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Marking and Labeling
of Components,
PCBs and PCBAs to
Identify Lead (Pb),
Lead-Free (Pb-Free)
and Other Attributes



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For Technical Information, Contact:

JEDEC
Solid State Technology Association
3103 North 14th Street, Suite 240-S
Arlington, VA 22201-2107
Tel 703 907.0026
Fax 703 907.7501

IPC
3000 Lakeside Drive, Suite 105N
Bannockburn, Illinois
60015-1249
Tel 847 615.7100
Fax 847 615.7105

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Users of this publication are encouraged to participate in the development of future revisions.

Contact:

JEDEC
Solid State Technology Association
3103 North 10th Street, Suite 240-S
Arlington, VA 22201-2107
Tel 703 907.0026
Fax 703 907.7501

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Tel 847 615.7100
Fax 847 615.7105

FOREWORD

Directive 2002/95/EC of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment, commonly referred to as the “RoHS Directive¹”, and other legislation are driving the electronics industry towards the use of lead-free (Pb-free) solders and components with Pb-free 2nd level interconnect terminal finishes and materials.

There are different Pb-free solders being used for the various soldering operations in electronics. Each of these solders may require different processing temperatures for assembly, rework, and repair. Some means of communicating the identity of the Pb-free or Pb-containing solder must be provided so that those performing assembly, rework and repair are aware of the temperature capabilities and limitations of these solders, and are able to distinguish between Pb-free and Pb-containing solders.

Marking of components and/or labeling their shipping containers are needed to identify and distinguish Pb-containing and Pb-free 2nd level interconnect terminal finishes and materials. Labeling electronic assemblies using Pb-free solder materials will facilitate end-of-life recycling of electronic equipment. This standard sets forth minimum requirements and includes options for the provision of additional information.

This paradigm shift to Pb-free electronics has created a need for identification of traditional Pb-containing coatings, finishes and solders. This standard can be utilized to identify the presence of Pb for those markets as described in Sections 5 (Marking/Labeling Categories) and 8 (Marking and/or Labeling of Pb-Containing Components, PCBs, and PCB Assemblies). This standard supersedes IPC/JEDEC J-STD-609, JESD97 and IPC-1066.

1. The RoHS Directive itself is not a law; rather, it is a direction to the European Union Member States to implement their own laws embodying the requirements of the Directive. These laws were required to be in effect as of July 1, 2006.

Acknowledgment

Any document involving a complex technology draws material from a vast number of sources across many continents. While the principal members of the Marking, Symbols and Labels for Identification of Assemblies, Components and Devices Task Group (4-34b) of the Materials Identification Subcommittee (4-34) are shown below, it is not possible to include all of those who assisted in the evolution of this standard. To each of them, the members of the IPC extend their gratitude.

Materials Identification Subcommittee

Chair
John Sharp
Qorvo

Marking, Symbols and Labels for Identification of Assemblies, Components and Devices Task Group

Co-Chairs
Stephen Tisdale
Intel Corporation

Lee Wilmot
TTM Technologies, Inc.

JEDEC COMMITTEE JC14.4 - Quality Processes and Methods

Chair
Curtis Grosskopf
IBM Corporation

Technical Liaisons of the IPC Board of Directors

Peter Bigelow
IMI Inc.

Sammy Yi
Aptina Imaging Corporation

Marking, Symbols and Labels for Identification of Assemblies, Components and Devices Task Group

Annie Abram, IBM Corporation	David Corbett, Defense Supply Center Columbus	Constantino Gonzalez, ACME Training & Consulting
Koji Akiyama, Tokai Shinei Denshi Kogyo	Krista Crotty, Alberici EcoTech	Curtis Grosskopf, IBM Corporation
Bo Andersson, NCAB Sweden AB	Jerry Czerwonka, Avnet EMG	Mick Harvey, Selex ES
Tony Batalha, NEO Technology Solutions	Sun Davis, Electronics America, LLC	Gerhard Haubner, Infineon Technologies AG
Frederick Beltran, L-3 Communications	Donald Priest, Lockheed Martin Missiles & Fire Control	Robert Heber, Defense Supply Center Columbus
Ross Berntson, Indium Corporation	Stephen Edward, TTM Technologies	Thom Hermann, Qualcomm Technologies Inc.
James Mark Bird, MBird and Associates	Harold Ellison, Quantum Corporation	David Hillman, Rockwell Collins
Erik Bjerke, BAE Systems	Brett Estes, NSWC Crane	Eddie Hofer, Rockwell Collins
Gerald Leslie Bogert, Bechtel Plant Machinery, Inc.	Jeff Ferry, Circuit Technology Center, Inc.	Scott Houthuysen, LSI Corporation
Bret Bruhn, TTM Technologies	Mark Frimann, Texas Instruments Inc.	Ife Hsu, Intel Corporation
Calette Chamness, U.S. Army Aviation & Missile Command	Dennis Fritz, MacDermid Enthone Electronics Solutions	Bruce Hupfer, Identco International
Forrest Christman, Innovation Machine Learning	Lou Fuda, General Dynamics Mission Systems	Bruce Hupfer, Unknown Address
John Cisa, Intel	James Gagne, Schneider Automation Inc.	Michael Hutchings, Oracle America, Inc.
Donald Clark, Vishay Micro-Measurements	Tim Gallagher, BAE Systems	Thanh Huynh, Dassault Systemes
Thomas Cleere, BAE Systems Platform Solutions	Poh Poh Gan, Bose Corporation	Nancy Jaster, IPC
Steve Cmiel, NSWC - Dahlgren	Mahendra Gandhi, Northrop Grumman Aerospace Systems	Kenneth Jonsson, NCAB Sweden AB
Marie Cole, IBM Corporation	Andrew Ganster, NSWC Crane	Kurk Kan, Murata Power Solutions, Inc.
	Denis Gignac, Nortel	Joseph Kane, BAE Systems Platform Solutions
		Sarah Kubic, Honeywell International

Vijay Kumar, Lockheed Martin Missile & Fire Control	Margaret Riley, NEO Technology Solutions	Denise Turley, Fujitsu Network Communications
Mark Kwoka, Intersil Corporation	Tom Rogers, Polyonics, Inc.	David Weatherford, Teledyne Printed Circuit Technologies
Leo Lambert, EPTAC Corporation	Patrick Ryan, Panduit Corp.	Michael Weinhold, PLUS Leiterplatten G
Gary Latta, SAIC	John Sharp, Unknown Address	Kevin Weston,
Nicholas Lycoudes, Freescale Semiconductor	Joseph Sherfick, NSWC Crane	George Wilkish, Prime Consulting
James Maguire, Intel Corporation	Joel Sherman, KEMET Electronics Corp.	Schuyler Williams, Lockheed Martin Missile & Fire Control
Steven Martell, Sonoscan Inc.	Akikazu Shibata, JPCA-Japan Electronics Packaging and Circuits Association	Timothy Wodrich, John Deere Electronic Solutions, Inc.
Barney Martin, NEDA	Jeff Shubrooks, Raytheon Company	Linda Woody,
Jerry Martinez, Honeywell Aerospace	Doug Sober, Essex Technologies Group Inc.	Scott Worley, NASA Marshall Space Flight Center
Karen McConnell, Northrop Grumman Corporation	Vern Solberg, Solberg Technical Consulting	Bai Chun Xiang, Huawei Technologies Co., Ltd.
Gregory Munie, IPC	Kerry Spencer, Unknown Address	Michael Yue, Foxconn CMMS (TNY) D
Terry Munson, Foresite, Inc.	Valerie St. Cyr, Teradyne Inc.	Han Hyeon Yun, I-SAC Electronic Co., Ltd.
David Nelson, Adtran Inc.	Toshiyasu Takei, NSK Co., Ltd.	
Aaron Pedigo, NSWC Crane	Stephen Tisdale, Intel Corporation	
Elvira Preecha, Qualcomm Technologies Inc.		
Markus Riester, maris TechCon		

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Lee Wilmot, TTM Technologies Inc.	Curt Grosskoph, IBM Corporation	Linda Woody, Linda Woody Consulting
Stephen Tisdale, Intel Corporation	Dr. Beverley Christian, Ph.D. ABC Electronics Manufacturing Consulting	
David Corbett, Defense Supply Center Columbus		

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