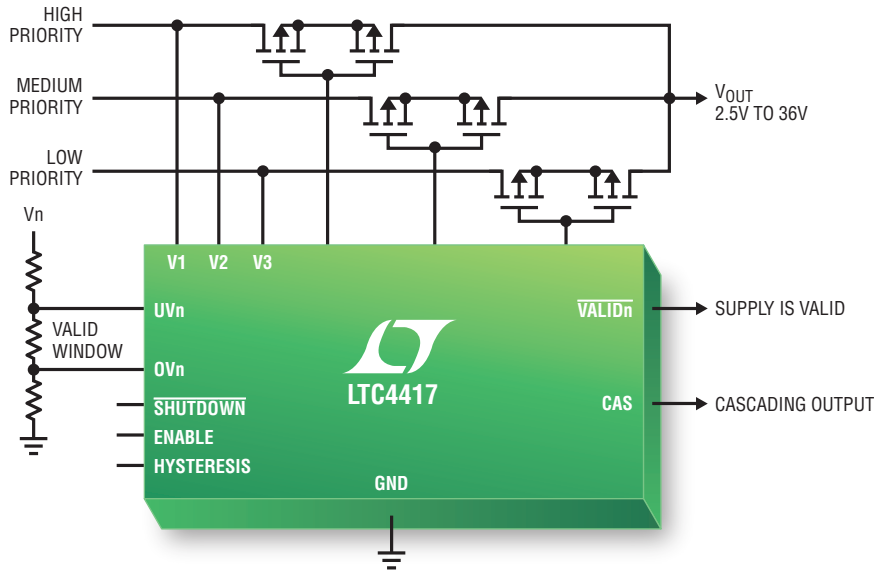


PowerPath Controllers, Ideal Diodes

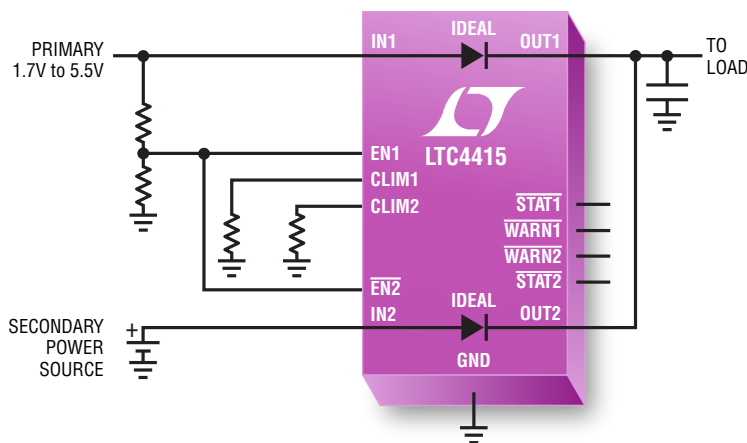
PowerPath™ controllers simplify power source selection and backup switchover in portable and high availability electronics employing multiple, disparate inputs such as wall adapters and batteries. Selection is either by highest voltage, as in a diode-OR, or by highest priority. Linear Technology's PowerPath controllers utilize P-channel MOSFETs as switches and ideal diodes. By dropping significantly less forward voltage than a regular diode, an ideal diode MOSFET conserves power and voltage headroom, critical for low voltage, battery-equipped systems. The lower drop leads to cooler operation, eliminating heat sinks. Low quiescent current and freshness seal mode extends battery run- and standby-time during product operation and storage.

LTC®4417 Triple Supply Prioritized PowerPath Controller

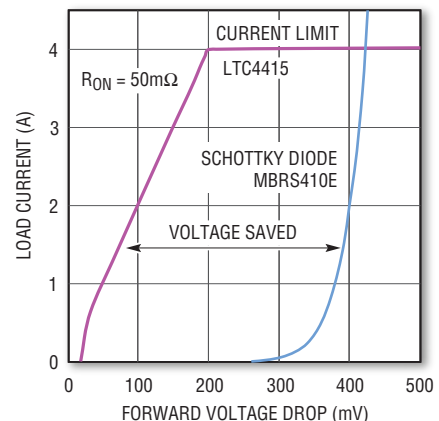


- Connects Highest Priority Valid Supply to Output
- 256ms Long, 1.5% Precise Overvoltage and Undervoltage Validation
- $<1\mu\text{A}$ Draw from Supplies Below V_{OUT}
- -42V Reversed Input Protection
- Blocks Reverse and Cross Conduction While Minimizing Output Droop

LTC4415 Dual Monolithic Ideal Diodes with Adjustable 4A Limit

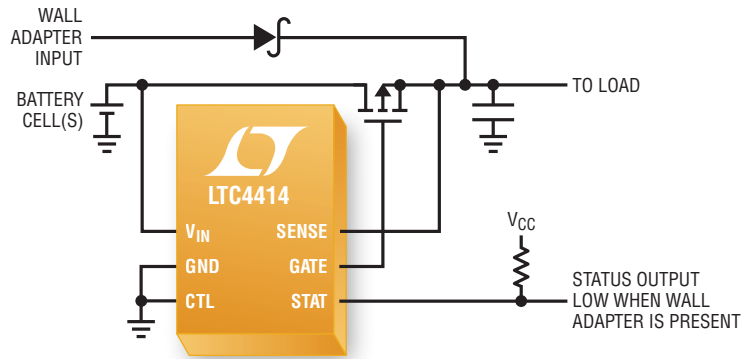


- 15mV Forward Turn-On Voltage
- Smooth Oscillation-Free Diode-OR Switchover
- Load Current Monitor
- Precision Enable Thresholds for Prioritized Switchover
- Current/Thermal Limit Warnings, Status Outputs



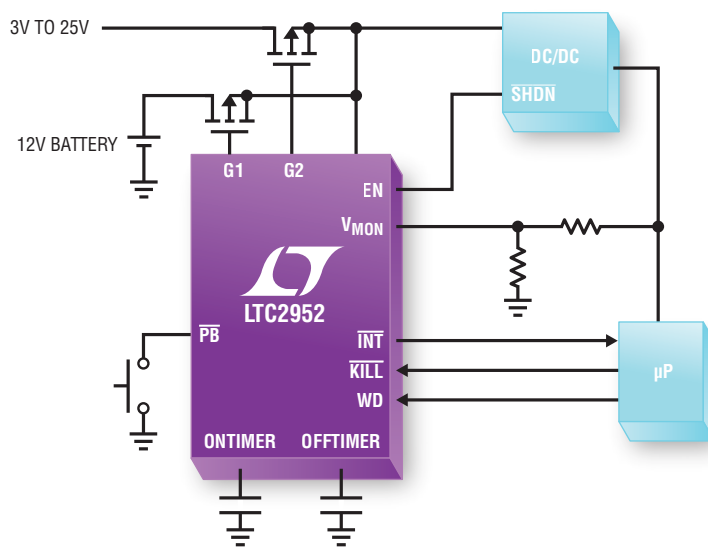
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LTC4414 3V to 36V Ideal Diode Controller for Large PFETs



- Low Loss Replacement for Power Schottky Diode
- MOSFET Gate Protection Clamp
- -14V Reversed Input Protection
- Off Control Input
- Status Output Drives Auxiliary PFET

LTC2952 Pushbutton and Dual Ideal Diode-OR Controller with System Supervisor



- Dual Input Ideal Diode-OR Control
- Pushbutton On/Off Control of Downstream DC/DC Converter
- Adjustable On/Off Debounce Timers
- Simple Interface for Graceful Microprocessor Shutdown
- ±8kV HBM ESD on Pushbutton Input

Linear Technology PowerPath Controllers

Part Number	V _{IN} Range	Max Current	I _Q	Freshness Seal	Function	Packages (mm × mm)
LTC4411	2.6V to 5.5V	2.6A	40μA		17mV Turn-On, 140mΩ Ideal Diode with 2.6A Limit	TSOT23-5
LTC4412HV	2.5V to 36V	FET	18μA		Ideal Diode Controller with Off Control Input	TSOT23-6
LTC4413	2.5V to 5.5V	2.6A	40μA		18mV Turn-On, 140mΩ Dual Ideal Diodes with 2.6A Limit	3 × 3 DFN-10
LTC4414	3V to 36V	FET	36μA		Ideal Diode Controller for Large PFETs	MSOP-8
LTC4415	1.7V to 5.5V	4A	44μA		15mV Turn-On, 50mΩ Dual Ideal Diodes with Adjustable 4A Limit	3 × 5 DFN-16, MSOP-16E
LTC4416	3.6V to 36V	FET	70μA		Dual Ideal Diode Controller with Enable Inputs	MSOP-10
LTC4417	2.5V to 36V	FET	28μA		Triple Supply Prioritized PowerPath Controller	4 × 4 QFN-24, SSOP-24
LTC4419	1.8V to 18V	0.5A	3.6μA	●	Dual Supply Prioritizer for Backup Switchover, 2Ω Switches	3 × 3 DFN-10, MSOP-12E
LTC4420	1.8V to 18V	0.5A	3.6μA	●	LTC4419 with Backup Supply Monitoring and Disconnect	3 × 3 DFN-12, MSOP-12E
LTC2952	2.7V to 28V	FET	65μA		Pushbutton and Dual Ideal Diode-OR Controller, System Supervisor	4 × 4 QFN-20, TSSOP-20