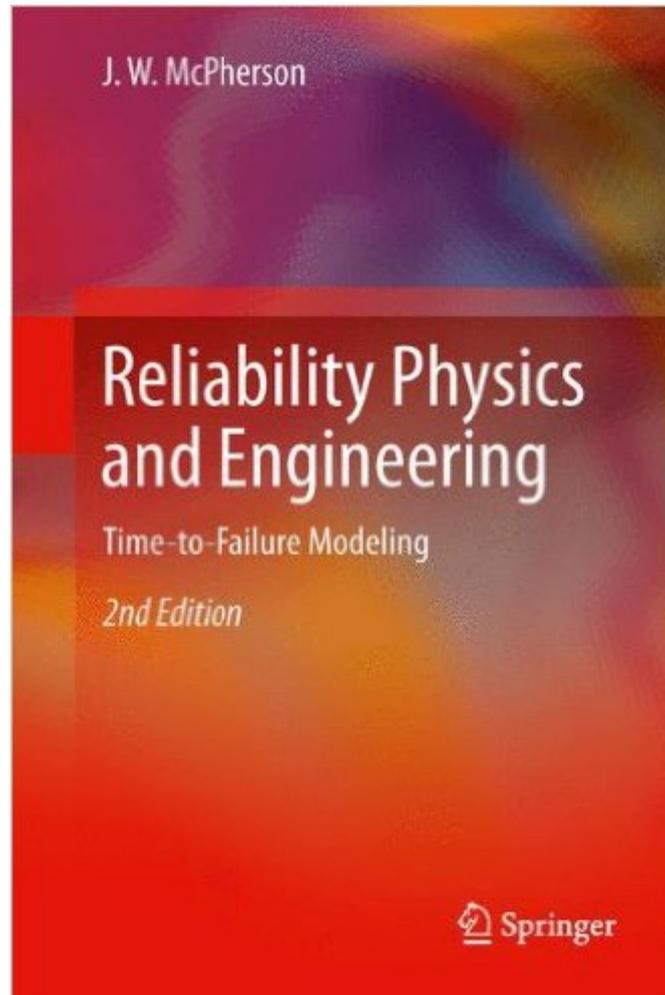


The book was found

# Reliability Physics And Engineering: Time-To-Failure Modeling



## Synopsis

"Reliability Physics and Engineering" provides critically important information for designing and building reliable cost-effective products. The textbook contains numerous example problems with solutions. Included at the end of each chapter are exercise problems and answers. "Reliability Physics and Engineering" is a useful resource for students, engineers, and materials scientists.

## Book Information

Hardcover: 399 pages

Publisher: Springer; 2nd ed. 2013 edition (June 4, 2013)

Language: English

ISBN-10: 3319001213

ISBN-13: 978-3319001210

Product Dimensions: 6.3 x 1.1 x 9.5 inches

Shipping Weight: 1.7 pounds (View shipping rates and policies)

Average Customer Review: 4.5 out of 5 stars See all reviews (8 customer reviews)

Best Sellers Rank: #836,984 in Books (See Top 100 in Books) #220 in Books > Engineering & Transportation > Engineering > Industrial, Manufacturing & Operational Systems > Quality Control #1452 in Books > Engineering & Transportation > Engineering > Energy Production & Extraction #1747 in Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics

## Customer Reviews

Author Joe W. McPherson received his Ph. D. degree in physics from Florida State University; and he has been with Texas Instruments since 1980. He is now Texas Instruments Senior Fellow Emeritus. He has 150 publications in the field of semiconductor reliability. He applies science to reliability problems to solve them. Throughout the book, the author tries to give examples for reliability issues for pipes, tires, turbine blades, but without question, the primary thrust of the book is semiconductor reliability. The chapters deal with device degradation and fitting degradation data; statistics (Normal, Lognormal and Weibull distribution); failure rate; accelerated degradation and modeling, ramp to failure test, and TTF models for semiconductor circuits (this being the condensed version of Dr. McPherson's work), mechanical reliability issues and conversion of dynamic stress into static equivalent. There are plenty of examples (with realistic experimental data) in each chapter to illustrate how to fit data, how to construct the statistics and calculate statistical variables; how to accelerate degradation and to project to use conditions for exponential and power law models;

analytical formulas for ramp testing establishing effective time at fail stress level for exponential and power law models.

[Download to continue reading...](#)

Reliability Physics and Engineering: Time-To-Failure Modeling IEC 60605-6 Ed. 2.0 b:1997,  
Equipment reliability testing - Part 6: Tests for the validity of the constant failure rate or constant failure intensity assumptions Practical Plant Failure Analysis: A Guide to Understanding Machinery Deterioration and Improving Equipment Reliability (Mechanical Engineering) Extended Warranties, Maintenance Service and Lease Contracts: Modeling and Analysis for Decision-Making (Springer Series in Reliability Engineering) The Solid State: An Introduction to the Physics of Crystals for Students of Physics, Materials Science, and Engineering (Oxford Physics Series) Mathematical Modeling of Collective Behavior in Socio-Economic and Life Sciences (Modeling and Simulation in Science, Engineering and Technology) Probability, Reliability, and Statistical Methods in Engineering Design Reliability in Engineering Design Practical Reliability Engineering Student Solutions Manual for Differential Equations: Computing and Modeling and Differential Equations and Boundary Value Problems: Computing and Modeling Microsoft Excel 2013 Data Analysis and Business Modeling: Data Analysis and Business Modeling (Introducing) Introduction to the Numerical Modeling of Groundwater and Geothermal Systems: Fundamentals of Mass, Energy and Solute Transport in Poroelastic Rocks (Multiphysics Modeling) Geochemical Modeling of Groundwater, Vadose and Geothermal Systems (Multiphysics Modeling) 3D Modeling For Beginners: Learn everything you need to know about 3D Modeling! Engineering the Financial Crisis: Systemic Risk and the Failure of Regulation Poor-Quality Cost: Implementing, Understanding, and Using the Cost of Poor Quality (Quality and Reliability) The Statistical Analysis of Failure Time Data An Introduction to Rehabilitation Engineering (Series in Medical Physics and Biomedical Engineering) How We Got the Bible Pamphlet: A Timeline of Key Events and History of the Bible (Increase Your Confidence in the Reliability of the Bible) Fault-Tolerance and Reliability Techniques for High-Density Random-Access Memories (Prentice Hall Modern Semiconductor Design Series)

[Dmca](#)