NASA Awards IceMOS Technology an SBIR Project to Develop Radiation-Tolerant High-Voltage MOSFET Transistors Critical to Moon to Mars Campaign

IceMOS Technology is Uniquely Positioned to Making Improvements in High Voltage Power Transistor Radiation Hardness Compatible With Cost-Effective High-Volume Manufacturing

PARADISE VALLEY, Ariz., May 11, 2021 – IceMOS Technology Corporation today announced the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center (GSFC) awarded it a project to begin work on developing a novel radiation-hard high voltage power transistor. Improvements in power semiconductor devices are critical to power supply applications required in long-term NASA space programs such as "Moon to Mars" which aims to send humans to the surface of the Moon by 2024 and establish sustainable exploration by the end of the decade.

"This project consists of developing an enabling technology to accelerate major advances in the efficiency of a spacecraft's power system by making improvements in high voltage power transistor radiation hardness compatible with cost-effective high-volume manufacturing processes," said Samuel J. Anderson, IceMOS Technology founder and chairman. "The reliability requirements of hostile deep space operating environments present a unique set of challenges that we look forward to addressing with our innovative device technology."

The IceMOS power transistor will incorporate a silicon-carbide engineered drain to take advantage of the low on resistance performance from Wide Band Gap (WBG) materials. The development award is in support of NASA's initiative to realize technology breakthroughs on Size, Weight and Power (SWaP) that will translate into high efficiency, small size, high reliability transistors as enabling components in spacecraft power supplies.

The same attributes valued by NASA for efficient power distribution in harsh environments is also critical to developers of power electronic systems in non-space applications to meet society's increasing demand for energy conservation. Commercial applications for these novel high voltage devices include AC/DC power stages in data centers servers for cloud computing, fast battery charging power systems for electric vehicles and more.

About IceMOS Technology

Established in 2004, IceMOS Technology is a best-in-class provider of cost-effective, high performance super junction MOSFETs, MEMS solutions and advanced engineering substrates that outperform competing solutions with a much simpler, lower cost process. The company has a manufacturing center of excellence located in Belfast, Northern Ireland, an advanced research innovation center in Tempe, Arizona, and a design center in Tokyo, Japan.

For more information, visit https://www.icemostech.com/

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