

## **NXP to offer 50 RF/Microwave products based on SiGe:C BiCMOS process technology**

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Targeting high frequency radio applications, NXP Semiconductors today announced the launch of a series of new products developed in the latest SiGe (silicon-germanium) process technology.

Addressing the industry's growing demand for more robust, cost-effective and highly integrated silicon based technology, NXP will offer a total of more than 50 products based on SiGe:C by end of 2010. Delivering high power gain and excellent dynamic range, NXP's QUBiC4 SiGe:C process is specifically designed to meet the needs of real-life, high-frequency applications in the wireless, broadband communications, networking, and multimedia markets. NXP will demonstrate its high performance RF solutions at the 2010 IEEE MTT-S International Microwave Symposium (IMS) from May 25-27 in Anaheim, California.

“As a global leader in RF technology and component design, NXP is committed to the development of products produced with SiGe:C technology to address the fast-moving dynamics of the RF/microwave markets. We endeavor to provide cost-effective, integrated, high frequency solutions with the performance of gallium-arsenide (GaAs) technologies using a silicon-based process,” said Ronald van Cleef, general manager, RF small signal business, [NXP Semiconductors](#).

NXP's innovative high-performance SiGe:C QUBiC4 process allows manufacturers of wireless equipments to add more functionality onto devices with less space, competitive cost, reliability and manufacturing

advantage. QUBiC4 technology speeds the migration from GaAs technology to silicon by enabling cutting-edge, low-noise performance and IP availability. NXP offers three variants of the QUBiC4 technology: QUBiC4+, a silicon-based process for applications up to 5GHz such as medium power amplifiers; QUBiC4X, a 0.25 $\mu$ m SiGe:C process introduced about 6 years ago, typically used for applications up to 30GHz and very low noise applications such as GPS; and the most recent 0.25 $\mu$ m QUBiC4Xi SiGe:C process, offering on Ft in excess of 200GHz, which is particularly suited for applications above 30GHz and those requiring minimum noise figure, such as VSAT and radar.

With proven IP and state-of-the-art in-house fabrication for volume production, NXP's QUBiC4 SiGe:C technology has been designed to improve overall RF performance and make the components less expensive, while offering higher and more flexible performance than their gallium-arsenide (GaAs) counterparts. With more than forty-five years of extensive experience in RF modeling, design and packaging, NXP's QUBiC4 combines the performance of gallium-arsenide (GaAs) technologies with the reliability of a silicon-based process. With the continued growth of high-speed-digital data transmission and wireless communications technology, NXP's QUBiC4 technology is advancing solutions traditionally offered only by GaAs technologies at a lower cost, with higher integration and added features. It also addresses the need for low power consumption.

Applications for QUBiC4-based products ranges from mobile platforms, personal navigation devices, AESA radars, satellite DBS/-VSAT, e-metering, software-defined radios (SDR), base stations, point-to-point radio links, and WLAN, where high frequency and high integration levels are essential. End users can benefit from increased functionality on smaller and lighter weight mobile phones.

Source: NXP

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