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15V/1A ACDC Buck using UCC28C42

| Designator | Quantity | Value | Description | PackageReference | PartNumber | Manufacturer | Alternate PartNumber | Alternate Manufacturer |
|--------------------|----------|--------|--|---|--------------------|----------------------------|----------------------|------------------------|
| !PCB1 | 1 | | Printed Circuit Board | | PMP10783 | Any | - | - |
| C1 | 1 | 3300pF | CAP, CERM, 3300 pF, 100 V, +/- 10%, X7R, 0603 | 0603 | 06031C332KAT2A | AVX | | |
| C2 | 1 | 0.1uF | CAP, CERM, 0.1 uF, 25 V, +/- 5%, X7R, 0603 | 0603 | 06033C104JAT2A | AVX | | |
| C3 | 1 | 100uF | CAP, AL, 100uF, 25V, +/-20%, TH | 6.3x11.2mm | EEU-EB1E101S | Panasonic | | |
| C4 | 1 | 1uF | CAP, CERM, 1uF, 25V, +/-10%, X7R, 1206 | 1206 | 12063C105KAT2A | AVX | | |
| C5 | 1 | 1uF | CAP, CERM, 1uF, 16V, +/-10%, X5R, 0805 | 0805 | 0805YD105KAT2A | AVX | | |
| C6 | 1 | 100pF | CAP, CERM, 100pF, 25V, +/-10%, X7R, 0603 | 0603 | 06033C101KAT2A | AVX | | |
| C7 | 1 | 220pF | CAP, CERM, 220pF, 100V, +/-10%, X7R, 0603 | 0603 | 06031C221KAT2A | AVX | | |
| C8, C10 | 2 | 100uF | CAP, AL, 100 uF, 400 V, +/- 20%, TH | RCAP, 16x30mm | 400KXW100MEFC16X30 | Rubycon | | |
| C9 | 1 | 470uF | CAP, AL, 470 uF, 25 V, +/- 20%, 0.053 ohm, TH | 2-Pin Radial, Dia 10 mm, Height 12.5 mm, Pin Spacing 5 mm | 25ZLJ470M10X12.5 | Rubycon | | |
| D1 | 1 | 100V | Diode, Ultrafast, 100V, 0.15A, SOD-123 | SOD-123 | 1N4148W-7-F | Diodes Inc. | | |
| D2 | 1 | 600V | DIODE FAST REC 600V 1A DO214AC | SMA | ES1J-TP | Diodes Inc. | | |
| D3 | 1 | 100V | Diode, Switching, 100V, 0.2A, SOD-323 | SOD-323 | MMDL914-TP | Micro Commercial Component | | |
| D4 | 1 | 1000V | Diode, Switching-Bridge, 1000 V, 1 A, DF-S | DF-S | DF10SA | Vishay-Semiconductor | | |
| D5 | 1 | 1200V | DIODE SCHOTKY 1.2KV 6.9A TO252-2 | DPAK | C4D02120E | Cree | | |
| D6 | 1 | 15V | Diode, TVS, Uni, 15 V, 600 W, SMB | SMB | SMBJ15A-13-F | Diodes Inc. | | |
| F1 | 1 | | Fuse, 0.5A, 250V, TH | 8.35x7.7x4mm | RST 500 | Bel Fuse | | |
| J1 | 1 | 2x1 | Conn Term Block, 2POS, 5.08mm, TH | PhoenixContact_1715721 | 1715721 | Phoenix Contact | | |
| L1 | 1 | 330uH | FIXED IND 330UH 1.4A 330 MOHM TH | 10.5x14.5mm | 7447480331 | Würth Elektronik eiSos | | |
| Q1 | 1 | 900V | MOSFET N-CH 900V 5.8A D2PAK | DDPAK | STB6NK90ZT4 | ST Microelectronics | | None |
| R2 | 1 | 150k | RES, 150 k, 1%, 0.1 W, 0603 | 0603 | CRCW0603150KFKEA | Vishay-Dale | | |
| R3 | 1 | 13.0k | RES, 13.0 k, 1%, 0.1 W, 0603 | 0603 | CRCW060313K0FKEA | Vishay-Dale | | |
| R4, R5 | 2 | 330k | RES, 330 k, 5%, 1 W, 2512 | 2512 | CRCW2512330KJNEG | Vishay-Dale | | |
| R6 | 1 | 10.0k | RES, 10.0k ohm, 1%, 0.1W, 0603 | 0603 | CRCW060310K0FKEA | Vishay-Dale | | |
| R7 | 1 | 511 | RES, 511 ohm, 1%, 0.1W, 0603 | 0603 | CRCW0603511RFKEA | Vishay-Dale | | |
| R8 | 1 | 2.49k | RES, 2.49k ohm, 1%, 0.1W, 0603 | 0603 | CRCW06032K49FKEA | Vishay-Dale | | |
| R9 | 1 | 10.0 | RES, 10.0 ohm, 1%, 0.25W, 1206 | 1206 | CRCW120610R0FKEA | Vishay-Dale | | |
| R10 | 1 | 100k | RES, 100k ohm, 1%, 0.1W, 0603 | 0603 | CRCW0603100KFKEA | Vishay-Dale | | |
| R11 | 1 | 0.56 | RES, 0.56, 1%, 0.25 W, 1206 | 1206 | ERJ-8RQFR56V | Panasonic | | |
| R12, R14, R17, R18 | 4 | 1.0Meg | RES, 1.0 M, 5%, 0.25 W, 1206 | 1206 | CRCW12061M00JNEA | Vishay-Dale | | |
| R13 | 1 | 10.0 | RES, 10.0, 1%, 0.25 W, 1206 | 1206 | CRCW120610R0FKEA | Vishay-Dale | | |
| R15, R16 | 2 | 5.1k | RES, 5.1 k, 5%, 0.25 W, 1206 | 1206 | CRCW12065K10JNEA | Vishay-Dale | | |
| RT1 | 1 | 10 ohm | Thermistor NTC, 10 ohm, 20%, Disc_11.5mmx6mm | Disc_11.5mmx6mm | B57236S0100M000 | EPCOS Inc | | |
| TP1 | 1 | Red | Test Point, Miniature, Red, TH | Red Miniature Testpoint | 5000 | Keystone | | |
| TP2 | 1 | Black | Test Point, TH, Miniature, Black | Keystone5001 | 5001 | Keystone | Equivalent | Any |
| U1 | 1 | | BiCMOS LOW-POWER CURRENT-MODE PWM CONTROLLER, D0008A | D0008A | UCC28C42D | Texas Instruments | | None |
| R1 | 0 | 475k | RES, 475k ohm, 1%, 0.25W, 1206 | 1206 | CRCW1206475KFKEA | Vishay-Dale | | |

Notes:

Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.

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