



Bill of Materials for the NCP1081SPCGEVB Evaluation Board

| Designator                         | Quantity | Description   | Value           | Tolerance | Footprint         | Manufacturer        | Manufacturer Part Number | Substitution Allowed | Lead Free |
|------------------------------------|----------|---|-----------------|-----------|-------------------|---------------------|--------------------------|----------------------|-----------|
| C1, C2, C3, C4, C41                | 5        | Capacitor   | 100n            | 10%       | 0805-C-S          | Samsung             | -                        | Yes                  | Yes       |
| Cf                                 | 1        | Capacitor Polar Tant  | 10u/20V/2.1R/T  | 10%       | C-TANT-B          | AVX                 | TAJB106K020R             | No                   | Yes       |
| Cfb1                               | 1        | Capacitor   | 39n             | 10%       | 0805-C-S          | Samsung             | -                        | Yes                  | Yes       |
| Cfb2                               | 1        | Capacitor   | 12n             | 10%       | 0805-C-S          | Samsung             | -                        | Yes                  | Yes       |
| Cgnd                               | 1        | Capacitor   | 2200p/2KV       | 10%       | 1812              | AVX                 | 1812GC222KAT1A           | Yes                  | Yes       |
| Cline, Cpd1, Cpd2                  | 3        | Capacitor   | 100n/100V       | 10%       | 1206-C            | Samsung             | -                        | Yes                  | Yes       |
| Cout                               | 1        | Capacitor Polar Tant  | 68u/25V/55mR/T  | 10%       | C-TANT-E          | AVX                 | TPME686K025R0055         | No                   | Yes       |
| Cpd                                | 1        | Capacitor Polar Elec  | 100u/63V        | 20%       | CRD10.0L17.0RM5.0 | Hitano              | -                        | Yes                  | Yes       |
| Csi                                | 1        | Capacitor   | NC              | 10%       | 0805-C-S          | Samsung             | -                        | Yes                  | Yes       |
| Csn                                | 1        | Capacitor   | NC              | 10%       | 1206-C            | Samsung             | -                        | Yes                  | Yes       |
| Csn1                               | 1        | Capacitor   | 100p/200V       | 10%       | 0805-C-S          | AVX                 | 08052A471JAT2A           | Yes                  | Yes       |
| Csn2                               | 1        | Capacitor   | 470p/200V       | 10%       | 0805-C-S          | Samsung             | -                        | Yes                  | Yes       |
| Css                                | 1        | Capacitor   | 47n             | 10%       | 0805-C-S          | Samsung             | -                        | Yes                  | Yes       |
| Cvddh                              | 1        | Capacitor   | 2.2u/16V        | 10%       | 0805-C-S          | Samsung             | -                        | Yes                  | Yes       |
| Cvddl                              | 1        | Capacitor   | 470n            | 10%       | 0805-C-S          | Samsung             | -                        | Yes                  | Yes       |
| Dbr1, Dbr2, Dbr3, Dbr4, Dbr5, Dbr6 | 6        | Diode Schottky  | MBR51100T3G     | -         | 403A-03           | ON Semiconductor    | MBR51100T3G              | No                   | Yes       |
| Dbw, DGate                         | 2        | Diode   | BA516HT1G       | -         | SOD323            | ON Semiconductor    | BAS16HT1G                | No                   | Yes       |
| Dsec                               | 1        | Diode Schottky  | 12CWQ06FNPBF    | -         | DPAK              | VISHAY FORMERLY IRF | 12CWQ06FNPBF             | No                   | Yes       |
| Dsn, Dsn1                          | 2        | Diode   | MURS120T3G      | -         | 403A-03           | ON Semiconductor    | MURS120T3G               | No                   | Yes       |
| J1, J4                             | 2        | 8 Position 8 Contact (8P8C) modular jack communications connector | RJ45            | -         | RJ45-MLX-85505    | Molex               | 85505-5113               | Yes                  | Yes       |
| L1                                 | 1        | Secondary Filter  | 10uH/3A         | -         | 10x12             | -                   | -                        | No                   | Yes       |
| Led                                | 1        | LED   | KP-2012SGC      | -         | 0805-D-S          | Kingbright          | KP-2012SGC               | Yes                  | Yes       |
| Q1                                 | 1        | MOSFET N-CHANNEL  | SI7450DP-T1-GE3 | -         | SOPP8             | VISHAY SILICONIX    | SI7450DP-T1-GE3          | No                   | Yes       |
| Q2, Q3                             | 2        | MOSFET P-Channel  | SI7113DN        | -         | POWERPACK 1212-8  | -                   | SI7113DN                 | No                   | Yes       |
| Q4                                 | 1        | MOSFET N-CHANNEL  | FDS3992         | -         | SO-8              | Fairchild           | FDS3992                  | No                   | Yes       |
| Qgate                              | 1        | Transistor PNP  | BFT92           | -         | SOT23             | NXP                 | BFT92                    | Yes                  | Yes       |
| Rbias1, Rsl                        | 2        | Resistor  | 5.1K            | 5%        | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rbias2                             | 1        | Resistor  | 20K             | 5%        | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rbr1, Rbr2, Rbr3, Rbr4, Rsc        | 5        | Resistor  | 150K            | 5%        | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rbw, Rsn2                          | 2        | Resistor  | 75              | 5%        | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rclass                             | 1        | Resistor  | 22              | 5%        | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rcs                                | 1        | Resistor  | 0R1/2W          | 1%        | 2512-S            | PHYCOMP             | 232276430107             | Yes                  | Yes       |
| Rdet1                              | 1        | Resistor  | 24.9K/0.1%      | 0.1%      | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rdet1'                             | 1        | Resistor  | 470K            | 5%        | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rdet2                              | 1        | Resistor  | 845/0.1%        | 0.1%      | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rfb1                               | 1        | Resistor  | 15K             | 5%        | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rfb2                               | 1        | Resistor  | 3.9K            | 5%        | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rfb3                               | 1        | Resistor  | 820             | 5%        | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rgate                              | 1        | Resistor  | 10              | 5%        | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rlim1                              | 1        | Resistor  | 44.2K           | 5%        | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rinrush                            | 1        | Resistor  | 120K            | 5%        | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rled                               | 1        | Resistor  | 1K              | 5%        | 0805-R-S          | Uni ohm             | -                        | Yes                  | Yes       |
| Rsn                                | 1        | Resistor  | NC              | -         | 2512-S            | -                   | -                        | Yes                  | Yes       |
| Rsn1                               | 1        | Resistor  | 330/2W          | 5%        | 2512-S            | VISHAY DALE         | PWC2512-330RJI           | Yes                  | Yes       |
| T1, T2                             | 2        | Transformer POE+, Midcom Inc.                                     | WE-749012011    | -         | 749012011         | Wurth Elektronik    | 749012011                | No                   | Yes       |
| T3                                 | 1        | PoE Plus Transformer  | SM-00112        | -         | NUFLUX            | NuFlux              | SM-00112                 | No                   | Yes       |
| U1                                 | 1        | Power over Ethernet controller                                    | NCP1081         | -         | TSSOPE20          | ON Semiconductor    | NCP1081                  | No                   | Yes       |
| U2                                 | 1        | HIGH ISOLATION VOLTAGE SSOP PHOTOCOUPLER                          | PS2801-1-F3-A   | -         | SSOP4             | CEL - NEC           | PS2801-1-F3-A            | No                   | Yes       |
| U3                                 | 1        | Programmable Shunt Voltage Reference                              | TL432BIDBZTG4   | -         | SOT23             | TI                  | TL432BIDBZTG4            | No                   | Yes       |
| Zbr1, Zbr2, Zbr3, Zbr4             | 4        | Diode Zener 16V   | MMSZ16T1G       | -         | SOD123            | ON Semiconductor    | MMSZ16T1G                | No                   | Yes       |
| Zline                              | 1        | Diode TVS 58V   | 1SMA58AT3G      | -         | SMA               | ON Semiconductor    | 1SMA58AT3G               | No                   | Yes       |
| Ztvs                               | 1        | Diode TVS 100V  | 1SMB100AT3G     | -         | 403A-03           | ON Semiconductor    | 1SMB100AT3G              | No                   | Yes       |