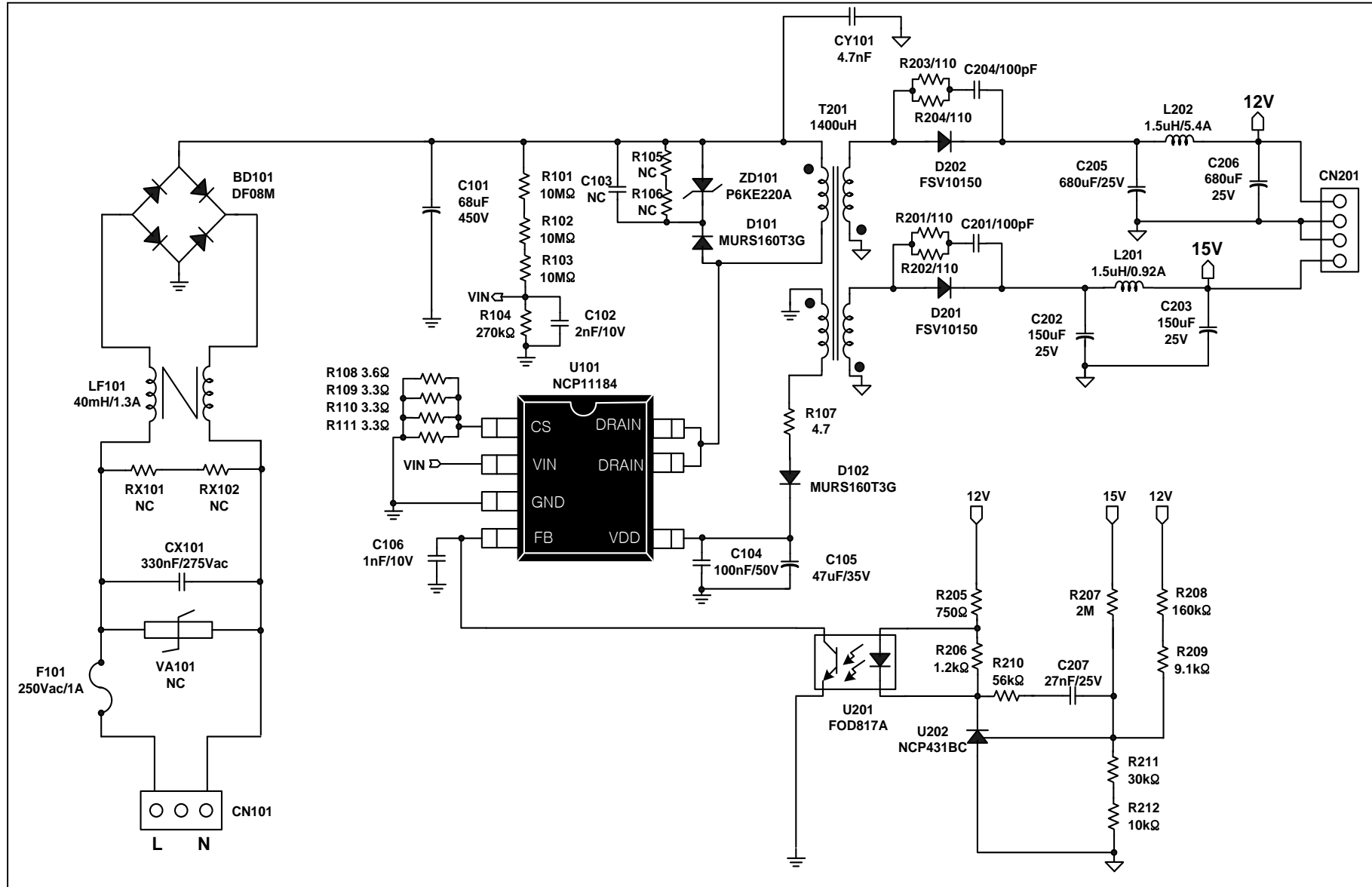


# Bill of Material for the NCP11184A65P25WGEVB

| Parts               | Qty | Description                        | Value             | Tolerance | Footprint             | Manufacturer     | Manufacturer Part Number |
|---------------------|-----|------------------------------------|-------------------|-----------|-----------------------|------------------|--------------------------|
| C101                | 1   | Electrolytic Capacitor             | 68uF/450V         |           | 18x25mm               | SAMYOUNG         | NFA                      |
| C102                | 1   | MLCC X7R capacitor                 | 2nF/10V           | ±5%       | 0805                  | Murata           |                          |
| C104                | 1   | MLCC X7R capacitor                 | 100nF/50V         | ±5%       | 0805                  | Murata           |                          |
| C105                | 1   | Electrolytic Capacitor             | 47uF/35V          |           | 5x11mm                | SAMYOUNG         | NXH                      |
| C106                | 1   | MLCC X7R capacitor                 | 1nF/10V           | ±5%       | 0805                  | Murata           |                          |
| C201,C204           | 1   | MLCC X7R capacitor                 | 100pF/630V        | ±5%       | 1206                  | Yageo            | CC1206JKNPOZBN101        |
| C202,C203           | 2   | Electrolytic Capacitor             | 150uF/25V         |           | 6.3x11mm              | SAMYOUNG         | NXH                      |
| C205,C206           | 2   | Electrolytic Capacitor             | 680uF/25V         |           | 10x16 mm              | SAMYOUNG         | NXH                      |
| C207                | 1   | MLCC X7R capacitor                 | 27nF/25V          | ±5%       | 0603                  | Murata           |                          |
| CX101               | 1   | X2 Capacitor                       | 0.33uF/275V       | ±10%      | 8.5x13.5x18mm         | PILKOR           | PCX2 337                 |
| CY101               | 1   | Y1 Capacitor                       | 4700pF/250V       | ±20%      | CY4.5X13              | Murata           | DE6E3KJ472MB3B           |
| R101,R102,R103      | 3   | Resistor SMD                       | 10M               | ±1%       | 1206                  | Rohm             |                          |
| R104                | 1   | Resistor SMD                       | 270K              | ±1%       | 0805                  | Rohm             |                          |
| R107                | 1   | Resistor SMD                       | 4.7               | ±1%       | 0805                  | Rohm             |                          |
| R108                | 1   | Resistor SMD                       | 3.6               | ±1%       | 1206                  | Rohm             |                          |
| R109,R110,R111      | 3   | Resistor SMD                       | 3.3               | ±1%       | 1206                  | Rohm             |                          |
| R201,R202,R203,R204 | 4   | Resistor SMD                       | 110               | ±1%       | 1206                  | Rohm             |                          |
| R205                | 1   | Resistor SMD                       | 750               | ±1%       | 0603                  | Rohm             |                          |
| R206                | 1   | Resistor SMD                       | 1.2k              | ±1%       | 0603                  | Rohm             |                          |
| R207                | 1   | Resistor SMD                       | 2M                | ±1%       | 0603                  | Rohm             |                          |
| R208                | 1   | Resistor SMD                       | 160k              | ±1%       | 0603                  | Rohm             |                          |
| R209                | 1   | Resistor SMD                       | 9.1K              | ±1%       | 0603                  | Rohm             |                          |
| R210                | 1   | Resistor SMD                       | 56k               | ±1%       | 0603                  | Rohm             |                          |
| R211,R212           | 2   | Resistor SMD                       | 20k               | ±1%       | 0603                  | Rohm             |                          |
| D101,D102           | 2   | Super Fast Rectifier               | 1000V, 1A         |           | SMB                   | ON Semiconductor | MURS160T3G               |
| D201,D202           | 1   | Schottky Rectifier                 | 150V, 10A         |           | TO-277                | ON Semiconductor | FSV10150V                |
| ZD101               | 1   | TVS                                | 220V, 600W        |           | DO-15                 | ON Semiconductor | P6KE220A                 |
| BD101               | 1   | Bridge Rectifier                   | 600V, 1.5A        |           | SDIP 4L               | ON Semiconductor | DF06S                    |
| LF101               | 1   | Common-mode Choke                  | 40mH/1.3A         |           | 21*10mm               | TNC              | CV613400SH               |
| L201                | 1   | Radial Lead Inductor               | 1.5uH/0.92A       | ±20%      | 5x6.5mm, 2.0mm pitch  | BOURNS           | RLB0608-1R5ML            |
| L202                | 1   | Radial Lead Inductor               | 1.5uH/5.4A        | ±20%      | 8.7x10mm, 5.0mm pitch | BOURNS           | RLB0912-1R5ML            |
| T201                | 1   | Transformer                        | 1.4mH             | ±10%      | EE25, 10Pin bobbin    | TDK              | EE25                     |
| F101                | 1   | Radial Lead Fuse                   | 250Vac, 1A        |           | SS-5                  | Little fuse      | 392 1100 0000            |
| U101                | 1   | PWM with integrated Power switcher | NCP11184          |           | 7DIP                  | ON Semiconductor | NCP11184                 |
| U201                | 1   | Opto coupler                       | CTR=130-260%      |           | DIP 4-pin             | ON Semiconductor | FOD817A                  |
| U202                | 1   | Shunt Regulator                    | Adjustable, 2.5 V | 1%        | SOT-23F 3L            | ON Semiconductor | NCP431BCSNT1G            |
| CN101               | 1   | Connector                          | 3Pin              |           | pitch 3.96mm          | MOLEX            | 5273-03A                 |
| CN201               | 1   | Connector                          | 4Pin              |           | pitch 3.96mm          | MOLEX            | 5273-04A                 |
| JP1                 | 1   | Jumper wire                        | short             |           | 13.5mm                |                  |                          |
| PCB                 | 1   | PCB                                |                   |           |                       |                  |                          |

# Schematic for the NCP11184A65P25WGEVB Evaluation Board



# Bill of Material for the NCP11185A100P35WGEVB

| Parts            | Qty | Description                        | Value             | Tolerance | Footprint                | Manufacturer     | Manufacturer Part Number |
|------------------|-----|------------------------------------|-------------------|-----------|--------------------------|------------------|--------------------------|
| C101             | 1   | Electrolytic Capacitor             | 100 uF/450 V      |           | 18 x 31.5 mm             | SAMYOUNG         | KMF                      |
| C102             | 1   | MLCC X7R capacitor                 | 2 nF/10 V         | ±5%       | 805                      | Murata           |                          |
| C104             | 1   | MLCC X7R capacitor                 | 100 nF/50 V       | ±5%       | 805                      | Murata           |                          |
| C105, C203, C206 | 3   | Electrolytic Capacitor             | 47 uF/35 V        |           | 5 x 11mm                 | SAMYOUNG         | NXH                      |
| C106             | 1   | MLCC X7R capacitor                 | 1 nF/10 V         | ±5%       | 805                      | Murata           |                          |
| C201             | 1   | MLCC X7R capacitor                 | 100 pF/630 V      | ±5%       | 1206                     | Yageo            | CC1206JKNPOZBN101        |
| C202             | 1   | Electrolytic Capacitor             | 330 uF/25 V       |           | 8 x 12.5 mm              | SAMYOUNG         | NXH                      |
| C205             | 1   | Electrolytic Capacitor             | 2200 uF/16 V      |           | 12.5 x 20 mm             | SAMYOUNG         | NXH                      |
| C207             | 1   | MLCC X7R capacitor                 | 33 nF/25 V        | ±5%       | 603                      | Murata           |                          |
| CX101            | 1   | X2 Capacitor                       | 0.68 uF/275 V     | ±10%      | 11 x 18.5 x 18 mm        | PILKOR           | PCX2 337                 |
| CX102            | 1   | X2 Capacitor                       | 0.15 uF/275 V     | ±10%      | 6 x 12 x 18 mm           | PILKOR           | PCX2 337                 |
| CY101            | 1   | Y1 Capacitor                       | 4700 pF/250 V     | ±20%      | CY4.5X13                 | Murata           | DE6E3KJ472MB3B           |
| R101, R102, R103 | 3   | Resistor SMD                       | 10 MΩ             | ±1%       | 1206                     | Rohm             |                          |
| R104             | 1   | Resistor SMD                       | 270 kΩ            | ±1%       | 0805                     | Rohm             |                          |
| R107             | 1   | Resistor SMD                       | 0 Ω               | ±1%       | 1206                     | Rohm             |                          |
| R108, R109       | 2   | Resistor SMD                       | 2.4 Ω             | ±1%       | 1206                     | Rohm             |                          |
| R110, R111       | 2   | Resistor SMD                       | 3.0 Ω             | ±1%       | 1206                     | Rohm             |                          |
| R201, R202       | 2   | Resistor SMD                       | 130 Ω             | ±1%       | 1206                     | Rohm             |                          |
| R205             | 1   | Resistor SMD                       | 750 Ω             | ±1%       | 0603                     | Rohm             |                          |
| R206             | 1   | Resistor SMD                       | 1.2 kΩ            | ±1%       | 0603                     | Rohm             |                          |
| R207             | 1   | Resistor SMD                       | 2 MΩ              | ±1%       | 0603                     | Rohm             |                          |
| R208             | 1   | Resistor SMD                       | 160 kΩ            | ±1%       | 0603                     | Rohm             |                          |
| R209             | 1   | Resistor SMD                       | 9.1 kΩ            | ±1%       | 0603                     | Rohm             |                          |
| R210             | 1   | Resistor SMD                       | 56 kΩ             | ±1%       | 0603                     | Rohm             |                          |
| R211, R212       | 2   | Resistor SMD                       | 20 kΩ             | ±1%       | 0603                     | Rohm             |                          |
| D101, D102       | 2   | Super Fast Rectifier               | 1000V, 1 A        |           | SMB                      | ON Semiconductor | MURS160T3G               |
| D201             | 1   | Schottky Rectifier                 | 150V, 10 A        |           | TO-277                   | ON Semiconductor | FSV10150V                |
| D202             | 1   | Schottky Rectifier                 | 200 V, 20 A       |           | TO-220                   | ON Semiconductor | MBR20200CT               |
| HS               | 1   | TO-220 Heatsink                    |                   |           |                          |                  |                          |
| ZD101            | 1   | TVS                                | 220V, 600 W       |           | DO-15                    | ON Semiconductor | F6KE220A                 |
| BD101            | 1   | Bridge Rectifier                   | 600 V, 6 A        |           | GBU 6J                   | ON Semiconductor | GBU6J                    |
| LF101            | 1   | Common-mode Choke                  | 40 mH/1.3 A       |           | 21 x 10 mm               | TNC              | CV613400SH               |
| L201             | 1   | Radial Lead Inductor               | 1.5 uH/0.92 A     | ±20%      | 5 x 6.5 mm, 2.0 mm pitch | BOURNS           | RLB0608-1R5ML            |
| L202             | 1   | Radial Lead Inductor               | 1.5 uH/5.4 A      | ±20%      | 8.7 x 10mm, 5.0 mm pitch | BOURNS           | RLB0912-1R5ML            |
| T201             | 1   | Transformer                        | 770uH             | ±10%      | EE25, 10Pin bobbin       | TDK              | EE25                     |
| F101             | 1   | Radial Lead Fuse                   | 250 Vac, 2 A      |           | 392 Series               | Little fuse      | 392 1200 0000            |
| U101             | 1   | PWM with integrated Power switcher | NCP11185          |           | 7DIP                     | ON Semiconductor | NCP11185A130P            |
| U201             | 1   | Opto coupler                       | CTR=80-160%       |           | DIP 4-pin                | ON Semiconductor | FOD817A                  |
| U202             | 1   | Shunt Regulator                    | Adjustable, 2.5 V | 1%        | SOT-23F 3L               | ON Semiconductor | NCP431BCSNT1G            |
| CN101            | 1   | Connector                          | 3Pin              |           | pitch 3.96mm             | MOLEX            | 5273-03A                 |
| CN201            | 1   | Connector                          | 4Pin              |           | pitch 3.96mm             | MOLEX            | 5273-04A                 |
| JP1              | 1   | Jumper wire                        | short             |           | 7 mm                     |                  |                          |
| JP2              | 1   | Jumper wire                        | short             |           | 20 mm                    |                  |                          |
| PCB              | 1   | PCB                                |                   |           |                          |                  |                          |

# Schematic for the NCP11185A100P35WGEVB Evaluation Board

