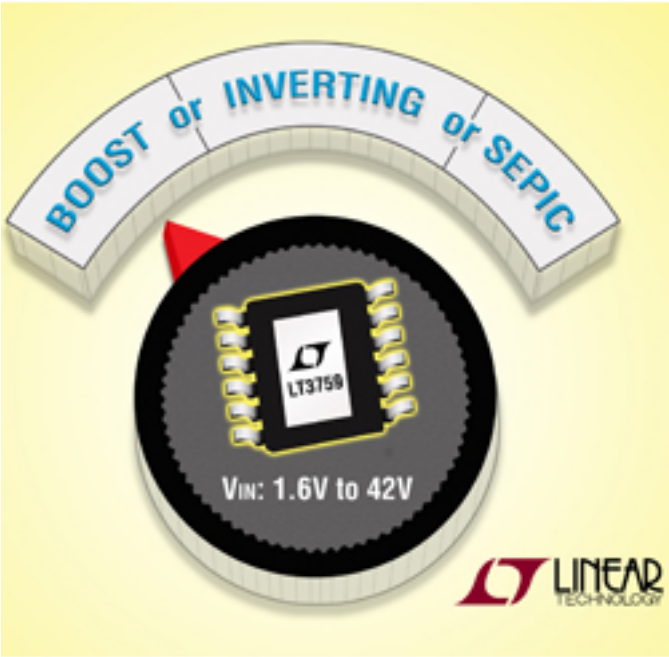
DC-DC Controller Makes Positive or Negative Regulated Voltages



Linear Technology Corporation announces the LT3759, a wide input range DC/DC controller for boost, SEPIC and inverting power supply applications, capable of generating either positive or negative regulated output voltages. The LT3759 has two voltage feedback error amplifiers and reference voltages. One set is for positive output voltages, the other is for negative output voltages, both off a single feedback pin, making the LT3759 a highly versatile DC/DC controller for many types of power supply designs.

The LT3759 operates over an input voltage range from 1.6V to 42V and is well suited for industrial, automotive, medical and telecom applications. With a programmable and synchronizable operating frequency from 100kHz to 1MHz, designers can choose a wide range of inductors and capacitors to optimize size, performance and cost. The fixed frequency, current-mode control architecture results in stable operation over a wide range of supply and output voltages, and the use of all ceramic capacitors, enables a smaller solution size. The LT3759 drives an external
N-channel MOSFET from an internally regulated 4.75V supply. Additional features include programmable soft-start, an accurate 50mV current sense threshold, programmable undervoltage lockout with hysteresis, and a power good signal along with output overvoltage and overcurrent protection.

The LT3759 is available in a thermally enhanced MSOP-12 package with extended and industrial operating junction temperature ranges from -40°C to 125°C while the H-grade version operates over a -40°C to 150°C junction temperature range.The 1000-piece price starts at $2.35 each. For more information, visit www.linear.com/product/LT3759.

Summary of Features: LT3759

• For Boost, SEPIC & Inverting Applications
• Wide Input Operating Voltage:
1.6V to 42V
• Positive or Negative Output Voltage Setting with a Single Feedback Pin
• Selectable Fixed 100kHz to 1MHz Operating Frequency
• Synchronizable to an External Clock
• Programmable Soft Start
• True Current-Mode Control
• Internal 4.75V Low Dropout Voltage Regulator
• Programmable Input Undervoltage Lockout with Hysteresis

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