

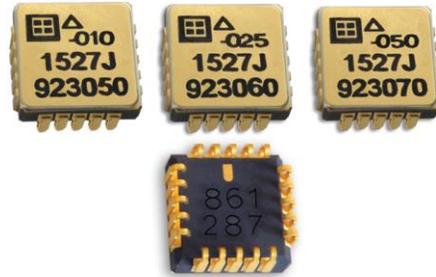
NEW PRODUCT ANNOUNCEMENT - FOR IMMEDIATE RELEASE

New Radiation Tested, Tactical-Grade MEMS Inertial Accelerometers for Spacecraft Electronics Testing

January 17, 2022, Kirkland, Washington, USA – Silicon Designs, Inc., today announced the global market launch of the Model 1527 Series, a family of miniature, radiation-tested, tactical-grade MEMS inertial accelerometers.

Offered in three standard full-scale acceleration ranges, of ± 10 g, ± 25 g, and ± 50 g, respectively, the Series is expressly designed to support a variety of critical space electronics testing requirements, including those of spacecraft, satellites, and CubeSats. In addition, their small bias and scale factor temperature coefficients, excellent in-run bias stability, and zero cross-coupling by design make the Model 1527 Series particularly well-suited for those spacecraft electronics testing applications

requiring low power consumption (+5 VDC, 6.5 mA), low noise, long-term measurement stability in -55°C to $+125^{\circ}\text{C}$ environments, and performance reliability under intermittent radiation exposures. (Please contact the factory for Model 1527 Series radiation test report data, as generated during internal qualification testing.)



The rugged design of the Model 1527 Series combines a premium performance, tactical-grade MEMS inertial sense element, together with a custom integrated circuit, internal temperature sensor, onboard sense amplifier and $\pm 4\text{V}$ differential analog output stage. Both the MEMS inertial sense element and internal components are housed together within a lightweight, hermetically sealed, Nitrogen damped, miniature, RoHS compliant, J-lead LCC-20 surface mount ceramic package (U.S. Export Classification ECCN 7A994), weighing just 0.68 gram. Its compact and lightweight footprint allows for ease of accelerometer installation within space-constrained environments, as well as the minimization of mass loading effects. Each Model 1527 Series accelerometer is also marked with a serial number for traceability on both its top and bottom surfaces.

In addition, all Silicon Designs' Model 1527 Series tactical-grade MEMS inertial accelerometers are designed, manufactured, performance-verified, and calibrated in-house at the company's own global corporate headquarters and R&D center, located just outside of Seattle, Washington, USA. Product performance documentation is also supplied at the time of shipment, including residuals, thermal sensor model, acceleration model, bias, scale factor, linearity, operating current, and frequency response data.

Since 1983, Silicon Designs has served as renowned global industry experts in the design, development, and manufacture of commercial- and inertial-grade MEMS DC accelerometer modules and chips with integral amplification for zero-to-medium frequency instrumentation requirements. By serving as the OEM of its own accelerometer chips and modules, Silicon Designs is able to ensure that each model in a particular series is made to be virtually identical, and thereby allowing for seamless customer performance upgrades. It further allows the company to ensure that its products can remain of consistently high quality, may be easily modified to customer exacting standards, and yet are still offered with highly competitive lead times and pricing.

From the company's earliest days, of developing classified components under a U.S. Small Business Administration Small Business Innovation and Research (SBIR) grant, to its later Tibbetts Award and induction into the Space Technology Hall of Fame, the team at Silicon Designs applies nearly four decades of acquired know-how, valued-added R&D innovation, and applications engineering expertise into all of its finished product designs. Silicon Designs is also a 100% US-based, veteran- and family-owned small business, and with its quality management systems certified to ISO9001:2015. For detailed specifications, pricing, or additional information about the Model 1527 Series, or other MEMS inertial accelerometers offered by Silicon Designs, please visit www.silicondesigns.com.

[Click here to view product datasheet.](#)

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