IEC 60749-30

Edition 1.1 2011-08

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Semiconductor devices – Mechanical and climatic test methods – Part 30: Preconditioning of non-hermetic surface mount devices prior to reliability testing

Dispositifs à semiconducteurs – Méthodes d'essais mécaniques et climatiques – Partie 30: Préconditionnement des composants pour montage en surface non hermétiques avant les essais de fiabilité

IEC 60749-30:2005+A1:2011

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SEMICONDUCTOR DEVICES – MECHANICAL AND CLIMATIC TEST METHODS –

Part 30: Preconditioning of non-hermetic surface mount devices prior to reliability testing

FOREWORD

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The technical content is therefore identical to the base edition and its amendment and has been prepared for user convenience. A vertical line in the margin shows where the base publication has been modified by amendment 1. Additions and deletions are displayed in red, with deletions being struck through.

International Standard IEC 60749-30 has been prepared by IEC technical committee 47: Semiconductor devices.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

IEC 60749 consists of the following parts, under the general title *Semiconductor devices – Mechanical and climatic test methods:*

Part 1: General
Part 2: Low air pressure
Part 3: External visual inspection
Part 4: Damp heat, steady state, highly accelerated stress test (HAST)
Part 5: Steady-state temperature humidity bias life test
Part 6: Storage at high temperature
Part 7: Internal moisture content measurement and the analysis of other residual gases
Part 8: Sealing
Part 9: Permanence of marking
Part 10: Mechanical shock
Part 11: Rapid change of temperature – Two-fluid-bath method
Part 12: Vibration, variable frequency
Part 13: Salt atmosphere
Part 14: Robustness of terminations (lead integrity)
Part 15: Resistance to soldering temperature for through-hole mounted devices
Part 16: Particle impact noise detection (PIND)
Part 17: Neutron irradiation
Part 18: Ionizing radiation (total dose)
Part 19: Die shear strength
Part 20: Resistance of plastic-encapsulated SMDs to the combined effect of moisture and soldering heat
Part 21: Solderability
Part 22: Bond strength
Part 23: High temperature operating life
Part 24: Accelerated moisture resistance – Unbiased HAST
Part 25: Temperature cycling
Part 26: Electrostatic discharge (ESD) sensitivity testing – Human body model (HBM)
Part 27: Electrostatic discharge (ESD) sensitivity testing – Machine model (MM)
Part 28: Electrostatic discharge (ESD) sensitivity testing – Charged device model (CDM)[1]
Part 29: Latch-up test
Part 30: Preconditioning of non-hermetic surface mount devices prior to reliability testing[1]
Part 31: Flammability of plastic-encapsulated devices (internally induced)
Part 32: Flammability of plastic-encapsulated devices (externally induced)
Part 33: Accelerated moisture resistance – Unbiased autoclave
Part 34: Power cycling

[1] To be published

Part 35: Acoustic microscopy for non-hermetic, encapsulated electronic components[2]

Part 36: Acceleration, steady state.

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2 In preparation