

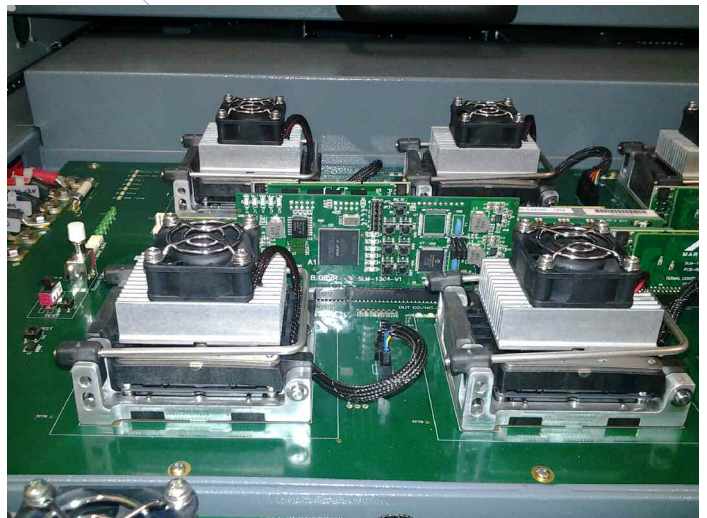


# Reltech 8000 Series High Power HTOL Systems

Today's low geometry semiconductor devices require a different approach to performing High Temperature Operating Life (HTOL) and "Burn-In". Core Leakage currents vary greatly between device die, even when from the same wafer, and are significantly higher than those of larger geometry devices. These leakage currents result in self-heating within the device and increased junction temperatures ( $T_j$ ).

In order to control the junction temperature to within acceptable limits and to increase product yield, it is necessary to control the temperature of each device independently. This is not possible in conventional chamber based HTOL systems.

The Reltech independent Test Laboratory is pleased to announce the latest addition to its portfolio of semiconductor qualification test systems. The Reltech 8000 series HTOL system incorporating iSocket™ technology, provides the highest level of thermal control possible for High Temperature Operating Life Testing and Burn-In of the very latest low geometry, high power semiconductor devices.



## Reltech 8014 HTOL System Features

- ◆ iSocket™ Technology
- ◆ Open Rack - Room Temperature (RTBI) non chamber design
- ◆ Easy to load trays on telescopic slides
- ◆ Individual DUT Temperature Measurement & Control
- ◆ System PC - iHost™ Software - DUT level thermal control
  - RELMON Software - HTOL Project programming and DUT monitoring
- ◆ Real Time monitoring functions:
  - Voltage, Current per DUT
  - Over voltage/current auto shut down
- ◆ DUT Monitoring with Auto shut down
- ◆ Multi DUT type HTOL Testing
- ◆ Remote System & HTOL monitoring
  - Customer access via VPN



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## HTOL System Configuration options

- ◆ 8002 System: 2 Slots - 2 Boards (Evaluation/Debug System)
- ◆ 8008 System: 8 slots - 16 Boards
- ◆ 8014 System: 14 Slots - 28 Boards (see photo over page)
- ◆ 8016 System: 16 Slots (2 columns of 8) - 32 Boards

Each Slot can drive up to 16 iSocket™ Controllers and up to 4 DUT's per Controller

- ◆ HTOL Board Dimensions (8014 System):  
Typically 300mm x 600mm (may vary on system configuration)
- ◆ DUT Power: Up to 150W per DUT
- ◆ 6KW DUT heating capability
- ◆ Signals zone: Up to 32 - 1 per Board. 1 Vector Generator per Board
- ◆ Power zones: Up to 32 - 1 per Board. POLs (point of load regulation) on Board

## DUT Power Supplies per HTOL Tray

- ◆ No limitation of quantity of power supplies or voltage level

Typical DUT power supplies per HTOL Board (example only):

PSU	Volts	Current
V1	0.6v – 5.5v	20A
V2	0.6v – 5.5v	20A
V3	0.6v – 5.5v	20A
V4	0.6v – 5.5v	20A
V5	0.6v – 5.5v	20A

## 8000 Series HTOL Test Pattern Generator type P4680

- ◆ Project re-programmable FPGA, PIC, ROM based control system
- ◆ 64 Vector Channels
- ◆ 16 Digital Control Channels
- ◆ 10 MHz Vector Frequency (recommended max speed)
- ◆ 60 DUT signal monitor channels
- ◆ 64Mb Vector Memory
- ◆ 200mA driver per vector channel (typical)
- ◆ Multi test mode operation e.g. MBIST, SCAN, PCIE, JTAG

## System Dimensions (8014 system):

Height: 1900mm, Width: 1400mm.

Depth: 1450

## System Power Requirements:

415v/50Hz/3PH +N/63A per phase



**Independent Test Laboratory**



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