

## Power Integrations' New CAPZero(TM) ICs Automatically and Safely Discharge X Capacitors, Eliminating Losses in Power-Supply EMI Filters

4/14/2010

Self-Powered CAPZero Devices Require No External Bias, Offer High Common-Mode Surge Immunity with No External Ground Connection

SAN JOSE, Calif., Apr 14, 2010 (BUSINESS WIRE) -- Power Integrations (Nasdaq: **POWI**), the leader in high-voltage integrated circuits for energy-efficient power conversion, today launched **CAPZero**, a family of innovative, two-terminal, automatic X capacitor discharge ICs that eliminate power losses while allowing power supplies to comply with safety standards.

X capacitors are typically positioned across a power supply's input terminals to filter differential EMI noise. Alone, these components could present a safety hazard because they can store unsafe levels of high-voltage energy for long periods of time after the AC is disconnected. To meet safety standards, resistors are commonly used in parallel with the X capacitor and across the AC line to provide a discharge path. However, these discharge resistors produce a constant power loss while the AC is connected and are a significant contributor to no-load and standby input power consumption.

**CAPZero** acts as a smart high-voltage switch when placed in series with discharge resistors. When AC voltage is applied, **CAPZero** blocks current flow in the X capacitor safety discharge resistors, reducing the power wasted in these components to zero at 230 VAC. When the AC voltage is disconnected, **CAPZero** automatically and safely discharges the X capacitor by closing the circuit through the bleed resistors and directing the energy away from the exposed AC plug. This approach provides engineers with total flexibility in their choice of the X capacitor used to optimize differential-mode EMI filtering without worrying about the effect of the required bleed resistors on system no-load and standby power budget. The innovative two-terminal design inherently meets international safety

standards for all open and short-circuit fault tests, allowing **CAPZero** to be used before or after the system input fuse.

Comments David New, product marketing manager at Power Integrations: "New energy-efficiency requirements have highlighted X capacitor discharge resistors as a significant source of power loss, especially in applications over 50 watts. **CAPZero** is a simple, cost-effective solution that eliminates this loss and requires virtually no change to system or PCB layout. It is easy to design-in and requires minimal effort to retrofit into existing designs, easily bringing them into compliance with new standards."

**CAPZero** is suitable for all AC-DC converters with X capacitors that require very low standby power, and is offered with 825 V or 1000 V MOSFETs to support a variety of power supply design needs. It is ideal for a wide range of applications, including PCs, servers/workstations, monitors and TVs, printers and notebooks, as well as appliances requiring EuP Lot 6 compliance and adapters requiring ultra-low no-load consumption.

**CAPZero** devices are available now in an SO-8 package at \$0.40 each for 10,000-piece quantities. The product datasheet, design ideas, and introductory video are available now on the Power Integrations website at [www.powerint.com/lp/capzero](http://www.powerint.com/lp/capzero).

## About Power Integrations

Power Integrations is the leading supplier of high-voltage integrated circuits used in energy-efficient power conversion. The company's innovative technology enables compact, energy-efficient power supplies in a wide range of electronic products, in AC-DC, DC-DC and LED lighting applications. Since its introduction in 1998, Power Integrations' EcoSmart(R) energy-efficiency technology has saved an estimated \$4.1 billion of standby energy waste and prevented millions of tons of CO2 emissions. The company's **Green Room** web site provides a wealth of information about "energy vampires" and the issue of standby energy waste, along with a comprehensive guide to energy-efficiency standards around the world. Reflecting the environmental benefits of EcoSmart technology, Power Integrations is included in clean-technology stock indices sponsored by the **Cleantech Group** (Amex: CTIUS) and **Clean Edge** (Nasdaq: CELS). For more information, please visit [www.powerint.com](http://www.powerint.com).

SOURCE: Power Integrations, Inc.

Power Integrations, Inc.  
Peter Rogerson, 408-414-8573  
[progerson@powerint.com](mailto:progerson@powerint.com)  
or  
Billings Europe PR Agency

Nick Foot, +44 (0) 1491-636 393  
**nick.foot@billings-europe.com**

Copyright Business Wire 2010