

## **HIRAYAMA HAST CHAMBERS**

- *HAST/PCT Systems*
- *AUTOCLAVES*
- *PRESSURE POTS*

### **Advantages of the HAST SYSTEM**

- The “shortened” evaluation time
- Realistic Reliability “Acceleration Factors”
- The new ‘industry standard’ for:
  - Qualifications
  - Incoming Lot Acceptance
  - Reliability Assurance
  - Materials evaluation
  - R&D
- Tool for increased accuracy of evaluation and life analysis
  - Commercial applications
  - Military applications
  - Standards for Plastic encapsulants by JEDEC
- HAST is now an accepted Worldwide Quality requirement
- Wide array of applications:
  - PC, Modules, Auto, Medical, Semiconductors, Materials
- Economics

## **WHY HAST & WHY HIRAYAMA HAST**

### **BENEFITS of HAST TESTING**

- Shortened Qualification time
- Cheaper Test than THB
- Standardization and universal acceptance

### **SOLUTIONS with HAST**

- Cycle Time Reduction
- Faster “time to market”
- Precision Experimentation
- World wide data acceptability
- Tremendous cost savings
- Accurate time to failure rates
- Appraisal of raw materials and finished products
- Realistic acceleration factors

## **COST ADVANTAGES of PRESSURE COOKER TESTING**

### **PCT AS A COST-EFFECTIVE ALTERNATIVE TO 85/85 TESTING**

**One PCT System can perform the work of five THB systems**

**i.e. A single PCT system can provide at least 5 product evaluation in the same time required for 1 product evaluation using conventional 85/85 equipment**

- 1) Initial investment divided by 5
- 2) Reduction in floor space costs
- 3) Reduction in test board fixturing costs
- 4) Reduced general operation costs of
  - Electricity
  - Maintenance

### **HAST STATUS in JAPAN-USA and the world.**

- **EIAJ** standard since 1982 –**JEDEC** in 1987
- Replacing THB as the main evaluation tool
- Widespread use in OEM's, subcontractors, users
- Increase use in testing of new materials
  - Reliability testing
  - Research and development
  - Communication media, paints, medical, consumer electronics
  - Ceramics, Glass, Wood, Polymers, etc.
- Trends are towards even more stressful factors
  - 5 atmospheres
  - Stress combinations

### **HIRAYAMA HAST BOARDS (SMT, DIP, IC'S)**

- Safe use up to 200°C (without coating)
- NO stitch-weld requirements
- No electro migration (nickel plated copper pattern)
- 3000 HRS life time (more than 3 times existing boards)
- Universal Board for all pin counts
- Minimized contact resistance
- (gold plated [Ni 2  $\mu$  + Au 5  $\mu$ ] contact to connections)
- Number of board rack connector pins: 22 X 2
- Standard JEDEC sizes
- Board size 220MM (H) X 300MM (D) X 1.6MM (T),  
6 pcb's for PC-422R8

### **HIRAYAMA HAS SET THE STANDARDS**

Hirayama's leading edge technology has set quality standards world wide and in various companies in the US and abroad, Hirayama equipment is regarded as the **ONLY STANDARD!**

## **NOT ALL EQUIPMENT IS THE SAME!**

Hirayama offers features that are only implemented in high end and exorbitantly priced systems. We offer features that keep us ahead and the competition guessing. Check for our technical brochures or call us for a technical presentation.

- ❖ Patented condensation control mechanism
- ❖ Constant Controlled Humidity
- ❖ Precision controlled accuracy
- ❖ Quality and Reliability without compromises
- ❖ Cost effective. Solutions comparably less

## **Key Features .....**

1. Patented door design and Safety Interlock mechanisms
2. Constant Humidity Control, including cooling phase
3. Built-in power recovery system
4. Safety Alarms and Key lock system
5. Redundant Safety Features
6. Guaranteed Humidity Control:
7. Guaranteed Temperature Control:
8. Guaranteed Pressure Accuracy:
9. Condensation Control Design (Patent pending)
10. Constant water level indicator



**HIRAYAMA HAST CHAMBER**