

MultiGig ESD Guide Feature**DESIGN OBJECTIVES**

The product described in this document has not been fully tested to ensure conformance to the requirements outlined below. Therefore Tyco Electronics makes no representation or warranty, express or implied, that the product will comply with these requirements. Further, Tyco Electronics may change these requirements based on the results of additional testing and evaluation. Contact Tyco Electronics Engineering for further details.

1. SCOPE

1.1. Content

This specification covers performance, tests and quality requirements for the Tyco Electronics MultiGig ESD Guide Feature.

1.2. Qualification

When tests are performed on the subject product line, procedures specified in Figure 1 shall be used. All inspections shall be performed using the applicable inspection plan and product drawing.

2. APPLICABLE DOCUMENTS

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

2.1. Tyco Electronics Documents

- 109-197: AMP Test Specifications vs EIA and IEC Test Methods
- 114- : Application Specification
- 501- : Qualification Test Report

2.2. Industry Standard

EIA-364: Electrical Connector/Socket Test Procedures Including Environmental Classifications

3. REQUIREMENTS

3.1. Design and Construction

Product shall be of the design, construction and physical dimensions specified on the applicable product drawing.

3.2. Materials

Materials used in the construction of this product shall be as specified on the applicable product drawing.

3.3. Ratings

- Static voltage: 250 to 35000 volts
- Temperature: -55 to 105°C

3.4. Performance and Test Description

Product is designed to meet the electrical, mechanical and environmental performance requirements specified in Figure 1. Unless otherwise specified, all tests shall be performed at ambient environmental conditions per EIA-364.

3.5. Test Requirements and Procedures Summary

| Test Description | Requirement | Procedure |
|---------------------------------|--|---|
| Initial examination of product. | Meets requirements of product drawing. | EIA-364-18. Visual and dimensional (C of C) inspection per product drawing. |
| Final examination of product. | Meets visual requirements. | EIA-364-18. Visual inspection. |
| ELECTRICAL | | |
| ESD feature resistance. | Board-to-board shall be less than 1 ohm. | EIA-364-23. Subject specimens to 100 milliamperes maximum and 20 millivolts maximum open circuit voltage. See Figure 3. |
| MECHANICAL | | |
| Durability. | See Note. | EIA-364-9. Mate and unmate specimens for 200 cycles at a maximum rate of 500 cycles per hour. |
| Contact retention, ESD feature. | 8.9 N [2 lbf]. | EIA-364-29. Apply specified load at a rate of 4.4 N [1 lb] per second and hold for 6 seconds. |
| Contact comb retention. | 66.7 N [15 lbf]. | EIA-364-29. Apply specified load at a rate of 4.4 N [1 lb] per second and hold for 6 seconds. |
| Guide pin support. | Guide pin shall support a 111.2 N [25 lbf] load located 28 mm [1.1 in] from the motherboard. | Apply specified load per Figure 4 |
| Guide module retention. | 111.2 N [25 lbf] side load. | Apply specified load per Figure 5. |
| ENVIRONMENTAL | | |
| Thermal shock. | See Note. | EIA-364-32, Test Condition VII. Subject specimens to 5 cycles between -55 and 105°C. |

Figure 1 (cont)

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| Test Description | Requirement | Procedure |
|-------------------|-------------|---|
| Temperature life. | See Note. | EIA-364-17, Method A, Test Condition 4, Test Time Condition C. Subject mated specimens to 105°C for 500 hours. |

NOTE *Shall meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the Product Qualification and Requalification Test Sequence shown in Figure 2.*

Figure 1 (end)

3.6. Product Qualification and Requalification Test Sequence

| Test or Examination | Test Group (a) | | | |
|--------------------------------|-------------------|---|-----|---|
| | 1 | 2 | 3 | 4 |
| | Test Sequence (b) | | | |
| Initial examination of product | 1 | 1 | 1 | 1 |
| ESD feature resistance | 2,4 | | 2,4 | |
| Durability | 3 | | | |
| Contact retention, ESD feature | | | | 2 |
| Contact comb retention | | 3 | | 3 |
| Guide pin support | | | | 4 |
| Guide module retention | | | | 5 |
| Thermal shock | | 2 | | |
| Temperature life | | | 3 | |
| Final examination of product | 5 | 4 | 5 | 6 |

NOTE (a) *See paragraph 4.1.A.*
 (b) *Numbers indicate sequence in which tests are performed.*

Figure 2

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4. QUALITY ASSURANCE PROVISIONS**4.1. Qualification Testing****A. Specimen Selection**

Specimens shall be prepared in accordance with applicable Instruction Sheets and shall be selected at random from current production. All test groups shall each consist of 4 specimens.

B. Test Sequence

Qualification inspection shall be verified by testing specimens as specified in Figure 2.

4.2. Requalification Testing

If changes significantly affecting form, fit or function are made to the product or manufacturing process, product assurance shall coordinate requalification testing, consisting of all or part of the original testing sequence as determined by development/product, quality and reliability engineering.

4.3. Acceptance

Acceptance is based on verification that the product meets the requirements of Figure 1. Failures attributed to equipment, test setup or operator deficiencies shall not disqualify the product. If product failure occurs, corrective action shall be taken and specimens resubmitted for qualification. Testing to confirm corrective action is required before resubmittal.

4.4. Quality Conformance Inspection

The applicable quality inspection plan shall specify the sampling acceptable quality level to be used. Dimensional and functional requirements shall be in accordance with the applicable product drawing and this specification.

TBD

Figure 3
ESD Feature Resistance

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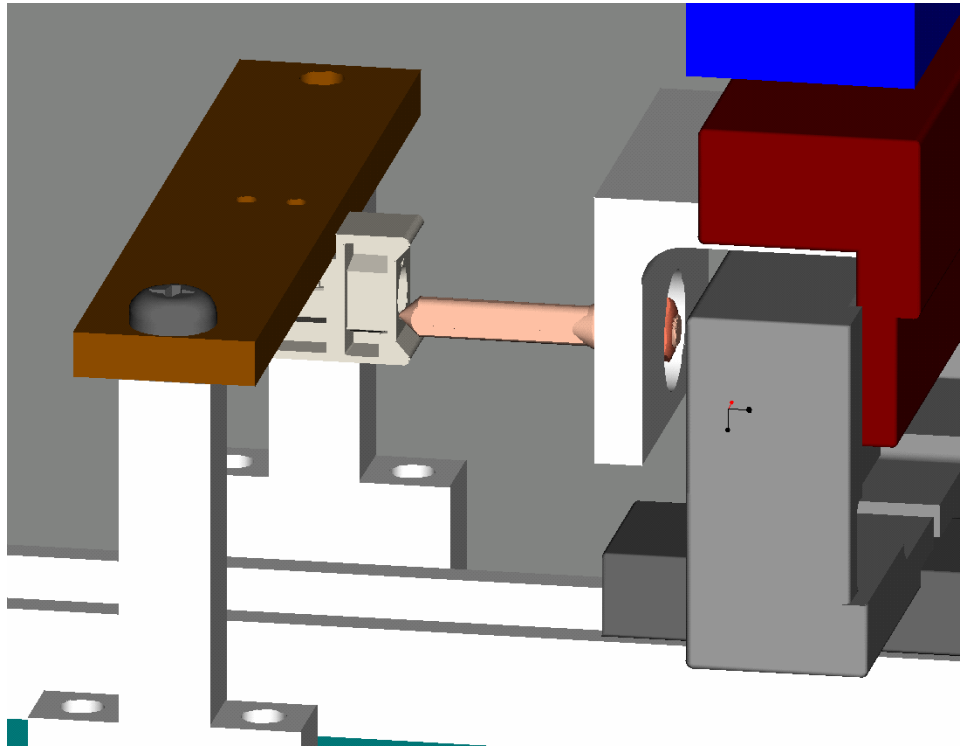
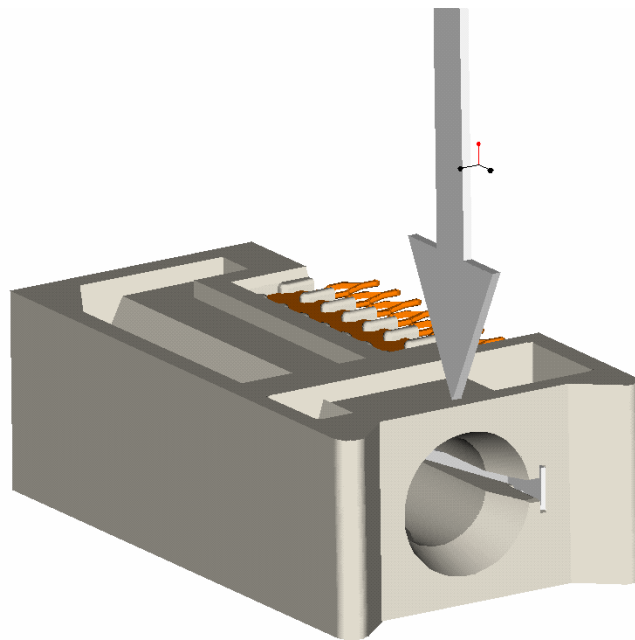


Figure 4
Guide Pin Support



X.X +0.5
X.XX +0.13
X.XXX +0.013
ANG. +0.5

Figure 5

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