

FPF1038

Low On-Resistance, Slew-Rate-Controlled Load Switch

Product Overview

For complete documentation, see the data sheet.

The FPF1038 advanced load management switch targets applications requiring a highly integrated solution for disconnecting loads powered from DC Power Rail (<6V) with stringent shutdown current targets and high load capacitances (up to 200 μ F). The FPF1038 consists of slew-rate controlled low-impedance MOSFET switch (21 m typical) and other integrated analog features. The slew-rate controlled turn-on characteristic prevents inrush-current and the resulting excessive voltage droop on power rails.

This device has exceptionally low shutdown current drain (<1 μ A maximum) that facilitate compliance in very low standby power applications. The input voltage range operates from 1.2 V to 5.5 V DC to fulfill a wide range of applications in consumer, optical, medical, storage, portable, and industrial device power management.

Switch control is managed by a logic input (active HIGH) capable of interfacing directly with low-voltage control signal/GPIO with no external pull-up required. The device is packaged in advanced fully "green" 1 mm x 1.5 mm Wafer-Level Chip-Scale Packaging (WLCS-P); providing excellent thermal conductivity, small footprint, and low electrical resistance for wider application usage.

Features

- 1.2 to 5.5 V Input Voltage Operating Range • Typical RDS(ON):
- 20 m Ω at VIN=5.5 V
- 21 m Ω at VIN=4.5 V
- 37 m Ω at VIN=1.8 V
- 75 m Ω at VIN=1.2 V • Slew Rate/Inrush Control with tR: 2.7 ms (Typical) • 3 A Maximum Continuous Current Capability • Low I_{q} 1 μ A Quiescent Current • ESD Protected: Above 8 kV HBM, 1.5 kV CDM • GPIO/CMOS-Compatible Enable Circuitry

Applications

- Storage & Peripherals
- Other Wired Communications
- Mobile Handsets
- Wireless LAN Card & Broadband Access
- Media Tablets

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Over Current - Shutdown (Y/N)	Over Current - Current Source (Y/N)	Current Limit (FIXED/ADJ/NO)	Over Voltage Protection (Y/N)	Reverse Current Blocking (Y/N)	FAULT Signal (Y/N)	PGOOD (Y/N)	UVLO (Y/N)	R _{ds(on)typ} (m Ω)	Max Current (A)	Output Discharge (Y/N)	MON Output (Y/N)	Adjustable Slew Rate (Y/N)	V _{iMin} (V)	V _{iMax} (V)	I _q (μ A)	Fuse / Hot Plug (Y/N)	Input / Output	Product Family	Package Type
FPF1038UCX	0.2181		Active	N	N		N	N	N	N	N	20	3.5	N	N	N	1.2	5.5	5.5	N	1:1	IntelIMA X	WLCS-P-6