

INCH-POUND
MIL-PRF-83530/1B
4 June 1999
SUPERSEDING
MIL-PRF-83530/1A
14 April 1995

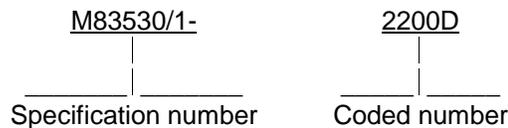
PERFORMANCE SPECIFICATION
RESISTORS, VOLTAGE SENSITIVE (VARISTORS)
STYLE RVS10

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 requirements for style RVS10 varistors.

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



The coded number is derived in accordance with MIL-PRF-83530.

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 shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

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-VAM, 3990 East Broad Street, Columbus, OH 43213-1199, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

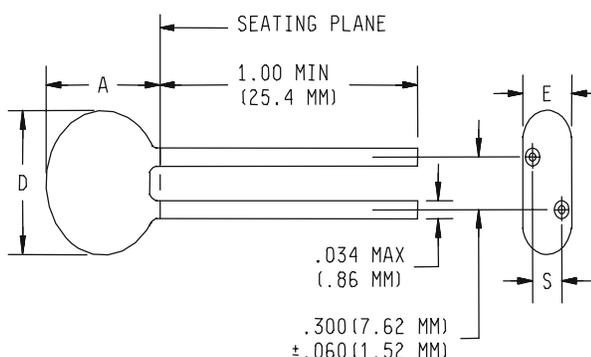
SPECIFICATION

DEPARTMENT OF DEFENSE

MIL-PRF-83530 - Resistors, Voltage Sensitive (Varistor Metal -Oxide), General Specification for.

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Defense Automated Printing Service, Building 4D (DPM-DODSSP), 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.



A		D		E		S			
Max		Max		Max		Min		Max	
Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm
1.10	27.94	.95	24.13	.32	8.13	.054	1.37	.26	6.60

FIGURE 1. Style RVS10 varistors, dimensions and configuration.

3. REQUIREMENTS

3.1 General. The requirements for acquiring the product described herein shall consist of this document and MIL-PRF-83530.

3.2 Interface and physical dimensions. Varistors shall meet the interface and physical dimensions specified on figure 1, as applicable.

3.3 Nominal varistor voltage. The nominal varistor voltages applicable to this specification shall be as specified in table 1. For varistors operated at ambient temperatures in excess of 85°C, the nominal varistor voltage shall be derated in accordance with figure 2.

3.4 Voltage tolerance. The nominal varistor voltage tolerances applicable to this specification shall be as specified in table I.

3.5 Voltage rating. The voltage rating applicable to parts covered by this specification shall be as specified in table I. For varistors operated at ambient temperatures in excess of 85°C, the voltage shall be derated in accordance with figure 2.

3.6 Energy rating. The energy rating applicable to parts covered by this specification shall be as specified in table I. For varistors operated at ambient temperatures in excess of 85°C, the voltage shall be derated in accordance with figure 2.

3.7 Clamping voltage. The varistors shall not exceed the maximum clamping voltage value specified in table I. For varistors operated at ambient temperatures in excess of 85°C, the voltage shall be derated in accordance with figure 2.

3.8 Capacitance. The varistors shall not exceed the maximum capacitance value specified in table I.

TABLE I. Rating and characteristics.

PIN	Nominal Varistor voltage (V)	Tolerance (%)	Voltage rating (V)		Energy rating (joules)	Clamping voltage at 100 A (V)	Capacitance at 1 MHz (pF)	Clamping voltage at peak current rating (V)
			rms	dc				
M83530/1-2000B	200	±10	130	175	50	325	3800	570
M83530/1-2200D	220	+10, -5	150	200	55	360	3200	650
M83530/1-4300E	430	+5, -10	275	369	100	680	1800	1200
M83530/1-5100E	510	+5, -10	320	420	120	810	1500	1450

3.9 Peak current rating. The peak current rating applicable to parts covered by this specification shall be 6,000 amperes (A). The clamping voltage at this rating shall not exceed the maximum value specified in table I. For varistors operated at ambient temperatures in excess of 85°C, the voltage shall be derated in accordance with figure 2.

3.10 Pulse life rating. The pulse life rating applicable to parts covered by this specification shall be 10,000 impulses.

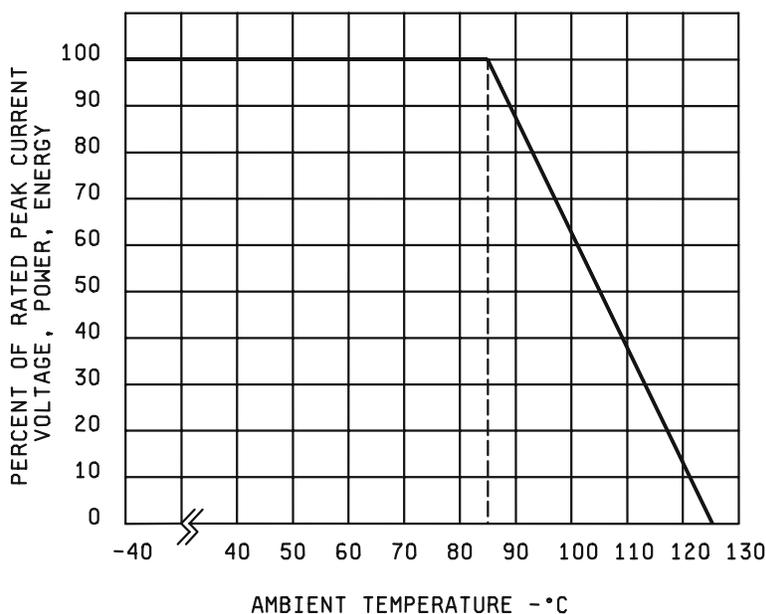


FIGURE 2. Current voltage, power, energy rating versus temperature.

3.11 Power rating. The average power dissipation rating applicable to parts covered by this specification shall be 1.0 W at 85°C. For varistors operated at ambient temperatures in excess of 85°C, the voltage shall be derated in accordance with figure 2.

3.12 Weight. Varistors applicable to this specification shall not exceed a weight of 0.35 ounce (10 grams).

4. VERIFICATION

4.1 Sampling and inspection. Sampling and inspection shall be in accordance with MIL-PRF-83530.

4.2 Energy. The test peak current shall be 140 A.

4.3 Clamping voltage. The test current shall be 100 A.

4.4 Pulse life. The test current shall be 250 A.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order. When actual packaging of material 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-83530 are applicable to this specification.

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

Custodians:

Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5905-1569)

Review activities:

Army - AR, AT, AV, ME, MI
Navy - AS, CG, MC, OS
Air Force - 19