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Improve Digital Support of Battery Charging and DC-DC Conversion Applications with New Digitally Enhanced Power Analog Controllers from Microchip

MCP19124/5 Contains Independent Voltage and Current Control Loops Plus a Full Suite of Configurable Performance Parameters

CHANDLER, Ariz., Sept. 27, 2016 /PRNewswire/ -- A new Digitally Enhanced Power Analog (DEPA) controller designed to regulate current, regulate voltage, and monitor temperature is now available from Microchip Technology Inc. (NASDAQ: MCHP), a leading provider of microcontroller, mixed-signal, analog and Flash-IP solutions. The device improves digital support for battery charging and is ideal for DC-DC conversion in server, consumer, industrial and automotive applications.

The **MCP19124/5** handles configurable charging algorithms for any chemistry, with capabilities for cell balancing and super capacitor charging. No other single-chip battery charging solution can be configured with any desired charging profile, for any battery chemistry, voltage or cell arrangement. Users may develop their own unique charging methods and implement them as well. Any voltage, current, temperature or duration can be used to trigger a transition to a new portion of the charge profile. These devices are also well suited for any DC-DC application requiring tight voltage or current regulation; capable of supporting flyback, boost, SEPIC, or Cuk topologies.

Benefits of the MCP19124/5 include:

- A unique combination of independent voltage and current control loops. Either the current control loop can regulate to a specified target current, or the voltage control loop can regulate to a target voltage. Each analog control loop has a separate

feedback network for independent pole-zero placement and the ability to perform zero cross detection for quasi-resonant operation.
- The ability to dynamically switch from a voltage target to a current target, or vice-versa, by switching between the two control loops. The internal architecture ensures this transition is monotonic, without glitching or transient events. This control configuration even allows for pre-positioning of the output voltage at open or no load conditions, greatly minimizing transients when a load is applied.
- A full suite of configurable, adjustable performance parameters. These parameters are set in the internal registers of the device (no external components required), and the settings are dynamically adjustable during operation.
- Integrated linear regulator, MOSFET drivers, 8-bit PIC® microcontroller core, analog-to-digital converter, precision oscillator and analog control loops for a compact solution.

"Smarter, more capable battery charging solutions have become vitally important for our customers," said Keith Pazul, director of marketing for Microchip's Analog, Power, and Interface Division. "Customers have been asking for the ability to run their own proprietary battery charging profiles in compact, customizable charge circuits, and now they can. This is the most flexible, most capable single-chip charging solution on the market today."

For more information about MCP19124/5, visit
http://www.microchip.com/wwwproducts/en/MCP19125

Pricing and Availability
The following devices are available in volume production with pricing in 10,000 unit quantities:

- MCP19124-E/MJ, 4 x 4mm QFN package, starting at $2.87
- MCP19124T-E/MJ, 4 x 4mm QFN package, starting at $2.87 (tape and reel not available for samples)
- MCP19125-E/MQ, 5 x 5mm QFN package, starting at $3.03
- MCP19125T-E/MQ, 5 x 5mm QFN package, starting at $3.03 (tape and reel not available for samples)

For additional information, contact any Microchip sales representative or authorized worldwide distributor. To purchase products mentioned in this press release, go to **microchipDIRECT (http://www.microchipdirect.com/ProductSearch.aspx?Keywords=MCP19125)** or contact one of Microchip's authorized distribution partners.

Resources

High-res Images Available Through Flickr or Editorial Contact (feel free to publish):

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About Microchip Technology
Microchip Technology Inc. (NASDAQ: MCHP) is a leading provider of microcontroller, mixed-signal, analog and Flash-IP solutions, providing low-risk product development, lower total system cost and faster time to market for thousands of diverse customer applications worldwide. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality. For more information, visit the Microchip website at **www.microchip.com**.

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