2.5D, 3D and Beyond: Bringing 3D Integration to the Packaging Mainstream 2011

Santa Clara, California, USA 9 November 2011

ISBN: 978-1-61839-450-7

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2011) by MEPTEC All rights reserved.

Printed by Curran Associates, Inc. (2012)

For permission requests, please contact MEPTEC at the address below.

MEPTEC P.O. Box 222 Medicine Park, Oklahoma 73557

Phone: 650-714-1570 Fax: 1-866-424-0130

info@meptec.org

Additional copies of this publication are available from:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 USA

Phone: 845-758-0400 Fax: 845-758-2634

Email: curran@proceedings.com Web: www.proceedings.com





2.5D, 3D AND BEYOND - BRINGING 3D INTEGRATION TO THE PACKAGING MAINSTREAM

CONTENTS

Agenda

Sponsor and Exhibitor Directory

Participant Biographies

SESSION ONE: 2.5/3D PACKAGING: WHY DO WE NEED IT? -- DRIVERS AND SOLUTIONS

- 2.5D, Silicon Interposers, Silicon Bridges, Glass Panels, Organic HDI What's It All About? \$\\$% Phil Marcoux, ALLVIA, Inc / PPM Associates
- Scaling in the Third Dimension Prospects for Silicon-Based Interposer and 3D Integration '\$9%' Subramanian S. Iyer, IBM Systems & Technology Group
- Packaging Solutions for Future Computers **\$&\text{Theresa Sze, Oracle Corporation}

SESSION TWO: ADVANCED 2.5D/3D ASSEMBLY PROCESS TECHNOLOGIES

- Assembly Strategies for Large Interposer 2.5D TSV Products "\$" \
 Marnie Mattei, Amkor Technology
- TSV Technology for 2.5D & 3D IC Solution "\$" -Muster Wang, ASE Group
- Critical Technologies for Thin Wafer Handling in 2.5D & 3D Integration ()
 Steve Anderson, STATS ChipPAC

KEYNOTE:

Bringing 3D Integration to the Packaging Mainstream '\$) *
 ChoonHeung Lee, Amkor Korea Technology Inc.

SESSION THREE: STANDARDS AND SUPPLY CHAIN DEVELOPMENT

- 2.5/3D Packaging: Back Side Integration and Supply Chain Challenges **\$+% Sunil Patel, GLOBALFOUNDRIES Inc.
- The Need for Industry-wide Cooperation on Design and Manufacturing Standards for 3D-ICs "\$+-Herb Reiter, eda2asic Consulting, Inc.
- Laying Out the Great TSV puzzle: Exploring Key Components Critical to Mainstream Adoption "\$-) Rich Rice, ASE US, Inc.

SESSION FOUR: THERMAL, POWER DISTRIBUTION & RELIABILITY INTERACTIONS IN 2.5/3D PACKAGING - MODELING & SIMULATION

- Power and Thermal Simulation Considerations for Stacked Die Packages "%" Aveek Sarkar, Apache Design Solutions, Inc.
- Thermal Characterization of Various 2.5 and 3D Package Configurations for Logic and Memory Applications '98/\$

 Zeki Celik, LSI Corporation
- 2.5D/3D Package Signal Integrity A Paradigm Shift "%%" Nozad Karim, Amkor Technology
- KGD Technology in an Era of Multi-Die Packaging and 3D Integration "%%)
 Rick Ried, STATS ChipPAC