



Bill of Materials for the ONS321A5VGEVB Evaluation Board

| Designator | Quantity | Description | Value | Tolerance | Footprint | Manufacturer | Manufacturer Part Number | Substitution Allowed | Lead Free |
|---------------------------------|----------|---|---------------|-----------|---------------------------------|----------------------|--------------------------|----------------------|-----------|
| C1 | 1 | CAP, SMT, 0603, 1500pF, 50V, 10%, X7R | 1500pF | 10% | SMC0603 | KEMET | C0603C152K5RACTU | No | Yes |
| C2 | 1 | CAP, SMT, 0603, 680pF, 50V, 5%, X7R | 680pF | 5% | SMC0603 | KEMET | C0603C681J5FRAC | No | Yes |
| C3 | 1 | CAP, SMT, 0603, 100pF, 50V, 5% | 100pF | 5% | SMC0603 | PANASONIC | ECJ1VC1H101J | Yes | Yes |
| C4 | DNP | CAP, SMT, 0603, DO NOT PLACE | DNP | - | SMC0603 | - | - | Yes | Yes |
| C5,C8 | 2 | CAP, SMT, 0805, 1uF, 50V, 10% | 1uF | 10% | SMC0805 | TDK | C2012X7R1H105K | No | Yes |
| C6 | 1 | CAP, SMT, 0805, 1200pF, 50V, 10% | 1200pF | 10% | SMC0805 | TDK | C1608C0G1H122J | No | Yes |
| C7,C9 | 2 | CAP, SMT, 0805, 0.1uF, 25V, 10% | 0.1uF | 10% | SMC0805 | MURATA | GRM40X7R104K025AD | No | Yes |
| C10 | DNP | CAP, SMT, 0805, DO NOT PLACE | DNP | - | SMC0805 | - | - | Yes | Yes |
| C11,C12,C13,C14,C15,C16,C18,C26 | 8 | CAP, SMT, 1210, 22uF, 16V | 22uF | 20% | CSMI 1210 | TDK | C3225X5R1C226M | No | Yes |
| C17,C25 | 2 | CAP, SMT, 7343X, 47uF, 25V, 20%, TANT | 47uF | 20% | CSMM 7343 | KEMET | T495D476M025ATE120 | No | Yes |
| C19,C20,C21,C22,C23,C24 | 6 | CAP, SMT, 1210, 100uF, 6.3V, 20% | 100uF | 20% | CSMI 1210 | TDK | C3225X5R0J107M | No | Yes |
| C27,C28,C29,C30 | 4 | CAP, SMT, 7343X, 470uF, 25V, 20%, TANT | 470uF | 20% | C7343 | KEMET | T495D477M025ATE120 | No | Yes |
| CR17 | 1 | DIODE, SMT, POWERMITE, MBRM130LT3, SHTKY | MBRM130LT3 | - | CRSMM_POWERMITE2 | ON SEMICONDUCTOR | MBRM130LT3G | Yes | Yes |
| CR18,CR19,CR20 | 3 | DIODE, SMT, SMB, MBR5230LT3, SHTKY, 2A, 30V | MBRS230LT3 | - | CRSMI_SMB403A | ON SEMICONDUCTOR | MBRS230LT3G | No | Yes |
| CSS | 1 | CAP, SMT, 0603, 0.1uF, 50V, 10% | 0.01uF | 10% | SMC0603 | TDK | C1608X7R1H103K | No | Yes |
| D22 | 1 | LED, SMT, 1206, GRN | GRN | - | SMLED1206 | - | 597-3311-407F | Yes | Yes |
| J1,J5,J6 | 3 | CON, TH, 2PIN, TERMINAL BLOCK | 2PIN/TERM BLK | - | TERM BL | PHOENIX CONTACT | 1729128 | No | Yes |
| J9,J10,J11,J12 | 4 | TESTPOINT, 100R63, 5007, COMPACT | TP | - | TPTH1_100R63 | KEYSTONE | 5007 | No | Yes |
| J13,J14 | 2 | CON, TH, 6PIN, PWR, SCREW TERMINAL, 30 AMP | 6PIN | - | JTHI_TERM2R6PS | KEYSTONE ELECTRONICS | 8196 | No | Yes |
| JS6,JS8,JS10,JS11 | 4 | CON, TH, SMB, 5PIN, VRT, PROBE, TP ADAPTER | SMB | - | JTHI_SMB5SS_TEST_PROBE | TEKTRONIX | 131-5031-00 | Yes | Yes |
| L1 | 1 | IND, SMT, 1.0uH, CHOKO, POWER | 1.0uH | - | SMIHLP5050PCCD126H | PANASONIC | ETQ-P1H1R0BFA | No | Yes |
| Q2 | 1 | XSTR, SMT, SO8FL, NTMFS4926NT1, MOSFET, N | NTMFS4926N | - | SO8_PTDSO8 SO8FL_COMBO_8MIL | ON SEMICONDUCTOR | NTMFS4926NT1G | No | Yes |
| Q3 | 1 | XSTR, SMT, SO8FL, NTMFS4935N, MOSFET, N | NTMFS4935N | - | SO8NB-5 | ON SEMICONDUCTOR | NTMFS4935NT1G | No | Yes |
| Q41 | 1 | XSTR, SMT, SOT23, 2N7002, NCH T MOS | 2N7002 | - | QSMI_SOT23 | ON SEMICONDUCTOR | 2N7002T1G | Yes | Yes |
| R1,R2,R3,R4,R5,R8,R11 | 7 | RES, SMT, 0603, 86.6K, 1/10W, 1% | 86.6K | 1% | SMR0603 | DALE | CRCW060386K6FRT1E3 | Yes | Yes |
| R6,R7,R12 | 3 | RES, SMT, 0603, 0, 1/16W, 5% | 0.0 | 5% | SMR0603 | DALE | CRCW0603000ZTE3 | Yes | Yes |
| R9 | 1 | RES, SMT, 0603, 301, 1/10W, 1% | 301 | 1% | SMR0603 | DALE | CRCW0603301RFR1E3 | Yes | Yes |
| R13 | 1 | RES, SMT, 0603, 16.9K, 1/10W, 1% | 16.9K | 1% | SMR0603 | DALE | CRCW060316K9FRT1E3 | Yes | Yes |
| R14 | 1 | RES, SMT, 0603, 13.7K, 1/10W, 1% | 13.7K | 1% | SMR0603 | DALE | CRCW060313K7FRT1E3 | Yes | Yes |
| R39 | 1 | RES, SMT, 0603, 2.21K, 1/10W, 1% | 2.21K | 1% | SMR0603 | DALE | CRCW06032K21FRT1E3 | Yes | Yes |
| R15,R17,R19,R58 | 4 | RES, SMT, 0603, 1.00K, 1/10W, 1% | 1.0K | 1% | SMR0603 | DALE | CRCW06031K0KFR1E3 | Yes | Yes |
| R18 | 1 | RES, SMT, 0603, 100, 1/10W, 1% | 100 | 1% | SMR0603 | DALE | CRCW0603100RFR1E3 | Yes | Yes |
| R20 | 1 | RES, SMT, 0603, 10.0, 1/10W, 1% | 10.0 | 1% | SMR0603 | DALE | CRCW060310R0FR1E3 | Yes | Yes |
| R21,R22,R23 | DNP | RES, SMT, 0603, DO NOT PLACE | DNP | - | SMR0603 | - | - | Yes | Yes |
| R24,R33 | 2 | RES, SMT, 1210, 2.21, 1/3W, 1% | 2.21 | 1% | RSMI 1210 | DALE | CRCW12102R21FRT1E3 | Yes | Yes |
| R26,R30 | 2 | RES, SMT, 0603, 0, 1/16W, 5% | 0 | 5% | SMR0603 | PANASONIC | ERJ3GEYR00V | No | Yes |
| R27 | 1 | RES, SMT, 0603, 15.0K, 1/10W, 1% | 15.0K | 1% | SMR0603 | DALE | CRCW060315K0FR1E3 | Yes | Yes |
| R28 | 1 | RES, SMT, 0805, 100K, 1/8W, 1% | 100K | 1% | SMR0805 | DALE | CRCW0805100KFR1E3 | Yes | Yes |
| R29 | 1 | RES, SMT, 0805, 11.5K, 1/8W, 1% | 11.5K | 1% | SMR0805 | DALE | CRCW080511K5FR1E3 | Yes | Yes |
| R31 | 1 | RES, SMT, 1210, 0.00, 1/3W, 1% | 0 | 1% | RSMI 1210 | DALE | CRCW12100000FR1E3 | Yes | Yes |
| R32,R52 | 2 | RES, SMT, 1210, 4.75, 1/3W, 1% | 4.75 | 1% | RSMI 1210 | DALE | CRCW12104R75FR1E3 | Yes | Yes |
| R34,R35 | 2 | RES, SMT, 0805, 10.0K, 1/8W, 1% | 10.0K | 1% | SMR0805 | DALE | CRCW080510K0FR1E3 | Yes | Yes |
| R36,R37 | 2 | RES, SMT, 0805, 0, 1/8W | 0 | 1% | RSMI 1210 | DALE | CRCW12100000FR1E3 | Yes | Yes |
| R38 | 1 | RES, SMT, 1206, 1.21, 1/4W, 1% | 1.21 | 1% | RSMI 1206 | DALE | CRCW12061R21FR1E3 | Yes | Yes |
| R40,R41,R42,R43,R44,R48,R51 | 7 | RES, SMT, 0603, 49.9K, 1/10W, 1% | 49.9K | 1% | SMR0603 | DALE | CRCW060349K9FR1E3 | Yes | Yes |
| R49,R50 | 2 | RES, SMT, 0603, 10.0K, 1/10W, 1% | 10.0K | 1% | SMR0603 | DALE | CRCW060310K0FR1E3 | Yes | Yes |
| R53,R54,R55,R56 | 4 | RES, SMT, 0805, 0, 1/8W | 0 | 1% | SMR0805 | DALE | CRCW08050000ZRT1E3 | Yes | Yes |
| R57 | DNP | RES, SMT, 0603, DO NOT PLACE | DNP | - | SMR0603 | - | - | Yes | Yes |
| RT1 | 1 | RES, SMT, 0603, 68K, THERMISTOR, 5% | 68K | 5% | SMR0603 | PANASONIC | ERTJ1VR683J | No | Yes |
| RT2 | 1 | RES, SMT, 0603, 10K, NTC, THERMISTOR, 1% | 10K | 1% | SMR0603 | MURATA | NCP18XH103F03RB | No | Yes |
| SW2 | 1 | SWITCH, TH, DIP, VRT, 8POS | SW DIP-8 | - | STHI_DIP08 | GRAYHILL | 76PSB08ST | Yes | Yes |
| U1 | 1 | IC, SMT, NCP5386B, 32-PIN QFN, 5X5, 0.50 | NCP5386B | - | USMM_QFN32R5X5 | ON SEMICONDUCTOR | NCP5386BMNR2G | No | Yes |
| U2 | 1 | IC, SMT, DFN-08, NCP5911 | NCP5911 | - | USMM_DFN08_0P2X0P2X0P5P_QFN_RWK | ON SEMICONDUCTOR | NCP5911MNTBG | No | Yes |

Optional MOSFETs (Do Not Place)

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|--------|---|---|---------------|---|---|------------------|---------------|----|-----|
| Q1 | 1 | XSTR, SMT, SO8FL, NTMFS4921NT1, MOSFET, N | NTMFS4921N | - | - | ON SEMICONDUCTOR | NTMFS4921NT1G | No | Yes |
| Q4 | 1 | XSTR, SMT, SO8FL, NTMFS4935N, MOSFET, N | NTMFS4935N | - | - | ON SEMICONDUCTOR | NTMFS4935NT1G | No | Yes |
| Q5,Q6 | 2 | XSTR, SMT, DPAK, NTD4810NH, MOSFET, N | NTD4810NH | - | - | ON SEMICONDUCTOR | NTD4810NH4TG | No | Yes |
| Q7,Q8 | 2 | XSTR, SMT, DPAK, NTD4806NT, MOSFET, N | NTD4806NT | - | - | ON SEMICONDUCTOR | NTD4806NT4G | No | Yes |
| Q9,Q10 | 2 | XSTR, SMT, u8FL, NTFFS4930NTAG, MOSFET, N | NTFFS4930NTAG | - | - | ON SEMICONDUCTOR | NTFFS4930NTAG | No | Yes |