

ISL62882C, ISL62883C

Connection Guidelines for 1-Phase Configuration

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Introduction

The ISL62882C can be configured for either 2-phase or 1-phase operation. The ISL62883C can be configured for 3-phase, 2-phase or 1-phase operation. Per the datasheet, the configuration for 1-phase operation is defined as ISEN2 is tied to +5V. In the case of the ISL62883C, the PWM3 pin is also tied to +5V and should be for the purposes of this document. If only ISEN2 is tied to +5V and ISEN1 is left floating, there have been rare occurrences where the configuration is interpreted as a 2-phase configuration, which will cause a system shutdown.

Application Recommendation

In order to prevent the possibility of the controller interpreting the configuration incorrectly, we recommend both ISEN1 and ISEN2 be tied to +5V. This will avoid any chance of a misinterpretation of the configuration programmed. The controller will always interpret the 1-phase configuration correctly and this will avoid any potential shutdown issues. The feasibility of this application recommendation has been validated and proved by simulations and bench tests.

A simplified application circuit using the ISL62882C is shown in Figure 1, in a 1-phase configuration following these guidelines.

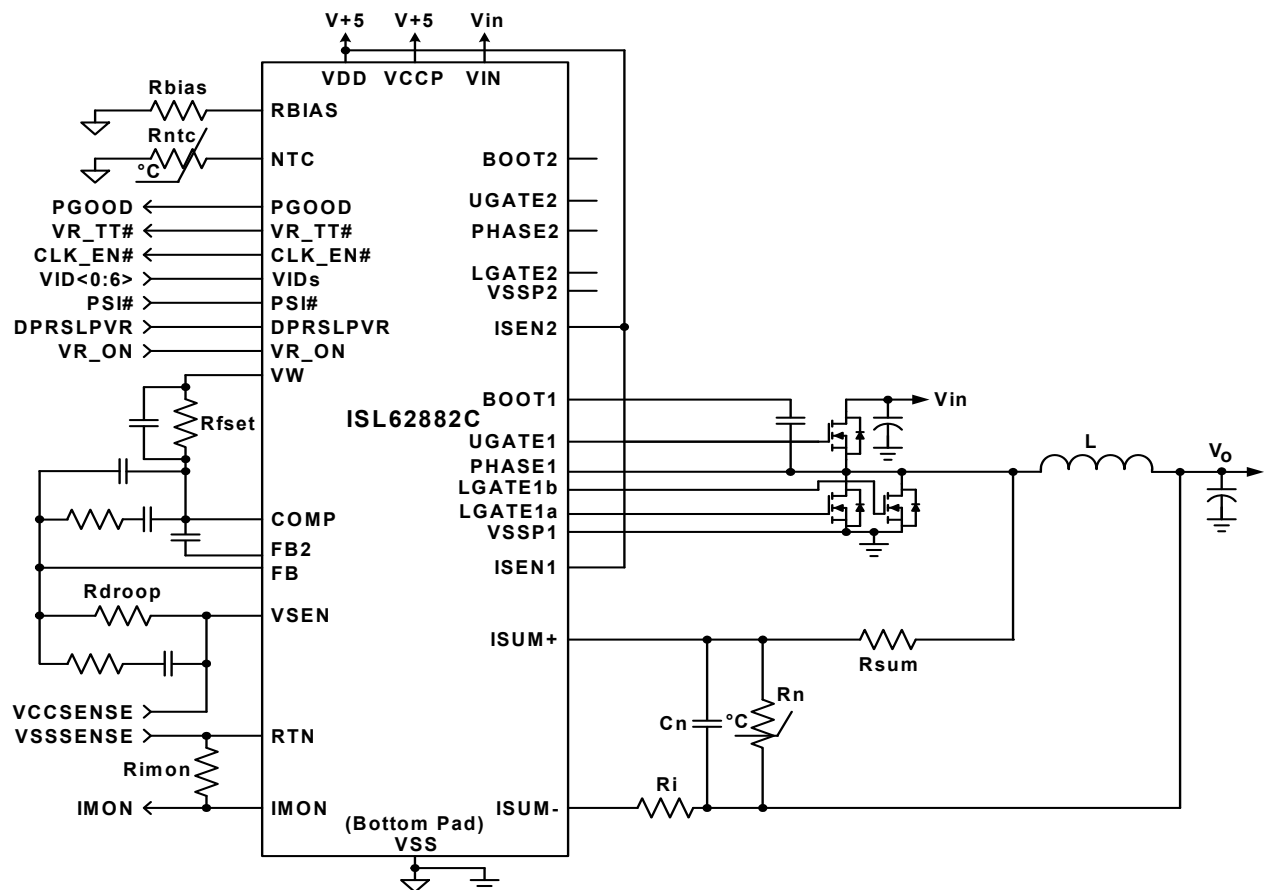


FIGURE 1. SIMPLIFIED 1-PHASE APPLICATION CIRCUIT

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