



Press Release

Infineon Announces 650V IGBTs with Highest Efficiency for Fast Switching in Electric and Hybrid Vehicles

Munich, Germany – February 26, 2015 – Infineon Technologies AG (FSE: IFX / OTCQX: IFNNY) has announced a family of robust 650V IGBTs that can deliver highest efficiency in fast switching automotive applications. The AEC-Q-qualified TRENCHSTOP™5 AUTO IGBTs will reduce power losses and improve reliability in electric vehicle (EV) and hybrid electric vehicle (HEV) applications such as on-board charging, power factor correction (PFC), DC/DC and DC/AC conversion.

The new IGBTs have a blocking voltage 50V higher than previous automotive IGBTs and achieve their ‘best-in-class’ efficiency ratings due to Infineon’s TRENCHSTOP 5 thin wafer technology. Compared with existing ‘state-of-the-art’ technologies, this technology reduces saturation voltage ($V_{CE(sat)}$) by 200mV, halves switching losses, and lowers gate charge by a factor of 2.5. Improved switching and conduction losses also support lower junction and case temperatures than alternative technologies, leading to enhanced device reliability and minimizing the need for cooling.

By using TRENCHSTOP 5 AUTO IGBTs, designers of electric vehicles will realize efficiency gains that enable extended cruising ranges or smaller battery sizes. In the case of HEVs, the efficiency improvements can be used to reduce overall fuel consumption and drive down CO₂ emissions. In addition, the performance of the TRENCHSTOP 5 AUTO devices allows also entering MOSFET dominated applications and offering designers a wider spectrum of suitable semiconductor base technologies.

Featuring current ratings of 40A or 50A, TRENCHSTOP 5 AUTO IGBTs are available as single discrete IGBT device or co-packaged with an Infineon ultra-fast “Rapid” silicon diode. In each case the two variants H5 HighSpeed and F5 HighSpeed

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FAST can be supplied depending on whether optimized switching speed or highest possible efficiency is the overriding design criteria.

Efficiency Gain Example

For a typical PFC used in on-board chargers the replacement of current 'state-of-the-art' technologies by TRENCHSTOP 5 AUTO IGBTs has been shown to deliver an efficiency increase from 97.5% to 97.9%. In the case of a 3.3kW charger this equates to a power loss reduction of 13W. Assuming a charging time of five hours, this would be equivalent to reducing CO₂ emissions by 30g in a single charging cycle.

Availability

The 650V TRENCHSTOP 5 AUTO IGBTs are supplied in TO-247 packages. Engineering samples are available now, with volume production scheduled for March 2015. Further information on the new 650V TRENCHSTOP 5 AUTO IGBTs from Infineon is available at www.infineon.com/discrete-automotive-igbt.

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

This press release is available online at www.infineon.com/press

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