The objective of the HTRB test is to check the stability of the device under test during reverse blocking conditions of the main blocking junction at an elevated temperature.

Dynex can offer a range of power semiconductor HTRB testers designed to achieve the test conditions as defined in IEC 60747 and MIL-STD-750E. The following parameters can be recorded by the tester during the test:

- Collector-emitter voltage ($V_{CE}$),
- Collector-emitter leakage current ($I_{CES}$),
- Case Temperature ($T_c$),
- Junction Temperature ($T_J$) by estimation,
- Gate-emitter voltage ($V_{GE}$), (Optional),
- *Gate-emitter leakage current ($I_{GES}$).

*Gate-emitter leakage current measurement only applicable with integrated HTGB test option.
The Dynex HTRB testers are designed to achieve the test conditions defined in IEC 60747 and MIL-STD-750E. The key features of the testers include:

- Maximum test voltage up to 10 kV and a maximum leakage current up to 200 mA – capable of testing most commercially available power modules.
- Maximum test temperature up to 175 °C – suitable to test SiC devices.
- Option to integrate HTGB testing and complete the two tests sequentially with one device loading operation.
- Compatibility for a wide range of DUT packaging and device types. Tester variations are available to suit Power Module and Press-pack IGBTs, MOSFETs and Power Diode Modules.
- Productivity is excellent with fast heating times from ambient to test temperature of fewer than 30 minutes. Automatic collection of test data, with support for the scanning of device serial numbers to maintain full traceability.
- High accuracy of measured test data with ±1% full range of $I_{CES}$, $V_{CE}$ and $V_{GE}$. With a temperature uniformity of ±2°C and stability of ±0.2°C.

The equipment is highly reliable, a custom design based on proven technology. An industrial PC provides reliable control and recording of test data. The test results can be backed up to an external drive or to a networked location. The testers have the ability to recover a test in the event of an interruption or unexpected shutdown, without losing test data and settings.

With a user-friendly control interface, all test parameters are set and displayed using a touchscreen control panel. Real-time measurement curves can be displayed. Batch reports can be generated with summarised test results and pass rates.

- Comprehensive safety features including but not limited to; over temperature protection, smoke detection, safety interlocks and short circuit protection.

Dynex IGBT Module HTRB Tester (left) and Dynex IGBT Module HTGB Specific Tester (right).