

## Title: LONG TERM STORAGE OF

**ELECTRONIC DEVICES:** The missing section from GEIA-STD-0003A

The GEIA standard GEIA-STD-0003A is very comprehensive and covers all aspects of how to store and how to test that the storage has been successful. **But what it does not address is what do you do if the storage was not successful?**

## **WHAT HAPPENS WHEN YOUR COMPONENTS FAIL SOLDERABILITY TESTS AND VISUAL INSPECTION BUT PASS ELECTRICAL TESTING?**

The standard stops at the section that mentions parts failing, but the basic understanding is these parts are non-conforming and therefore cannot be used and should be disposed of. That could be a lot of value that is being disposed of, but there is more than just the basic value of the components to take into consideration.

In a lot of cases if you are opting for long term storage of key devices then you will be doing this to secure the future of your products. So, disposing of, say **£3k of devices** could impact **£500k+ of end product** that relies on those £3k worth of devices.

Plus, there is the fact that these parts may be obsolete or on an extended lead-time and cannot be easily replaced which will impact your build schedule and lead to possible penalty clauses being actioned.

## **WHAT IS THE RISK AND THE SOLUTION?**

The risks of long-term storage are well detailed in the GEIA-STD-0003A and are listed as:

- Tin Whiskers
- Intermetallics
- Dopant Migration
- Plating Diffusion

**and this is the reasoning behind the controls put into place and the reason for the set timeline of one year and recommended inspection and testing of parts after this time.**

Retronix deal with issues like this for customers everyday and offer a full-service suite of solutions to enable you to use these parts that are failing solderability or visual inspection after long term storage.

Steps would include – Solderability testing, Visual inspection, Electrical curve trace testing and Retinning/balling. Alongside these services, Retronix also offer lead straightening, XRF, ICOS AOI and X-ray inspection that can also be utilised as tools to support your components.

Our services can be defined by the customer or defined by Retronix to suit each case, we can offer advice on the steps that would be required for each device type and will work with you to create a specification for each device on your first order, that specification can then be applied to Retronix new

Factory Management System to ensure these specifications are called up for use on any future orders for the relevant devices.

We can set up agreed schedules with customers for inspection, solderability testing and Electrical Curve Trace Testing.

For example – using your MRP systems you can plan that a month before you know these devices are due out of long term storage for your scheduled assembly that the devices are shipped to Retronix for these services. And in the case of failing solderability testing then these can be progressed to re tinning/balling of the devices. This ensures the devices arrive back with you ready for placement and on time.

If you would like to know more please get in touch with us –

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