



STEVAL-ILB009V1

2 x 28 W electronic ballast with active PFC based on the
STD3N62K3 and STD845DN40 BJT devices

Data brief – production data

Features

- Input voltage range: 180 Vac to 264 Vac
- Nominal output voltage: 400 V
- Nominal output power: 60 W
- Target efficiency: ~ 90 %
- Minimum switching frequency: 35 kHz
- Expected power factor (PF): 0.99
- RoHS compliant

Description

The STEVAL-ILB009V1 demonstration board is able to drive a 2 x 28 W electronic lamp ballast with active PFC. The ballast is formed by a PFC section and a self-oscillating half bridge converter.

The circuit has been designed for a nominal input voltage of $230\text{ V}_{\text{rms}} \pm 15\%$ and 50-60 Hz.

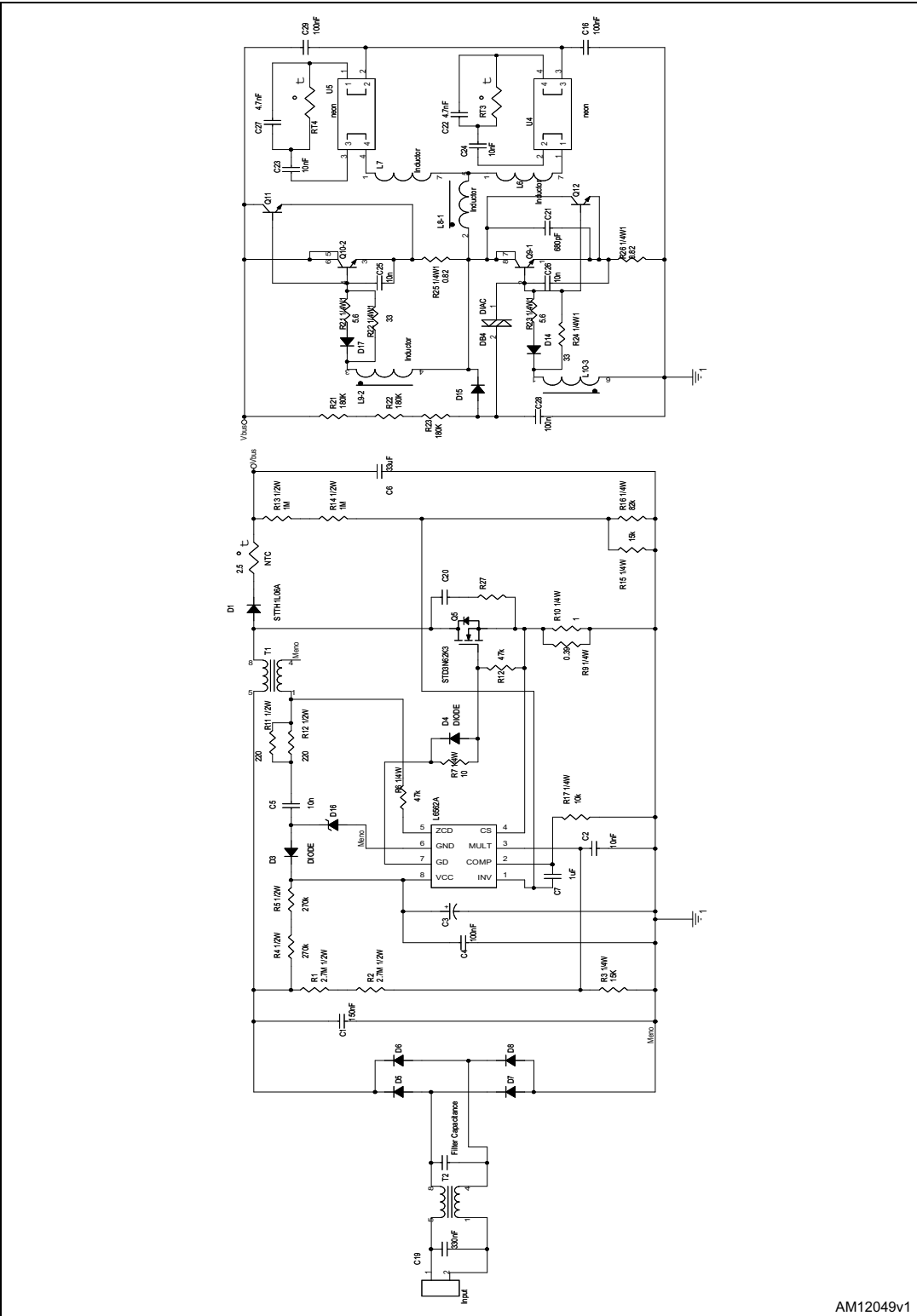
The key components are the power bipolar transistor (STD845DN40), MOSFET device (STD3N62K3) and ST power switching driver for the PFC section.

The purpose of the STEVAL-ILB009V1 is to show a simple and cheap lighting application optimized in terms of power factor (PFC), THD harmonic distortion, and electrical efficiency.



1 Circuit schematic

Figure 1. STEVAL-ILB009V1 circuit schematic



AM12049v1

2 Revision history

Table 1. Document revision history

Date	Revision	Changes
08-Mar-2012	1	Initial release.

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