



## Bill of Materials for the NCP51810GAN1GEVB Evaluation Board

| Designator | Quantity | Description                        | Value | Tolerance | Footprint   | Manufacturer     | Manufacturer Part Number | Substitution Allowed | Lead Free |
|------------|----------|------------------------------------|-------|-----------|-------------|------------------|--------------------------|----------------------|-----------|
| C1         | 1        | CAP, SMD, CERAMIC, 50V, NPO        | 10pF  |           | 402         | Yageo            | CC0402JRNPO9BN100        | Yes                  | Yes       |
| C2         | 1        | CAP, SMD, CERAMIC, 25V, X7R        | 1uF   |           | 603         | Samsung          | CL10B105KA8NNNC          | Yes                  | Yes       |
| C4         | 1        | CAP, SMD, CERAMIC, 25V, X7R        | 100nF |           | 603         | TDK              | CGA3E2X7R1E104K080AA     | Yes                  | Yes       |
| C5         | 1        | CAP, SMD, CERAMIC, 25V, X5R        | 1uF   |           | 402         | TDK              | CGB2A1X5R1E105K033BC     | Yes                  | Yes       |
| C8,C6,C9   | 3        | CAP, SMD, CERAMIC, 25V, X7R        | 0.1uF |           | 402         | Yageo            | CC0402KRX7R8BB104        | Yes                  | Yes       |
| C3,C7      | 2        | CAP, SMD, CERAMIC, 630V, X7R       | 0.1uF |           | 1812        | TDK              | C4532X7R2J104K230KA      | Yes                  | Yes       |
| D1         | 1        | DIODE FAST REC 1A 600V             |       |           | SMA         | ON Semiconductor | ES1J                     | No                   | Yes       |
| J1         | 1        | Connector, Header, 100Mil spacing  |       |           | Thru-Hole   | Würth            | 61300611121              | Yes                  | Yes       |
| J2-4       | 3        |                                    | DNI   |           |             |                  |                          | Yes                  | Yes       |
| J5,J6      | 2        | Testpin, Gold, 40mil,              |       |           | Thru-Hole   | Keystone         | 1352-1                   | Yes                  | Yes       |
| Q1-2       | 2        | GaN FET, 650V, E-mode, 30A, 50mOhm |       |           | 7.1x8.5mm   | GaN Systems      | GS66508B                 | Yes                  | Yes       |
| R3         | 1        | RES, SMD, 1/16W                    | 2     |           | 402         | Samsung          | RC1005F2R0CS             | Yes                  | Yes       |
| R4         | 1        | RES, SMD, 1/10W                    | 60.4k |           | 603         | Yageo            | RC0603FR-0760K4L         | Yes                  | Yes       |
| R10        | 1        | RES, SMD, 1/10W                    | 0     |           | 603         | Yageo            | RC0603JR-070RL           | Yes                  | Yes       |
| R1         | 1        | RES, SMD, 1/16W                    | 1k    |           | 402         | Yageo            | RC0402FR-071KL           | Yes                  | Yes       |
| R2,R5      | 2        | RES, SMD, 1/16W                    | 10k   |           | 402         | Yageo            | RC0402FR-0710KL          | Yes                  | Yes       |
| R6,R8      | 2        | RES, SMD, 1/10W                    | 10    |           | 603         | Yageo            | RC0603FR-0710RL          | Yes                  | Yes       |
| R7,R9      | 2        | RES, SMD, 1/10W                    | 2     |           | 603         | Yageo            | RC0603FR-072RL           | Yes                  | Yes       |
| U1         | 1        | High Speed Half Bridge GaN Driver  |       |           | MLP 4 x4-15 | ON Semiconductor | NCP51820                 | No                   | Yes       |

