

**AMERICAN NATIONAL
STANDARD**

ANSI/EIA RS-186-E-78
Approved October 27, 1978

EIA STANDARD

STANDARD TEST METHODS FOR PASSIVE
ELECTRONIC COMPONENT PARTS

METHOD 9: SOLDERABILITY

RS-186-9E

(Revision of RS-186-D, Method 9)

OCTOBER 1978



Engineering Department

ELECTRONIC INDUSTRIES ASSOCIATION

NOTICE

EIA engineering standards are designed to serve the public interest through eliminating misunderstandings between manufacturers and purchasers, facilitating interchangeability and improvement of products, and assisting the purchaser in selecting and obtaining with minimum delay the proper product for his particular need. Existence of such standards shall not in any respect preclude any member or non-member of EIA from manufacturing or selling products not conforming to such standards, nor shall the existence of such standards preclude their voluntary use by those other than EIA members whether the standard is to be used either domestically or internationally.

Recommended standards are adopted by EIA without regard to whether or not their adoption may involve patents on articles, materials, or processes. By such action, EIA does not assume any liability to any patent owner, nor does it assume any obligation whatever to parties adopting the recommended standards.

This Standard contains the major technical contents of International Electrotechnical Commission Publication 68-2-20, *Test T: Soldering, Solder Bath Method*.

It differs from the IEC Publication 68-2-20 only in test control and procedure wording.

These differences are well known to the U.S. Committee of Experts for the International Electrotechnical Commission Technical Committee 50 and resolution of these differences will be sought in future meetings of TC-50.

Published by

ELECTRONIC INDUSTRIES ASSOCIATION

Engineering Department

2001 Eye Street, N. W., Washington, D. C. 20006

© Electronic Industries Association 1979

All rights reserved

PRICE: \$3.00



Documents
Document Sharing Hub

**STANDARD TEST METHODS FOR PASSIVE
ELECTRONIC COMPONENT PARTS
METHOD 9
SOLDERABILITY**

(From EIA Standard RS-178-B and Standards Proposal No. 1271 formulated under the cognizance of the EIA P-9 Committee on Test Methods and Procedures.)

INTRODUCTION

This Test Method forms a part of the EIA Standard RS-186 which contains test guidance, definitions and standard test conditions.

1. PURPOSE

The purpose of this test standard is to determine the solderability of solid lead wires, terminals, and other terminations which are normally joined by means of soft solder.

This Standard shall not be construed as a production procedure for soldering operations.

The solderability determination is made on the basis of the ability of the terminal of the part to be wetted by a coat of new solder, to verify that the treatment used in the manufacturing process to facilitate soldering is satisfactory, and that this treatment has been applied to the required portion of the part designed to accommodate a soldered connection.

The applicability of this test standard as to the size of the terminals tested should be considered before use in the referencing specification. The solder temperatures and the dwell times given in this standard are normally limited to component parts with terminals up to 17AWG wire size or 0.045 inch (1.14mm) in diameter. Variation in pot temperature, Paragraph 7, and the immersion procedure, Paragraph 8.2, of the standard will provide for specifications that include larger type terminals.

2. SCOPE

This standard defines a test for solderability of solid lead wires, terminals, and conductive accessories of component parts which are to be joined by a soldering operation involving the use of rosin type flux and solder of the types covered by QQ-S-571. The specific times and temperatures are for lead wires not greater than 0.045 inch (1.14 mm) in diameter. For larger diameter wires, stranded leads or other parts, the test procedure may be modified as outlined in Paragraph 10. This standard includes test conditions which may be selected and referenced as condition 1, or 2 as per Paragraph 7.

3. DEFINITIONS

3.1 Solderability

The property of a metal surface which allows it to be wetted by solder; wetting being defined as the formation of a uniform, smooth, unbroken film of solder adherent to a base metal.