

## TDADP-USBC-65W-KIT Bill of Materials (BOM)

| Description   | Designator         | Manufacturer                                   | Part Number          |
|---|--------------------|--|----------------------|
| <b>Main Board</b>   |                    |  |                      |
| NPX 1000 $\mu$ F 25 V Aluminum Electrolytic Capacitors Radial, Can - 2000 Hrs @ 105°C | C1                 | Ymin   | PXGC                 |
| 0.22 $\mu$ F $\pm$ 20% 450V Ceramic Capacitor X7T 1210 (3225 Metric)                  | C2, C4, C10, C11   | TDK Corporation                                | C3225X7T2W224M200AA  |
|   | C3                 | Chemi-Con                                      | EKWB401ELL101MK40S   |
| 15 $\mu$ F 400 V Aluminum Electrolytic Capacitors Radial, Can - 2000 Hrs @ 105°C      | C5                 | Rubycon  | 400AX15MEFC10X16     |
|   | C6, C7             | TDK Corporation                                | CGA5L1X7R1E106M160AE |
|   | C32, C33           | TDK Corporation                                | CGA5L1X7R1E106M160AE |
|   | C8                 |  |                      |
| CAP CER 2.2UF 35V X7R 0805  | C9                 | TDK Corporation                                | CGA4J1X7R1V225K125AC |
|   | C16                |  |                      |
|   | C17, C23, C28, C29 |  |                      |
|   | C18, C19, C22      |  |                      |
|   | C20                |  |                      |
|   | C21, C25           |  |                      |
|   | C24                |  |                      |
|   | C26                |  |                      |
|   | C27                |  |                      |
|   | C30, C31           |  |                      |
|   | CX1                | JURCC  |                      |
| CAP CER 2200PF 300V NONSTND SMD   | CY1                | TRX  | TMY1222M             |
|   | CY3, CY4           | Murata Electronics                             | GA342QR7GD471KW01L   |
| DIODE SCHOTTKY TMBS 10A 150V SMP  | D1                 | Vishay General Semiconductor - Diodes Division | V10PM15HM3/H         |
| Diode Standard 1000 V 1A Surface Mount Mini SMA/SOD-123, [NoValue]                    | D2, D3             | Comchip Technology                             | CGRM4007-G           |
| DIODE GEN PURP 100V 200MA SOD323  | D4                 | ON Semiconductor                               | BAS16HT1G            |
| Bridge Rectifer 1000V 5A, Z4PAK-S, Bridage Rectifer 1000V 5A, Z4PAK-S                 | DB1, DB2           | TRX  | LS50M                |
|   | F1                 | Bel Fuse Inc.                                  | RST 3.15-BULK        |
|   | FB1                | TDK Corporation                                | MMZ1608Y600BTA00     |
| USB - Type C Female 16 8.94*7.3mm USB Connectors RoHS                                 | J1                 | Korean Hroparts Elec                           | TYPE-C-31-M-12       |
| 2 Line Common Mode Choke Surface Mount 100 Ohms @ 100 MHz 6A DCR 13mOhm               | L3                 | Murata Electronics                             | DLW5BTM101TQ2L       |
|   | L4                 | Createk  | T10-642-D            |
|   | L5                 | Createk  | T14-564              |
| 33 $\mu$ H Shielded Wirewound Inductor 1.8 A 242mOhm Max Nonstandard                  | L7                 | Eaton - Electronics Division                   | HCMA0703-330-R       |

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|   | Pa5, Pa6, PS5, PS6 |                                   |                    |
| <b>N-Channel 100 V 15A (Ta), 50A (Tc) 4.1W (Ta), 52W (Tc) Surface Mount 8-DFN-EP (3.3x3.3)</b>                      | Q1, Q5             | Alpha & Omega Semiconductor Inc.  | AONR66922          |
| <b>MOSFET N-CH 30V 25A/28A 8DFN</b>   | Q2                 | Alpha & Omega Semiconductor Inc.  | AON7524            |
|   | R1                 |                                   |                    |
| <b>Current Sense Resistors - SMD 1/2W 5mOhms 1% 100ppm</b>  | R2                 | Bourns                            | CFN0805-FX-R005ELF |
|   | R3                 |                                   |                    |
|   | R4                 |                                   |                    |
|   | R5                 |                                   |                    |
|   | R6                 |                                   |                    |
|   | R7                 |                                   |                    |
|   | R8                 |                                   |                    |
|   | R12                |                                   |                    |
|   | R17, R25           |                                   |                    |
|   | R21                |                                   |                    |
|   | R22, R24           |                                   |                    |
|   | R23                |                                   |                    |
|   | R26, R28           |                                   |                    |
|   | R27                |                                   |                    |
|   | R29, R30           |                                   |                    |
| <b>65W RM8/ILP Transformer</b>  | T1                 |                                   |                    |
| <b>65W Discrete QR Ctrl Module</b>  | U1                 |                                   |                    |
| <b>USB Dedicated Charging Port (DCP), Power Switch PMIC TSOT-23-6</b>   | U2                 | Monolithic Power Systems Inc.     | MP6908AGJ-P        |
| <b>Optoisolator Transistor Output 5000Vrms 1 Channel 6-SO</b>   | U3                 | Toshiba Semiconductor and Storage | TLP383(GR-TPL,E    |
| <b>USB Power Delivery and Qualcomm Quick Charge 4/4+ Controller</b>   | U6                 | Weltrend                          | WT6633P            |
| <b>50V Clamp 7A (8/20μs) Ipp Tvs Diode Surface Mount SOD-323</b>  | Z1, Z2             | Littelfuse Inc.                   | AQ4024-01FTG       |
| <b>TVS DIODE 5VWM 9.8VC SOD323</b>  | Z3, Z4             | ON Semiconductor                  | SD05T1G            |
| <b>QR Control Board</b>   |                    |                                   |                    |
| <b>DIODE ZENER 13.25V 300MW SOD323</b>  | Z1                 | ON Semiconductor                  | MM3Z12VST1G        |
| <b>Converter Offline Flyback Topology 50kHz 9-SOIC</b>  | U1                 | ON Semiconductor                  | NCP1342AMAACD1R2G  |
| <b>20 kOhms ±5% 0.25W, 1/4W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200, Pulse Withstanding Thick Film</b> | R16                | Panasonic Electronic Components   | ERJ-PA3J203V       |

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|--|------------|---------------------------------|--------------------|
| 1.27 kOhms ±1% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Moisture Resistant Thick Film                    | R15        | Bourns Inc.                     | CRO603-FX-1271ELF  |
| 10 kOhms ±5% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200 Thick Film                     | R14        | Stackpole Electronics Inc       | RMCF0603JT10K0     |
| 2.2 Ohms ±5% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200 Thick Film                     | R13        | Panasonic Electronic Components | ERJ-3GEYJ2R2V      |
| 1 kOhms ±5% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Anti-Sulfur, Automotive AEC-Q200 Thick Film         | R11        | Panasonic Electronic Components | ERJ-U03J102V       |
| 49.9 ±1% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200 Thick Film                         | R10        | Panasonic Electronic Components | ERJ-3EKF4992V      |
| 820 kOhms ±5% 0.125W, 1/8W Chip Resistor 0805 (2012 Metric) Moisture Resistant Thick Film                    | R9         | Yageo                           | RC0805JR-07820KL   |
| RES SMD 82K OHM 1% 1/10W 0603  | R8         | Panasonic Electronic Components | ERJ-3EKF8202V      |
| THERM NTC 100KOHM 4200K 0603   | R7         | Murata Electronics              | NCP18WF104F12RB    |
| 220 Ohms ±1% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200, Moisture Resistant Thick Film | R6         | TE Connectivity Passive Product | CRGCQ0603F220R     |
| 820 Ohms ±5% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200 Thick Film                     | R5         | Panasonic Electronic Components | ERJ-3GEYJ821V      |
| RES SMD 5.9K OHM 1% 1/10W 0603   | R4         | Yageo                           | AC0603FR-075K9L    |
| 620 mOhms ±5% 0.5W, 1/2W Chip Resistor 1206 (3216 Metric) Automotive AEC-Q200, Current Sense Thick Film      | R3         | Panasonic Electronic Components | ERJ-8BQJR62V       |
| 680 mOhms ±1% 0.5W, 1/2W Chip Resistor 1206 (3216 Metric) Automotive AEC-Q200, Current Sense Thick Film      | R2, R12    | Panasonic Electronic Components | ERJ-8BQFR68V       |
| 1 MOhms ±5% 0.75W, 3/4W Chip Resistor 1206 (3216 Metric) Automotive AEC-Q200, Pulse Withstanding Thick Film  | R1         | Vishay Dale                     | CRCW12061M00JNEAHP |
| TRANS NPN 80V 0.1A SOT-23  | Q2         | ON Semiconductor                | BSS64LT1G          |
| N-Channel 650 V 6.5A (Tc) 21W (Tc) Surface Mount 3-PQFN (8x8)  | Q1         | Transphorm                      | TP65H300G4LSG      |
| 6.8 µH Shielded - Inductor 1.2 A 330mOhm Max 1008 (2520 Metric)  | L1         | Murata Electronics              | DFE252012F-6R8M=P2 |

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|--|--------------------|-----------------------------------|---------------------|
| 60 Ohms @ 100 MHz 1 Signal Line Ferrite Bead 0603 (1608 Metric) 500mA 150mOhm, [NoValue] | FB3, FB4           | TDK Corporation                   | MMZ1608Y600BTA00    |
| 120 Ohms @ 100 MHz 1 Signal Line Ferrite Bead 0603 (1608 Metric) 500mA 150mOhm           | FB2                | TDK Corporation                   | MMZ1608S121CTAH0    |
| Power Line Ferrite Bead 0805 (2012 Metric) 3.5A 20mOhm                                   | FB1                | Murata Electronics                | BLM21PG600SH1D      |
| DIODE SCHOTTKY 150V 1A PMDU  | D8                 | Rohm Semiconductor                | RB168MM150TR        |
| RECTIFIER DIODE, 0.2A, 100V  | D7                 | Fairchild Semiconductor           | BAS16HT1G           |
| Diode Standard 250 V 200mA (DC) Surface Mount SOD-323                                    | D5                 | ON Semiconductor                  | BAS21HT1GOSTR-ND    |
| Diode Schottky 30 V 200mA Surface Mount USC  | D4                 | Toshiba Semiconductor and Storage | CUS520,H3F          |
| Zener Diode 27 V 300 mW ±5% Surface Mount SOD-323  | D3                 | ON Semiconductor                  | MM3Z27VT1G          |
| Diode Standard 1000 V 1A Surface Mount Mini SMA/SOD-123                                  | D2                 | Comchip Technology                | CGRM4007-G          |
| DIODE GEN PURP 600V 1A SOD123W, DIODE GEN PURP 600V 1A SOD123F                           | D1, D6             | Taiwan Semiconductor Corporation  | ES1JLW RVG          |
|  | C14                | Yageo                             | CC0603JRNPO8BN151   |
|  | C10, C11, C12, C13 | TDK Corporation                   | C3216X7R1E106M160AE |
| GRM31CC72A475KE11K   | C6, C7, C9         | Murata Electronics                | GRM31CC72A475KE11L  |
| CAP CER 4.7UF 100V X7S 1206  |                    |                                   |                     |
| 22 pF ±5% 50V Ceramic Capacitor COG, NP0 0603 (1608 Metric)                              | C5, C8             | AVX Corporation                   | 06035U220JAT2A      |
|  | C4                 | AVX Corporation                   | 06033G104ZAT2A      |
| CAP CER 1000PF 25V X7R 0603  | C2, C3             | KEMET                             | C0603C102K3RACTU    |
| 2200 pF ±20% 630V Ceramic Capacitor X7R 1206 (3216 Metric)                               | C1                 | TDK Corporation                   | C3216X7R2J222M115AA |