GLOBALFOUNDRIES Delivers 8SW RF SOI Technology for Next-Generation Mobile and 5G Applications

September 20, 2017

Advanced 8SW 300mm SOI technology enables cost-effective, high-performance RF front-end modules for 4G LTE mobile and sub-6GHz 5G applications

Santa Clara, Calif., Sept. 20, 2017 -- GLOBALFOUNDRIES today announced the availability of the industry's first RF SOI foundry solution manufactured on 300mm wafers. The company's most advanced RF SOI technology, 8SW SOI, delivers significant performance, integration and area advantages in front-end modules (FEMs) for 4G LTE and sub-6 GHz 5G mobile and wireless communication applications.

GF's new 8SW technology offers a low cost, low power, highly flexible solution with superior switching, low-noise amplifiers (LNA) and logic processing capabilities on a 300mm manufacturing line. The technology features up to 70 percent power reduction compared to the previous generation, with higher voltage handling, a best-in-class on-resistance (Ron) and off-capacitance (Coff) for reduced insertion loss with high isolation, and an all-copper interconnect that improves power-handling capacity.

"Skyworks continues to leverage our broad systems expertise to bring highly customized solutions to customers worldwide," said Joel King, vice president and general manager of Advanced Mobile Solutions for Skyworks. "Our collaboration with GF has provided Skyworks early access to best-in-class switch and LNA technology that will further advance RF front-ends for next-generation mobile devices and evolving IoT applications."

"We now live in a world of connected intelligence where people expect and demand seamless, reliable data connectivity everywhere," said Bami Bastani, senior vice president of GF'S RF Business Unit. "But that's only getting more difficult to achieve, as front-ends increasingly must be able to handle many different frequency bands and many different types of RF signals, along with integrated digital processing and control. As the industry leader in RF, we have developed the new 8SW process specifically to help customers meet their most pressing needs."

The 300mm RF silicon-on-insulator (SOI) based technology gives designers a cost-effective platform with an optimal combination of performance, integration and power efficiency with greater digital integration ability. GF's 8SW technology incorporates a specialized substrate optimization that maximizes the quality factor for passive devices, reduces parasitic capacitances for active circuits and minimizes the disparity in phase and voltage swing for devices operating in the sub-GHz frequency range. The technology showcases an optimized LNA with leadership noise figure and high ft/fmax supporting diversity receive and main antenna path LNA applications for today's 4G operating frequencies and future sub-6GHz 5G FEMs.

The advanced 8SW technology is manufactured on GF's 300mm production line at Fab 10 in East Fishkill, N.Y. and provides the industry with manufacturing capacity to meet the expected market demand at a lower cost. Process design kits are available now.

For more information on GF's RF SOI solutions, contact your GLOBALFOUNDRIES sales representative or go to www.globalfoundries.com.

About GF:

GLOBALFOUNDRIES is a leading full-service semiconductor foundry providing a unique combination of design, development, and fabrication services to some of the world's most inspired technology companies. With a global manufacturing footprint spanning three continents, GLOBALFOUNDRIES makes possible the technologies and systems that transform industries and give customers the power to shape their markets. GLOBALFOUNDRIES is owned by Mubadala Investment Company. For more information, visit http://www.globalfoundries.com.

Contacts:

Erica McGill
GLOBALFOUNDRIES
(518) 795-5240
erica.mcgill@globalfoundries.com