

Tuesday 3/11/14 10:00am

If one was good, two must be better! Poster Sessions that is! We had so many qualified submissions this year, we divided them in to two Poster sessions offering a variety of relevant topics to augment what you'll learn sitting in the Podium sessions.

Poster Sessions are a great way to network through interaction with the poster presenters and other curious bystanders, multitask during a break and stretch your legs after a long session.

In-Situ Debug Techniques of SATA Connectors In Storage Servers - and Connector Degradation Phenomena

Trent Johnson—Cleversafe, Inc.

Investigation of Micro Spring Performance

Jiachun (Frank) Zhou, Hui Liu—Smiths Connectors - IDI



This Poster

Testing Elastomer for HTOL

Ila Pal, Meghann Fedde, Sultan Faiz, Ranjit Patil—Ironwood Electronics, Inc.

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Testing Elastomer for HTOL

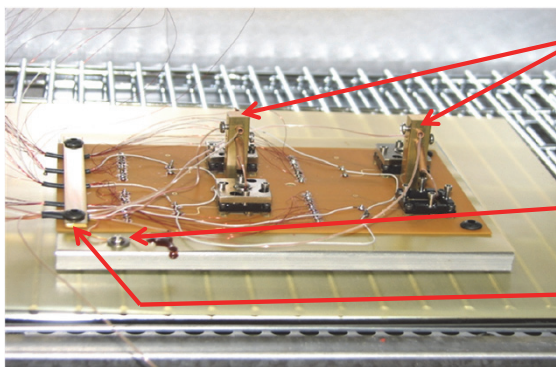
Ila Pal, Meghann Fedde, Sultan Faiz, Ranjit Patil
Ironwood Electronics, Inc.

Introduction

- Need low inductance contact technology for HTOL test.
- HTOL Conditions - 1000hrs at 125C with DUT read points at 0, 168, 500 & 1000hrs.
- Measure resistance as a function of time at a temperature of 125 deg C and 140 mA current loading.

Experimental Setup

- 4 sockets with a PCB & daisy chain DUTs.
- Installed in temperature chamber/oven to maintain setup at 125C.
- 10 points in a daisy chain to a digital data acquisition system.
- Chains are driven from a constant voltage (10V) via dropping resistors of approximately 55 Ohms in series with the chains.
- Current is measured in a summing point and monitored for changes.
- Any current reduction greater than 2.5% triggers a data acquisition event that records the voltages in the individual chains respective to the common drive point for current summing.



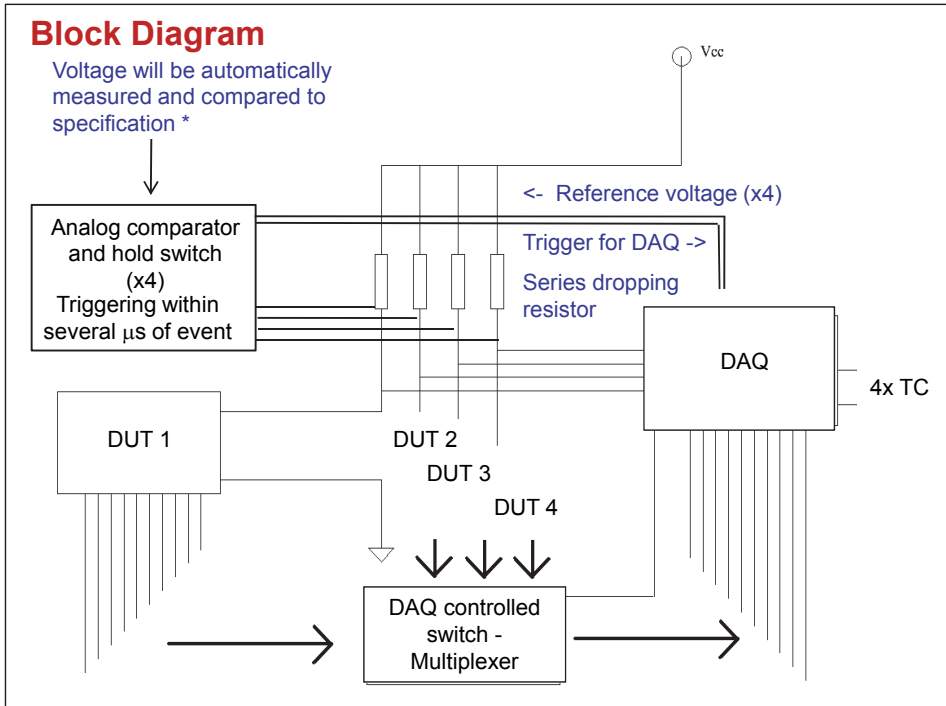
T-couple holders for
DUT temperature

T-couple mount for
baseplate
temperature

Strain relief for
connecting wiring

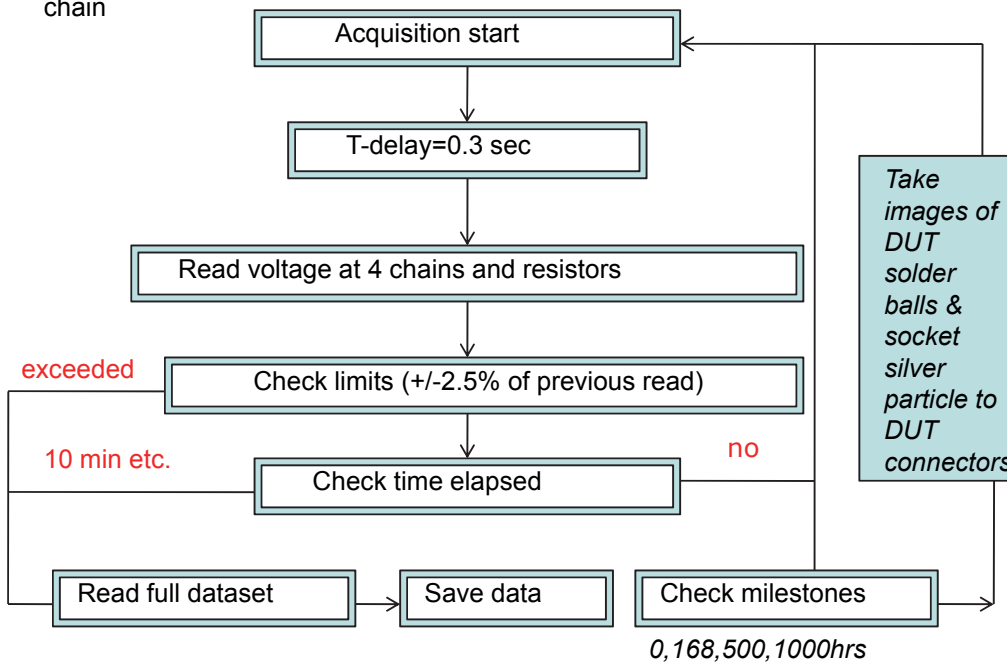
Block Diagram

Voltage will be automatically measured and compared to specification *

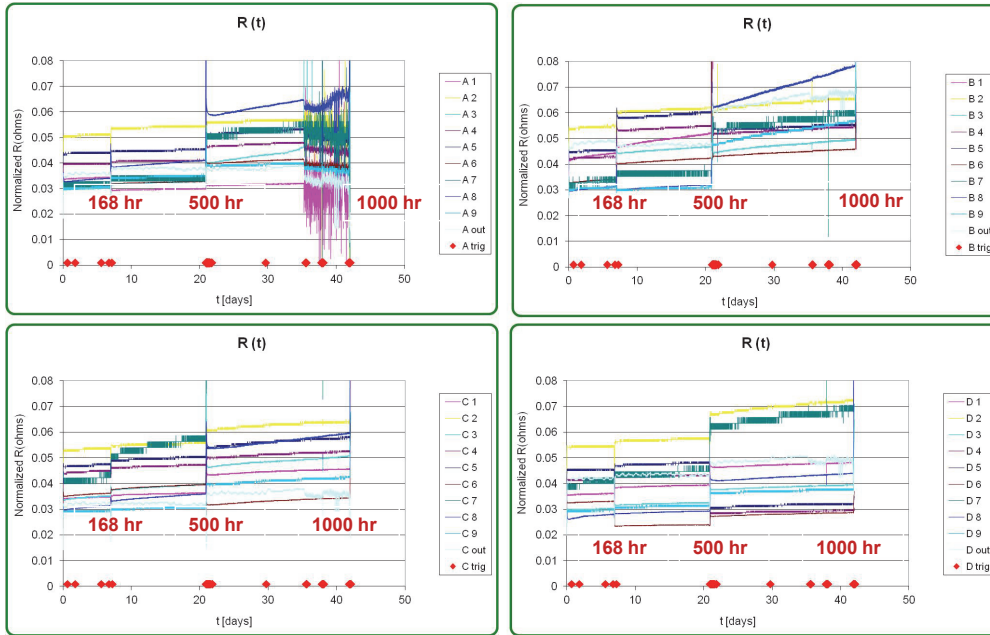


Data Acquisition

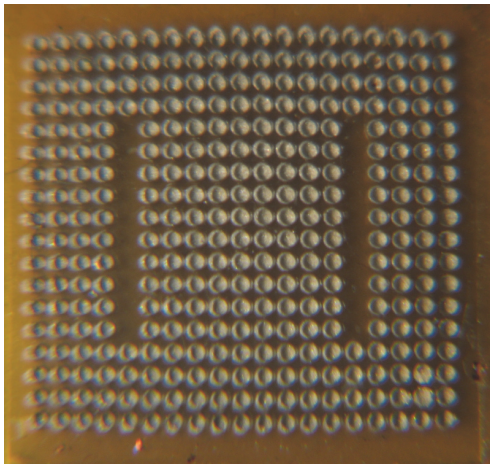
Acquire current as quickly as possible (0.3sec), if varies by more than $\pm 2.5\%$ since last measurement -> trigger immediate measurement of V at each daisy chain



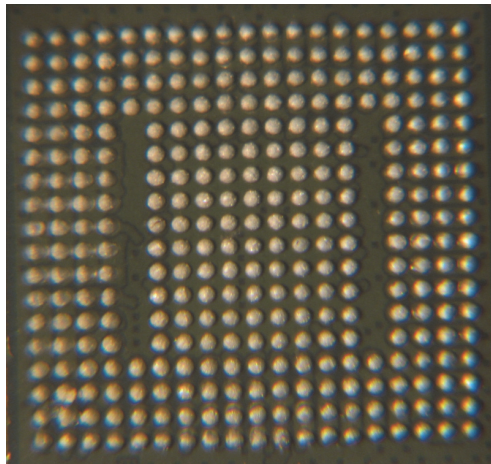
Results



Elastomer after 1000 hrs



DUT after 1000 hrs



Summary:

- Elastomer can be used for HTOL test that requires low inductance.
- DUT sticks to elastomer. DUT has to be peeled instead of pulled.
- Need to disassemble socket from PCB at 168, 500 and 1000 hr read points for peeling.