High Power Factor Flyback PWM Controller

FEATURES

- ◆ **Built-in Soft Start**
- ◆ **Very Low Startup Current**
- ◆ **Under Voltage Lockout with 7.7V Hysteresis**
- ◆ **VCC Over Voltage Protection (OVP)**
- ◆ **Clear External EA Feedback Network before Power On**
- ◆ **Transition Mode (TM) Operation**
- ◆ **Highly Linear Analog Multiplier**
- ◆ **Proprietary "Frequency Adjusting" for Higher PF and Low THD**
- ◆ **3.3us Min. OFF Time**
- ◆ **270KHz Max Frequency Clamp**
- ◆ **Trimmed 1.5% Internal Voltage Reference**
- ◆ **Restart Timer for Stand-alone Applications**
- ◆ **Cycle-by-Cycle Current Limiting**
- ◆ **Built-in Leading Edge Blanking (LEB)**
- ◆ **Audio Noise Free Operation**
- ◆ **10V to 32V Wide Range of VCC Voltage**
- ◆ **800mA Drive Capability**

APPLICATIONS

- ◆ **LED Lighting Application**
- ◆ **Single Stage High PF Flyback AC/DC SMPS**

GENERAL DESCRIPTION

SFL320 is a high power factor flyback PWM controller special for LED lighting applications. The IC adopts transition mode (TM) operation for high efficiency and low EMI.

SFL320 will *Clear External EA Feedback Network* before IC power on. The IC also has *Soft Start* control to soften the stress on the MOSFET during power on period.
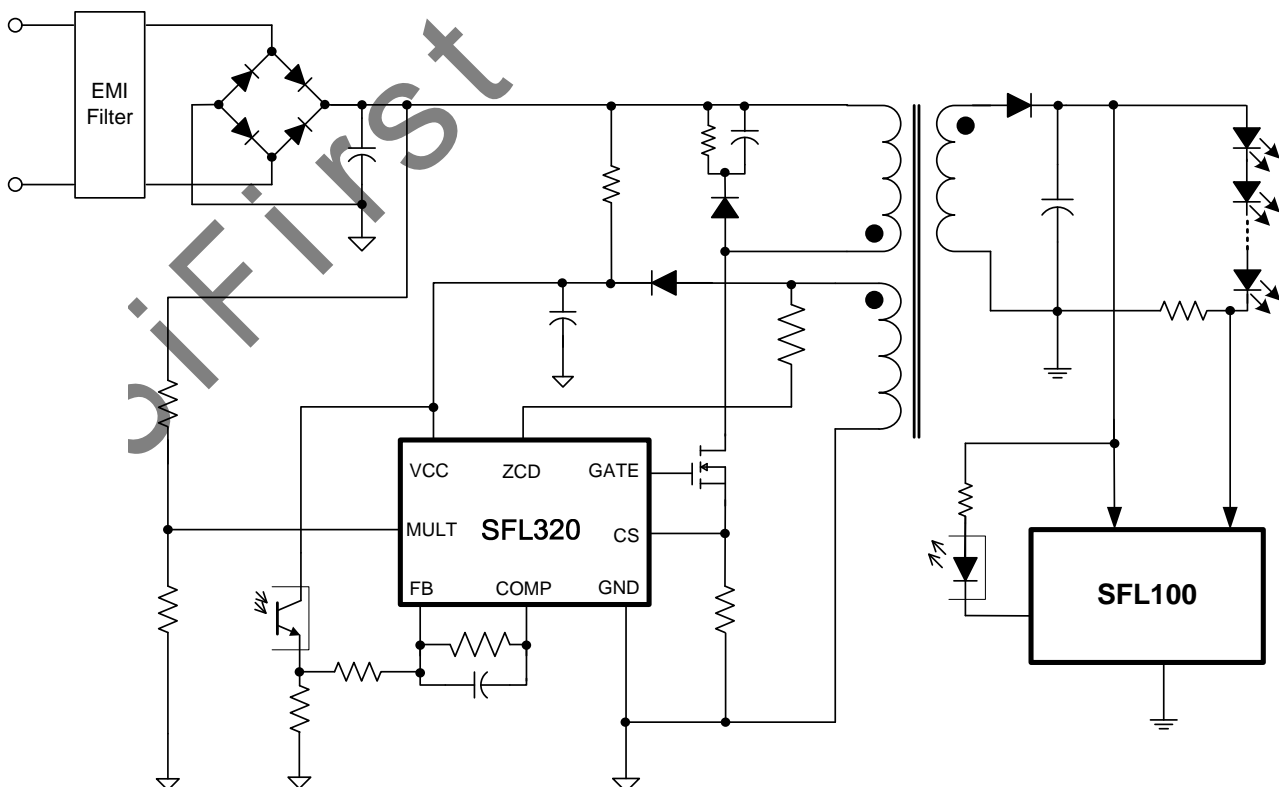
In SFL320, a highly linear analog multiplier is integrated to achieve low THD and high power factor. The zero current detector (ZCD) ensures TM operation. A restart timer is for stand alone applications. The IC also has the function of *Min. OFF time* and *Max. Frequency Clamp* to limits power MOS Vds spike when LED output is short.
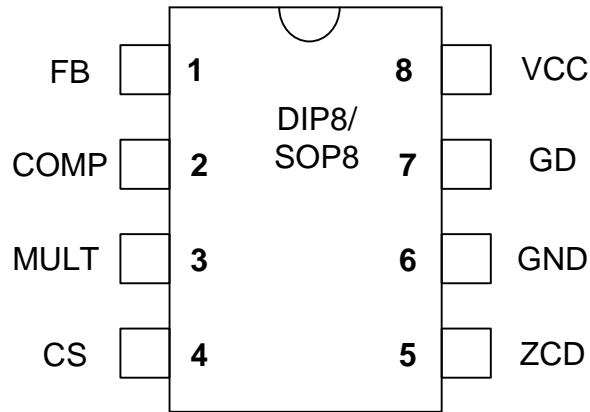
In SFL320, the proprietary "*Frequency Adjusting*" can help to improve THD performance, while ensures audio noise free operation. A *VCC Over Voltage Protection* (VCC OVP) is integrated to improve system reliability.

SFL320 integrates functions and protections of Under Voltage Lockout (UVLO), VCC Over Voltage Protection (OVP), Soft Start Control, Cycle-by-cycle Current Limiting (OCP), GD Clamping, VCC Clamping, Leading Edge Blanking (LEB), etc.

In SFL320, VCC OVP is auto-recovery mode protection.

SFL320 is available in SOP-8 and DIP-8 packages.

TYPICAL APPLICATION

Pin Configuration

FB	1	8	VCC
COMP	2	7	GD
MULT	3	6	GND
CS	4	5	ZCD

DIP8/SOP8

Ordering Information

Part Number	Top Mark	Package		Tape & Reel
SFL320SG	SFL320SG	SOP8	Green	
SFL320SGT	SFL320SG	SOP8	Green	Yes
SFL320DP	SFL320DP	DIP8	RoHS	

Marking Information

S F L 3 2 0 S G

Y WW

YWW: Year&Week code

S F L 3 2 0 D P

Y WW

YWW: Year&Week code