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Description

The SLG59M1603V is 16 mΩ, ~ 4.5 A dual-channel load switch that is able to switch 1.0 to 5.5 V power rails. The product is packaged in an ultra-small 1 x 3 mm package.

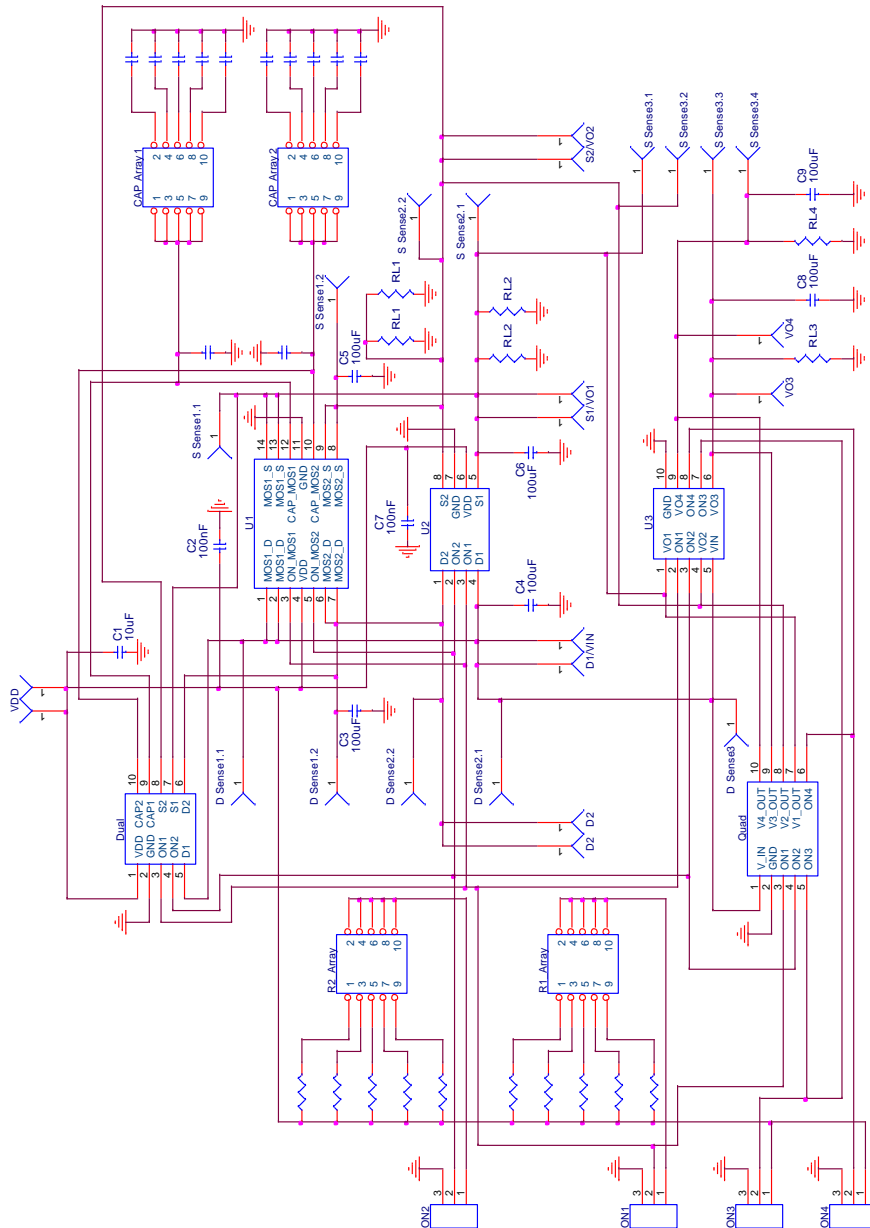


Figure 4. SLG59M1603V Connection Circuit

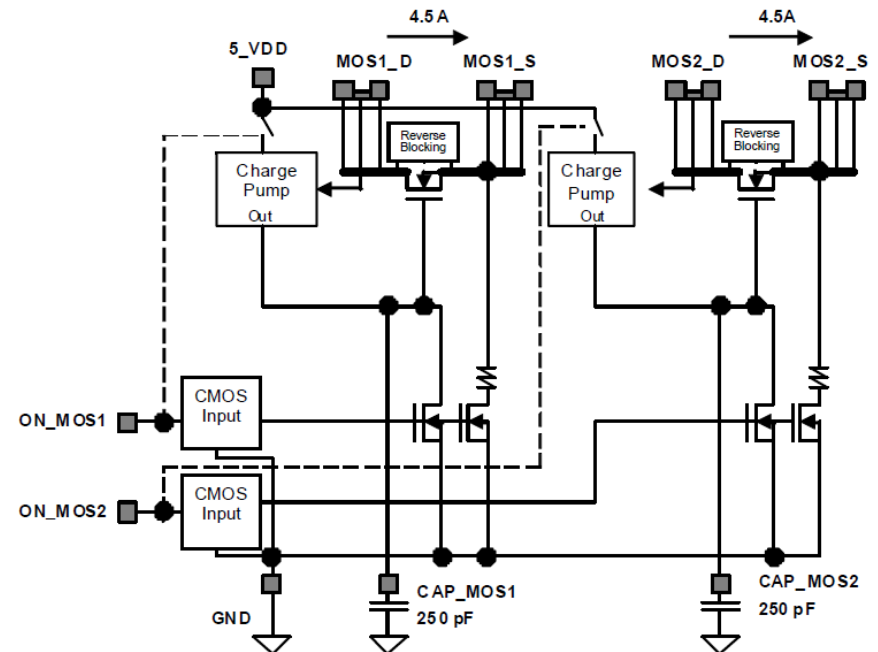


Figure 1: SLG59M1603V Block Diagram

This layout guide provides some important information about the PCB layout of SLG59M1603V applications.

SILEGO STDFN 1 x 3 - 14L PKG

Unit: um

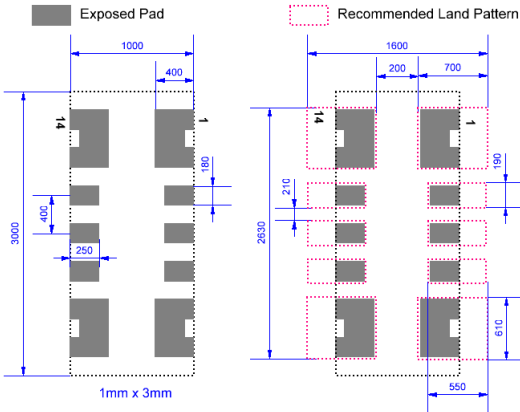


Figure 2. SLG59M1603V Package Dimensions and Recommended Land Pattern

Please solder your SLG59M1603V here

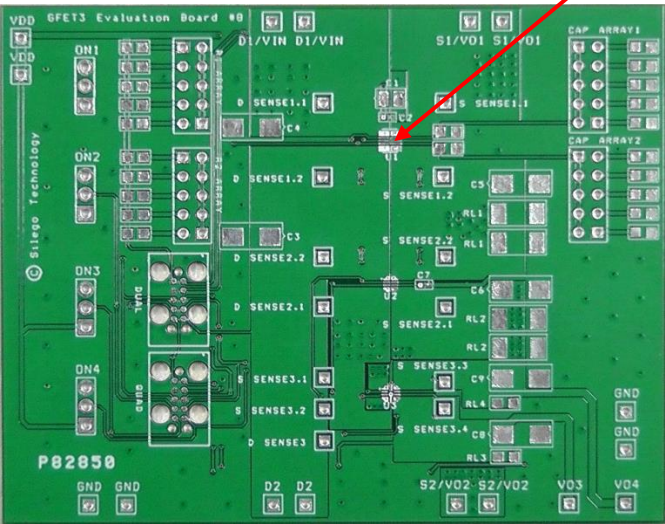


Figure 3. SLG59M1603V Evaluation Test Board

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

2. Power and Ground Planes

- 2.1. The VDD pin needs 0.1uF external capacitor to smooth pulses from the power supply. Locate these capacitor close to PIN4.
- 2.2. The trace length from the control IC to the ON pins should be as short as possible and must avoid crossing this trace with power rails.
- 2.3. The D and S pins carry significant current. Please note how the D and S pads are placed directly on the power planes in Figure 3, which minimizes the RDS(ON) associated with long, narrow traces. The D and S 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.
- 2.4. The GND pin (PIN11) should be connected to GND.
- 2.5. 2 oz. copper is recommended for higher currents.