Freescale Introduces its First GaN RF Product for Cellular Infrastructure Applications

Freescale Semiconductor today revealed its first RF power amplifier product built using gallium nitride (GaN) technology. The company's RF power GaN products will initially target the cellular infrastructure market, with potential future applications including avionics, radar, ISM and software-defined radio.

Freescale's first GaN product, the AFG25HW355S device, is the latest addition to the industry's most comprehensive portfolio of power amplifier solutions. Current Freescale RF power offerings include 12V, 28V and 50V silicon LDMOS products, 5V GaAs HBT, 5V and 12V GaAs pHEMT solutions, and high-frequency SiGe technology featuring operation up to 100 GHz and beyond.

"Freescale's GaN RF power solutions underscore our technology-agnostic approach to the RF power market," said Ritu Favre, Vice President and general manager of Freescale's RF Division. "Working with GaN in development since the mid-2000s, we have established an ideal blend of cost-efficiency, performance and reliability, and the time is now right to add GaN-based products to our broad array of RF power amplifier solutions."

The AFG25HW355S is a 350W, high-performance-in-package (HiP), 2:1 asymmetric device with the following features and performance targets:

• 2.3 GHz-2.7 GHz

• 56 dBm peak power

• 50 percent efficiency

• 16 dB gain

• NI-780 packaging

Advantages of using GaN technology in power amplifiers include smaller product form factors, low parasitic loss, elevated power density and higher-frequency operation. Potential GaN cellular applications include quasi-linear, high efficiency (Doherty), high-powered pulsed (non-linear) applications, broadband PAs and switch-mode amplifier configurations.

Availability:

The AFG25HW355S will be available soon to select customers in sample quantities, with full qualification and volume shipping planned by Q2 2013. For more

information, please contact your local Freescale sales representative.

www.freescale.com

Posted by Sara Cohen, Editorial Intern

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