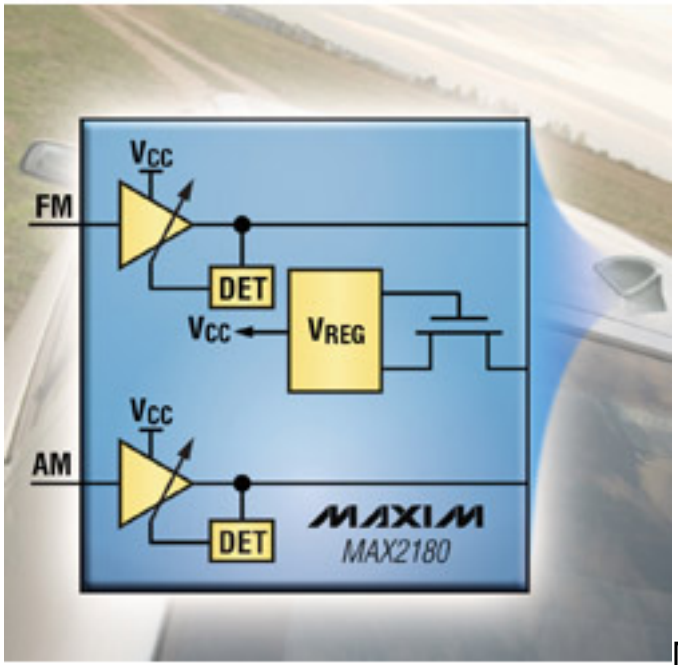
CMOS AM FM LNA integrates adjustable control for car antenna



Maxim Integrated Products (NASDAQ: MXIM) introduces the MAX2180, a low-noise amplifier (LNA) with integrated automatic gain control (AGC) for automotive antenna applications. Fabricated using Maxim's advanced CMOS process, the LNA accepts separate AM and FM signal paths and delivers 30dB of gain range to each. This fully integrated solution reduces BOM cost while ensuring optimized performance and carefree operation.

The MAX2180 is designed to operate from 148kHz to 162.5MHz and incorporates many features that advance current antenna architectures. This LNA also reduces solution size and complexity. The self-controlled AGC loop includes on-chip power detectors to ensure that the signal level within each channel is continually optimized to negate the effects of antenna mobility. This design eliminates the need for external PIN diodes and associated driver circuits. A voltage regulator and pass transistor provide a stable supply over a wide 8V to 24V voltage range. A wide voltage range can be particularly useful in applications such as hybrid or electric vehicles where sudden swings in supply are common.

The MAX2180 also provides on-chip thermal protection that automatically limits junction temperatures during extreme thermal conditions. Available in a small (4mm x 4mm) TQFN package, the device is fully specified over the -40 degrees Celsius to +85 degrees Celsius extended temperature range. Prices start at $2.57 (1000-up, FOB USA), and samples are available upon request.

Maxim Integrated Products is a publicly traded company that designs, manufactures, and sells high-performance semiconductor products. The Company was founded over 25 years ago with the mission to deliver innovative analog and

mixed-signal engineering solutions that add value to its customers' products. To date, it has developed over 6300 products serving the industrial, communications, consumer, and computing markets.

Maxim reported revenue in excess of $1.6 billion for fiscal 2009. A Fortune 1000 company, Maxim is included in the Nasdaq 100, the Russell 1000, and the MSCI USA indices. For more information, go to www.maxim-ic.com.

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