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Microchip Continues Expansion of Gallium Nitride (GaN) RF Power Portfolio

New Monolithic Microwave Integrated Circuits (MMICs) and discrete devices deliver performance levels required in 5G, satellite communication and defense applications

CHANDLER, Ariz., Dec. 01, 2021 (GLOBE NEWSWIRE) -- Microchip Technology Inc. (**Nasdaq: MCHP**) today announced a significant expansion of its Gallium Nitride (GaN) Radio Frequency (RF) **power device portfolio** with new MMICs and **discrete transistors** that cover frequencies up to 20 gigahertz (GHz). The devices combine high power-added efficiency (PAE) and high linearity to deliver new levels of performance in applications ranging from 5G to electronic warfare, satellite communications, commercial and defense radar systems and test equipment.

Like all Microchip GaN RF power products, the devices are fabricated using GaN-on-silicon carbide technology that provides the best combination of high-power density and yield, as well as high-voltage operation and longevity of more than 1 million hours at a 255^{o} C junction temperature.

They include GaN MMICs covering 2 to 18 GHz, 12 to 20 GHz, and 12 to 20 GHz with 3 dB Compression Point (P_3dB) RF output power up to 20 W and efficiency up to 25%, as well as bare die and packaged GaN MMIC amplifiers for S- and X-band with up to 60% PAE, and discrete high electron mobility transistor (HEMT) devices covering DC to 14 GHz with P_3dB RF output power up to 100W and maximum efficiency of 70%.

“Microchip continues to invest in our family of GaN RF products to support every application at all frequencies from microwave through millimeter wavelengths, and our product portfolio includes more than 50 devices, from low-power levels to 2.2 kW,” said Leon Gross, vice president of Microchip’s discrete products business unit. “Together the products announced today span 2 to 20 GHz and are designed to meet the linearity and efficiency challenges posed by the higher-order modulation techniques employed in 5G and other wireless networks, as well as the unique needs of satellite communications and defense applications.”

Microchip’s portfolio of RF semiconductors in addition to GaN devices ranges from gallium arsenide (GaAs) RF amplifiers and modules to low-noise amplifiers, front-end modules (RFFEs), varactor, Schottky, and PIN diodes, RF switches and voltage variable attenuators. In addition, the company provides high-performance surface acoustic wave (SAW) sensors and microelectromechanical systems (MEMS) oscillators and highly integrated modules that combine microcontrollers (MCUs) with RF transceivers (Wi-Fi® MCUs) that support major short-range wireless communications protocols from Bluetooth® and Wi-Fi to LoRa®.

Development Tools
Microchip provides board design support to help with design-ins, as do the company's distribution partners. The company also provides compact models for the new GaN products that let customers more easily model performance and expedite the design of the power amplifiers in their systems.

Availability
The power devices announced today include the **ICP0349PP7-1-300I and ICP1543-1-110I**, as well as other Microchip RF products, and are available in volume production. For additional information, contact a Microchip sales representative or visit Microchip's **website**. To purchase Microchip's GaN products, contact a Microchip authorized distributor.

Resources
High-res images available through Flickr (feel free to publish):

- Application image: **https://www.flickr.com/photos/microchiptechnology/51664786331/sizes/l/**
- Product image**:** **https://www.flickr.com/photos/microchiptechnology/51665913049/sizes/l/**

About Microchip Technology
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