

Standard

Qualification and Quality Requirements for Space Solar Cells

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Standard

Qualification and Quality Requirements for Space Solar Cells

Sponsored by

American Institute of Aeronautics and Astronautics

Approved

26 September 2005

Abstract

This standard establishes qualification and quality requirements for solar cells. Section 7 describes specific tests necessary to ensure the quality and reliability of solar cells intended for space application. Section 8 describes specific tests necessary to characterize the performance of solar cells intended for space application. Section 9 describes the quality requirements for cells to be qualified to this standard. Section 11 describes the reporting format for the qualification tests in Section 7 and the characterizations tests in Section 8.

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Foreword

Before 2004, no comprehensive standard for space solar cell qualification was available. This document was developed to provide a “gold standard” for space solar cell qualification, with provisions included to supplement industry ISO 9001 standards for quality. The basis for this document was “Qualification and Quality Requirements for Space Solar Cells, TOR 2004(8583)-3554, developed by Brad Reed of the Solar Array Section of the Engineering and Technology Group at The Aerospace Corporation. Improvements were made to the TOR by additions and deletions based on the experience of the committee. However, as a ground rule certain requirements in the TOR could not be deleted or altered.

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The above consensus body approved this document in August 2005.

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Introduction

This standard establishes qualification and quality requirements for solar cells. Section 7 describes specific tests necessary to ensure the quality and reliability of solar cells intended for space application. Section 8 describes specific tests necessary to characterize the performance of solar cells intended for space application. Section 9 describes the quality requirements for cells to be qualified to this standard. Section 11 describes the reporting format for the qualification tests in Section 7 and the data sheet characterizations in Section 8.

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