



40V_{IN}, 2.1A Rail-to-Rail LDO+ Now Offered in High Temp, 150°C H-Grade in TSSOP Package

MILPITAS, CA – September 22, 2016 – Linear Technology Corporation announces a new higher temperature “H-grade” version of the LT3086 in the TSSOP package. The [LT3086](#) is part of Linear’s feature-rich LDO+™ family, offering significant functionality previously unavailable in linear regulators. The 40V, 2.1A low dropout linear regulator (LDO) includes current monitoring with externally settable current limit and temperature monitoring with external control of thermal limit temperature. The device includes a programmable power good status flag, cable drop compensation and easy paralleling. The current reference in the LT308x LDO family provides regulation, independent of output voltage.

The LT3086 features a 1.4V to 40V input voltage range. A single resistor programs output voltage from 0.4V to 32V and dropout voltage is only 330mV at 2.1A. The LT3086 achieves line and load regulation of 0.1%, independent of output voltage. The trimmed, precision 50μA current reference is ±1% accurate, providing ±2% output voltage tolerance over line, load and temperature. Output voltage regulation, bandwidth, transient response and noise (40μV_{RMS}) remain independent of output voltage due to the device’s unity gain voltage follower architecture.

Unique internal circuitry allows paralleling of multiple LT3086s for higher load current and heat spreading without needing external ballast resistors. Programmable cable drop compensation cancels regulation errors caused by line drops to the load. Output current and temperature monitoring, in addition to a power good flag with programmable threshold, provide system monitoring and diagnostic/debug capability. Internal fault circuitry includes thermal shutdown and current limit with foldback. Thermal limit and current limit are externally programmable. The device’s reverse-battery and reverse-current protection add robustness to the end design.

The LT3086HFE adjustable output version is offered in the thermally enhanced TSSOP surface mount package, specified with an operating junction temperature range of –40°C to 150°C. Devices are available from stock and 1,000-piece pricing starts at \$3.70 each. For more information, visit www.linear.com/product/LT3086

Photo Caption: 40V 2.1A Low Noise LDO+ in 150°C H-Grade in TSSOP


Summary of Features: LT3086

- Operating Junction Temperature Range: –40°C to 150°C (H-Grade TSSOP Only)
- Wide Input Voltage Range: 1.4V to 40V
- 1 Resistor Sets Output Voltage: 0.4V to 32V
- Output Current: 2.1A
- ±2% Tolerance Over Line, Load & Temperature
- Output Current Monitor: $I_{MON} = I_{OUT}/1000$
- Temperature Monitor with Programmable Thermal Limit
- Programmable Current Limit
- Programmable Cable Drop Compensation
- Parallel Multiple Devices for Higher Current
- Dropout Voltage: 330mV
- 1 Capacitor Soft-Starts Output & Decreases Noise
- Low Output Noise: 40μV_{RMS} (10Hz to 100kHz)
- Precision, Programmable External Current Limit
- Power Good Flag with Programmable Threshold
- Ceramic Output Capacitors: 10μF Minimum
- Quiescent Current in Shutdown: <1μA
- Reverse-Battery, Reverse-Current Protection
- Available in 4mm × 5mm 16-Lead DFN, 16-Lead TSSOP, 7-Lead DD-PAK & 7-Lead TO-220 Packages

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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