Amplifier for Military, Commercial High-Power Amplifier Needs

PR Newswire

Northrop Grumman Corporation has developed a new gallium nitride (GaN) flange packaged power amplifier, APN180FP, targeting military and commercial Ka-band communication applications. This product represents the first commercial availability of a packaged, GaN-based component from the company.

"The APN180FP provides customers with a powerful, easy-to-use, high-frequency product that greatly expands the accessibility of Monolithic Microwave Integrated Circuits [MMICs]. Initial engineering evaluation sampling of prototypes is underway. Preproduction quantities will be available later this summer," said Frank Kropschot, general manager of the Microelectronics Products and Services business unit of Northrop Grumman Aerospace Systems.

"This amplifier is produced in Northrop Grumman's advanced microelectronics wafer fabrication facility in Manhattan Beach, Calif., which has provided large volumes of compound semiconductor products to both military and commercial customers for more than 20 years," Kropschot said. "We are targeting the APN180FP for the growing Ka-band satellite communication terminal and the commercial wireless infrastructure markets."

Product description:

- The APN180FP is a 0.2 mm GaN HEMT MMIC power amplifier chip mounted in a flange mount package. It operates at between 27 and 31 GHz and is optimized for operation between 29-31 GHz.
- This power amplifier operates with a drain voltage of +28V and provides 21 dB of linear gain, +37 dBm (5.0 W) of output power at 1 dB gain compression and +39 dBm (8 W) in saturation with Power Added Efficiency (PAE) of 26 percent at midband.
- For less-demanding applications, the APN180FP can be operated from a drain voltage as low as +20V while still producing +37 dBm (5 W) of saturated output power.
- Samples are available now.
- Preproduction quantities will be available in July.
- Production quantities will be available in the fourth quarter of 2013.

"This new product is a follow on to the GaN MMICs we released in November 2012, and is the first of several package and module products we plan to introduce during the next few months," Kropschot aid.

"It's based on MMICs using Northrop Grumman's 0.2um GaN HEMT process

developed partially under the Defense Advanced Research Projects Agency's Wide Band Gap Semiconductors for Radio Frequency program," Kropschot said. The agency's program was the first of several key GaN technology development contracts awarded to Northrop Grumman beginning in 2002.

Source URL (retrieved on *08/02/2014 - 6:04am*):
http://www.wirelessdesignmag.com/news/2013/06/amplifier-military-commercial-high-power-amplifier-needs