

INCH-POUND

MIL-PRF-18546/2C
15 May 2001
SUPERSEDING
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27 April 1966

PERFORMANCE SPECIFICATION
RESISTORS, FIXED, WIRE-WOUND
(POWER TYPE, CHASSIS MOUNTED),
STYLES RE77 AND RE80

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

1. SCOPE

1.1 Scope. This specification covers the requirements for styles RE77 and RE80 resistors.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in section 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 user 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: DSCC-VAT, Post Office Box 3990, Columbus, Ohio 43216-5000, by using the Standardization Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 5905

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SPECIFICATION

DEPARTMENT OF DEFENSE

MIL-PRF-18546 - Resistors, Fixed, Wire-Wound, (Power Type, Chassis Mounted), General Specification for.

STANDARD

DEPARTMENT OF DEFENSE

MS 35690 - Nut, Plain, Hexagon, UNC-2B and UNF-2B.

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Document Automation and Production 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.

3. REQUIREMENT

3.1 General. The requirements for acquiring the product described herein shall consist of this document and MIL-PRF-18546.

3.2 Interface and physical dimension. Resistors shall meet the interface and physical dimension specified on figure 1 and as specified herein.

3.2.1 Weight. The maximum weight shall be as specified in table I.

TABLE I. Weight.

Style	Grams, (maximum)	
	Characteristic G	Characteristic N
RE77	400	440
RE80	800	880

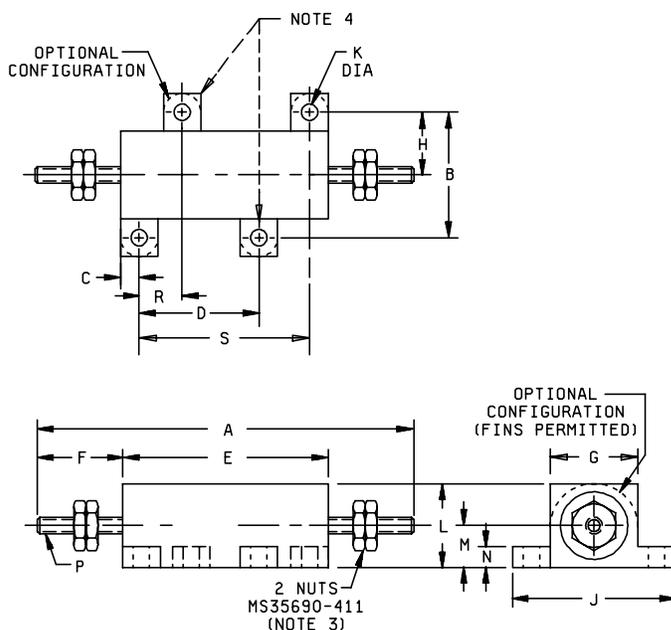
3.3 Power rating. The power rating shall be as specified in table II, based on full load operation at an ambient temperature of 25°C, when mounted on the chassis specified in table V.

TABLE II. Power rating.

Style	Power rating (watts)	
	Chassis mounted	Free air ^{1/}
RE77	75	30
RE80	120	75

^{1/} Free air power ratings are listed for information only.

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Style	A	B	C ±.031 (0.79)	D	E ±.094 (2.39)	F	G ±.031 (0.79)	H ±.031 (0.79)
RE77	5.478 ±.094 (139.14 ±2.39)	2.250 ±.010 (57.15 ±.25)	.375 (9.53)		3.500 (88.90)	.989 ±.031 (25.12 ±.79)	1.812 (46.02)	1.125 (28.58)
RE80	7.000 ±.125 (177.80 ±3.18)	2.500 ±.015 (63.50 ±.40)	.312 (7.93)	3.000 ±.010 (76.20 ±.25)	4.500 (114.30)	1.250 ±.062 (31.75 ±1.57)	2.125 (53.98)	1.250 (31.75)
Style	J ±.031 (0.79)	K ±.010 (0.25)	L ±.031 (0.79)	M ±.062 (1.57)	N ±.031 (0.79)	P	R ±.010 (.25)	S ±.010 (.25)
RE77	2.812 (71.42)	.188 (4.78)	1.750 (44.45)	.770 (19.56)	.188 (4.78)	12-24 UNC-2A		2.750 (69.85)
RE80	3.000 (76.20)	.188 (4.78)	2.188 (55.58)	1.000 (25.40)	.250 (6.35)	1/4-20 UNC-2A	.875 (22.23)	3.875 (98.43)

NOTES:

1. All dimensions are in inches.
2. Metric equivalent (to the nearest .01 mm) are given for general information only and based upon 1 inch = 25.4 mm.
3. MS35690-411 applies to RE80 only. For RE77 the manufacturer may provide the hex nut configuration or equivalent (wing nut).
4. Mounting tabs apply to RE80 only.
5. Millimeters are in parentheses.

FIGURE 1. Styles RE77, and RE80 resistors.

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

TABLE III. Minimum and maximum nominal resistance values.

Style	Resistance values (Ohms)			
	Minimum		Maximum	
	Characteristic		Characteristic	
	G	N	G 1/	N
RE77	0.05	1	29,400	14,700
RE80	0.10	1	35,700	17,400

1/ Based on use of 0.00175 inch nominal diameter wire.

4. VERIFICATION

4.1 Sampling and inspection. Sampling and inspection shall be in accordance with MIL-PRF-18546, and as specified herein.

4.2 Terminal strength. The direct pull shall be as specified in table IV.

TABLE IV. Direct pull.

Style	Direct pull (pounds)	Torque (pounds-inches)
RE77	10 +0, -1/2	24
RE80	10 +0, -1/2	32

4.3 Dielectric withstanding voltage.

4.3.1 At atmospheric pressure. The magnitude of the test voltage shall be 4,500 volts.

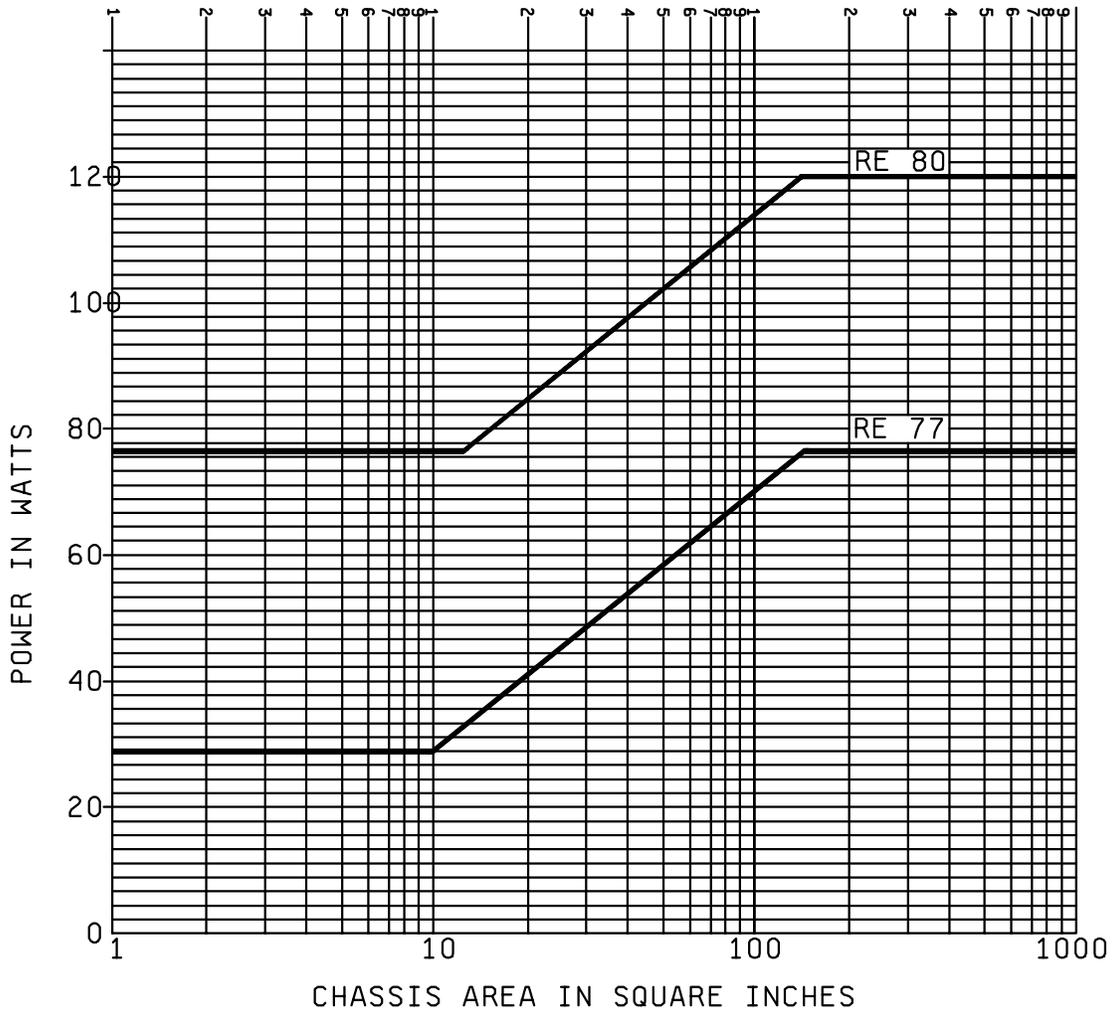
4.3.2 At reduced barometric pressure. The magnitude of the test voltage shall be 1,000 volts.

4.4 Chassis dimensions. The chassis dimensions shall be as specified in table V.

TABLE V. Chassis dimensions. 1/

Style	Length, width, and height	Thickness
RE77	9 X 7 X 2	0.06
RE80	9 X 7 X 2	0.06

1/ All dimension are given in inches.



NOTE:

1. The chassis derating curves are based on the full power ratings at an ambient temperature of 25°C.
2. These curves are independent of the temperature derating curves.

FIGURE 2. Chassis area derating curves.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of material is to be performed by DoD personnel, these personnel need to contract 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

6.1 Intended use. In addition to the notes specified herein, the notes specified in MIL-PRF-18546 are applicable to this specification.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this specification and the complete PIN (see 1.2.1).
- b. Issue of DoDISS to cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1).
- c. Packaging requirements (see 5.1).

6.3 Power rating (free air). The free air (resistor not mounted on a chassis) power rating is as listed in table II.

6.4 Chassis area derating curves. Figure 2 may be used for design information.

6.5 Interchangeability. Items in this specification are mutually interchangeable with items of the same style and characteristic procured under MIL-R-18546/2A.

6.7 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.

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Custodians:

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

Preparing activity:

DLA-CC

(Project 5905-1610-02)

Review activities:

Army - AR, MI
Navy - MC
Air Force - 99