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MIL-PRF-39017/5M
19 May 1997
SUPERSEDING
MIL-R-39017/5L
19 March 1991

PERFORMANCE SPECIFICATION

RESISTORS, FIXED, FILM (INSULATED), NONESTABLISHED RELIABILITY, AND ESTABLISHED RELIABILITY, STYLE RLR05

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the associated requirements for style RLR05, nonestablished reliability and established reliability, insulated, film, fixed resistors.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 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 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).

Beneficial comment (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be address to: Commander, US Army Communications-Electronics Command, ATTN: AMSEL-LC-LEO-E-EP, Fort Monmouth, NJ 07703-5023 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 5905

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

SPECIFICATION

DEPARTMENT OF DEFENSE

MIL-PRF-39017 - Resistors, Fixed, Film (Insulated), NonEstablished Reliability and Established

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Defense Printing Service Detachment Office, Building 4D (Customer Service), 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, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 General. The requirements for acquiring the product described herein shall consist of this document and MIL-PRF-39017.

3.2 Interface and physical dimension requirements. Resistors shall meet the interface and physical dimensions specified on figure 1.

3.3 Power rating. The power rating shall be 0.125 watt.

3.4 Voltage rating. The continuous working voltage shall not exceed 200 volts.

3.5 Resistance and resistance tolerance. Minimum resistance and maximum resistance values and resistance tolerance for temperature characteristics of ± 100 parts per million (PPM) and ± 350 PPM shall be as follows:

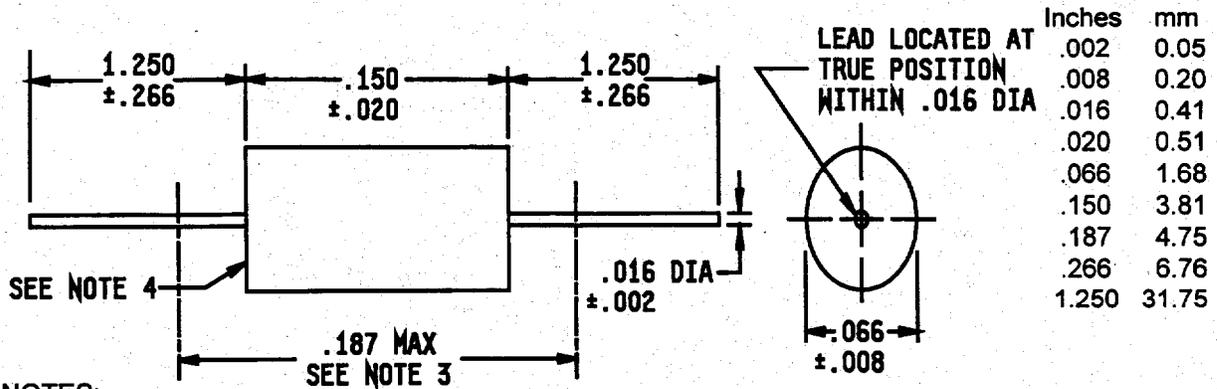
	<u>100 PPM</u>	<u>350 PPM</u>
Resistance tolerance (percent)	1, 2	2, 5, 10
Minimum resistance	2.7 Ω	1.1 M Ω
Maximum resistance	1 M Ω	22 M Ω

3.6 Maximum weight. The maximum weight shall not exceed 0.3 gram.

3.7 Marking. Due to size limitations the style resistor shall be marked with the following minimum information in the order shown:

- 123A - Year and week manufactured, lot code (letters "0" and "I" excluded).
- 1003 - Resistance value.
- GMJ* - Resistance tolerance, product level designator, JAN marking and manufacturer's code (see qualified products list for manufacturer's code symbols).

Full marking is required on the unit package.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Maximum length is "clean lead" to "clean lead".
4. The end of the body shall be that point at which the body diameter equals the nearest drill size larger than 250 percent of the nominal lead diameter.
5. Lead length for tape and reel packaging shall be 1 inch (25.4 mm) minimum (see 6.2).

FIGURE 1. Style RLR05 resistor.

4. VERIFICATION

- 4.1 Sampling and inspection. Sampling and inspection shall be in accordance with MIL-PRF-39017.
- 4.2 Power conditioning. The maximum voltage applied shall not exceed 250 volts, ac or dc.
- 4.3 Dielectric withstanding voltage. The test voltages applicable to style RLR07 are as follows:

Atmospheric pressure - 300 volts rms.
 Barometric pressure - 200 volts rms.

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, these 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 or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Notes. The notes specified in MIL-PRF-39017 are applicable to this specification.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of the specification, and complete PIN.
- b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1).
- c. Packaging requirements (see 5.1).
- d. Lead length requirements for tape and reel packaging. (Contractor may specify smaller lead lengths in the purchase order).

6.3 Substitution data.

6.3.1 MIL-R-39008. Resistors of this specification, regardless of failure rate (FR) designation, are suggested replacements for resistors of the same resistance values and tolerance specified in the specification sheet MIL-R-39008/4.

6.3.2 MIL-R-11. Resistors of this specification, regardless of their FR designation are suggested replacements for resistors of the same resistance value and tolerance specified in MIL-R-11/11.

6.4 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:

Army - CR
Navy - EC
Air Force - 85

Review activities:

Army - AR, AT, AV, ME
Navy - AS, CG, MC, OS
Air Force - 17, 99

Preparing activity:

Army - CR

Agent:

DLA - CC

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spanner wrenches for tightening. Unless otherwise specified (see 6.2), the cap and body shall conform to NFPA 30 requirements for vented fill caps.

3.5.2 Style B. Closing the cap shall be by either cam or lever, screw-on, or mating twist-lock lugs. The body of the cap shall provide a sealing surface; cam grooves, threads, notches, flanges, or lugs to receive the lid with mating parts. To facilitate locking, matching eyes on the lid and the body shall be provided to receive a padlock with a shackle of not less than 0.375-inch (10 mm) in diameter. The sealing gasket provided shall be Buna-N for gasoline and diesel fuel tanks and Viton-A for jet fuel tanks and shall provide an air-tight seal when the cap is closed and locked. Where cams and cam levers are used, the cam levers shall be of corrosion-resistant steel or high-strength brass compatible with the mating parts. Cam lever hinge pins shall be of stainless steel or other corrosion-resistant metal of strength equal to the lever hinge eye. The hinge pin shall be peened or enlarged to prevent removal. The body shall be threaded at the base for threading onto a fill pipe as specified for types I and II. Threads shall be as specified in 3.6. The cap and body construction shall have a pressure rating of not less than 5 pound-force per square inch (psi) (34 kPa) and not greater than 9 psi (62 kPa). Unless otherwise specified (see 6.2), the cap and body shall conform to NFPA 30 requirements for air-tight fill caps.

3.5.3 Adapter A. The adapter A bushing shall be hexagon with 1.5-inch (38 mm) internal pipe threads NPT and 2-inch (51 mm) external pipe threads NPT. Threads shall be as specified in 3.6. The pressure rating of the bushing shall be not less than 5 psi (34 kPa) and not greater than 9 psi (62 kPa).

3.5.4 Adapter B. The adapter B threaded reducer shall have 1.5-inch (38 mm) internal pipe threads NPT at one end and 2-inch (51 mm) internal pipe threads NPT at the opposite end. Threads shall be as specified in 3.6. The pressure rating of the reducer shall be not less than 5 psi (34 kPa) and not greater than 9 psi (62 kPa). When the reducer is fabricated from cast iron, it shall be zinc-coated by the hot-dip process in accordance with ASTM A153, and shall be so treated as to be thoroughly coated with a smooth, bright adherent solid surface of zinc. The fitting shall be zinc-coated both inside and outside. The fitting shall be coated before threading.

3.6 Threads. All threads shall be right hand and shall be smooth, clean, and true to form. All threads shall conform to FED-STD-H28 for NPT, except for the manufacture's selection of threads for a screw-on cap to the body.

3.7 Performance.

3.7.1 Pressure.

3.7.1.1 Style B caps. The style B caps shall be capable of withstanding pressure of not less than 5 psi (34 kPa) and not greater than 9 psi (62 kPa).

3.7.1.2 Adapters. The adapter A and adapter B shall be capable of withstanding pressure of not less than 5 psi (34 kPa) and not greater than 9 psi (62 kPa) (see 4.6.1 and 4.6.2).