Description
The STEVAL-ISA138V1 solution evaluation board is a 90 W, wide-range mains, power-factor corrected, AC-DC adapter. Its electrical specifications are tailored to a typical hi-end portable computer power adapter.

The architecture is based on a two-stage approach: a front-end PFC pre-regulator based on the L6563H™ PFC controller and a downstream LLC resonant half bridge converter using the new L6699 resonant controller. Thanks to the chipset used, the main features of this design are very high overall efficiency, compliance with ENERGY STAR® eligibility criteria (EPA rev. 2.0 EPS), high efficiency even at light load, and compliance with the new ErP Lot 6 Tier2 requirements. No load input power consumption is very low also, well within the international regulation limits.

The controller of the LLC stage is the L6699, integrating innovative functions such as self-adjusting adaptive dead-time, anti-capacitive mode protection and proprietary "safe-start" procedure to prevent hard switching at startup.
1 Schematic diagram

Figure 1: Schematic diagram
2 Revision history

Table 1: Document revision history

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<tr>
<th>Date</th>
<th>Revision</th>
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<tr>
<td>15-Nov-2013</td>
<td>1</td>
<td>Initial release</td>
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