

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Endurance test methods for die attach materials  
Part 2: Temperature cycling test method for die attach materials applied to  
discrete type power electronic devices**

**Méthodes d'essai d'endurance pour les matériaux de fixation de puce –  
Partie 2: Méthode d'essai de cycle thermique pour les matériaux de fixation de  
puce, appliquée aux dispositifs électroniques de puissance de type discret**



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INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

ICS 31.190

ISBN 978-2-8322-7677-8

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**ENDURANCE TEST METHODS FOR DIE ATTACH MATERIALS –****Part 2: Temperature cycling test method for die attach materials applied to discrete type power electronic devices**

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The text of this International Standard is based on the following documents:

Draft	Report on voting
91/1895/FDIS	91/1912/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

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## ENDURANCE TEST METHODS FOR DIE ATTACH MATERIALS –

### Part 2: Temperature cycling test method for die attach materials applied to discrete type power electronic devices

#### 1 Scope

This part of IEC 63215 applies to the die attach materials and joining system applied to discrete type power electronic devices.

This document specifies the temperature cycling test method which takes into account the actual usage conditions of discrete type power electronic devices to evaluate reliability of the die attach joint materials and joining system, and establishes a classification level for joining reliability (reliability performance index).

The test method specified in this document is not intended to evaluate power semiconductor devices themselves.

The test method specified in this document is not regarded as the one for use to guarantee the reliability of the power semiconductor device packages.

NOTE The test result obtained using this document will not be used as absolute quantitative data, but for intercomparison with the other die attach materials results using the same setup.

#### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60068-2-14, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60194-1, *Printed boards design, manufacture and assembly – Vocabulary – Part 1: Common usage in printed board and electronic assembly technologies*

IEC 60194-2, *Printed boards design, manufacture and assembly – Vocabulary – Part 2: Common usage in electronic technologies as well as printed board and electronic assembly technologies*

IEC 60747-15, *Semiconductor devices – Discrete devices – Part 15: Isolated power semiconductor devices*