INCH-POUND
MIL-STD-202-303
18 April 2015

SUPERSEDING
MIL-STD-202G
w/CHANGE 2 (IN PART)
28 June 2013
(see 6.1)

DEPARTMENT OF DEFENSE

TEST METHOD STANDARD

METHOD 303, DC RESISTANCE

AMSC N/A

FSC 59GP

FOREWORD

1. This standard is approved for use by all Departments and Agencies of the Department of Defense.

2. This entire standard has been revised. This revision has resulted in many changes to the format, but the most significant one is the splitting the document into test methods. See MIL-STD-202 for the change summary.

3. Comments, suggestions, or questions on this document should be emailed to std202@dla.mil or addressed to: Commander, Defense Logistics Agency, DLA Land and Maritime, ATTN: VAT, P.O. Box 3990, Columbus, OH 43218–3990. 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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METHOD 303
DC RESISTANCE

1. SCOPE

1.1 Purpose. The purpose of this test is to measure the direct-current (dc) resistance of resistors, electromagnetic windings of components, and conductors. It is not intended that this test apply to the measurement of contact resistance.

2. APPLICABLE DOCUMENTS

This section not applicable to this standard.

3. DEFINTIONS

This section not applicable to this standard.

4. GENERAL REQUIREMENTS

4.1. Procedure. DC resistance shall be measured with a resistance bridge or other suitable test equipment. The limit of error in the bridge or other test equipment shall not exceed one-tenth of the specified tolerance on the measured resistance (for example, the limit of error in the bridge or other test equipment shall not exceed $\pm$ 0.5 percent if the specified tolerance on the measured resistance is $\pm$ 5 percent), unless otherwise specified. For inplant quality conformance testing, the accuracy of the measurement shall be such to insure that the resistance value is within the required tolerance. If a plus or minus tolerance is not specified, the limit of error in the bridge or other test equipment shall not exceed $\pm$ 2 percent. The test current through the specimen shall be as small as practical considering the sensitivity of the indicating instruments, unless the test current or voltage is specified. When it is important that the temperature of the specimen shall not rise appreciably during the measurement, the test voltage shall be applied uninterruptedly for as short a time as practicable, but in no case for more than 5 seconds, unless otherwise specified. Unless otherwise specified, the measurement shall be made at a temperature of 25°C $\pm$ 5°C. In the case of measurement dispute, dc resistance measurements shall be made at or corrected to 25°C**.**

5. DETAILED REQUIREMENTS

5.1 Summary. The following details are to be specified in the individual specification:

a. Limit of error of measuring apparatus, if other than one-tenth of specified tolerance (see 4.1).

b. Test voltage or current, if applicable (see 4.1).

c. Maximum period of uninterrupted test-voltage application, if other than 5 seconds (see 4.1).

d. Test temperature, if other than that specified (see 4.1).

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Supersession data. The main body and 38 parts of this revision of MIL-STD-202 replace superseded MIL-STD-202.

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

Preparing activity:
DLA – CC

(Project 59GP-2015-033)

Review activities:
Army - AR, AT, AV, CR4, MI, SM, TE
Navy - AS, OS, SH
Air Force - 19, 99
NSA - NS

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