

# ISO 21498-2:2021 (E)

## Electrically propelled road vehicles — Electrical specifications and tests for voltage class B systems and components — Part 2: Electrical tests for components

---

### Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Abbreviated terms
5	General assumptions for voltage class B components
6	Tests and requirements
6.1	Test parameters and general test requirements
6.1.1	Purpose
6.1.2	Test setup
6.1.3	Voltages
6.1.4	Powers
6.1.5	Temperatures
6.1.6	Times and durations
6.1.7	Standard tolerances
6.1.8	Ambient conditions
6.1.9	Wiring harness
6.1.10	Load conditions
6.1.11	Sampling rates and measured value resolutions
6.1.12	Parameter monitoring
6.1.13	Interface description
6.1.14	Documentation
6.2	DC supply voltage variation within operational range
6.2.1	Purpose
6.2.2	Test setup
6.2.3	Test procedure
6.2.4	Requirements
6.3	Generated voltage slope
6.3.1	Purpose
6.3.2	Test setup
6.3.3	Test procedure
6.3.4	Requirements
6.4	Immunity to voltage slope
6.4.1	Purpose
6.4.2	Test setup
6.4.3	Test procedure
6.4.4	Requirements
6.5	Generated voltage ripple
6.5.1	Purpose
6.5.2	Test setup
6.5.3	Test procedure
6.5.3.1	General
6.5.3.2	Data evaluation in time domain
6.5.3.3	Data evaluation in frequency domain

6.5.4	Requirements
6.6	Immunity to voltage ripple
6.6.1	Purpose
6.6.2	Test setup
6.6.3	Test procedure
6.6.4	Requirements
6.7	Overshoot
6.7.1	Purpose
6.7.2	Test setup
6.7.3	Test procedure
6.7.4	Requirements
6.8	Undervoltage
6.8.1	Purpose
6.8.2	Test setup
6.8.3	Test procedure
6.8.4	Requirements
6.9	Voltage offset
6.9.1	Purpose
6.9.2	Test setup
6.9.3	Test procedure
6.9.4	Requirements
6.10	Generated load dump voltage
6.10.1	Purpose
6.10.2	Test setup
6.10.3	Test procedure
6.10.4	Requirements
6.11	Immunity to load dump voltage
6.11.1	Purpose
6.11.2	Test setup
6.11.3	Test procedure
6.11.4	Requirements

**Annex A (informative) Test overview**

**Annex B (informative) Testing at different temperatures**

**Annex C (informative) Example values**

C.1	Example values for slope and ripple
C.2	Comparison of ripple amplitude for generated ripple test and immunity to ripple test
C.3	Calculation example for voltage slope during immunity to load dump (see 6.11)

**Annex D (normative) Artificial network**

D.1	Purpose
D.2	Setup of artificial network
D.3	Impedance characteristics of artificial network

**Annex E (informative) Example for the setup of generated voltage ripple measurement**

E.1	Example for method 1
E.2	Example for method 2
E.3	Example of active offset corrections for method 1 and method 2