Market News

Next generation 1200 V CoolSiC™ Trench MOSFET in TO263-7 package boosts e-Mobility

Munich, Germany – 13 June, 2023 – Infineon presents its new generation of 1200 V CoolSiC™ MOSFETs in TO263-7 for automotive applications. The automotive-graded silicon carbide (SiC) MOSFET generation offers high power density and efficiency, enables bi-directional charging and significantly reduces system cost in on-board charging (OBC) and DC-DC applications.

The 1200 V CoolSiC family member offers best-in-class switching performance through 25 percent lower switching losses compared to the first generation. This improvement in switching behavior enables high-frequency operation, leading to smaller system sizes and increased power density. With a Gate-source threshold voltage ($V_{GS(th)}$) greater than 4 V and a very low *C*rss/*C*iss ratio, reliable turn-off at V_{GS} = 0 V is achieved without the risk of parasitic turn-ons. This allows for unipolar driving, resulting in reduced system cost and complexity. In addition, the new generation features a low on resistance ($R_{DS(on)}$), reducing conductive losses over the whole temperature range of -55°C to 175°C.

The advanced diffusion soldering chip mount technology (.XT technology) significantly improves the package's thermal capabilities, lowering the SiC MOSFET junction temperature by 25 percent compared to the first generation.
Moreover, the MOSFET has a creepage distance of 5.89 mm, meeting 800 V system requirements and reducing coating effort. Infineon is offering a range of $R_{DS(on)}$ options to cater to diverse application demands, including the only 9 mΩ type in the TO263-7 package currently on the market.

KOSTAL uses CoolSiC MOSFET in their OBC platform

KOSTAL Automobil Elektrik has designed-in Infineon’s latest CoolSiC MOSFET in their next-generation OBC platform for Chinese OEMs. KOSTAL is a global leading supplier for automotive charger systems. With their standard platform approach, safe, reliable, and highly efficient products are worldwide delivered for various OEM requirements and global regulations.

Public / For the Trade Press: INFATV202306.117e

Reinhard von Faltin (Headquarters)	Tel.: +49 89 234 39694	reinhard.vonfaltin@infineon.com	**Investor Relations:**
Agnes Toan (Americas)	Tel.: +1 408 250 1814	agnes.toan@infineon.com	Tel: +49 89 234 26655
Chi Kang David Ong (Asia-Pacific)	Tel.: +65 6876 3070	david.ong@infineon.com	investor.relations@infineon.com
Penny Yang (Greater China)	Tel.: +86 21 6101 9276	penny.yang@infineon.com	
Yasuyuki Kamiseki (Japan)	Tel.: +81 3 4595 7079	media-relations.jp@infineon.com	

“Decarbonization is the major challenge of this decade and thus a great motivation to shape car electrification with our customers. Therefore, we are very proud about the partnership with KOSTAL,” said Robert Hermann, Vice President for Automotive High Voltage Chips and Discretes at Infineon. “This project highlights the strong position of our standard product portfolio within the on-board charger market enabled by cutting-edge SiC technology.”

“As key component for our future generation OBC platform, Infineon’s new 1200 V CoolSiC Trench MOSFET features high voltage rating and qualified robustness. These benefits help us in to create a compatible design to manage our state-of-art technical solutions, cost optimization and massive market delivery,” said Shen Jianyu, Vice President, Technical Executive Manager at KOSTAL ASIA.

Availability

The 1200V CoolSiC™ MOSFET in TO263-7 package is available now.
More information is available at www.infineon.com/ATV-1200v-coolsic-mosfet

Reinhard von Faltin (Headquarters)	Tel.: +49 89 234 39694	reinhard.vonfaltin@infineon.com	**Investor Relations:**
Agnes Toan (Americas)	Tel.: +1 408 250 1814	agnes.toan@infineon.com	Tel: +49 89 234 26655
Chi Kang David Ong (Asia-Pacific)	Tel.: +65 6876 3070	david.ong@infineon.com	investor.relations@infineon.com
Penny Yang (Greater China)	Tel.: +86 21 6101 9276	penny.yang@infineon.com	
Yasuyuki Kamiseki (Japan)	Tel.: +81 3 4595 7079	media-relations.jp@infineon.com	