

STMicroelectronics Innovates Integrated Protection ICs Enabling Smaller, Sleeker Power-over-Ethernet Equipment

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Power over Ethernet (PoE), or IEEE 802.3at, is the industry standard enabling devices such as Voice-over-IP (VoIP) phones, wireless-LAN access points, RFID tag readers, sensors, or cameras to connect into a network without also requiring a nearby wall outlet for power. This enhances convenience and flexibility for end users, and also reduces equipment costs, as no external AC/DC power adapter is required. In 2008, VDC Research Group predicted that annual shipments of PoE-enabled Ethernet switches will increase to over 132 million ports by 2012.

STMicroelectronics (NYSE: STM), a world leader in protection ICs, has simplified the design of equipment for powering devices connected to an Ethernet network by introducing an integrated surge-protection IC that meets Power-over-Ethernet specifications and protects against high-voltage surges, including electrostatic discharge (ESD). ST's PEP01-5841 protection IC is used in Power Sourcing Equipment (PSE), such as PoE-enabled Ethernet switches or hubs, which drive the specified 48V supply onto the Ethernet cable.

The PoE power-supply circuitry in the Ethernet hub or switch can withstand transients on the power lines of up to 100V. Extra protection is necessary to prevent very high voltage surges, such as ESD or EOS, from damaging the power supply. Discrete components are usually used to clamp surges to a voltage below 121V (when specified), but the PEP01-5841 integrates a 100V clamping protection device and filtering capacitors for up to four PoE outputs in a single 5 x 6mm component. This simplifies design and saves up to 55 percent of pc-board printed-circuit-board space.

The PEP01-5841 is the first device providing 1kV surge protection as specified by IEC 61000-4-5 that also has a clamping voltage compatible with the 100V PSE controller. ESD protection satisfies worldwide standards including IEC 61000-4-2 and MIL-STD-883 Method 3015.

The PEP01-5841 is available immediately, in the industry-standard SO-8 package, priced at \$0.25 in quantities of 10,000 pieces.

STMicroelectronics is a global leader serving customers across the spectrum of electronics applications with innovative semiconductor solutions. ST aims to be the undisputed leader in multimedia convergence and power applications leveraging its vast array of technologies, design expertise and combination of intellectual property portfolio, strategic partnerships and manufacturing strength. In 2008, the Company's net revenues were \$9.84 billion. Further information on ST can be found at www.st.com

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