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FAN7317B

LCD Backlight Inverter Drive IC

Features

- High-Efficiency, Single-Stage Power Conversion
- Wide Input Voltage Range: 6V to 28V
- Backlight Lamp Ballast and Soft Dimming
- Minimal Required External Components
- Precision Voltage Reference Trimmed to 2%
- ZVS Full-Bridge Topology
- Soft-Start
- PWM Control at Fixed Frequency
- Burst Dimming Function
- Dynamic Contrast Ratio Function
- Programmable Striking Frequency
- Open-Lamp Protection (OLP)
- Open-Lamp Regulation (OLR)
- Short-Lamp Protection (SLP)
- Thermal Shutdown (TSD)
- 20-Pin SOIC

Applications

- LCD TV
- LCD Monitor

Description

The FAN7317B is a LCD backlight inverter drive IC that controls P-N full-bridge topology using a new propriety phase-shift method.

The FAN7317B provides a low-cost solution and reduces external components by integrating full wave rectifiers for open-lamp protection and regulation (patent pending). The operating voltage range of the FAN7317B is wide, so an external regulator isn't necessary to supply the voltage to the IC.

The FAN7317B provides protections such as open-lamp regulation, open-lamp protection, and short-lamp protection to increase the system reliability. The FAN7317B provides a burst-dimming function and analog dimming is possible, in a narrow range, by adding external components.

The FAN7317B is available in a 20-pin SOIC package.

20-SOIC



Ordering Information

| Part Number | Operating Temperature | Package | Packing Method |
|-------------|-----------------------|--|----------------|
| FAN7317BM | -25 to +85°C | 20-Pin Small Outline Integrated Circuit (SOIC) | Rail |
| FAN7317BMX | | | Tape and Reel |

Typical Application Circuit (LCD Backlight Inverter)

| Application | Device | Input Voltage Range | Number of Lamps |
|---------------------|----------|---------------------|-----------------|
| 22-Inch LCD Monitor | FAN7317B | 13±10% | 4 |

1. Features

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

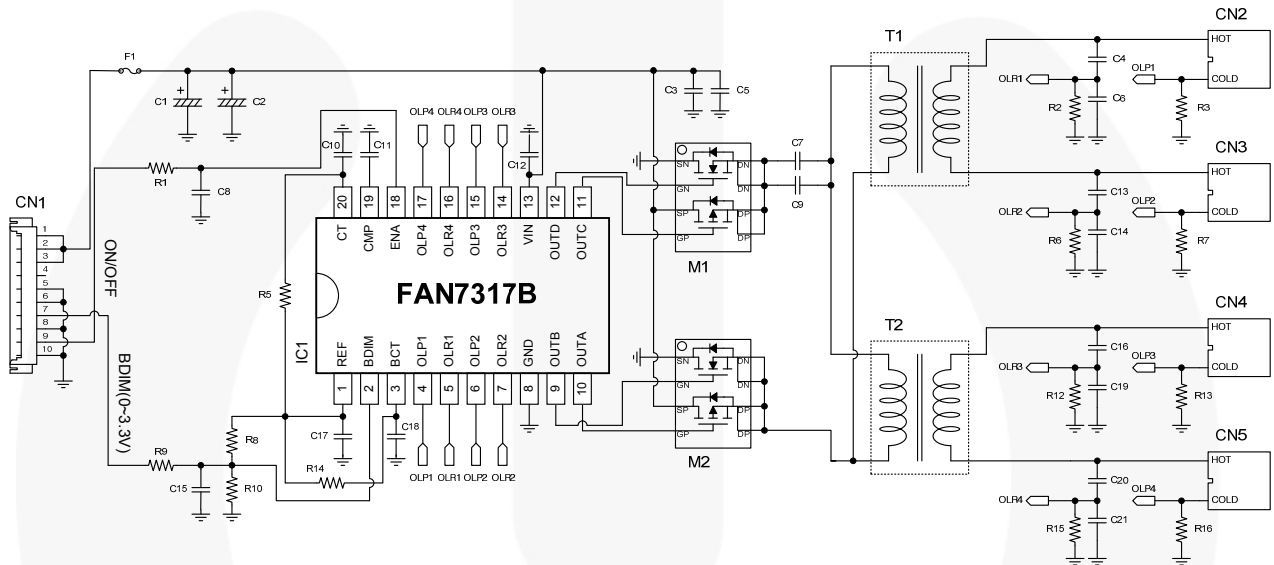


Figure 55. Typical Application Circuit

2. Transformer Schematic Diagram

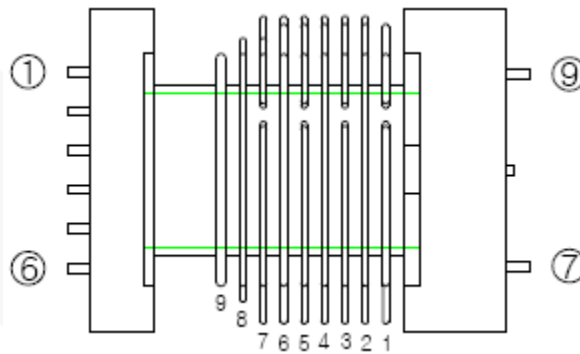


Figure 56. Transformer Schematic Diagram

3. Core & Bobbin

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

Physical Dimensions

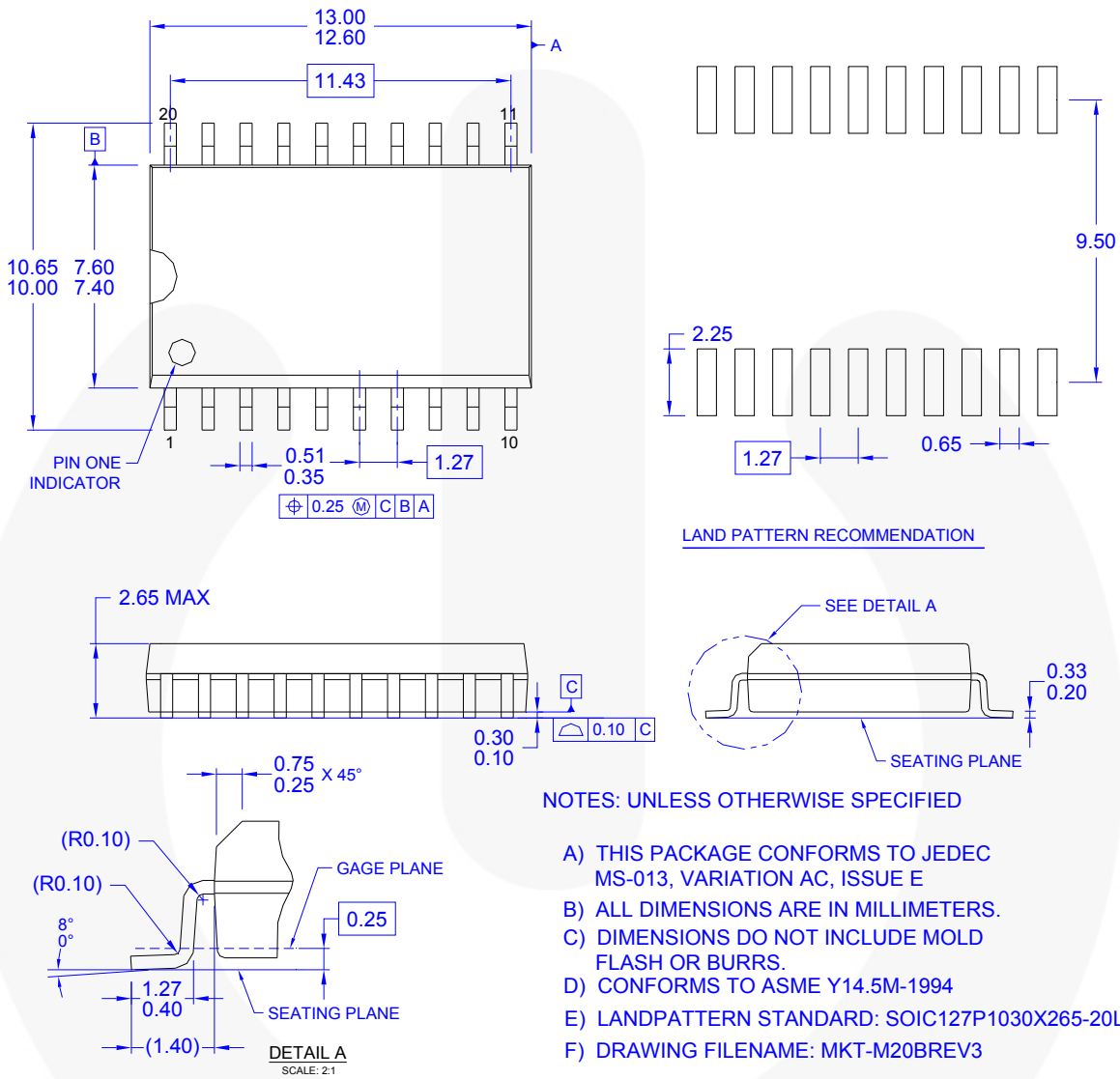


Figure 57. 20-Pin, Small Outline Integrated Circuit (SOIC) Package






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