Abstract: We present resources for aerospace engineers or spacecraft design engineers to use when searching for radiation test data.

Introduction

The performance of electronic components in space is often limited by susceptibility to single-event effects (SEE), single-event emptying (SEE), displacement damage (DD), and total ionizing dose (TID). These effects can significantly degrade the reliability and functionality of space-qualified components.

Here are a few aspects to consider:

- Search engines
- Test results may vary from lot to lot. We highly recommend that lot testing be performed on any suspect or commercial device.
- Some websites require a log-in account to view test results.
- Independent party testing was performed.
- This work was supported in part by the Defense Threat Reduction Agency (DTRA).
- Materials Compatibility Survey, internal-compatibility testing, signature of publication in the REDW Record, see: http://dlar.com/arc/.

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Test Data Research Samples

IEEE Radiation Effects Data Workshop

The IEEE Radiation Effects Data Workshop (REDW) provides a platform for sharing radiation test data and promoting the use of radiation effects analysis and design methods.

Resources for Radiation Test Data

National Aeronautics and Space Administration (NASA) Defense Logistics Agency (DLA) Asset Management Program (AMP) website. See: http://radhome.gsfc.nasa.gov/. REAG test reports are also available at the NASA Spares and Packaging Information System website, where html-version files of Data Search Indices are available. Search engines such as Google, are also useful resources.

European Space Components Information Exchange System

This system is intended to be a resource for independent testing of device performance. It provides a searchable database of radiation test data for various space components.

Terrestrial Instruments Radiations Data for Space

This website provides a comprehensive database of radiation test data for various space instruments and spacecraft design.

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Summary

This poster is intended to be a resource for independent testing of device performance. It provides a searchable database of radiation test data for various space instruments and spacecraft design.

References


