BiBench systems

BIBURN : TRUE DYNAMIC BURN-IN / LIFE-TEST SOLUTION

→ Testing high speed / complex components under actual operating conditions

✔ System usable at high or low temperature for high-end component functional tests.

✔ Nominal operation qualification under stress!

✔ True dynamic aging solution for DDRx, High Capacity Nand Flash, High Res Image Sensor, etc. Available now!

✔ Designed to be used in your existing oven thanks to the patented « air-cooled » system : no equipment change!

✔ Easy to use: “on-desk” comfortable component installation. Easy to handle system with in-oven latch and automatic connection.

✔ Reconfigurable, reusable for different component types and different developments.

BiBurn benefits?

This approach originated in the space field for several reasons:

✔ Many of existing component tests activate only an extremely limited surface of the die (e.g. DDR-Sdram) and do not stress the sensitive parts of components (e.g. Flashs / floating gate).

✔ Some recent components, such as FPGA, SoC, etc ..., may present fault trees whose intricacies follow their own complexity. BiBurn systems helps you address this issue by allowing test under real conditions.

✔ Nowadays the life expectancy for a commercial component (smart-phone, computer...) is less than 4 or 5 years against 10 years formerly. Using these components for reliable applications therefore requires deeper tests. Keep cool : our systems are there for that !

✔ Highly qualitative tests compared to static burn-in or pseudo-dynamic testing: brings more failure modes with more objective results for better Go/NoGo sorting.

✔ Optimized test time:
  ◦ For flawed component, no parametric test required ...
  ◦ Independent test slots: partial batches possible, the stop of a faulty component has no influence on others ...
  ◦ Defective component are instantly detected: replace and restart position with no dead time.

✔ Reliable system, recognized in the space field.

Evolution of Burn-in / Life-Test conditions

Static

Pseudo-Dynamic

Nowadays, the most common
(Only few signals, at low frequency, Poor or no monitoring.)

True-Dynamic

( almost 100% active, Nominal frequency, monitored operation )

Test During Burn-In

( continuous testing, log file )

BiBench Expertise
Usual systems:
- True Dynamic Not Possible

BiBurn Systems:
- True Dynamic Possible

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- Centralized power supplies far away → poor bandwidth
- Driver too far → no high speed
- Not enough connections per component → parallelization
- No individual temperature monitoring

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- In oven, nearby driver protected from thermal stress thanks to an innovative housing (patented)
- One or small count of DUT per Driver
- Close and performing programmable power supplies (high di/dt)
- High I/O count & matched impedance (if necessary)
- Versatile, reprogrammable, reusable, reasonable recurring cost, reasonable NRE cost for new project

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Drivers outside the oven, in cool place

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Easy-to-handle removable system with in-oven latch and automatic connection.

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Targeted components:
- High-speed /complex component such as DDR-X Memory, High Capacity Flash, Image Sensor, SERDES, ASIC etc...

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Driver very close: High Speed possible