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# FAN7316

## LCD Backlight Inverter Drive IC

### Features

- High-Efficiency Single-Stage Power Conversion
- Wide Input Voltage Range: 4.5V to 24V
- Backlight Lamp Ballast and Soft Dimming
- Reduces Required External Components
- Precision Voltage Reference Trimmed to 2%
- N-N Half-Bridge Topology
- PWM Control at Fixed Frequency
- Analog and Burst Dimming Function
- Selectable Burst Dimming Polarity by ADIM Voltage
- Striking Frequency Depending on Normal Frequency
- Open-Lamp Protection
- Open-Lamp Regulation
- Short-Circuit Protection
- 20-Pin SOIC

### Applications

- LCD TV
- LCD Monitor

### Description

The FAN7316 is a LCD backlight inverter drive IC that controls N-N half-bridge topology. The FAN7316 can also drive push-pull topology.


The FAN7316 provides a low-cost solution by integrating the external open-lamp protection circuit. The operating voltage of the FAN7316 is wide, so the FAN7316 doesn't need an external regulator to supply the voltage to the IC. The FAN7316 has the internal bootstrap driver, so the external fast recovery diode can be avoided.

The FAN7316 provides various protections, such as open-lamp regulation, arc protection, open-lamp protection, short-circuit protection, and CMP-high protection to increase the system reliability. The FAN7316 provides analog dimming, burst dimming, and burst dimming polarity selection functions.

The FAN7316 is available in a 20-SOIC package.

### Ordering Information

| Part Number | Package | Operating Temperature | Packing Method |
|-------------|---------|-----------------------|----------------|
| FAN7316M    | 20-SOIC | -25 to +85°C          | RAIL           |
| FAN7316MX   | 20-SOIC | -25 to +85°C          | TAPE & REEL    |

 All packages are lead free per JEDEC: J-STD-020B standard.

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

## Typical Application Circuit (LCD Backlight Inverter)

| Application         | Device  | Input Voltage Range | Number of lamps |
|---------------------|---------|---------------------|-----------------|
| 19-Inch LCD Monitor | FAN7316 | 14.5±10%            | 4               |

### 1. Features

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

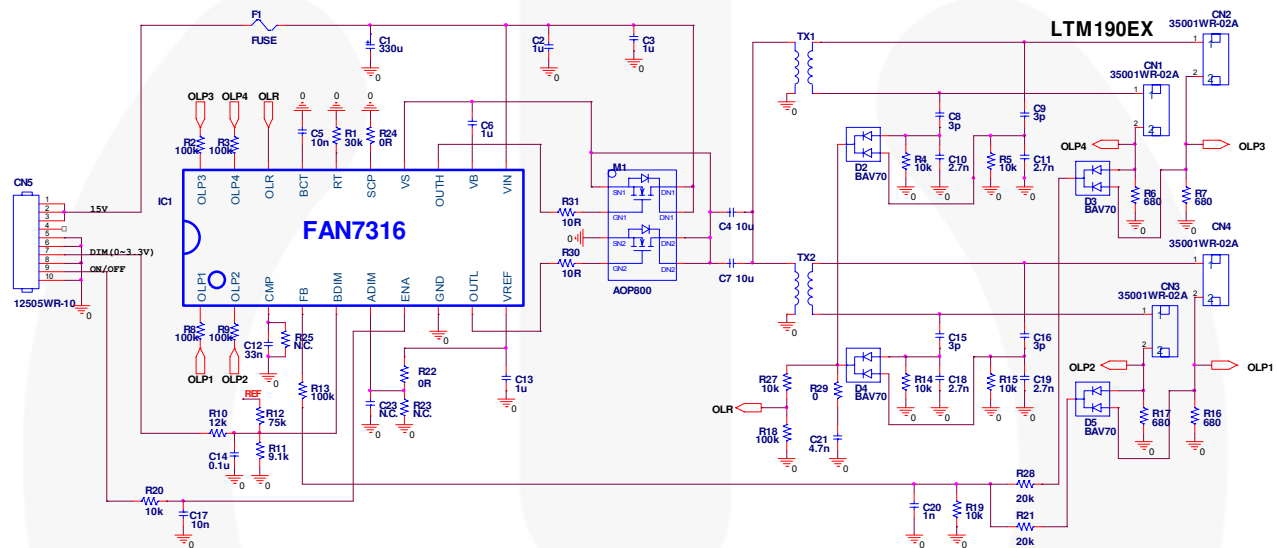


Figure 47. Typical Application Circuit

### 2. Transformer Schematic Diagram

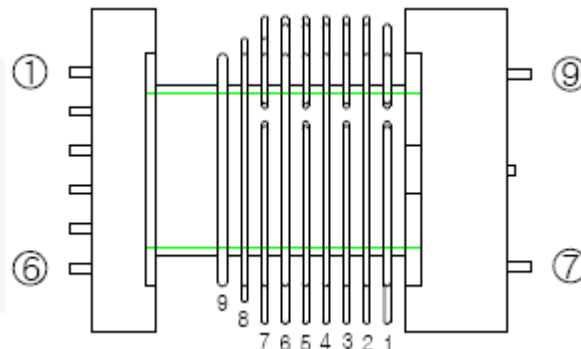


Figure 48. Transformer Schematic Diagram


### 3. Core & Bobbin

- Core: EFD2126
- Material: PL7
- Bobbin: EFD2126



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