

INCH-POUND

MIL-STD-202-212

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 212, ACCELERATION**



AMSC N/A

FSC 59GP



MIL-STD-202-212

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](mailto: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>.

MIL-STD-202-212

CONTENTS

<u>PARAGRAPH</u>		<u>PAGE</u>
	<u>FOREWORD</u> .....	ii
1.	<u>SCOPE</u>	1
1.1	<u>Purpose</u> .....	1
2.	<u>APPLICABLE DOCUMENTS</u>	1
3.	<u>DEFINITIONS</u>	1
4.	<u>GENERAL REQUIREMENTS</u>	1
4.1	<u>Apparatus</u> .....	1
4.2	<u>Mounting accessories</u> .....	1
4.3	<u>Procedure</u> .....	1
4.3.1	<u>Test condition A</u> .....	1
4.3.1	<u>Test condition B</u> .....	1
4.3.1	<u>Test condition C</u> .....	1
4.4	<u>Measurements</u> .....	1
5.	<u>DETAILED REQUIREMENTS</u>	2
5.1	<u>Summary</u> .....	2
6.	<u>NOTES</u>	2
6.1	<u>Supersession data</u> .....	2

MIL-STD-202-212

METHOD 212  
ACCELERATION

1. SCOPE

1.1 Purpose. This test is performed for the purpose of determining the effects of acceleration stress on component parts, and to verify the ability of the component parts to operate properly during exposure to acceleration stress such as would be experienced in aircraft, missiles, etc.

2. APPLICABLE DOCUMENTS

This section not applicable to this standard.

3. DEFINITIONS

This section not applicable to this standard.

4. GENERAL REQUIREMENTS

4.1. Apparatus. Unless otherwise specified, the acceleration test apparatus shall be the centrifuge-type and shall be capable of subjecting the test specimen to the value of acceleration (g's) as specified in 3. The acceleration gradient across the specimen shall not exceed 15 percent of the specified g level.

4.2 Mounting accessories. Provisions shall be made to permit mounting by the normal means so that the specimen can be tested in both directions, 180 degrees apart, of each of three mutually perpendicular axes, unless otherwise specified. Parts with axial terminations weighing less than 0.5 ounce shall be soldered to stand-off terminals, leaving a distance of 0.2 inch to 0.3 inch from the point of emergence to the terminals. Parts weighing 0.5 ounce and more shall be clamped so as to avoid any stress on the leads. Parts having radial leads and those of unusual mass distribution shall be mounted as specified in the individual specification. If loading, actuating, or polarizing currents are required, they shall be specified. Provisions shall be made for all electrical connections to be secure.

4.3. Procedure. The specimen under test shall be mounted in a rigid position as specified in 4.2 and shall be subjected to one of the following test conditions, as specified in the individual specification.

4.3.1 Test condition A. The specimen shall be subjected to 5 minutes acceleration of the specified "g" level in both directions of each of three mutually perpendicular axes for a total of 30 minutes at either 20, 50, or 100g level. The acceleration measured at any point of the component part shall not exceed 15 percent of the "g" level.

4.3.2 Test condition B. The specimen shall be subjected for 1 minute at nominally 10,000 or 20,000g in the direction as specified in the individual specification. The rate of acceleration shall be increased smoothly from zero to the specified value in not less than 20 seconds. The rate of acceleration shall be decreased smoothly to zero in not less than 20 seconds.

4.3.3 Test condition C. The specimen shall be subjected to the value of acceleration specified in the individual specification for 10 minutes in both directions of each of three mutually perpendicular axes. The acceleration shall be increased smoothly from zero to the specified value in approximately 2 minutes. The acceleration shall be decreased smoothly to zero in not less than 2 minutes.

4.4 Measurements. The measurements made before, during, or after the test shall be as specified.

## 5. DETAILED REQUIREMENTS

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

- a. Mounting of specimens (see 4.2).
- b. Electrical loading if applicable (see 4.2).
- c. Test condition letter (see 4.3).
- d. If test condition A is specified, the value of g (see 4.3.1).
- e. If test condition B is specified, the directions of application of acceleration and value of g (see 4.3.2).
- f. If test condition C is specified, the value of acceleration (see 4.3.3).
- g. Measurements (see 4.4).

## 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-2015-026)

### Review activities:

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

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/>