Doc: LITD 02 (26429)
Draft IS/IEC 62506: 2023
April 2025

BUREAU OF INDIAN STANDARDS
DRAFT FOR COMMENTS ONLY

मसौदा भारतीय मानक
उत्पाद त्वरित परीक्षण — पध्दतियाँ
(पहला पुनरीक्षण)

Draft Indian Standard
Methods for Product Accelerated Testing
(First revision)

ICS 03.100.40;03.120.01;
21.020

LITD 02 Dependability of Electronic, Electrical Components, Equipment and Systems Sectional Committee	**Last Date for Comments: 21 June 2025**

NATIONAL FOREWORD

(Formal clauses will be added later)

This draft Indian Standard which is identical to 'IEC 62506: 2023 Methods for product accelerated testing' issued by the International Electrotechnical Commission (IEC) will be adopted by the Bureau of Indian Standards (BIS) on the recommendations of Dependability of Electronic, Electrical Components, Equipment and Systems Sectional Committee and approval of the Electronics and Information Technology Division Council.

This Standard was originally published in 2023 and was identical with IEC 62506: 2013. The first revision of this standard has been undertaken to align it with the latest version of IEC 62506:2023.

This edition includes the following significant technical changes with respect to the previous edition:

a) references have been updated;
b) symbols have been revised;
c) errors in 5.7.2.3 and Annex B, mainly, have been corrected;
d) calculation errors in the examples of Annex B and Annex F have been corrected

The text of ISO/IEC Standard may be approved as suitable for publication as an Indian Standard without deviations. Certain conventions and terminologies are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard', and

b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted draft standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their respective places, are listed below along with their degree of equivalence for the editions indicated. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

International Standards	**Corresponding Indian Standard**	**Degree of Equivalence**
IEC 61123:2019, Reliability testing – Compliance test plans for success ratio	IS/IEC 61123 : 2019	Identical
IEC 61124:2023, Reliability testing – Compliance tests for constant failure rate and constant failure intensity	IS/IEC 61124 : 2012	Identical

The technical committee has reviewed the provisions of the following International Standard referred to in this adopted draft standard and has decided that it is acceptable for use in conjunction with this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies

International Standard	Title
IEC 60050-192	International Electrotechnical Vocabulary (IEV) – Part 192: Dependability
IEC 60300-3-5	Dependability management – Part 3-5: Application guide – Reliability test conditions and statistical test principles
IEC 60605-2	Equipment reliability testing – Part 2: Design of test cycles
IEC 60721	(all parts), Classification of environmental conditions
IEC 61649: 2008	Weibull analysis
IEC 61709	Electric components – Reliability – Reference conditions for failure rates and stress models for conversion
IEC 61710	Power law model – Goodness-of-fit tests and estimation methods
IEC 62429	Reliability growth – Stress testing for early failures in unique complex systems

Scope of IEC 62506: 2023 is as follows:

"This document provides guidance on the application of various accelerated test techniques for measurement or improvement of item reliability. Identification of potential failure modes that can be experienced in the use of an item and their mitigation is instrumental to ensure dependability of an item.

The object of the methods is to either identify potential design weakness or provide information on item reliability, or to achieve necessary reliability and availability improvement, all within a compressed or accelerated period of time. This document addresses accelerated testing of nonrepairable and repairable systems. It can be used for probability ratio sequential tests, fixed duration tests and reliability improvement/growth tests, where the measure of reliability can differ from the standard probability of failure occurrence.

This document also extends to present accelerated testing or production screening methods that would identify weakness introduced into the item by manufacturing error, which can compromise item reliability. Services and people are however not covered by this document."

Note: - The Technical content of this document has not been enclosed as these are identical with the corresponding ISO/IEC Standard. For details please refer to IEC 62506: 2023 or kindly contact.

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