Toshiba Adds High Gain 200W GaN HEMT Power Amplifier for C-Band RADAR Applications

PR Newswire

Toshiba America Electronic Components and its parent company, Toshiba Corp., have announced the addition of a 200W C-Band gallium nitride (GaN) semiconductor High Electron Mobility Transistor to its power amplifier product family. The new device was shown during the conference exhibition portion of the 2013 IEEE MTT-S International Microwave Symposium from June 4-6 in Seattle, Washington.

The 200W TGI5254-200P is Toshiba's first commercial C-Band GaN HEMT that is optimized for pulse operation to support C-Band RADAR applications. The new device operates in the 5.2 GHz1 to 5.4 GHz range. RF performance specifications include output power of 53.0dBm (typ.) with 43dBm input power, power gain of 10.0dB2 (typ.) and drain current of 2.4Amps2 (typ.) with pulse width of 200 microseconds (nom.) and duty ratio of 10 percent (nom.).

This device enables increased output power and helps reduce size and weight in solid state power amplifiers (SSPA) for RADAR applications. "Although this is our initial entry into this specific type of C-Band GaN HEMTs, Toshiba has long been a leading manufacturer of solid state power amplifiers for RADAR applications in the Japanese domestic and international markets," said Homayoun Ghani, business development manager, microwave devices, for TAEC's Discrete Business Unit. "Our GaN HEMTs have been one of the technological foundations helping to accelerate the modernization of RADAR technology from a tube-based to a solid-state-based design. In fact, solid-state weather RADAR systems using Toshiba devices are currently in operation at several sites in Japan."

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