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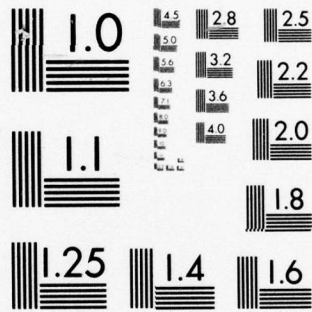
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peripherally related to the topic. Entries in each part are alphabetized according to author.

Appendix B is divided into sections treating reverse bias failure, forward bias failure, interconnection failure, and general causes of failure. Each section includes separate parts for materials directly, indirectly, or peripherally related to the topic. Entries in each part are alphabetized according to author.

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PREFACE

The following report contains a bibliographic listing of documents pertinent to the investigation of electrical overstress phenomena in semiconductor devices. The bibliography was originally compiled under the direction of Dr. G. Neudeck of Purdue University. It was provided to The BDM Corporation through the offices of Dr. D. Wunsch at the Air Force Weapons Laboratory to assist in the performance of a review of previous research in overstress effects. The bibliography has been reformatted under DNA (Defense Nuclear Agency) Contract DNA001-76-C-0191 and is published as part of the documentation for that contract. The work was sponsored by DNA under RDT&E RMSS Code B3230 76464 299QAXTB097 H2590D.

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CHAPTER I
INTRODUCTION

The bibliographies presented in appendices A and B represent a collection of technical documents and articles treating subjects related to conduction processes and failure mechanisms in bipolar semiconductors exposed to high amplitude electrical transients. The sources cited in appendix A generally treat conduction processes which precede catastrophic junction damage. The sources cited in appendix B deal more directly with the failure phenomenology involved in the damage. Appendix A is divided into sections treating reverse bias processes and forward bias processes. Each of those sections is divided into parts for articles directly related to the topic, indirectly related to the topic, and peripherally related to the topic. Entries in each part are alphabetized according to author.

Appendix B is divided into sections treating reverse bias failure, forward bias failure, interconnection failure, and general causes of failure. Each section includes separate parts for materials directly, indirectly, or peripherally related to the topic. Entries in each part are alphabetized according to author.

APPENDIX A
TECHNICAL PUBLICATIONS RELATED TO
HIGH AMPLITUDE CONDUCTION
PROCESSES

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A. REVERSE BIAS PROCESSES, INCLUDING AVALANCHE, SECOND BREAKDOWN, ETC.

Part I: Articles Directly Related to Device Failure

1. Adirovich, E. I. and E. M. Kuynetsova. "The Capacitance and Electrical Breakdown of PN Junctions," Radiotekhnika Elektronika (USSR), 4, 10 October 1960, pp. 1708-1717 (in Russian).
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18. Ryder-Smith, S. C. "Voltage Breakdown of Transistors," Electronic Technol. (GB), 38, 10, October 1961, pp. 367-369.
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APPENDIX B
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RELATED TO DAMAGE MECHANISMS

A. REVERSE BIAS FAILURE - SECOND BREAKDOWN

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C. INTERCONNECTION FAILURE

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Naval Electronic Systems Command Hqs.
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ATTN: ELEX 0518
ATTN: PME 117-215A

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Naval Intelligence Support Center
ATTN: Technical Library

Commander
Naval Ocean Systems Center
ATTN: Code 3100
ATTN: Code 2200
ATTN: Technical Library
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Superintendent (Code 1424)
Naval Postgraduate School
ATTN: Code 2124, Tech. Rpts. Librarian

Director
Naval Research Laboratory
ATTN: Code 6631
ATTN: Code 7701
ATTN: Code 4004
ATTN: Code 2600
ATTN: Code 2627

Commander
Naval Sea Systems Command
Navy Department
ATTN: SEA-9931

Commander
Naval Ship Engineering Center
Department of the Navy
ATTN: Code 6174D2

Officer-in-Charge
Naval Surface Weapons Center
ATTN: Code 431
ATTN: Code WA50
ATTN: Code 431, Edwin B. Dean
ATTN: Code 223, L. Libello
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ATTN: Code WR43

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Dahlgren Laboratory
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Commanding Officer
Naval Weapons Support Center
ATTN: Code 7024
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Director
Strategic Systems Project Office
Navy Department
ATTN: NSP-27331
ATTN: NSP-230
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AF Office of Scientific Research
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AF Weapons Laboratory, AFSC
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ATTN: ELP/Carl E. Baum
ATTN: DYX, Donald C. Wunsch
ATTN: EL
ATTN: NT
ATTN: SUL
ATTN: NTS
ATTN: EL, (Library)
ATTN: ELA
ATTN: ELC
ATTN: NTR

AFTAC
ATTN: TFS
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Commander
ADCOM/XPD
ATTN: XPDQ

DEPARTMENT OF THE AIR FORCE

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ATTN: ASD/ENESS
ATTN: ENFTV

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Electronic Systems Division/YS
ATTN: YSEV

Commander
Foreign Technology Division, AFSC
ATTN: NICD Library
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DEPARTMENT OF THE AIR FORCE (Continued)

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Commander
Rome Air Development Center, AFSC
ATTN: RBRP
ATTN: EMTLD, Doc. Library

Headquarters
Air Force Systems Command
ATTN: Technical Library
ATTN: DLCAW

Commander
Sacramento Air Logistics Center
ATTN: MMEAE

SAMSO/IN
ATTN: IND, I. J. Judy

SAMSO/MN
ATTN: MNNH, Major M. Baran
ATTN: MNNG

SAMSO/SK
ATTN: SKF

Headquarters
Electronic Systems Division, AFSC
ATTN: Technical Library

Commander in Chief
Strategic Air Command
ATTN: NRI-STINFO, Library
ATTN: XPFS
ATTN: DEF

SAMSO/DY
ATTN: DYS

Hqs. USAF/RD
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Headquarters
Electronic Systems Division/YW
ATTN: YWEI

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Northrop Research & Technology Center
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Northrop Corporation
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ATTN: Doc. Con. for Tech. Lib.

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Science Applications, Inc.
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ENERGY RESEARCH & DEVELOPMENT ADMINISTRATION
(Continued)

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ATTN: Doc. Con. for Tech. Lib.

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Division of Military Application
US Energy Rsch. & Dev. Admin.
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EG&G, Inc.
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DEPARTMENT OF DEFENSE CONTRACTORS

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General Electric Company
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IIT Research Institute
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Institute for Defense Analyses
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Systems, Science & Software, Inc.
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TRW Defense & Space Sys. Group
8 cy ATTN: Tech. Info. Center/S-1930
ATTN: Aaron H. Narevsky, R1-2144

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