



- TEST NAVI REPORT

Release of the reports for customers interested in HALT.

“Effects of Stresses in Highly Accelerated Limit Test (HALT)”

Takuya Hirata, Raphael Pihet and Yuichi Aoki,
Development Headquarters,
ESPEC CORP.

Abstract

The effects of vibration stress and combined stresses in Highly Accelerated Limit Test (HALT) using printed circuit boards have been quantitatively investigated. During the vibration step test at 20°C, the lead of the aluminum electrolytic capacitor has been broken due to the bending stress. On the other hand, during the combined stresses test (temperature cycle and vibration step), cracks and delamination have also been found at the solder joint of the capacitor in relation with the capacitor mass and solder quantity. Moreover, it has been possible to detect those cracks and delamination during the vibration step stress at 80°C. Therefore, different failure modes have been detected depending on the test conditions in HALT.

This technical report is a modified and expanded version of information presented at the 47th JUSE Reliability & Material Safety Symposium held in July 2017.

https://www.test-navi.com/eng/report/pdf/Effects_of_Stresses_in_Highly_Accelerated_Limit_Test_HALT.pdf

- FASTER TEMPERATURE (& HUMIDITY) CHAMBER, SM SERIES

■ ESPEC has developed a new model of its SM series

Features

- 1: Achieving high stress of 5°C/min. or more
- 2: Model variation for 1800L capacity
- 3: Door-integrated instrumentation
- 4: Remote monitoring and control
- 5: Large viewing window for specimen observation

<http://www.espec.co.jp/english/products/env-test/sm/>





- MODEL SELECTION GUIDE

■ Search by Specification or Function

By selecting the temperature range, capacity, etc., you can easily select the chamber.

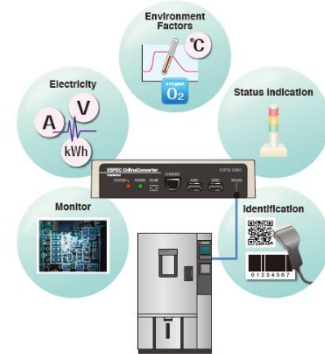
<http://www.espec.co.jp/english/products/search/spec/>

- NETWORK CUSTOM PROPOSAL

■ ESPEC provide the case study on the Network System adding functionalities specially designed for.

1. Bar-code Operation System
2. Extending ESPEC OnlineConverter Functionality by USB ports
3. Exposure Time Control System for Thermal Shock Chambers
4. Test Report Auto Creation System
5. ESPEC OnlineCORE RAID model
6. ESPEC OnlineCore Indicator Lamp for Alarm Notification in Offices
7. ESPEC OnlineCore Uninterruptible Power Supply (UPS) for Power Losses

<http://www.test-navi.com/eng/test/network/index.php>



Test Navi by ESPEC CORP.

<http://www.test-navi.com/eng/index.html>

Copyright (C) ESPEC CORP. All Rights Reserved.
