

Wind Tunnel Allows Precise Thermal Studies of PCB Components

March 29, 2022 - Advanced Thermal Solutions, Inc. (ATS) is providing the CLWT-067 closed loop wind tunnel for thermally characterizing devices such as SSD cards, PCB components and heat sinks at controllable temperatures from ambient to 85°C.



The CLWT-067 wind tunnel produces air flows up to 7 m/s (1,400 ft/min). With customization, it can generate flows up to 50 m/s (10,000 ft/min). Its clear Lexan test chamber lets the user view the test specimen and allows for smoke stream and other flow visualization testing.

Using the CLWT-067 wind tunnel and positioning sensors throughout its test section and around a device under test helps identify the precise flow and temperature that the DUT would be subject to in an operating condition. This will determine what cooling devices are needed to obtain maximum performance and long life.

Unlike open loop wind tunnels, the CLWT-067 recirculate internal air. This allows the system heater to quickly warm the air to a specific temperature. The testing of boards and components in hot air is a requirement in some NEBS and other standards.

With the wind tunnel, semiconductor manufacturers can determine the right heat sinks for cooling chips at extreme conditions. Solid state device manufacturers can better understand enclosure design for their products, and what is required to maintain cooling solutions for optimal performance.

The wind tunnel's test section can be accessed from the top door for mounting and repositioning of boards, components and sensors. Optional internal rail guides provide an easy mechanism to install test specimens of different sizes (e.g., PCB, heat sink). Instrument ports (6) are provided in the side walls of the test section for placing temperature and velocity sensors, such as thermocouples, Pitot tubes and hotwire anemometers.

Find more information about the CLWT-067 closed loop wind tunnel at <https://www.qats.com/Products/Wind-Tunnels/Closed-Loop-Wind-Tunnels/CLWT-067>

#####

About Advanced Thermal Solutions

For more than 30 years, Advanced Thermal Solutions, Inc. (ATS) has been a global engineering and manufacturing company focused on the thermal management of electronics. Founded in 1989 as a consulting company, ATS today is a complete airflow filtration and thermal solutions provider. ATS provides a family of ultra-low temperature freezers and air cleansers for room-level air filtration to remove viruses, including COVID-19. ATS is also world-renowned for its portfolio of more than 5,000 high- and ultra-performance heat sinks. It provides industry-leading liquid cooling solutions, the broadest off-the-shelf line of heat pipes, expert consulting and design services, research-quality test equipment, and leading-edge R&D. ATS has a manufacturing center in the U.S. and strategic partnerships with global manufacturers to provide its global customers with complete thermal solutions ready to tackle the industry's toughest challenges. ATS is headquartered in Norwood, MA, about 30 minutes south of Boston. Learn more at <https://www.qats.com/> or email ats-hq@qats.com.