INCH-POUND
MIL-PRF-49465/1C
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29 October 2013
SUPERSEDING
MIL-PRF-49465/1C
15 October 2007

PERFORMANCE SPECIFICATION

RESISTOR, FIXED, METAL ELEMENT, POWER TYPE, STYLE RLV10

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

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-PRF-49465.

1. SCOPE

1.1 Scope. This specification covers the performance requirements for style RLV10 metal element, power type, fixed resistors.

1.2 Part or Identifying Number (PIN). Resistors covered by this specification are identified by a PIN which consists of a basic style of this specification and a coded number. The PIN is in the following form:

M4946501	TR1000F
Associated Specification	Coded number (see MIL-PRF-49465)

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 cited in the solicitation (see 6.2).

DEPARTMENT OF DEFENSE SPECIFICATION

MIL-PRF-49465	-	Resistor, Fixed, Metal Element, Power Type, Very Low Resistance Values, General Specification for.

Comments, suggestions, or questions on this document should be addressed to: DLA Land and Maritime, ATTN: VAT, Post Office Box 3990, Columbus, Ohio 43218-3990 or by email Resistor@dla.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at https://assist.dla.mil/

(Copies of these documents are available online at http://quicksearch.dla.mil or from the DLA Document Services, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094).

2.3 Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein (except for related specification sheets), the text of this document takes precedence unless otherwise noted. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENT

3.1 General. The requirements for acquiring the product described herein shall consist of this document and MIL-PRF-49465.

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

3.3 Characteristic. This style of resistor is available in characteristic T as described in MIL-PRF-49465.

3.4 Tolerance. This style of resistor is available in tolerances F, H, and J (±1 percent, ±3 percent, and ±5 percent, respectively).

3.5 Terminal lead types. This style resistor is a four-leaded device with solderable terminals (see figure 1).

3.6 Weight. The weight shall be .014 lbs. (6.35 grams).

3.7 Power rating. The power rating shall be 5.0 watts at +25°C as shown in table I.

3.8 Maximum overload current. The maximum overload current shall be as specified in table I.

3.9 Resistance value range. The minimum and maximum resistance values shall be as specified in table I.

TABLE I. Electrical characteristics.

Style	Rated wattage at 25°C (watts)	Minimum resistance (ohms)	Maximum resistance (ohms)	Maximum overload current (amperes)
RLV10	5.0	0.01	0.50	40.0

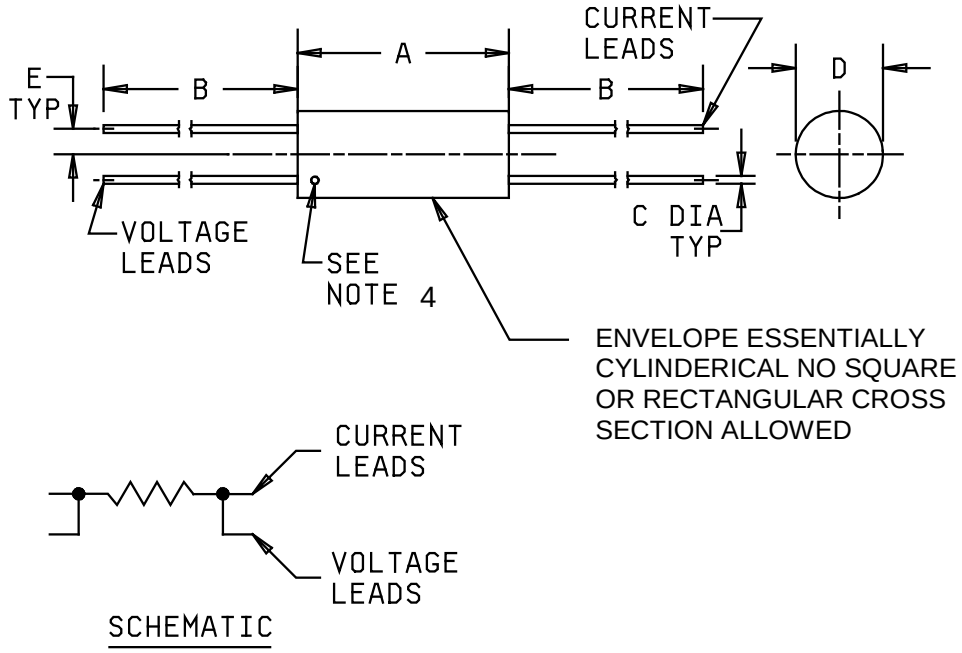
3.10 Temperature coefficient. The temperature coefficient of resistance shall be as specified in table II.

TABLE II. Temperature coefficient of resistance.

Resistance range (in ohms)	Temperature coefficient (ppm/^{O}C)
.01 to .0249	±150
.025 to .0499	±125
.05 to .0749	±100
.075 to .099	±50
.1 ohm and above	±50

3.11 Marking. The resistors shall be marked in accordance with MIL-PRF-49465.

3.12 Pure tin. The use of pure tin, as an underplate or final finish, is prohibited both internally and externally. Tin content of resistor components and solder shall not exceed 97 percent, by mass. Tin shall be alloyed with a minimum of 3 percent lead, by mass (see 6.3).



Style	Dimensions				
	A	B	C	D	E
RLV10	.937 ±.062 (23.80 ±1.57)	1.43 min (37.59 min)	.040 ±.005 (1.02 ±.130)	.375 ±.031 (9.53 ±.787)	.062 ±.020 (1.57 ±.508)

NOTES:
1. Dimensions are in inches. Metric equivalents are given for general information only, and are in parentheses.
2. For resistance measurements the point of contact to the leads shall be .375 ±.062 (9.52 mm ±1.57 mm) from the body.
3. The picturization of the style above is given as representative of the envelope of the item. Slight deviations from the outline shown, which are contained within the envelope and do not alter the functional aspects of the device, are acceptable.
4. At the option of the manufacturer a dot may be placed adjacent to the voltage lead. In the absence of a dot either lead may be used as the voltage lead.

FIGURE 1. Resistors, fixed, metal element.

4. VERIFICATION

4.1 Sampling and inspection. Sampling and inspection shall be in accordance with MIL-PRF-49465.

4.2 Visual and mechanical inspection. Visual and mechanical inspection shall be in accordance with MIL-PRF-49465.

4.3 Terminal strength. Terminal strength shall be in accordance with MIL-PRF-49465 and the applied force shall be five pounds.

5. PACKAGING.

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Service or Defense Agency, or within the military services system commands. 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. In addition to the notes specified herein, the notes specified in MIL-PRF-49465 are applicable to this specification.

6.2 Acquisition requirements. Acquisition requirements are as specified in MIL-PRF-49465.

a. Title, number, and date of this specification, and the complete PIN (see 1.2).

b. Unless otherwise specified (see 2.1), the versions of the individual documents referenced will be those in effect on the date of release of the solicitation.

c. Packaging instructions (see 5.1).

d. Bracket assembly requirements (see 6.5 of MIL-PRF-49465).

6.3 Tin whisker growth. The use of alloys with tin content greater than 97 percent, by mass, may exhibit tin whisker growth problems after manufacture. Tin whiskers may occur anytime from a day to years after manufacture and can develop under typical operating conditions, on products that use such materials. Conformal coatings applied over top of a whisker-prone surface will not prevent the formation of tin whiskers. Alloys of 3 percent lead, by mass, have shown to inhibit the growth of tin whiskers. For additional information on this matter, refer to ASTM-B545 (Standard Specification for Electrodeposited Coatings of Tin).

6.4 Amendment notification. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

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

Preparing activity:
DLA - CC

Review activities:
Army - MI
Navy - AS, CG, MC, OS
Air Force - 19, 99

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