

# INTERNATIONAL STANDARD

**IEC**  
**60068-2-27**

Third edition  
1987

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**Basic environmental testing procedures –  
Part 2:  
Tests – Test Ea and guidance: Shock**

*This **English-language** version is derived from the original **bilingual** publication by leaving out all French-language pages. Missing page numbers correspond to the French-language pages.*



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## Basic environmental testing procedures – Part 2: Tests – Test Ea and guidance: Shock

Withdrawn

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Международная Электротехническая Комиссия

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## BASIC ENVIRONMENTAL TESTING PROCEDURES

## Part 2: Tests — Test Ea and guidance: Shock

## FOREWORD

- 1) The formal decisions or agreements of the I E C on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the I E C expresses the wish that all National Committees should adopt the test of the I E C recommendation for their national rules in so far as national conditions will permit. Any divergence between the I E C recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

## PREFACE

This standard has been prepared by Sub-Committee 50A: Shock and Vibration Tests, of I E C Technical Committee No. 50: Environmental Testing.

This third edition replaces the second edition of I E C Publication 68-2-27 (1972). It includes Amendment No. 1 (1982) and Amendment No. 2 (1983).

The text of this standard is based on the following documents:

Six Months' Rule	Reports on Voting
50A(CO)161 50A(CO)162	50A(CO)168 50A(CO)169

Further information can be found in the relevant Reports on Voting indicated in the table above.

*The following I E C publications are quoted in this standard:*

Publication Nos. 68-1 (1982): Basic Environmental Testing Procedures, Part I: General and Guidance.

68-2: Part 2: Tests.

68-2-29 (1986): Test Eb and Guidance: Bump.

68-2-31 (1969): Test Ec: Drop and Topple, Primarily for Equipment-type Specimens.

68-2-32 (1975): Test Ed: Free Fall.

68-2-47 (1982): Mounting of Components, Equipment and Other Articles for Dynamic Tests Including Shock (Ea), Bump (Eb), Vibration (Fc and Fd) and Steady-state Acceleration (Ga) and Guidance.

68-2-XX: Test Ee and Guidance: Bounce. (In preparation.)

721-3: Classification of Environmental Conditions, Part 3: Classification of Groups of Environmental Parameters and Their Severities.

721-3-1: Part 3: Classification of Groups of Environmental Parameters and Their Severities — Storage. (Under consideration.)

721-3-5 (1985): Part 3: Classification of Groups of Environmental Parameters and Their Severities — Ground Vehicle Installations.

*Other publication quoted:*

ISO Standard 2041 (1975): Vibration and Shock — Vocabulary.

## BASIC ENVIRONMENTAL TESTING PROCEDURES

### Part 2: Tests — Test Ea and guidance: Shock

#### INTRODUCTION

This test is applicable to components, equipments and other electrotechnical products, hereinafter referred to as “specimens”, which, during transportation or in use, may be subjected to conditions involving relatively infrequent non-repetitive shocks. The shock test may also be used as a means of establishing the satisfactory design of a specimen in so far as its structural integrity is concerned and as a means of quality control. It consists basically of subjecting a specimen to non-repetitive shocks of standard pulse shapes with specified peak acceleration and duration.

Specification writers will find in Clause 11 a list of details to be considered for inclusion in specifications and in Appendix A the necessary guidance.

#### 1. Scope

To provide a standard procedure for determining the ability of a specimen to withstand specified severities of shock.