STEVAL-ISA079V1

High efficiency monolithic synchronous step-down regulator based on the L6928D

Data brief — preliminary data

Features

- 2 V to 5.5 V battery input range
- High efficiency: up to 95%
- Extremely low quiescent current
- 1 µA max. shutdown supply current
- 800 mA max. output current
- Adjustable output voltage from 0.6 V
- Low dropout operation: up to 100% duty cycle
- ± 1% output voltage accuracy
- 1.4 MHz switching frequency externally synchronizable from 1 MHz to 2 MHz
- Short-circuit protection
- RoHS compliant

Description

The STEVAL-ISA079V1 demonstration board is based on the DC-DC monolithic regulator L6928D, specifically designed to provide extremely high efficiency.

The L6928D supply voltage can be as low as 2 V, allowing it to be used in single Li-Ion cell supplied applications.

Output voltage can be selected by an external divider down to 0.6 V.

Duty cycle can saturate to 100%, allowing low dropout operation.

The previous part number for this demonstration board was EVAL6928D.
1 Circuit schematic

Figure 1. Circuit schematic

![Circuit schematic diagram]

- **C1**: 10 µF, 6.3 V
- **R1**: 10 kΩ
- **R2**: 100 kΩ
- **R3**: 200 kΩ
- **R4**: 100 kΩ
- **L1**: 4.7 µH
- **C2**: 10 µF, 6.3 V
- **C3**: 220 pF
- **VCC**: 5 V
- **VFB**: 8 V
- **PGOOD**: 8 V
- **SYNC**: 7 V
- **RUN**: 6 V
- **COMP**: 2 V

**Vin** = 2 to 5.5 V

**Vout** = 1.8 V
2 Revision history

Table 1. Document revision history

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<thead>
<tr>
<th>Date</th>
<th>Revision</th>
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<tbody>
<tr>
<td>15-Mar-2012</td>
<td>1</td>
<td>Initial release.</td>
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