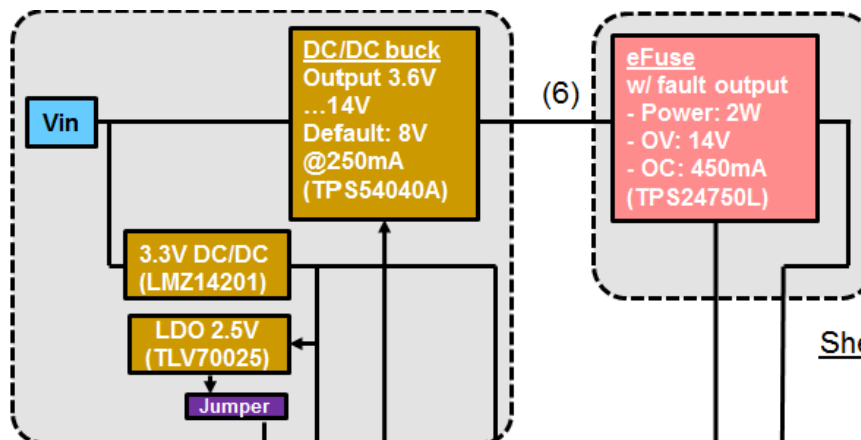


# Sheet "PS"

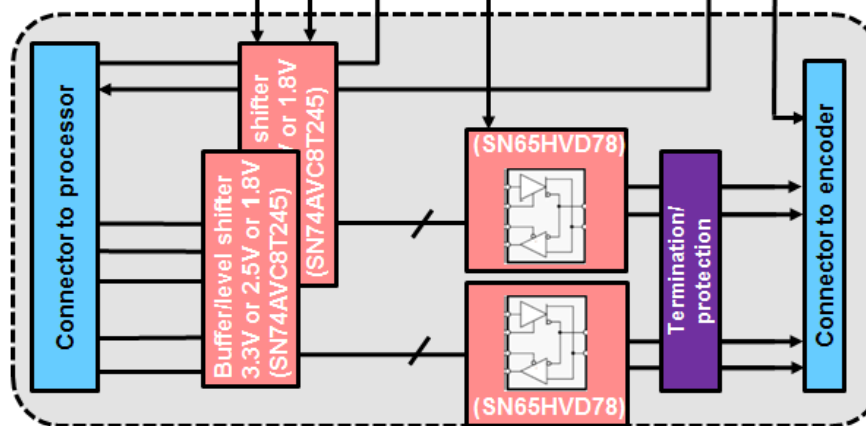


# Sheet "PR"

# Sheet "SC"

## Off-sheet connections

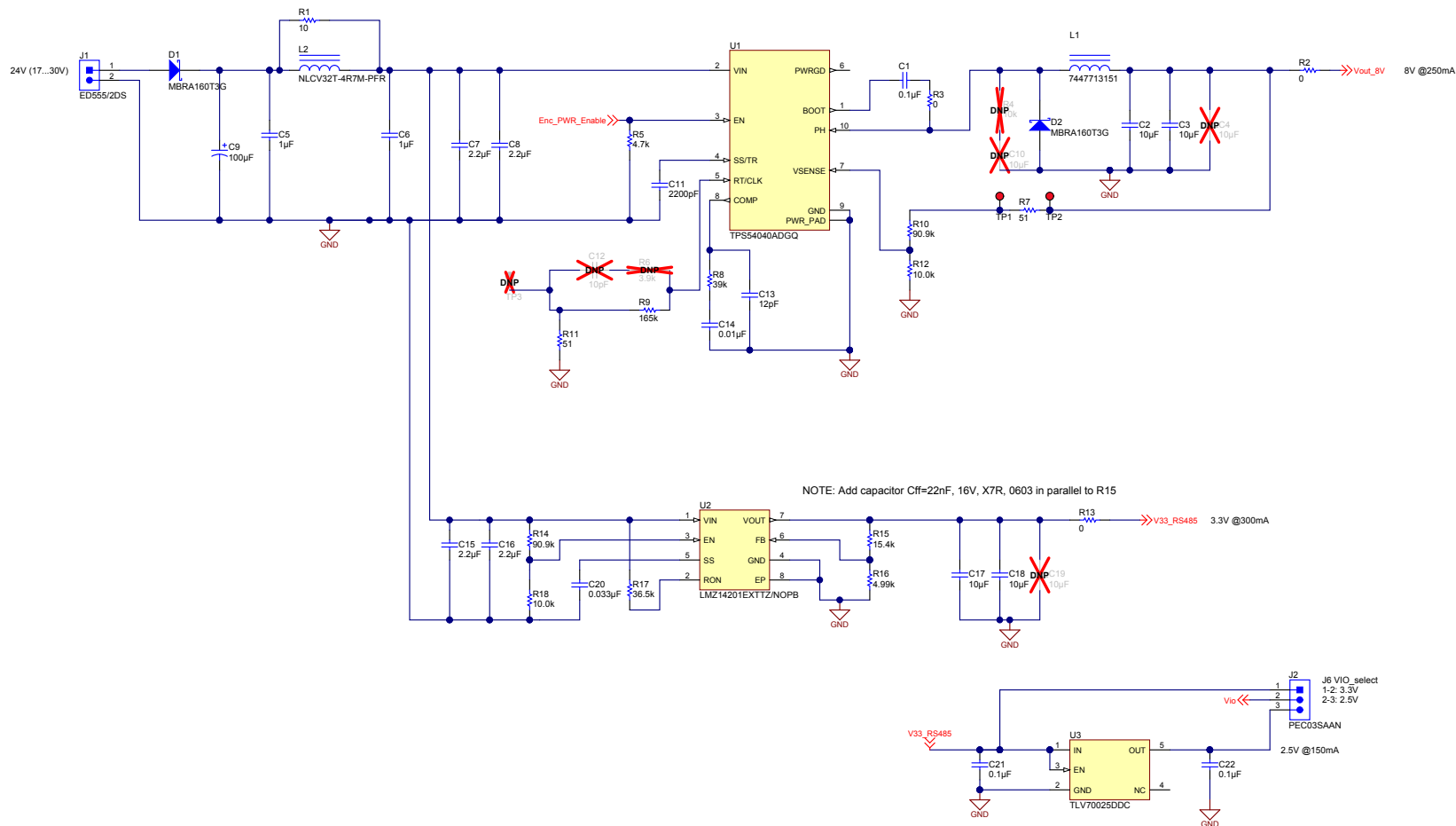
- (1)Vio
- (2)V33\_RS485
- (3)Enc\_PWR\_Enable
- (4)Enc\_PWR\_Fault
- (5)Venc
- (6)Vout\_8V

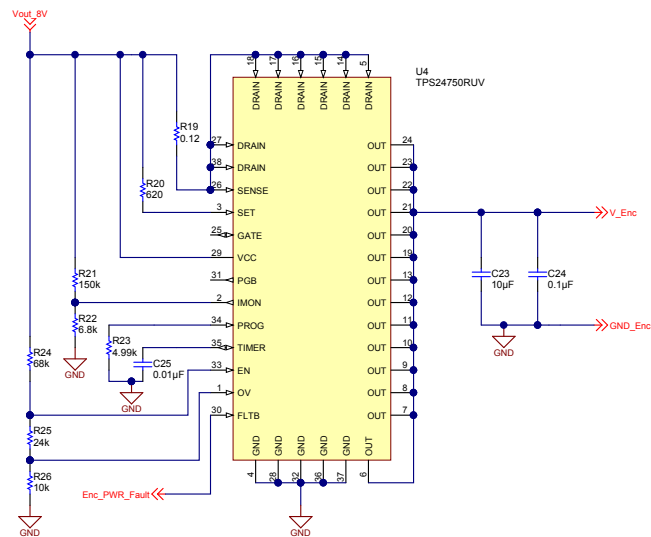


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Designed for: Public Release | Mod. Date: 5/16/2014  
Project Title: Interface to position encoder with EnDat 2.2  
Sheet Title:  
SVM Rev.: Not in version control | Rev: E2  
Drawn By: | Assembly Variant: TIDA-00172\_revE2 | Sheet: 1 of 4  
Engineer: Stauder/Mogenssen/Staebli | File: TIDA-00172\_revE2\_Block\_Diagram\_SchDoc | Size: B  
Contact: <http://www.ti.com/support>

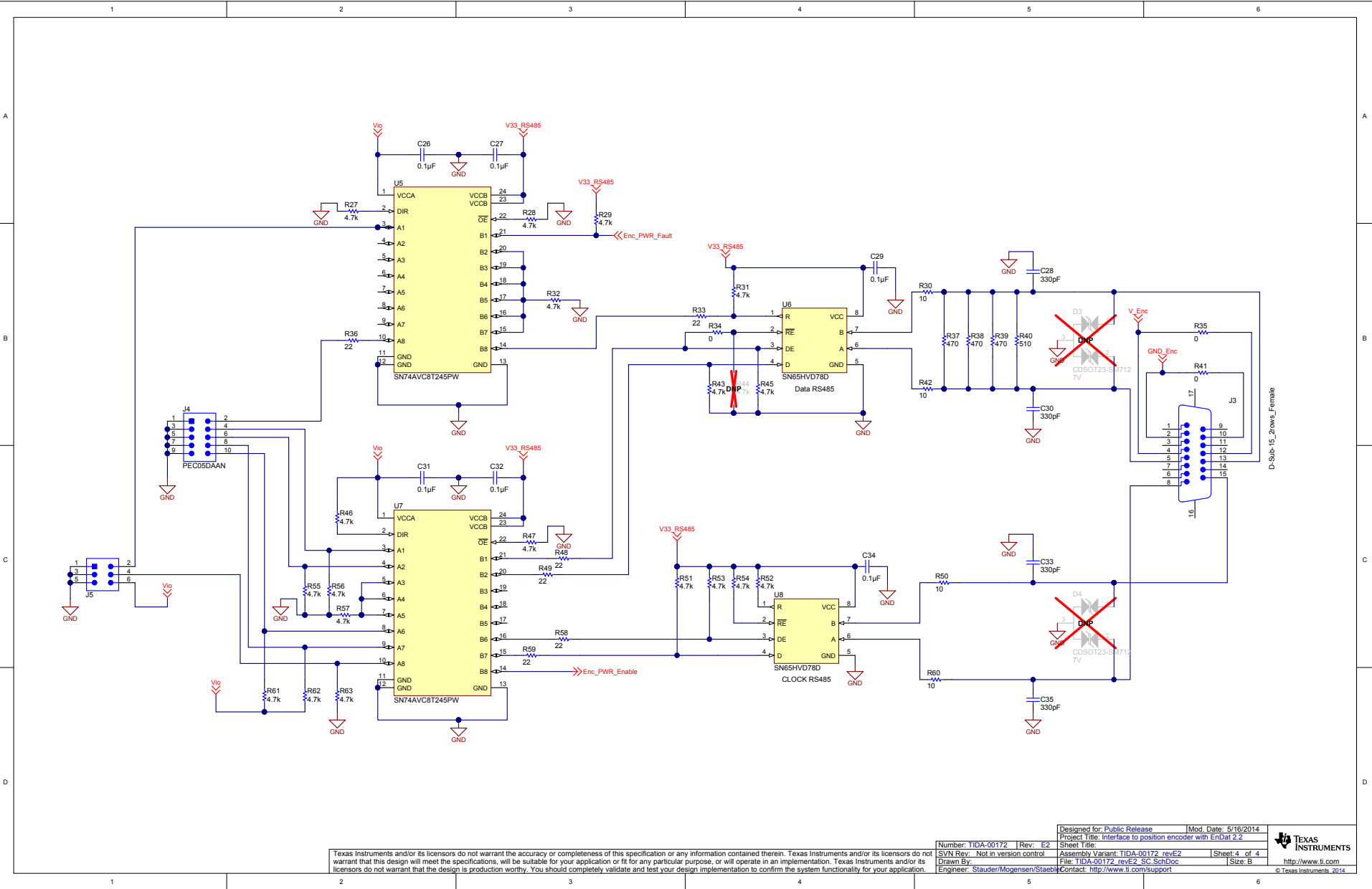
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|   |  |
|---|--|
| Designed for: Public Release                                | Mod. Date: 5/16/2014   |
| Project Title: Interface to position encoder with EnDat 2.2 | Sheet Title:   |
| SVN Rev.: Not in version control                            | Assembly Variant: TIDA-00172_revE2   |
| Drawn By: Engineer: Stauder/Mogensen/Staebli                | File: TIDA-00172_revE2_PR.SchDoc   |
|   | Sheet: 3 of 4  |
|   | Size: B  |
|   | Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a> |



Bill of Materials

<Parameter Title not found>

Source Data From: TIDA-00172\_revE2.PyJPcb  
Project: TIDA-00172\_revE2.PyJPcb  
Variant: TIDA-00172\_revE2

Creation Date: 5/21/2014 6:37:28 PM  
Print Date: 21-May-14 6:37:31 PM

| Footprint          | Comment            | LibRef             | Designator  | Description   | Quantity |
|--------------------|--------------------|--------------------|---|---|----------|
| 0603               | GRM188R61C104KA01D | GRM188R61C104KA01D | C1, C21, C22  | CAP, CER.M, 0.1uF, 16V, +/-10%, XSR, 0603   | 3        |
| 0805_HV            | C2012XR1E1010      | C2012XR1E1010      | C2, C3, C23   | CAP, CER.M, 10uF, 25V, +/-10%, XSR, 0805  | 3        |
| 0805_HV            | GRM31CRB1H109KA12L | GRM31CRB1H109KA12L | C5, C6  | CAP, CER.M, 1uF, 50V, +/-10%, XTR, 0805   | 2        |
| 1206               | GRM31CRB1H229KA01L | GRM31CRB1H229KA01L | C7, C8, C15, C16  | CAP, CER.M, 2.2uF, 50V, +/-10%, XSR, 1206   | 4        |
| SM_RADIAL_G        | EEE-FK1J101P       | EEE-FK1J101P       | C9  | CAP, AL, 100uF, 63V, +/-20%, 0.35 ohm, SMD  | 1        |
| 0603               | GRM188R71C22KA01D  | GRM188R71C22KA01D  | C11   | CAP, CER.M, 2200pf, 16V, +/-10%, XTR, 0603  | 1        |
| 0603               | GRM1885C1H120KA01D | GRM1885C1H120KA01D | C13   | CAP, CER.M, 12pF, 50V, +/-5%, COSMPS, 0603  | 1        |
| 0603_HV            | GRM188R71H103KA01D | GRM188R71H103KA01D | C14   | CAP, CER.M, 0.01uF, 50V, +/-10%, XTR, 0603  | 1        |
| 0603               | C1508XR1A105M      | C1508XR1A105M      | C17, C18  | CAP, CER.M, 10uF, 10V, +/-20%, XSR, 0603  | 2        |
| 0603               | GRM188R71C33KA01D  | GRM188R71C33KA01D  | C20   | CAP, CER.M, 0.033uF, 16V, +/-10%, XTR, 0603   | 1        |
| 0603               | C1508XR1E104K      | C1508XR1E104K      | C24   | CAP, CER.M, 0.1uF, 25V, +/-10%, XTR, 0603   | 1        |
| 0603               | GRM188R71H103KA01D | GRM188R71H103KA01D | C25   | CAP, CER.M, 0.01uF, 50V, +/-10%, XTR, 0603  | 1        |
| 0603               | 0603D104KA12A      | 0603D104KA12A      | C26, C27, C28, C31, C32, C34  | CAP, CER.M, 0.1uF, 25V, +/-10%, XSR, 0603   | 6        |
| 0603               | GRM188R71H31KA01D  | GRM188R71H31KA01D  | C28, C30, C33, C36  | CAP, CER.M, 330pf, 50V, +/-10%, XTR, 0603   | 4        |
| SMA                | MBRA160T3G         | MBRA160T3G         | D1, D2  | Diode, Schottky, 60V, 1A, SMA   | 2        |
| TERA_BLK_ED555-2D5 | ED555-2D5          | ED555-2D5          | J1  | Terminal Block, 6A, 3.5mm Pitch, 2-Pos, TH  | 1        |
| CONN_PECO3SAAN     | PEC03SAAN          | PEC03SAAN          | J2  | Header, 100mil, 3x1, Tin plated, TH   | 1        |
| Harting_D9         | D-Sub-15           | 09 66 252 6610     | J3  | D-Sub-15, 17Pos, TH   | 1        |
| 66 252 6610        | 15_2rows_Female    |                    |   |   |          |
| CONN_PECO3DAAN     | PEC03DAAN          | PEC03DAAN          | J4  | Header, 100mil, 5x2, Tin plated, TH   | 1        |
| SULLINS_PECO3DAAN  | PEC03DAAN          | PEC03DAAN          | J5  | Header, 100mil, 3x2, Tin, TH  | 1        |
| WE-PD-1030         | 7447713151         | 7447713151         | L1  | Inductor, Shielded Drum Core, Ferrite, 150uH, 0.7A, 0.57 ohm, SMD   | 1        |
| NLCV32             | NLCV32T-4R7M-PFR   | NLCV32T-4R7M-PFR   | L2  | Inductor, Wirewound, Ferrite, 4.7uH, 0.9A, 0.2 ohm, SMD   | 1        |
| 0603               | CRCW060310R01NEA   | CRCW060310R01NEA   | R1, R30, R42, R50, R60  | RES, 10 ohm, 5%, 0.25W, 0603  | 6        |
| 0603               | CRCW06030000Z0EA   | CRCW06030000Z0EA   | R2, R3, R13, R34, R35, R41  | RES, 0 ohm, 5%, 0.1W, 0603  | 6        |
| 0603               | CRCW06034K701NEA   | CRCW06034K701NEA   | R5, R27, R28, R29, R31, R32, R43, R45, R46, R47, R51, R52, R53, R54, R55, R56, R57, R61, R62, R63 | RES, 4.7k ohm, 5%, 0.1W, 0603   | 20       |
| 0603               | CRCW060351R01NEA   | CRCW060351R01NEA   | R7, R11   | RES, 51 ohm, 5%, 0.1W, 0603   | 2        |
| 0603               | CRCW060339K01NEA   | CRCW060339K01NEA   | R8  | RES, 39k ohm, 5%, 0.1W, 0603  | 1        |
| 0603               | CRCW06031650KFEA   | CRCW06031650KFEA   | R9  | RES, 165k ohm, 1%, 0.1W, 0603   | 1        |
| 0603               | CRCW060339K01FEA   | CRCW060339K01FEA   | R10, R14  | RES, 90.9k ohm, 1%, 0.1W, 0603  | 2        |
| 0603               | CRCW060310K01FEA   | CRCW060310K01FEA   | R12, R18  | RES, 10.0k ohm, 1%, 0.1W, 0603  | 2        |
| 0603               | CRCW060315K01FEA   | CRCW060315K01FEA   | R15   | RES, 15.4k ohm, 1%, 0.1W, 0603  | 1        |
| 0603_HV            | CRCW06034K901FEA   | CRCW06034K901FEA   | R16   | RES, 4.99k ohm, 1%, 0.1W, 0603  | 1        |
| 0603               | CRCW060339K01FEA   | CRCW060339K01FEA   | R17   | RES, 36.5k ohm, 1%, 0.1W, 0603  | 1        |
| 0603               | ERJ-3RSFR12V       | ERJ-3RSFR12V       | R19   | RES, 0.12 ohm, 1%, 0.1W, 0603   | 1        |
| 0603               | RC0603FR-07620RL   | RC0603FR-07620RL   | R20   | RES, 620 ohm, 1%, 0.1W, 0603  | 1        |
| 0603               | CRCW060315001NEA   | CRCW060315001NEA   | R21   | RES, 150k ohm, 5%, 0.1W, 0603   | 1        |
| 0603               | CRCW06039K601NEA   | CRCW06039K601NEA   | R22   | RES, 6.8k ohm, 5%, 0.1W, 0603   | 1        |
| 0603               | CRCW06034K901FEA   | CRCW06034K901FEA   | R23   | RES, 4.99k ohm, 1%, 0.1W, 0603  | 1        |
| 0603               | CRCW060368K01NEA   | CRCW060368K01NEA   | R24   | RES, 68k ohm, 5%, 0.1W, 0603  | 1        |
| 0603               | CRCW060324K01NEA   | CRCW060324K01NEA   | R25   | RES, 24k ohm, 5%, 0.1W, 0603  | 1        |
| 0603               | CRCW060310K01NEA   | CRCW060310K01NEA   | R26   | RES, 10k ohm, 5%, 0.1W, 0603  | 1        |
| 0603               | CRCW060322R01NEA   | CRCW060322R01NEA   | R33, R36, R48, R49, R58, R59  | RES, 22 ohm, 5%, 0.1W, 0603   | 6        |
| 0603               | CRCW060347001NEA   | CRCW060347001NEA   | R37, R38, R39   | RES, 470 ohm, 5%, 0.1W, 0603  | 3        |
| 0603               | CRCW060351001NEA   | CRCW060351001NEA   | R40   | RES, 510 ohm, 5%, 0.1W, 0603  | 1        |
| Keystone5000       | 5000               | 5000               | TP1, TP2  | Test Point, Miniature, Red, TH  | 2        |
| ICQ0010D_Q         | TPS54040ADG        | TPS54040ADG        | U1  | 0.5 A, 42 V Step Down DC/DC Converter with Eco-mode, DQ00010D   | 1        |
| TZA07A_V           | LMZ14201EXTZNPB    | LMZ14201EXTZNPB    | U2  | 1A SIMPLE SWITCHER® Power Module with 42V Maximum Input Voltage for Military and Rugged Applications, 7 pin TO-PMOD | 1        |
| DOC0005A_N         | TLV70025DDC        | TLV70025DDC        | U3  | 200-mA, Low-IQ, LDO Regulator for Portable Devices, DOC0005A  | 1        |
| RLV0036A           | TPS24750RUV        | TPS24750RUV        | U4  | 2.5 to 18 V Positive Voltage 10A Integrated Hot-Swap Controller, RLV0036A   | 1        |
| PW0024A_N          | SN74AVC8T245PW     | SN74AVC8T245PW     | U5, U7  | 8-BIT DUAL-SUPPLY BUS TRANSCEIVER WITH CONFIGURABLE VOLTAGE TRANSLATION AND 3-STATE OUTPUTS, PW0024A                | 2        |
| DO008A_N           | SN65HVD78D         | SN65HVD78D         | U6, U8  | 3.3V-Supply RS-485 with IEC ESD Protection, DO008A  | 2        |

| Approved | Notes |
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