

INCH-POUND
MIL-PRF-49462/3C
w/Amendment 2
8 August 2014
SUPERSEDING
MIL-PRF-49462/3C
w/Amendment 1
23 March 2011

PERFORMANCE SPECIFICATION SHEET

RESISTOR, FIXED, FILM, HIGH VOLTAGE STYLES RHV30, RHV31, RHV32, RHV33, RHV34, RHV35

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-49462](#).

1. SCOPE

1.1 Scope. This specification covers the performance requirements for styles RHV30, RHV31, RHV32, RHV33, RHV34, and RHV35 resistors.

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

<u>M4946203</u>	<u>AA100KF</u>
Associated Specification	Coded number (see MIL-PRF-49462)

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 cited in the solicitation or contract (see [6.2](#)).

DEPARTMENT OF DEFENSE SPECIFICATION

[MIL-PRF-49462](#)

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Resistor, Fixed, Film, High Voltage, General Specification For.

(Copies of these documents are available online at <http://quicksearch.dla.mil>).

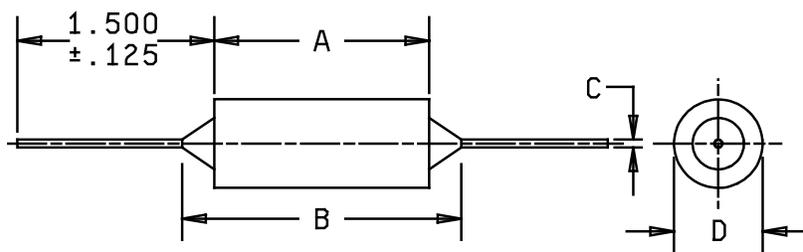
Comments, suggestions, or questions on this document should be addressed to: DLA Land and Maritime, ATTN: VAT, Post Office Box 3990, Columbus, Ohio 43218-3990 or by email Resistor@dlam.mil. Since contact information can change, you may want to verify the currency of this address information using the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

2.4 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-49462.

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



Inches	mm
.125	3.18
1.500	38.10

	RHV30	RHV31	RHV32	RHV33	RHV34	RHV35
A	0.275 ±0.031 (6.98 ±0.079)	0.400 ±0.031 (10.16 ±0.079)	0.690 ±0.062 (17.53 ±1.57)	1.062 ±0.062 (26.97 ±1.57)	2.062 ±0.062 (52.37 ±1.57)	3.062 ±0.062 (77.77 ±1.57)
B max	0.400 (10.16)	0.525 (13.34)	0.900 (22.86)	1.250 (31.75)	2.250 (57.15)	3.250 (88.55)
C	0.025 ±0.002 (0.635 ±0.05)	0.032 ±0.002 (0.81 ±0.05)	0.032 ±0.002 (0.81 ±0.05)	0.032 ±0.002 (0.81 ±0.05)	0.032 ±0.002 (0.81 ±0.05)	0.032 ±0.002 (0.81 ±0.05)
D	0.088 ±0.010 (2.22 ±0.25)	0.138 ±0.016 (3.51 ±0.41)	0.297 ±0.031 (7.54 ±0.79)	0.297 ±0.031 (7.54 ±0.79)	0.297 ±0.031 (7.54 ±0.79)	0.297 ±0.031 (7.54 ±0.79)

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are in parentheses, and are given for general information only.

FIGURE 1. Resistors, fixed, film, high voltage.

3.3 Power rating. The power rating shall be as specified in table I, based on a full load operation at an ambient temperature of 70°C. For operation at temperatures higher than 70°C, derate in accordance with figure 2.

TABLE I. Power rating.

Style	Power rating (watts)	Style	Style	Power rating (watts)	Style
RHV30	0.25	A	RHV33	2.0	D
RHV31	0.5	B	RHV34	3.0	E
RHV32	1.0	C	RHV35	5.0	F

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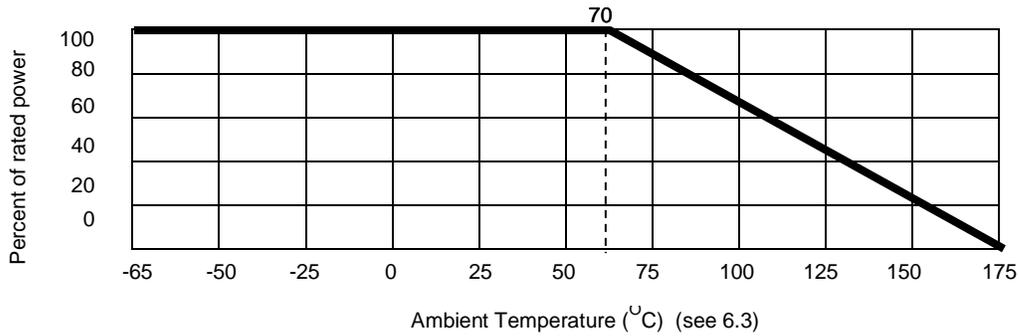


FIGURE 2. Derating curve.

3.4 Resistance. The minimum and maximum nominal resistance values shall be as specified in table II.

TABLE II. Minimum and maximum nominal resistance values.

Style	Resistance value (ohms)		Style
	Minimum	Maximum	
RHV30	100k	100M	A
RHV31	100k	392M	B
RHV32	49.9k	499M	C
RHV33	100k	499M	D
RHV34	200k	1G	E
RHV35	330k	1G	F

3.5 Maximum voltages. Maximum voltages shall be in accordance with table III.

TABLE III. Maximum voltages.

Style	Maximum voltage (volts)	Style
RHV30	750	A
RHV31	1.5k	B
RHV32	3.0k	C
RHV33	5.0k	D
RHV34	10.0k	E
RHV35	20.0k	F

3.6 Resistance tolerance. The resistance tolerance is identified by a single letter in accordance with table IV.

TABLE IV. Resistance tolerance.

Symbol	Resistive tolerance percent (±)
F	1.0
G	2.0
J	5.0

3.7 Outgassing. Outgassing shall be as specified in [MIL-PRF-49462](#).

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3.8 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).

4. VERIFICATION

4.1 Sampling and inspection. Sampling and inspection shall be in accordance with [MIL-PRF-49462](#).

4.2 Visual and mechanical inspection. Visual and mechanical inspection shall be in accordance with [MIL-PRF-49462](#).

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 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 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 Intended use. Resistors are intended for use in electronic circuits where high voltages and high resistance are required.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of the specification, the applicable associated specification, and complete PIN (see 1.2 and 3.1).
- 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 requirements (see 5.1).

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 Pulse applications. Designers are CAUTIONED on using these resistors in high power pulse applications. Since they have not been qualified nor tested for such applications, damage and premature failure are possible.

6.5 Amendment notations. The margins of this specification are marked with vertical lines to indicate modification generated by this amendment. 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.

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

Preparing activity:
DLA - CC

(Project 5905-2014-042)

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

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.