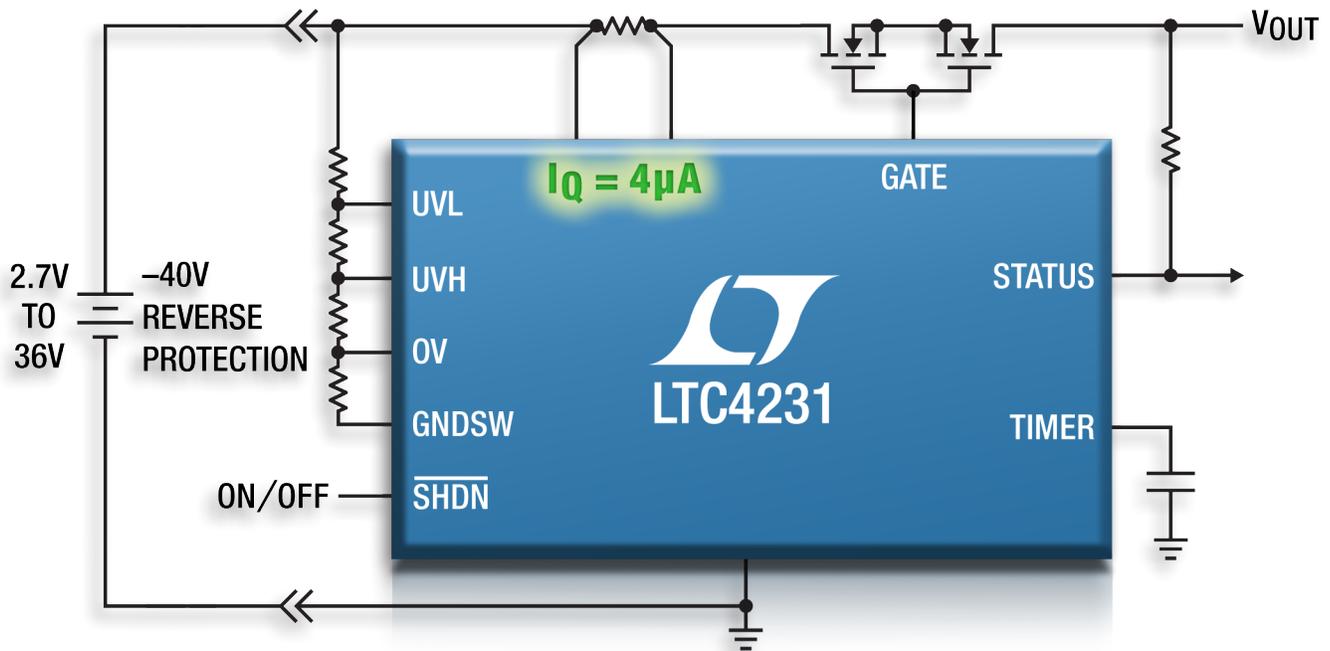


Micropower Hot Swap Controller



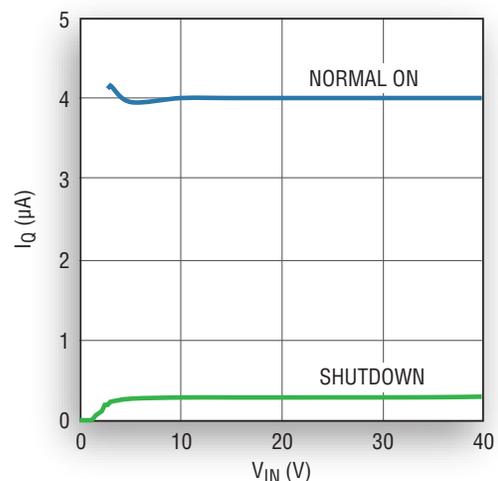
4µA I_Q Hot Swap Controller Protects Battery Against Voltage and Current Faults

The LTC4231 Hot Swap™ controller delivers a micropower solution for safe insertion and removal of boards and batteries in energy conscious applications. Device I_Q (quiescent current) is a mere 4µA while a strobed ground reduces the input voltage divider current by 50x. The system is completely protected against battery deep discharge, output overload or short-circuit, overvoltage and reverse battery connection. Placing the LTC4231 in shutdown mode reduces its I_Q to 0.3µA and turns off the external N-channel power MOSFETs to disconnect downstream circuits, extending battery standby time.

Features

- Enables Safe Board or Battery Insertion and Removal
- Low 4µA Quiescent Current, 0.3µA in Shutdown
- 2.7V to 36V Operating Range
- Reverse Battery Protection to -40V
- Overcurrent Protection
 - Two Level: Circuit Breaker with Higher Current Limit
 - Adjustable Circuit Breaker Delay
 - 1µs (max) Fast Current Limit Response
 - Automatic Retry or Latchoff After Current Fault
- Overvoltage and Undervoltage Protection
 - Adjustable Undervoltage Hysteresis
 - Divider Strobed Ground for Reduced Current
- Controls Single or Back-to-Back N-Channel MOSFETs
- MOSFET On Status Output
- 12-Pin MSOP and 3mm x 3mm QFN Packages

I_Q vs Input Voltage

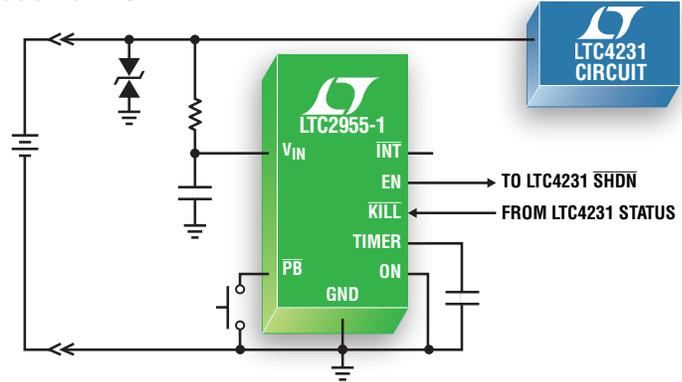


LT, LT, LTC, LTM, Linear Technology and the Linear logo are registered trademarks and Hot Swap and ThinSOT are trademarks of Linear Technology Corporation. All other trademarks are the property of their respective owners.

Micropower Devices for Building Battery Powered Systems

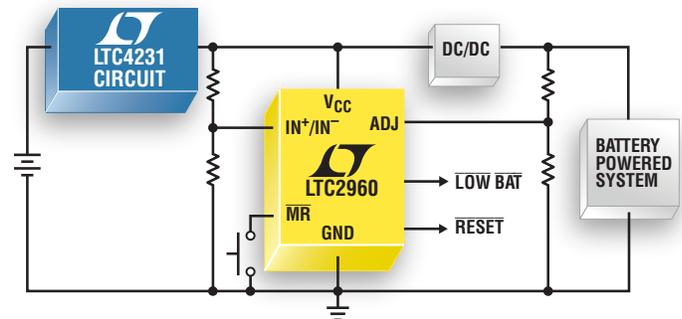
LTC2955 Pushbutton On/Off Controller with Automatic Turn-On

- Automatic Turn-On with Voltage Monitor Input
- 1.2µA Quiescent Current
- 1.5V to 36V Operating Range
- \overline{PB} Input: $\pm 36V$ Range, $\pm 25kV$ ESD HBM
- Simple Interface Allows Graceful μP Shutdown
- Adjustable Turn-Off Timer
- 10-Pin 3mm x 2mm DFN and 8-Pin ThinSOT™ Packages



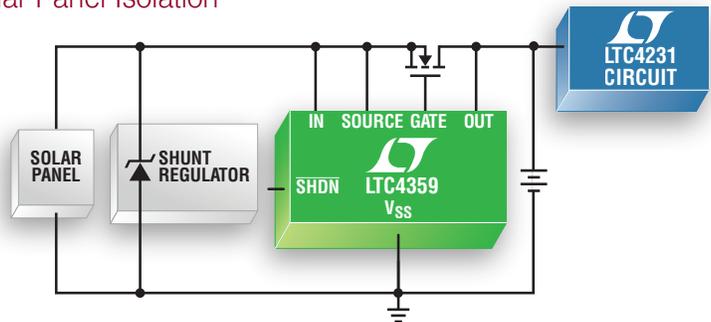
LTC2960 Nano-Current Two Input Voltage Supervisor for Reset Generation

- 850nA Quiescent Current
- 2.5V to 36V Operating Range
- $\pm 1.5\%$ (Max) Threshold Accuracy
- Adjustable Reset Threshold
- Manual Reset Input
- $-40^{\circ}C$ to $125^{\circ}C$ Operation
- 8-Pin TSOT-23 and 2mm x 2mm DFN Packages



LTC4359 Ideal Diode Controller for Lossless Solar Panel Isolation

- Low Loss Replacement for Power Schottky Diode
- 150µA Quiescent Current, 9µA in Shutdown
- 4V to 80V Operating Range
- On/Off Control of Forward Path
- Reverse Input Protection to $-40V$
- $-40^{\circ}C$ to $125^{\circ}C$ Operation
- 8-Pin MSOP and 6-Pin 2mm x 3mm DFN Packages



Other Battery Friendly Devices

Device	V_{IN} (V)	$V_{IN,REV}$ (V)	I_Q (μA)	I_{SHDN} (μA)	Function	Package (mm x mm)
LTC4361	2.5 to 5.5	PFET	230	1.5	Overcurrent and 80V Overvoltage Protection	TSOT23-8, 2 x 2 DFN-8
LTC4364	4 to 80	-40	483	10	Surge Stopper/Hot Swap with Ideal Diode	MSOP-16, SO-16, 4 x 3 DFN-14
LTC4365	2.5 to 34	-40	125	10	OV, UV and Reverse Input Protection	TSOT23-8, 3 x 2 DFN-8
LTC4417	2.5 to 36	-42	28	15	Prioritized Supply Selection from Three Inputs	SSOP-24, 4 x 4 QFN-24