

NEC Electronics Europe expands NP-Series with robust PowerMOSFETs

New devices combine higher avalanche capability and higher maximum channel temperature with low on-state resistance

DÜSSELDORF (Germany), December 10, 2007 — NEC Electronics Europe today announced it has extended its portfolio of low-voltage power management devices (PMD). Part of the NP-Series, the new MOSFETs feature improved ruggedness, with respect to avalanche capability and channel temperature, combined with low values for on-state resistance ($R_{DS(on)}$) and input capacitance (C_{iss}). Devices with two V_{DSS} ratings (40 V and 55 V), two I_D (DC) ratings (90 A, 100 A) and logic/non-logic gate drive types are available in three popular packages, TO-220, TO-262 and TO-263ZP. All 24 devices are fully AEC-Q101 and RoHS compliant.

The improved ruggedness is achieved by the recently developed UMOS-2R process, an enhancement of NEC Electronics' UMOS-2 trench process with 0.5 μm design rule. This results in a maximum repetitive avalanche energy rating of 1000 mJ and supports a maximum channel temperature of 200 °C. Typical values for $R_{DS(on)}$ range from 2.9 m Ω to 5.8 m Ω and for C_{iss} from 5500 pF to 9500 pF.

Meeting the increasing demand for reliable systems, these devices are ideal for applications with higher ambient temperatures (eg, engine cooling fans), higher avalanche capability (eg, HVAC blower motor drives), and higher current capability (eg, electric or electro-hydraulic power steering). Samples are available for all devices and volume production has started.

The NP-Series is part of NEC Electronics' family of low-voltage switching devices that provides efficient power management for power supplies, automotive systems, motor control, and office, robotic and uninterruptible power applications. For more information about the new MOSFETs and other PMDs from NEC Electronics visit www.eu.necel.com/mosfet.

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About NEC Electronics (Europe) GmbH

NEC Electronics (Europe) GmbH, headquartered in Duesseldorf, Germany, is a leading developer and supplier of semiconductor products in Europe. Committed to meeting customers' cost, performance and time-to-market requirements, the company offers solutions ranging from standard products to system-on-a-chip (SoC) solutions, as well as customized products for next-generation designs. Our customers also benefit from state-of-the-art manufacturing from the global production network of our parent company, NEC Electronics Corporation. Additionally, NEC Electronics (Europe) GmbH is the exclusive European sales and marketing channel of LCD modules from NEC LCD Technologies Ltd.. For more information visit <http://www.eu.necel.com>.

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