

POWER BOOSTER UNITS for T3Ster®

High power thermal testing

Thermal testing can be carried out for different purposes, such as:

- characterization of the heat conductance path
- reliability analysis.

As T3Ster® has exceptionally high sensitivity and low noise, characterization of the heat conductance path by thermal impedances or structure functions can be done at low power levels. However, reliability testing needs high power levels corresponding to the real operation of the device.

Accelerated reliability testing requires even power levels above the normal operating power.



T3Ster-Booster devices

These add-on devices have the same excellent speed and resolution as the T3Ster® base unit but raise the switched current, voltage and power level.

The booster devices are **modular**, ensuring easy extension of the driving capability into tens and hundreds of amperes and tens and hundreds of volts.

Typical applications of the booster include:

- measurement of power devices such as thyristors or IGBTs,
- measurement of power LED assemblies, LED lines,
- measurement of large area VLSI chips using the substrate diode.

The booster follows the multi-channel architecture of T3Ster®. Up to four boosting channels can be placed into a single (19 inch, 3U high) enclosure.

Flexible design for satisfying customer needs

As the user requirements span over a wide range of voltage and current a variety of power sources and modules can be used for best results.

Typical module specifications are:

Low voltage module

for diode and thyristor testing:

30V 50A or 40V 38A.

More modules can be used in parallel for higher currents.

High voltage module

for power LED line testing:

100V 10A.

More channels can be used for simultaneous driving of different colors, etc.

Three pole module

for high power IGBT or transistor testing: voltage jump or current jump, 2 kW or more.

High voltage models also contain signal prescalers for matching the input range of T3Ster® measurement channels. Current sources are auto-ranging precision type. Sensor currents can be programmed from μA range to 2A or more, without compromising in accuracy.

Size and weight

Single module units are 257 mm x 218 mm x 376 mm (W×H×D) weighing approximately 7 kg (15 lbs).

Stand alone use

Booster units have their own control through USB interface. They can be programmed for stand-alone power cycling (or temperature cycling using an external heater) for long reliability tests while T3Ster® is used for other measurements.