HRL Makes GaN Transistor Technology Available to Commercial Customers

HRL Laboratories LLC of Malibu, CA, USA (a corporate R&D lab owned by The Boeing Company and General Motors) is now offering products in its gallium nitride (GaN) high-electron-mobility transistor (HEMT) technology to commercial customers in select markets, providing what is claimed to be significant advantages for high-data-rate wireless links, radars and active sensors.

HRL has been investing in GaN transistor development since the late 1990s, reporting the first Ka-band GaN power amplifier at the 2004 IEEE International Microwave Symposium (IMS) and the first W-band GaN power amplifier at the 2006 International Electron Devices Meeting (IEDM).

The firm says that its GaN amplifiers offer a more than five-fold improvement in E- and W-band output power compared with current state-of-the-art commercial solid-state technologies. This high power output reduces the need for power combining multiple amplifiers and minimizes the power module assembly complexity, says HRL. In addition, the intrinsic higher linearity of GaN allows the transmission of modulation schemes with higher spectral efficiency, increasing the potential data throughput for wireless links.

HRL is offering wideband 70-100GHz GaN power amplifiers as well as a family of application-specific E- and W-band power amplifiers covering the 71-76GHz, 81-86GHz and 90-96GHz bands.

The new GaN products will be introduced in booth # 305 at the 2012 Government Microcircuit Applications and Critical Technology Conference (GOMACTech 12) in Las Vegas (19-22 March) and in booth # 203 at the IEEE MTT-S International Microwave Symposium (IMS 2012) in Montreal, Canada (17-22 June).

Posted by Janine E. Mooney, Editor

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