INCH-POUND

MIL-PRF-83401G
AMENDMENT 3
8 December 2000
SUPERSEDING
AMENDMENT 2
11 December 1999

PERFORMANCE SPECIFICATION

RESISTOR NETWORKS, FIXED, FILM
AND CAPACITOR-RESISTOR NETWORKS, CERAMIC CAPACITOR
AND FIXED, FILM, RESISTORS, GENERAL SPECIFICATION FOR

This amendment forms a part of MIL-PRF-83401G, dated 18 March 1996, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

1.1, last line, between screened and part add "(without the mandatory conformance inspection)."

Beneficial comments: delete and substitute.

"

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Defense Supply Center, Columbus, ATTN: DSCC-VAT, Post Office Box 3990, Columbus, Ohio, 43216-5000 by using the Standardization Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

"

PAGE 2

TABLE I, characteristics, column M; delete "1/" and substitute "2/".

TABLE I, note 2; delete "3.10.1" and substitute "3.10".

PAGE 6

2.2.1, STANDARDS; delete "MIL-STD-1276 - Leads for Electronic Component Parts."

* 2.2.1, STANDARDS, parenthetical source statement, delete "Defense Automated Printing Service" and substitute: "Document Automation and Production Service, DPM-DODSSP".

PAGE 7

3.3, delete and substitute:

"3.3 Material. Material shall be used which enable the networks to meet the performance requirements of this specification. Acceptance or approval of any constituent material shall not be construed as a guaranty of the acceptance of the finished product."

PAGE 12

3.4.7, delete and substitute:

"3.4.7 Solder dip (retinning) leads. The manufacturer may solder dip/retin the leads of product supplied to this specification provided the solder dip process (see appendix) has been approved by the qualifying activity."

PAGE 13

TABLE VII and 3.4.7.1, delete.

PAGE 14

3.4.7.2, delete.

PAGE 15

3.7, third line, delete "IV" and "C" and substitute "I" and "A".

PAGE 23

4.4.2, third line, delete "through" and substitute "and".

4.5b, delete "(subgroups 2 and 3)" and substitute "(subgroup 1, subgroup 2, and subgroup 3)".

4.6.1.1.1 add.

"4.6.1.1.1 Production lot. A production lot consists of all networks of the same style, schematic, nominal resistance value, resistance tolerance, resistance temperature characteristic, and terminal type. Manufacture of all parts in the lot shall have been started, processed, assembled, and tested as a group. Lot identity shall be maintained throughout the manufacturing cycle."

PAGE 26

4.6.1.2.2.1, first line, delete "Subgroup 1 tests shall be performed on 100 percent of the product supplied under this specification." and substitute "Subgroup 1 tests shall be performed on a production lot basis on 100 percent of the lot".

PAGE 27

4.6.1.2.2.2, delete and substitute:

"4.6.1.2.2.2 Subgroup 2. Subgroup 2 shall be performed on an inspection lot basis. A sample of 13 parts shall be randomly selected and if one or more defects are found, the lot shall be screened and the defects removed. A new sample of 13 parts shall be randomly selected. If one or more defects are found in the second sample, the lot is rejected and shall not be supplied to this specification. (NOTE: This corrective action applies to the original quality defect found. If another defect type is found in the second sample, a rescreen for that defect is also permitted)."

4.6.1.2.2.2.1, fourth line, delete "quality".

PAGE 39

4.8.14c, delete and substitute:

"c. Test condition C (immersion 10 seconds ±2 seconds). A board with a maximum area of nine square inches shall be used, and the leads shall not be cut."

PAGE 43

4.8.21a, delete "111a or 111b" and substitute "IIIa or IIIb".

* 6.2d, delete and substitute"

"d. Packaging requirements (e.g., Electrostatic discharge (ESD) sensitivity) (see 5.1)".

PAGE 44

6.3, last line, delete and substitute: "The activity responsible for the QPL, and information pertaining to qualification of products, may be obtained from the Defense Supply Center, Columbus (DSCC-VQP), Post Office Box 3990, Columbus, Ohio 43216-5000."

* After 6.4.3.1 add

"6.4.4 Electrostatic charge. Under several combinations of conditions, these resistors can be electrically damaged, by electrostatic charges, and drift from specified value. Users should consider this phenomena when ordering or shipping resistors. Direct shipment to the Government is controlled by MIL-DTL-39032 which specifies a preventive packaging procedure."

PAGE 46

A.2. APPLICABLE DOCUMENTS, delete and substitute:

"A.2. APPLICABLE DOCUMENTS

"A.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 the 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.

"A.2.2.1 Government documents.

"A.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 ad 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.)

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

PAGE 49

After table XXIV, add section 5:

"A.5. SOLDER DIP (RETINNING) LEADS

"A.5.1 Solder dip (retinning) leads. The manufacturer may solder dip/retin the leads of product supplied to this specification provided the solder dip process (see 5.2) or an equivalent process has been approved by the qualifying activity.

"A.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 A.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.

"(NOTE: If hermetic seal testing is required in group A, these tests would also be performed. 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 (or hermetic seal test if the device is hermetically sealed). No defects are allowed.

"(NOTE: Solder dip of gold plated leads is not allowed).

"A.5.3 Solder dip/retinning options. The manufacturer 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 dc resistance 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). For "M" level part, the percent defective allowable (PDA) (see 4.6.1.2.2.1) 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 (for "M" level part only). The lot after retinning shall be 100 percent screened for group A electrical requirements (dc resistance) and parts failing (lot not exceeding PDA for group A, subgroup 1, see 4.6.1.2.2.1) these screens shall not be supplied to this specification, if electrical failures are detected after the second retinning operation exceeding 1 percent of the lot, 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 dc resistance shall be repeated on 100 percent of the lot. The PDA for the electrical measurements shall be as for the subgroup 1 tests (see 4.6.1.2.2.1) (for "M" level part only). Following these tests, the manufacturer shall submit the lot to the group A solderability test as specified in 4.8.6."

PAGE 50

B.3.1, second line, delete “DESC-ELDM” and substitute “DSCC-VAT”.

Custodians:
Army - CR
Navy - EC
Air Force - 11
NASA - NA
DLA - CC

Preparing activity:
DLA - CC

Review activities:
Army - AR, AT, AV, CR4, MI
Navy - AS, CG, MC, OS
Air Force - 19

(Project 59GP-0173)