

[INCH-POUND]
A-A-55534C
7 July 2023
SUPERSEDING
A-A-55534B
28 June 2018

COMMERCIAL ITEM DESCRIPTION

RESISTOR, FIXED, POWER TYPE (VERY LOW RESISTANCE VALUES), GENERAL REQUIREMENTS FOR

The General Services Administration has authorized the use of this commercial item description (CID) for all federal agencies.

1. **SCOPE.** This commercial item description (CID) covers the general requirements for power type, low value (0.9 ohms and below), fixed resistors, wirewound, nonwirewound, or metal element, both leaded and nonleaded devices. These resistors have a +25°C ambient operating temperature derated to zero load at +175°C or +275°C as applicable (see 3.1). Requirements for specific resistors are covered in the individual CID specification sheets. The resistors covered by this CID are intended for commercial/industrial applications.

2. **CLASSIFICATION/PIN OR IDENTIFICATION NUMBER (PIN).** This CID uses a classification system which is included in the PIN as shown in the following example (see 7.1).

AA55534/01-R010FB

AA55534 - Abbreviated CID number
/01- - Applicable CID sheet (two digits)
R010 - Resistance value (see 3.3)
F - Resistance tolerance (see 3.4)
B - Termination finish (see 3.5)

NOTE: This PIN supersedes the PIN from previous revision and includes provisions for termination finish (see 3.5 and 7.5)

3. SALIENT CHARACTERISTICS

3.1 Interface and physical dimensions. The resistors supplied to this CID shall be as specified on the applicable CID specification sheet.

3.2 CID specification sheet. The family of resistors shall be in accordance with the requirements specified herein and the applicable CID specification sheet. In the event of a conflict between this general CID and the applicable CID specification sheet, the latter shall govern.

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

AMSC N/A
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FSC 5905



3.3 Resistance. The nominal resistance is expressed in ohms and is identified by three digits and the letter "R". The letter "R" is used to represent the decimal point. The resistance value designations are shown in table I. It is recommended that the standard resistance values listed in table II are to be used except that the "H" tolerance ($\pm 3\%$) shall follow the standard values for "J" tolerance ($\pm 5\%$). Where it is not feasible to use the standard values any value shall be acceptable.

TABLE I. Designation of resistance values.

Designation				Resistance (ohms)			
R005	to	R009	inclusive	0.005	to	0.009	inclusive
R010	to	R090	inclusive	0.010	to	0.090	inclusive
R100	to	R900	inclusive	0.100	to	0.900	inclusive

TABLE II. Standard resistance values for the 10 to 100 decade.

(F)	(H) (J)	(F)	(H) (J)	(F)	(H) (J)	(F)	(H) (J)
1.00	1.00	1.82				5.62	
1.02		1.87		3.32		5.76	
1.05		1.91		3.40		5.90	
1.07		1.96		3.48		6.04	
1.10	1.10	2.00	2.00	3.57		6.19	
1.13		2.05			3.60		6.20
1.15		2.10		3.65		6.34	
1.18		2.15		3.74		6.49	
	1.20		2.20	3.83		6.65	
1.21		2.21			3.90		6.80
1.24		2.26		3.92		6.81	
1.27		2.32		4.02		6.98	
1.30	1.30	2.37		4.12		7.15	
1.33			2.40	4.22		7.32	
1.37		2.43			4.30	7.50	7.50
1.40		2.49		4.32		7.68	
1.43		2.55		4.42		7.87	
1.47		2.61		4.53		8.06	
1.50	1.50	2.67		4.64			8.20
1.54			2.70		4.70	8.25	
1.58		2.74		4.75		8.45	
	1.60	2.80		4.87		8.66	
1.62		2.87		4.99		8.87	
1.65		2.94			5.10	9.09	
1.69			3.00	5.11			9.10
1.74		3.01		5.23		9.31	
1.78		3.09		5.36		9.53	
	1.80	3.16		5.49		9.76	
		3.24			5.60		
			3.30				

3.4 Resistance value. The resistance value shall be as specified on the applicable CID sheet.

3.5 Resistance tolerance. The resistance tolerance is identified by a single letter in accordance with table III and shall be as specified on the applicable CID sheet.

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TABLE III. Resistance tolerance.

Symbol	Resistance tolerance Percent ($\pm$)
F	1.0
H	3.0
J	5.0

3.6 Termination finish. The termination finish shall be identified by a single B for tin/lead (Sn/Pb) (3 percent lead minimum) or T (Sn) (100 percent tin).

3.6.1 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.

3.7 Marking. Resistors supplied to this CID shall be marked with the manufacturer's (MFR's) standard commercial PIN. Marking of individual small devices (e.g. chips) is not required but is permitted. (NOTE: The part number marked on the unit pack shall be the CID PIN).

3.8 Recycled, recovered, environmentally preferable, or biobased materials. Recycled, recovered, environmentally preferable, or biobased materials should be used to the maximum extent possible provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

3.9 Workmanship. Resistors shall be processed in such a manner as to be uniform in quality and shall be free from other defects that will affect life, serviceability, or appearance.

4. **REGULATORY REQUIREMENTS.** The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with [23.403](#) of the [Federal Acquisition Regulation](#) (FAR).

5. **PRODUCT CONFORMANCE PROVISIONS**

5.1 Product conformance. The products provided shall meet the salient characteristics of this CID, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial market. The Government reserves the right to require proof of such conformance.

6. **PACKAGING.** Preservation, packing, and marking shall be as specified in the contract or order.

7. **NOTES**

7.1 PIN. The PIN should be used for Government purposes to buy commercial products to this CID. See section 2 for PIN format example.

7.2 Commercial and Government Entity (CAGE) code. For ordering purposes, inventory control, and submission of these resistors to DLA Land and Maritime under the Parts Management Advisor Team (PMAT) evaluation program, CAGE code 58536 should be used.

7.3 Source of documents.

FEDERAL REGULATIONS

FAR

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Federal Acquisition Regulations (FAR)

(Copies of these documents are available online at <https://www.acquisition.gov/far/> or from the U.S. Government Printing Office, 732 North Capital Street, NW, Washington D.C. 20401-0001.)

7.4 Ordering data. The contract or order should specify the following:

- a. CID document number, revision, and CID PIN.
- b. Product conformance provisions.
- c. Packaging requirements.

7.5 PIN supersession. PIN's from the original A-A-55534 have been superseded; the new PIN in revision A includes a characteristic code for termination finish. Table IV illustrates the original PIN and the revised PIN.

TABLE IV. PIN supersession.

Original version	New revision A
AA55534*****	AA55534/**-*****B

7.6 Government users. To acquire information on obtaining these resistors from the Government inventory system, contact DLA Land and Maritime, ATTN: CPBC, PO Box 3990, Columbus, OH 43218-3990, or telephone (614) 692-2271.

7.7 Changes from previous issue. The margins of this CID are marked with a vertical line 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 last previous issue.

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MILITARY INTERESTS:

Custodian
Navy - EC
DLA - CC

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FAS

Preparing Activity:

DLA - CC

Project 5905-2023-017

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>.