

### Current mode PWM controller with integrated high voltage power MOSFET

### LY9523/LY9525/LY9526/LY9527/LY9528

#### GENERAL DESCRIPTION

LY9523/LY9525/LY9526/LY9527/LY9528 combines a dedicated current mode PWM controller with integrated high voltage power MOSFET.

Vcc low startup current and low operating current contribute to a reliable power on startup

design with LY9523/LY9525/LY9526/LY9527/LY9528. the IC operates in Extended 'burst mode' to minimize switching loss. Lower standby power and higher conversion efficiency is thus achieved.

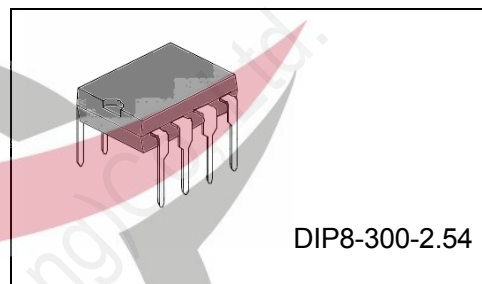
LY9523/LY9525/LY9526/LY9527/LY9528 operates in the fixed PWM frequency, the frequency is 65KHz.

Excellent EMI performance is achieved with proprietary frequency huffling technique.

Soft Start with 4mS, LY9523/LY9525/LY9526/LY9527/LY9528 offers complete protection coverage with automatic self-recovery feature including Vcc over voltage clamp and under voltage lockout (UVLO), over voltage protection (OLP), over current protection (OCP). LY9523/LY9525/LY9526/LY9527/LY9528 is offered in DIP-8 package.

#### FEATURES

- Integrated high voltage power MOSFET
- Low Vcc Startup Current (5 $\mu$ A)
- "No Y-CAP" system design in sub 20W range
- Frequency shuffling for EMI
- Over current Protection (OCP), over voltage Protection (OVP)
- UVLO and Auto Self-Recovery
- Soft Start with 4mS
- Burst Mode
- Cycle-by-Cycle Over-current limiting
- OTP

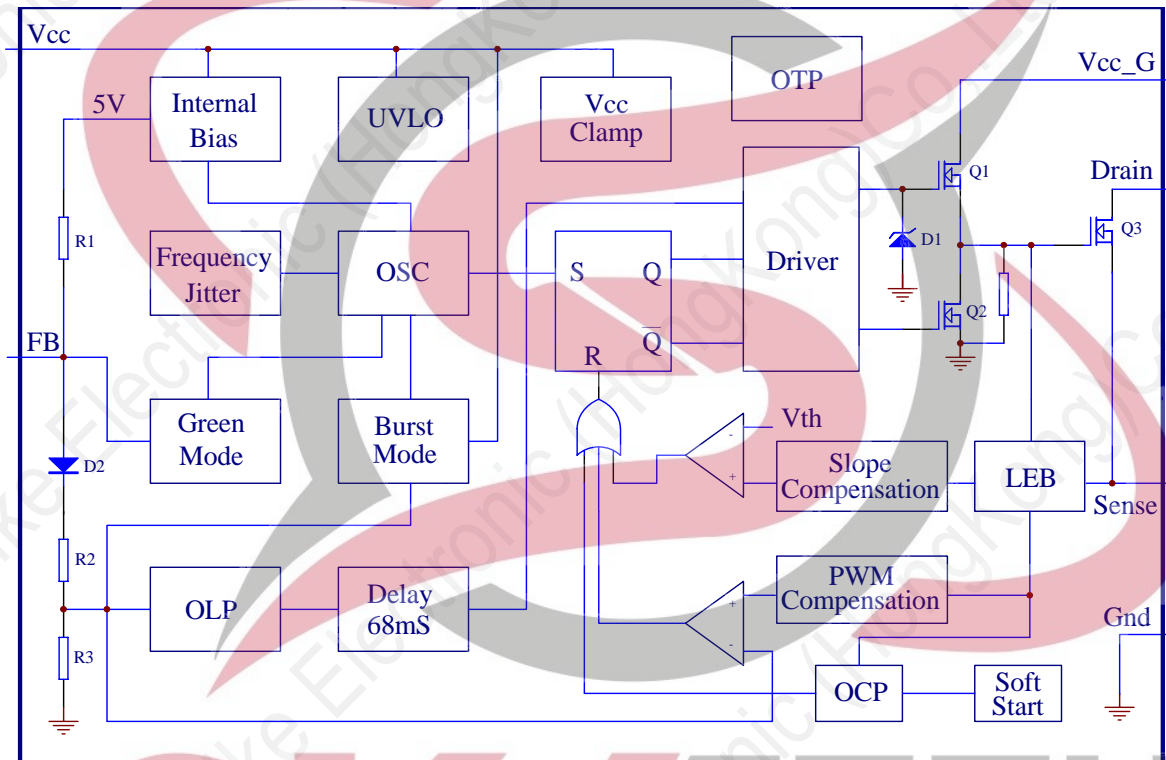


DIP8-300-2.54

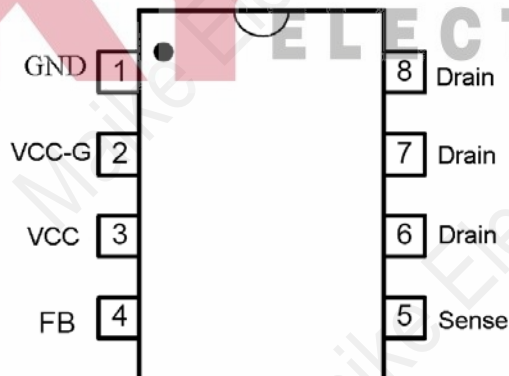
**APPLICATIONS**

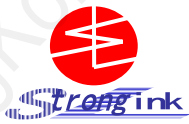
- DVD/DVB/Set-Top Box Power Supplies
- Offline AC/DC Flyback converter
- Battery Charger
- Open-frame SMPS

**BLOCK DIAGRAM**



**PIN CONNECTION**





Shen

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LY9523/LY9525/LY9526/LY9527/LY9528

### PIN DESCRIPTIONS

Pin No.	Pin Name	Descriptions
1	GND	Ground
2	Vcc-G	Power Supply specially for Internal Gate Driver
3	Vcc	power supply pin
4	FB	Feedback input pin
5	Sense	Current sense input pin
6, 7, 8	Drain	The Drain pin is designed to connect directly to the primary lead of the transformer and is capable of switching a maximum of 650V

### OUTPUT POWER TABLE

Name	190V ~ 260V		85V ~ 265V	
	Adapting	Opening	Adapting	Opening
LY9523	6W	8W	5W	7W
LY9525	10W	14W	8W	12W
LY9526	20W	24W	15W	20W
LY9527	22W	28W	20W	24W
LY9528	24W	30W	24W	28W

### ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Characteristics	Symbol	Value	Unit	
Drain Input Voltage	$V_{Drain}$	650	V	
Vcc-G Voltage	$V_{GS}$	±20	V	
Vcc zener clamp continuous current	LY9523	$I_D$	0.80	A
	LY9525	$I_D$	1.0	A
	LY9526	$I_D$	2.0	A
	LY9527	$I_D$	3.0	A
	LY9528	$I_D$	4.0	A
Power Supply Voltage	$V_{VCC}$	25	V	
$V_{FB}$ Maximum Input Voltage		-0.3 ~ 7.0	V	