



## NXP Announces New 65 V LDMOS Technology that Speeds RF Power Design

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### The new MRFX series and its flagship 1800 W transistor focus on ease of use

EINDHOVEN, The Netherlands, April 10, 2017 (GLOBE NEWSWIRE) -- NXP Semiconductors N.V. (NASDAQ:NXPI), the leader in RF power, today announced a new laterally diffused metal oxide semiconductor (LDMOS) technology for RF power transistors designed for operation up to 65 volts (V). This extra-high voltage LDMOS process will give rise to a new generation of products: the MRFX series.

As RF becomes more pervasive in various industrial applications, NXP is providing RF power engineers with a means to reduce design cycle time:

- **More power** – Higher voltage enables higher output power, which helps decrease the number of transistors to combine, simplifying power amplifiers complexity and reducing their size.
- **Faster development time** – With higher voltage, the output power can be increased while retaining a reasonable output impedance. This simplifies the matching to 50 ohms, especially in wideband applications. Faster matching dramatically speeds up the development time.
- **Design reuse** – This impedance benefit also ensures pin-to-pin compatibility with current 50 V LDMOS transistors, making it possible for RF designers to reuse existing printed circuit board (PCB) designs for even shorter time to market.
- **Manageable current level** – A higher voltage lowers the current in the system, limiting the stresses on DC power supplies and reducing magnetic radiation.
- **Wide safety margin** – The NXP 65 V LDMOS technology has a breakdown voltage of 182 V, which improves reliability and enables higher efficiency architectures.

The first product in the MRFX series is the MRFX1K80, the industry's most powerful continuous wave (CW) RF transistor. It is designed to deliver 1800 watts (W) CW at 65 V for applications from 1 to 470 megahertz (MHz) and is capable of handling 65:1 voltage standing wave ratio (VSWR).

"The drop-in compatibility between our 1250, 1500 and our new 1800 W transistors enables our customers to create a single scalable platform for multiple end products," said Pierre Piel, senior director and general manager for multi-market RF power at NXP. "With this new generation, we help our customers deliver on their commitment of higher performing, more rugged products in a shorter amount of time."

The MRFX1K80 is targeted for industrial, scientific and medical (ISM) applications such as laser generation, plasma etching, magnetic-resonance imaging (MRI), skin treatment and diathermy, as well as particle accelerators and other scientific applications. The MRFX1K80 is also designed for radio and very high frequency (VHF) TV broadcast transmitters. Industrial heating, welding, curing or drying machines currently using vacuum tubes will also benefit from the higher level of control that solid state enables.

### Availability and Development Support

The MRFX1K80H transistor in an air cavity ceramic package is currently sampling, with production expected in August 2017. Reference circuits for 27 MHz and 87.5-108 MHz applications are available now. In a few months, NXP will offer the over-molded plastic version, the MRFX1K80N, that reduces the thermal resistance by 30 percent for further reliability and ease of use. For pricing or additional information, please contact your local NXP sales office or NXP approved distributor.

For more information, visit [www.nxp.com/65V](http://www.nxp.com/65V) and [www.nxp.com/MRFX1K80H](http://www.nxp.com/MRFX1K80H).

### About NXP Semiconductors

NXP Semiconductors N.V. (NASDAQ:NXPI) enables secure connections and infrastructure for a smarter world, advancing solutions that make lives easier, better and safer. As the world leader in secure connectivity solutions for embedded applications, NXP is driving innovation in the secure connected vehicle, end-to-end security & privacy and smart connected solutions markets. Built on more than 60 years of combined experience and expertise, the company has 31,000 employees in more than 33 countries and posted revenue of \$9.5 billion in 2016. Find out more at [www.nxp.com](http://www.nxp.com).

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