## TPS61088 reference design

**Designator**  | **Quantity** | **Value** | **Description** | **Package** | **Reference** | **Manufacturer** | **Alternate PartNumber** | **Alternate Manufacturer**
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C1, C19 | 2 | 2 1µF | CAP, CERM, 1µF, 16V, +/- 10%, X7R, 0603 | GRM155R61C104KA88 | D | Multilam | | |
C2, C3, C4, C5 | 1 | 2µ2F | CAP, 2µF, 16V, +/- 10%, X5R, 0603 | GRM155R61C204KA88 | C | Multilam | | | |
C6 | 1 | 0.1µF | CAP, 0.1µF, 16V, +/- 10%, 0402 | CD112211MP71HS | Nichicon | | | |
C7 | 1 | 10µF | CAP, 10µF, 50V, +/- 10%, C0G/NP0, 0402 | RM0015501050C476K | Multilam | | | |
C8 | 1 | 8µ80F | CAP, 8µ80F, 16V, +/- 10%, X7R, 0402 | GRM155R61C802KA105 | C | Multilam | | | |
C9 | 1 | 0.2µF | CAP, 2µF, 16V, +/- 10%, X5R, 0603 | CD112211MP71HS | Nichicon | | | |
C10 | 1 | 10µF | CAP, 10µF, 16V, +/- 10%, 0603 | TLR051A710K0J106M | Kemet | | | |
C12 | 1 | 0.47µF | CAP, 0.1µF, 16V, +/- 10%, X5R, 0402 | GRM155R61C476K | AVX | | | |
C13 | 1 | 0.047µF | CAP, 0.047µF, 16V, +/- 10%, X7R, 0402 | GRM155R71C473KA01 | D | Multilam | | | |
C14, C16 | 2 | 0.1µF | CAP, 0.1µF, 16V, +/- 10%, X5R, 0402 | GRM155R61C104KA88 | D | Multilam | | | |
C15, C18 | 2 | 0.1µF | CAP, 0.1µF, 16V, +/- 10%, X5R, 0402 | GRM155R61C104KA88 | D | Multilam | | | |
C17, C19 | 2 | 0.1µF | CAP, 0.1µF, 16V, +/- 10%, X5R, 0402 | GRM155R61C104KA88 | D | Multilam | | | |
C21 | 1 | 10µF | CAP, 25µF, +/- 10%, X5R, 0805 | C1006X5R101M080A | TDK | | | |
C22 | 1 | 10µF | CAP, 25µF, +/- 10%, X5R, 0805 | C1006X5R101M080A | TDK | | | |
D1, D2, D3 | 3 | 75V Diode, Switching, 75V, 0.3 A, SMD, 2-Leads, Body 1.2x0.8mm | 1N4148WT | Fairchild Semiconductor | | | | |
J1, J2, J3 | 3 | Header, 1.0mm, 41+6, TH | 1X1 Header | Samtec | | | | |
J4 | 1 | Header, 1.0mm, 41+6, TH | 1X1 Header | Samtec | | | | |
J5, J6 | 2 | Header, 1.0mm, 41+6, TH | 1X2 Header | Samtec | | | | |
L1 | 1 | 1.2µH | Inductor, Shielded Drum Core, Metal Composite, 1.2µH, 12.9 A, 0.007 ohm, 3MM | COAC6B295PR-TR2PC | Sunline | | | |
Q1 | 1 | 300V MOSFET, TVS, 50V, 50µS, 120µA, SO-8 | D21-23 | Fairchild Semiconductor | | None | | |
R0 | 1 | 499 | RES, 1%, 0.001 W, 0402 | CRCW0402499R9ED | Vishay-Dale | | | |
R1 | 1 | 563 | RES, 1%, 0.001 W, 0402 | CRCW0402563R9ED | Vishay-Dale | | | |
R2 | 1 | 15k | RES, 1%, 0.001 W, 0402 | CRCW040215KR9ED | Vishay-Dale | | | |
R3 | 1 | 100k | RES, 1%, 0.001 W, 0402 | CRCW0402100KR9ED | Vishay-Dale | | | |
R4 | 1 | 1M | RES, 1%, 0.001 W, 0402 | CRCW040210MR9ED | Vishay-Dale | | | |
R5 | 1 | 10k | RES, 1%, 0.001 W, 0402 | CRCW0402100KR9ED | Vishay-Dale | | | |
R6 | 1 | 12k | RES, 1%, 0.001 W, 0402 | CRCW040212MR9ED | Vishay-Dale | | | |
R7 | 1 | 5k | RES, 1%, 0.001 W, 0402 | CRCW0402050KR9ED | Vishay-Dale | | | |
R8 | 1 | 100k | RES, 0.1%, 0.001 W, 0402 | CRCW0402100KR9ED | Vishay-Dale | | | |
R9, R10, R11, R12, R13, R14 | 4 | 10.2k | RES, 1%, 0.001 W, 0402 | CRCW0402102KR9ED | Vishay-Dale | | | |
R15, R16, R17 | 4 | 12.1k | RES, 1%, 0.001 W, 0402 | CRCW0402121KR9ED | Vishay-Dale | | | |
R18 | 2 | 12.56k | RES, 1%, 0.001 W, 0402 | CRCW0402126KR9ED | Vishay-Dale | | | |
R19 | 2 | 19.6k | RES, 1%, 0.001 W, 0402 | CRCW0402196KR9ED | Vishay-Dale | | | |
R20 | 2 | 1.00Meg | RES, 0.1%, 0.001 W, 0402 | CRCW04021000MR9ED | Vishay-Dale | | | |
TP1, TP2, TP3, TP4 | 4 | Red | Test Point, TH, Multipurpose, Red | KeyStone6010 | 0010 | KeyStone | | | |
U1 | 1 | 13.2-V Output, Synchronous Boost Converter with 10-A Switch, RH0020A | TPS61088RH | Texas Instruments | TPS61088RH | Texas Instruments | | |
U3 | 1 | Com/Dec, Low Noise, 5.5 MHz CMOS Operational Amplifier, 2.2 to 5.5 V, -40 to 125 degC, 14-pin SOP (PW0014A), Grey (RoHS & no SnBr) | PW0014A | Texas Instruments | Equivalent | None | | |
C11 | 0 | 1µF | CAP, CERM, 1µF, 16V, +/- 10%, X5R, 0402 | GRM155R61C104KA105 | D | Multilam | | | |
C15 | 0 | 1000µF | CAP, CERM, 1000 µF, 16V, +/- 10%, X5R, 0402 | GRM155R61C104KA105 | D | Multilam | | | |
C20 | 0 | 1000µF | CAP, CERM, 1000 µF, 16V, +/- 10%, X5R, 0402 | GRM155R61C104KA105 | D | Multilam | | | |
R6, R20 | 0 | 0.05 | RES, 0.5%, 0.1 W, 0402 | CRCW04020005R0ED | Vishay-Dale | | | |

**Notes:**
- Unless otherwise noted in the Alternate PartNumber and Alternate Manufacturer columns, all parts may be substituted with equivalents.
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