

International Conference on Soldering and Reliability 2012

(ICSR 2012)

**Toronto, Ontario, Canada
15-18 May 2012**

ISBN: 978-1-62276-899-8

Table of Contents

International Conference on Soldering and Reliability (ICSR)

Toronto, Ontario, Canada

May 15-18, 2012

Wednesday, May 16, 2012

Session 1
<i>Process Guidelines to Ensure Optimal SMT Electronics Assembly</i> % <u>Ed Briggs</u> , Ron Lasky, Ph.D., Indium Corporation
<i>The Last Will and Testament of the Lead-Free BGA Void</i> %& <u>Dave Hillman</u> , David Adams, Tim Pearson, Ross Wilcoxon, Rockwell Collins, Bev Christian, Brandon Smith, Research In Motion, Mario Scalzo, Indium Corporation
<i>Conformal Coating Protection of Surface Mount Resistors in Harsh Environments</i> %& Eric Dalton, Maurice Collins, Michael Reid, Jeff Punch, Stokes Institute, University of Limerick, Ireland
<i>New Generation of Pb-Free Solder Alloys: Possible Solution to Solve Current Issues with Main Stream Pb-free Soldering</i> % <u>Polina Snugovsky</u> , Simin Bagheri, Marianne Romansky, Celestica, Inc., Doug Perovic, Leonid Snugovsky, John Rutter, University of Texas
<i>Lead-Free Assembly Design For Manufacturability Considerations</i> %('' <u>Matt Kelly</u> , Mark Hoffmeyer, IBM Corporation
Session 2
<i>To Clean or Not To Clean- Both Sides of the Story</i> %)\$ <u>Tim Luke</u> , Alpha
<i>Maintaining OSP Coating Integrity During the Cleaning Process</i> %('' <u>Umut Tosun</u> , Naveen Ravindran, Michael McCutchen, ZESTRON America
<i>Quality Control Methods Used to Insure the Production of Reliable Assemblies</i> %('' <u>David Lober</u> , John Williamson & Mike Bixenman, Kyzen Corporation
<i>Solder Paste Dipping with 0.4mm Pitch PoP Packages</i> %&' <u>Christopher Nash</u> & Maria Durham, Indium Corporation
<i>Evaluating Solderability of Surface Finishes</i> %&'+ Bev Christian ¹ Ph.D., <u>Numaira Obaid</u> ² and Adam Westwood ² , ¹ Research in Motion, ² University of Waterloo
<i>Reverting Back to Convection Reflow from Vapor Phase Reflow for High End Server Printed Circuit Board Assembly</i> %('' <u>Wai Mon</u> , IBM Corporation
<i>Design and Construction Affects on PWB Reliability</i> %&' <u>Paul Reid</u> , PWB Interconnect Solutions

Thursday, May 17, 2012

Session 3	
Keynote: Computational Modeling: On the Critical Path for Predicting Solder Joint Reliability <u>Dr. Paul Vianco</u> , Sandia National Laboratories	
<i>Improving Product Reliability Using Accelerated Stress Testing</i> `~%\$\$ <u>Peter Arrowsmith</u> , Ph.D., Ops A La Carte, Bojan Randjelovic, AB Sciex	
<i>Fundamentals of The Non-Wet Open BGA Solder Joint Defect Formation</i> `~%\$, <u>Srini Aravamudhan</u> , Raiyo Aspandiar Ph.D., Lilia Kondrachova, Rajen Sidhu, Dudi Amir, Intel Corporation	
<i>Evaluating the Electrical and the Mechanical Reliability of Soldering Materials</i> `~%* <u>Karen Tellefsen</u> , Ph.D., Mitch Holtzer, Alpha	
<i>Materials For High Performances Solder Joint Reliability</i> `~%&& <u>Sang Ho Jeon</u> , Yeong Gyeong Yang, Sun Young Kim, Kyu Yul Ahn, Sang Jun Bae, Yong Chul Chu, Duksan Hi-Metal Co., Ltd., Republic of Korea	
Session 4	
<i>A Novel Approach to 3D Chip Stacking</i> `~%&+ <u>Sukhi Binapal</u> , Ron Csermak, Mark Vandermeulen, ON Semiconductor	
<i>Pre-Stacking of Package on Package Mitigating the Effects of Warpage</i> `~% (<u>Robert Farrell</u> , Paul Bodmer, Doug Sommer, Benchmark Electronics, Inc., Binh Pham, ViaSat Inc	
<i>Implementation of Package-on-Package Assembly in Manufacturing</i> `~%((<u>Ishrat Hasan</u> and Adrian Hirceaga, Creation Technologies	
<i>The Effect of Coating and Potting on the Reliability of QFN Devices</i> `~% % <u>Cheryl Tulkoff</u> , Greg Caswell, DfR Solutions	
<i>Graphite Nanofiber Composite Thermal Interface Material</i> `~%), <u>Eric Dalton</u> ¹ , Amy Fleischer ² , Maurice N. Collins ¹ , Jing Tao, Kafil Razeed ³ , Jeff Punch ¹ , ¹ Stokes Institute, University of Limerick, Ireland, ² Villanova University, Villanova, Pennsylvania, ³ Tyndall National Institute, University College, Cork, Ireland	
<i>Terminal Solder Dip Testing for Chip Ceramic and Tantalum Capacitors</i> `~%* ' <u>Alexander Teverovsky</u> , Dell Services Federal Government, Inc.	
<i>The Performance of Fluxes and Lead-Free Solder Alloys In Soldering of Aluminum</i> `~%+ (<u>William F. Avery</u> , Philip A. Baskin, Superior Flux and Manufacturing Co.	

Friday, May 18, 2012

Session 5

Lead Free Alloy Development % (
Karl Seelig, AIM

The Stability of Cu_6Sn_5 in the Formation and Performance of Lead-free Solder Joints % \$
Keith Howell, Keith Sweatman, Tetsuro Nishimura, Kazuhiro Nogita, Nihon Superior Co., Ltd.

Tin Whisker Testing and Modeling: Low Stress Conditions %)
Stephen Meschter, BAE Systems, Polina Snugovsky, Jeff Kennedy, Steve McKeown, Zohreh Bagheri and Eva Kosiba, Celestica

Corrosion Study of Lead-free Solders Exposed to Artificial Sweat % *
Laura Turbini¹, Laura Sloboda², Thomas Kennedy², Julie Liu¹, Deepchand Ramjattan¹, and Nancy Wang¹, ¹Research in Motion, ²University of Waterloo

Assembly Feasibility and Property Evaluation of Low Ag, Bi-Containing Solder Alloys %&\$,
Eva Kosiba, Simin Bagheri, Zohreh Bagheri, Polina Snugovsky, Doug Perovic, Celestica and University of Toronto

Accelerated Temperature Cycling and Microstructural Analysis of SnZn Solder in Surface Mount Assemblies %&*
Maurice N. Collins¹, Gavin J. Jackson², Eric Dalton², Jeff Punch¹, Hector Steen², Puwei Liu², Matthew Holloway², ¹University of Limerick, ²Henkel