STEVAL-ISA028V1

Single phase 20 A step-down converter evaluation board based on the L6727

Data Brief

Features

- BOM optimized for 12 V input / 1.25 V output @ 20 A
- High flexibility to host wide range designs
- Customizable output voltage
- L6726A / L6727 compatibility
- Controller input voltage (V_{CC}) range from 5 V to 12 V
- Conversion input voltage (V_{IN}) up to 13.2 V
- DPAK / SO-8 / PowerSO-8 / PowerFLAT MOSFET compatibility
- Multi-footprint for input and output capacitors
- Through-hole / SMD inductor compatibility
- 4-layer PCB

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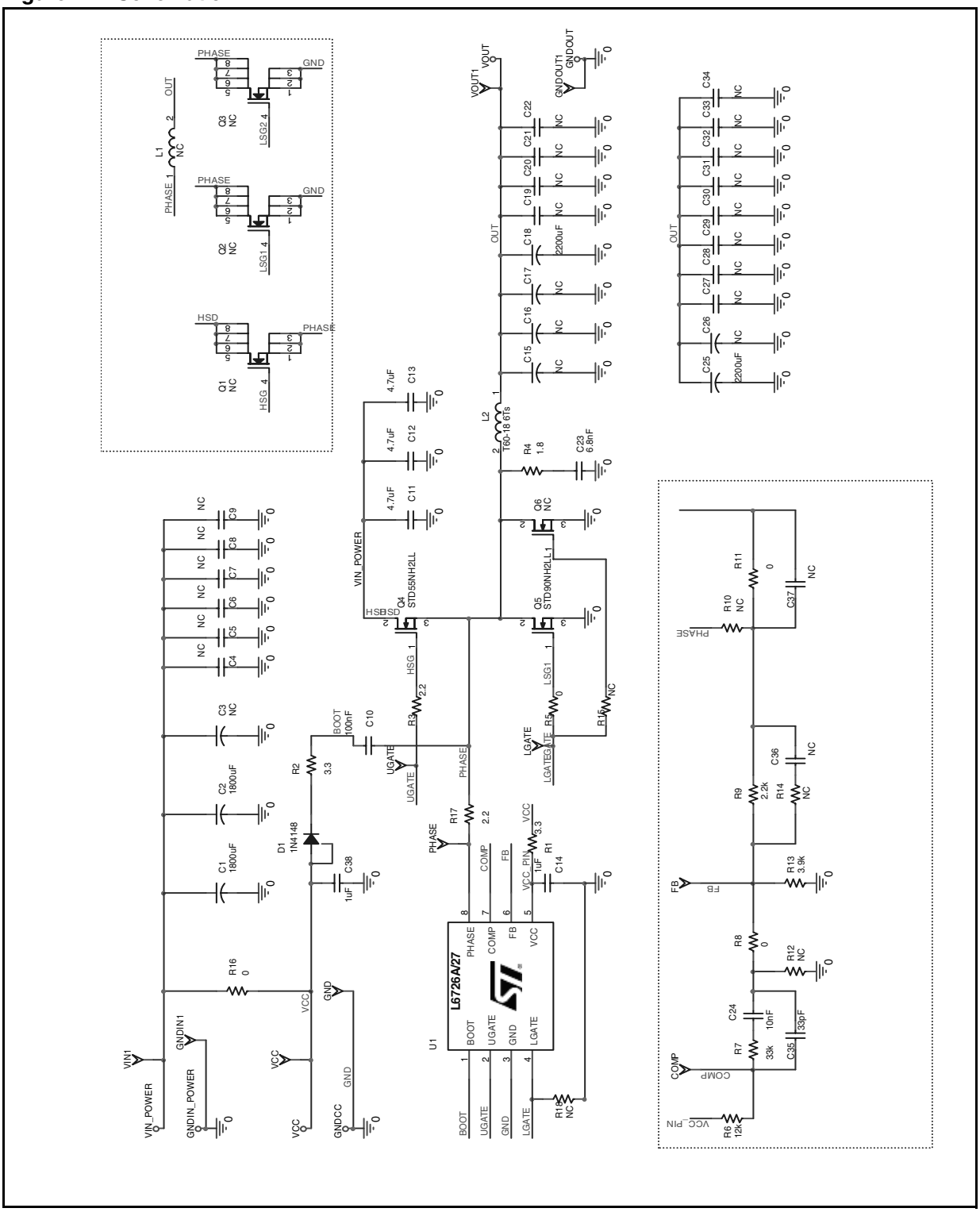
Description

This evaluation board demonstrates the key features of STMicroelectronics' L6727, a new powerful new buck controller. The L6727 makes the design of complete step-down voltage regulators simple and cost effective. It provides a full solution by integrating a 0.8 V reference, control logic and protection, and NMOS drivers in an 8-pin package. The L6727 evaluation board implements a step-down DC/DC converter in a four-layer PCB and demonstrates the operation of the device in a general-purpose application. The input voltage can range from 5 V to 12 V and the output voltage is fixed at 1.25 V. The application can deliver an output current up to 20 A. Airflow must be applied with current higher than 18 A (@V_{IN} = 5 V). The switching frequency is 300 kHz.

1 Board schematic

Figure 1. Schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
10-Jul-2007	1	Initial release
06-Dec-2007	2	Content reworked to improve readability. No content change.

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