

Product Overview

FSL336LR: 650V Integrated Power Switch with Error Amp and no bias winding for 9Watt offline buck converters

For complete documentation, see the data sheet.

The FSL336LR integrated Pulse Width Modulator (PWM) and SenseFET is specifically designed for high-performance offline buck, buck-boost, and non-isolation flyback Switched Mode Power Supplies (SMPS) with minimal external components. This device integrates a high-voltage power regulator that enables operation without auxiliary bias winding. An internal transconductance amplifier reduces external components for the feedback compensation circuit. The integrated PWM controller includes: 10 V regulator for no external bias circuit, Under-Voltage Lockout (UVLO), Leading-Edge Blanking (LEB), an optimized gate turn-on / turn-off driver, EMI attenuator, Thermal Shutdown (TSD), temperature-compensated precision current sources for loop compensation, and fault-protection circuitry. Protections include: Overload Protection (OLP), Over-Voltage Protection (OVP), and Feedback Open Loop Protection (FB_OLP). FSL336LR offers good soft-start performance during startup. The internal high-voltage startup switch and the Burst-Mode operation with very low operating current reduce the power loss in Standby Mode. As the result, it is possible to reach power loss of 120 mW without external bias and 25 mW with external bias when input voltage is 230 VAC.

Features

- Built-in Avalanche-Rugged SenseFET: 650 V
 - Fixed Operating Frequency: 50 kHz
 - No-Load Power Consumption:
 - <25 mW at 230 VAC with External Bias;
 - <120 mW at 230 VAC without External Bias
 - No Need for Auxiliary Bias Winding
 - Frequency Modulation for Attenuating EMI
 - Pulse-by-Pulse Current Limiting
 - Ultra-Low Operating Current: 250 μ A
 - Built-in Soft-Start and Startup Circuit
- For more features, see the data sheet

Applications

- This product is general usage and suitable for many different applications.

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Control Mode	f_{sw} Typ (kHz)	f_{jitter} Typ (%)	Stand-by Mode	$R_{DS(on)}$ Typ (Ω)	$V_{DSS}^{(BR)}$ Max (V)	I_{Peak} (mA)	HV Start-up Min (V)	DSS (mA)	UVLO	Short Circuit Protection	Over Power Compensation	Brown-out	LatCh	Package Type
FSL336LRLX	0.7517	Pb-free Halide free	Active	Current Mode	50			3.5	650	1800	Yes		Yes	Yes			No	PDIP 7 MIN US PIN 6 GW
FSL336LRN	0.5401	Pb-free Halide free	Active	Current Mode	50			3.5	650	1800	Yes		Yes	Yes			No	PDIP -7

For more information please contact your local sales support at www.onsemi.com.

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