

# Reference Design RD-337

## Fairchild PWM Controller FAN6862 – 40W Design

Featured Device	Application	Input Voltage Range	Output Voltage (Rated Current)	Rated Output Power	Topology
FAN6862	Netbook Computer Adapter	90~265V <sub>AC</sub>	19V (2.1A)	40W	Flyback Converter

### Key Features

- Low Startup Current: 8 $\mu$ A;
- Low Operation Current in Green Mode: 3mA
- Green Mode: Frequency Reduction with Burst Mode at Light Load
- Fixed PWM Frequency at 65kHz with Frequency Hopping to Reduce EMI
- Constant Output Power Limit
- Soft-Start Time: 4ms
- Driving Capability: 400mA
- Various Protection Functions: V<sub>DD</sub> Over-Voltage Protections (OVP), Open-Loop Protection (OLP), and Over-Temperature Protection (OTP)

### 1. Schematic

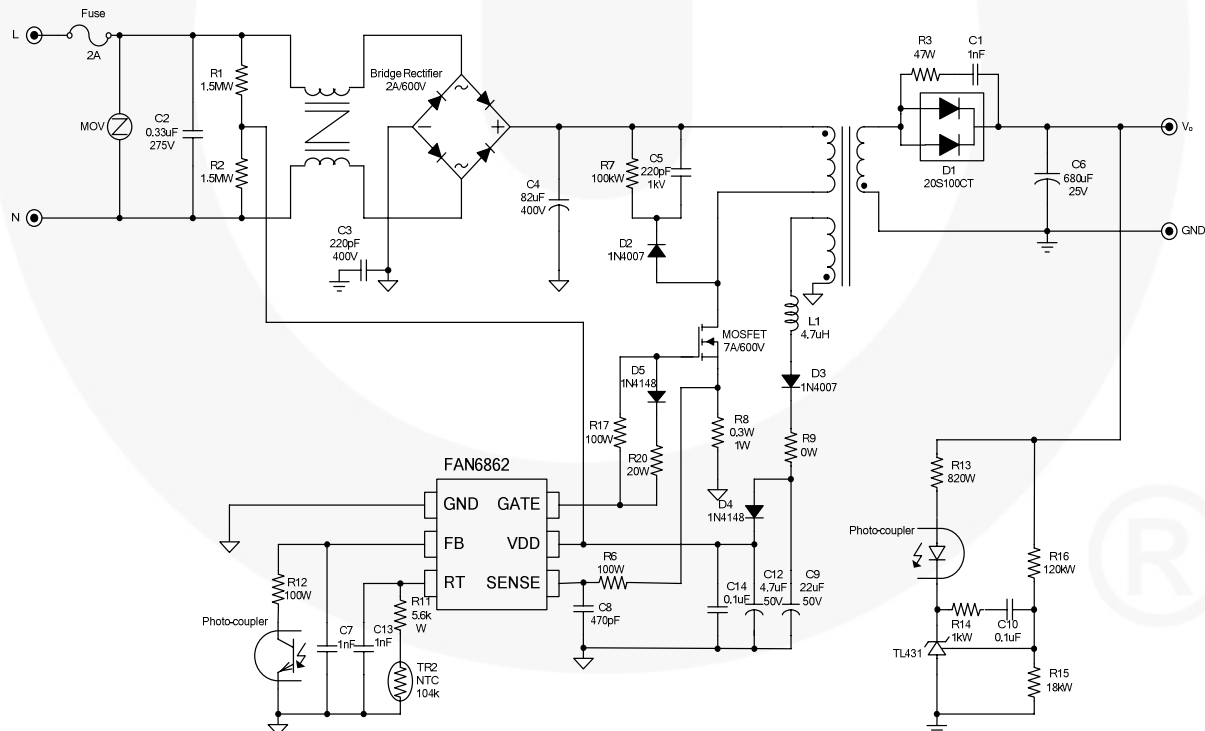


Figure 1. Schematic

## 2. Transformer

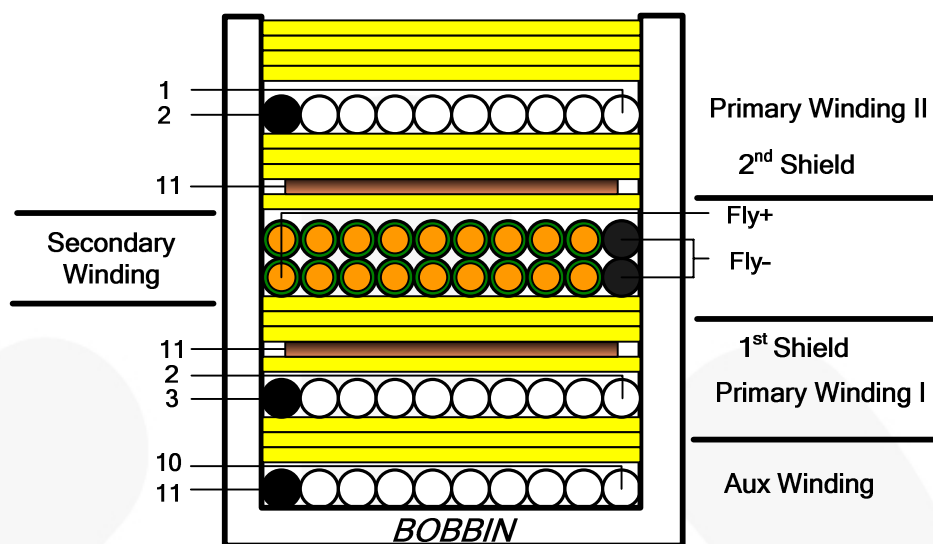


Figure 2. Transformer Schematic Diagram

### 2.1. Winding Specification

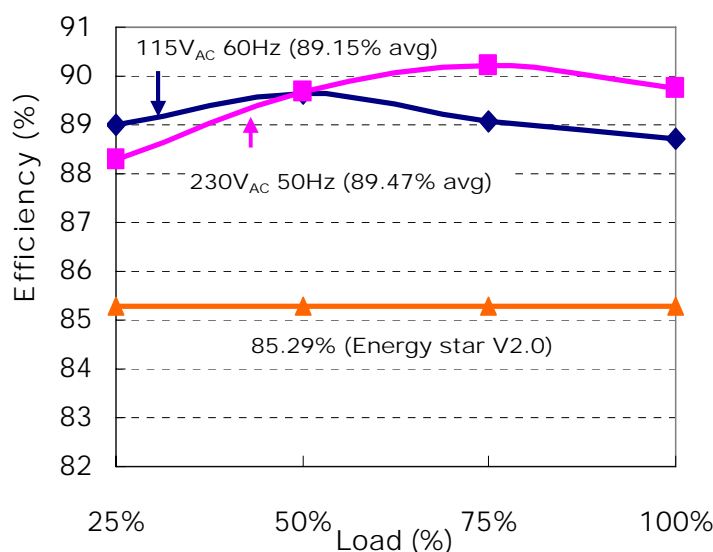
No.	Terminal		Wire	Ts	Insulation	Barrier	
	S	F			Ts	Primary	Secondary
N1	11	10	0.25*1	9	3		
N2	3	2	0.25 * 1	33	1		
	11		COPPER SHIELD	1.2	3		
N3	Fly-	Fly+	0.5* 2	12	1		
	11		COPPER SHIELD	1.2	3		
N4	2	1	0.25 * 1	33	4		
			CORE ROUNDING TAPE		3		

Core: RM-8  
 Bobbin: RM-8

### 2.2. Electrical Characteristics

	Pin	Specification	Remark
Primary-Side Inductance	3 – 1	920μH ± 5%	100kHz, 1V
Primary-Side Leakage Inductance	3 – 1	15μH Max.	Short One of the Secondary Windings

### 3. Typical Performance



**Figure 3. Efficiency vs. Load**

### 4. Related Resources

[FAN6862 — Highly Integrated Green-Mode PWM Controller Datasheet](#)

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