First Commercial Envelope Tracking Chip for Smartphones

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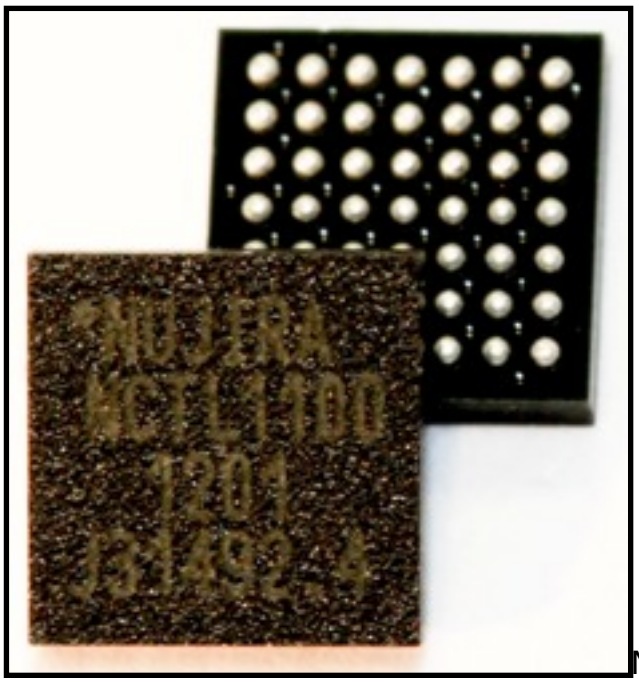

Nujira has launched the first IC in its Coolteq.L product family of Envelope Tracking (ET) power supply modulators for mobile handsets. Nujira's NCT-L1100 has been developed by the industry's largest and most experienced ET team, delivering a chip that reduces wasted energy from power amplifiers (PAs) in mobile handsets by more than 50%, cutting heat dissipation and extending battery life.

Reducing the power consumption of PAs is one of the key challenges facing 3G and 4G smartphone OEMs as demand for higher data rates continues to drive network standards. The improved spectral efficiency of the 4G LTE standard enables higher data bandwidth, but comes at the price of reduced energy efficiency in the RF PA. Further penalties come from an increase in the average RF power transmitted from the handset, and the need to support an increasing number of frequency bands in the phone to support global roaming. This not only impacts on battery life, but also on handset temperature - a growing problem for smartphone designers. Unaddressed, these issues will degrade the user experience and delay the adoption of 4G smartphones.

"Battery life has always been a key factor for consumers when it comes to mobile handsets, and it is a regular complaint from users of the latest smartphones. 4G handsets may need to be charged two or three times a day, which will have a catastrophic impact on user adoption," commented Tim Haynes, CEO, Nujira. "The industry consensus is that Envelope Tracking will become the standard PA architecture for the next generation of handsets, because it is the only power optimization technology which delivers high efficiency over the entire spectrum

used for 3G and 4G standards. As a result we see the launch of our first commercial chip for mobile handsets as a significant milestone, not just for Nujira, but for the mobile handset sector."

Nujira's NCT-L1100 demonstrates power conversion efficiencies in excess of 80% and supports the maximum 20MHz channel bandwidth of LTE - the best available on the market today. The technology has already been validated through system integration with two major platform chipset vendors, and Nujira will be demonstrating the NCT-L1100 at Mobile World Congress in Barcelona, Spain, February 27-March 1st.

The new Coolteq.L chip is compatible with multiple air interface standards, including TDD and FDD LTE. Nujira's ISOGAIN™ linearization technology delivers improved ACLR and EVM performance, eliminating antenna load mismatch and providing additional output power from the PA. The NCT-L1100 features the industry-standard OpenET analog envelope interface, and a MIPI RFFE control interface.

Production devices will be available in small footprint WLCSP packages. Nujira provides platform chipset vendors with evaluation boards and engineering support for integration into reference designs for smartphones and data devices.
The NCT-L1100 is sampling now to lead partners with general availability in Q4 2012.

For more information visit www.nujira.com [1]

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