



STEVAL-ISA041V1

125 W SMPS based on the STP12IE95F4 ESBT switch
with L6565 PWM controller

Features

- Input voltage range: 240 - 400 VDC
- Output voltage: 19 V - 6.6 A
- Maximum output power: 125 W
- Short-circuit protection based on auto-restart feature
- Minimum switching frequency: 55 kHz
- Converter efficiency: >85%
- Meets EN60065 safety standards

PCB type and size

- PCB grade: FR-4
- Single-side layout
- Copper thickness: 35 μm

Description

This demonstration board is a 125 W adapter using ESBT switch STP12IE95F4, the L6565 quasi-resonant PWM controller and the STSR30 smart driver IC for flyback synchronous rectification.

The main target of this design is to offer a high power, cost-effective flyback converter for notebook computer power supply with good efficiency. This is achieved by using a quasi-resonant PWM driver, synchronous rectification and constant current driving of the ESBT switch.

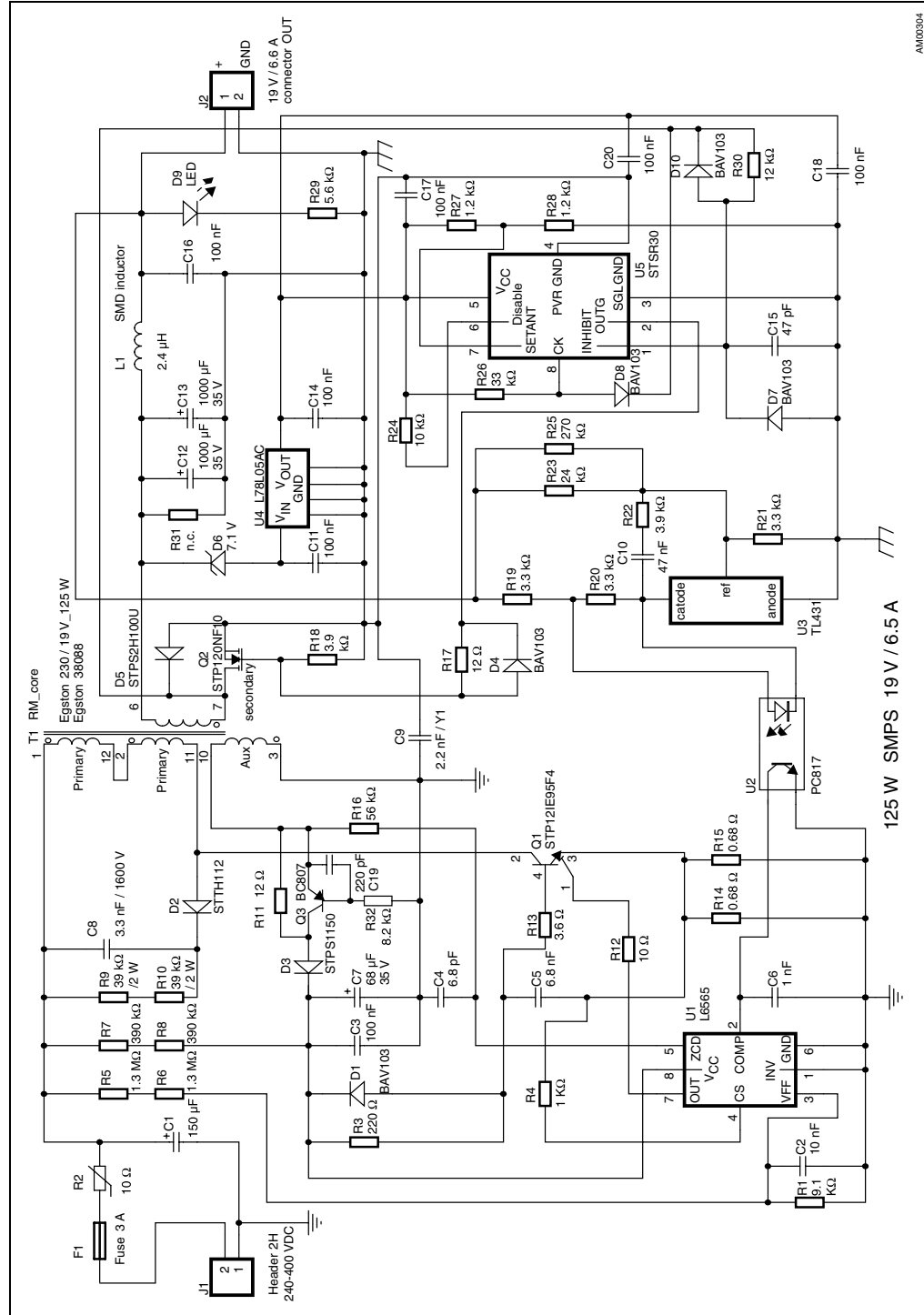
The 240-400 VDC input range of the converter is also tailored for PFC input use (not implemented on the board). It is possible to use various PFC conceptions based on other ST solutions.



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1 Schematic diagram

Figure 1. 125 W SMPS circuit schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
16-Apr-2010	1	Initial release.

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