

FSL538

High Performance 800 V Off-line Switcher with HV Startup and SenseFET

Product Overview

For complete documentation, see the data sheet.

The FSL5x8A/H is an integrated peak-current-mode controlled pulse width modulation (PWM) power switch, specifically designed for off-line switch-mode power supplies. The PWM controller includes an advanced soft-start, frequency hopping, optimized gate driver, internal transconductance amplifier, temperature-compensated precise current source for loop compensation and enhanced self-protections circuitry as well. Compared with a discrete MOSFET and PWM controller solution, the FSL5x8A/H allows to reduce total cost, component count, size, and weight, while simultaneously increase efficiency, productivity, and system reliability. This device provides a basic platform for cost-effective design of both isolated and non-isolated Flyback converters.

Features

- Rugged 800V FET with 3.8Ω Typ.RDS(on) with Built-in HV current source for start up
- Fine-tunable Skip Mode Operation
- Integrated Line Compensation
- Line Brown-in, Brown-out Function
- Line Over-voltage Protection (LOVP)
- Fsw options: 100 & 130 kHz
- Seamless implementation of isolated and non-isolated topologies
- Peak Current: FSL538A = 860mA and FSL538H = 660 mA

Benefits

- Easy and Rugged design with minimal external components
- High Efficiency across all operating conditions
- Constant Maximum power Limitation
- Robust design in case of poor Ac grid network
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- Allows design trade-offs between space and efficiency
- Design flexibility
- Design versatility

Applications

- Auxiliary & Stand-by Power Supply
- Major Home Appliances power supplies
- Low to medium Power Chargers & Adapters

End Products

- White Goods (Air-con, Fridges, Washing machines,)
- E-Meters
- Industrial equipments
- Consumer Equipment Power Supply

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 _{DS(BR)} Max (V)	I _{peak} (mA)	HV Start-up Min (V)	DS S (mA)	UV LO	Short Circuit Protection	Over Power Compensation	Brown-out	Latch	Package Type
FSL538APG	0.53		Active	Current Mode	100	Yes	Yes	3.8	800	860	Yes	4	8	Yes	Yes	Yes	No	PDI P-7
FSL538HPG	0.53		Active	Current Mode	130	Yes	Yes	3.8	800	660	Yes	4	8	Yes	Yes	Yes	No	PDI P-7