



STEVAL-ISC002V1

Resonant LCC 90 W notebook power adapter
based on the L6599 and STP12NM50N

Data Brief

Features

- Dimensions (L/W/H): 132 mm / 52 mm / 22 mm
- Universal AC mains range: 90 VAC to 264 VAC
- High output power: 90 W (4.74 A, 19 VDC)
- Very low output noise and ripple: less than 300 mV_{P-P}
- Very low standby power: less than 0.5 W at 264 V
- Hiccup mode: Auto recovery with SCP
- Latch mode: OVP acts while $V_{OUT} > 29$ VDC
- Efficiency > 88% at universal AC mains range

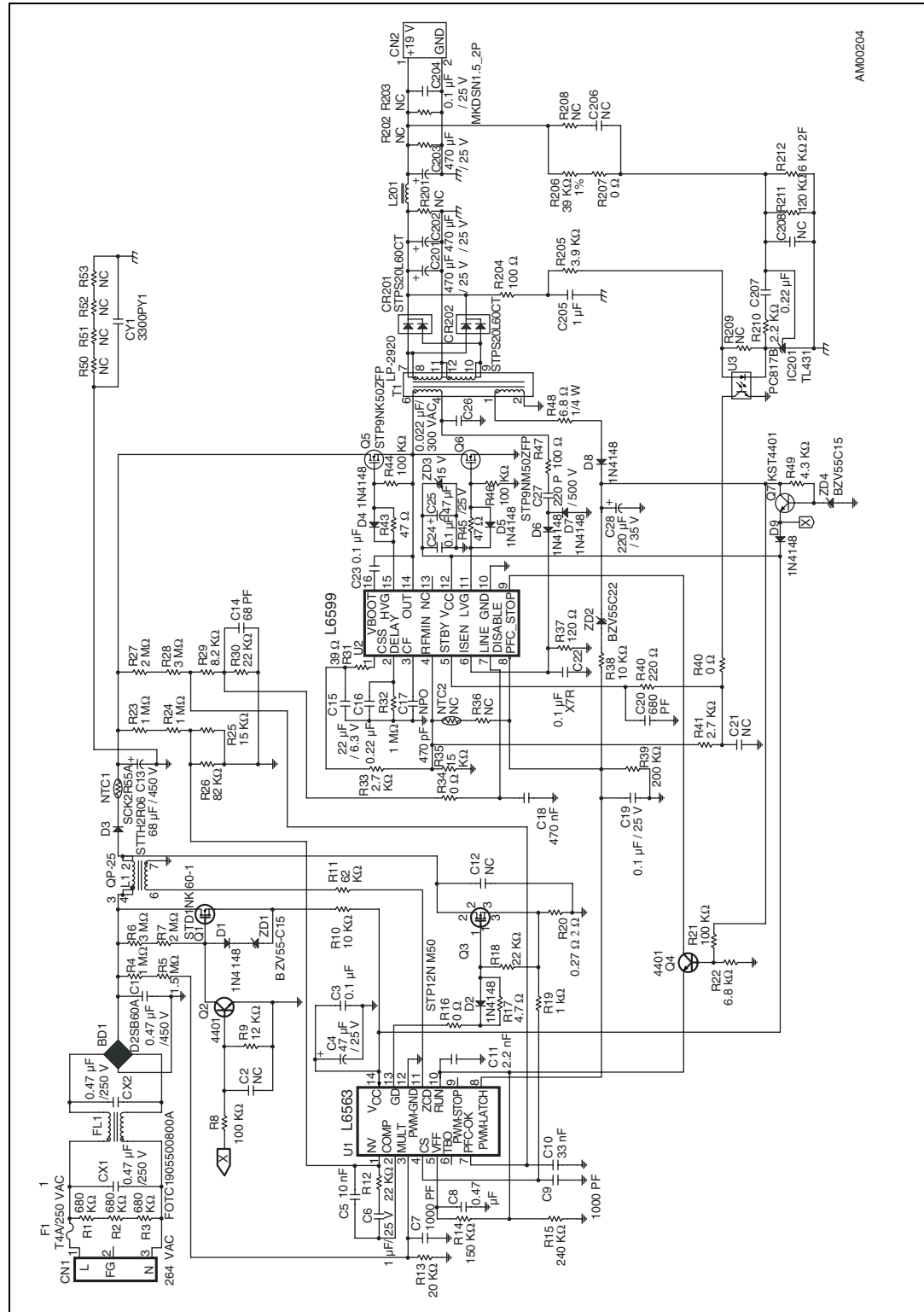


Description

This demonstration board is a 90 W wide-range mains AC-DC adapter which is power factor corrected. Its electrical specifications are suitable for typical high-end portable computer power adapters. The particular benefits of this design are the very low no-load input consumption (<0.5 W) and the very high global efficiency. The architecture is based on a two-stage approach: a front-end PFC pre-regulator based on the L6563 TM PFC controller and a downstream multi-resonant half-bridge converter that makes use of the L6599 resonant controller.

1 Schematic diagram

Figure 1. Resonant LLC 90 W notebook power adapter schematic diagram



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
11-June-2008	1	Initial release.

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