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**NATIONAL STANDARD OF THE
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GB/T 46894-2025

**General specification for the EMC testing of vehicle integrated
circuits**

车辆集成电路电磁兼容试验通用规范

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

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1 Scope

GB/T 46894-2025 is the Chinese national standard covering the electromagnetic compatibility of a chip destined for a car - its emissions and its immunity measured at component level, because finding the problem in the vehicle at the end of development costs a redesign. First edition. It was issued on 31 December 2025 and has been in force since 1 July 2026, as a first edition. The document is under the responsibility of the Ministry of Industry and Information Technology. This page is published from the official record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the general testing requirements for electromagnetic compatibility (EMC) of vehicle integrated circuits (ICs) and describes the corresponding testing methods. This document applies to radio frequency (RF) transmission and RF immunity in the 150kHz~6GHz frequency range of vehicle ICs, as well as pulse immunity. Degree and

system-level electrostatic discharge (ESD) immunity. This document provides a general specification. Specific IC testing items and levels should refer to the relevant product standards, or be agreed upon by the IC user and manufacturer. The agreement is finalized.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 19951-2019 Test methods for the immunity of electrical/electronic components of road vehicles to electrostatic discharge

GB/T 42968.1 Measurement of electromagnetic immunity of integrated circuits - Part

3.1 Terms and Definitions The terms and definitions defined in GB/T 42968.1 and

GB/T 44937.1, as well as the following terms and definitions, apply to this document.

3.1.1 pin The interface between the IC and its circuit environment.

3.1.2 globalpin The pin that enters or leaves the circuit board containing the signal or power supply; there are no active devices between this pin and the circuit board. [Source:

GB/T 44806.1-2024, 3.1.1]

4 Direct injection of radio frequency power

GB/T 42968.8-2023 Measurement of electromagnetic immunity of integrated circuits-Part

8 Measurement of radiated immunity-IC stripline method

GB/T 43034.3-2023 Measurement of Pulse Immunity of Integrated Circuits - Part