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## **GaN Power IC Packages Deliver Enhanced Thermal Performance**

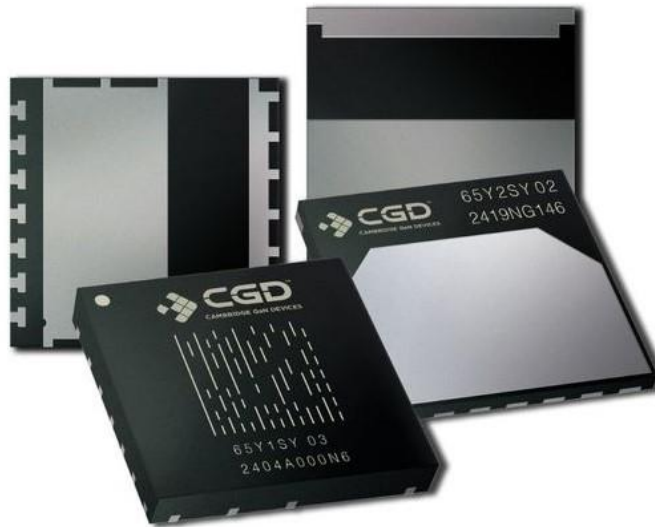
[Cambridge GaN Devices \(CGD\)](#) has announced two new packages for its ICeGaN family of GaN power ICs that offer enhanced thermal performance and simplify inspection. Variants of the well-proven DFN style, both packages are extremely rugged and reliable, according to the vendor.

Developed for CGD, the DHDFN-9-1 (dual heat-spreader DFN) is a thin, dual-side-cooled package with a small, 10-mm x 10-mm footprint and wettable flanks to simplify optical inspection. It offers low thermal resistance ( $R_{TH(JC)}$ ), and can be operated with bottom-side, top-side and dual-side cooling, offering flexibility in design and outperforming the often-used TOLT package in top-side- and, especially, dual-side-cooled configurations.

The DHDFN-9-1 package has been designed with dual-gate pinout to facilitate optimal PCB layout and simple paralleling, enabling customers to address applications up to 6 kW with ease, says the company.

The BHDFN-9-1 (bottom heat-spreader DFN) is a bottom-side-cooled package, also with wettable flanks for easy inspection. Thermal resistance is 0.28 K/W, matching or exceeding other leading devices, according to CGD. Measuring 10 mm x 10 mm, the BHDFN is smaller than the commonly-used TOLL package yet shares a similar footprint, hence a common layout with TOLL-packaged GaN power ICs is possible for ease of use and evaluation (see the figure).

“These new packages are part of our strategy to enable customers to use our ICeGaN GaN power ICs at higher power levels. Servers, data centers, inverters/motor drives, microinverters and other industrial applications are all beginning to enjoy the power density and efficiency benefits that GaN brings, but they are also more demanding. Therefore, it is essential for such applications that devices are also rugged and reliable, and easy to design in. These attributes are inherent in ICeGaN, and are supported and extended by the new packages,” says Nare Gabrielyan, product marketing manager, CGD.



*Figure. BHDFN-9-1 (left) and DHDFN-9-1 (right) packages for the company's ICeGaN family of GaN power ICs deliver increased power output while simplifying inspection, saving system cost and increasing reliability.*