

# PWM+PFM CONTROLLER WITH BUILT-IN HIGH VOLTAGE MOSFET

## 1. DESCRIPTION

SDH8654S is current mode PWM+PFM controller used for SMPS, with built-in high voltage MOSFET, high-voltage startup constant current source, and external sensing resistor.

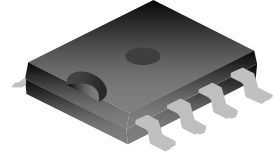
SDH8654S has a built-in high-voltage startup constant current source, features low standby power dissipation and multi-mode control. At heavy load condition, it works in PWM mode. At light load condition, it works in PFM mode to improve the conversion efficiency. At no load, it enters burst mode to reduce the standby power dissipation.

SDH8654S integrates switching frequency jitter to achieve low EMI. Built-in peak current compensation circuit makes the limit output power consistent even with different input AC voltages. Built-in soft startup reduces the transformer stress during power-on process to avoid transformer saturation.

SDH8654S integrates comprehensive exceptional protections including leading edge blanking (LEB), cycle-by-cycle peak current limit, VCC overvoltage protection(OVP), output overload protection(OLP), AC input undervoltage protection(AC\_UVP), AC input overvoltage protection (AC\_OVP) and over-temperature protection(OTP) etc.

## 2. FEATURES

- ◆ High-voltage startup
- ◆ Low standby power dissipation
- ◆ Multi-mode control
- ◆ Switching frequency jitter
- ◆ Peak current compensation
- ◆ Soft startup
- ◆ Leading edge blanking (LEB)
- ◆ Cycle-by-cycle current limit
- ◆ VCC overvoltage protection (OVP)
- ◆ Output overload protection (OLP)
- ◆ AC input undervoltage protection (AC\_UVP)
- ◆ AC input overvoltage protection (AC\_OVP)
- ◆ Over-temperature protection (OTP)



SOP-7F-325-2.54

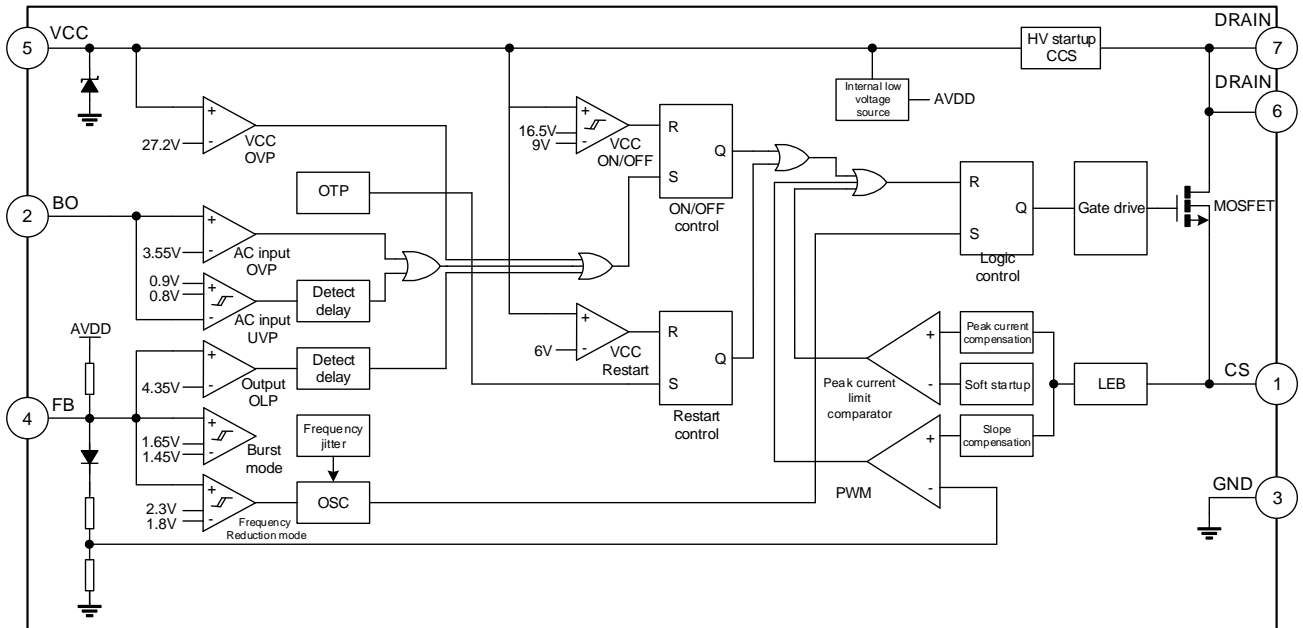
## 3. APPLICATIONS

- ◆ SMPS

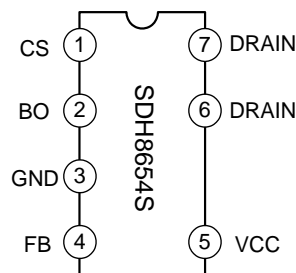
### 4. ORDERING INFORMATION

Part No.	Package	Marking	Hazardous Substance Control	Packing Type
SDH8654STR	SOP-7F-325-2.54	SDH8654S	Halogen free	Tape & Reel

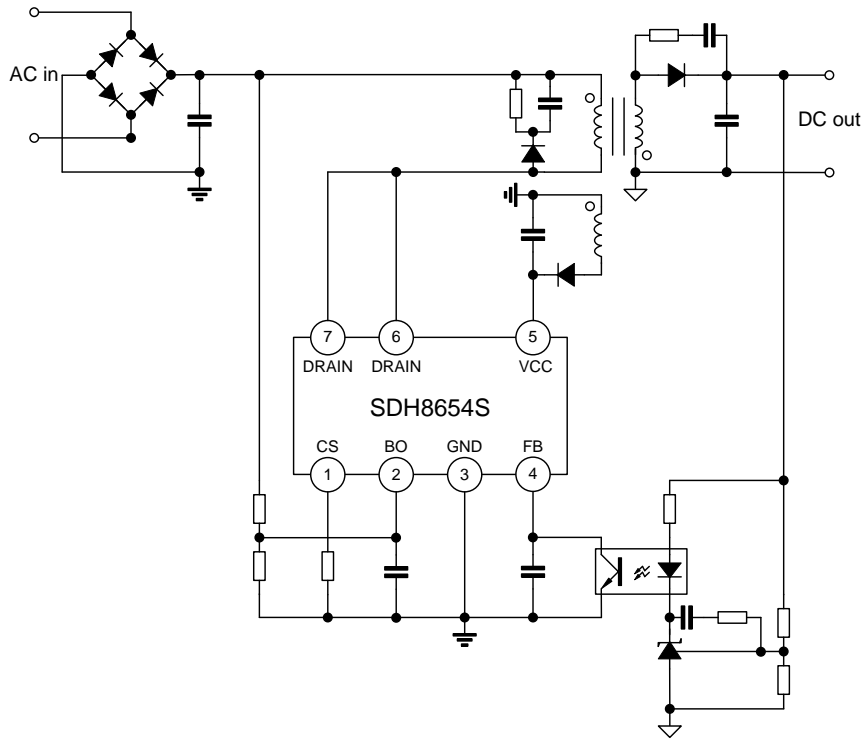
### 5. BLOCK DIAGRAM



### 6. PIN CONFIGURATION



7.TYPICAL APPLICATION CIRCUIT



8.PACKAGE OUTLINE

SOP-7F-325-2.54 UNIT: mm

SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	3.424	—	3.776
A1	0.100	—	0.300
A2	3.324	—	3.476
b	1.484	—	1.564
b1	0.440	—	0.520
c	0.204	—	0.304
D	9.100	—	9.300
e	2.540BSC		
E	6.250	—	6.450
E1	9.450	—	9.850
L	0.920	—	1.120
L1	1.650REF		

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