



ANSI/EIA-364-61A
Approved: May 6, 2014
Reaffirmed: December 20, 2019

EIA-364-61A

EIA STANDARD

TP-61A

**Resistance to Soldering Heat from
Rework Test Procedure for
Electrical Connectors and Sockets
Mounted on Printed Circuit Boards**

EIA-364-61A

(Revision of EIA-364-61)

May 2014



Electronic Components Industry Association

NOTICE

EIA Engineering Standards and Publications 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 and Publications shall not in any respect preclude any member or nonmember of ECIA from manufacturing or selling products not conforming to such Standards and Publications, nor shall the existence of such Standards and Publications preclude their voluntary use by those other than ECIA members, whether the standard is to be used either domestically or internationally.

Standards and Publications are adopted by ECIA in accordance with the American National Standards Institute (ANSI) patent policy. By such action, ECIA does not assume any liability to any patent owner, nor does it assume any obligation whatever to parties adopting the Standard or Publication.

This EIA Standard is considered to have International Standardization implications, but the International Electrotechnical Commission activity has not progressed to the point where a valid comparison between the EIA Standard and the IEC document can be made.

This Standard does not purport to address all safety problems associated with its use or all applicable regulatory requirements. It is the responsibility of the user of this Standard to establish appropriate safety and health practices and to determine the applicability of regulatory limitations before its use.

(From Standards Proposal No. 5320 and reaffirmed by 5440.09, formulated under the cognizance of the CE-2.0 Committee on EIA National Connector and Sockets Standards.)

Published by

©Electronic Components Industry Association 2019
EIA Standards & Technology Department
13873 Park Center Road, Suite 315
Herndon, VA 20171

**PLEASE !
DON'T VIOLATE
THE
LAW!**

This document is copyrighted by the ECIA and may not be reproduced without permission.

Organizations may obtain permission to reproduce a limited number of copies through entering into a license agreement. For information, contact:

IHS Markit
15 Inverness Way East
Englewood, CO 80112-5704 or call
USA and Canada (1-877-413-5186), International (303-397-7956)

CONTENTS

Clause	Page
1 Introduction	1
1.1 Scope	1
1.2 Object	1
1.3 Reference documents	1
2 Test resources	2
2.1 Equipment	2
2.2 Material	3
3 Test specimen	3
3.1 Description	3
3.2 Preparation	3
4 Test procedure	3
4.1 Procedure 1, soldering iron	4
4.2 Procedure 2, solder pot / fountain / wave solder.....	4
4.3 Procedure 3, hot gas / vapor	6
4.4 Procedure 4, for compliant pin connectors or sockets	7
5 Details to be specified	8
6 Test documentation	9
 Table	
1 Test procedures	3
2 Test conditions	5
3 Thermal profiles	7
 Figure	
1 Thermal profile	8
 Annex	
A Normative	A-1

(This page left blank)

TEST PROCEDURE No. 61A

RESISTANCE TO SOLDERING HEAT FROM REWORK TEST PROCEDURE
FOR ELECTRICAL CONNECTORS AND SOCKETS MOUNTED ON
PRINTED CIRCUIT BOARDS

(From EIA Standards Proposal No. 5320, formulated under the cognizance of EIA CE-2.0 Committee on National Connector and Socket Standards, and previously published in EIA-364-61.)

1 Introduction**1.1 Scope**

This standard establishes a test method for determining if connectors or sockets can withstand exposure to solder rework conditions using either soldering iron, solder pot / fountain / wave solder, or hot gas / vapor techniques. It is important to note that compliant pin connectors or sockets can be affected by solder rework if they are in close proximity to other connectors or sockets undergoing solder rework.

1.2 Object

Solder rework conditions may affect the electrical characteristics of the connector or socket and/or cause damage to component materials. They may also result in loosening of terminations, softening or distortion of insulation materials, opening of solder seals, weakening of mechanical joints, etc.

1.3 Reference documents

The following documents form a part of this standard to the extent indicated herein. In the event of conflict between this standard and the referenced document this standard shall take precedence.

- ANSI/EIA/IPC J-STD-004: Requirements for Soldering Fluxes
- ANSI/EIA/IPC J-STD-006: Requirements for Electronic Grade Solder Alloys and Fluxed and Non-Fluxed Solid Solders for Electronic Soldering Applications
- IPC-CH-65: Guidelines for Cleaning Printed Circuit Boards and Assemblies
- IPC/JEDEC J-STD-020: Moisture/Reflow Sensitivity Classification for Non-hermetic Solid State Surface Mount Devices