



Negative Input (–4.5V to –80V) Synchronous Buck-Boost/Inverting DC/DC Controller Delivers up to 20A Output Current

MILPITAS, CA – January 22, 2015 – Linear Technology Corporation announces the [LT8709](#), a synchronous PWM controller for negative-to-negative or negative-to-positive DC/DC conversion. The LT8709 is unique in solving the problem of regulating a negative voltage with respect to system ground, without the need of complicated level shifting circuitry. The device's synchronous operation means that the output diode is replaced with a high efficiency P-channel MOSFET, thereby increasing efficiency, allowing for higher output currents (up to 20A), and eliminating the heat sink typically required in medium to high power applications. The LT8709 can be configured in buck, boost, buck-boost, and inverting topologies, making it highly versatile for a wide range of power supply designs.

The LT8709 operates over a –4.5V to –80V input voltage range and produces an output voltage from –0.1V to as high as 60V or from –1.4V to as low as –80V. Its rail-to-rail output current monitor and control enables the device to be configured as a current source. The LT8709 features innovative EN/FBIN pin circuitry for slowly varying input signals and an adjustable undervoltage lockout function. This pin is also used for input voltage regulation to avoid collapsing a high impedance supply.

The fixed operating frequency is selectable from 100kHz to 750kHz and can be synchronized to an external clock. Current mode control provides excellent line and load regulation. The LT8709 is configurable for either forced continuous or pulse-skipping operating modes during light load conditions. Additional features include a power good indicator, thermal shutdown and integrated soft-start circuitry.

The LT8709 is available in a 20-lead TSSOP package, priced starting at \$3.65 each in 1,000-piece quantities. For more information, visit www.linear.com/product/LT8709

Photo Caption: Negative Input Multitopology Synchronous DC/DC Controller


Summary of Features: LT8709

- Wide Negative Input Range: –4.5V to –80V
- Buck, Boost, Buck-Boost and Inverting Topologies
- Output Voltage Ranges: –0.1V to 60V or –1.4V to –80V
- Synchronous Rectification
- Rail-to-Rail Output Current Monitor & Control
- Input Voltage Regulation for High Impedance Inputs
- Power Good Indication Pin
- Forced Continuous or Pulse-Skipping Mode Operation
- Fixed Operating Frequency from 100kHz to 750kHz
- Synchronizable to an External Clock
- Avoids the Collapse of a High Impedance Input Supply
- 20-Lead TSSOP Package

The USA list pricing shown is for budgetary use only. International prices may differ due to local duties, taxes, fees and exchange rates.

About Linear Technology

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for over three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs, µModule® subsystems, and wireless sensor network products. For more information, visit www.linear.com

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