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### Altera Arria V SoC Power Supply

| Designator                                                                             | Description                                  | Manufacturer        | PartNumber         | Quantity |
|----------------------------------------------------------------------------------------|----------------------------------------------|---------------------|--------------------|----------|
| C1                                                                                     | CAP, CERM, 1uF, 25V, +/-10%, X5R, 0603       | MuRata              | GRM188R61E105KA12D | 1        |
| C2, C3                                                                                 | CAP, AL, 22uF, 16V, +/-20%, 1.8 ohm, SMD     | Panasonic           | EEE-FC1C220R       | 2        |
| C4, C5, C6,<br>C7, C8, C9,<br>C10, C11                                                 | CAP, CERM, 47uF, 16V, +/-10%, X5R, 1210      | MuRata              | GRM32ER61C476KE15L | 8        |
| C12, C13                                                                               | CAP, TA, 330uF, 2V, +/-20%, 0.006 ohm, SMD   | Panasonic           | EEF-SX0D331XE      | 2        |
| C14, C15,<br>C16, C17,<br>C18, C26,<br>C27, C28,<br>C45, C46,<br>C47, C56,<br>C57, C58 | CAP, CERM, 100uF, 6.3V, +/-20%, X5R, 1210    | MuRata              | GRM32ER60J107ME20L | 14       |
| C19, C38,<br>C49                                                                       | CAP, CERM, 4.7uF, 25V, +/-10%, X7R, 1206     | TDK                 | C3216X7R1E475K     | 3        |
| C20, C39,<br>C50                                                                       | CAP, AL, 100uF, 25V, +/-20%, 30 ohm, SMD     | Panasonic           | EEHZA1E101XP       | 3        |
| C21, C40,<br>C51                                                                       | CAP, AL, 220uF, 2.5V, +/-20%, 0.009 ohm, SMD | Panasonic           | EEF-UD0E221LR      | 3        |
| C22, C23,<br>C24, C41,<br>C42, C43,<br>C52, C53,<br>C54                                | CAP, CERM, 22uF, 25V, +/-10%, X5R, 1210      | MuRata              | GRM32ER61E226KE15L | 9        |
| C25, C44,<br>C55                                                                       | CAP, CERM, 0.1uF, 25V, +/-10%, X5R, 0603     | MuRata              | GRM188R61E104KA01D | 3        |
| C30                                                                                    | CAP, TA, 68uF, 16V, +/-20%, 0.05 ohm, SMD    | Panasonic           | 16TQC68MYF         | 1        |
| C31                                                                                    | CAP, CERM, 47uF, 16V, +/-20%, X5R, 1210      | MuRata              | GRM32ER61C476ME15L | 1        |
| C33                                                                                    | CAP, TA, 220uF, 6.3V, +/-20%, 0.009 ohm, SMD | Kemet               | T520D227M006ATE009 | 1        |
| C34, C35,<br>C36, C37                                                                  | CAP, CERM, 47uF, 6.3V, +/-20%, X5R, 1210     | MuRata              | GRM32ER60J476ME20L | 4        |
| C60, C61,<br>C62, C66,<br>C74, C80                                                     | CAP, CERM, 0.01uF, 50V, +/-5%, X7R, 0603     | Kemet               | C0603C103J5RACTU   | 6        |
| C63, C64,<br>C75                                                                       | CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603     | MuRata              | GCM188R71H104KA57B | 3        |
| C65                                                                                    | CAP, CERM, 100pF, 50V, +/-5%, C0G/NP0, 0603  | AVX                 | 06035A101JAT2A     | 1        |
| C67, C69,<br>C70, C77,<br>C78, C79                                                     | CAP, CERM, 10uF, 6.3V, +/-20%, X5R, 0603     | Kemet               | C0603C106M9PACTU   | 6        |
| C68                                                                                    | CAP, CERM, 1000pF, 100V, +/-5%, X7R, 0603    | AVX                 | 06031C102JAT2A     | 1        |
| C71, C72,<br>C73                                                                       | CAP, CERM, 10uF, 10V, +/-10%, X5R, 0805      | MuRata              | GRM21BR61A106KE19L | 3        |
| C76                                                                                    | CAP, CERM, 10pF, 50V, +/-5%, C0G/NP0, 0603   | AVX                 | 06035A100JAT2A     | 1        |
| D1, D2, D3,<br>D4, D5, D6                                                              | Diode, Schottky, 30V, 0.2A, SOT-23           | Diodes Inc.         | BAT54-7-F          | 6        |
| J1, J2, J3,<br>J4, J5, J6,<br>J7, J8, J9,<br>J10                                       | TERMINAL BLOCK 5.08MM VERT 2POS, TH          | On-Shore Technology | ED120/2DS          | 10       |
| R1, R4,<br>R10, R13                                                                    | RES, 10.0 ohm, 1%, 0.1W, 0603                | Vishay-Dale         | CRCW060310R0FKEA   | 4        |
| R3                                                                                     | RES, 1.74k ohm, 1%, 0.1W, 0603               | Vishay-Dale         | CRCW06031K74FKEA   | 1        |
| R5                                                                                     | RES, 1.43k ohm, 1%, 0.1W, 0603               | Yageo America       | RC0603FR-071K43L   | 1        |
| R6                                                                                     | RES, 487k ohm, 1%, 0.1W, 0603                | Vishay-Dale         | CRCW0603487KFKEA   | 1        |
| R7                                                                                     | RES, 49.9 ohm, 1%, 0.1W, 0603                | Vishay-Dale         | CRCW060349R9FKEA   | 1        |
| R8, R11                                                                                | RES, 453 ohm, 1%, 0.1W, 0603                 | Vishay-Dale         | CRCW0603453RFKEA   | 2        |

| Designator                    | Description                                                                                        | Manufacturer      | PartNumber       | Quantity |
|-------------------------------|----------------------------------------------------------------------------------------------------|-------------------|------------------|----------|
| R9                            | RES, 158k ohm, 1%, 0.1W, 0603                                                                      | Vishay-Dale       | CRCW0603158KFKEA | 1        |
| R12                           | RES, 90.9k ohm, 1%, 0.1W, 0603                                                                     | Vishay-Dale       | CRCW060390K9FKEA | 1        |
| R14                           | RES, 953 ohm, 1%, 0.1W, 0603                                                                       | Vishay-Dale       | CRCW0603953RFKEA | 1        |
| R15                           | RES, 487k ohm, 1%, 0.1W, 0603                                                                      | Yageo America     | RC0603FR-07487KL | 1        |
| R16, R17,<br>R18, R19,<br>R22 | RES, 1.0k ohm, 5%, 0.1W, 0603                                                                      | Vishay-Dale       | CRCW06031K00JNEA | 5        |
| R20, R21                      | RES, 10k ohm, 5%, 0.1W, 0603                                                                       | Vishay-Dale       | CRCW060310K0JNEA | 2        |
| R23, R24                      | RES, 10.0k ohm, 1%, 0.1W, 0603                                                                     | Vishay-Dale       | CRCW060310K0FKEA | 2        |
| R25                           | RES, 100k ohm, 1%, 0.1W, 0603                                                                      | Vishay-Dale       | CRCW0603100KFKEA | 1        |
| R26                           | RES, 10 ohm, 5%, 0.1W, 0603                                                                        | Vishay-Dale       | CRCW060310R0JNEA | 1        |
| TP1                           | Test Point, Multipurpose, Orange, TH                                                               | Keystone          | 5013             | 1        |
| TP2                           | Test Point, Multipurpose, Red, TH                                                                  | Keystone          | 5010             | 1        |
| U1                            | 20A SIMPLE SWITCHER(R) Power Module with 3.0V-14.5V Input, RLG0072A                                | Texas Instruments | LMZ31520RLG      | 1        |
| U2, U4, U5                    | 10A SIMPLE SWITCHER Power Module with 2.95V-17V Input and Current Sharing in QFN Package, RVQ0042A | Texas Instruments | LMZ31710RVQ      | 3        |
| U3                            | 3A SIMPLE SWITCHER Power Module with 4.5V-14.5V Input in QFN Package, RUQ0047A                     | Texas Instruments | LMZ31503RUQ      | 1        |
| U6                            | IC, Single Schmitt-Trigger Inverter                                                                | TI                | SN74LVC1G14DCK   | 1        |
| U7                            | 2-A, 6-μVRMS, RF, LDO Voltage Regulator, RGR0020A                                                  | Texas Instruments | TPS7A8300RGR     | 1        |
| U8                            | IC, Sink/Source DDR Termination Regulator                                                          | TI                | TPS51200DRC      | 1        |

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