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NIS5112 Hot Plug Evaluation Board Manual

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APPLICATION NOTE

General Description

The NIS5112 Demo board is a simple circuit which biases the NIS5112 device so that its functionality can easily be observed. It contains an input capacitor of 1 μF and output capacitor of 100 μF , as well as a bleeding load resistor of 2 k Ω . It also contains a low power resistor of 56 Ω to set the current limit (I_{Limit}) as well as the capacitors for the timer and dV/dt functions. The value of the timer capacitor is 100 nF and the dV/dt is 1 μF . These two capacitors are optional and their function is explained in the NIS5112 datasheet. The demo board defaults are for a 9.0 V turn on point and a 15 V overvoltage clamp. The current limit circuit is set for 2.5 amp limit (56 Ω). Input power and loads can easily be connected via banana jacks mounted on the board.

Features

- Integrated Power FET
- Power FET Thermally Protected
- No External Current Shunt Required
- Enable/Timer Pin
- Adjustable Slew Rate for Output Voltage
- Internal Charge Pump
- 30 m Ω Typical
- 9 to 15 Volt Input Range
- Overvoltage Clamp

Current Limit

The current limit circuit has a 56 Ω resistor installed which will allow a maximum current of 2.5 amps before invoking the current limit circuit. To change the current limit circuit, select the corresponding resistance value for the desired peak current setting from the chart in Figure 2.

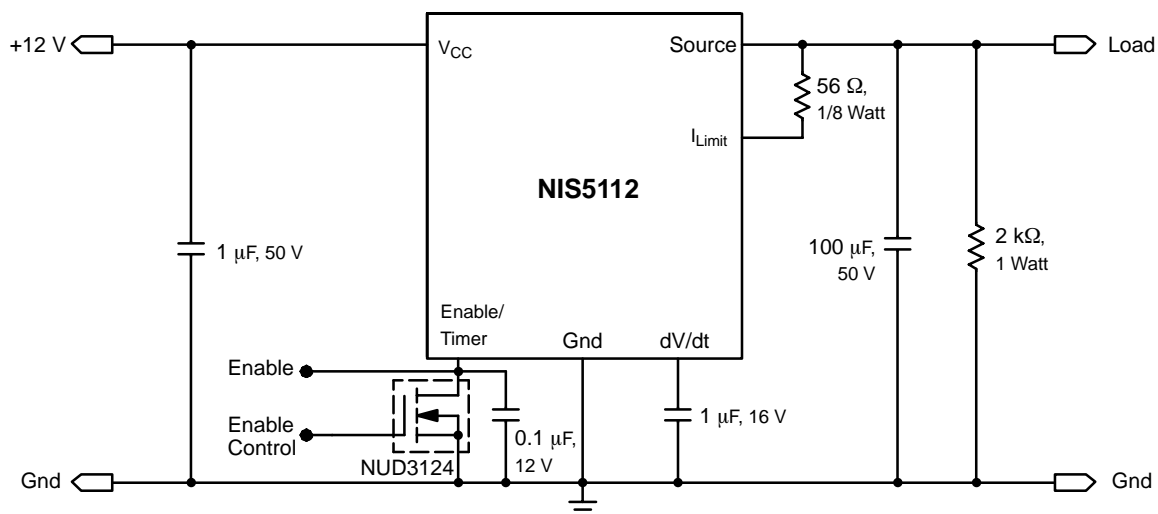


Figure 1. Evaluation Board Schematic

AND8259/D

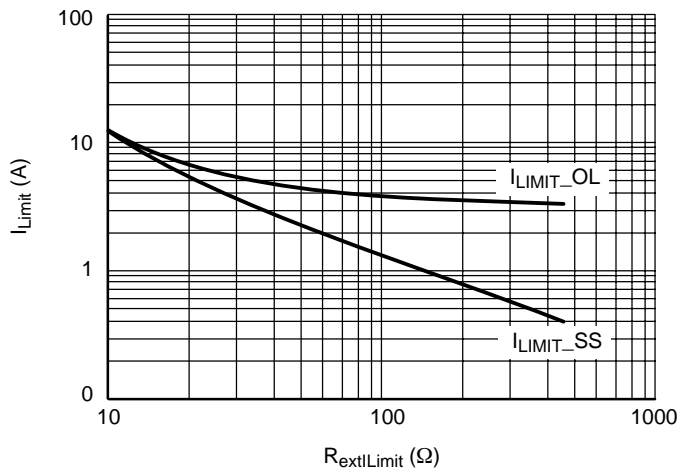



Figure 2. Current Limit Adjustment

NOTE: For additional information about device's operation and parameters, please refer to the device's datasheet (NIS5112) at ON Semi's web site.

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