferrite, 680 nH, 18 A, 0.0042 ohm, SMD                       | 7.05x4.8x6.6mm             |
| Q1, Q2, Q3                                 | 3        | 25V     | CSD16410Q5A         | Texas Instruments   | MOSFET, N-CH, 25 V, 59 A, SON 5x6mm   | SON 5x6mm                  |
| R1, R14, R27                               | 3        | 100k    | CRCW0402100KFKED    | Vishay-Dale         | RES, 100 k, 1%, 0.063 W, 0402   | 0402                       |
| R2, R15                                    | 2        | 475k    | CRCW0402475KFKED    | Vishay-Dale         | RES, 475 k, 1%, 0.063 W, 0402   | 0402                       |
| R3   | 1        | 1.00k   | CRCW04021K00FKED    | Vishay-Dale         | RES, 1.00 k, 1%, 0.063 W, 0402  | 0402                       |
| R4, R13, R19                               | 3        | 49.9    | CRCW040249R9FKED    | Vishay-Dale         | RES, 49.9, 1%, 0.063 W, 0402  | 0402                       |
| R5, R20, R21,<br>R30                       | 4        | 0       | CRCW04020000Z0ED    | Vishay-Dale         | RES, 0, 5%, 0.063 W, 0402   | 0402                       |
| R6   | 1        | 750     | CRCW0402750RFBKED   | Vishay-Dale         | RES, 750, 1%, 0.063 W, 0402   | 0402                       |
| R7   | 1        | DNP     | CRCW040247K5FKED    | Vishay-Dale         | RES, 47.5 k, 1%, 0.063 W, 0402  | 0402                       |
| R8   | 1        | 150k    | CRCW0402150KFKED    | Vishay-Dale         | RES, 150 k, 1%, 0.063 W, 0402   | 0402                       |
| R9   | 1        | DNP     | CRCW040222K1FKED    | Vishay-Dale         | RES, 22.1 k, 1%, 0.063 W, 0402  | 0402                       |
| R10  | 1        | 24.9k   | CRCW040224K9FKED    | Vishay-Dale         | RES, 24.9 k, 1%, 0.063 W, 0402  | 0402                       |
| R11, R17, R34                              | 3        | 10.0k   | CRCW060310K0FKEA    | Vishay-Dale         | RES, 10.0 k, 1%, 0.1 W, 0603  | 0603                       |
| R12, R18, R35                              | 3        | 0.032   | WSL2512R0320FEA18   | Vishay-Dale         | RES, 0.032, 1%, 2 W, 2512   | 2512                       |
| R16, R22                                   | 2        | 200k    | CRCW0402200KFKED    | Vishay-Dale         | RES, 200 k, 1%, 0.063 W, 0402   | 0402                       |
| R23  | 1        | 3.01    | CRCW08053R01FKEA    | Vishay-Dale         | RES, 3.01, 1%, 0.125 W, 0805  | 0805                       |
| R24, R28                                   | 2        | 10.0k   | CRCW040210K0FKED    | Vishay-Dale         | RES, 10.0 k, 1%, 0.063 W, 0402  | 0402                       |
| R25  | 1        | DNP     | CRCW040220K0FKED    | Vishay-Dale         | RES, 20.0 k, 1%, 0.063 W, 0402  | 0402                       |
| R26  | 1        | DNP     | CRCW0402187KFKED    | Vishay-Dale         | RES, 187 k, 1%, 0.063 W, 0402   | 0402                       |
| R29  | 1        | 240k    | CRCW0402240KFKED    | Vishay-Dale         | RES, 240 k, 1%, 0.063 W, 0402   | 0402                       |

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| R31                                    | 1        | 48.7k | CRCW040248K7FKED | Vishay-Dale       | RES, 48.7 k, 1%, 0.063 W, 0402   | 0402                         |
| R32                                    | 1        | 71.5k | CRCW040271K5FKED | Vishay-Dale       | RES, 71.5 k, 1%, 0.063 W, 0402   | 0402                         |
| R33                                    | 1        | 32.4k | CRCW040232K4FKED | Vishay-Dale       | RES, 32.4 k, 1%, 0.063 W, 0402   | 0402                         |
| TP1, TP3, TP7,<br>TP8, TP13, TP14      | 6        | Red   | 5000             | Keystone          | Test Point, Miniature, Red, TH   | Red Miniature<br>Testpoint   |
| TP2, TP6, TP9,<br>TP12, TP16,<br>TP18  | 6        | Black | 5001             | Keystone          | Test Point, Miniature, Black, TH   | Black Miniature<br>Testpoint |
| TP4, TP5, TP10,<br>TP11, TP15,<br>TP17 | 6        | White | 5002             | Keystone          | Test Point, Miniature, White, TH   | White Miniature<br>Testpoint |
| U1                                     | 1        |       | TPS54A20RNJR     | Texas Instruments | 10A/14V Series Capacitor Buck Converter, RNJ0020A                          | RNJ0020A                     |
| U2                                     | 1        |       | TPS62184YZFR     | Texas Instruments | 4-V to 17-V, 6-A, 2-Phase Step-Down Converter with AEE,<br>YZF0024AMAM     | YZF0024AMAM                  |
| U3                                     | 1        |       | TPS53515RVER     | Texas Instruments | High Performance, 12-A Single Synchronous Step-Down Converter,<br>RVE0028A | RVE0028A                     |

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