



STEVAL-ISA067V1

Dual step-down controller with auxiliary voltages demonstration board based on the PM6681A for industrial system power

Data brief

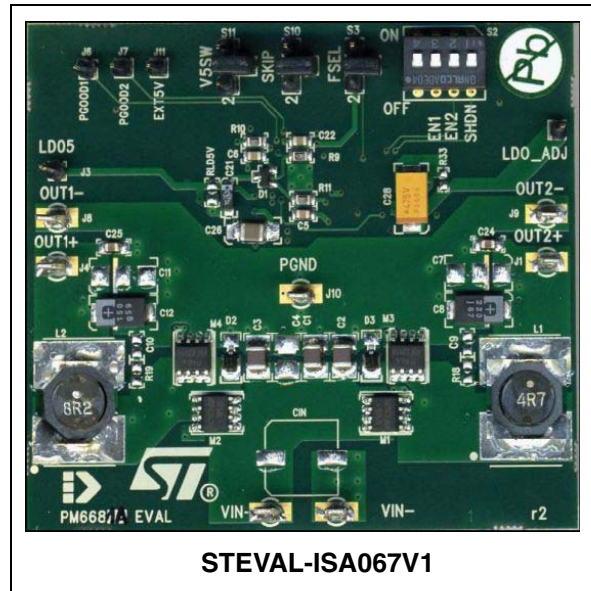
Features

- 5.5 V to 36 V input voltage range
- V_{out1} : 3.3 V, $I_{out1} > 2.5$ A (or adjustable output voltage)
- V_{out2} : 1.8 V, $I_{out2} > 2.5$ A (or adjustable output voltage)
- 0.9 - 3.3 V adjustable LDO delivers 100 mA peak current
- 5 V LDO delivers 100 mA peak current
- 1.237 V \pm 1% reference voltage available
- Loss-less current sensing using low-side MOSFET $R_{DS(on)}$
- Negative current limit
- Soft-start internally fixed at 2 ms
- Soft output discharge
- Latched UVP
- Non-latched OVP
- Selectable pulse-skipping at light loads
- Selectable minimum frequency (33 kHz) in pulse-skip mode
- 4 mW maximum quiescent power
- Independent power-good signals
- Output voltage ripple compensation
- RoHS compliant

Description

This demonstration board is based on the PM6681A, a dual step-down controller with adjustable output voltages that can be used in industrial power systems. The PM6681A demonstration board allows testing all the device's functions and provides two switching sections, with (typically) 3.3 V (OUT1) and 1.8 V (OUT2) outputs from 5.5 V to 36 V input voltage.

The typical operating switching frequency of the two available sections is 200 kHz/300 kHz,

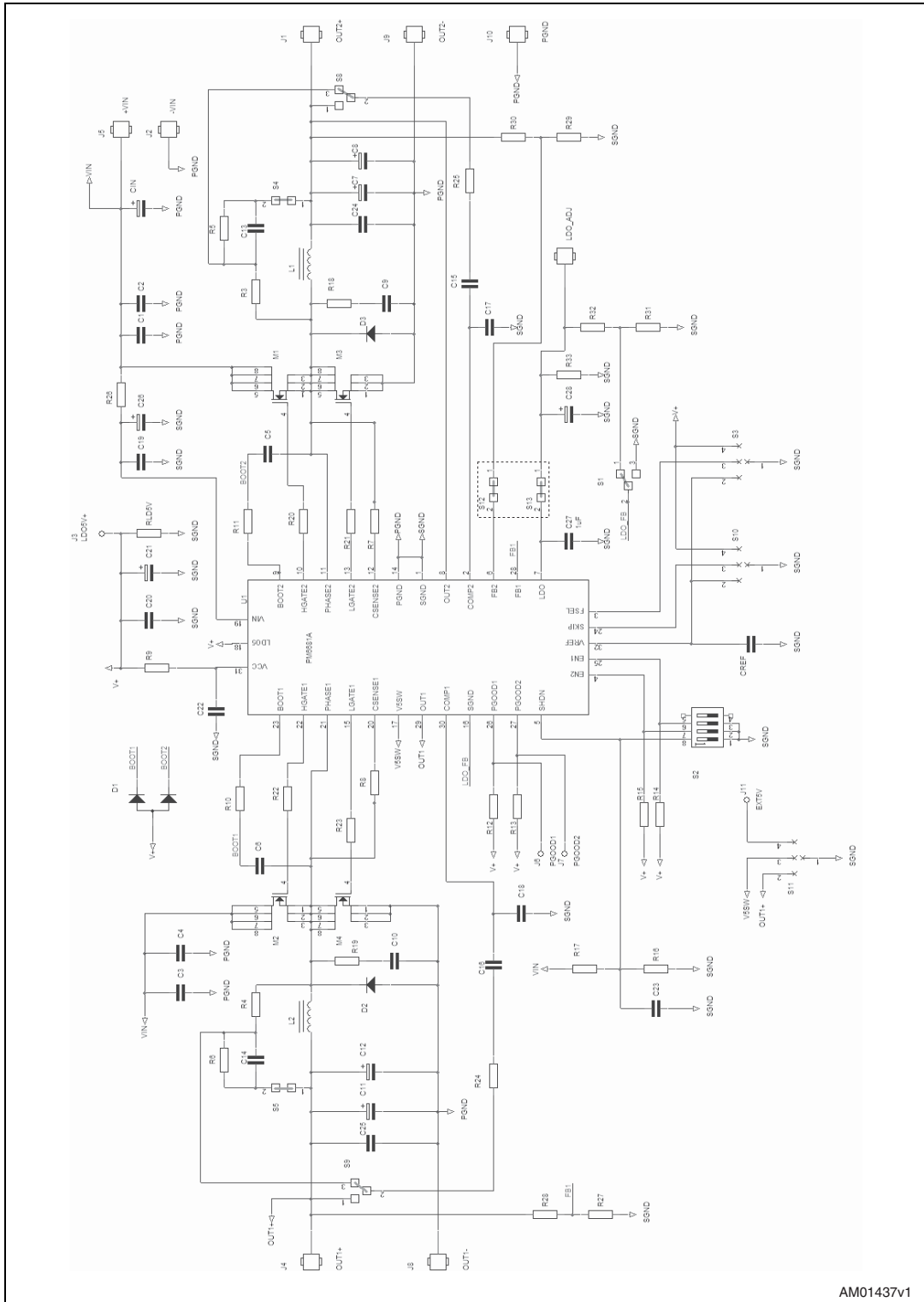


respectively. Each switching section delivers more than 2.5 A output current.

An internal linear regulator provides a fixed 5 V output voltage. Another internal linear regulator provides an adjustable output voltage (default 2.5 V). Both linear regulators can deliver up to 100 mA peak current.

1 Circuit schematic

Figure 1. Schematic diagram



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
29-Apr-2009	1	Initial release.

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