INCH-POUND

MIL-PRF-18546/2C
w/ Amendment 2
24 June 2015
SUPERSEDING
MIL-PRF-18546/2C
w/ Amendment 1
20 October 2010

PERFORMANCE SPECIFICATION

RESISTOR, FIXED, WIREWOUND (POWER TYPE, CHASSIS MOUNTED), STYLES RE77 AND RE80

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

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-PRF-18546.

1. SCOPE

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

* 1.2 Part or Identifying Number (PIN). Resistors covered by this specification are identified by a PIN which consists of the style designation, characteristic, and resistance. The PIN is derived in accordance with MIL-PRF-18546 and is in the following form:

RE77	G	1001
Style	Characteristic	Resistance

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.

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 emailed to 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.

AMSC N/A FSC 5905

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.

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-PRF-18546 - Resistor, Fixed, Wirewound (Power Type, Chassis Mounted), GSF.

DEPARTMENT OF DEFENSE SPECIFICATIONS

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

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

* 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. 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.

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.

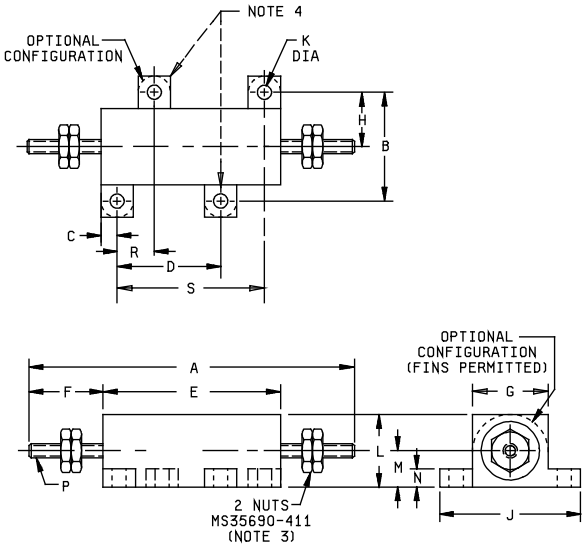
TABLE IV. Direct pull.

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.



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.

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.

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 activities within the Military Service or Defense Agency, or within the military service's 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

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:

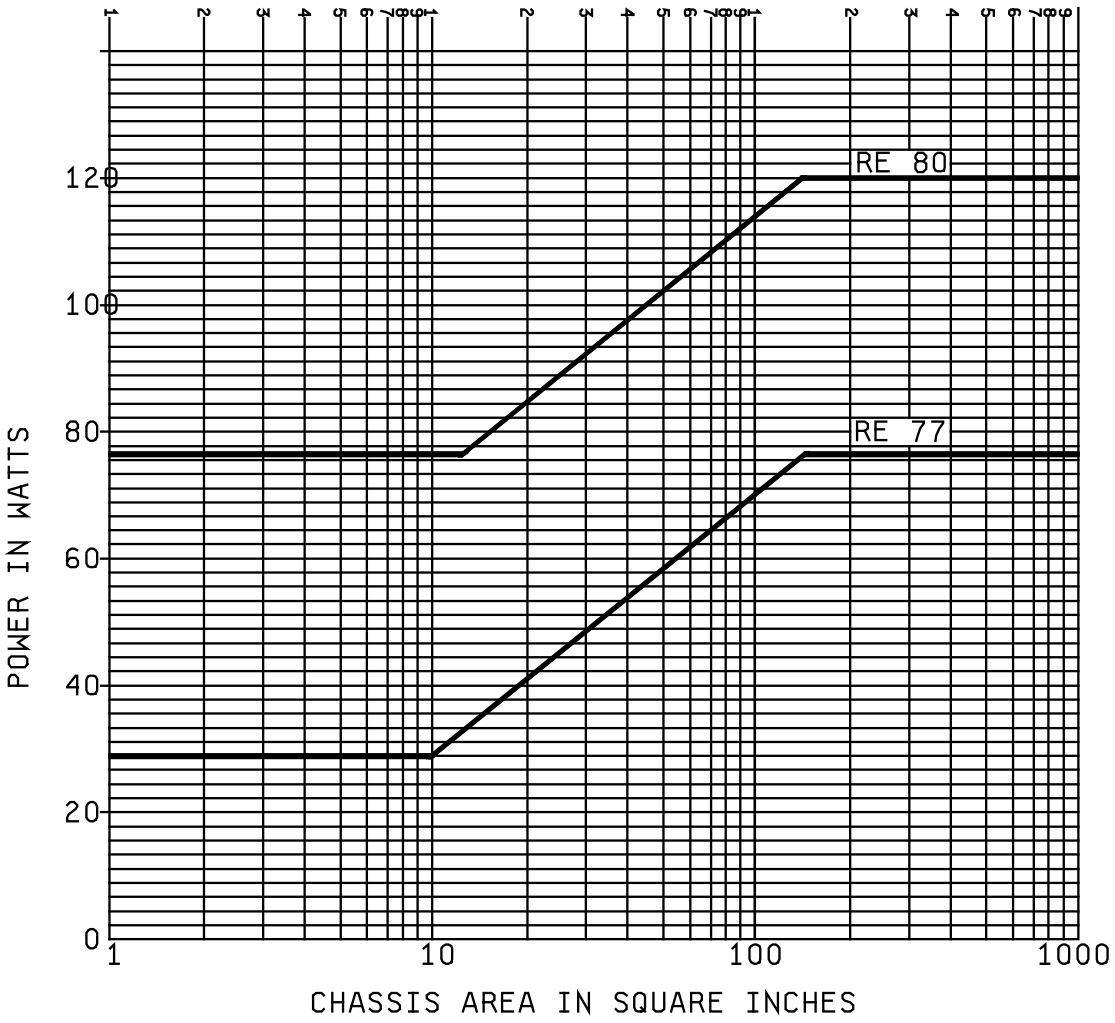
a. Title, number, and date of this specification and the complete PIN (see 1.2).

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 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.



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.

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

6.6 Amendment notations. The margins of this specification are marked with asterisks to indicate modifications 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.

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

Preparing activity:
DLA-CC

(Project 5905-2015-028)

Review activities:
Army - AR, MI
Navy – AS, MC
Air Force - 99

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