

# LATCHUP BY STEVEN H. VOLDMAN



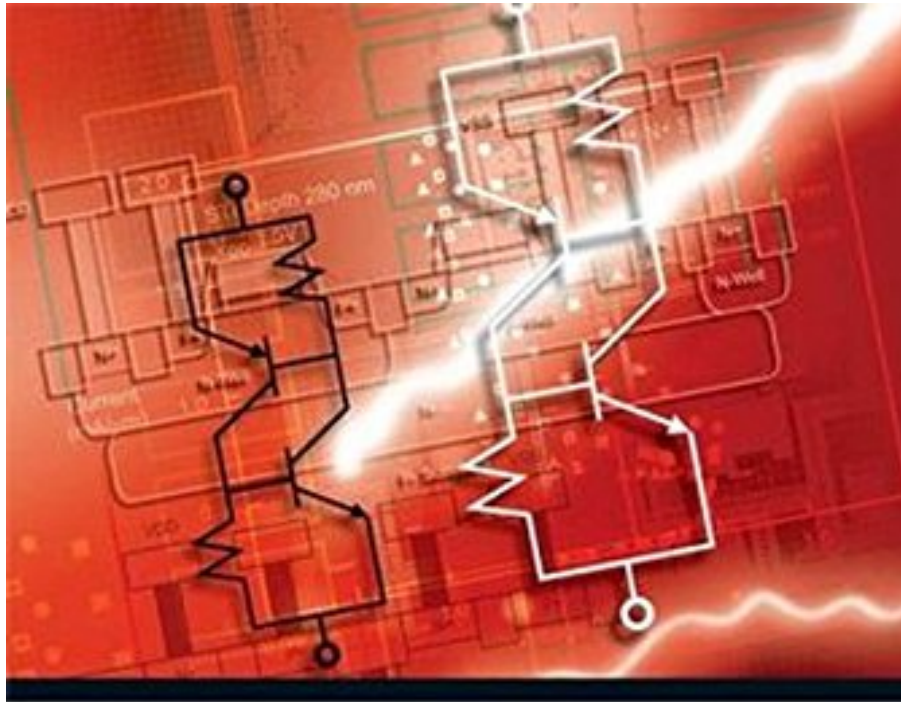
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Highly recommend to IC designers and students

By VC

Latchup is a very important topic for on-chip reliability of integrated systems. However, to the best of my knowledge, the previous book about this topic was published about 20 years ago. As the semiconductor technology evolves from micrometer range to nanometer range, every topic needs to be up-to-date, and latchup is no different in this regard. A book with full coverage on latchup and its implications in advanced technologies has been sought after for a while. This book by Dr. Voldman, a well-known IEEE fellow who has written a series of excellent books in ESD/latchup, serves this purpose perfectly. This book provides a very rigorous and comprehensive treatment. More importantly, this book also includes modern approaches and methodologies, especially on BiCMOS technology and on computer aided design (there is a full chapter dedicated to each of these topics).

Chapters 1 to 3 discuss latchup theories in scientific and rigorous approaches. Latchup is a special area in which simplistic rules of thumb are by no means adequate in nowadays' advanced design. The coverage of the theories is so comprehensive that many of the derivations can be directly used in one's on-chip design for latchup prevention. Starting from Chapter 4, there are lots of realistic examples of layout structures for latchup prevention, and schematics for characterization setup. These are very good guides and manuals from the authors' many years of experience in real design. Circuit examples are illustrated in the right places in the book. By Chapter 7, readers should have a deep understanding of the theories and layout guidelines. Then the readers are presented with circuit options and techniques. Chapter 8 on computer aided design techniques is a necessary discussion in modern IC design.

I highly recommend this book to engineers who need to deal with anything related to latchup, as well as students majoring in circuit or device design. Good understanding of this topic will be very helpful in one's career as a designer later on.

0 of 0 people found the following review helpful.

Another great book by Steven Voldman!

By Chen

This is yet another great book by the ESD expert Steven Voldman, IEEE Fellow. It is well-known that Dr. Voldman is an authoritative voice in circuit reliability. He writes with clarity, and with great wittiness, the



state-of-the-art developments in circuit reliability. This comment is true for all of the books in his ESD series, but is particularly true for this latest book, Latchup. As a practicing engineer in ESD and reliability, I cannot recommend this book enough to all practicing professionals and students alike! On another note, if you do not have all of the books in his series, I highly recommend that you consider buying all of them. The comprehensive coverage of ESD and reliability topics in all of his books means that any serious student of this field must study them.

0 of 0 people found the following review helpful.

Excellent Comprehensive Series

By Amazon Customer

Dr. Voldmans ESD and Latchup book Series is an excellent reference. I recommend them to engineers in my department who indeed use them with great success.

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