STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
BASIC ENVIRONMENTAL TESTING PROCEDURES FOR ELECTROTECHNOLOGY

Part 2: TESTS

1099.2.48—Guidance on the application of tests A, B and Ca to simulate the effects of storage

This test shall be read in conjunction with AS 1099.1 General.

PREFACE

This Standard was prepared by the Association's Committee on Environmental Testing Procedures to supersede the procedures for testing storage contained in AS 1099.2Ha—1971 and AS 1099.2Hb—1971 which have been withdrawn. This Standard is identical with IEC 68-2-48(1982).

The object of the Standard is to simulate the effects of one or more environmental stresses acting on products during their normal storage life to establish whether —

(a) storage prevents the use of the product in its intended application, e.g. the solderability characteristics of component leads are changed, the drift of electrical parameters is excessive, open or short circuits occur, or

(b) significant performance or reliability degradation occurs when operated after a period of storage, or

(c) for emergency equipment, the ability of products to function correctly and reliability is impaired after prolonged storage in a non-operating mode.

For the purpose of this Australian Standard the text of the IEC Publication used herein should be modified as follows;

Terminology: The words 'Australian Standard' should replace the words 'IEC Publication' wherever they appear.

Cross-references: The references to International Standards shall be replaced by references to Australian Standards as follows:

Reference to IEC Publications		*Appropriate Australian Standard*	
IEC 68	Basic environmental testing procedures	AS 1099	Basic environmental testing procedures for electrotechnology
IEC 68-2	Part 2: Tests	AS 1099.2	Part 2: Tests
IEC 68-2-1	Test A: Cold	AS 1099.2.1	Test A: Cold
IEC 68-2-2	Test B: Dry heat	AS 1099.2.2	Test B: Dry heat
IEC 68-2-3	Test Ca: Damp heat, steady state	AS 1099.2.3	Test Ca: Damp heat, steady state

1. Definition of storage

In this guide the term "storage" describes the keeping of components, equipment or other articles for relatively long periods of time (ranging from some weeks to many years) in a non-operating mode, and:

a) in the environmental conditions typical of industrial warehouses, retail stores, etc., or

b) in reserve or emergency equipment or plant, for example, fire alarms, auxiliary motors, stand-by generators, etc.; in this case, the product may be subjected to particularly severe environmental stresses due to operation of the surrounding plant, or

c) in installations which take a long time to complete, where the initial environment may be much more severe than the operational environment, e.g. large telephone switching offices, large computer installations, power stations, etc.

Note. — Reference should be made to specialized standards for environmental data relative to these conditions.

2. Definition and object of a "storage test"

A "storage test" is intended to simulate the effects of one or more environmental. stresses acting on products during their normal storage life, and when the assumption of fatigue accumulation is likely, to establish whether:

a) storage prevents the use of the product in its intended application, for example the solderability characteristics of component leads or printed circuit boards are worsened, the drift of electrical parameters is excessive, open circuits or short circuits are caused, or

b) significant performance and/or reliability degradation occurs for products operated after storage, or

c) for emergency equipment, the ability of products to function correctly and reliably is not impaired after prolonged non-operation.

Note. — For the reliability determination of relatively new products or those stored for long periods, and for the determination of functioning reliability after storage, reference should be made to the I E C standards dealing with reliability and maintainability.