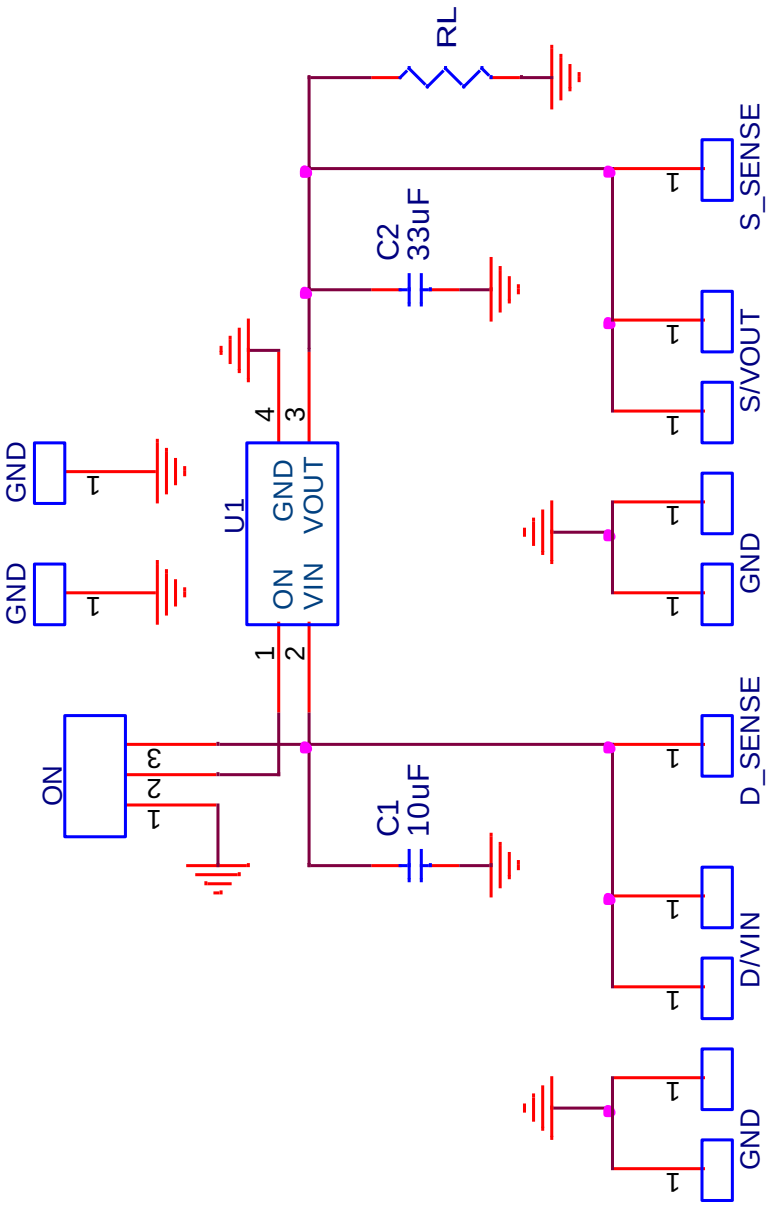

Figure 4. SLG59M1736C Connection Circuit

SILEGO

GreenFET3
SLG59M1736C
Layout Guide

Content

Description

The SLG59M1736C is a 33 mΩ, ~ 2.2 A single-channel load switch that is able to switch 2.5 V to 5.5 V power rails. The product is packaged in an ultra-small 0.8 x 0.8 mm package.

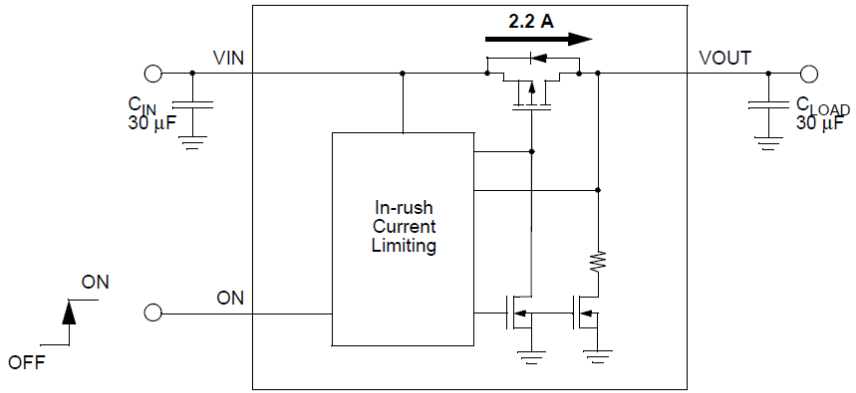

Figure 1: SLG59M1736C Block Diagram

This layout guide provides some important information about the PCB layout of SLG59M1736C applications.

SILEGO WLCSP 0.8x0.8-4L PKG

Unit: um

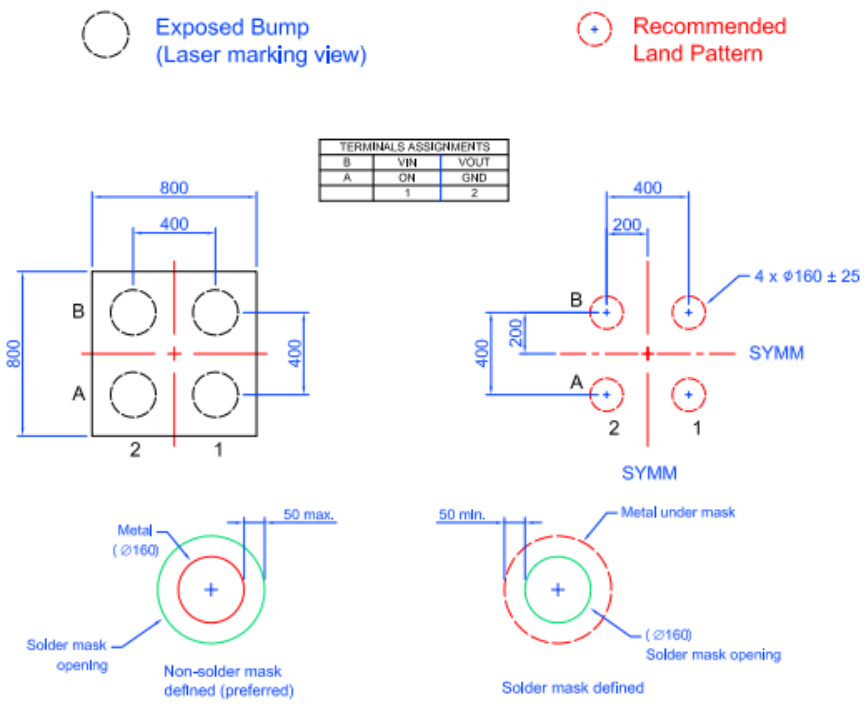

Figure 2. SLG59M1736C Package Dimensions and Recommended Land Pattern

2. Power and Ground Planes

2.1. The trace length from the control IC to the ON pin (PIN1) should be as short as possible and must avoid crossing this trace with power rails.

2.2. The D/VIN and S/VOUT pins carry significant current. Please note how the D/VIN and S/VOUT pads are placed directly on the power planes in Figure 3, which minimizes the RDS_{ON} associated with long, narrow traces. The D/VIN, S/VOUT and GND pins dissipate most of the heat generated during high-load current condition. The layout shown in Figure 3 is illustrating a proper solution for heat to transfer as efficiently as possible out of the device.

2.3. The GND pin (A2) should be connected to GND.

2.4. 2 oz. copper is recommended for higher currents.

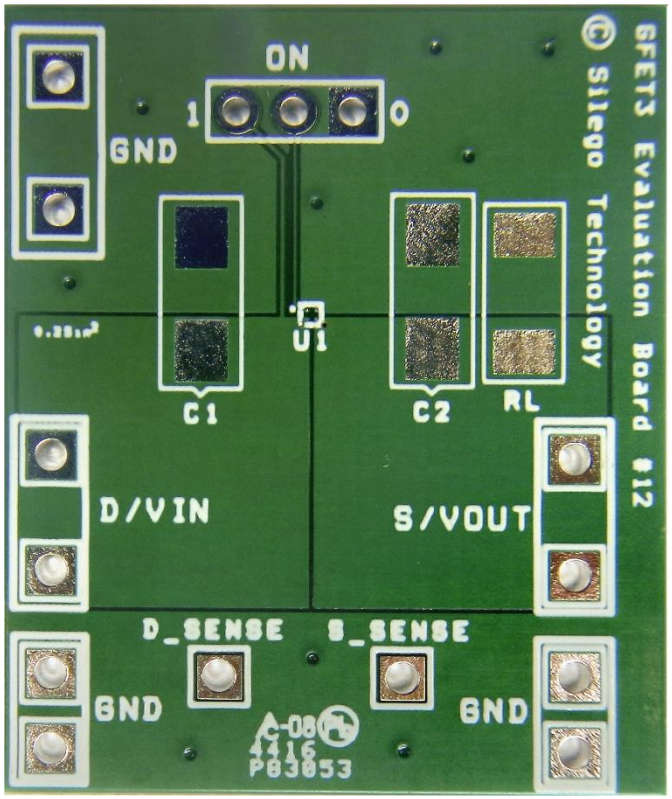

Figure 3. SLG59M1736C Evaluation Test Board

Note: Evaluation board has D_Sense and S_Sense pads. Please use them only for RDS(ON) evaluation.

3. Basic Test Setup and Connections

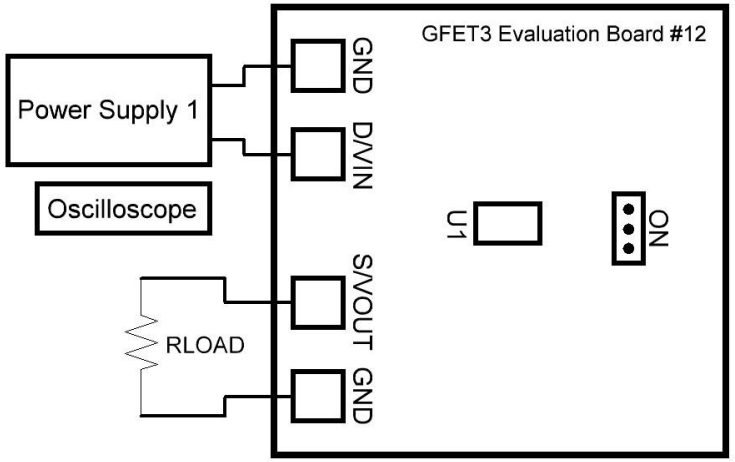

Figure 5. Typical connections for GFET3 Evaluation

3.1 EVB Configuration

1. Connect oscilloscope probes to D/VIN, S/VOUT, ON, etc.
2. Turn ON Power Supply and set desirable V_{IN} in range of 2.5 to 5.5 V.
3. Switch ON to High or Low to evaluate GFET3 operation.

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