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## **20V, 20A Monolithic Synchronous Silent Switcher 2 Buck Regulator Reduces EMI & Enables High Power Density Applications**

MILPITAS, CA & NORWOOD, MA – July 24, 2017 – Analog Devices, Inc., which recently acquired Linear Technology Corporation, announces the [LTC7150S](#), a 20V, 20A monolithic synchronous buck converter with differential  $V_{OUT}$  remote sensing. The device's unique phase lockable controlled on-time constant frequency current mode architecture eases compensation and is ideal for high step-down ratio applications that operate at high frequencies while demanding fast transient response. The LTC7150S uses Silent Switcher<sup>®2</sup> technology, including integrated bypass capacitors to deliver a highly efficient solution with excellent EMI performance while easing layout constraints. Multiphase operation with up to 12 phases provides the capability to directly parallel multiple devices for higher current with minimal increase in input and output capacitance.  $V_{OUT}$  remote sense ensures that voltage regulation at the load is accurate regardless of load current or board layout. The LTC7150S's wide 3.1V to 20V input range supports a wide variety of applications, including most intermediate bus voltages, and is compatible with many battery types. Integrated N-channel MOSFETs deliver continuous load currents as high as 20A with minimal thermal derating, at output voltages ranging from 0.6V to  $V_{IN}$ , ideal for point-of-load applications such as powering high current/low voltage DSPs, FPGAs and ASICs. Other applications include telecom/datacom systems, distributed power architectures and general high power density systems.

The LTC7150S's very low 25ns minimum on-time allows for a high step-down ratio power supply at high frequencies supporting both forced continuous and discontinuous mode operation. The operating frequency is selectable from 400kHz to 3MHz and can be synchronized to an external clock. The LTC7150S's total differential output voltage accuracy is  $\pm 1\%$  over the  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$  operating junction temperature range. Additional features include differential remote  $V_{OUT}$  sensing directly at the load, PHMODE phase selector pin, accurate 1.2V RUN pin threshold,  $V_{IN}$  overvoltage protection, power good and programmable soft-start/tracking.

The LTC7150S is available in a thermally enhanced 42-lead  $5\text{mm} \times 6\text{mm} \times 1.3\text{mm}$  BGA package, in both RoHS lead-free and leaded SnPb (63/37) finishes. The E and I grades are

specified from  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$  operating junction temperature range. The 1,000-piece price starts at \$5.60 each for the E grade. All versions are available from stock. For more information, visit [www.linear.com/product/LTC7150S](http://www.linear.com/product/LTC7150S).

**Photo Caption:** 20V<sub>IN</sub> 20A Monolithic Silent Switcher 2 Synchronous Buck for High Power PoL Applications

### Summary of Features: LTC7150S

- Silent Switcher<sup>®</sup>2 Architecture
- High Efficiency: Up to 96%
- Output Current: 20A
- V<sub>IN</sub> Range: 3.1V to 20V
- Integrated Power N-Channel MOSFETs (6mΩ Top, 2.5mΩ Bottom)
- Differential V<sub>OUT</sub> Remote Sense
- Adjustable Frequency: 400kHz to 3MHz
- PolyPhase<sup>®</sup> Operation: Up to 12 Phases
- Output Tracking & Soft-Start
- Reference Accuracy: 0.6V ±1%
- Current Mode Operation for Excellent Line & Load Transient Response
- Synchronizable Frequency from 400kHz to 3MHz
- Accurate 1.2V RUN Pin Threshold
- Supports Forced Continuous/Discontinuous Modes
- 42-Lead 5mm × 6mm × 1.3mm BGA Package

Pricing shown is for budgetary use only and may differ due to local duties, taxes, fees and exchange rates.

**Analog Devices just got more Powerful. On March 10, Analog Devices acquired Linear Technology, creating the premier high performance analog company. More info at <http://lt.linear.com/07c>**

### About Analog Devices

Analog Devices (NASDAQ: ADI) is the leading global high-performance analog technology company dedicated to solving the toughest engineering challenges. We enable our customers to interpret the world around us by intelligently bridging the physical and digital with unmatched technologies that sense, measure, power, connect and interpret. Visit <http://www.analog.com>

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