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Road Vehicles — Disturbances Test Methods for Electrical/Electronic Component from Electrostatic Discharge

道路车辆 电气/电子部件对静电放电抗扰性的试验方法

[ISO 10605:2008, Road vehicles- Test methods for electrical disturbances from electrostatic discharge, MOD]

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Road Vehicles — Disturbances Test Methods for Electrical/Electronic Component from Electrostatic Discharge

1 SCOPE

This Standard specifies the test methods for determining the immunity of vehicle electrical/ electronic components (ESA) to the electrostatic discharge (ESD) which is liable to occur during the assembly/maintenance process and caused by driver and passenger inside and outside, including the tests for components and complete vehicles.

This Standard is applicable to the electrical/electronic components for Categories M, N, O and L vehicles, regardless of the vehicle propulsion system, e.g. spark-ignition engine, diesel engine and electric motor.

2 NORMATIVE REFERENCES

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

GB/T 29259-2012 Road vehicle - Electromagnetic compatibility terminology

3 TERMS AND DEFINITIONS

For the purpose of this document, the terms and definitions established in GB/T 29259-2012 and the followings apply.

3.1 Device under test (DUT)

“Device under test” means a single electrical/electronic component or combination of components to be tested.

3.2 Air discharge

“Air discharge” means a test method characterized by bringing the charging electrode of test generator close to the DUT, where the discharge is by arcing on the DUT.

3.3 Contact discharge

“Contact discharge” means a test method characterized by contact of the test generator electrode with the DUT, where the discharge is initiated by the generator discharge switch.

3.4 Direct discharge

“Direct discharge” means a test method which discharges directly on the DUT.

3.5 Indirect discharge

“Indirect discharge” means a test method which discharges on a coupling plane near the DUT. Generally, indirect discharge is used to simulate discharge by a human being on objects adjacent to the DUT.

3.6 Surface

“Surface” means the uninterrupted housing, gap or opening of the DUT, e.g., tip switches, points of contact, air vents and speaker openings.

3.7 Holding time

“Holding time” means the interval of time within which the decrease of the test voltage due to leakage, prior to the discharge, is 10%.

3.8 Horizontal coupling plane (HCP)

“Horizontal coupling plane” means the metal plane oriented in horizontal direction and used to simulate discharge to objects adjacent to the DUT.

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