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Variant: 001

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TID #: TIDA-00826



| Item # | Designator  | Quantity | Value  | PartNumber         | Manufacturer         | Description   | PackageReference               |
|--------|---|----------|--------|--------------------|----------------------|---|--------------------------------|
| 1      | !PCB  | 1        |        | 6593635            | Any                  | Printed Circuit Board   |                                |
| 2      | 1:1, 2:1, 5:1, AC,<br>DC  | 5        |        | RS-032G05A3-SM RT  | C&K Components       | Switch, Tactile, SPST-NO, 0.05A, 12V, SMD                     | SPST, 6x3.5mm                  |
| 3      | 1:1 Atten, 2:1<br>Atten, 5:1 Atten,<br>12V, AC<br>COUPLED, DC<br>COUPLED, LD,<br>Status1, Status2,<br>USB_PWR   | -        | Green  | LTST-C190GKT       | Lite-On              | LED, Green, SMD   | 1.6x0.8x0.8mm                  |
| 4      | 1V2ADC_INT,<br>1V2ADC_LDO,<br>1V9ADC, 1V9INT,<br>5401 PD, 6401<br>PD, EXT_Vcmo,<br>JZ, J3, KC705<br>JTAG, LMK_INT,<br>LMK_LDO,<br>LMX_INT,<br>LMX_LDO,<br>PG_RX1, Tdiode,<br>VA12, VA19, Vbg,<br>VD12 | 20       |        | TSW-102-07-G-S     | Samtec, Inc.         | Header, TH, 100mil, 2x1, Gold plated, 230 mil above insulator | TSW-102-07-G-S                 |
| 5      | 3P3RX, GND,<br>GND1, GND2,<br>GND3, VADJ_RX   | 6        | Black  | 5011               | Keystone Electronics | Test Point, TH, Multipurpose, Black                           |                                |
| 6      | 5VDC  | 1        |        | PJ-202AH           | CUI Inc.             | Connector, DC Jack 2.1X5.5 mm, TH                             | Conn, DC Jack, pin<br>2mm Dia. |
|        | C1, C272, C309  |          | 0.01uF | C1005X7R1E103K     | TDK                  | CAP, CERM, 0.01uF, 25V, +/-10%, X7R, 0402                     | 0402                           |
| 8      | C2, C8, C11, C94,<br>C95, C96, C215,<br>C216, C217,<br>C218, C219,<br>C220, C221,<br>C222, C223,<br>C224, C225,<br>C226, C227,<br>C261  |          | 0.1uF  | GRM155R71A104KA01D | MuRata               | CAP, CERM, 0.1uF, 10V, +/-10%, X7R, 0402                      | 0402                           |
| 9      | C3, C275  | 2        | 10uF   | TPSA106K010R0900   | AVX                  | CAP, TA, 10uF, 10V, +/-10%, 0.9 ohm, SMD                      | 3216-18                        |

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|--------|----------------------------------|----------|--------|---------------------|----------------|--|------------------|
| 10     | C4, C5, C18, C19,                |          | 0.1uF  | C1005X5R1A104K      | TDK            | CAP, CERM, 0.1uF, 10V, +/-10%, X5R, 0402                 | 0402             |
|        | C73, C88, C89,                   |          |        |                     |                |  |                  |
|        | C100, C103,                      |          |        |                     |                |  |                  |
|        | C104, C105,                      |          |        |                     |                |  |                  |
|        | C106, C107,                      |          |        |                     |                |  |                  |
|        | C109, C110,                      |          |        |                     |                |  |                  |
|        | C111, C112,                      |          |        |                     |                |  |                  |
|        | C113, C120,                      |          |        |                     |                |  |                  |
|        | C121, C124,                      |          |        |                     |                |  |                  |
|        | C206, C207,                      |          |        |                     |                |  |                  |
|        | C208, C209,                      |          |        |                     |                |  |                  |
|        | C258, C259,                      |          |        |                     |                |  |                  |
|        | C260, C273,                      |          |        |                     |                |  |                  |
|        | C274, C310,                      |          |        |                     |                |  |                  |
|        | C321, C322,                      |          |        |                     |                |  |                  |
|        | C323, C324,                      |          |        |                     |                |  |                  |
|        | C325, C326,                      |          |        |                     |                |  |                  |
|        | C327, C328,                      |          |        |                     |                |  |                  |
|        | C329, C330,                      |          |        |                     |                |  |                  |
|        | C331, C332,                      |          |        |                     |                |  |                  |
|        | C333, C334,                      |          |        |                     |                |  |                  |
|        | C335, C334,                      |          |        |                     |                |  |                  |
|        | C337, C338,                      |          |        |                     |                |  |                  |
|        | C339, C340,                      |          |        |                     |                |  |                  |
|        | C346, C347,                      |          |        |                     |                |  |                  |
|        | C349, C350,                      |          |        |                     |                |  |                  |
|        |                                  |          |        |                     |                |  |                  |
|        | C351, C352,                      |          |        |                     |                |  |                  |
|        | C353, C354,<br>C355, C384        |          |        |                     |                |  |                  |
|        | C333, C364                       |          |        |                     |                |  |                  |
| 11     | C7, C9, C10, C12,                | 51       | 0.1uF  | C0603X5R0J104K      | TDK            | CAP, CERM, 0.1uF, 6.3V, X5R, 10%, 0201                   | 0201             |
|        | C13, C14, C15,                   | ٥.       | 0      |                     |                | or a , o = 1 an, or a , o o v , 7 o r v , 10 70, o = 0 1 | 020.             |
|        | C17, C20, C21,                   |          |        |                     |                |  |                  |
|        | C22, C23, C26,                   |          |        |                     |                |  |                  |
|        | C28, C29, C31,                   |          |        |                     |                |  |                  |
|        | C41, C42, C43,                   |          |        |                     |                |  |                  |
|        | C44, C45, C46,                   |          |        |                     |                |  |                  |
|        | C44, C43, C40,<br>C47, C51, C52, |          |        |                     |                |  |                  |
|        | C53, C54, C55,                   |          |        |                     |                |  |                  |
|        | C56, C57, C58,                   |          |        |                     |                |  |                  |
|        | C62, C63, C64,                   |          |        |                     |                |  |                  |
|        |                                  |          |        |                     |                |  |                  |
|        | C65, C66, C67,                   |          |        |                     |                |  |                  |
|        | C68, C69, C70,                   |          |        |                     |                |  |                  |
|        | C71, C118, C119,                 |          |        |                     |                |  |                  |
|        | C131, C132,                      |          |        |                     |                |  |                  |
|        | C133, C134,                      |          |        |                     |                |  |                  |
|        | C136, C140,                      |          |        |                     |                |  |                  |
|        | C142, C214                       |          |        |                     |                |  |                  |
| 12     | C16                              | 1        | 4.7uF  | C1005X5R0J475M050BC | TDK            | CAP, CERM, 4.7uF, 6.3V, +/-20%, X5R, 0402                | 0402             |
| 13     | C24, C115, C210                  | 3        | 0.1uF  | 0603YC104JAT2A      | AVX            | CAP, CERM, 0.1uF, 16V, +/-5%, X7R, 0603                  | 0603             |
| 14     | C25, C34, C38                    | 3        | 100pF  | 06035A101JAT2A      | AVX            | CAP, CERM, 100pF, 50V, +/-5%, C0G/NP0, 0603              | 0603             |
| 15     | C27, C48, C59,<br>C72            | 4        | 10uF   | 293D106X0010B2TE3   | Vishay-Sprague | CAP, TANT, 10uF, 10V, +/-20%, 2.5 ohm, 3528-21 SMD       | 3528-21          |
|        |                                  |          |        | 1                   | 1              |  |                  |
| 16     | C32, C33, C35,                   | 4        | 4700pF | GRM033R61A472KA01D  | MuRata         | CAP, CERM, 4700pF, 10V, +/-10%, X5R, 0201                | 0201             |

| Item # | Designator   | Quantity | Value  | PartNumber         | Manufacturer | Description                                 | PackageReference |
|--------|--|----------|--------|--------------------|--------------|---|------------------|
| 17     | C39, C40, C49,<br>C50, C60, C61,<br>C99, C125, C143,<br>C205   | 10       | 1uF    | C1608X5R1A105K     | TDK          | CAP, CERM, 1uF, 10V, +/-10%, X5R, 0603      | 0603             |
| 18     | C74  | 1        | 100pF  | GRM1555C1E101JA01D | MuRata       | CAP, CERM, 100pF, 25V, +/-5%, C0G/NP0, 0402 | 0402             |
| 19     | C75, C76, C83,<br>C84, C245  | 5        | 47pF   | GRM1555C1H470JA01D | MuRata       | CAP, CERM, 47pF, 50V, +/-5%, C0G/NP0, 0402  | 0402             |
| 20     | C77, C79, C239,<br>C242, C253,<br>C256   | 6        | 0.01uF | GRM155R71E103KA01D | MuRata       | CAP, CERM, 0.01uF, 25V, +/-10%, X7R, 0402   | 0402             |
| 21     | C78, C80, C254,<br>C257  | 4        | 27pF   | GRM1555C1H270JA01D | MuRata       | CAP, CERM, 27pF, 50V, +/-5%, C0G/NP0, 0402  | 0402             |
| 22     | C81, C82, C232,<br>C236, C240,<br>C243, C252,<br>C255  | 8        | 1uF    | C1005X5R0J105M     | TDK          | CAP, CERM, 1uF, 6.3V, +/-20%, X5R, 0402     | 0402             |
| 23     | C97, C98, C116, C126, C129, C130, C144, C147, C148, C151, C153, C159, C164, C167, C176, C177, C185, C189, C191, C198, C199, C213, C277, C281, C283, C288, C290, C298, C300, C357, C359, C390, C396, C399, C402, C405, C407, C411, C416 |          | 0.1uF  | 06033C104JAT2A     | AVX          | CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603     | 0603             |
| 24     | C102, C311,<br>C312, C313,<br>C314, C315,<br>C316, C317,<br>C318, C319,<br>C320  | 11       | 0.01uF | C1005X7R1C103K     | TDK          | CAP, CERM, 0.01uF, 16V, +/-10%, X7R, 0402   | 0402             |
| 25     | C108, C155,<br>C201, C211  | 4        | 1uF    | C1608X5R1C105K     | TDK          | CAP, CERM, 1uF, 16V, +/-10%, X5R, 0603      | 0603             |
| 26     | C117, C149   | 2        | 330pF  | 06035A331JAT2A     | AVX          | CAP, CERM, 330pF, 50V, +/-5%, C0G/NP0, 0603 | 0603             |
| 27     | C122   | 1        | 10uF   | C0805C106K8PACTU   | Kemet        | CAP, CERM, 10uF, 10V, +/-10%, X5R, 0805     | 0805             |
| 28     | C127, C160   | 2        | 4.7uF  | C0603C475K8PACTU   | Kemet        | CAP, CERM, 4.7uF, 10V, +/-10%, X5R, 0603    | 0603             |
| 29     | C128, C161,<br>C278, C408  | 4        | 0.01uF | 06031C103MAT2A     | AVX          | CAP, CERM, 0.01uF, 100V, +/-20%, X7R, 0603  | 0603             |
| 30     | C135, C137   | 2        | 18pF   | GRM1555C1H180JA01D | MuRata       | CAP, CERM, 18pF, 50V, +/-5%, C0G/NP0, 0402  | 0402             |
| 31     | C138, C212   | 2        | 100uF  | GRM31CR60J107ME39L | MuRata       | CAP, CERM, 100uF, 6.3V, +/-20%, X5R, 1206   | 1206             |

| Item # | Designator  | Quantity | Value  | PartNumber             | Manufacturer            | Description  | PackageReference |
|--------|-------------|----------|--|------------------------|-------------------------|--|------------------|
| 32     | C139, C141, | 36       | 10uF   | C1608X5R1A106M         | TDK                     | CAP, CERM, 10uF, 10V, +/-10%, C0G/NP0, 0603  | 0603             |
|        | C150, C152, |          |  |                        |                         |  |                  |
|        | C158, C163, |          |  |                        |                         |  |                  |
|        | C165, C166, |          |  |                        |                         |  |                  |
|        | C171, C172, |          |  |                        |                         |  |                  |
|        |             |          |  |                        |                         |  |                  |
|        | C186, C188, |          |  |                        |                         |  |                  |
|        | C190, C194, |          |  |                        |                         |  |                  |
|        | C195, C196, |          |  |                        |                         |  |                  |
|        | C197, C200, |          |  |                        |                         |  |                  |
|        | C202, C203, |          |  |                        |                         |  |                  |
|        | C204, C276, |          |  |                        |                         |  |                  |
|        | C280, C282, |          |  |                        |                         |  |                  |
|        | C289, C297, |          |  |                        |                         |  |                  |
|        | C299, C358, |          |  |                        |                         |  |                  |
|        | C391, C395, |          |  |                        |                         |  |                  |
|        | C398, C401, |          |  |                        |                         |  |                  |
|        | C404, C406, |          |  |                        |                         |  |                  |
|        | C410, C415  |          |  |                        |                         |  |                  |
| 33     | C145, C146, | 6        | 10uF   | EMK212BJ106KG-T        | Taiyo Yuden             | CAP, CERM, 10uF, 16V, +/-10%, X5R, 0805  | 0805             |
| 33     | , ,         | 6        | TOUF   | EIVINZ 12BJ 100NG-1    | raiyo ruden             | CAP, CERINI, 10UF, 16V, +/-10%, ASR, 0605  | 0805             |
|        | C173, C184, |          |  |                        |                         |  |                  |
|        | C382, C383  |          |  |                        | 1100                    |  |                  |
| 34     | C154        |          | 10pF   | 06035A100JAT2A         | AVX                     | CAP, CERM, 10pF, 50V, +/-5%, C0G/NP0, 0603   | 0603             |
| 35     | C156, C157  | 1        | 47uF   | GRM31CR60J476ME19L     | MuRata                  | CAP, CERM, 47uF, 6.3V, +/-20%, X5R, 1206   | 1206             |
| 36     | C162        |          | 3300pF                                       | GRM188R71E332KA01D     | MuRata                  | CAP, CERM, 3300pF, 25V, +/-10%, X7R, 0603  | 0603             |
| 37     | C168        | 1        | 0.22uF                                       | C1608X7R1C224K         | TDK                     | CAP, CERM, 0.22uF, 16V, +/-10%, X7R, 0603  | 0603             |
| 38     | C169, C170  | 2        | 0.1uF  | GRM155R60J104KA01D     | MuRata                  | CAP, CERM, 0.1uF, 6.3V, +/-10%, X5R, 0402  | 0402             |
| 39     | C174, C175  | 2        | 0.027uF                                      | GRM188R71C273KA01D     | MuRata                  | CAP, CERM, 0.027uF, 16V, +/-10%, X7R, 0603   | 0603             |
| 40     | C178, C179  | 2        | 0.039uF                                      | 06033C393KAT2A         | AVX                     | CAP, CERM, 0.039uF, 25V, +/-10%, X7R, 0603   | 0603             |
| 41     | C180, C181, |          | 22uF   | GRM31CR61A226ME19L     | MuRata                  | CAP, CERM, 22uF, 10V, +/-20%, X5R, 1206  | 1206             |
|        | C182, C183  |          |  |                        |                         | ,  |                  |
| 42     | C187        | 1        | 560pF  | 06035A561JAT2A         | AVX                     | CAP, CERM, 560pF, 50V, +/-5%, C0G/NP0, 0603  | 0603             |
| 43     | C192        |          | 4700pF                                       | GRM188R71C472KA01D     | MuRata                  | CAP, CERM, 4700pF, 16V, +/-10%, X7R, 0603  | 0603             |
| 44     | C193        |          | 47uF   | TPSB476K010R0250       | AVX                     | CAP, TA, 47 µF, 10 V, +/- 10%, 0.25 ohm, SMD   | 3528-21          |
| 45     | C228, C229  |          | 0.5pF  | 500R07S0R5BV4T         | Johanson Technology Inc | CAP CER 0.5PF 50V NP0 0402   | 0402             |
| 46     |             |          | 4.7pF  | GRM1555C1H4R7CA01D     | MuRata                  |  | 0402             |
| 40     | C233, C237, | 0        | 4.7pr  | GRIVI 1555C TH4R7CAUTD | Mukala                  | CAP, CERM, 4.7pF, 50V, +/-5%, C0G/NP0, 0402  | 0402             |
|        | C238, C241, |          |  |                        |                         |  |                  |
|        | C246, C248  |          |  |                        |                         |  |                  |
| 47     | C244        |          | 560pF  | GRM1555C1H561JA01D     | MuRata                  | CAP, CERM, 560pF, 50V, +/-5%, C0G/NP0, 0402  | 0402             |
| 48     | C249        |          | 22pF   | GRM1555C1H220JA01D     | MuRata                  | CAP, CERM, 22pF, 50V, +/-5%, C0G/NP0, 0402   | 0402             |
| 49     | C264, C265, | 8        | 0.01uF                                       | LLL185R71E103MA01L     | MuRata                  | CAP, CERM, 0.01uF, 25V, +/-20%, X7R, 0306  | 0306             |
|        | C270, C271, |          |  |                        |                         |  |                  |
|        | C301, C302, |          |  |                        |                         |  |                  |
|        | C307, C308  | 1        | <u>                                     </u> |                        |                         |  |                  |
| 50     | C266, C267, | 8        | 2200pF                                       | LLL185R71H222MA01L     | MuRata                  | CAP, CERM, 2200pF, 50V, +/-20%, X7R, 0306  | 0306             |
|        | C268, C269, |          |  |                        |                         | ,  |                  |
|        | C303, C304, |          |  |                        |                         |  |                  |
|        | C305, C306  |          |  |                        |                         |  |                  |
| 51     | C279        | 1        | 15pF   | C0603C150J5GACTU       | Kemet                   | CAP, CERM, 15 pF, 50 V, +/- 5%, C0G/NP0, 0603  | 0603             |
| 52     | C284, C285, |          | 22uF   | C1608X5R0J226M080AC    | TDK                     | CAP, CERM, 15 pr, 30 V, +/- 3%, C0G/NP0, 0003<br>CAP, CERM, 22 μF, 6.3 V, +/- 20%, X5R, 0603 | 0603             |
| 52     |             | 4        | ZZUF   | C 1000ASKUJZZOWIUOUAC  | IDK                     | CAF, OERIVI, 22 μF, 0.3 V, +/- 20%, A3R, 0003  | 0003             |
|        | C418, C419  |          | 10.5   | 0004455504140014645    | M B                     | 0AD 05DM 40 -5 50 V -/ 50/ 000 MID0 0400   | 0.400            |
| 53     | C286, C385, | 3        | 10pF   | GRM1555C1H100JA01D     | MuRata                  | CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0402  | 0402             |
|        | C417        |          |  |                        |                         |  |                  |
| 54     | C287, C356, | 3        | 2.2uF  | GRM188R61A225KE34D     | MuRata                  | CAP, CERM, 2.2 μF, 10 V, +/- 10%, X5R, 0603  | 0603             |
|        | C389        |          |  |                        |                         |  |                  |
| 55     | C291, C292  | 2        | 1pF  | GRM1555C1H1R0CA01D     | MuRata                  | CAP, CERM, 1 pF, 50 V, +/- 5%, C0G/NP0, 0402   | 0402             |
| 56     | C293, C294  | 2        | 2.4pF  | GRM1555C1H2R4CA01D     | MuRata                  | CAP, CERM, 2.4 pF, 50 V, +/- 5%, C0G/NP0, 0402   | 0402             |

| Item # | Designator  | Quantity | Value          | PartNumber          | Manufacturer                | Description  | PackageReference                        |
|--------|---|----------|----------------|---------------------|-----------------------------|--|---|
| 57     | C295, C296  | 2        | 0 ohm          | CRCW04020000Z0ED    | Vishay-Dale                 | RES, 0, 5%, 0.063 W, 0402  | 0402                                    |
| 58     | C341, C342,<br>C343, C344,<br>C345  | 5        | 1000pF         | C1005C0G1E102J      | TDK                         | CAP, CERM, 1000 pF, 25 V, +/- 5%, C0G/NP0, 0402  | 0402                                    |
| 59     | C360, C361,<br>C362, C363,<br>C364, C365,<br>C366, C367,<br>C368, C369,<br>C413, C414 | 12       | 1uF            | 293D105X0016A2TE3   | Vishay-Sprague              | CAP, TA, 1 μF, 16 V, +/- 20%, 9.3 ohm, SMD   | 3216-18                                 |
| 60     | C386, C387,<br>C388, C394,<br>C397, C400  | 6        | 22uF           | C2012X5R1C226K125AC | TDK                         | CAP, CERM, 22 μF, 16 V, +/- 10%, X5R, 0805   | 0805                                    |
| 61     | C403  | 1        | N/A            | Used in BOM report  | Used in BOM report          | CAP, CERM, xxxF, xxV, [TempCo], xx%, [PackageReference]  | Used in PnP output and some BOM reports |
| 62     | C409  | 1        | 22pF           | C0603C220J5GACTU    | Kemet                       | CAP, CERM, 22 pF, 50 V, +/- 5%, C0G/NP0, 0603  | 0603                                    |
| 63     | D1, D7  | 2        | 30V            | PMEG3005EL,315      | NXP Semiconductor           | Diode, Schottky, 30 V, 0.5 A, SOD882   | SOD882                                  |
| 64     | D2, D4  | 2        | 1.25V          | 1N4148W-7-F         | Diodes Inc.                 | Diode, Ultrafast, 100V, 0.15A, SOD-123   | SOD-123                                 |
| 65     | D3  | 1        | MMBD352<br>WT1 | MMBD352WT1          | Diodes                      | Diode, Dual Switching, Series, 10-mA, 7V   | SC-70                                   |
| 66     | D5, D6  | 2        | 0.5V           | MBRS540T3G          | ON Semiconductor            | Diode, Schottky, 40V, 5A, SMC  | SMC                                     |
| 67     | DEVCLK,<br>EXT_VCO,<br>LMKCLK, OSCin  | 4        |                | SASF546-P26-X1      | Lighthorse Technologies     | Connector, SMA, Vertical, Thru hole w/SMT center pin   | 6.35x12.52x6.35mm                       |
| 68     | EXT5V_FMC12V  | 1        | 1x3            | PBC03SAAN           | Sullins Connector Solutions | Header, TH, 100mil, 1x3, Gold plated, 230 mil above insulator  | PBC03SAAN                               |
| 69     | FL1, FL2, FL3   | 3        | 0.2uF          | NFM41PC204F1H3L     | MuRata                      | Filter, LC, 0.2uF, 1806, SMT   | 1806                                    |
| 70     | FMC_RX1   | 1        |                | ASP-134488-01       | Molex                       | Connector, Receptacle, 400-Pos (40x10), 50x50-mil Pitch, SMT   | 2196x280x478mil                         |
| 71     | FTDI_3P3V, OR,<br>RSV, Ts ADD1,<br>Vcmo   | 5        |                | TSW-103-07-G-S      | Samtec, Inc.                | Header, TH, 100mil, 3x1, Gold plated, 230 mil above insulator  | TSW-103-07-G-S                          |
| 72     | H3, H4  | 2        |                | 1648-440-AL         | RAF                         | Standoff, Round, 3/16" x 1-3/16"L #4-40 Aluminum   | Standoff                                |
| 73     | H5, H6  | 2        |                | NY PMS 440 0025 PH  | B&F Fastener Supply         | Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead  | Screw                                   |
| 74     | H9, H11   | 2        |                | PMSSS 256 0075 PH   | B&F Fastner Supply          | MACHINE SCREW PAN PHILLIPS 2-56  | Used in PnP output                      |
| 75     | H10, H12  | 2        |                | HNSS256             | B & F Fastener Supply       | HEX NUT 3/16" STN STEEL 2-56   | Used in PnP output                      |
| 76     | J1  | 1        |                | TSW-104-07-G-S      | Samtec, Inc.                | Header, TH, 100mil, 4x1, Gold plated, 230 mil above insulator  | TSW-104-07-G-S                          |
| 77     | K1, K2, K3, K4, K5  | 5        |                | RF180-5             | Any                         | Relay, DPDT (2 Form C), , 5 VDC, TH, K1 - K5 Body to be mounted approxiamtely 0.025 inches above PC board but cannot be in contact with the PC board | 9.53x12.06mm                            |
| 78     | K6, K7  | 2        |                | DS1E-SL2-DC5V       | Panasonic                   | Relay, SPDT (1 Form C), 2A, 5 VDC, TH  | TH, 6-Leads, Body<br>15x9.9mm           |
| 79     | K8  | 1        |                | DS1E-SL2-DC5V       | Panasonic                   | Relay, SPDT (1 Form C), 2 A, 5 VDC, TH   | 15x9.9mm                                |
| 80     | L1, L27, L28, L29,<br>L30, L31, L32,<br>L33, L34                                      | 9        | 1000 ohm       | BLM15HG102SN1D      | MuRata                      | 0.25A Ferrite Bead, 1000 ohm @ 100MHz, SMD   | 0402                                    |
| 81     | L2, L3, L4, L5,<br>L19, L21, L22,<br>L23  | 8        | 330 ohm        | BLM18SG331TN1D      | MuRata                      | 1.5A Ferrite Bead, 330 ohm @ 100MHz, SMD   | 0603                                    |
| 82     | L6, L9, L10, L13,<br>L15, L16, L17,<br>L18, L26                                       | 9        | 26 ohm         | BLM18SG260TN1D      | MuRata                      | 6A Ferrite Bead, 26 ohm @ 100MHz, SMD  | 0603                                    |

| Item # | Designator   | Quantity | Value   | PartNumber         | Manufacturer            | Description  | PackageReference           |
|--------|--|----------|---------|--------------------|-------------------------|--|----------------------------|
| 83     | L7, L14, L20, L24,<br>L25, L35, L36,<br>L40, L42, L43,<br>L44, L45, L46,<br>L47, L48, L50,<br>L51, L52, L53, | 20       | 120 ohm | BLM18SG121TN1D     | MuRata                  | 3A Ferrite Bead, 120 ohm @ 100MHz, SMD                               | 0603                       |
|        | L54  |          |         |                    |                         |  |                            |
| 84     | L8   |          | 3uH     | CDRH6D28NP-3R0NC   | Sumida                  | Inductor, Shielded Drum Core, Ferrite, 3uH, 3A, 0.024 ohm, SMD       | CDRH6D28                   |
| 85     | L11  |          | 7uH     | MSS1038-702NLB     | Coilcraft               | Inductor, Shielded Drum Core, Ferrite, 7uH, 4.35A, 0.03 ohm, SMD     | MSS1038                    |
| 86     | L12  | 1        | 5.5uH   | 744325550          | Wurth Elektronik eiSos  | Inductor, Shielded Drum Core, Superflux, 5.5uH, 10A, 0.0112 ohm, SMD | WE-HC6                     |
| 87     | L37, L41   | 2        | 6.8uH   | VLS2012ET-6R8M     | TDK                     | Inductor, Shielded, Ferrite, 6.8 µH, 0.57 A, 0.498 ohm, SMD          | Inductor, 2x1.2x2mm        |
| 88     | L38, L39   | 2        | 5.6nH   | LQW18AN5N6D10D     | MuRata                  | Inductor, Wirewound, 5.6 nH, 0.9 A, 0.045 ohm, SMD                   | Inductor,<br>1.6x0.8x0.8mm |
| 89     | L49  | 1        | 1uH     | XFL4020-102MEB     | Coilcraft               | Inductor, Shielded, Composite, 1 µH, 5.4 A, 0.01 ohm, SMD            | 4x2x4mm                    |
| 90     | L55, L56   |          | 3.9nH   | 0603HC-3N9XJLU     | Coilcraft               | Inductor, Wirewound, Ceramic, 3.9 nH, 2.2 A, 0.054 ohm, SMD          | 0603                       |
| 91     | LF1  | 1        | 3900pF  | C1608C0G1E392J     | TDK                     | CAP, CERM, 3900pF, 25V, +/-5%, C0G/NP0, 0603                         | 0603                       |
| 92     | LF2  |          | 47pF    | 06035A470JAT2A     | AVX                     | CAP, CERM, 47pF, 50V, +/-5%, C0G/NP0, 0603                           | 0603                       |
| 93     | LF3  |          | 619     | RC0603FR-07619RL   | Yageo America           | RES, 619 ohm, 1%, 0.1W, 0603   | 0603                       |
| 94     | LF7  |          | uH      | ACM7060-301-2PL-TL | TDK                     | Coupled inductor, 5A, 0.01 ohm, SMD                                  | 6x3.5x7 mm                 |
| 95     | NCO  | 1        |         | TSW-103-07-G-D     | Samtec, Inc.            | Header, TH, 100mil, 3x2, Gold plated, 230 mil above insulator        | TSW-103-07-G-D             |
| 96     | OFFSET ADJ   | 1        | 1k      | 3214W-1-102E       | Bourns                  | Trimmer, 1k, 0.25W, SMT  | 4.8x5.3x3.5mm              |
| 97     | OR_T0, OR_T1   |          | Orange  | LTST-C190KFKT      | Lite-On                 | LED, Orange, SMD   | 1.6x0.8x0.8mm              |
| 98     | Q1   |          | 60V     | CSD18532Q5B        | Texas Instruments       | MOSFET, N-CH, 60 V, 172 A, SON 5x6mm                                 | SON 5x6mm                  |
| 99     | Q2, Q3, Q4   |          | 20V     | FDY1002PZ          | Fairchild Semiconductor | MOSFET, P-CH, 20 V, 0.83 A, SOT-563                                  | SOT-563                    |
| 100    | R1   |          | 8.06k   | CRCW04028K06FKED   | Vishay-Dale             | RES, 8.06k ohm, 1%, 0.063W, 0402                                     | 0402                       |
| 101    | R2, R10  | 2        | 1.2k    | CRCW04021K20JNED   | Vishay-Dale             | RES, 1.2k ohm, 5%, 0.063W, 0402                                      | 0402                       |
| 102    | R3, R11, R150,<br>R243, R245   |          | 1.0Meg  | CRCW04021M00JNED   | Vishay-Dale             | RES, 1.0Meg ohm, 5%, 0.063W, 0402                                    | 0402                       |
| 103    | R4, R5, R6, R14,<br>R15, R16, R105,<br>R106, R107,<br>R123, R130,<br>R131, R187                              | 13       | 10.0k   | CRCW060310K0FKEA   | Vishay-Dale             | RES, 10.0k ohm, 1%, 0.1W, 0603                                       | 0603                       |
| 104    | R12  | 1        | 1.33k   | CRCW04021K33FKED   | Vishay-Dale             | RES, 1.33k ohm, 1%, 0.063W, 0402                                     | 0402                       |
| 105    | R13  | 1        | 3.30k   | RG1608P-332-B-T5   | Susumu Co Ltd           | RES, 3.30k ohm, 0.1%, 0.1W, 0603                                     | 0603                       |
| 106    | R17  | 1        | 750     | RC0603JR-07750RL   | Yageo America           | RES, 750 ohm, 5%, 0.1W, 0603   | 0603                       |
| 107    | R19, R20   | 2        | 0       | ERJ-1GE0R00C       | Panasonic               | RES, 0 ohm, 5%, 0.05W, 0201  | 0201                       |
| 108    | R25, R38, R145,<br>R147, R148,<br>R149, R233   | 7        | 0       | ERJ-2GE0R00X       | Panasonic               | RES, 0 ohm, 5%, 0.063W, 0402   | 0402                       |
| 109    | R27, R28, R34,<br>R35  | 4        | 100     | CRCW0402100RFKED   | Vishay-Dale             | RES, 100 ohm, 1%, 0.063W, 0402                                       | 0402                       |
| 110    | R31, R32, R122   | 3        | 1.3k    | RC0603JR-071K3L    | Yageo America           | RES, 1.3k ohm, 5%, 0.1W, 0603  | 0603                       |
| 111    | R33, R37   |          | 3.3k    | CRCW04023K30JNED   | Vishay-Dale             | RES, 3.3k ohm, 5%, 0.063W, 0402                                      | 0402                       |
| 112    | R39, R71, R80,<br>R134   |          | 1.0k    | RC0603JR-071KL     | Yageo America           | RES, 1.0k ohm, 5%, 0.1W, 0603  | 0603                       |
| 113    | R41, R74   | 2        | 10.7k   | CRCW060310K7FKEA   | Vishay-Dale             | RES, 10.7k ohm, 1%, 0.1W, 0603                                       | 0603                       |
| 114    | R43, R44, R48,<br>R59, R60, R61,<br>R62, R63, R64,<br>R160, R161,<br>R181                                    |          | 0       | CRCW04020000Z0ED   | Vishay-Dale             | RES, 0 ohm, 5%, 0.063W, 0402   | 0402                       |
| 115    | R45, R56, R112   | 3        | 270     | CRCW0603270RJNEA   | Vishay-Dale             | RES, 270 ohm, 5%, 0.1W, 0603   | 0603                       |
| 116    | R47  |          | 2.32k   | RC0603FR-072K32L   | Yageo America           | RES, 2.32k ohm, 1%, 0.1W, 0603                                       | 0603                       |
| 117    | R49, R77   |          | 4.64k   | RC0603FR-074K64L   | Yageo America           | RES, 4.64k ohm, 1%, 0.1W, 0603                                       | 0603                       |

| Item # | Designator  | Quantity | Value | PartNumber       | Manufacturer               | Description                      | PackageReference |
|--------|---|----------|-------|------------------|----------------------------|----------------------------------|------------------|
| 118    | R51   | 1        | 51    | CRCW040251R0JNED | Vishay-Dale                | RES, 51 ohm, 5%, 0.063W, 0402    | 0402             |
| 119    | R52, R53  | 2        | 10    | CRCW060310R0JNEA | Vishay-Dale                | RES, 10 ohm, 5%, 0.1W, 0603      | 0603             |
| 120    | R65, R68, R109,<br>R110, R111,<br>R113, R114,<br>R115, R117,<br>R118, R124,<br>R125, R186 | 13       | 100   | CRCW0603100RJNEA | Vishay-Dale                | RES, 100 ohm, 5%, 0.1W, 0603     | 0603             |
| 121    | R66   | 1        | 1.00k | CRCW06031K00FKEA | Vishay-Dale                | RES, 1.00k ohm, 1%, 0.1W, 0603   | 0603             |
| 122    | R67   | 1        | 12.0k | RC0603FR-0712KL  | Yageo America              | RES, 12.0k ohm, 1%, 0.1W, 0603   | 0603             |
| 123    | R70   | 1        | 10k   | RC0603JR-0710KL  | Yageo America              | RES, 10k ohm, 5%, 0.1W, 0603     | 0603             |
| 124    | R72, R177   |          | 95.3k | RC0603FR-0795K3L | Yageo America              | RES. 95.3 k. 1%, 0.1 W, 0603     | 0603             |
| 125    | R76   |          | 22.1k | CRCW060322K1FKEA | Vishay-Dale                | RES, 22.1k ohm, 1%, 0.1W, 0603   | 0603             |
| 126    | R78   |          | 10.0  | RC0603FR-0710RL  | Yageo America              | RES, 10.0 ohm, 1%, 0.1W, 0603    | 0603             |
| 127    | R79   |          | 732   | CRCW0603732RFKEA | Vishay-Dale                | RES, 732 ohm, 1%, 0.1W, 0603     | 0603             |
| 128    | R81   | 1        | 16.2k | CRCW0603752KFKEA | Vishay-Dale<br>Vishay-Dale | RES, 16.2k ohm, 1%, 0.1W, 0603   | 0603             |
| 129    | R82   | 1        | 7.87k | CRCW06037K87FKEA | Vishay-Dale<br>Vishay-Dale | RES, 7.87k ohm, 1%, 0.1W, 0603   | 0603             |
| 130    | R85   |          | 2.49k | CRCW06037K67FKEA | Vishay-Dale<br>Vishay-Dale | RES, 2.49k ohm, 1%, 0.1W, 0603   | 0603             |
| 131    | R86, R87  |          | 5.90k | CRCW06035K90FKEA | Vishay-Dale<br>Vishay-Dale | RES, 5.90k ohm, 1%, 0.1W, 0603   | 0603             |
| 132    | R88, RR6  |          | 4.99k | CRCW06033K99FKEA | Vishay-Dale<br>Vishay-Dale | RES, 4.99k ohm, 1%, 0.1W, 0603   | 0603             |
| 133    | R89   |          | 2.80k | CRCW06034K99FKEA | Vishay-Dale<br>Vishay-Dale | RES, 2.80k ohm, 1%, 0.1W, 0603   | 0603             |
|        |   |          |       |                  |                            |                                  |                  |
| 134    | R91<br>R93  |          | 4.99k | CRCW04024K99FKED | Vishay-Dale                | RES, 4.99k ohm, 1%, 0.063W, 0402 | 0402<br>0603     |
| 135    |   | 6        | 1.00k | RC0603FR-071KL   | Yageo America              | RES, 1.00k ohm, 1%, 0.1W, 0603   |                  |
| 136    | R94, R251, R252,<br>R253, R254,<br>R255   | 6        | 1.0k  | CRCW12061K00JNEA | Vishay-Dale                | RES, 1.0k ohm, 5%, 0.25W, 1206   | 1206             |
| 137    | R96   | 1        | 357   | RC0603FR-07357RL | Yageo America              | RES, 357 ohm, 1%, 0.1W, 0603     | 0603             |
| 138    | R97, R98, R101,<br>R102   | 4        | 12.4k | CRCW060312K4FKEA | Vishay-Dale                | RES, 12.4k ohm, 1%, 0.1W, 0603   | 0603             |
| 139    | R99, R100, R143,<br>R259, R260,<br>R261, R262,<br>R263, R264, RR7                         |          | 0     | ERJ-3GEY0R00V    | Panasonic                  | RES, 0 ohm, 5%, 0.1W, 0603       | 0603             |
| 140    | R103, R132,<br>R152   | 3        | 0     | CRCW06030000Z0EA | Vishay-Dale                | RES, 0 ohm, 5%, 0.1W, 0603       | 0603             |
| 141    | R108  | 1        | 2.2k  | RC0603JR-072K2L  | Yageo America              | RES, 2.2k ohm, 5%, 0.1W, 0603    | 0603             |
| 142    | R133, R170,<br>R173, R242,<br>R250, R256  | 6        | 1.00k | CRCW04021K00FKED | Vishay-Dale                | RES, 1.00k ohm, 1%, 0.063W, 0402 | 0402             |
| 143    | R135  | 1        | 2.10k | CRCW06032K10FKEA | Vishay-Dale                | RES, 2.10k ohm, 1%, 0.1W, 0603   | 0603             |
| 144    | R136, R137,<br>R138   | 3        | 4.7k  | CRCW06034K70JNEA | Vishay-Dale                | RES, 4.7k ohm, 5%, 0.1W, 0603    | 0603             |
| 145    | R144, R190,<br>R234, R235,<br>R236, R237,<br>R238   | 7        | 10.0k | CRCW040210K0FKED | Vishay-Dale                | RES, 10.0k ohm, 1%, 0.063W, 0402 | 0402             |
| 146    | R154  | 1        | 261   | CRCW0402261RFKED | Vishay-Dale                | RES, 261, 1%, 0.063 W, 0402      | 0402             |
| 147    | R156, R157  | 2        | 127   | CRCW0402127RFKED | Vishay-Dale                | RES, 127 ohm, 1%, 0.063W, 0402   | 0402             |
| 148    | R158, R159  |          | 82.5  | CRCW040282R5FKED | Vishay-Dale                | RES, 82.5 ohm, 1%, 0.063W, 0402  | 0402             |
| 149    | R162  | 1        | 107   | CRCW0402107RFKED | Vishay-Dale                | RES, 107 ohm, 1%, 0.063W, 0402   | 0402             |
| 150    | R163, R164  |          | 2.2k  | CRCW04022K20JNED | Vishay-Dale                | RES, 2.2k ohm, 5%, 0.063W, 0402  | 0402             |
| 151    | R166, R167  |          | 560   | CRCW0402560RJNED | Vishay-Dale                | RES, 560, 5%, 0.063 W, 0402      | 0402             |
| 152    | R168, R204  | 2        | 365   | CRCW0402365RFKED | Vishay-Dale                | RES, 365, 1%, 0.063 W, 0402      | 0402             |
| 153    | R169, R203  |          | 22.6  | CRCW040222R6FKED | Vishay-Dale                | RES, 22.6, 1%, 0.063 W, 0402     | 0402             |
| 154    | R171  |          | 62.0k | RC0603FR-0762KL  | Yageo America              | RES, 62.0 k, 1%, 0.1 W, 0603     | 0603             |
| 155    | R172, R249  |          | 30.1k | CRCW060330K1FKEA | Vishay-Dale                | RES, 30.1 k, 1%, 0.1 W, 0603     | 0603             |

| Item # | Designator   | Quantity | Value | PartNumber       | Manufacturer              | Description                        | PackageReference          |
|--------|--|----------|-------|------------------|---------------------------|------------------------------------|---------------------------|
| 156    | R174, R257   | 2        | 274k  | CRCW0402274KFKED | Vishay-Dale               | RES, 274 k, 1%, 0.063 W, 0402      | 0402                      |
| 157    | R175, R213,<br>R214, R215,<br>R216, R217,<br>R218, R219,   | 12       | 100k  | CRCW0402100KFKED | Vishay-Dale               | RES, 100 k, 1%, 0.063 W, 0402      | 0402                      |
|        | R220, R221,<br>R222, R258  |          |       |                  |                           |                                    |                           |
| 158    | R176   | 1        | 5.23k | CRCW06035K23FKEA | Vishay-Dale               | RES, 5.23 k, 1%, 0.1 W, 0603       | 0603                      |
| 159    | R179, R180   | 2        | 4.99  | CRCW04024R99FKED | Vishay-Dale               | RES, 4.99, 1%, 0.063 W, 0402       | 0402                      |
| 160    | R182, R183,<br>R188, R189  | 4        | 2.00k | CRCW04022K00FKED | Vishay-Dale               | RES, 2.00 k, 1%, 0.063 W, 0402     | 0402                      |
| 161    | R184, R185   | 2        | 1.21k | CRCW04021K21FKED | Vishay-Dale               | RES, 1.21 k, 1%, 0.063 W, 0402     | 0402                      |
| 162    | R191, R193,<br>R200, R202  | 4        | 150   | ERA-2AEB151X     | Panasonic                 | RES, 150, 0.1%, 0.063 W, 0402      | 0402                      |
| 163    | R192, R201   | 2        | 37.4  | 1-1879213-6      | TE Connectivity AMP Conne | ect RES, 37.4, 0.1%, 0.063 W, 0402 | 0402                      |
| 164    | R194, R196,<br>R197, R199  | 4        | 75.0  | ERA-2AEB750X     | Panasonic                 | RES, 75.0, 0.1%, 0.063 W, 0402     | 0402                      |
| 165    | R195, R198   | 2        | 121   | ERA-2AEB1210X    | Panasonic                 | RES, 121, 0.1%, 0.063 W, 0402      | 0402                      |
| 166    | R205, R206   | 2        | 15.0  | CRCW040215R0FKED | Vishay-Dale               | RES, 15.0, 1%, 0.063 W, 0402       | 0402                      |
| 167    | R207, R208   | 2        | 0     | CRCW04020000Z0ED | Vishay-Dale               | RES, 0, 5%, 0.063 W, 0402          | 0402                      |
| 168    | R209, R210   | 2        | 127   | CRCW0402127RFKED | Vishay-Dale               | RES, 127, 1%, 0.063 W, 0402        | 0402                      |
| 169    | R211, R212   | 2        | 40.2  | CRCW040240R2FKED | Vishay-Dale               | RES, 40.2 ohm, 1%, 0.063W, 0402    | 0402                      |
| 170    | R224, R225,<br>R226, R227,<br>R228   | 5        | 10.0k | CRCW040210K0FKED | Vishay-Dale               | RES, 10.0 k, 1%, 0.063 W, 0402     | 0402                      |
| 171    | R229, R230   | 2        | 49.9  | CRCW040249R9FKED | Vishay-Dale               | RES, 49.9 ohm, 1%, 0.063W, 0402    | 0402                      |
| 172    | R231   | 1        | 60.4k | CRCW060360K4FKEA | Vishay-Dale               | RES, 60.4 k, 1%, 0.1 W, 0603       | 0603                      |
| 173    | R232   | 1        | 39.2k | RC0603FR-0739K2L | Yageo America             | RES, 39.2 k, 1%, 0.1 W, 0603       | 0603                      |
| 174    | R244   | 1        | 110k  | CRCW0402110KFKED | Vishay-Dale               | RES, 110 k, 1%, 0.063 W, 0402      | 0402                      |
| 175    | R246   | 1        | 80.6k | CRCW060380K6FKEA | Vishay-Dale               | RES, 80.6 k, 1%, 0.1 W, 0603       | 0603                      |
| 176    | R247   | 1        | 25.5k | RC0603FR-0725K5L | Yageo America             | RES, 25.5 k, 1%, 0.1 W, 0603       | 0603                      |
| 177    | R248   | 1        | 43.2k | RC0603FR-0743K2L | Yageo America             | RES, 43.2 k, 1%, 0.1 W, 0603       | 0603                      |
| 178    | S1   | 1        |       | L101011MS02Q     | C&K Components            | SWITCH SLIDE SPST 4A PCB, TH       | Slide Switch, TH,<br>SPST |
| 179    | SH- 1V2ADC_INT_1_2 , SH- 1V2ADC_LDO_1_ 2, SH- 1V9ADC_1_2, SH- 1V9INT_1_2, SH- EXT5V_FMC12V_ 1_2, SH- FTDI_3P3V_1_2, SH-J2_1_2, SH- LMK_INT_1_2, SH- LMK_LDO_1_2, SH- LMX_INT_1_2, SH- LMX_LDO_1_2, SH- LMX_LDO_1_2, SH- LMX_LDO_1_2, SH- SH- LMX_LDO_1_2, SH- LMX_LDO_1_2, SH- LMX_LDO_1_2, SH- LMX_LDO_1_2, SH- LMX_LDO_1_2, SH- LMX_LDO_1_2, SH- TS ADD1_1_2, Vcmo_2_3 |          | 1x2   | SNT-100-BK-G     | Samtec, Inc.              | Shunt, 100mil, Gold plated, Black  | Shunt                     |

| Item # | Designator     | Quantity | Value               | PartNumber         | Manufacturer                           | Description   | PackageReference  |
|--------|----------------|----------|---------------------|--------------------|--|---|-------------------|
| 180    | SPI            | 1        |                     | TSW-104-07-G-D     | Samtec, Inc.                           | Header, TH, 100mil, 4x2, Gold plated, 230 mil above insulator   | TSW-104-07-G-D    |
| 181    | T2             | 1        |                     | TCM2-43X+          | Minicircuits                           | Transformer, RF, 50 ohm, 10 to 4000 MHz, SMT  | 4.06x4.06x3.81 mm |
| 182    | TEMP           | 1        | Red                 | LTST-C170KRKT      | Lite-On                                | LED, Red, SMD   | LED_0805          |
| 183    | TMST+, TMST-   | 2        |                     | 142-0701-231       | Emerson Network Power                  | Connector, TH, SMA  | SMA               |
| 184    | U1             | 1        |                     | LMC6762AIMX/NOPB   | Texas Instruments                      | Dual Micro-Power Rail-to-Rail Input CMOS Comparator with Push-Pull  | M08A              |
|        |                |          |                     |                    |  | Output, 8-pin Narrow SOIC   |                   |
| 185    | U2             | 1        |                     | ADC12J4000NKE      | Texas Instruments                      | ADC12J4000RLY Ultra-Wideband RF Sampling Subsystem, RLY0068A  | NKE0068A          |
| 186    | U3             | 1        |                     | LM95233CISD/NOPB   | Texas Instruments                      | Dual Remote Diode and Local Temperature Sensor with SMBus Interface   | SDA14B            |
|        |                |          |                     |                    |  | and TruTherm Technology, 14-pin LLP, Pb-Free  |                   |
| 187    | U4             | 1        |                     | TRF3765IRHB        | Texas Instruments                      | Integer-N/Fractional-N PLL with Integrated VCO, RHB0032E  | RHB0032E          |
| 188    | U5, U8         | 2        |                     | LP3878MR-ADJ/NOPB  | Texas Instruments                      | Micropower 800mA Low Noise "Ceramic Stable" Adjustable Voltage  | MRA08A            |
|        |                |          |                     |                    |  | Regulator for 1V to 5V Applications, 8-pin PSOP, Pb-Free  |                   |
| 189    | U6             | 1        |                     | LMK04828BISQ/NOPB  | Texas Instruments                      | Low-Noise Clock Jitter Cleaner with Dual Loop PLLs, NKD0064A  | NKD0064A          |
| 190    | U7             | 1        |                     | TPS54327DDA        | Texas Instruments                      | 3-A OUTPUT SINGLE SYNCRONOUS STEP DOWN SWITCHER WITH INTEGRATED FET(SWIFT), DDA0008B  | DDA0008B          |
| 191    | U9             | 1        |                     | LM26400YSDE/NOPB   | Texas Instruments                      | Dual 2A, 500kHz Wide Input Range Buck Regulator, 16-pin LLP, Pb-Free  | SDA16A            |
| 192    | U10            | 1        |                     | TPS74901RGW        | Texas Instruments                      | 3.0A Low Dropout Linear Regulator with Programmable Soft-Start, RGW0020A  | RGW0020A          |
| 193    | U11            | 1        |                     | LP38513TJ-ADJ/NOPB | Texas Instruments                      | 3A Fast-Transient Response Adjustable Low-Dropout Linear Voltage<br>Regulator, 5-pin TO-263 Thin, Pb-Free                                     | TJ5A              |
| 194    | U12, U24       | 2        |                     | SN74AVC4T774PW     | Texas Instruments                      | 4-BIT DUAL-SUPPLY BUS TRANSCEIVER WITH CONFIGURABLE   | PW0016A           |
| 101    | 012, 021       | _        |                     |                    | T CAGO III OII GIII OII IO             | VOLTAGE TRANSLATION AND 3-STATE OUTPUTS, PW0016A  | 1 110010/1        |
| 195    | U13            | 1        |                     | FT4232HL           | FTDI                                   | Quad High Speed USB to Multipurpose UART/MPSSE IC   | LQFP 10x10mm      |
| 196    | U14            | 1        |                     | TLV70233DBV        | Texas Instruments                      | 300-mA, Low-IQ, Low-Dropout Regulator, DBV0005A   | DBV0005A          |
| 197    | U15            | 1        |                     | 93LC46B-I/MS       | Microchip Technology                   | 1K, 64x16-bit, 2.5V Microwire Serial EEPROM, 8-Pin MSOP, Industrial   | MSOP-MS8          |
|        |                |          |                     |                    | ······································ | Temperature   |                   |
| 198    | U17            | 1        |                     | MC10EP32DG         | ON Semiconductor                       | Divide-by-2 Divider   | 751-06            |
| 199    | U18            | 1        | SN74LVC1<br>G125DBV | SN74LVC1G125DBV    | TI                                     | IC, Single Bus Buffer Gate With 3-States Output   | DBV               |
| 200    | U19            | 1        |                     | LMH5401IRMSR       | Texas Instruments                      | 8GHz Ultra Wideband Fully Differential Amplifier, RMS0014A  | RMS0014A          |
| 201    | U20, U45       | 2        |                     | TPS79301DBVR       | Texas Instruments                      | Single Output High PSRR LDO, 200 mA, Adjustable 1.22 to 5.5 V Output,   | DBV0006A          |
|        |                |          |                     |                    |  | 2.7 to 5.5 V Input, 6-pin SOT-23 (DBV), -40 to 85 degC, Green (RoHS & no Sb/Br)   |                   |
| 202    | U21, U48       | 2        |                     | LMR70503TM/NOPB    | Texas Instruments                      | SIMPLE SWITCHER Buck-Boost Converter For Negative Output Voltage  | YFX0008ADAC       |
|        | .,             | _        |                     |                    |  | in uSMD, YFX0008ADAC  |                   |
| 203    | U22, U42       | 2        |                     | TPS72301DBVR       | Texas Instruments                      | Single Output LDO, 200 mA, Adjustable -10 to -1.2 V Output, -10 to -2.7 V Input, 5-pin SOT-23 (DBV), -40 to 125 degC, Green (RoHS & no Sb/Br) | DBV0005A          |
|        |                |          |                     |                    |  | Input, 5-pin 501-25 (DBV), -40 to 125 dego, Green (Norto & 110 56/Br)   |                   |
| 204    | U23            | 1        |                     | LMH6401IRMZR       | Texas Instruments                      | 5 GHz Ultra Wideband Digital Variable Gain Amplifier. RMZ0016A  | RMZ0016A          |
| 205    | U25            | 1        |                     | OPA376AIDCKT       | Texas Instruments                      | Precision, Low Noise, Low Ig Operational Amplifier, 2.2 to 5.5 V, -40 to 125  |                   |
| 200    |                | '        |                     | 0.70707050         | . Oxao monamonto                       | degC, 5-pin SOT23 (DCK0005A), Green (RoHS & no Sb/Br)   | 2 31.000071       |
| 206    | U26            | 1        |                     | CD74HC14PW         | Texas Instruments                      | High-Speed CMOS Logic Hex Inverting Schmitt Triggers, PW0014A   | PW0014A           |
| 207    | U27, U29       | 2        |                     | DRV777PWR          | Texas Instruments                      | 7- bit Integrated Motor and Relay Driver, PW0016A   | PW0016A           |
| 208    | U30. U31. U32. | 10       |                     | LMC555CMM/NOPB     | Texas Instruments                      | CMOS Timer, 8-pin Mini SOIC, Pb-Free  | MUA08A            |
|        | U33, U34, U35, |          |                     |                    | 1 21.00 11.01.01.10                    |   |                   |
|        | U36, U37, U38, |          |                     |                    |  |   |                   |
|        | U39            |          |                     |                    |  |   |                   |
| 209    | U40            | 1        |                     | LMH6559MFX/NOPB    | Texas Instruments                      | High-Speed, Closed-Loop Buffer, DBV0005A  | DBV0005A          |
| 210    | U41            | 1        | SN74LVC1<br>G57DCK  | SN74LVC1G57DCK     | TI                                     | IC, Configurable Multiple-Function Gate   | DCK6              |
| 211    | U43            | 1        | COLDON              | TPS63060DSC        | Texas Instruments                      | High Input Voltage Buck-Boost Converter with 2 A Switch Current,  | DSC0010E          |
| 040    | 1144           |          | -                   | TD070004DD\/D      | T                                      | DSC0010E  | DD\/0005A         |
| 212    | U44            | 1        |                     | TPS73201DBVR       | Texas Instruments                      | Cap-Free, NMOS, 250mA Low Dropout Regulator with Reverse Current  | DBV0005A          |
| 040    | 1147           |          |                     | TD00400DD\/D       | Tavas lastin viviti                    | Protection, DBV0005A  | DD\/00054         |
| 213    | U47            | 1        |                     | TPS2400DBVR        | Texas Instruments                      | OVERVOLTAGE PROTECTION CONTROLLER, DBV0005A   | DBV0005A          |

| Item # | Designator  | Quantity | Value  | PartNumber          | Manufacturer              | Description  | PackageReference                              |
|--------|---|----------|--------|---------------------|---------------------------|--|---|
| 214    | USB   | 1        |        | 651-305-142-821     | Wurth Elektronik eiSos    | MINI USB 2.0 SMT TYPE AB 5 CONTACTS R/A, SMD   | 9.2x9.9x4 mm                                  |
| 215    | uWIRE   | 1        |        | N2510-6002-RB       | 3M                        | Connector, 100mil Shrouded, 5x2, High-Temperature, Gold, TH  | 5x2 Shrouded header                           |
| 216    | VIN   | 1        | 50 Ohm | 142-0701-806        | Emerson Network Power     | Connector, SMT, End launch SMA 50 ohm  | SMA   |
| 217    | Y1  | 1        |        | CWX813-100.0M       | Connor-Winfield           | OSC 100.0000MHZ 3.3V +-25PPM SMD   | 7x1.3x5mm                                     |
| 218    | Y2  | 1        |        | ABM3-12.000MHZ-B2-T | Abracon Corportation      | Crystal, 12Mhz, 18pF, SMD  | ABM3  |
| 219    | C30, C36  | 0        | 0.22uF | C0603X5R0J224M      | TDK                       | CAP, CERM, 0.22uF, 6.3V, +/-20%, X5R, 0201   | 0201  |
| 220    | C85, C86, C87,<br>C114, C123,<br>C231, C235,<br>C250, C251                            | 0        | 0.1uF  | C1005X5R1A104K      | TDK                       | CAP, CERM, 0.1uF, 10V, +/-10%, X5R, 0402   | 0402  |
| 221    | C90, C91, C92,<br>C93, C262, C263   | 0        | 4700pF | GRM033R61A472KA01D  | MuRata                    | CAP, CERM, 4700pF, 10V, +/-10%, X5R, 0201  | 0201  |
| 222    | C230, C234  | 0        | 47pF   | GRM1885C1H470JA01D  | MuRata                    | CAP, CERM, 47pF, 50V, +/-5%, C0G/NP0, 0603   | 0603  |
| 223    | C247  | 0        | 2.2pF  | GRM1555C1H2R2CA01D  | MuRata                    | CAP, CERM, 2.2pF, 50V, +/-5%, C0G/NP0, 0402  | 0402  |
| 224    | C370, C371,<br>C372, C373,<br>C374, C375,<br>C376, C377,<br>C378, C379,<br>C380, C381 | 0        | N/A    | Used in BOM report  | Used in BOM report        | CAP, CERM, xxxF, xxV, [TempCo], xx%, [PackageReference]  | Used in PnP output<br>and some BOM<br>reports |
| 225    | F1  | 0        |        | 1206SFF200F/63-2    | TE Connectivity           | Fuse, 2 A, 63 V, SMD   | 1206  |
| 226    | FID1, FID2, FID3  | 0        |        | N/A                 | N/A                       | Fiducial mark. There is nothing to buy or mount.   | Fiducial                                      |
| 227    | R7, R8, R9, R18,<br>R21, R22, R23   | 0        | 0      | ERJ-1GE0R00C        | Panasonic                 | RES, 0 ohm, 5%, 0.05W, 0201  | 0201  |
| 228    | R24   | 0        | 10.0k  | CRCW040210K0FKED    | Vishay-Dale               | RES, 10.0k ohm, 1%, 0.063W, 0402   | 0402  |
| 229    | R26, R29, R36,<br>R146  | 0        | 0      | ERJ-2GE0R00X        | Panasonic                 | RES, 0 ohm, 5%, 0.063W, 0402   | 0402  |
| 230    | R30, R153   | 0        | 49.9   | CRCW040249R9FKED    | Vishay-Dale               | RES, 49.9 ohm, 1%, 0.063W, 0402  | 0402  |
| 231    | R40, R42, R73,<br>R75, R83, R84,<br>R92, R95  | 0        | 0.002  | CSNL1206FT2L00      | Stackpole Electronics Inc | RES, 0.002 ohm, 1%, 1W, 1206   | 1206  |
| 232    | R50, R239, R240,<br>R241  | 0        | N/A    | Used in BOM report  | Used in BOM report        | RES, xxx ohm, x%, xW, [PackageReference]   | Used in PnP output                            |
| 233    | R54, R55, R57,<br>R58, R69, R119,<br>R120, R121,<br>R126, R127                        | 0        | 100    | CRCW0603100RJNEA    | Vishay-Dale               | RES, 100 ohm, 5%, 0.1W, 0603   | 0603  |
| 234    | R90   | 0        | 402    | RC0603FR-07402RL    | Yageo America             | RES, 402 ohm, 1%, 0.1W, 0603   | 0603  |
| 235    | R104, R116,<br>R128, R129   | 0        | 24k    | CRCW040224K0JNED    | Vishay-Dale               | RES, 24k ohm, 5%, 0.063W, 0402   | 0402  |
| 236    | R139, R140,<br>R141   | 0        | 2.0k   | CRCW06032K00JNEA    | Vishay-Dale               | RES, 2.0k ohm, 5%, 0.1W, 0603  | 0603  |
| 237    | R142  | 0        | 0      | ERJ-3GEY0R00V       | Panasonic                 | RES, 0 ohm, 5%, 0.1W, 0603   | 0603  |
| 238    | R151  | 0        | 0      | CRCW06030000Z0EA    | Vishay-Dale               | RES, 0 ohm, 5%, 0.1W, 0603   | 0603  |
| 239    | R165  | 0        | 51     | CRCW040251R0JNED    | Vishay-Dale               | RES, 51 ohm, 5%, 0.063W, 0402  | 0402  |
| 240    | R178  | 0        | 0      | CRCW04020000Z0ED    | Vishay-Dale               | RES, 0 ohm, 5%, 0.063W, 0402   | 0402  |
| 241    | U16   | 0        |        |                     |                           | 64Kbit, 400kHz, 4.5V, I2C Serial EEPROM, 8-Pin SOIC 208mil,<br>Commercial Temperature, Tape and Reel | SOIJ-SM8                                      |

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