

**Figure 4. SLG59M1618V Connection Circuit**

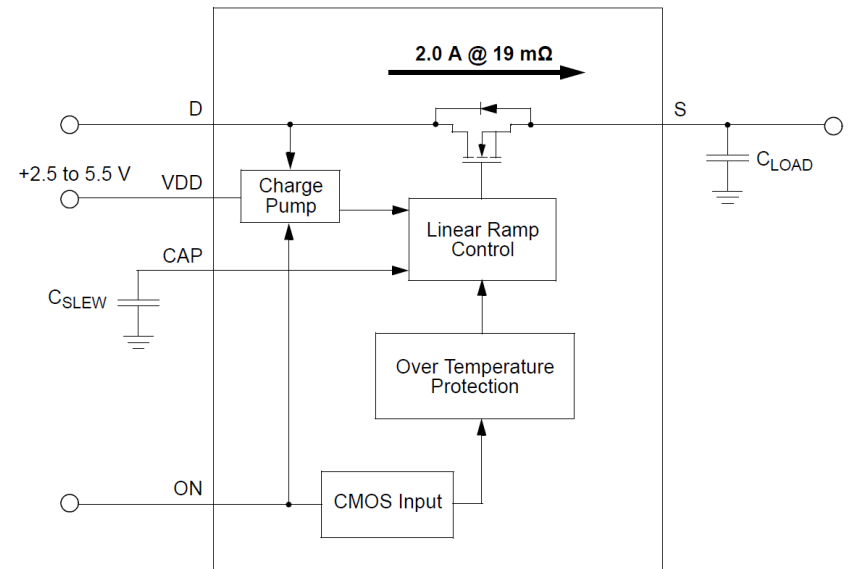


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## Description

The SLG59M1618V is a 19 mΩ, ~ 2 A single-channel load switch that is able to switch 0.85 V to 5.5 V power rails. The product is packaged in an ultra-small 1 x 1.4 mm package.

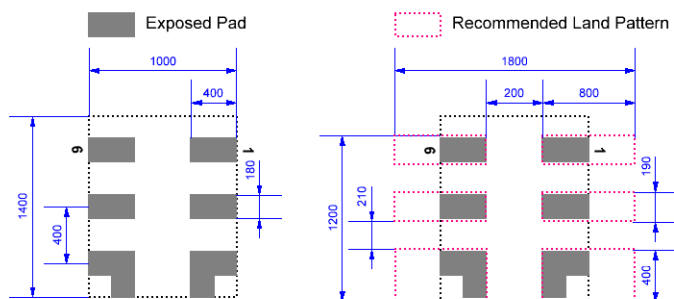


**Figure 1: SLG59M1618V Block Diagram**

This layout guide provides some important information about the PCB layout of SLG59M1618V applications.

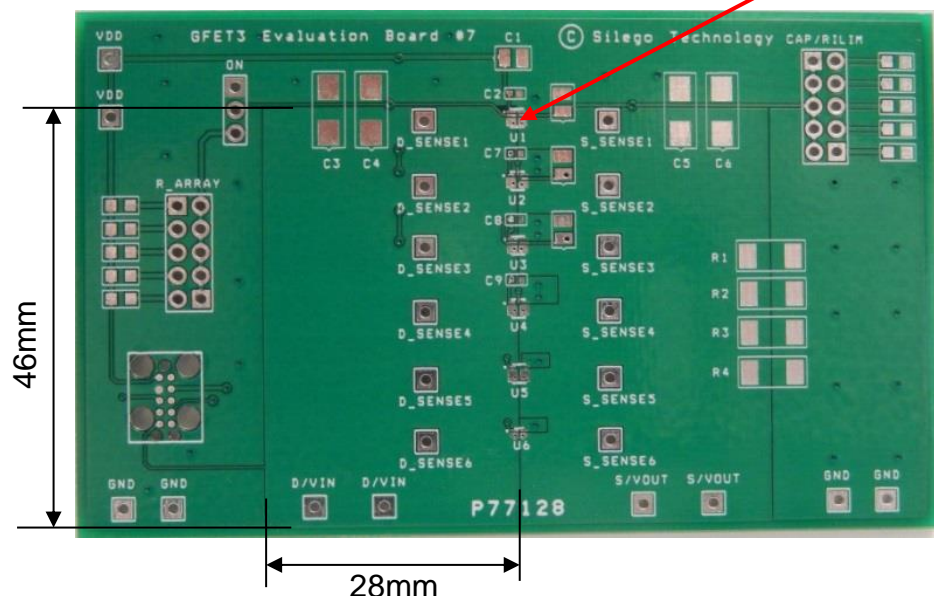
### SILEGO FC-TDFN 1.0x1.4-6L PKG

Unit: um



**Figure 2. SLG59M1618V Package Dimensions and Recommended Land Pattern**

Please solder your SLG59M1618V here



**Figure 3. SLG59M1618V 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 are 0.1uF and 10uF external capacitors to smooth pulses from the power supply. Locate these capacitors close to PIN1.
- 2.2. The trace length from the control IC to the ON pin should be as short as possible and must avoid crossing this trace with power rails.
- 2.3. 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  $R_{ds}(ON)$  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.
- 2.4. Place the power rail ramp capacitor as close as possible to the CAP pin to avoid/reduce the effect of parasitic mount capacitance.
- 2.5. The GND pin (PIN6) should be connected to GND.
- 2.6. 2 oz. copper is recommended for higher currents.