NEWS RELEASE

TE Connectivity's High-Current Reflowable Thermal Protection Device Helps Meet Demanding Reliability Requirements of Automotive Electronics

New HCRTP device's high-current capability (90A at 23ºC) offers a robust, simple approach for complying with AECQ standards for under-the-hood applications

MENLO PARK, Calif. – November 11, 2014 –

To address the growing need to increase reliability and safety in extremely harsh automotive environments, TE Connectivity's Circuit Protection business unit (TE Circuit Protection) has introduced a High-Current Reflowable Thermal Protection (HCRTP) device. Specifically suited to high-power, high-current automotive applications – such as ABS modules, glow plugs and engine cooling fans – the robust HCRTP device (model: RTP200HR010SA) can withstand hold currents of up to 90A at room temperature (23ºC) and 45A at 140ºC. In addition to helping automotive designers comply with stringent AECQ automotive standards (including the AECQ vibration test), the surface-mountable HCRTP device speeds installation.

The HCRTP device builds on TE Circuit Protection's RTP technology. This technology helps protect electronic systems in the event that power FETs, capacitors or other power components fail due to increased resistance, thus causing thermal runaway. The innovative technology utilizes a one-time electrical activation process to become thermally sensitive. Prior to activation, the HCRTP device can withstand lead (Pb)-free solder reflow processes up to 260°C without opening. But following installation, the one-time electrical arming process initiates a lower thermal threshold of 210°C. After arming, which is typically done at end of line testing after reflow, the device will open when the critical junction exceeds the 210°C open temperature.

Available in a low-profile (3.7mm max.) package, the HCRTP device can be installed using industry-standard, Pb-free, SMD (surface mount device) assembly and reflow processes. In comparison, radial-leaded thermal fuses must be installed after reflow. The HCRTP device therefore enables cost-effective and simple installation while also optimizing thermal coupling with the printed circuit board, or PCB.

"With the increased power of automotive electronics, thermal protection devices must handle higher currents to maintain reliability," said Faraz Hasan, Sr. Global Strategic Automotive Marketing Manager for TE Circuit Protection. "For example, an integrated ABS module combining ABS, stability control and an electronic parking brake generates a significant amount of heat at the input connector or power MOSFET if a failure or fault condition occurs. In the event of a component failure, where the currents are extremely high, the high-current-withstand capability of the HCRTP device can help prevent a potentially damaging event caused by thermal runaway. This is a key consideration for automotive electronics designers who need to comply with AECQ tests."

Price:	Available upon request
Availability:	Samples available now
Delivery:	12 weeks ARO

ABOUT TE CONNECTIVITY

TE Connectivity (NYSE: TEL) is a $13 billion world leader in connectivity. The company designs and manufactures products at the heart of electronic connections for the world's leading industries including automotive, energy and industrial, broadband communications, consumer devices, healthcare, and aerospace and defense. TE Connectivity's long-standing commitment to innovation and engineering excellence helps its customers solve the need for more energy efficiency, always-on communications and ever-increasing productivity. With nearly 90,000 employees in over 50 countries, TE Connectivity makes connections the world relies on to work flawlessly every day. To connect with the company, visit: www.TE.com.

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