

INCH-POUND
MIL-PRF-39009D
AMENDMENT 1
17 May 2002

PERFORMANCE SPECIFICATION

RESISTORS, FIXED, WIRE-WOUND (POWER TYPE, CHASSIS MOUNTED), NONESTABLISHED RELIABILITY, AND ESTABLISHED RELIABILITY, GENERAL SPECIFICATION FOR

This amendment forms a part of MIL-PRF-39009D, dated 3 July 1997, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 4

2.2.1 STANDARDS, delete MIL-STD-1276.

2.2.1, STANDARDS, parenthetical source statement, delete "Defense Printing Service Detachment Office, Bldg 4D, Customer Service" and substitute "Document Automation and Production Service (DAPS), Bldg. 4D, (DPM-DODSSP)"

PAGE 6

3.5.3, delete and substitute:

"3.5.3 Terminals. Terminals shall be treated to facilitate soldering. When a coating containing tin is used, the tin content shall range between 40 percent and 70 percent. The terminals shall be firmly secured and shall not be solely dependent on the protective coating or enclosure for mechanical anchorage."

3.5.3.1, delete in its entirety and substitute:

"3.5.3.1 Solder dip (retinning) of leads. The manufacturer (or their authorized category B or category C distributor) may solder dip/retin the leads of product supplied to this specification provided the solder dip process (see Appendix, Section 5) has been approved by the qualifying activity."

PAGE 7 and 8

TABLE IV, 3.5.3.2, and 3.5.3.3, delete in their entirety.

PAGE 18

4.6.3.2.4b delete and substitute.

"b. The failed lot is submitted to 100 percent solder dip using an approved solder dip process (see 3.5.3.1). A subsequent solderability test shall then be performed. If the lot passes, it is available for shipment; if the lot fails, the manufacturer may perform the hot solder dip one additional time. If the lot fails to pass, the lot is considered rejected and shall not be supplied to this specification.

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PAGE 20

4.6.5.4 delete and substitute:

“4.6.5.4 Disposition of sample units. Sample units which have been subjected to group B, subgroup 1 and subgroup 2 inspections may be delivered on the acquisition document provided they are within the resistance tolerance and meet the requirements of group B inspection.”

PAGE 24

4.8.4.2 delete paragraph title “Quality conformance inspection.” and substitute “Conformance inspection.”

PAGE 28

4.8.13a last sentence, delete and substitute "There shall be no circulation of air over the resistors other than that caused by the heat of the resistors."

PAGE 33

2. APPLICABLE DOCUMENTS delete and substitute:

“2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, and 5 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, and 5 of this specification whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation (see 6.2).

STANDARDS

DEPARTMENT OF DEFENSE

MIL-STD-1276 - Leads For Electronic Components Parts.

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Document Automation and Production Service, Building 4D (DPM-DODSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094).

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for associated specifications, specification sheets, or MS standards), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.”

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After TABLE XIV, add new section 5:

“5. SOLDER DIP (RETNING) LEADS

5.1 Solder dip (retinning) leads. The manufacturer (or their authorized category B or category C distributor) may solder dip/retin the leads of product supplied to this specification provided the solder dip process (see 5.2 of this appendix) or an equivalent process has been approved by the qualifying activity.

5.2 Qualifying activity approval. Approval of the solder dip process will be based on one of the following options:

- a. When the original lead finish qualified was hot solder dip lead finish 52 of MIL-STD-1276. (NOTE: The 200 microinch maximum thickness is not applicable.) The manufacturer shall use the same solder dip process for retinning as is used in the original manufacture of the product.
- b. When the lead originally qualified was not hot solder dip lead finish 52 of MIL-STD-1276 as prescribed in 5.2a, approval for the process to be used for solder dip shall be based on the following test procedure:
 - (1) Thirty samples of any resistance value for each style and lead finish are subjected to the manufacturer's solder dip process. Following the solder dip process, the resistors are subjected to the dc resistance test (and other group A electricals). No defects are allowed.
 - (2) Ten of the 30 samples are then subjected to the solderability test. No defects are allowed.
 - (3) The remaining 20 samples are subjected to the resistance to solder heat test followed by the moisture resistance test. No defects are allowed.

5.3 Solder dip/retinning options. The manufacturer (or authorized category B or Category C distributor) may solder dip/retin as follows:

- a. After the 100 percent group A screening tests. Following the solder dip/retinning process, the electrical measurements required in group A, subgroup 1, 100 percent screening tests shall be repeated on 100 percent of the lot. (NOTE: The manufacturer may solder dip/retin prior to the 100 percent electrical measurements of the group A, subgroup 1 tests). The percentage defective allowable (PDA) for the electrical measurements shall be as for the subgroup 1 tests.
- b. As a corrective action, if the lot fails the group A solderability test: The lot may be retinned no more than two times. The lot after retinning shall be 100 percent screened for group A electrical requirements (dc resistance). Any parts failing (lot not exceeding PDA for group A, subgroup 1, see 4.6.3.2.1) these screens shall not be supplied to this specification. If electrical failures exceeding 3 percent of the lot are detected after the second retinning operation, the lot shall not be supplied to this specification.
- c. After the group A inspection has been completed: Following the solder dip/retinning process, the electrical measurements required in group A, subgroup 1, 100 percent screening test shall be repeated on 100 percent of the lot. The PDA for the electrical measurements shall be as for the subgroup 1 tests. Following these tests, the manufacturer shall submit the lot to the group A solderability test as specified in 4.6.3.2.4.”

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Custodians:

Army - CR
Navy - EC
Air Force - 11

Review activities:

Army - AR, AV, CR4, MI
Navy - AS, CG, MC, OS
Air Force - 19

Preparing activity:

Army - CR

Agent:

DLA - CC

(Project 5905-1663)