TI Quiets the Noise with Innovative 1-A Power Converter

Today's noise-sensitive medical, industrial and telecom designs need smooth, quiet power sources to operate at peak performance. Texas Instruments introduced a new class of voltage regulators designed to deliver the industry's lowest-noise 1-A switching power supply without sacrificing efficiency and power performance. The TPS54120, the first in TI's family of QuietSupply regulators, reduces switching noise by up to 99 percent, compared to other power conversion devices, and helps maximize the performance of precision data converters and amplifiers and sensitive clock distribution circuits used in applications, such as telecommunications, test equipment, and high-end audio and video equipment.

For more information, visit: www.ti.com/tps54120-pr [1].

Key features and benefits of TPS54120
• 99-percent noise reduction: 9 µVRMS at 100 Hz to 100 kHz, and 17 µVRMS at 100 Hz to 1 MHz
• Performance: High power supply rejection ratio (PSRR) of 83 db at 10 kHz, 70 dB at 100 kHz
• Design flexibility: Synchronizable to external clock from 200 kHz to 1.2 MHz
• Wide input voltage range of 4.5 V to 17 V, adjustable output of 0.8 V to 6.0 V

Quiet power management
In addition to the TPS54120, TI also offers a large selection of low dropout linear regulators (LDOs) with low noise, wide input voltage and high PSRR, such as the TPS7A8101, TPS7A3001, TPS7A4901 and the ultra-low noise LP5900 and LP8900 regulators. Complete reference designs and evaluation modules are also available to speed time to market.

Availability and pricing
The TPS54120 is available in volume now from TI and its authorized distributors in a thermally enhanced 3.5-mm x 5.5-mm, 24-pin QFN package, and has a suggested resale price of $1.95 each in 1,000-unit quantities. The easy-to-use TPS54120EVM-103 contains all of the external components required for a low noise, 1-A solution with internal thermal and current limit shutdowns, power good output monitor, tracking and enabling/disabling circuitry.

Find out more about TI's LDO portfolio, application notes and evaluation modules:
• New LDO Quick Reference Guide, including National and TI combined portfolio of LDOs.
• Vast library of easy-to-use application design notes using TI linear regulators.
• Video collection about TI LDOs

• Join the TI E2E Power Community to ask questions and help solve problems with fellow engineers: www.ti.com/powerforum-pr [2].

Posted by Janine E. Mooney, Editor

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Links:
[1] http://www.ti.com/tps54120-pr
[2] http://www.ti.com/powerforum-pr