

SEMI FH3-0224

GUIDE FOR SALT MIST AND WASHABILITY TEST FLOW FOR CONTROL MODULE CONNECTOR OF WEARABLES

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1 Purpose

1.1 Salt mist and/or washability is one of the main factors that affect the reliability of control module connectors of wearables used to integrate signals from different textile-based and non-textile-based subsystems. To ensure smooth transfer for power and signal from subsystems for wearables, this Standard is proposed where wearables are the basic platform to integrate various subsystems.

1.2 In order to constitute and align an efficient supply chain, generic test flows are needed to integrate the tests. Therefore, this Guide provides a generic test flow and referenced standards of test methods for control module connector applying on wearables.

2 Scope

2.1 This Guide is applied to control module connector of wearables and the control module is detachable from wearables.

2.2 This Guide proposes generic test flows for the control module connector of wearables.

2.3 This Guide provides generic test flows including pretest, washability, salt mist test, type test, and integrated test.

2.4 This Guide defines the test items of pretest, type test, and integrated test. The metrology and test methods are determined by the published standards EIA 364 and IEC 60601-1.

2.5 This Guide provides the published standards that can be cited for washability and salt mist test. Washability can be determined by the published standard ISO 6330. The test method of salt mist is determined by the published standards IEC 60068-2-11 and IEC 60068-2-52.

NOTICE: SEMI Standards and Safety Guidelines do not purport to address all safety issues associated with their use. It is the responsibility of the users of the documents to establish appropriate safety and health practices, and determine the applicability of regulatory or other limitations prior to use.

3 Limitations

3.1 This Guide does not describe shapes, dimensions and specifications related to electrical connectors, sockets of wearables.

3.2 This Guide does not specify the details of the contacts and spacing design of electrical connectors, sockets of wearables.

4 Referenced Standards and Documents

4.1 *EIA Standards*¹

EIA 364 — Electrical Connector/Socket Test Procedures Including Environmental Classifications

4.2 *IEC® Standards*²

IEC 60068-2-11 — Environmental Testing – Part 2-11: Tests – Test Ka: Salt Mist

¹ Electronic Component Industry Association, 310 Maxwell Road, Suite 200, Alpharetta, GA 30009, USA; Telephone: +1.678.393.9990, Fax: +1.678.393.9998, <https://www.ecianow.org/>.

² International Electrotechnical Commission, 3 rue de Varembé, Case Postale 131, CH-1211 Geneva 20, Switzerland; Telephone: +41.22.919.02.11, <http://www.iec.ch>. IEC trademark is owned by International Electrotechnical Commission.

IEC 60068-2-52 — Environmental Testing – Part 2-52: Tests – Test Kb: Salt Mist, Cyclic (Sodium Chloride Solution)

IEC 60601-1 — Medical Electrical Equipment – Part 1: General Requirements for Basic Safety and Essential Performance

4.3 ISO® Standards³

ISO 6330 — Textiles – Domestic Washing and Drying Procedures for Textile Testing

NOTICE: Unless otherwise indicated, all documents cited shall be the latest published versions.

5 Terminology

5.1 None.

6 Generic Test Flow

6.1 *Generic Test Flow* — There are four categories of tests, which include:

1. Pretest
2. Washability and salt mist test
3. Type test
4. Integrated test

6.2 Washability and salt mist test can be performed as an individual test (refer to Figure 1) or a continuous test (refer to Figure 2).

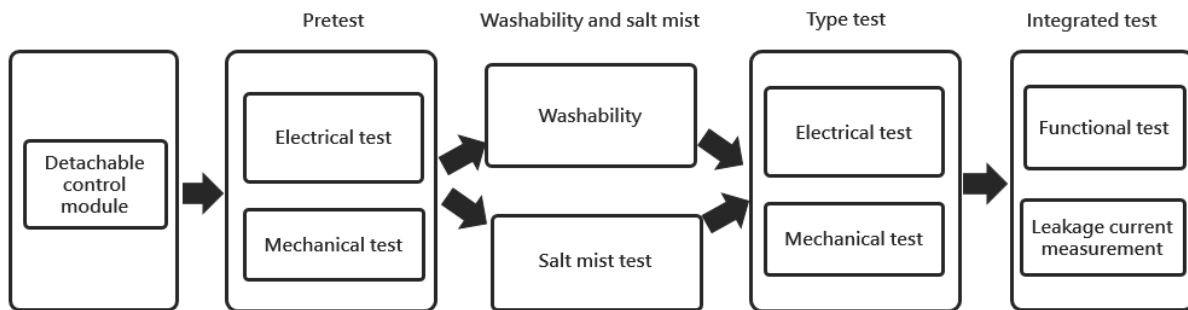


Figure 1
Generic Test Flow of Individual Test

³ International Organization for Standardization, ISO Central Secretariat, Chemin de Blandonnet 8, CP 401-1214 Vernier, Geneva, Switzerland; Telephone: +41.22.749.01.11, Fax: +41.22.733.34.30, <http://www.iso.org>. ISO trademark is owned by International Organization for Standardization.