FAIRCHILD SEMICONDUCTOR®

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FAN7313
LCD Backlight Inverter Drive IC

Features

- High-Efficiency Single-Stage Power Conversion
- Wide Input Voltage Range: 4.5V to 25.5V
- Backlight Lamp Ballast and Soft Dimming
- Reduces Required External Components
- Precision Voltage Reference Trimmed to 2%
- Push-Pull Topology
- Soft-Start Capability
- PWM Control at Fixed Frequency
- Analog and Burst Dimming Functions
- Open-Lamp Protection
- Open-Lamp Regulation
- Over-Voltage Protection
- Short-Circuit Protection
- 20-Pin SOIC

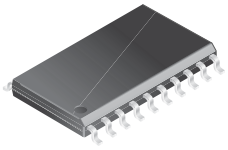
Applications

- LCD TV
- LCD Monitor

Description

FAN7313 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 cold cathode fluorescent lamp (CCFL) and the transformer's characteristics.

20-SOIC



Ordering Information

Part Number	Package	Pb-Free	Operating Temperature Range	Packing Method
FAN7313M	20-SOIC	Yes	-25°C ~ 85°C	Rail
FAN7313MX	20-SOIC	Yes		Tape & Reel

Typical Application Circuits

Application	Lamps	Input Voltage
19-inch LCD Monitor	4	13V

1. Schematic

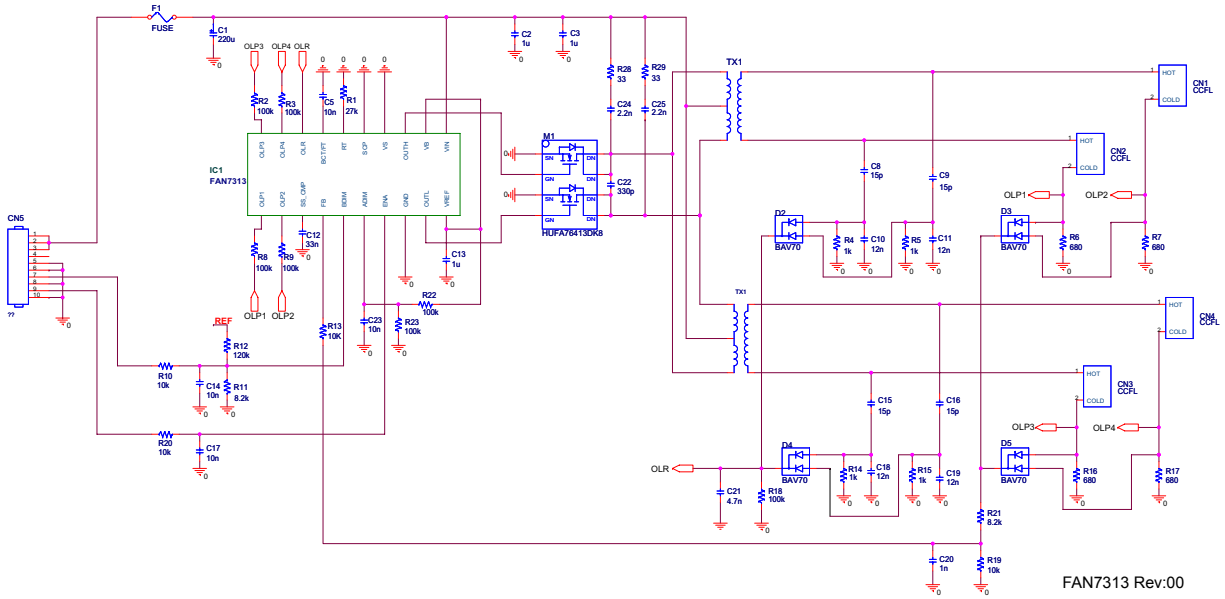


Figure 4. Typical Application Circuit

2. Transformer Schematic Diagram

Supported by Namyang electronics (http://www.namyangelec.co.kr).

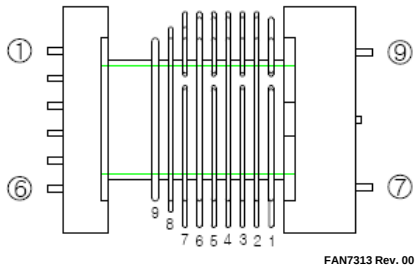


Figure 5. Transformer Schematic

3. Core & Bobbin

- Core: EFD2124
- Material: PL7
- Bobbin: EFE2124

4. Winding Specification

Pin No.	Wire	Turns	Inductance	Leakage Inductance	Remarks
6 --> 4	1 UEW 0.35 ϕ	19	50μH	1.2μH	1KHz, 1V
3 --> 5	1 UEW 0.35 ϕ	19	50μH	1.2μH	1KHz, 1V
7 --> 9	1 UEW 0.04 ϕ	2300	826mH	260mH	1KHz, 1V

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FAST®	MICROWIRE™	Quiet Series™		
FASTr™	MSX™	RapidConfigure™	Across the board. Around the world.™	
FPS™	MSXPro™	RapidConnect™	Programmable Active Droop™	
FRFET™	OCX™	ScalarPump™	The Power Franchise®	

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