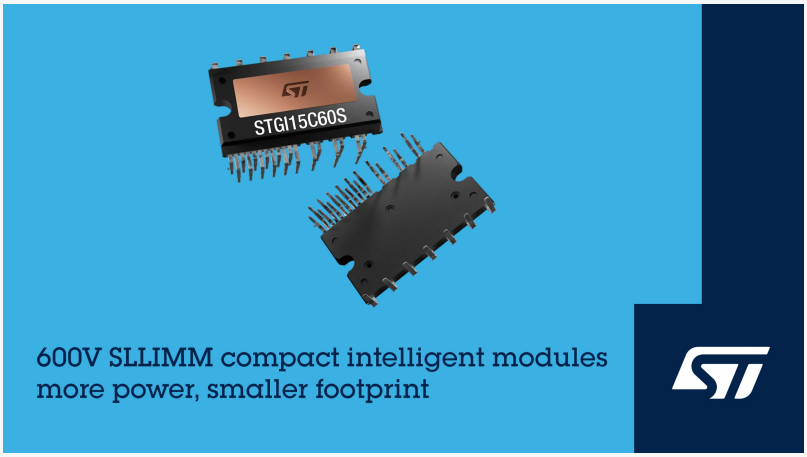
STMicroelectronics reveals sizably smaller intelligent power modules for air conditioners, heat pumps, and appliances

GENEVA, SWITZERLAND, September 16, 2026 /EINPresswire.com/ -- STMicroelectronics has announced small low-loss intelligent molded modules (SLLIMM) with direct-bonded copper (DBC) in a new compact outline for industrial drives, air conditioners, heat pumps and home appliances. The space-saving modules deliver a complete 600V, 3-phase IGBT inverter bridge with an 18.8mm x 32.8mm footprint, which is more than 30% smaller than existing IGBT IPM in DBC packages.



STMicroelectronics SLLIMM compact power modules

The first module in the new SLLIMM Compact series, the 20A STGI15C60S, targets low- and medium-power motor drive designs. The thermally efficient package with topside cooling ensures outstanding reliability in hard-switching circuit topologies operating at up to 20kHz. As part of the STPOWER portfolio, the module contains two control ICs for driving the integrated high-side and low-side IGBTs, as well as a bootstrap diode and protection circuitry. The IGBTs leverage ST's trench-gate and short-circuit rugged technology with very fast soft-recovery freewheeling diodes, combining low saturation voltage with stable dynamic performance for enhanced energy efficiency. High-side reference outputs arranged on the signal side of the dual-inline package help to simplify the bootstrap circuit layout.

While the driver design and IGBTs are optimized for low EMI, the package is fully isolated for safety with an isolation rating of 2000 Vrms/min. Protection includes undervoltage lock-out (UVLO) and smart shutdown that prevents operation in unsafe conditions or when a fault is detected, a temperature sensor, and a comparator that designers can use to indicate any fault measurable as a voltage signal.

The STGI15C60S is in production now, in a CDIPB-26L DBC package, priced from $4.35 for orders of 1000 pieces.

Please visit www.st.com/sllimm-compact for more information.

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