



SURFACE VEHICLE STANDARD

J1113™-1

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Superseding J1113-1 OCT2018

Electromagnetic Compatibility Measurement Procedures and Limits
for Components of Vehicles, Boats (up to 15 m), and Machines (Except Aircraft)
(16.6 Hz to 18 GHz)

RATIONALE

Document revised to reflect changes to other SAE Standards within the SAE J1113 series.

FOREWORD

This SAE Standard brings together methodology for testing the electromagnetic emissions and immunity characteristics of vehicular modules and components. The writers of this series of documents have participated extensively in the drafting of ISO TC 22 Subcommittee 3 and CISPR Subcommittee D documents.

By intent, the methods and limits of this document closely resemble the counterpart international standards.

- SAE J1113-1 General and Definitions
- SAE J1113-2 [Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from ISO 11452-10.]
- SAE J1113-3 [Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from ISO 11452-7.]
- SAE J1113-4 Conducted Immunity-Bulk Current Injection (BCI) Method
- SAE J1113-5 through -10 reserved for future use
- SAE J1113-11 Immunity to Conducted Transients on Power Leads
- SAE J1113-12 Electrical Interference by Conduction and Coupling - Coupling Clamp
- SAE J1113-13 Immunity to Electrostatic Discharge
- SAE J1113-14 through -20 reserved for future use
- SAE J1113-21 Road Vehicles - Electrical Disturbances by Narrowband Radiated Electromagnetic Energy - Component Test Method - Absorber Lined Chamber [Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from ISO 11452-2.]

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For more information on this standard, visit
https://www.sae.org/standards/content/J1113/1_202304/

SAE J1113-22	[Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from ISO 11452-8.]
SAE J1113-23	Withdrawn
SAE J1113-24	[Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from ISO 11452-3.]
SAE J1113-25	Withdrawn
SAE J1113-26	Immunity to AC Power Line Electric Fields
SAE J1113-27	Immunity to Radiated Electromagnetic Fields - Mode Stir Reverberation Method
SAE J1113-28	[Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from ISO 11452-11.]
SAE J1113-29 through -40	reserved for future use
SAE J1113-41	[Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from IEC CISPR 25.]
SAE J1113-42	[Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from the emissions portion of ISO 7637-2.]

1. SCOPE

This SAE Standard covers the measurement of voltage transient immunity and within the applicable frequency ranges, audio (AF) and radio frequency (RF) immunity, and conducted and radiated emissions.

By reference, ISO 11452-3, ISO 11452-7, ISO 11452-8, ISO 11452-10, ISO 11452-11, ISO 11452-2, and the emissions portion of ISO 7637-2 are adopted in place of SAE J1113-24, SAE J1113-3, SAE J1113-22, SAE J1113-2, SAE J1113-28, SAE J1113-21, and SAE J1113-42, respectively. In the event that an amendment is made, or a new edition is published, the new ISO document shall become part of this standard 6 months after the publication of the ISO document. SAE reserves the right to identify exceptions to the published ISO document with the exceptions to be documented in SAE J1113-24, SAE J1113-3, SAE J1113-22, SAE J1113-2, SAE J1113-28, SAE J1113-21, and SAE J1113-42, respectively.

By reference, IEC CISPR 25 is adopted as the standard for the measurement of component emissions. In the event that an amendment is made, or a new edition is published, the new IEC document shall become part of this standard 6 months after the publication of the IEC document. SAE reserves the right to identify exceptions to the published IEC document with the exceptions to be documented in SAE J1113-41.

Emissions from intentional radiators are not controlled by this document. (See applicable appropriate regulatory documents.) The immunity of commercial mains powered equipment to over voltages and line transients is not covered by this document.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org

SAE J1113-2	[Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from ISO 11452-10.]
SAE J1113-3	[Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from ISO 11452-4.]
SAE J1113-4	Immunity to Radiated Electromagnetic Fields - Bulk Current Injection (BCI) Method
SAE J1113-11	Immunity to Conducted Transients on Power Leads
SAE J1113-12	Electrical Interference by Conduction and Coupling - Capacitive and Inductive Coupling via Lines Other than Supply Lines
SAE J1113-13	Electromagnetic Compatibility Measurement Procedure for Vehicle Components - Part 13: Immunity to Electrostatic Discharge
SAE J1113-21	Electromagnetic Compatibility Measurement Procedure for Vehicle Components - Part 21: Immunity to Electromagnetic Fields, 30 MHz to 18 GHz, Absorber-Lined Chamber [Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from ISO 11452-2.]
SAE J1113-22	[Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from ISO 11452-8.]
SAE J1113-24	[Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from ISO 11452-3.]
SAE J1113-26	Electromagnetic Compatibility Measurement Procedure for Vehicle Components - Immunity to AC Power Line Electric Fields
SAE J1113-27	Electromagnetic Compatibility Measurements Procedure for Vehicle Components - Part 27 - Immunity to Radiated Electromagnetic Fields - Reverberation Method
SAE J1113-28	[Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from ISO 11452-11.]
SAE J1113-41	[Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from IEC CISPR 25.]
SAE J1113-42	[Withdrawn as a complete standard. Reserved for use as an exception document for SAE differences from the emissions portion of ISO 7637-2.]
SAE J1812	Function Performance Status Classification for EMC Immunity Testing