1.0 SCOPE

1.1. Content:

This specification covers performance, tests and quality requirements for Ultraminiature Poke-in contact and male pin contact. 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-2834167/C-2834172: Customer drawing for Connector

114-137166: Application Specification for releasable poke-in Contact

501-137166: Qualification Test Report for releasable poke-in Contact

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: 600 V AC Max for each contact

B. Current: 10A for 18AWG/6A for 20AWG&22AWG ➔**2834167-3**

4A for male pin BTB contact ➔**2834172-3**

C. Operating Temperature: -40 to 105℃

D. Storage Environment:

Temperature: - 25℃ to 40℃ 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℃), relative humidity (45～85％), air pressure (86～106kPa), and special case temperature (18～22℃), 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 30ºC Max.	**2834167-3** Mated connector measured at 10A current with18AWG Mated connector measured at 6A current with22AWG **2834167-3 mate 2834172-3** Mated connector measured at 4A

3.6.3 MECHANICAL

Test Description	Requirement	Procedure
Durability (Just for 2834167-3)	See Note	Subject connector assembly to 5 wire insertion and 4 wire extraction cycles. One full cycle consists of the following actions: 1. Insert the wire, and the wire must be closed the internal bottom. 2. To release wire, contact release button must be depressed.
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.
Wire insertion force.	20N Max	EIA-364-13. Measure force necessary to insert wires at a maximum rate of 12.7 mm [.5 in.] per minute. Wire releasable button shall not be depressed as wire is inserted.
Extraction Force	22.24N minimum	EIA-364-13. Measure force necessary to extract wire at a maximum rate of 12.7 mm [.5 in.] per minute.

3.6.4 Environmental

Test Description	Requirement	Procedure
Thermal shock	See Note	EIA-364-32, Test Condition VIII. Subject specimens to 25 cycles between -40°C and 105°C.
Humidity /temperature cycling	See Note	EIA-364-31, Method III. Subject specimens to 10 cycles(10 days) between 25°C and 65°C at 80 to 100% RH.
Temperature life	See Note	Subject mated specimens to 105 ºC 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.
*2.18AWG solid wire default for **2834167-3***
3.Tin-dipped for all the stranded wire
*4.Female P/N: **2834167-3***
*Male Pin P/N: **2834172-3***

3.6.5 Product Qualification and Requalification Test Sequence

Test group	A1	A2	B1	B2	C1	C2	D	E	F	G1	G2
Examination of product	1,6	1,6	1,7	1,5	1,5	1,5	1,3	1,4		1,3	1,3
Contact resistance	2，5	2，5	2，4，6	2，4	2,4	2,4					
Temperature Rise										2	2
Random vibration	3	3									
Mechanical shock	4	4									
Durability								2			
Thermal shock					3	3					
Insertion force.									1		
Extraction Force							2	3			
Humidity -temperature cycling			3	3							
Temperature life			5								
Sample size	**5PCS**	**5PCS**	**5PCS**	**5PCS**	**5PCS**	**5PCS**	**5PCS /each wire**	**5PCS /each wire**	**5PCS /each wire**	**5PCS/each wire**	**5PCS/each wire**

Figure 2

NOTE

*1. **Group A1/B1/C1/D/F/G1** for each female connector with wire test: 2834167-3*
*2. **Group A2/B2/C2/G2** for female&male connector mating: 2834167-3+2834172-3*
*3. **Group E** for female connector with wire test: 2834167-3*

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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