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CC3220SF-LAUNCHXL

| Designator | Quantity | Value | Description | PackageReference | PartNumber | Manufacturer | Alternate PartNumber | Alternate Manufacturer |
|---|----------|--------|---|------------------|----------------------|------------------------|----------------------|------------------------|
| IPC B1 | 1 | | Printed Circuit Board | | WCS002 | Any | - | - |
| C1, C4, C5, C14, C17, C24, C25, C28, C32, C33, C36, C37, C38, C43, C44, C46, C47, C57, C58, C59 | 20 | 0.1uF | CAP, CERM, 0.1 µF, 10 V, +/- 10%, X5R, 0402 | 0402 | C1005X5R1A104K050B A | TDK | | |
| C2, C3, C7, C8, C9, C15, C21, C53, C54, C55, C56 | 11 | 0.01uF | CAP, CERM, 0.01 µF, 16 V, +/- 10%, X7R, 0402 | 0402 | C1005X7R1C103K | TDK | | |
| C6, C13 | 2 | 22pF | CAP, CERM, 22 pF, 50 V, +/- 1%, C0G/NP0, 0402 | 0402 | GRM1555C1H220FA01 D | MuRata | | |
| C10, C11, C19 | 3 | 0.1uF | CAP, CERM, 0.1 µF, 25 V, +/- 10%, X5R, 0603 | 0603 | 06033D104KAT2A | AVX | | |
| C12, C16, C20, C22, C23 | 5 | 1uF | CAP, CERM, 1 µF, 16 V, +/- 10%, X5R, 0402 | 0402 | C1005X5R1C105K050B C | TDK | | |
| C18 | 1 | 2.2uF | CAP, CERM, 2.2 µF, 16 V, +/- 10%, X5R, 0402 | 0402 | C1005X5R1C225K050B C | TDK | | |
| C26, C48, C49 | 3 | 10pF | CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0402 | 0402 | GRM1555C1H100JA01 D | MuRata | | |
| C27 | 1 | 1uF | CAP, CERM, 1 µF, 10 V, +/- 10%, X5R, 0402 | 0402 | GRM155R61A105KE15 D | MuRata | | |
| C29, C30, C31 | 3 | 4.7uF | CAP, CERM, 4.7 µF, 6.3 V, +/- 20%, X5R, 0402 | 0402 | C1005X5R0J475M050B C | TDK | | |
| C34 | 1 | 0.5pF | CAP, CERM, 0.5 pF, 50 V, +/- 10%, C0G/NP0, 0402 | 0402 | GJM1555C1HR50BB01 J | MuRata | | |
| C35, C42, C45 | 3 | 10uF | CAP, CERM, 10 µF, 6.3 V, +/- 20%, X5R, 0603 | 0603 | GRM188R60J106ME47 D | MuRata | | |
| C39, C40 | 2 | 22uF | CAP, CERM, 22 µF, 4 V, +/- 20%, X5R, 0603 | 0603 | C1608X5R0G226M080A A | TDK | | |
| C41 | 1 | 1uF | CAP, CERM, 1 µF, 10 V, +/- 10%, X5R, 0402 | 0402 | C1005X5R1A105K050B B | TDK | | |
| C50, C51 | 2 | 6.2pF | CAP, CERM, 6.2 pF, 50 V, +/- 5%, C0G/NP0, 0402 | 0402 | GRM1555C1H6R2CA01 D | MuRata | | |
| C52 | 1 | 0.01uF | CAP, CERM, 0.01 µF, 10 V, +/- 10%, X5R, 0402 | 0402 | GRM155R61A103KA01 D | MuRata | | |
| C60, C62 | 2 | 10uF | CAP, CERM, 10 µF, 10 V, +/- 10%, X5R, 0805 | 0805 | GRM21BR61A106KE19 L | MuRata | | |
| C61 | 1 | 22uF | CAP, CERM, 22 µF, 16 V, +/- 10%, X5R, 0805 | 0805 | C2012X5R1C226K125A C | TDK | | |
| C63, C64 | 2 | 100uF | CAP, CERM, 100 µF, 6.3 V, +/- 20%, X5R, 1206 | 1206 | GRM31CR60J107ME39 L | MuRata | | |
| D1, D8 | 2 | Green | LED, Green, SMD | LED, GREEN, 0603 | SML-LX0603GW-TR | Lumex | | |
| D2, D6, D7, D10 | 4 | Red | LED, Red, SMD | LED, 1.6x.8x.8mm | SML-311UTT86 | Rohm | | |
| D3, D9 | 2 | Yellow | LED, Yellow, SMD | LED, 0603 | 150060YS75000 | Würth Elektronik eiSos | | |

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|--|----------|---------|--|---------------------------------|----------------------|--------------------------|----------------------|------------------------|
| D4, D5 | 2 | 45V | Diode, Schottky, 45 V, 0.03 A, 0603 Diode | 0603 Diode | CD0603-B00340 | Bourns | | |
| E1 | 1 | | ANT BLUETOOTH W-LAN ZIGBEE WIMAX, SMD | 3.2x1.6mm | AH316M245001-T | Taiyo Yuden | | |
| FL1 | 1 | 1.02 dB | Multilayer Chip Band Pass Filter For 2.4GHz W-LAN/Bluetooth, SMD | 2x1.25mm | DEA202450BT-1294C1-H | TDK | | |
| J1 | 1 | | Connector, Receptacle, Micro-USB Type B, R/A, Bottom Mount SMT | Micro USB receptacle | 105017-0001 | Molex | | |
| J3 | 1 | | Header, 2.54 mm, 5x2, Gold, TH | Header, 2.54mm, 5x2, TH | 61301021121 | Würth Elektronik | | |
| J4, J8 | 2 | | Header, 1.27 mm, 5x2, Gold, TH | Header, 1.27 mm, 5x2, TH | FTSH-105-01-F-D-K | Samtec | | |
| J5, J6, J22, J23 | 4 | | Header, 2.54 mm, 3x1, Gold, TH | Header, 2.54mm, 3x1, TH | 61300311121 | Würth Elektronik | | |
| J7 | 1 | | Header, 1.27mm, 7x2, Gold, SMT | Header, 1.27mm, 7x2, SMT | FTSH-107-01-F-DV | Samtec | | |
| J9, J14, J15, J16, J17, J18, J19, J20, J21, J24 | 10 | | Header, 2.54 mm, 2x1, Gold, TH | Header, 2.54mm, 2x1, TH | 61300211121 | Würth Elektronik | | |
| J10 | 1 | | Connector, Ultra-Mini Coaxial, SMD | Ultra small CO-AX SMD | U.FL-R-SMT-1 | Hirose Electric Co. Ltd. | | |
| J11 | 1 | | Coaxial Connectors with Switch, 50 Ohm, SMD | Coaxial Connector with Switch | MM8030-2610RJ3 | MuRata | | |
| J13 | 1 | | Header, 2.54mm, 3x2, Gold, TH | Header, 2.54mm, 3x2, TH | 61300621121 | Würth Elektronik | | |
| L1, L2 | 2 | 10 ohm | Ferrite Bead, 10 ohm @ 100 MHz, 1 A, 0402 | 0402 | BLM15AG100SN1D | MuRata | | |
| L3 | 1 | 3.3nH | Inductor, Multilayer, Air Core, 3.3 nH, 0.3 A, 0.17 ohm, SMD | 0402 polarized | LQG15HS3N3S02D | MuRata | | |
| L4, L6 | 2 | 2.2uH | Inductor, Multilayer, Ferrite, 2.2 µH, 1.3 A, 0.08 ohm, SMD | SMD, Body 2.5x2mm, Height 1.2mm | LQM2HPN2R2MG0L | MuRata | | |
| L5 | 1 | 1uH | Inductor, Multilayer, Ferrite, 1 µH, 1.6 A, 0.055 ohm, SMD | SMD, Body 2.5x2mm, Height 1.2mm | LQM2HPN1R0MG0L | MuRata | | |
| L7 | 1 | 10uH | Inductor, Wirewound, Ceramic, 10 µH, 0.48 A, 0.36 ohm, SMD | 2.5x1.8x1.8mm | CBC2518T100M | Taiyo Yuden | | |
| L8 | 1 | 2.2uH | Inductor, Wirewound, 2.2 µH, 1 A, 0.143 ohm, SMD | 0805 140 | BRC2012T2R2MD | Taiyo Yuden | | |
| LBL1 | 1 | | Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll | PCB Label 0.650"H x 0.200"W | THT-14-423-10 | Brady | - | - |
| P1, P2, P3, P4 | 4 | | Connector, Receptacle, 100mil, 10x1, Gold plated, TH | 10x1 Receptacle | SSW-110-23-F-S | Samtec | | |
| Q1, Q4, Q6, Q7 | 4 | 50V | MOSFET, N-CH, 50 V, 0.22 A, SOT-23 | SOT-23 | BSS138 | Fairchild Semiconductor | | None |
| Q2 | 1 | -50V | MOSFET, P-CH, -50 V, -0.13 A, AEC-Q101, SOT-363 | SOT-363 | BSS84DW-7-F | Diodes Inc. | | None |
| Q3, Q5 | 2 | -30V | MOSFET, P-CH, -30 V, -1.5 A, SSOT-3 | SSOT-3 | FDN358P | Fairchild Semiconductor | | None |
| R1, R2, R3, R4, R5, R6, R8, R27, R31 | 9 | 33.0 | RES, 33.0, 1%, 0.1 W, 0402 | 0402 | ERJ-2RKF33R0X | Panasonic | | |
| R7, R9, R10, R11, R25, R29, R30, R32, R137, R138, R139, R144 | 12 | 1.0k | RES, 1.0 k, 5%, 0.063 W, 0402 | 0402 | CRCW04021K00JNED | Vishay-Dale | | |

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|---|----------|-------|-------------------------------|------------------|------------------|--------------|----------------------|------------------------|
| R12, R39, R40, R44, R45, R46, R60, R62, R64, R67, R68, R70, R71, R72, R74, R75, R76, R78, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R116, R117, R121, R123, R126, R128, R129, R130, R132, R133, R134, R135, R154 | 44 | 0 | RES, 0, 5%, 0.063 W, 0402 | 0402 | ERJ-2GE0R00X | Panasonic | | |
| R13 | 1 | 100 | RES, 100, 5%, 0.063 W, 0402 | 0402 | CRCW0402100RJNED | Vishay-Dale | | |
| R14 | 1 | 100k | RES, 100 k, 5%, 0.1 W, 0603 | 0603 | CRCW0603100KJNEA | Vishay-Dale | | |
| R15 | 1 | 330k | RES, 330 k, 5%, 0.063 W, 0402 | 0402 | CRCW0402330KJNED | Vishay-Dale | | |
| R16 | 1 | 220k | RES, 220 k, 5%, 0.063 W, 0402 | 0402 | CRCW0402220KJNED | Vishay-Dale | | |
| R17, R26, R41, R48, R49, R50, R136, R146, R151, R152, R153 | 11 | 100k | RES, 100 k, 5%, 0.063 W, 0402 | 0402 | CRCW0402100KJNED | Vishay-Dale | | |
| R51 | 1 | 2.7k | RES, 2.7 k, 5%, 0.063 W, 0402 | 402 | CRCW04022K70JNED | Vishay-Dale | | |
| R18, R19 | 2 | 220 | RES, 220, 5%, 0.1 W, 0603 | 0603 | CRCW0603220RJNEA | Vishay-Dale | | |
| R20, R35, R53, R141, R142 | 5 | 10k | RES, 10 k, 5%, 0.063 W, 0402 | 0402 | CRCW040210K0JNED | Vishay-Dale | | |
| R21 | 1 | 100 | RES, 100, 1%, 0.1 W, 0402 | 0402 | ERJ-2RKF1000X | Panasonic | | |
| R22 | 1 | 100 | RES, 100, 1%, 0.063 W, 0402 | 0402 | CRCW0402100RFKED | Vishay-Dale | | |
| R23 | 1 | 4.87k | RES, 4.87 k, 1%, 0.1 W, 0603 | 0603 | CRCW06034K87FKEA | Vishay-Dale | | |
| R24, R143, R145, R147, R148, R149 | 6 | 270 | RES, 270, 5%, 0.1 W, 0603 | 0603 | CRCW0603270RJNEA | Vishay-Dale | | |
| R28 | 1 | 51 | RES, 51, 5%, 0.063 W, 0402 | 0402 | CRCW040251R0JNED | Vishay-Dale | | |
| R33, R34 | 2 | 33 | RES, 33, 5%, 0.1 W, 0603 | 0603 | CRCW060333R0JNEA | Vishay-Dale | | |
| R36, R56 | 2 | 0 | RES, 0, 5%, 0.1 W, 0603 | 0603 | ERJ-3GEY0R00V | Panasonic | | |
| R47 | 1 | 270 | RES, 270, 5%, 0.063 W, 0402 | 0402 | CRCW0402270RJNED | Vishay-Dale | | |
| R52 | 1 | 2.2k | RES, 2.2 k, 5%, 0.063 W, 0402 | 0402 | CRCW04022K20JNED | Vishay-Dale | | |
| R102, R105, R110, R111 | 4 | 470 | RES, 470, 1%, 0.1 W, 0402 | 0402 | ERJ-2RKF4700X | Panasonic | | |
| R103, R104, R112, R113 | 4 | 576k | RES, 576 k, 1%, 0.063 W, 0402 | 0402 | CRCW0402576KFKED | Vishay-Dale | | |

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|------------------------------------|----------|-------|---|--|----------------------|--------------------------------|----------------------|------------------------|
| R106, R107, R114, R115 | 4 | 422k | RES, 422 k, 1%, 0.063 W, 0402 | 0402 | CRCW0402422KFKED | Vishay-Dale | | |
| R118, R119 | 2 | 3.3k | RES, 3.3 k, 5%, 0.063 W, 0402 | 0402 | CRCW04023K30JNED | Vishay-Dale | | |
| R140 | 1 | 100k | RES, 100 k, 1%, 0.1 W, 0402 | 0402 | ERJ-2RKF1003X | Panasonic | | |
| SW1, SW2, SW3 | 3 | | Switch, SPST-NO, Off-Mom, 1 Pos, 0.05A, 12VDC, TH | 7.3x5.9mm | MJTP1117 | APEM | | |
| SW4 | 1 | | Switch, Tactile, SPST-NO, SMT | Switch, 6.1x1.8x4.6 mm | EVQ-PSD02K | Panasonic | | |
| TP2 | 1 | SMT | Test Point, Miniature, SMT | Testpoint_Keystone_Miniature | 5015 | Keystone | | |
| U1 | 1 | | Tiva C Series Microcontroller, PDT0128A | PDT0128A | TM4C1294NCPDTI3R | Texas Instruments | TM4C1294NCPDTI3 | Texas Instruments |
| U2 | 1 | | ESD Solution for High-Speed Differential Interface, 4 Channels, -40 to +85 degC, 10-pin SON (DQA), Green (RoHS & no Sb/Br) | DQA0010A | TPD4S010DQAR | Texas Instruments | Equivalent | Texas Instruments |
| U3, U4, U6 | 3 | | Single-Bit Dual-Supply Bus Transceiver With Configurable Voltage Translation and 3-State Outputs, DCK0006A | DCK0006A | SN74LVC1T45DCKR | Texas Instruments | SN74LVC1T45DCKT | Texas Instruments |
| U5 | 1 | | Precision Micropower Shunt Voltage Reference, 0.2% accuracy, 2.5 V, 15 ppm / degC, 15 mA, -40 to 85 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br) | DBZ0003A | LM4040B25IDBZR | Texas Instruments | Equivalent | Texas Instruments |
| U7 | 1 | | SimpleLink Wi-Fi and Internet-of-Things Solution, a Single-Chip Wireless MCU, RGK0064B (VQFN-64) | RGK0064B | CC3220SF12ARGKR | Texas Instruments | CC3220SF12ARGKT | Texas Instruments |
| U8 | 1 | | ULTRA LOW POWER, 32M-BIT [x 1/x 2/x 4] CMOS MXSMIO(SERIAL MULTI I/O) FLASH MEMORY, SOP-8 | 8-SOP | MX25R3235FM11L0 | Macronix International Co., LT | | |
| U9 | 1 | | Low Cost, Low Power, Rail-to-Rail Operational Amplifier MicroAmplifier(TM) Series, 2.7 to 5.5 V, -55 to 125 degC, 14-pin SOP (PW0014A), Green (RoHS & no Sb/Br) | PW0014A | OPA4342EA/250 | Texas Instruments | Equivalent | None |
| U10 | 1 | | Infrared Thermopile Sensor in Chip-Scale Package, YZF0008AEAE | YZF0008AEAE | TMP006AIYZF | Texas Instruments | | Texas Instruments |
| U11 | 1 | | Digital, triaxial acceleration sensor, 12LGA | LGA, 12-Leads, Body 2x2mm, Pitch 0.5mm | BMA222E | Bosch Solar Energy | | |
| U12 | 1 | | Buck Step Down Regulator with 3 to 17 V Input and 3.3 V Output, -40 to 85 degC, 8-Pin WSON (DSG), Green (RoHS & no Sb/Br) | DSG0008A | TPS62162DSGR | Texas Instruments | Equivalent | Texas Instruments |
| Y1 | 1 | | Crystal, 16 MHz, 18 pF, SMD | ABM3 | ABM3-16.000MHZ-D2Y-T | Abracon Corporation | | |
| Y2 | 1 | | CRYSTAL, 32.768KHZ, 9PF, SMD | 3.2x0.9x1.5mm | ABS07-32.768KHZ-9-T | Abracon Corporation | | |
| Y3 | 1 | | Crystal, 40MHz, 8pF, SMD | 2.5x2mm | Q24FA20H0039600 | Epson | | |
| FID1, FID2, FID3, FID4, FID5, FID6 | 0 | | Fiducial mark. There is nothing to buy or mount. | Fiducial | N/A | N/A | | |

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|---|----------|-------|---------------------------|------------------|---------------|--------------|----------------------|------------------------|
| R37, R38, R42, R43, R54, R55, R58, R59, R61, R63, R65, R66, R69, R73, R77, R79, R93, R94, R95, R96, R97, R98, R99, R100, R101, R108, R109, R120, R122, R124, R127, R131 | 0 | 0 | RES, 0, 5%, 0.063 W, 0402 | 0402 | ERJ-2GE0R00X | Panasonic | | |
| R57, R150 | 0 | 0 | RES, 0, 5%, 0.1 W, 0603 | 0603 | ERJ-3GEY0R00V | Panasonic | | |
| R125 | 0 | 0 | RES, 0, 5%, 0.125 W, 0805 | 0805 | ERJ-6GEY0R00V | Panasonic | | |

Notes:

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

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