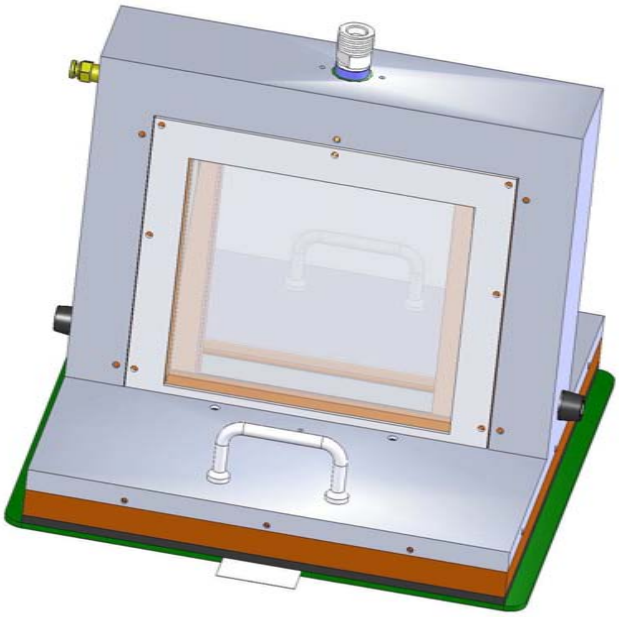
Custom Thermal Fixtures

To meet the needs of non-standard thermal test requirements, Thermonics is able to develop; design and manufacture customized thermal text fixtures. These innovative test fixture designs are useful for providing test solutions for a wide range of devices in an application-specific context. Our test fixtures are always designed to meet your specific needs and are fabricated to high-quality standards.

During the design process, Thermonics' engineers take into consideration the various critical aspects of electronic testing of microelectronic devices at temperature. This includes a variety of factors: size, power dissipation, and temperature range and accuracy requirements of the device.

Additionally, during the design phase, great care is taken to provide protection against electrostatic discharge (ESD) problems as well as frost and moisture. Other important development factors include the interface of the fixture to the user's ATE system and the ergonomic and accessibility requirements of the end-user. Fixture designs for a production environment can vary significantly from those intended for low-volume engineering uses such as R&D or quality assurance.



Thermal Fixture with Probe-Through Windows

Thermonics offers application specific PCB thermal fixture designs that can include "punch-through" windows for probing component leads or PCB traces for failure analysis of PCBs at temperature. Fixtures have been made for operation at -40C to 125C with PCB sizes as large as 8" x 10" (20.32 cm x 25.4 cm). The punch through windows are thin translucent plastic sheets that are easily replaced. Heated purge air is forced over the exterior of the windows to minimize moisture condensation on the windows at cold temperatures.

Applications

- Integrated Circuits
- Hybrid Devices
- Microwave Devices
- Printed Circuit Boards
- Modules
- Optical Devices

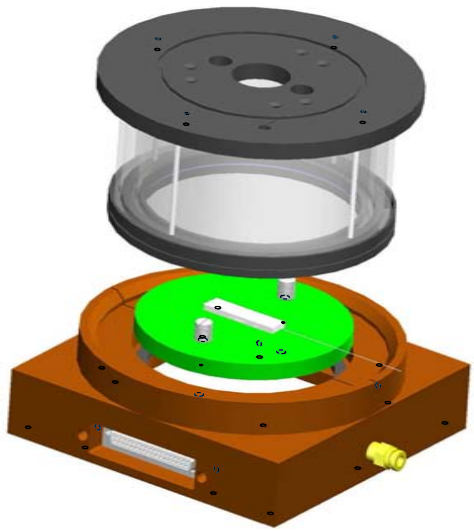
Features

- Temperature Range of -80C to 200C
- Accuracy of ±1C
- Frost-Free Operation
- Power Dissipation to 50 Watts
- ESD Protected
- Quiet Operation

THERMONICS
AN INTEST COMPANY

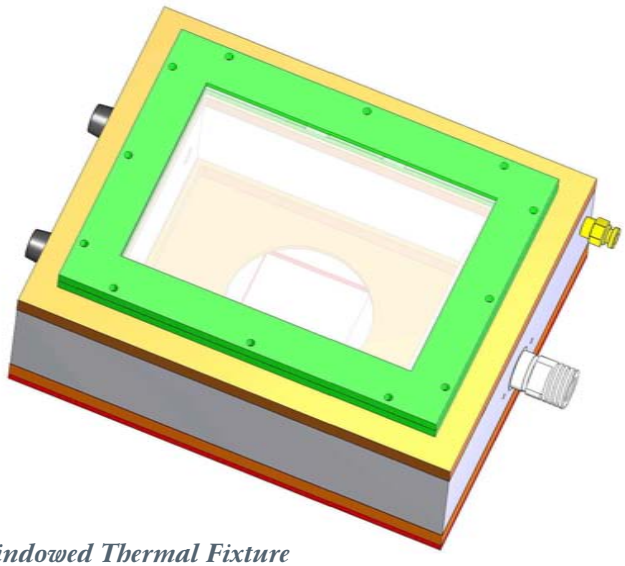
*Specifications subject to change without notice.

For additional information call a Thermonics Sales Representative today! **(408) 542-5900**



Large Shroud

The standard shroud provided with the Thermonics Precision Temperature Forcing System has an I.D. of 4.6" (11.6 cm). An optional shroud (SH-ADD5/25) has an ID of 5.4" (13.7 cm). In addition, custom shrouds can be made with an I.D. of up to 10" (25.4 cm). These shrouds are good for operation over the temperature range of -100C to 225C. For better distribution of the air flow to the DUT, an optional air dispersion (shower head) is available in place of the standard nozzle.

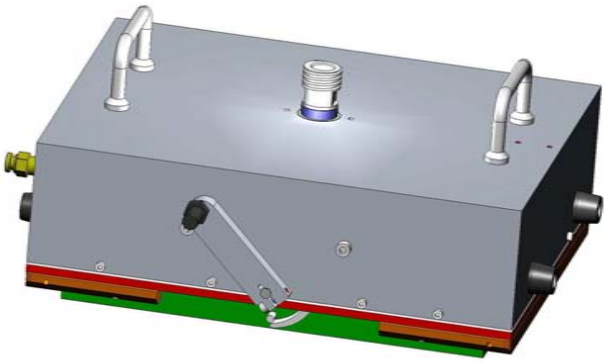


Windowed Thermal Fixture

Thermal fixtures with windows can be designed for applications that require external optical access to the DUT during test. This style of design incorporates a dual pane window with heated purge air forced over the outside window to minimize frost and moisture from forming on the window during test at low temperatures. In addition, air distribution plenums and exhaust ports are incorporated to maintain uniform air flow over the optical DUT. Ports can be provided for power and signal cables or fiber optics. An external extension hose (T-EXTN/25) is used to connect the thermal fixture to the thermal test fixture.

Rectangular Shroud

For applications that require the testing of multiple devices or small PCBs, rectangular shrouds can be designed. Temperature ranges between -80C to 125C can be accommodated. The shroud design consists of an insulated dual wall structure with an air plenum for uniform distribution of thermal air over the DUT or test PCB. Exhaust ports are provided to insure good air flow. Heated purge air is mixed with the exhaust air to eliminate frost build-up on the exhaust ports when testing at extreme low temperatures. The rectangular shroud connects to the thermal test head in place of the standard shroud.



Rectangular Shroud with Securing Clamp

Useful for applications that require a rectangular thermal test fixture that is too large to be attached directly to the thermal test head. The rectangular fixture can be designed with clamps to secure the fixture in place. This is particularly appropriate when the fixture is in a vertical position. This type of thermal fixture may be used for testing small PCBs or multiple socketed DUTs. Fixtures of this type can made for temperature ranges between -80C to 125C. Air dispersion plenums and air exhaust ports are provided to permit uniform application of air flow to the DUT. The air exhaust is mixed with heated purge air to eliminate the build-up of frost at the exhaust port when operating at low temperatures.