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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 28046.3-2011

**Road vehicles -- Environmental conditions and testing for
electrical and electronic equipment -- Part 3: Mechanical loads
(English Translation)**

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Foreword

GB/T 28046 Road vehicles -Environmental conditions and testing for electrical and electronic equipment consists of five parts.

- Part 1.General;
- Part 2.Electrical loads;
- Part 3.Mechanical loads;
- Part 4.Climatic loads;
- Part 5.Chemical loads.

This is Part 3 of GB/T 28046.

This Part is drafted in accordance with the rules given in GB/T 1.1-2009.

This Part modifies and adopts, according to redrafting method, ISO 16750-3.2007 Road vehicles - Environmental conditions and testing for electrical and electronic equipment - Part 3.Mechanical loads.

Technical differences and reasons between this Part and ISO 16750-3.2007 are as

follows [Translator note. Key differences are highlighted in RED].

- Delete the description on Clause 6 in the previous standard as it has no guiding significance;
- In order to unify the context and comprehension, add "The test and requirements shall be negotiated by supplier and purchaser" into Sub-clause 4.5;
- The Figure 1 - 40 and Table 1 - 40 are apparent errors in the previous standard. In order to maintain mutual corresponding and coordinating of serial standards, delete Figure 1 - 40 and replace the Table 1 - 40 by T_{min}. Meanwhile, add footnote into Table 1 for T_{min}, see GB/T 28046.4;
- Test standard is not given in 4.1.2.9.2 test of previous standard. According to other test method, add the test that adopts GB/T 2423.10 to conduct test.

Compared with ISO 16750-3:2007, the editorial changes of this Part are as follows.

- Delete the foreword of the international standard.

This Part was proposed by National Development and Reform Commission (NDRC).

This Part shall be under the jurisdiction of National Technical Committee (SAC/TC 114) on Road Vehicles of Standardization Administration of China.

1 Scope

This Part describes the potential mechanical environmental stresses, and specifies tests and requirements recommended for the specific mounting location on/in the road vehicle.

2 Normative References

The articles contained in the following documents have become part of this Part when they are quoted herein. For the dated documents so quoted, all the modifications (including all corrections) or revisions made thereafter shall be applicable to this Part.

GB/T 2423.6 Environmental testing for electric and electronic products - Part 2. Test methods - Test Eb and guidance. Bump (GB/T 2423.6-1995, IEC 60068-2-29:1987, IDT)

GB/T 2423.8 Environmental testing for electric and electronic products - Part 2. Test methods Test Ed. Free fall (GB/T 2423.8-1995, IEC 60068-2-32:1995, IDT)

GB/T 2423.10 Environmental testing for electric and electronic products - Part 2.

Tests methods - Test Fc. Vibration (sinusoidal) (GB/T 2423.10-2008, IEC

60068-2-6.1995, IDT)

GB/T 2423.56 Environmental testing for electric and electronic products - Part 2. Test

methods - Test Fh. Vibration, broad-band random(digital control) and guidance (GB/T

2423.56-2006, IEC 60068-2-64.1993, IDT)

GB/T 2423.58 Environmental testing for electric and electronic products - Part 2.

Tests -Test Fi. Vibration - Mixed Mode (GB/T 2423.58-2008, IEC 60068-2-80.2005,

IDT)

GB/T 28046.1 Road vehicles - Environmental conditions and testing for electrical and electronic equipment - Part 1. General (GB/T 28046.1-2011, ISO 16750-1.2006, MOD)

GB/T 28046.4 Road vehicles - Environmental conditions and testing for electrical and electronic equipment - Part 4. Climatic loads (GB/T 28046.4-2011, ISO 16750-4.2006, MOD)

3 Terms and definitions

For the purposes of this document, the terms and definitions given in GB/T 28046.1 apply.

4 Tests and requirements

The vibration test methods specified consider various levels of vibration severities applicable to on-board electrical and electronic equipment.

Mechanical shock checks the DUT for malfunctions and breakage caused by shock of door slamming.

Free fall checks the DUT for malfunctions and breakage caused by free fall.

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