

1.0 SCOPE

1.1. Content:

This specification covers performance, tests and quality requirements for slim WtoB Poke-in Connector. Applicable product descriptions and part numbers are as shown on product drawing.

1.2. Qualification:

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

2.0 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 TE Connectivity Documents:

C-2834010/2834012: Customer drawing for Connector
114-137049: Application Specification for slim WtoB Connector
501-137049: Qualification Test Report for slim WtoB Connector

3.0 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.

3.4 Ratings

- A. Voltage: 300 V AC Max.
- B. Current: 16A Max for 2834012-3
11A Max for 2834010-3
- C. Operating Temperature: -40 to 125C
- D. Storage Environment:
Temperature: - 25°C to 40°C Relative humidity: 15%-70%

3.5 Performance and Test Description

Product is designed to meet the electrical, mechanical and environmental performance requirements. Unless otherwise specified, all tests shall be performed in the room temperature (5~35°C), relative humidity (45~85%), air pressure (86~106kPa), and special case temperature (18~22°C), relative humidity (60~70%), unless otherwise specified.

3.6 Test Requirements and Procedures Summary

3.6.1 Examination:

Test Description	Requirement	Procedure
Examination of the product	Meets visual requirements.	Visual inspection per product drawing. Per EIA-364-18

3.6.2 ELECTRICAL

Test Description	Requirement	Procedure
Contact Resistance	20 mΩ Max	Subject the specimen to maximum allowed rating current and measure the contact resistance. Per EIA-364-06
Temperature Rise	The temperature rise should be 30°C Max.	Mated connector measured series all contacts. Current list: 2834012-3: 16A/16AWG 13A/18AWG 11A/20AWG 2834010-3: 11A/20AWG 8A/22AWG 6A/24AWG Per EIA-364-70

3.6.3 MECHANICAL

Test Description	Requirement	Procedure
Random Vibration	No discontinuities of 1 microsecond or longer duration.	Subject mated specimens to 3.10G's rms between 20~500HZ. Fifteen minutes in each of 3 mutually perpendicular planes. Per EIA-364-28, Test Condition VII, Condition D.
Mechanical shock	No discontinuities of 1 microsecond or longer duration.	Subject mated specimens to 30 G's half-sine shock pulses of 11 milliseconds duration. Three shocks in each direction applied along 3 mutually perpendicular planes, 18 total shocks. Per EIA-364-27, Condition H.
Insertion force.	20N max for both P/N: 2834010&2834012	EIA-364-13. Measure force necessary to insert wires at a maximum rate Of 12.7 mm [.5 in.] per minute. Wire size: 2834010: 22AWG solid&stranded 24AWG solid 2834012: 16AWG solid 18AWG solid&stranded 20AWG solid&stranded
Extraction Force	Extraction force for 2834012: 30N min Extraction force for 2834010: 30N min	EIA-364-13. Measure force necessary to extract wire at a maximum rate of 12.7 mm [.5 in.] per minute. Wire size: 2834010: 22AWG solid&stranded 24AWG solid 2834012: 16AWG solid 18AWG solid&stranded 20AWG solid&stranded

3.6.4 Environmental

Test Description	Requirement	Procedure
Thermal shock	See Note	Subject specimens to 25 cycles between -40 and 105 °C with 30 minute dwells at temperature extremes and 1 minute transition between temperatures. Per EIA-364-32, Test Condition VII.
Humidity /temperature cycling	See Note	Subject specimens to 10 cycles (10 days) between 25 and 65 °C at 80 to 100% RH. Per EIA-364-31, Method III.
Temperature life	See Note	Subject mated specimens to 105 °C for 648 hours. Per EIA-364-17, Method A

Figure 1

NOTE

1. 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.
2. Test wire
 2834010: 22AWG Default
 2834012: 18AWG Default
3. Test group D: 5pcs/per wire
 2834010: 15pcs / 2834012:25pcs

3.6.5 Product Qualification and Requalification Test Sequence

Test group	a	b	c	d	e
Examination of product	1,7	1,7	1,6	1,4	1,3
Contact resistance	2, 5	2, 4, 6	2,5		
Temperature Rise					2
Random vibration	3				
Mechanical shock	4				
Thermal shock			3		
Insertion force.				2	
Extraction Force	6			3	
Humidity -temperature cycling		3	4		
Temperature life		5			
Sample size	5pcs/per P/N	5pcs/per P/N	5pcs/per P/N	2834010:15pcs 2834012: 25pcs	5pcs/per wire

Figure 2

4.0 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.

B. Test Sequence

Qualification inspection shall be verified by testing specimens as specified.

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. 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 resubmitted.

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

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