

**PMP20497 REV A Bill of Materials**

| Designator          | Quantity | Value  | PartNumber         | Manufacturer                    | Description   | PackageReference           |
|---------------------|----------|--------|--------------------|---------------------------------|---|----------------------------|
| IPC B1              | 1        |        | PMP20497           | Any                             | Printed Circuit Board   |                            |
| C1                  | 1        | 330pF  | GRM2165C2A331JA01D | MuRata                          | CAP, CERM, 330 pF, 100 V, +/- 5%, COG/NPO, 0805                   | 0805                       |
| C2                  | 1        | 150uF  | EEV-FK1J151Q       | Panasonic                       | CAP, AL, 150uF, 63V, +/-20%, 0.16 ohm, SMD                        | SMT Radial H13             |
| C3                  | 1        | 0.1uF  | GRM188R71C104KA01D | MuRata                          | CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0603                       | 0603                       |
| C4, C5, C6, C7      | 4        | 4.7uF  | GRM32ER71K475KE14L | MuRata                          | CAP, CERM, 4.7 uF, 80 V, +/- 10%, X7R, 1210                       | 1210                       |
| C8, C9, C10, C11    | 4        | 22uF   | GRM32ER71E226KE15L | MuRata                          | CAP, CERM, 22 uF, 25 V, +/- 10%, X7R, 1210                        | 1210                       |
| C12                 | 1        | 4.7uF  | GRM21BR71C475KA73L | MuRata                          | CAP, CERM, 4.7 uF, 16 V, +/- 10%, X7R, 0805                       | 0805                       |
| C13                 | 1        | 1uF    | GRM188R71E105KA12D | MuRata                          | CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0603                         | 0603                       |
| C14                 | 1        | 470pF  | GRM2165C2A471JA01D | MuRata                          | CAP, CERM, 470 pF, 100 V, +/- 5%, COG/NPO, 0805                   | 0805                       |
| C15                 | 1        | 0.01uF | GRM188R71C103KA01D | MuRata                          | CAP, CERM, 0.01 uF, 16 V, +/- 10%, X7R, 0603                      | 0603                       |
| C17                 | 1        | 100pF  | GRM1885C1H101JA01D | MuRata                          | CAP, CERM, 100 pF, 50 V, +/- 5%, COG/NPO, 0603                    | 0603                       |
| C18                 | 1        | 2.2uF  | UMK212BB7225KG-T   | Taiyo Yuden                     | CAP, CERM, 2.2 uF, 50 V, +/- 10%, X7R, 0805                       | 0805                       |
| C21                 | 1        | 0.1uF  | GRM188R71E104KA01D | MuRata                          | CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603                       | 0603                       |
| C22                 | 1        | 1000pF | GRM31BR73A102KW01L | MuRata                          | CAP, CERM, 1000 pF, 1000 V, +/- 10%, X7R, 1206                    | 1206                       |
| D1                  | 1        | 200V   | MBRD10200CT-13     | Diodes Inc.                     | Diode, Schottky, 200 V, 5 A, DPAK                                 | DPAK                       |
| D2                  | 1        | 1.25V  | 1N4148W-7-F        | Diodes Inc.                     | Diode, Ultrafast, 100V, 0.15A, SOD-123                            | SOD-123                    |
| D4                  | 1        | 62V    | 1SMB5944BT3G       | ON Semiconductor                | Diode, Zener, 62 V, 550 mW, SMB                                   | SMB                        |
| D5                  | 1        | 100V   | MBRS1100T3G        | ON Semiconductor                | Diode, Schottky, 100 V, 1 A, SMB                                  | SMB                        |
| D6, R10             | 2        | 10.0k  | CRCW080510K0FKEA   | Vishay-Dale                     | RES, 10.0 k, 1%, 0.125 W, 0805                                    | 0805                       |
| D7                  | 1        | 30V    | BAT54S-7-F         | Diodes Inc.                     | Diode, Schottky, 30 V, 0.2 A, SOT-23                              | SOT-23                     |
| D8                  | 1        | 100V   | 1N4148W-7-F        | Diodes Inc.                     | Diode, Ultrafast, 100 V, 0.15 A, SOD-123                          | SOD-123                    |
| H1, H2, H3, H4      | 4        |        | NY PMS 440 0025 PH | B&F Fastener Supply             | Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead         | Screw                      |
| L1                  | 1        | 3.3uH  | SRR6028-3R3Y       | Bourns                          | Inductor, Drum Core, Ferrite, 3.3 uH, 2.5 A, 0.028 ohm, SMD       | Inductor,<br>6.8x2.8x6.8mm |
| Q1                  | 1        | 0.22V  | FMMT618            | Diodes Inc.                     | Transistor, NPN, 20V, 1.5A, SOT-23                                | SOT-23                     |
| Q2, Q3              | 2        | 150V   | BSC093N15NS5ATMA1  | Infineon Technologies           | MOSFET, N-CH, 150 V, 87 A, PG-TDSON-8                             | PG-TDSON-8                 |
| Q4                  | 1        | 20 V   | FMMT718TA          | Diodes Inc.                     | Transistor, PNP, 20 V, 1.5 A, SOT-23                              | SOT-23                     |
| R1, R8              | 2        | 7.5    | CRCW20107R50JNEF   | Vishay-Dale                     | RES, 7.5, 5%, 0.75 W, AEC-Q200 Grade 0, 2010                      | 2010                       |
| R2                  | 1        | 3.3    | CRCW08053R30JNEA   | Vishay-Dale                     | RES, 3.3, 5%, 0.125 W, 0805                                       | 0805                       |
| R3                  | 1        | 49.9   | CRCW060349R9FKEA   | Vishay-Dale                     | RES, 49.9, 1%, 0.1 W, 0603  | 0603                       |
| R4                  | 1        | 66.5k  | CRCW060366K5FKEA   | Vishay-Dale                     | RES, 66.5 k, 1%, 0.1 W, 0603                                      | 0603                       |
| R5, R14             | 2        | 10.0k  | CRCW060310K0FKEA   | Vishay-Dale                     | RES, 10.0k ohm, 1%, 0.1W, 0603                                    | 0603                       |
| R6                  | 1        | 4.7    | CRCW06034R70JNEA   | Vishay-Dale                     | RES, 4.7, 5%, 0.1 W, 0603   | 0603                       |
| R7                  | 1        | 174k   | CRCW0603174KfKEA   | Vishay-Dale                     | RES, 174 k, 1%, 0.1 W, 0603                                       | 0603                       |
| R11, R17            | 2        | 47.0k  | CRCW060347K0FKEA   | Vishay-Dale                     | RES, 47.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603                    | 0603                       |
| R12                 | 1        | 3.24k  | CRCW06033K24FKEA   | Vishay-Dale                     | RES, 3.24 k, 1%, 0.1 W, 0603                                      | 0603                       |
| R13                 | 1        | 1.50   | CRCW06031R50FKEA   | Vishay-Dale                     | RES, 1.50, 1%, 0.1 W, 0603  | 0603                       |
| R15                 | 1        | 499    | CRCW0603499RFKEA   | Vishay-Dale                     | RES, 499, 1%, 0.1 W, 0603   | 0603                       |
| R16                 | 1        | 0      | CRCW06030000Z0EA   | Vishay-Dale                     | RES, 0, 5%, 0.1 W, 0603   | 0603                       |
| R18                 | 1        | 1.10k  | CRCW06031K10FKEA   | Vishay-Dale                     | RES, 1.10 k, 1%, 0.1 W, 0603                                      | 0603                       |
| T1                  | 1        | 8.3uH  | PA4826NL           | Pulse Engineering               | Transformer, 8.3 uH, TH   | 39.5x31.5mm                |
| T2                  | 1        |        | PA1005.100NL       | Pulse Engineering               | SMT Current Sense Tranformer                                      | P82xx                      |
| TP1, TP2, TP7, TP11 | 4        | Double | 1502-2             | Keystone                        | Terminal, Turret, TH, Double                                      | Keystone1502-2             |
| TP3, TP5            | 2        | Red    | 5000               | Keystone                        | Test Point, TH, Miniature, Red                                    | Keystone5000               |
| TP4, TP8, TP9       | 3        | White  | 5002               | Keystone                        | Test Point, TH, Miniature, White                                  | Keystone5002               |
| TP6, TP10           | 2        | Black  | 5001               | Keystone                        | Test Point, TH, Miniature, Black                                  | Keystone5001               |
| U1                  | 1        |        | LM5022MME/NOPB     | Texas Instruments               | 60V Low Side Controller for Boost and SEPIC, 10-pin MSOP, Pb-Free | MUB10A                     |
| U2                  | 1        |        | PS2501L-1-F3-L-A   | California Eastern Laboratories | Optocoupler, 5 kV, 200-400% CTR, SMT                              | PS2501L                    |

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|------------------|----------|---------|--------------------|-------------------|--|------------------|
| U3               | 1        |         | LMV431BIMFX/NOPB   | Texas Instruments | Low-Voltage (1.24V) Adjustable Precision Shunt Regulators, 3-pin SOT-23, Pb-Free | MF03A            |
| C16              | 0        | 1uF     | GRM188R61C105KA93D | MuRata            | CAP, CERM, 1uF, 16V, +/-10%, X5R, 0603   | 0603             |
| C19              | 0        | 3300pF  | GRM188R71H332KA01D | MuRata            | CAP, CERM, 3300 pF, 50 V, +/- 10%, X7R, 0603                                     | 0603             |
| C20              | 0        | 0.047uF | GRM188R71E473KA01D | MuRata            | CAP, CERM, 0.047 µF, 25 V, +/- 10%, X7R, 0603                                    | 0603             |
| FID1, FID2, FID3 | 0        |         | N/A                | N/A               | Fiducial mark. There is nothing to buy or mount.                                 | Fiducial         |
| R19              | 0        | 1.10k   | CRCW06031K10FKEA   | Vishay-Dale       | RES, 1.10 k, 1%, 0.1 W, 0603   | 0603             |
| T3               | 0        | 10uH    | PA4621NL           | Pulse Engineering | Transformer, 10 uH, TH   | 31x28.5mm        |

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