3 A step-down switching demonstration board based on the L7986 in DFN10 package

Features

- 3 A DC output current
- From 4.5 V to 38 V range input voltage
- Output voltage adjustable from 0.6 V
- 250 kHz switching frequency programmable up to 1 MHz
- Internal soft-start and enable
- Low dropout operation: 100% duty cycle
- Voltage feed-forward
- Zero load current operation
- Overcurrent and thermal protection
- RoHS compliant

Description

The STEVAL-ISA099V1 demonstration board is a step-down switching power supply based on the L7986 in DFN10 package.

The L7986 is a step-down regulator with a 3.7 A (minimum) current limited embedded power MOSFET, so it is able to deliver up to 3 A current to the load depending on the application conditions.

The input voltage can range from 4.5 V to 38 V, while the output voltage can be set starting from 0.6 V to \( V_{IN} \).

Requiring a minimum set of external components, the device includes an internal 250 kHz switching frequency oscillator that can be externally adjusted up to 1 MHz.
1 Schematic diagram

Figure 1. Schematic diagram
2 Revision history

Table 1. Document revision history

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision</th>
<th>Changes</th>
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<tbody>
<tr>
<td>27-Apr-2012</td>
<td>1</td>
<td>Initial release.</td>
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