



Navitas Announces Automotive Qualification of High-Power GaNSafe™ ICs

April 15, 2025

High-power GaNSafe ICs bring production-ready performance to EVs, unlocking unprecedented power density and efficiency for on-board chargers (OBCs) and HV-LV DC-DC converters applications



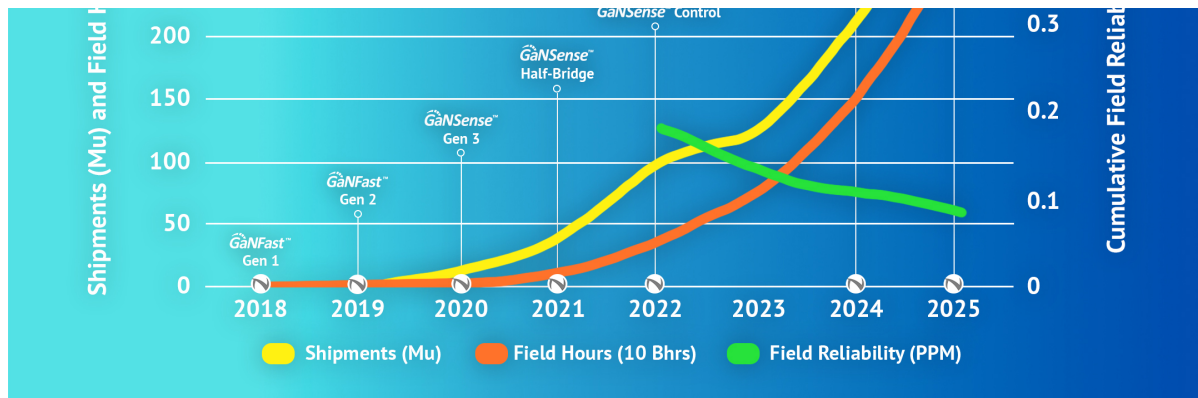
TORRANCE, Calif., April 15, 2025 (GLOBE NEWSWIRE) -- [Navitas Semiconductor](#) (Nasdaq: NVTS), the only pure-play, next-generation power semiconductor company and industry leader in gallium nitride (GaN) power ICs and silicon carbide (SiC) technology, has announced its high-power GaNSafe™ ICs achieve automotive qualification for both AEC-Q100 and AEC-Q101, showcasing GaN's next inflection into the automotive market.

Navitas high-power [GaNSafe](#) 4th generation family integrates control, drive, sensing, and critical protection features that enable unprecedented reliability and robustness in high-power applications. It is the world's safest GaN with short-circuit protection (350ns max latency), 2kV ESD protection on all pins, elimination of negative gate drive, and programmable slew rate control. All these features are controlled with 4-pins, allowing the package to be treated like a discrete GaN FET, requiring no V_{CC} pin.

The [Automotive Electronics Council \(AEC\)](#) lists various qualifications focused on failure mechanism-based stress tests for packaged integrated circuits ([AEC-Q100](#)) and discrete semiconductors ([AEC-Q101](#)) used in automotive applications. Navitas' GaNSafe™ has been qualified to both standards to ensure that both the discrete power FET stage and the combined IC solution meet these stringent specifications.

To support the qualification, Navitas has created a comprehensive reliability report that analyzes over 7 years of production and field data. It demonstrates their track record, alongside generational and family improvements in robustness and reliability, establishing GaN power ICs as highly reliable and automotive-ready. This reliability report is available to qualified customers.





Navitas' latest GaN reliability report highlights seven years of production with accelerating volumes exceeding 250 million units, while driving field failure rate towards an impressive 100 parts per billion (ppb).

Additionally in March 2025, Navitas unveiled the [world's first production released 650V Bi-Directional GaNFast ICs](#) with IsoFast Drivers, creating a paradigm shift in power to enable the transition from two-stage to single-stage topologies to further enhance efficiency, power density, and performance in AC-DC and AC-AC conversion. This would allow next-generation single-stage OBCs to provide bi-directional charging in a high-efficiency, extremely compact solution – which eliminates bulky capacitors and input inductors.

A leading EV and solar micro-inverter manufacturer have already begun their implementation of single-stage BDS converters to improve efficiency, size, and cost in their systems. GaNFast-enabled single-stage BDS converters achieve up to 10% cost savings, 20% energy savings, and up to 50% size reductions.

"Our latest reliability report is the culmination of years of innovation and field experience," said Gene Sheridan, CEO and co-founder of Navitas. "With more than 250 million units shipped, over 2 trillion field devices hours and a cumulative field failure rate that is now approaching 100 parts per billion, we're leading the charge in making GaN the go-to technology for EV power systems."

Please contact info@navitassemi.com for further information or visit www.navitassemi.com.

About Navitas

[Navitas Semiconductor](#) (Nasdaq: NVTX) is the only pure-play, next-generation power-semiconductor company, celebrating [10 years](#) of power innovation founded in 2014. [GaNFast™ power ICs](#) integrate gallium nitride (GaN) power and drive, with control, sensing, and protection to enable faster charging, higher power density, and greater energy savings. Complementary [GeneSiC™ power](#) devices are optimized high-power, high-voltage, and high-reliability silicon carbide (SiC) solutions. Focus markets include AI data centers, EV, solar, energy storage, home appliance / industrial, mobile, and consumer. Over 300 Navitas patents are issued or pending, with the industry's first and only [20-year GaNFast warranty](#). Navitas was the world's first semiconductor company to be [CarbonNeutral®-certified](#).

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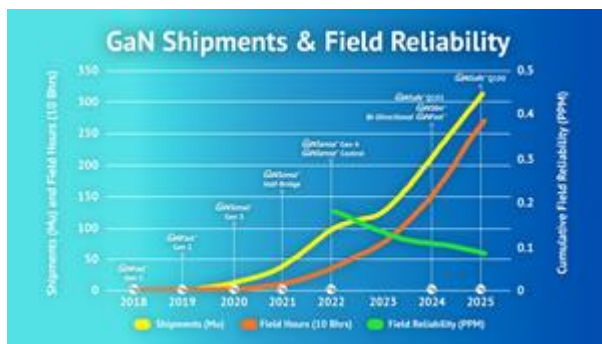
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GaN Shipments & Field Reliability



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Source: Navitas Semiconductor Corporation