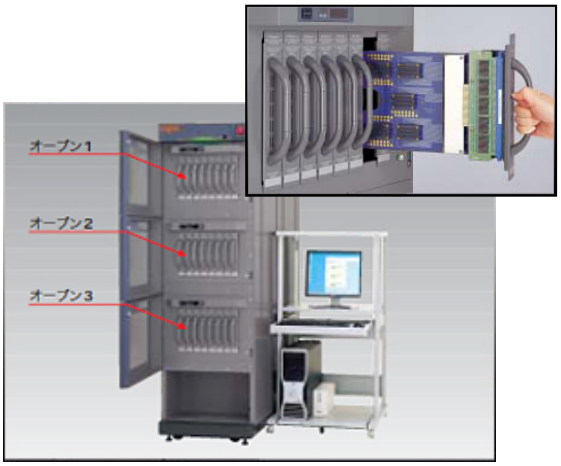
This product has a limited sales area in the world.

# For power semiconductor

# High temperature Burn In chamber for SiC power transistor

## Model: RBC-HHH series

Reference → Power devices
http://www.espec.co.jp/english/products/market/auto/power.html
http://www.espec.co.jp/english/products/market/new/power.html




**High temperature Burn In chamber** for SiC power transistor is a special chamber that can perform R&D, Reliability Evaluation and Screening of SiC power transistor under the high temperature environment up to 400℃.

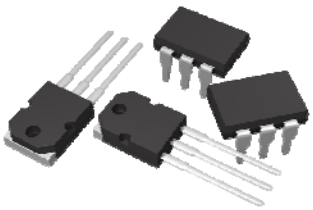
This chamber can easily convert to static burn-in, dynamic burn-in and monitored burn-in.

Best suitable system can be configured on Temp. range, number of samples, purpose and application from the line up.

## Target device

### －Power semiconductor including SiC transistor －

SiC (silicon carbide) semiconductor that attracts attention in recent years has three times wider Bandwidth compared with a past Si semiconductor. Electric field strength is about ten times bigger to the dielectric breakdown. It also has excellent characteristics in thermal conductivity, heatproof, chemical resistance, and higher tolerance to the radiation than the Si semiconductor.
By above features, it can treat as a element with smaller size, lower power consumption, highly effective power, high frequency, and stronger anti-radiation. It is useful for recent hybrid car, electric power, transporting, consumer electronic, space and nuclear power.



Comparison of SiC and Si

| | SiC | Si |
|---|---|---|
| (MV/cm) | 3.0 | 0.3 |
| (eV) | 3.25 | 1.1 |
| (cm2/Vs) | 1140 | 1500 |
| relative permittivity | 9.7 | 11.8 |
| (Wc/mK) | 4.9 | 1.51 |

## Feature and usage

### It corresponds to three temperature levels.

It provides with three independent ovens (400℃ or less) in one cabinet. It is possible to evaluate by different temperature conditions in each oven. Eight DUT boards can be mounted on one oven.

**Highly accurate oven of high temperature 400℃**

AEM's ovens can create test temperatures of up to 400℃ with outstanding precision (±2.5℃ distribution at 50℃ setting). Up to three ovens can be mounted in each cabinet, and evaluations can use different temperature conditions in each oven.

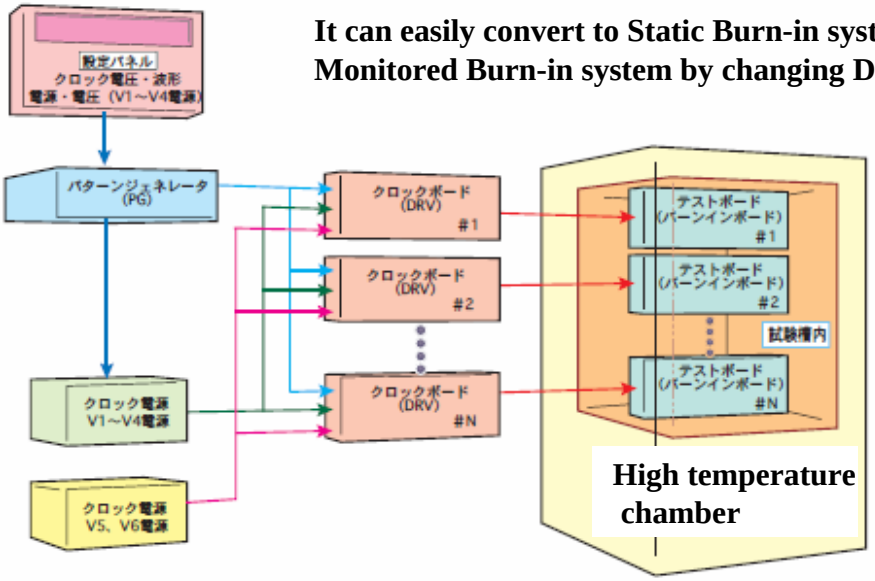
### The development of reliable DUT boards

To ensure that components connect securely, DUT board-to-socket connections have been given a double contact structure (patent pending), and an original ESPEC design has been used for DUT-to-socket connections. These structural improvements dramatically reduce contact failure at high temperatures, enabling low-cost, high-cost-performance DUT boards that can withstand longer tests.

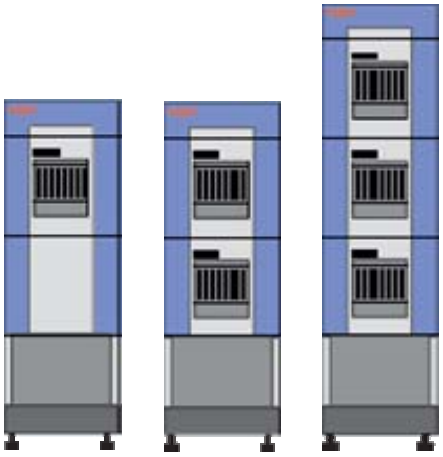
### Pin-Scramble is available

ESPEC DUT Board can accommodate any kind Pin Assignments."As you see",inserting various lengths of pins to create all kind of configurations.

# System up




**It can easily convert to Static Burn-in system, Dynamic Burn-in system and Monitored Burn-in system by changing DUT Power Supply and Driver Board.**



**The cabinet can be selected from one oven, two ovens, and three ovens according to the amount of DUT's.**

# Specification

| Model | temperature range | temperature uniformity | board storage | Outside View |
|---|---|---|---|---|
| RBC−HHH | +65℃～+40 0℃ | ±2．5℃ | 24 pieces |  |



Reference → Power devices http://www.espec.co.jp/english/products/market/auto/power.html
http://www.espec.co.jp/english/products/market/new/power.html

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