

FAN7319

LCD Backlight Inverter Drive IC

Features

- High-Efficiency Single-Stage Power Conversion
- Wide Input Voltage Range: 10V to 24V
- Backlight Lamp Ballast and Soft Dimming
- Minimal Required External Components
- Precision Voltage Reference Trimmed to 2%
- ZVS or ZCS Push-Pull & Full-Bridge Topology
- PWM Control at Fixed Frequency
- ZCS Control by Sensing Resonant Tank Current
- External Pulse Burst Dimming Function - Positive
- Analog Dimming Function - Positive
- Programmable Striking Frequency
- Open-Lamp Protection
- Open-Lamp Regulation
- Short-Lamp Protection
- CMP-High Protection
- Dynamic Contrast Ratio Mode
- Thermal Shutdown
- 20-Pin SOP

Applications

- LCD TV
- LCD Monitor

Description

The FAN7319 is a LCD backlight inverter drive IC that controls N-N push-pull topology or N-N full-bridge topology using a proprietary phase-shift method.

The FAN7319 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 is wide, so an external regulator isn't necessary to supply voltage to the IC.

The FAN7319 provides various protections, such as open-lamp regulation, open-lamp protection, short-lamp protection, CMP-high protection, and FB-high protection, to increase the system reliability. The FAN7319 provides burst dimming function and analog dimming.

The FAN7319 is available in a 20-Lead Small Outline Integrated Circuit (SIOC) package.

Ordering Information

| Part Number | Operating Temperature | Package | Packing Method |
|-------------|-----------------------|--|----------------|
| FAN7319M | -25 to +85°C | 20-Lead, SOIC, JEDEC MS-013, .300 Inch, Wide Body | Rail |
| FAN7319MX | -25 to +85°C | | Tape & Reel |

Typical Full-Bridge Application Circuit (LCD Backlight Inverter)

| Application | Input Voltage Range | Number of Lamps |
|--------------------|---------------------|-----------------|
| LCD TV (LIPS Type) | 13±10% | CCFL/EEFL IP |

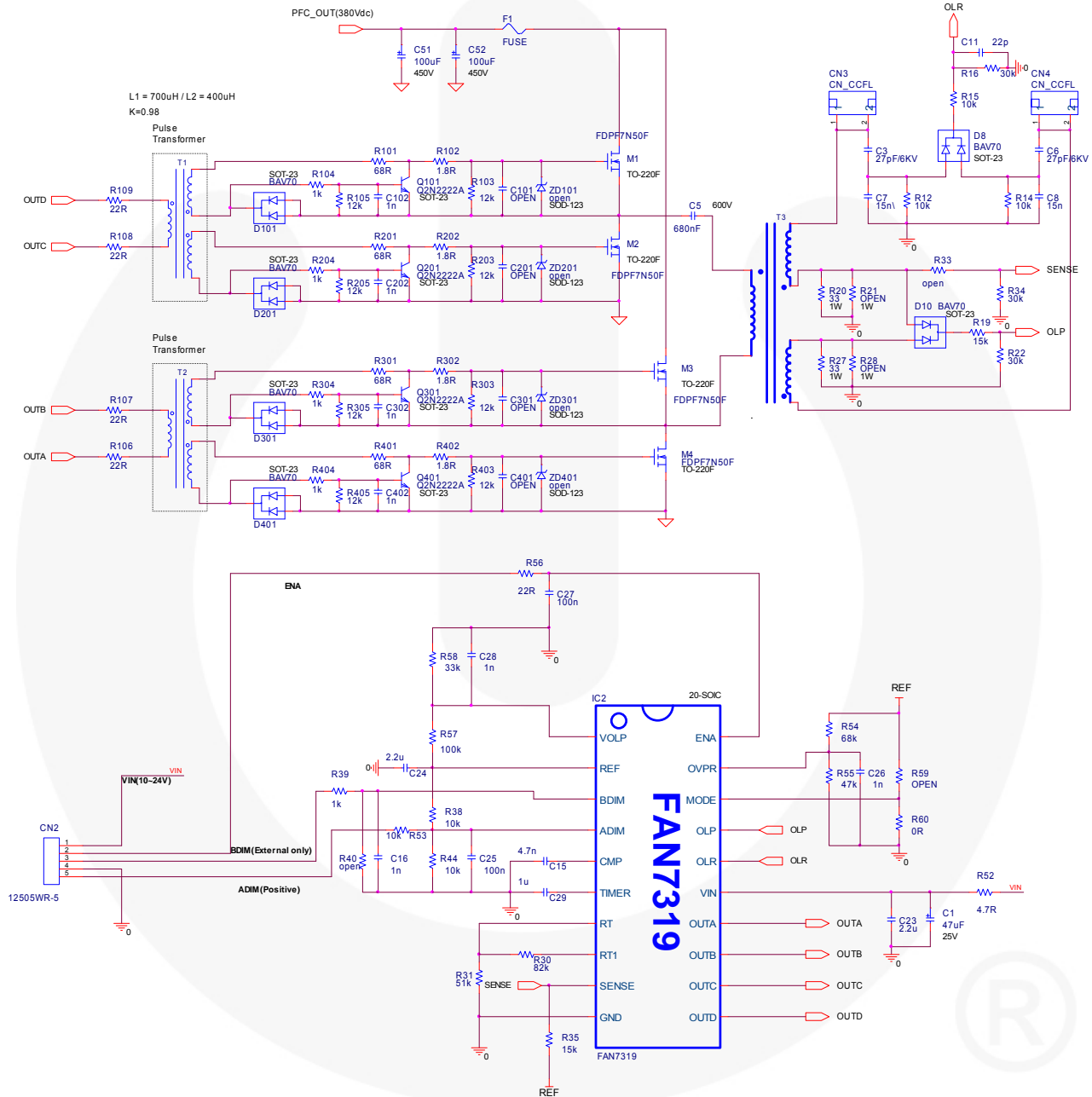


Figure 47. Typical Full-Bridge Application Circuit

Typical Half-Bridge Application Circuit (LCD Backlight Inverter)

| Application | Input Voltage Range | Number of Lamps |
|--------------------|---------------------|-----------------|
| LCD TV (LIPS Type) | 13±10% | CCFL/EEFL IP |

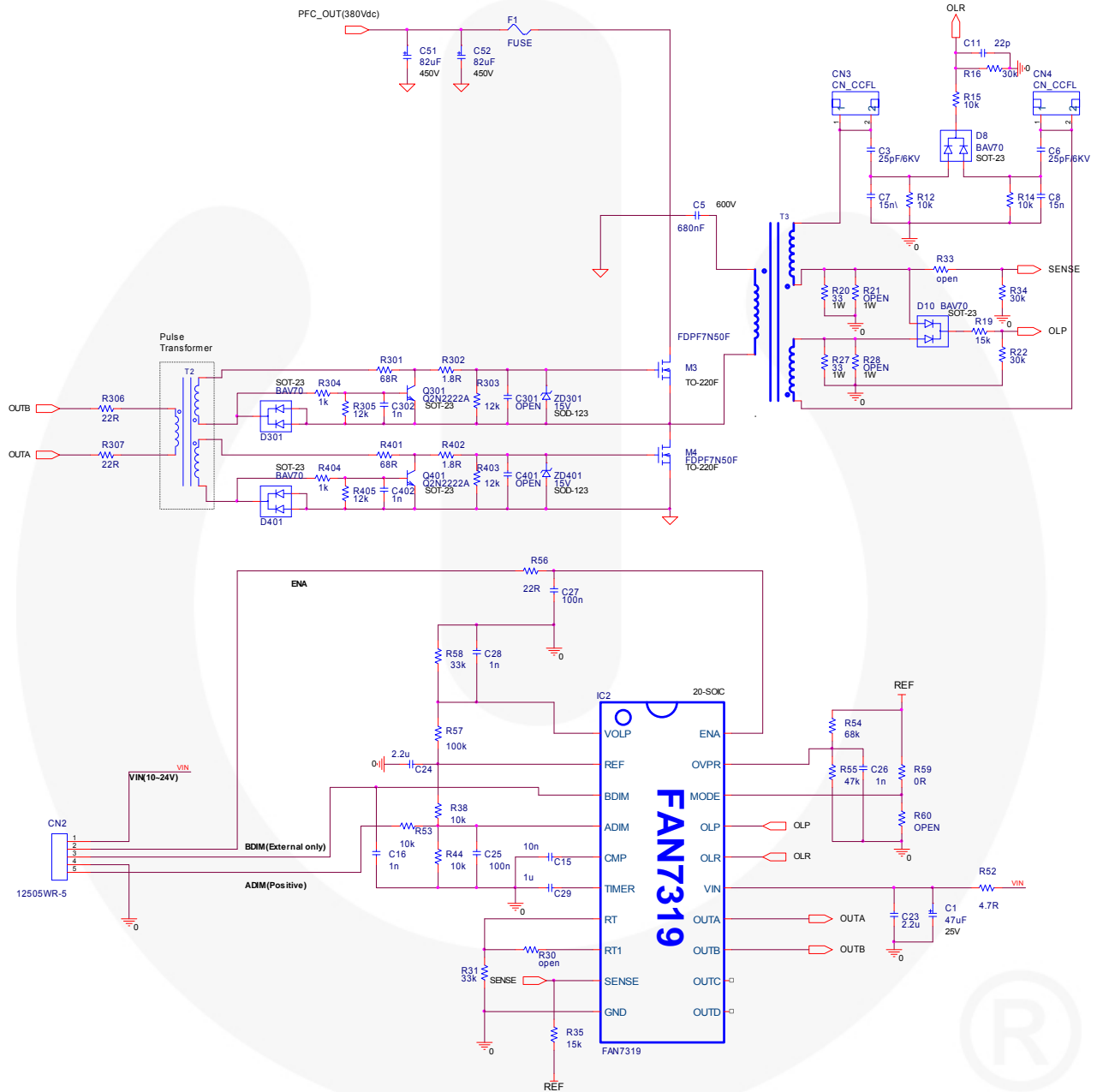


Figure 48. Typical Half-Bridge Application Circuit

Physical Dimensions

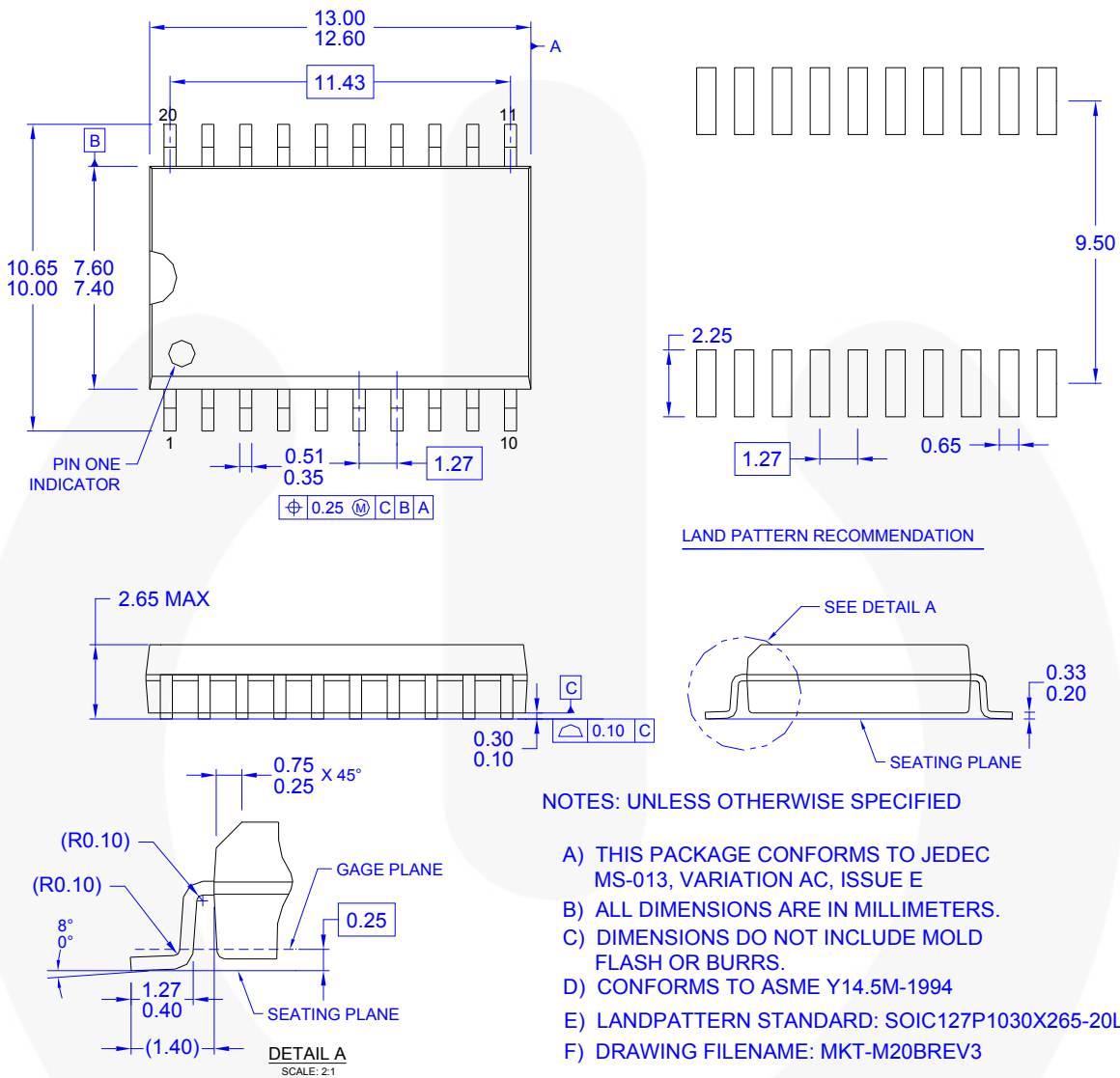


Figure 49. 20-Pin, Small-Outline Integrated Circuit (SOIC) Package





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|--------------------------|-----------------------|---|
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