



News Release | www.linear.com

Surface Mount 3A LDO is Easily Paralleled for High I_{OUT} without Any Hot Spots

MILPITAS, CA – February 8, 2011 – Linear Technology Corporation announces the [LT3083](#), a 3A LDO that can be paralleled for heat spreading and higher output current, and is adjustable with a single resistor. This regulator is based on the same innovative architecture as its 1.1A predecessor, the LT3080, which uses a current source reference for single resistor output voltage setting. With the SET pins tied together, sharing the current and spreading the heat is accomplished between multiple regulators using a small length of PC trace as ballast, enabling multi-amp linear regulation in all surface-mount systems without heat sinks.

The LT3083 achieves unmatched regulation of under 2mV at any output voltage. Featuring wide input voltage range from 1.2V to 18V (DD-Pak and TO-220 packages), the full current dropout is only 310mV (when operating with a separate bias supply). The output voltage is programmable with a single resistor from 0V to 17.5V, and the on-chip trimmed 50 μ A current reference is trimmed to $\pm 1\%$. The regulation and output noise (40 μ Vrms) is independent of output voltage due to the device's voltage follower architecture. The high output current, wide V_{IN} & V_{OUT} capability, tight line and load regulation, high ripple rejection, low external parts count and paralleling capability make the LT3083 ideal for modern higher-current, multi-rail systems.

According to Robert Dobkin, Linear Technology's Vice President, Engineering and CTO, "The LT3083 regulator provides designers with an all-surface-mount solution for high

current, low ripple applications such as FPGAs, data communications or serial links. The device's separate collector pin minimizes power dissipation when generating additional voltages in multi-rail power systems."

The LT3083 is offered in a variety of thermally enhanced surface-mount compatible packages, including a low profile (0.75mm) 12-lead 4mm x 4mm DFN and a 16-lead thermally enhanced TSSOP; both dissipate 2W in surface mount applications with no heat sink. The LT3083 is also available in 5-lead TO-220 and DD-Pak power packages for mounting to heat sinks for higher power dissipation. 1,000-piece pricing starts at \$3.80, \$4.40 and \$10.26 for the DFN package in E, I and MP grades respectively, and at \$3.93, \$4.53 and \$10.62 for the TSSOP package E, I and MP grades, respectively. 1k pricing for the TO-220 and DD-Pak power packages is at \$4.13, \$4.73 and \$11.16 for the E, I and MP grades respectively. For more information, visit www.linear.com/3083


Photo Caption: Next-Generation, Single-Resistor, Easily Paralleled 3A LDO

Summary of Features: LT3083

- Outputs May be Paralleled for Higher Output Current or Spreading PCB Heat
- Output Current: 3A
- Single-Resistor Programs Output Voltage
- $\pm 1\%$ Accurate 50 μ A SET Pin Current
- Wide V_{IN} Range: 1.2V to 18V (DD-Pak and TO-220 Packages)
- Adjustable V_{OUT} Range: 0V to 17.5V
- Low Noise: 40 μ V_{RMS} (10Hz to 100kHz)
- Low Dropout Voltage: 310mV
- <1mV Load Regulation
- <0.001%/V Line Regulation
- Stable with Minimum 10 μ F Ceramic Capacitor
- Current Limit with Foldback & OverTemperature Protected
- Available in 16-Lead TSSOP, 12-Lead 4mm x 4mm DFN, 5-Lead TO-220 & 5-Lead Surface Mount DD-PAK Packages

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 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, and μ Module[®] subsystems.

LT, LTC, LTM, μ Module and  are registered trademarks of Linear Technology Corp. All other trademarks are the property of their respective owners.

Press Contacts:

North America / Worldwide

John Hamburger, Director Marketing
Communications
jhamburger@linear.com
Tel 408-432-1900 ext 2419

Doug Dickinson, Media Relations Manager
ddickinson@linear.com
408-432-1900 ext 2233

UK & Nordic

Alan Timmins
alan@ezwire.com
Tel: +44-1-252-629937