



Press Release

Infineon's Next Generation CoolMOS™ Delivers 50 Percent Improved Switching Losses; EiceDRIVER™ is Setting New Standards in System Robustness

Munich, Germany – May 19, 2015 – Infineon Technologies AG (FSE: IFX / OTCQX: IFNNY) has launched a new family of CoolMOS™ C7 series superjunction (SJ) MOSFETs. The 600 V series offers a 50 percent reduction in turn-off losses compared to the CoolMOS™ CP, offering a GaN-like level of performance in PFC, TTF and other hard-switching topologies. The CoolMOS C7 achieves an industry first by delivering an area-specific on resistance ($R_{DS(ON)} \cdot A$) of just 1 Ω per mm^2 , extending Infineon's portfolio of products with lowest $R_{DS(ON)}$ per package to support customer efforts to further increase power density. The new CoolMOS series features ultra-low switching losses and targets high power SMPS applications such as server, telecom, solar and industrial applications requiring high efficiency, a reduced Bill of Materials (BoM) and total cost of ownership (TCO).

Efficiency and TCO driven applications such as hyperscale data centers and telecom base stations benefit from the switching loss reduction offered by the CoolMOS C7. Efficiency gains of 0.3 percent to 0.7 percent in PFC and 0.1 percent in LLC topologies can be achieved, leading to significant total cost of ownership benefits. In the case of a 2.5 kW server PSU, for example, using C7 600 V MOSFETs can result in energy cost reductions of around 10 percent for PSU energy loss.

In BoM and cost driven designs such as enterprise servers, the CoolMOS C7 600 V devices offer a cost reduction in magnetics. Due to the significantly lower gate charge and output capacitance, the C7 can be operated at two times higher switching frequencies with only a marginal penalty in efficiency. This enables the size of magnetic components to be minimized, lowering the overall BoM cost. For example, doubling the switching frequency from 65 kHz to 130 kHz may reduce magnetic component cost by as much as 30 percent.

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The CoolMOS C7 600 V family will be manufactured in two 300 mm fabs ensuring security of supply for customers. The family comes in a broad range of $R_{DS(ON)}$ values and packages, with innovative options such as the TO-247 4-pin package available immediately at time of launch. The fourth pin boosts efficiency in full load by up to 0.4 percent by eliminating voltage drops across the source inductance caused by fast transients.

“As part of Infineon’s high-voltage MOSFET portfolio, the new CoolMOS C7 600V family is a major ‘stepping stone’ to Infineon’s upcoming GaN devices which are expected to launch in early 2016”, stated Peter Wawer, Vice President and General Manager of Businessline AC/DC at Infineon. “The CoolMOS C7 devices deliver lowest losses and higher frequencies up to 200 kHz in an established and proven technology being available in high volume, while Infineon’s GaN technology will further increase the frequency range and enable new topologies.”

Infineon’s complementary new 2EDN7524 EiceDRIVER™ ICs in industry standard pin-out feature two independent, non-isolated low-side gate drivers each capable of providing a 5 A source and sink peak current. Both channels operate with typical rise and fall times of just 5 ns, while the excellent 1 ns channel-to-channel delay matching allows configuration of simultaneous switching to double the total drive current. Despite the high current, the output stages offer a very low $R_{DS(ON)}$, minimizing power dissipation in the driver even if a very small or no external gate resistor is used. Exceptional robustness against ground bounce for system reliability is ensured through the ability of the driver ICs to handle up to -10 V_{DC} at the control and enable inputs.

Availability

CoolMOS C7 600 V MOSFETs will initially be available in TO-220, TO-247 and TO-247 4-pin packages with maximum $R_{DS(ON)}$ ratings from 40 mΩ to 180 mΩ. Samples for TO-220 FP, DPAK, D²PAK, ThinPAK and the complete portfolio of $R_{DS(ON)}$ values will be available in Q3 2015. Volume production of the 2EDN7524 MOSFET drivers in a DSO-8 package will begin in August 2015. Further package and functionality options will become available in Q4 2015. Further information on the CoolMOS C7 600 V is available at www.infineon.com/C7-600V. Further information on 2EDN7524 MOSFET drivers is available at www.infineon.com/2EDN.

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Infineon at the PCIM 2015

Infineon will be presenting the CoolMOS C7 600 V and the 2EDN7524 MOSFET drivers, as well as other innovative system oriented solutions, at booth 412 in hall 9 at the PCIM trade show in Nuremberg from May 19 to 21, 2015. Further information on trade fair highlights is available at: www.infineon.com/PCIM.

About Infineon

Infineon Technologies AG is a world leader in semiconductors. Infineon offers products and system solutions addressing three central challenges to modern society: energy efficiency, mobility, and security. In the 2014 fiscal year (ending September 30), the company reported sales of Euro 4.3 billion with about 29,800 employees worldwide. In January 2015, Infineon acquired US-based International Rectifier Corporation, a leading provider of power management technology, with revenues of USD 1.1 billion (fiscal year 2014 ending June 29) and approximately 4,200 employees.

Infineon is listed on the Frankfurt Stock Exchange (ticker symbol: IFX) and in the USA on the over-the-counter market OTCQX International Premier (ticker symbol: IFNNY).

Further information is available at www.infineon.com

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