NAVITAS DRIVES A COOL FAST-CHARGER UPGRADE:

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Image1

New GaNFast Power ICs with Integrated Cooling Pad Enable Even Faster Charging in Smaller Sizes

EL SEGUNDO, Calif.–(PRWeb)—Navitas Semiconductor today announced a new range of 650V-rated GaNFast power ICs in 6 x 8 mm PQFN packaging with a proprietary, integrated cooling pad for high-efficiency, high-density power systems.

Gallium nitride (GaN) is a next-generation semiconductor technology that runs up to 20x faster than old, slow silicon (Si), and enables 3x more power or 3x faster charging in half the size & weight. GaNFast power ICs enable next-generational upgrades across diverse markets from 25-100W consumer and mobile USB-C fast chargers and adapters for smartphones and laptops, to 200-800W TV and all-in-one computers and on up to multi-kW EV, industrial and datacenter power supplies.

“As we’ve seen in recent releases from Xiaomi and Lenovo, GaNFast power ICs run at high speeds and drastically shrink the size and cost of passive components in fast chargers and adapters”, noted Dan Kinzer, Navitas CTO/COO and co-founder. “The NV612x-series delivers a cool 10-15°C reduction in temperature with an enlarged thermal interface to the PCB and a direct thermal and electrical connection to the system ground, enabling the world’s highest power density and passing all thermal specifications and agency approvals.”

While competing solutions require additional, complex, external driving and protection components, the unique and proprietary monolithic integration of GaN FET, GaN digital and GaN analog circuits means the new GaNFast ICs deliver the simplest, smallest, fastest and now even cooler performance. This combination of simplicity and capability drives the world’s smallest size fast chargers to achieve power densities as high as 1 W/cc at 65W and 1.25 W/cc at 300W, far beyond any other discrete GaN or Si solutions.

For power electronics designers, the new NV612x-series of GaNFast power ICs offers an elegant solution to difficult thermal questions by providing an immediate improvement in heat dissipation through the printed-circuit board (PCB). The 6×8 mm range with advanced cooling pad is offered at the same price as the existing 5×6 mm GaNFast range and in some cases, the new low-temperature may enable the designer to substitute a smaller-die version to reduce system costs further.

The new range of 650V-rated power ICs includes complete gate drive and protection circuits plus GaN power FETs in 6 x 8 mm surface-mount PQFN, low-inductance (high-speed) packaging:

- NV6123: 650V, 300 mOhm, 6 x 8 mm PQFN
- NV6125: 650V, 175 mOhm, 6 x 8 mm PQFN
- NV6127: 650V, 125 mOhm, 6 x 8 mm PQFN

Design-support includes detailed datasheets, electrical models (SPICE), mechanical models (.stp) plus a thermal-layout application note (AN011). All parts are in high-volume mass production and immediately available from Navitas distribution partners, with prices starting as low as $1.19 for 1k.

About Navitas:

Navitas Semiconductor Inc. is the world’s first and only GaN Power IC company, founded in 2014 and based in El Segundo, CA, USA. Navitas has a strong and growing team of power semiconductor industry experts with a combined 200 years of experience in materials, devices, applications, systems and marketing, plus a proven record of innovation with over 300 patents among its founders. GaN power ICs monolithically-integrate power, analog and logic circuits to enable faster charging, higher power density and greater energy savings for mobile, consumer, enterprise, eMobility and new energy markets. Over 100 Navitas patents are issued or pending.

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