CSA GROUP™

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National Standard of Canada

(reaffirmed 2019)

Low-Voltage Fuses — Part 13: Semiconductor Fuses

Standards Council of Canada
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Title: *Low-Voltage Fuses — Part 13: Semiconductor Fuses* — originally published August 2000

Revisions issued: Update No. 2 — November 2004
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The following revisions have been formally approved and are marked by a vertical line in the margin on the attached replacement pages:

Revised	Title page, copyright page, Contents, Preface, and Clause 1, 8.2.4, and 8.4
New	None
Deleted	Foreword (ANCE) and Foreword (UL)

CAN/CSA-C22.2 No. 248.13-00 originally consisted of **14 pages** each dated **August 2000**. It now consists of the following pages:

August 2000	10, 13, and 14
November 2004	Cover
August 2005	1–9, 11, and 12

- Update your copy by inserting these revised pages.
- Keep the pages you remove for reference.

National Association of Standardization and Certification of the Electrical Sector

NMX-J-009/248/13-2000-ANCE

First Edition

Canadian Standards Association

CAN/CSA-C22.2 No. 248.13-00

Second Edition

Underwriters Laboratories Inc.

UL 248-13

Second Edition

Low-Voltage Fuses – Part 13: Semiconductor Fuses

August 1, 2000

(Title Page Reprinted: August 11, 2005)

Approved
by
Standards Council
of Canada

ANSI/UL 248-13-2005

Commitment for Amendments

This Standard is issued jointly by the National Association of Standardization and Certification of the Electrical Sector (ANCE), CSA International, and Underwriters Laboratories Incorporated (UL). Amendments to this Standard will be made only after processing according to the Standards writing procedures by ANCE, CSA, and UL.

Revisions of this Standard will be made by issuing revised or additional pages bearing their date of issue. A UL Standard is current only if it incorporates the most recently adopted revisions, all of which are itemized on the transmittal notice that accompanies the latest set of revised requirements.

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Preface

This is the common UL, CSA, and ANCE Standard for *Low-Voltage Fuses – Part 13: Semiconductor Fuses*. This is the second edition of CAN/CSA-C22.2 No. 248.13-00 (superseding the first edition, published in 1996), the second edition of UL 248-13, and the first edition of NMX-J-009/248/13-2000-ANCE.

This Standard was prepared by a Technical Harmonization Committee comprised of members from Underwriters Laboratories, CSA International, the National Association of Standardization and Certification of the Electrical Sector, the end product manufacturers, and material suppliers. The efforts and support of the members of the Technical Harmonization Committee are gratefully acknowledged.

The present Mexican Standard was developed by the TC 32 Fuses from the Comite de Normalizacion de la Asociacion de Normalizacion y Certificacion, A.C., CONANCE, with the collaboration of the fuse manufacturers and users.

This Standard was reviewed by the CSA Subcommittee on Fuses and approved by the Technical Committee on Industrial Products under the jurisdiction of the CSA Strategic Steering Committee on the Requirements for Electrical Safety.

This Standard has been approved by the American National Standards Institute (ANSI) as an American National Standard.

The most recent designation of ANSI/UL 248-13 as an American National Standard (ANSI) occurred on August 1, 2005.

This ANSI/UL Standard for Safety, which consists of the Second edition with revisions through August 11, 2005, is under continuous maintenance, whereby each revision is ANSI approved upon publication. Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at http://csds.ul.com.

Note: Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.

Level of Harmonization

This trinational standard is published as an Identical Standard. An identical standard is a standard that is the same in technical content except for conflicts in Codes and Governmental Regulations. Presentation is word for word except for editorial changes.

Interpretations

The interpretation by the SDO (Standards Development Organization) of an identical standard shall be based on the literal text to determine compliance with the standard in accordance with the procedural rules of the SDO. If more than one interpretation of the literal text has been identified, a revision shall be proposed as soon as possible to each of the SDOs to more accurately reflect the intent.

ANCE Effective Date

The effective date for ANCE will be announced through the *Diario Oficial de la Federation (Official Gazette)* and is indicated on the cover page.

CSA Effective Date

The effective date for CSA will be announced through *CSA Informs* or *CSA Certification Notice*.

UL Effective Date

This edition of the standard is now in effect.

Foreword (CSA)

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Low-Voltage Fuses – Part 13: Semiconductor Fuses

1 General

NOTE –

This Part is intended to be read together with the Standard for Low-Voltage Fuses – Part 1: General Requirements, hereafter referred to as Part 1. The numbering of the Clauses in this Part correspond to like numbered Clauses in Part 1. The requirements of Part 1 apply unless modified by this Part. For Clauses not shown below, refer to the Standard for Low-Voltage Fuses – Part 1: General Requirements, NMX-J-009/248/13-2000-ANCE ♦ CAN/CSA C22.2 No. 248.1 ♦ UL 248-1.

1.1 Scope

This Part applies to semiconductor fuses rated 2000 V ac or less. DC ratings are optional.

Note: The Canadian Electrical Code, Part I, *defines low voltage as any voltage from 31 to 750 V inclusive and high voltage as any voltage above 750 V. The* National Electrical Code, NFPA 70-1996 *, Section 710-2 defines high voltage as more than 600 V, nominal.*

2 Definitions

2.2 General Terms

2.2.15 Semiconductor fuse

A fuse, letter designation ″R,″ intended only for protection or isolation of semiconductor devices such as SCR's, diodes, and the like, and not branch-circuit protection.

2.2.15.1 ″g″ Fuse

A fuse capable of interrupting under specified conditions all currents which cause melting of the fuse-element up to its interrupting rating.

2.2.15.2 ″a″ Fuse

A fuse capable of interrupting, under specified conditions, all currents between the lowest current specified by the manufacturer and its interrupting rating.