Resources for Radiation Test Data

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

Resources for Radiation Test Data

Radiation hazards and space radiation hardening (REAG) radhome website allows searching of the database

Acronyms

SEFIs = single event functional interrupts (SEFIs)
SEB = single-event burnout (SEB)
REDW = Radiation Effects Data Workshop
NASA GSFC Radiation Effects and Analysis Group (NEAG)
IEEE Radiation Effects Data Workshop (REDW)
ESCC = European Space Components Coordination (ESCC)
DoD = Department of Defense (DoD)
DLA = Defense Logistics Agency (DLA)
DLA = Defense Logistics Agency
DD = displacement damage (DD)

Other Search Tools

Search engines such as Google can be used to locate resources related to radiation testing. However, even with specific search keywords, there may be no results. In these cases, it may be necessary to verify that the search is legitimate.

Cautions

This poster is intended to be a resource for radiation test data. Here are a few aspects to consider:

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• Always check radiation test results with the manufacturer to determine whether the device is radiation-hardened or the test was performed. All search results should be validated with the manufacturer.

Summary

This poster provides a summary of resources for searching radiation test data. The main resources are:

• Red home website. This website is a useful tool for researching radiation test data. It includes an index of radiation effects piece-part testing data, organized by year of publication in the REDW. Users can search by keywords, there may still be the need to download the actual test reports. The authors of this poster welcome updates and suggestions for additional radiation test data resources.

A few companies and organizations provide analysis and test services that have done 360° reliability analysis, including:

• Texas Instruments
• National Aeronautics and Space Administration (NASA) GSFC
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• International Rectifier http://hirel.irf.com/,
• Texas Instruments http://www.ti.com/lsds/ti/high-reliability/space/radiation-data.page
• Infracom http://www.infracom.com/products.htm
• Munir Shoga’s Radiation Group, Inc., see http://www.rad-data.net/index.html.

References

15. Defense Logistics Agency (DLA) Land and Maritime, the largest Inventory Control Point (ICP) for DoD, maintains qualification data. Figure 4 shows a screen capture of a sample part.

In this case, consider the latest results and the most recent research methods.

• Texas Instruments Radiation Data for Space
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