INTERNATIONAL STANDARD

ISO 11452-10

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Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy —

Part 10: Immunity to conducted disturbances in the extended audio frequency range

Véhicules routiers — Méthodes d'essai d'un équipement soumis à des perturbations électriques par rayonnement d'énergie électromagnétique en bande étroite —

Partie 10: Immunité aux perturbations conduites dans la bande des audiofréquences étendues

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 11452-10 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*.

ISO 11452 consists of the following parts, under the general title *Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy*:

— *Part 1: General principles and terminology*

— *Part 2: Absorber-lined shielded enclosure*

— *Part 3: Transverse electromagnetic mode (TEM) cell*

— *Part 4: Bulk current injection (BCI)*

— *Part 5: Stripline*

— *Part 7: Direct radio frequency (RF) power injection*

— *Part 8: Immunity to magnetic fields*

— *Part 10: Immunity to conducted disturbances in the extended audio frequency range*

— *Part 11: Radiated immunity test method using a reverberation chamber*

The following parts are under preparation:

— *Part 9: Portable transmitters*

Introduction

Immunity measurements of complete road vehicles can generally only be carried out by the vehicle manufacturer, owing to, for example, high costs of absorber-lined shielded enclosures, the desire to preserve the secrecy of prototypes or a large number of different vehicle models.

For research, development and quality control, a laboratory measuring method can be used by both vehicle manufacturers and equipment suppliers to test electronic components.

ISO 11452-1 specifies general test conditions, definitions, practical use and basic principles of the test procedure.

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy —

Part 10: Immunity to conducted disturbances in the extended audio frequency range

1 Scope

This part of ISO 11452 specifies a conducted voltage test method and procedure for determining the immunity of electronic components of passenger cars and commercial vehicles, regardless of the propulsion system (e.g. spark-ignition engine, diesel engine, electric motor). The method is applied to each individual device under test (DUT) lead and is applicable to all power and output leads, as well as low frequency analogue leads. The method is particularly useful in evaluating DUTs with acoustic or visible display functions.

The disturbances considered in this part of ISO 11452 are limited to continuous narrowband electric voltage waveforms.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 11452-1, *Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 1: General principles and terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 11452-1 apply.

4 Test conditions

The applicable frequency range of the test method is 15 Hz to 250 kHz.

The user of this part of ISO 11452 shall specify the test severity level or levels over the frequency bands. Typical test levels are given for information purposes in Annex A.

Standard test conditions are given in ISO 11452-1 for the following:

— test temperature;

— supply voltage;