GPS LNAs provide low noise and save space with a WLP package

Maxim Integrated Products introduces the MAX2686/MAX2688, low-noise amplifiers (LNAs) designed for GPS-enabled applications operating in the 1575MHz band. Packaged in a 0.86mm x 0.86mm, 0.4mm-pitch wafer-level package (WLP) with only four pins, these LNAs minimize solution footprint for today's continually shrinking handheld designs. Maxim's advanced SiGe BiCMOS technology enables this space-saving design. Device specifications outperform GaAs and pHEMT LNAs and integrated RF CMOS receivers, and performance surpasses today's larger competitive options. The MAX2686/MAX22688 only require two external components to complete the board-level design (plus an optional resistor for logic-enabled shutdown). These LNAs are ideal for GPS L1, Galileo, and GLONASS applications like cellular phones, portable navigational devices (PNDs), and module customers who want to improve GPS receive sensitivity.

The MAX2686/MAX2688 feature an ultra-low 0.75dB noise figure that improves receive sensitivity over discrete and highly integrated CMOS solutions. Additionally, customers can expect longer battery life in their end equipment thanks to the low 4mA (typ) operating supply current. When the LNAs are not in use, an optional logic-enabled shutdown mode reduces supply current to less than 1microamp. For customers who wish to ensure a higher level of receive performance in the face of in-band and out-of-band blockers, the high-linearity MAX2688 provides approximately 6dBm better in-band and out-of-band IIP3 for a mere 4.0mA extra supply current.

Pin-compatible versions are in development that offer variable levels of performance based on gain, current consumption, and linearity. An integrated LDO

option will also be available to enable direct operation off of VBATT. Contact your local Maxim representative for more information.

The MAX2686/MAX2688 operate from a 1.6V to 3.3V supply, and are fully specified over the -40 degrees Celsius to +85 degrees Celsius extended temperature range. Prices start at $0.50 (1000-up, FOB USA). The MAX2686EVKIT and MAX2688EVKIT are also available for bench-level evaluation. Pricing for the EVKIT is $50.00 (each, FOB USA).

For more information, go to www.maxim-ic.com [1].

Source URL (retrieved on *12/18/2013 - 3:51pm*):
http://www.ecnmag.com/products/2011/01/gps-lnas-provide-low-noise-and-save-space-wlp-package

Links:
[1] http://www.maxim-ic.com