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EIA STANDARD

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Crimp Tensile Strength Test Procedure for Electrical Connectors

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(Revision of EIA-364-08A)

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ELECTRONIC INDUSTRIES ALLIANCE
ENGINEERING DEPARTMENT

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This standard is based upon the major technical content of International Electrotechnical Commission standard 512-8, test 16d, tensile strength (crimp connections), 1993-01. It conforms in all essential respects to this IEC standard.

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TEST PROCEDURE No. 08B

CRIMP TENSILE STRENGTH
TEST PROCEDURE FOR ELECTRICAL CONNECTORS

(From EIA Standards Proposal No. 4031, formulated under the cognizance EIA CE-2.0 Committee on National Connector Standards.)

1 Introduction

1.1 Scope

This standard establishes a test method to determine the tensile strength of a crimped contact to conductor joint. The values obtained give an indication of the relative strength of the joints. Unless otherwise specified in the referencing document, this is a destructive test.

2 Test resources

2.1 Equipment

The testing device shall require the following:

2.1.1 Clamps, jaws, or other means, that will not distort the contact in the crimp area, to hold the contact and the conductor.

2.1.2 A mechanism to separate the holding device at a constant rate of speed 25 ± 6 millimeters per minute (1 ± ¼ inch per minute).

2.1.3 A gauge to register the amount of tension being exerted between the contact and conductor.

3 Test specimen

3.1 Description

A test specimen shall consist of an identified contact and a 5.1 centimeters (2 inches) minimum conductor crimped together with the specified tool. If the contact has a wire insulation support, it shall be rendered mechanically ineffective.

4 Test procedure

4.1 Place crimped sample into test fixture of tensile tester.

4.2 Activate tensile equipment so that an axial force is exerted at a speed of 25 ± 6 millimeters per minute (1 ± ¼ inch per minute) until separation occurs between contact and conductor.

4.3 Record tensile data and examine sample.

4.4 Separation

Types of separation resulting from this test are as follows:

4.4.1 Slip (pull out).

4.4.2 Conductor broken in crimp area (some or all).

4.4.3 Contact broke in crimp area (some or all).

4.4.4 Conductor broken outside crimp area.

4.4.5 Contact broken outside crimp area.

4.4.6 Other.

5 Details to be specified

The following details shall be specified in the referencing document:

5.1 Size and number of contact-conductor combinations required for test

5.2 Identification of contact, wire, and crimp tool used (including tool selector position or other controls and instructions, if applicable

5.3 Minimum tensile strength requirements

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

6.3 Identification of contact, wire, and crimp tool used (including tool selector position or other controls and instructions, if applicable)

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

6.5 Test procedure

6.6 Values and observations

6.6 1 Tensile data

6.6.2 Types of separation; see 4.4

6.7 Name of operator and date of test


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