ANSI/EIA-364-18B-2007
Approved: February 12, 2007

EIA STANDARD

TP-18B

VISUAL AND DIMENSIONAL INSPECTION TEST PROCEDURE FOR ELECTRICAL CONNECTORS, AND SOCKETS

EIA/ECA-364-18B

(Revision of EIA-364-18A)

FEBRUARY 2007

Electronic Components, Assemblies & Materials Association

THE ELECTRONIC COMPONENTS SECTOR OF THE ELECTRONIC INDUSTRIES ALLIANCE

Electronic Industries Alliance

EIA/ECA-364-18B

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(From Standards Proposal No. 5109 formulated under the cognizance of the CE-2.0 National Connector Standards Committee.

Published by

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Technology Strategy & Standards Department
2500 Wilson Boulevard
Arlington, VA 22201

PRICE: Please refer to the current
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International (303-397-7956)

Printed in U.S.A.

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TEST PROCEDURE No. 18B

VISUAL AND DIMENSIONAL INSPECTION TEST PROCEDURE FOR ELECTRICAL CONNECTORS AND SOCKETS

(From EIA Standards Proposal No. 5109, formulated under the cognizance EIA CE-2.0 Committee on National Connector Standards, and previously published in EIA-364-18A.)

1 Introduction

1.1 Scope

This standard establishes guidelines for visual and dimensional inspection of electrical connectors and sockets prior to, during, and after other test procedures.

1.2 Object

The object of this test procedure is to detail standard methods for visual examination and dimensional inspection of test specimens in order to determine if the test specimens exhibit obvious defects that would affect test results or if a test has exposed obvious physical defects. It is not intended to substitute for full first article inspections, process capability studies and the requirements specified in the referencing document.

2 Test resources

2.1 Equipment

2.1.1 Visual examination shall be performed by the unaided eye, corrected to normal vision. The use of magnification, polarized light, or other indications are not permitted, unless otherwise specified in the referencing document.

2.1.2 When specified, dimensional inspection shall be performed using suitable measuring tools and measuring equipment having an accuracy of at least one-third the tolerance for the variable to be measured.

3 Test specimen

3.1 Description

A test specimen shall consist of a plug, a receptacle, or a mated plug and receptacle, or socket as specified in the referencing document.

3.2 Preparation

The test specimen shall be examined as is. No additional preparation shall be performed, unless otherwise specified in the referencing document.

4 Test procedure

4.1 Visual examination

4.1.1 The initial examination is generally performed as a first step in a test program. It is intended to establish the general condition of the lot of test specimens. Representative samples from the lots of specimens shall be randomly selected for the initial examination. If any part of the examination compromised the specimen, it shall not be used in subsequent tests.

4.1.2 Visual inspection such as workmanship, marking, finish, etc. shall be as specified in the referencing document.

4.2 Dimensional inspection

When specified dimensional inspection shall be performed. Representative samples from the lots of specimens shall be randomly selected for the dimensional inspection. When required, a drawing
shall be included in the referencing document and the dimensions to be inspected shall be indicated.

5 Details to be specified

The following details shall be specified in the referencing document:

5.1 Number of specimens to be tested

5.2 Applicable standards and drawings

5.3 Special inspection conditions

5.4 Specific visual workmanship, finish and marking requirements that need to be inspected

6 Test documentation

Documentation shall contain the details specified in clause 5, with any exceptions, and the following:

6.1 Title of test

6.2 Specimen description, including fixturing if applicable

6.3 Test equipment used, and date of last and next calibration

6.4 Values and observations

6.5 Name of operator and date of test

EIA Document Improvement Proposal

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Revision History

Revision letter	Project number	Additions, changes and deletions
B	SP-5109	Revised, retyped and reformatted.