INCH-POUND
MIL-PRF-55342/2K
30 December 2024
SUPERSEDING
MIL-PRF-55342/2J
w/ Amendment 5
17 March 2020

PERFORMANCE SPECIFICATION SHEET

RESISTOR, CHIP, FIXED, FILM, NONESTABLISHED RELIABILITY, ESTABLISHED RELIABILITY, SPACE LEVEL, STYLE RM0505

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-55342.

1. SCOPE

1.1 Scope. This specification covers the requirements for style RM0505, fixed, film, chip, nonestablished reliability, established reliability, and space level resistors. This style is available in characteristic E, characteristic H, characteristic K, characteristic L, characteristic M and characteristic Z, resistance tolerances 0.1 percent, 0.25 percent, 0.5 percent, 1 percent, 2 percent, 5 percent, and 10 percent, and all termination materials. Designers are CAUTIONED on using these resistors in high power pulses applications (see 6.5).

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

M55342H02	B1E00M
Performance specification number	Coded dash number

The coded dash number is derived in accordance with MIL-PRF-55342.

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.

Comments, suggestions, or questions on this document should be emailed 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.

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2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks forms 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 SPECIFICATION

MIL-PRF-55342 - Resistor, Chip, Fixed, Film, Nonestablished Reliability, Established Reliability, Space Level, General Specification for.

(Copies of these documents are available online at https://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. REQUIREMENTS

3.1 General. The requirements for acquiring the product described herein shall consist of this document and MIL-PRF-55342.

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

3.3 Power rating. The power rating for all characteristics shall be 125 milliwatts.

3.4 Voltage rating. The maximum continuous working voltage shall not exceed 40 volts.

3.5 Resistance and resistance tolerance. Minimum and maximum resistance values and associated resistance tolerances shall be as listed in table I.

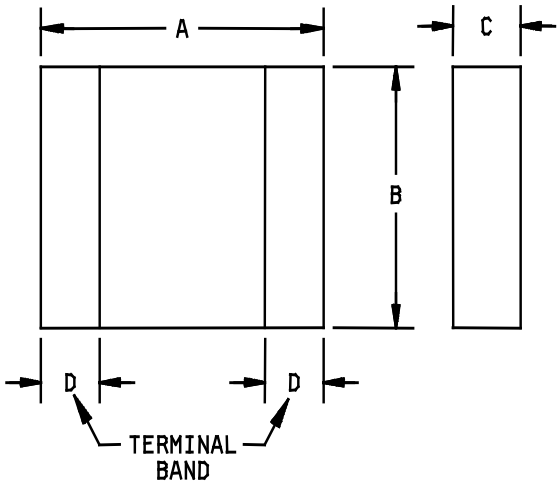
TABLE I. Minimum and maximum resistance values.

Resistance tolerance	Minimum resistance	Maximum resistance
Percent (±) 0.1 0.25 0.5	1.0 ohm	22.0 megohms
1.0	0.1 ohm	22.0 megohms
2.0 5.0 10.0	0.049 ohm	22.0 megohms

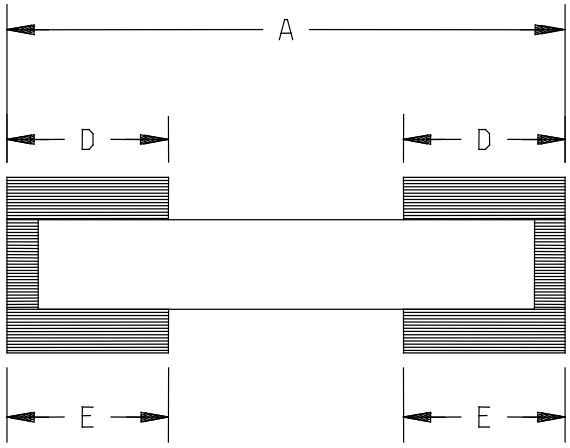
3.6 Termination material. Termination material for resistance values less 1 ohm shall be in accordance with MIL-PRF-55342, code letter B.

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Configuration A



Configuration B



Inches	mm	Inches	mm
0.005	0.13	0.015	0.38
0.006	0.15	0.030	0.76
0.007	0.18	0.033	0.84
0.010	0.25	0.050	1.27
		0.055	1.40

Configuration	Dimension A inch	Dimension B inch	Dimension C inch	Dimension D inch	Dimension E inch
A	0.050 ±0.005	0.050 ±0.005	0.010/0.030	0.010 ±0.005	N/A
B	0.055 ±0.006	0.050 ±0.005	0.010/0.033	0.010 ±0.005	0.015 ±0.005

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ±0.005 (0.13 mm).
4. The pictorial view of the styles 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.
5. Configuration A covers termination materials D, T, and W.
6. Configuration B covers termination materials B, C, G, and U.

FIGURE 1. Style RM0505.

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4. VERIFICATION

4.1 Verification. Verification shall be in accordance with MIL-PRF-55342.

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 Intended use. Chip resistors are intended to be used in thin or thick film hybrid circuits where micro-circuitry is indicated and in surface mount applications.

6.2 Acquisition requirements. Acquisition documents should specify the following:

a. Title, number, date of this specification, the applicable associated 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). (i.e. Electrostatic discharge (ESD) sensitive packaging).

d. Allowable substitution (see MIL-PRF-55342).

e. If marking is required (see MIL-PRF-55342).

6.3 Tolerance for wraparound termination. The added tolerance for the wraparound type termination is intended to apply only to termination, metallization, and pretinning material.

6.4 Electrostatic charge effects. Under relatively low humidity conditions, some types of film resistors, particularly those with small dimensions and high sheet resistivity materials, are prone to sudden significant changes in resistance (usually reductions in value) and to changes in temperature coefficient of resistance as a result of discharge of static charges built up on associated objects during handling, packaging, or shipping. Substitution of more suitable implements and materials can help minimize this problem. For example, use of cotton gloves, static eliminator devices, air humidifiers, and operator and workbench grounding systems can reduce static buildup during handling. Means of alleviating static problems during shipment include elimination of loose packaging of resistors and use of metal foil (conductive) and static dissipation packaging materials. Direct shipments to the government are controlled by MIL-DTL-39032 which specifies a preventive packaging procedure.

6.5 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. These resistors only see a five second short time overload as part of the group B inspection of this specification.

6.6 Changes from previous issue. 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 previous issue.

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