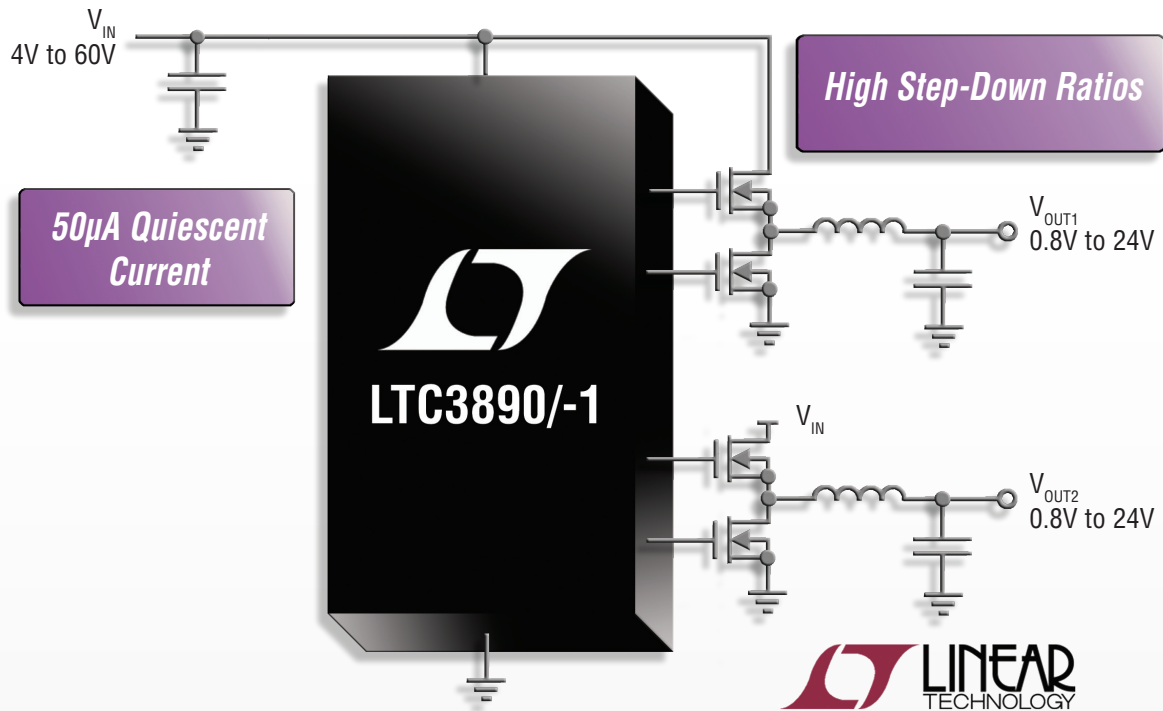


High Voltage Dual Step-Down Controller



The LTC[®]3890/-1 is a high voltage dual output synchronous step-down DC/DC controller that draws only 50µA when in standby mode with one output active and the output voltage in regulation. The 4V to 60V input supply range is designed to protect against high voltage transients, continue operation during automotive cold crank and cover a broad range of input sources and battery chemistries. Each output can be set from 0.8V to 24V at output currents up to 25A with efficiencies as high as 95%, making it well suited for 12V or 24V automotive, heavy equipment, industrial control, robotics and telecom applications.

Features

- Input Voltage Range: 4V to 60V
- Low Quiescent Current
- Up to 25A per Output
- High Step-Down Ratios: 95ns Min On-Time
- Multiphase Capable
- Powerful 1.1Ω Gate Drivers
- Very Low Dropout: 99% Duty Cycle
- R_{SENSE} or Inductor DCR Sensing
- PLL Fixed 75kHz to 850kHz Operating Frequency

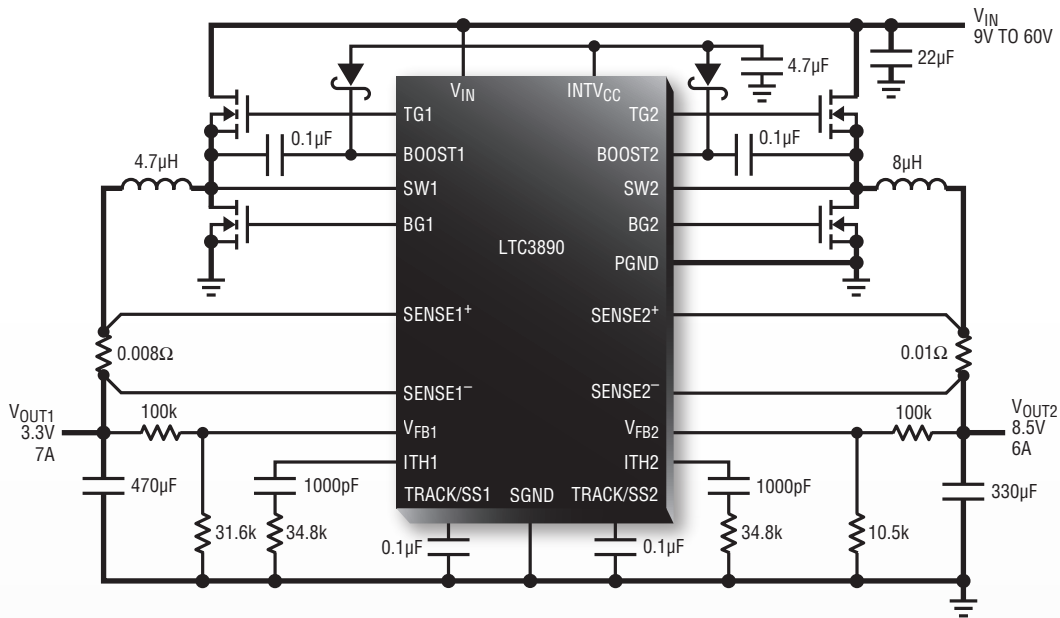
Applications

- Double Battery Automotive/Trucks
- Motor Controls
- Braking Systems
- Infotainment/GPS Systems
- Industrial Controls
- Heavy Equipment
- Robotics
- Telecom
- Avionics

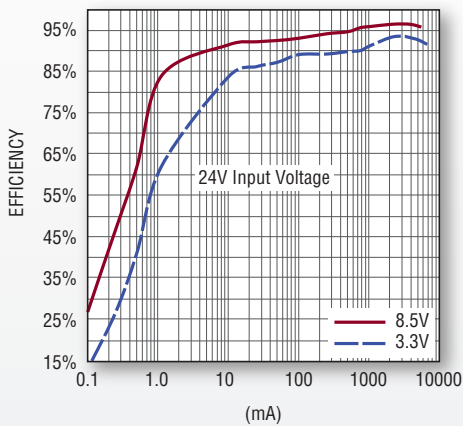


LT, LT, LTC, LTM, Linear Technology and the Linear logo are registered trademarks of Linear Technology Corporation. All other trademarks are the property of their respective owners.

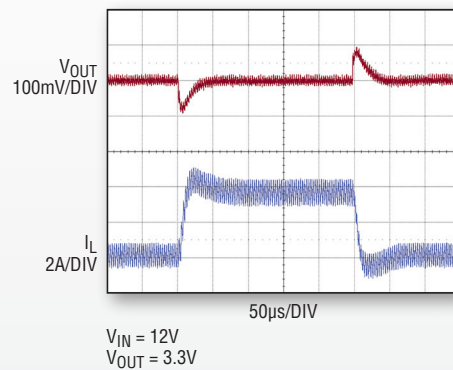
60V Input Eliminates Surge Suppression in Most Applications



Application Schematic for 3.3V/8.5V Outputs from a 9V to 60V Input



Greater Than 95% Efficiency Capable



Fast Recovery from a Step-Load

Related DC/DC Controllers

Part Number	V _{IN} Range (V)	V _{OUT} Range (V)	I _{OUT} Max (A)	I _Q (µA)	Comments
LTC3891	4 to 60	0.8 to 24	25	50	Single Synchronous Step-Down
LTC3824	4 to 60	0.8 to V _{IN}	5	40	Single Non-Synchronous Step-Down
LT3845A	4 to 60	1.23 to 36	25	120	Single Synchronous Step-Down
LTC3857/-1	4 to 38	0.8 to 24	25/25	50	Dual Synchronous Step-Down
LTC3858/-1	4 to 38	0.8 to 24	25/25	170	Dual Synchronous Step-Down
LTC3868/-1	4 to 24	0.8 to 14	25/25	170	Dual Synchronous Step-Down
LTC3859	4.5 to 38	0.8 to 24	10/10/10	55	Triple Synchronous Buck/Buck/Boost