

INCH-POUND

MIL- PRF-23648D  
AMENDMENT 1  
15 June 1998

PERFORMANCE SPECIFICATION  
RESISTOR, THERMAL (THERMISTOR)  
INSULATED, GENERAL SPECIFICATION FOR

This amendment forms a part of MIL-PRF-23648D, dated 4 April 1995, and is approved for use by all Departments and Agencies of the Department of Defense.

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Section 2, delete and substitute:

"2. APPLICABLE DOCUMENTS

"2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. The section does not include documents cited in other sections of this specification or recommended for additional information or as samples. 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 and 4 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).

"SPECIFICATION

"DEPARTMENT OF DEFENSE

"(See supplement 1 for a list of associated specifications.)

"STANDARDS

"DEPARTMENT OF DEFENSE

"MIL-STD-202 - Test Methods Standard For Electronics and Electrical Component Parts.

"MIL-STD-1285 - Marking Of Electrical and Electronic Parts.

"(Unless otherwise indicated, copies of federal and performance specifications, standards, and handbooks are available from the Defense Automated Printing Service, Bldg. 4D, (DPM-DODSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

AMSC N/A

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“2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the DoDISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS are the issues of the documents cited in the solicitation (see 6.1).

“AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

“ANSI/NCSL Z540-1 - Calibration Laboratory and Measuring and Test Equipment, General Requirement for.

“INTERNATIONAL ORGANIZATION for STANDARDS (ISO)

“ISO 10012-1 - Quality Assurance Requirements for Measuring Equipment, Part 1: Meteorological Confirmation System for Measuring Equipment.

“(Application for copies should be addressed to the American National Standards Institute, 11 West 42<sup>nd</sup> Street, New York, NY 10036-8002.)

“2.4 Order of precedence. In event of a conflict between the text of this document and the references cited herein (except for related 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.”

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3.3, delete and substitute:

“3.3 Interface and physical dimension requirements. The thermistor shall meet the interface and physical dimensions specific. (see 3.1).”

3.3.1.2, delete and substitute:

“3.3.1.2 Type W (weldable). All type W terminals shall be suitably treated to facilitate welding. Dimensions shall conform to the associated specification requirements (see 3.1).”

3.3.1.3, delete and substitute:

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

3.3.1.3.1, Table IV, and 3.3.1.3.2, delete.

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4.1.2, delete “ANSI/NCSL Z540-1-1994” and substitute “ANSI/NCSL Z540-1, ISO-10012-1, or equivalent system as approved by the qualifying activity”.

Table VII, delete and substitute:

“Table VII. Group A sampling plan.”

Lot size	Subgroup 1 Sample size	Subgroup 2 Sample size
1 to 13	100 percent	5
14 to 125	100 percent	5
126 to 150	125	5
151 to 280	125	5
281 to 500	125	5
501 to 1,200	125	5
1,201 to 3,200	125	5
3,201 to 10,000	125	8
10,001 to 35,000	294	13
35,001 to 150,000	294	20
150,001 to 500,000	345	20
500,001 and over	435	20

4.6.4, third line, delete “and IV”.

Section 5, delete and substitute:

“5. PACKAGING

“5.1 Packaging. For acquisition purposes, packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, the personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point’s packaging activity within the Military Department, the Military Department’s System Command, or Defense Agency. Packaging data retrieval is available from the managing Military Department’s or Defense Agency’s automated packaging files, CD-ROM products, or responsible packaging activity.”

6.2, delete last sentence 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, OH 43216-5001.”

Appendix, section 20, delete and substitute:

“20. APPLICABLE DOCUMENTS.

“DEPARTMENT OF DEFENSE

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

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Appendix, section 50, add:

“50. SOLDER DIP (RETINNING) LEADS

“50.1 Solder dip (retinning leads). The manufacturer may solder dip/retin the leads of product supplied to this specification provided the solder dip has been approved by the qualifying activity.

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

- “a. When 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 for retinning as is used in the original manufacture of product.
- “b. When the lead originally qualified was not hot solder dip lead finish 52 of MIL-STD-1276 as prescribed in 50.2a, approval for the 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, the resistors are subjected to the zero-power resistance test and other group A electricals. No defects are allowed.
  - “(2) Ten of the 30 samples are 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.

“50.3 Solder dip/retin options. The manufacturer may solder dip/retin as follows:

- “a. After group A tests and following the solder dip/retinning, the electrical measurements required in group A, subgroup 1, tests shall be repeated on the lot. Group A, subgroup 1, lot rejection criteria shall be used. Following these tests, the manufacturer shall submit the lot to the group A solderability test as specified in 4.6.4.
- “b. As a corrective action if the lot fails the group A solderability test.”

Custodians:  
Army - CR  
Navy - EC  
Air Force - 85

Preparing activity:  
DLA - CC  
  
(Project 5905-1519)

Review activities:  
Army - AR, AT, AV, CR4  
Navy - AS, CG, MC, OS  
Air Force - 17, 19, 99  
NASA - NA