

FAN7314A — LCD Backlight Inverter Drive IC

Features

- High-Efficiency Single-Stage Power Conversion
- Wide Input Voltage Range: 6V to 25.5V
- Backlight Lamp Ballast and Soft Dimming
- Minimal Required External Components
- Precision Voltage Reference Trimmed to 2%
- ZVS Half-Bridge Topology
- Soft-Start
- PWM Control at Fixed Frequency
- Analog and Burst Dimming Function
- Programmable Striking Frequency
- Open-Lamp Protection
- Open-Lamp Regulation
- Thermal Shutdown
- 20-Pin SOIC

Description

The FAN7314A provides all the control functions for a series parallel resonant converter as well as a pulse width modulation (PWM) controller to develop a supply voltage. Typical operating frequency range is between 30kHz and 250kHz, depending on the CCFL and the transformer's characteristics.

The FAN7314A is available in a 20-SOIC package.


20-SOIC




Applications

- LCD TV
- LCD Monitor

Ordering Information

| Part Number | Package | Operating Temperature |  Eco Status | Packing Method |
|-------------|---------|-----------------------|--|----------------|
| FAN7314AM | 20-SOIC | -25 to +85°C | RoHS | RAIL |
| FAN7314AMX | 20-SOIC | -25 to +85°C | RoHS | TAPE & REEL |

 For Fairchild's definition of "green" Eco Status, please visit: http://www.fairchildsemi.com/company/green/rohs_green.html.

Protected under U.S. patent nos. 5,652,479.

Important Note:

For complete performance specifications, please contact one of the following:

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Typical Application Circuit (LCD Backlight Inverter)

| Application | Device | Input Voltage Range | Number of lamps |
|---------------------|----------|---------------------|-----------------|
| 22-Inch LCD Monitor | FAN7314A | 22V±5% | 4 |

1. Features

- High-Efficiency Single-Stage Power Conversion
- P-N Half-Bridge Topology
- Reduces Required External Components
- Enhanced System Reliability through Protection Functions

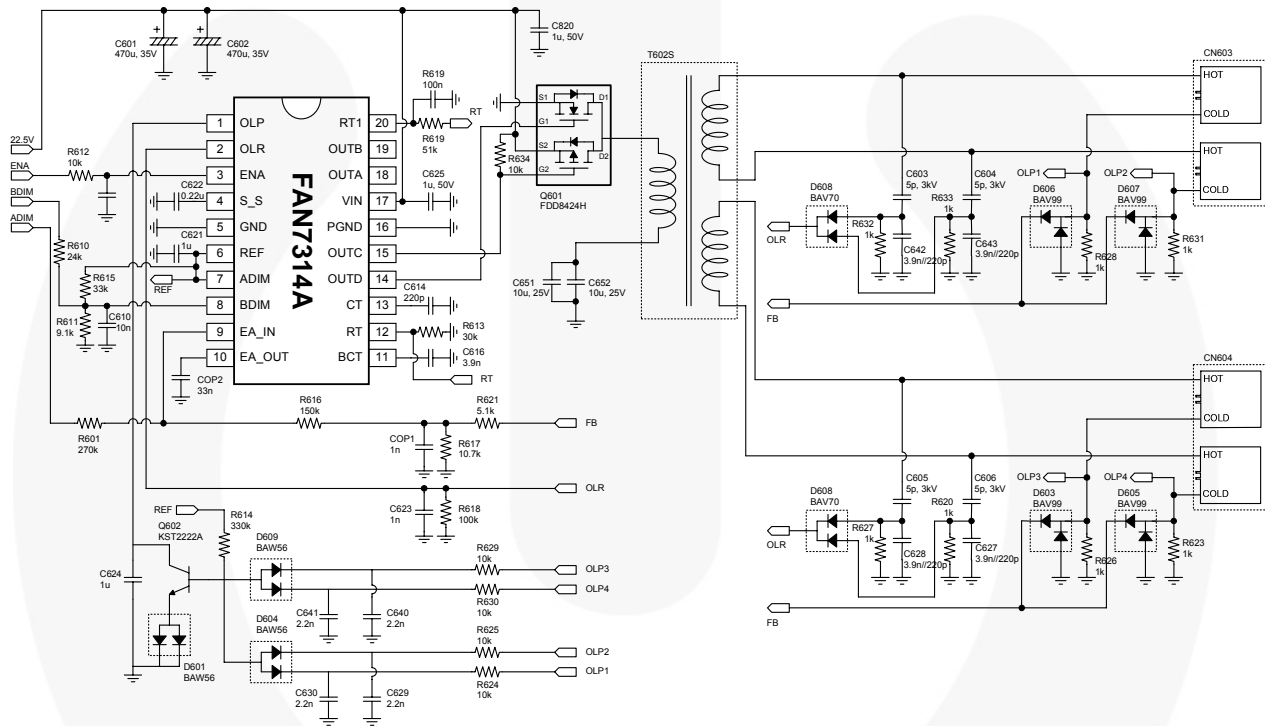


Figure 9. Typical Application Circuit

2. Transformer Specifications

- Supported by Clover Hitech (<http://www.cloverhitech.com>)
- PART NO : EEL-22W

| Pin No. | Wire | Turns | Inductance | Leakage Inductance | Remarks |
|---------|-------------|-------|------------|--------------------|----------|
| 2 → 7 | UTSC 0.1×12 | 19 | 83.0μH | 16μH | 1kHz, 1V |
| 3 → 6 | | | | | |
| 1 → 8 | 1 UEW 0.04Ω | 2300 | 1.4H | 280mH | |
| 4 → 5 | | | | | |



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