Press Release

Teledyne e2v HiRel and GaN Systems Unveil High Reliability 650V GaN Power HEMT

High voltage GaN Power HEMT now shipping in both top- and bottom-side cooled versions

MILPITAS, CA – December 18, 2019 – Teledyne e2v HiRel is launching a new, ruggedized 650V/60A GaN power HEMT (High Electron Mobility Transistor) based on industry-leading technology from GaN Systems**.**

The new GaN power HEMT, TDG650E60, is the highest voltage GaN power device available on the market for hi-rel military and space applications, and is now available with both top- or bottom-side cooled options.

Gallium nitride devices have revolutionized power conversion in other industries and are now available in radiation tolerant, plastic encapsulated packaging that has undergone stringent reliability and electrical testing to ensure mission critical success. The release of the TDG650E60 GaN HEMT finally delivers to customers the efficiency, size, and power-density benefits required in critical aerospace and defense power applications.

For all product lines, Teledyne e2v HiRel performs the most demanding qualification and testing tailored to the highest reliability applications. This regime includes sulfuric test, high altitude simulation, dynamic burn-in, step stress up to 175C ambient, 9V gate voltage, and full temperature testing.

Teledyne's TDG650E60 GaN Power HEMT boasts an extremely small form factor and leverages the patented Island Technology® from GaN Systems. This technology is a scalable, vertical charge dissipating system that gives the power transistor ultra-low thermal losses, high power density, no-charge storage, and very high switching speeds.

Unlike silicon on carbide (SIC) devices, the GaN-based TDG650E60 parts can easily be implemented in parallel to increase the load current or lower the effective RDSon. The use of exclusive GaNpx® packaging allows very high frequency switching and excellent thermal characteristics, enabling customers to significantly reduce the size and weight of power electronics.

"Teledyne e2v has a proud heritage of space products, and we are now bringing the unprecedented efficiency of GaN power to our customers," said Mont Taylor, VP of Business Development for Teledyne e2v HiRel. "These devices enable design engineers to create highly efficient, small power supplies and motor controllers which can comfortably function in high radiation environments such as space."

Qualified TDG650E60 devices with either top-side or bottom-side cooling are now shipping and available for immediate purchase. Customers may review the datasheet here.

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About Teledyne e2v, Inc.
Teledyne e2v innovations lead developments in space, transportation, defense, and industrial markets. Teledyne e2v's unique approach involves listening to the market and application challenges of customers and partnering with them to provide innovative standard, semi-custom or fully-custom solutions, bringing increased value to their systems. For more information, visit www.teledyne-e2v.com.

About GaN Systems
GaN Systems is the global leader in GaN power semiconductors with the largest portfolio of transistors that uniquely address the needs of today's most demanding industries including data center servers, renewable energy systems, automotive, industrial motors, and consumer electronics. As a market-leading innovator, GaN Systems makes possible the design of smaller, lower cost, more efficient power systems. The company's award-winning products provide system design

opportunities free from the limitations of yesterday's silicon. By changing the rules of transistor performance, GaN Systems is enabling power conversion companies to revolutionize their industries and transform the world. For more information, please visit: www.gansystems.com or follow GaN Systems on Facebook, Twitter and LinkedIn.

About Teledyne Defense Electronics
Serving Defense, Space and Commercial sectors worldwide, Teledyne Defense Electronics offers a comprehensive portfolio of highly engineered solutions that meet your most demanding requirements in the harshest environments. Manufacturing both custom and off-the-shelf product offerings, our diverse product lines meet emerging needs for key applications for avionics, energetics, electronic warfare, missiles, radar, satcom, space, and test and measurement . www.teledynedefelec.com. TDE is a business unit of Teledyne Technologies, Inc., a leading provider of sophisticated instrumentation, digital imaging products and software, aerospace and defense electronics, and engineered systems. www.teledyne.com.

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