STEVAL-ISA148V1

19 V - 90 W adapter with PFC for laptop computers based on L6563H and L6599A

Data brief

Features

- Universal input mains range: 90 - 264 VAC - frequency 45 - 65 Hz
- Output voltage: 19 V at 4.75 A continuous operation
- Mains harmonics: ACC. to EN61000-3-2 Class-D or JEITA-MITI Class-D
- Standby mains consumption: < 0.3 W at 230 VAC
- Efficiency at nominal load: Better than 90% at full load
- EMI: In accordance with EN55022-Class-B
- Safety: In accordance with EN60950
- Dimensions: 65 x 151 mm, 25 mm component maximum height
- PCB: double side, 70 µm, FR-4, mixed PTH/SMT
- RoHS compliant

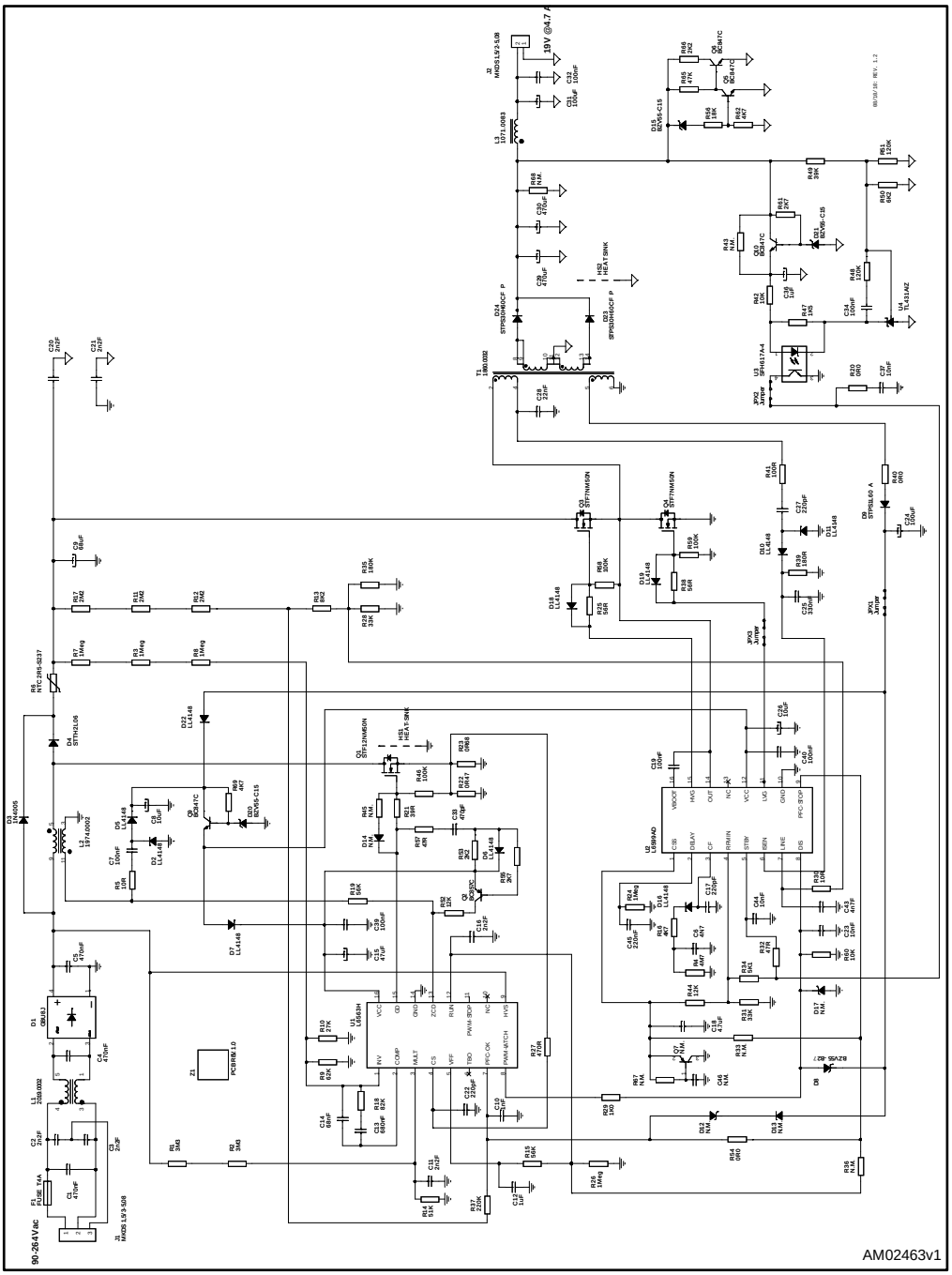
Description

The STEVAL-ISA148V1 is a 90 W, wide range mains, power factor corrected, AC-DC adapter system evaluation board. Its electrical specification is tailored on 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 L6563H TM PFC controller and a downstream LLC resonant half-bridge converter using new L6599A resonant controller. Thanks to the chipset used, the main characteristics of this design are very high efficiency compliance with ENERGY STAR® Eligibility Criteria (EPA rev. 2.0 EPS) and very low input consumption at no-load (< 0.3 W).

1 Schematic diagram

Figure 1: STEVAL-ISA148V1 circuit schematic



2 Revision history

Table 1: Document revision history

Data	Revision	Changes
10-Dec-2013	1	Initial release

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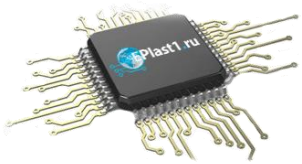

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