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4th December 2014

Session	A1: Wafer Level Packaging 1
Date/Time	Thursday, 4th December 2014 / 10:50 – 12:10 hrs
Venue	Orchard Main Ballroom 4301AB
Chair(s)	**John Hunt**

- **W2W Permanent Stacking for 3D System Integration**
  Lan Peng, Soon-Wook Kim, Michael Soules, Markus Gabriel, Margarete Zoberbier, Erik Sleeckx, Herbert Struyf, Andy Miller and Eric Beyne

- **Stochastic Wire-length Model with TSV Placement on Periphery Area**
  Jianhui Ling, Huiyun Li, Guoqing Xu and Liying Xiong

- **Innovative Wafer Level Package Manufacturing with FlexLine TM**
  Seung Wook Yoon, Chen Kang, Kok Hwa Lim, Kenneth Seah and Yaojian Lin

Session	A2: Emerging Technologies
Date/Time	Thursday, 4th December 2014 / 10:50 – 12:10hrs
Venue	Orchard Main Ballroom 4302
Chair(s)	**Bill Chen**

- **Extremely High Temperature and High Pressure (x-HTHP) Endurable SOI Device & Sensor Packaging for Deep Sea, Oil and Gas Applications**
  Daniel Rhee Min Woo, Jason Au Keng Yun, Yu Jun, Eva Wai Leong Ching and F. X. Che

- **Silver Screen Printed Transmission Lines- Analyzing the Influence of Substrate Roughness on the RF Performance up to 30 GHz**
  Ying Ying Lim, Yee Mey Goh, Manabu Yoshida, Tung Thanh Bui, Tracey Vincent, Masahiro Aoyagi and Changqing Liu

- **Characterization of Copper Conductive Ink for Low Temperature Sintering Processing on Flexible Polymer Substrate**
  Jaewon Kim, Byunghoon Lee, Jun Yan Lek, Riko I Made, Budiman Salam and Chee Lip Gan

- **High Power SiC Inverter Module Packaging Solutions for Junction Temperature over 220°C**
  Daniel Rhee Min Woo, Hwang How Yuan, Jerry Aw Jie Li, Ho Siow Ling, Lee Jong Bum, Zhang Songbai

Session	**A3: Advanced Packaging 1**
Date/Time	Thursday, 4th December 2014 / 10:50 – 12:10hrs
Venue	Orchard Main Ballroom 4303
Chair(s)	**Vempati Srinivas**

- **Workability and Reliability Assessment of Various High Bandwidth PoP Structures**
  Mike Hung, Louie Huang, Timmy Lin, Eting Chen, Edward Huang and YC Ding

- **Etch-hole Design in Encapsulation for Better Robustness**
  Jae-Wung Lee, Jaibir Sharma, Srinivas Merugu and Navab Singh

- **BGA Packaging Using Insulated Wire for Die Area Reduction**
  Shailesh Kumar, Vikas Garg, Chetan Verma, Rishi Bhooshan, Poh Zi-Song and LC Tan

- **Design and Implementation of Two Different RF SiPs for Micro Base Station**
  Yi He, Fengman Liu, Peng Wu, Fengze Hou, Jun Li, Jie Pan, Dongkai Shangguan, Liqiang Cao

Session	A4: Quality & Reliability 1
Date/Time	Thursday, 4th December 2014 / 10:50 – 12:10hrs
Venue	Orchard Main Ballroom 4202
Chair(s)	Stevan Hunter

- **A Fast Passive-Heating Setup to Investigate Die-Attach Delamination in Packaged Devices**
  Tiphaine Pélisset, Mirko Bernardoni, Michael Nelhiebel and Thomas Antretter

- **Effect of Additive Elements on Crack Propagation Behavior for Sn-Bi Solders at High Temperatures**
  Noritake Hiyoshi, Mitsuo Yamashita and Hiroaki Hokazono

- **Reliability Physics and Probabilistic Design for Reliability (PDfR): Role, Attributes, Challenges**
  E. Suhir

Session	**A5: Materials & Processes 1**
Date/Time	Thursday, 4th December 2014 / 10:50 – 12:10hrs
Venue	Orchard Main Ballroom 4203
Chair(s)	**Loke Yuen Wong**

- **Interfacial Microstructure and Shear Strength of Sn-Ag-Cu Based Composite Solders on Cu and Au/Ni Metallized Cu Substrates**
  Tama Fouzder, Y. C. Chan and Daniel K. Chan

- **Challenges and Solutions on Pre-Assembly Processes for Thinned 3D Wafers with Micro-bumps on the Backside**
  A. Podpod, C. Demeurisse, C. Gerets, K. J. Rebibis, G. Capuz, F. Duval, A. Phommahaxay, E. Sleeckx, H. Struyf, R. A. Miller, G. Beyer and E. Beyne

- **Low Stress Die Attach Material Challenges for Critical Si Node with Cu Wire**
  Megan Chang and Anderson Li

- **The Study of Adhesive Performance Within Backside-Via Revealing**
  H. Y. Li, L. Ding and G. Q. Lo

Session	B1: Interconnection Technologies 1
Date/Time	Thursday, 4th December 2014 / 14:00 – 15:20hrs
Venue	Orchard Main Ballroom 4301AB
Chair(s)	Hong Meng Ho

- **Advanced Electrical Array Interconnections for Ultrasound Probes Integrated in Surgical Needles**
  Giuseppe Schiavone, Thomas Jones, Dennis Price, Rachael McPhillips, Zhen Qiu, Christine E. M. Demore, Yun Jiang, Carl Meggs, Syed O. Mahboob, Sam Eljamel, Tim W. Button, Sandy Cochran and Marc P. Y. Desmulliez

- **Sintering of Ag Paste for Power Devices Die Attach on Cu Surfaces**
  Vemal Raja Manikam and Erik Nino Tolentino

- **Bondability and Challenges of Cu Ultra-Fine-Wire Bonding**
  Sylvia Sutiono, Zhangxi, Tok Chee Wei, Don Syth An, Murali Sarangapani, Louie Huang, Jason Hung and Frank Lin

- **Breakthrough Development of Ultimate Ultra-Fine Pitch Process with Gold Wire & Copper Wire in QFN Packages**
  C. E.Tan , J. Y. Liong , Jeramie Dimatira , Lee Wee Kok , Jason Tan, Lie Handra Wijaya, James Song , Teshima Satoshi and K. H. Kwong

Session	B2: Electrical Modelling 1
Date/Time	Thursday, 4th December 2014 / 14:00 – 15:20hrs
Venue	Orchard Main Ballroom 4302
Chair(s)	**Wui Weng Wong**

- **A Low-Cost, High Efficiency Power Architecture Map for Basic and Performance Level Tablet Computers**
  Suvankar Biswas and Ripan Das

- **Measurement of Power Distribution Network Impedance Using an Error Analysis Approach**
  Eng-Kee Chua, Xing-Ming Li, Shan-Qing Hu and Kye-Yak See

- **Vertical Interconnections using Through Encapsulant Via (TEV) and Through Silicon Via (TSV) for High-Frequency System-in-Package Integration**
  M. Wojnowski, K. Pressel, G. Beer, A. Heinig, M. Dittrich and J. Wolf

- **Capacitive Crosstalk Compensation Structure for Improved High-Speed On-Package Signaling**
  Bok Eng Cheah, Jackson Kong, Ping Ping Ooi, Kok Hou Teh and Po Yin Yaw

Session	B3: Advanced Packaging 2
Date/Time	Thursday, 4th December 2014 / 14:00 – 15:20hrs
Venue	Orchard Main Ballroom 4303
Chair(s)	**John Oviso**

- **Air-Gap in Encapsulation for Fast Release and Safe Sealing**
  Jae-Wung Lee, Srinivas Merugu, Jaibir Sharma, Geng Li and Navab Singh

- **The Study of High-Lead Solder Joints Reliability of Flip Chip Devices**
  Lingjuan Tian, Yuanfu Zhao, Quanbin Yao, Yusheng Cao and Binhao Lian

- **Elongated Copper Pillar Bump Flip Chip Design on Molded Interconnect Substrate (MIS) for Advanced Flip Chip Packages**
  Ho Siow Ling, Sherryll Alialy, Stephenie, Zhang Xiaowu and Raymond Shoa Siong Lim

- **Structure Reliability and Characterization for FC Package w/ Embedded Trace Coreless Substrate**
  Eason Chen, Albert Lan, Jack You and Mark Liao

Session	**B4: Quality & Reliability 2**
Date/Time	Thursday, 4th December 2014 / 14:00 – 15:20hrs
Venue	Orchard Main Ballroom 4202
Chair(s)	**Tong Yan Tee**

- **Development of Scanning Acoustic Microscopy Method with Passive Integration Package for Mass Production Monitoring**
  C.T. Tai, C.Y. Lai and Subramanian Eswariy

- **Intermetallic Compound Growth Mechanism and Failure Modes of Flip Chip Solder Bump with Different UBM Structure during Electromigration**
  Yong-Sheng Zou, Yu-Hsiang Hsiao and Kwang-Lung Lin

- **Analysis of Silicone-Based Adhesive Bond Separation**
  L. E. Khoong , T. K. Gan and M. B. Young

- **Copper Ball Bond Shear Test for Two Pad Aluminum Thicknesses**
  Derek Andrews, Levi Hill, Aaron Collins, Kok Inn Hoo and Stevan Hunter

Session	**B5: Materials & Processes 2**
Date/Time	Thursday, 4th December 2014 / 14:00 – 15:20hrs
Venue	Orchard Main Ballroom 4203
Chair(s)	**L. C. Tan**

- **Flip Chip Die Attach Flux Evaluation Method**
  Adam Liu, Tank Lo, James Li, Eason Chen, JZ Yang and CT Chen

- **Simultaneously Obtaining the Young's Relaxation Modulus and Shear Relaxation Modulus of an Epoxy Molding Compound by Using DMA**
  Dao-Long Chen, Tz-Cheng Chiu, Tei-Chen Chen, Ping-Feng Yang, Chih-Pin Hung and Jen-Kuang Fang

- **Picking Large Thinned Dies with High Topography on Both Sides**
  Carine Gerets, Jaber Derakhshandeh, Teng Wang, Giovanni Capuz, Arnita Podpod, Caroline Demeurisse, Kenneth June Rebibis, Andy Miller, Gerald Beyer and Eric Beyne

Session	C1: Quality & Reliability 3
Date/Time	Thursday, 4th December 2014 / 15:50 – 16:50hrs
Venue	Orchard Main Ballroom 4301AB
Chair(s)	Che Faxing

- **An Alternative Methodology of Determining the Package Delamination Failure Starting Point Using the Thermomechanical Analyzer**
  Aaron D. Cadag and Bernie Chrisanto M. Ang

- **Towards Adequate Qualification Testing of Electronic Products: Review and Extension**
  G. Khatibi, B. Czerny , J. Magnien, M. Lederer, E. Suhir and J. Nicolics

Session	C2: Wafer Level Testing
Date/Time	Thursday, 4th December 2014 / 15:50 – 16:50hrs
Venue	Orchard Main Ballroom 4302
Chair(s)	Bruce Kim

- **Thickness Dependency of Adhesion Properties of TiW Thin Films**
  A. Roshangias, R. Pelzer, G. Khatibi and J. Steinbrenner

- **Concurrent System Level Test (CSLT) Methodology for Complex System-on-Chip**
  Dilip Kumar Reddy Tipparthi and Karthik Krishna Kumar

Session	C3: Advanced Packaging 3
Date/Time	Thursday, 4th December 2014 / 15:50 – 16:50hrs
Venue	Orchard Main Ballroom 4303
Chair(s)	Yew Cheong Mui

- **Flip Chip Packaging with Pre-Molded Coreless Substrate**
  Tom Tang, Albert Lan, Jensen Tsai, Ivan Chang and Evan Chen

- **Study on Electrical Characteristics for Active Die Embedding Substrate**
  Hyunho Kim

- **Temporary Handling Technology for Advanced Wafer Level Packaging Applications Based on Adhesive Bonding and Laser Assisted De-Bonding**
  Kai Zoschke, Thorsten Fischer, Hermann Oppermann and Klaus-Dieter Lang

Session	C4: Interconnection Technologies 2
Date/Time	Thursday, 4th December 2014 / 15:50 – 16:50hrs
Venue	Orchard Main Ballroom 4202
Chair(s)	Eric Yong

- **Manufacturability Readiness of Insulated Cu Wire Bonding Process in PBGA Package**
  Leong HungYang , Yap BoonKar, Tan Chou Yong, Navas Khan, Mohd Rusli Ibrahim, L. C. Tan

- **Wirebond Enhancement on Copper Palladium Bonding in a Over Pad Metalization**
  Michael B. Tabiera, Bryan Christian S. Bacquian and Terencio D. Lacuesta

- **Process Development and Optimization for High Temperature Endurable Flip Chip Interconnection in SiC High Power Module**
  Jie Li Aw, Bu Lin, Hwang How Yuan and Daniel Rhee Min Woo

Session	**C5: Materials & Processes 3**
Date/Time	Thursday, 4th December 2014 / 15:50 – 16:50hrs
Venue	Orchard Main Ballroom 4203
Chair(s)	**Alvin Lee**

- **High Temperature Die Attach Material on ENEPIG Surface for High Temperature (250DegC/500hour) and Temperature Cycle (-65 to +150DegC) Applications**
  Leong Ching Wai, Seit Wen Wei, Hwang How Yuan and Daniel Rhee MinWoo

- **Functionalised Copper Nanoparticles as Catalysts for Electroless Plating**
  R. E. Litchfield, J. Graves, M. Sugden, D. A. Hutt and A. Cobley

- **Fabrication and Characterization of Gold-Tin Eutectic Bonding for Hermetic Packaging of MEMS Devices**
  Eyup Can Demir, M. Mert Torunbalci, Inci Donmez, Y. Eren Kalay and Tayfun Akin

Poster Session 1

- **New Process Flow to Make QFN Package with Stand-Off**
  Peng Liu, Ping Wu and Q. C. He

- **60GHz Wideband Yagi-Uda Antenna Integrated on 2.5D Through Silicon Interposer**
  Songbai Zhang, Ka Fai Chang, Cheng Jin, Guruprasad Katti, Roshan Weerasekera and Surya Bhattacharya

- **Embedded Compact BaTiO 3 -Polymer Film VHF Band-Pass Filter**
  Wenhu Yang, Shuhui Yu, Rong Sun and Wei-Hsin Liao

- **A Compact and Low-profile GaN Power Amplifier Using Interposer-Based MMIC Technology**
  Dongsu Kim, Jong Min Yook, Sung Jin An, Sung Ryul Kim, Jong-Gwan Yook and Jun Chul Kim

- **Through Silicon via (TSV) Scallop Smoothening Technique**
  Goon Heng Wong, Guan Kian Lau, King Jien Chui and Woon Leng Loh

- **2.5D Through Silicon Interposer Package Fabrication by Chip-on-Wafer (CoW) Approach**
  S. W. Ho, Mian Zhi Ding, Pei Siang Lim, Daniel Ismail Cereno, Guruprasad Katti, Tai Chong Chai and Surya Bhattacharya

- **Fabrication of Dielectric Insulation Layers in TSV by Different Processes**
  Zhenzhong Yong, Hengfu Li and Wenqi Zhang

- **Biocompatible Packaging for Implantable Miniaturized Pressure Sensor Device used for Stent Grafts: Concept and Choice of Materials**
  Sabine Kirsten, Martin Schubert, Markus Braunschweig, Gregor Woldt, Tetiana Voitsekhivska, Klaus-Jürgen Wolter

- **Package Characterization of FET-Based Biochemical Sensors**
  Tetiana Voitsekhivska, Eike Suthau, Sabine Kirsten, Martin Schubert, Felix Zörgiebel, Gianaurelio Cuniberti and Klaus-Jürgen Wolter

- **Inkjet Printed Transmission Line Elements for RF Applications and Measurement Challenges**
  Nishshanka Bandara Narampanawe, See Kye Yak and Zhang Jie

- **One-Sided Directional Slot Antenna with Impedance Matching Circuit for 3D Packaging**
  Haruichi Kanaya, Naoto Iizasa and Tomoki Oda

- **Sequential Stress Combinations in Product Level Reliability Testing of Industrial Electronics**
  J. Pippola, T. Marttila and L. Frisk

- **How to Improve Void Performance in Wafer Bumping**
  Zhang Ruifen, Yap Kong Tat, Yam Lip Huei and Reynoso Dexter

- **Optimization of the Wafer Level Molding Process for High Power Device Module**
  Lin Bu, Siow Ling Ho, Sorono Dexter Velez and Daniel Rhee Min Woo

- **Single & Multi Beam Laser Grooving Process Parameter Development and Die Strength Characterization for 40nm Node Low-K/ULK Wafer**
  Koh Wen Shi, K. Y. Yowand Calvin Lo

- **Joint Strength and Microstructures of Brazed Joints of Stainless Steel with Fe-based Filler**
  Takahiro Tsunoda, Kangdao Shi, Ikuo Shohji, Kotaro Matsu and Yasuhiro Taguchi

5th December 2014

Session	D1: Advanced Packaging 4
Date/Time	Friday, 5th December 2014 / 08:30 – 10:10hrs
Venue	Orchard Main Ballroom 4301AB
Chair(s)	Bok Eng Cheah

- **Electrical Performance Characterization for Novel Multiple Compartments Shielding and Verification on LTE Modem SiP**
  Albert Lin, Vincent Chen, JJ Chen, Simon Leou, Thomas Wang and Harrison Chang

- **Alternative Package-on-Package with Organic Substrate Interposer for Stacking Packaging Solution**
  Steven Lin, Mark Liao, Albert Lan and David Wang

- **Photonic Device Package Design, Assembly and Encapsulation**
  J. Hamelink and A. Bos

- **Ultrahigh Speed Transceiver Package with Stacked Silicon Integration Technology**
  Hong Shi

Session	D2: Electrical Modelling 2
Date/Time	Friday, 5th December 2014 / 08:30 – 10:10hrs
Venue	Orchard Main Ballroom 4302
Chair(s)	**Weerasekera Roshan**

- **Integrated Passive Devices on Through Silicon Interposer with Re-distribution Layers**
  Cheng Jin, Guruprasad Katti and Songbai Zhang

- **Capacitor Selection Process for High-Speed Power Distribution Network Based on Switching Current Requirement**
  Xing-Ming Li, Shan-Qing Hu, Kye-Yak See and Eng-Kee Chua

- **Segmented Plated-Thru-Hole Design in Flip-Chip Packaging for Improved Electrical Performance**
  Jackson Kong, Bok Eng Cheah, Chin Lee Kuan and Ping Ping Ooi

- **Electromagnetic Modelling and Simulation of TSVs in 2.5D Interposers for RFICs**
  Kaushal Kannan and David Crouse

- **Study of Transmission Line Performance on Through Silicon Interposer**
  Ka Fai Chang, Rui Li, Liang Ding and Songbai Zhang

Session	D3: Mechanical Modelling 1
Date/Time	Friday, 5th December 2014 / 08:30 – 10:10hrs
Venue	Orchard Main Ballroom 4303
Chair(s)	Andrew Tay

- **Comprehensive Study on Reliability of Chip-Package Interaction Using Cu Pillar Joint onto Low k Chip**
  F. X. Che, Jong-Kai Lin, K. Y. Au and Xiaowu Zhang

- **Evaluating the Optimal Location for Embedded Accelerometers using Experimentally Validated Computer Algorithms**
  Guy Banwell, Richard Sharpe, Paul Conway and Andrew West

- **Wirebondability Enhancement for Very Small Die in Power Packages with Dynamic Simulation**
  Xueren Zhang, Kim-yong Goh, Yiyi Ma, Tito Verano, Raquel Fundan, Wingshenq Wong and Loic Renard

- **Unit Warpage Control with Universal Die Thickness**
  Gu Bin, Jun Dimaano Jr., Richen Chen, Eric Bool, Seow Fui Shi, Choon Ghee Ang and Nathapong Suthiwongsunthorn

- **Thermal Effects of TSV (Through Silicon via) with Void**
  Yunna Sun, Hui-Yeol Kim, Yan Wang, Guifu Ding, Junhong Zhao and Hong Wang

Session	D4: Wafer Level Packaging 2
Date/Time	Friday, 5th December 2014 / 08:30 –10:10hrs
Venue	Orchard Main Ballroom 4202
Chair(s)	Yoon Seung Wook

- **Cu-Cu Insertion Bonding Technique Using Photosensitive Polymer as WLUF**
  G. Potoms, W. Teng, J. Derakhshandeh, R. Daily, G. Capuz, M. Gonzalez, G. Beyer, K.J. Rebibis, R. A. Miller and E. Beyne

- **Process Development of Multi-Die Stacking Using 20 um Pitch Micro Bumps on Large Scale Dies**
  Lee Jong Bum, Jerry Aw Jie Li and Daniel Rhee Min Woo

- **Tunable 3D TSV-Based Inductor for Integrated Sensors**
  Bruce Kim, Saikat Mondal and Seok Ho Noh

- **Wafer to Wafer Bonding Using CuSn Microbumps for GaN-LED Substrate Transfer Process**
  Nga. P. Pham, Philippe Soussan, Lan Peng, Maarten Rosmeulen and Deniz Sabuncuoglu

Session	D5: Thermal Characterization & Cooling Solutions 1
Date/Time	Friday, 5th December 2014 / 08:30 – 10:10hrs
Venue	Orchard Main Ballroom 4203
Chair(s)	Rathin Mandal

- **Package-Level Si-Based Micro-Jet Impingement Cooling Solution With Multiple Drainage Micro-Trenches**
  Yong Han, Boon Long Lau, Hengyun Zhang and Xiaowu Zhang

- **Experimental Characterization of Si Micropillar Based Evaporator for Advanced Vapor Chambers**
  Mengyao Wei, Sivanand Somasundaram, Bin He, Qian Liang, Chuan Seng Tan and Evelyn N. Wang

- **The Effect of Variation of Doping Density on Thermal Properties of Power Si MOSFET**
  Risako Kibushi, Tomoyuki Hatakeyama, Shinji Nakagawa and Masaru Ishizuka

- **Comparative Analysis of Novel Thermal Interface Containing Nano Additives**
  Przemysaw Matkowski, Tomasz Faat and Andrzej Mościcki

- **Design Considerations on the External Heat Exchanger for Cooling of Microelectronic Devices**
  H. Y. Zhang, X. W. Zhang, Y. Han, B. L. Lau, Hector Valladares, Hikmat Chammasand and Bruce Bolliger

Session	**E1: Quality & Reliability 4**
Date/Time	Friday, 5th December 2014 / 10:40 – 12:20hrs
Venue	Orchard Main Ballroom 4301AB
Chair(s)	**John Pang**

- **Experimental Study of Water Absorption of Electronic Components and Internal Local Temperature and Humidity into Electronic Enclosure**
  Héléne Conseil, Morten S. Jellesen and Rajan Ambat

- **Thermal and Mechanical Reliability of Low-Temperature Solder Alloys for Handheld Devices**
  Morgana Ribas, Sujatha Chegudi, Anil Kumar, Ranjit Pandher, Rahul Raut, Sutapa Mukherjee, Siuli Sarkar and Bawa Singh

- **Sensor-Enabled PCBs to Aid Right First Time Manufacture Through Defect Prediction**
  Richard Sharpe, Guy Banwell, Paul P. Conway and Andrew A. West

- **Growth Behavior and Physical Response of Al-Cu Intermetallic Compounds**
  Rainer Pelzer, Stefan Woehlert, Heinrich Koerner, Golta Khatibi and Juergen Walter

Session	**E2: Materials & Processes 4**
Date/Time	Friday, 5th December 2014 / 10:40 – 12:20hrs
Venue	Orchard Main Ballroom 4302
Chair(s)	**Ernest Leo**

- **Temporary Bonding on the Move Towards High Volume: A Status Update on Cost-Of-Ownership**
  Thomas Uhrmann, Jürgen Burggraf, Harald Wiesbauer, Julian Bravin, Thorsten Matthias, Markus Wimplinger and Paul Lindner

- **Influence of the Height of Carbon Nanotubes on Hot Switching of Au/Cr-Au/MWCNT Contact Pairs**
  H. Liu, A. P. Lewis, S.H. Pu, L. Jiang, J. W. McBride

- **Plasma Technology Optimization for a Robust Flip Chip Package**
  Jesus B. Bautista, Ma. Jean Krisca N. Blas, Erma G. Gardose, Antonio R. Taloban, Jr and Vikas Gupta

- **Thermo-Compression Bonding for 2.5D Fine Pitch Copper Pillar Bump Interconnections on TSV Interposer**
  Sharon Pei-Siang Lim, Mian Zhi Ding, Sorono Dexter Velez, Daniel Ismael Cereno, Jong Kai Lin and Vempati Srinivasa Rao

- **Wafer Level Underfill Study for High Density Ultra-fine Pitch Cu-Cu Bonding for 3D IC Stacking**
  Ling Xie, Sunil Wickramanayaka, Boo Yung Jung, Jerry Aw Jie Li, Lim Jung-Kai and Daniel Ismael

Session	**E3: Mechanical Modelling 2**
Date/Time	Friday, 5th December 2014 / 10:40 – 12:20hrs
Venue	Orchard Main Ballroom 4303
Chair(s)	**Xueren Zhang**

- **Board Level Drop Test Simulation Using Explicit and Implicit Solvers**
  Yiyi Ma, Kim-Yong Goh and Xueren Zhang

- **Finite Strain Thermomechanical Material Characterization of Adhesives Used in Automotive Electronics for Quantitative Finite Element Simulations**
  B. Öztürk, P. Gromala, C. Silber, K. M. B. Jansen and L. J. Ernst

- **Chip Scale Package with Low Cost Substrate Evaluation and Characterization**
  Vito Lin, Vincent Lin, Nicholas Kao, Don Son Jiang and C. S. Hsiao

- **Over-Acceleration of Corrosion Mechanisms During Reliability Testing: A Method to Relate Biased HAST Tests and Application Conditions for Cu Wire Products**
  J. J. M. Zaal, A. Mavinkurve, R. Rongen, J. H. J. Janssen and P. Drummen

- **Effect of Thermo-Mechanical Excursions on Growth of Interfacial Intermetallic Compounds in Cu/Sn-Ag-Cu Solder Joints**
  Rituparna Ghosh, Praveen Kumar and Abha Misra

Session	**E4: Advanced Packaging 5**
Date/Time	Friday, 5th December 2014 / 10:40 – 12:20hrs
Venue	Orchard Main Ballroom 4202
Chair(s)	**Chen Zhaohui**

- **Thermal Compression Bonding with Non-Conductive Adhesive of 30µm Pitch Cu Pillar Micro Bumps on Organic Substrate with Bare Cu Bondpads**
  Jie Li Aw, Alvin Chow, K. Y. Au and Jong-Kai Lin

- **Reliability of 3D Package Using Wafer Level Underfill and Low CTE Epoxy Mold Compound Materials**
  F. Cadacio, K. J. Rebibis, G. Capuz, R. Daily, C. Gerets, F. Duval, T. Wang, R. A. Miller, G. Beyer and E. Beyne

- **New Nano Size Filled TIM Material With High Thermally Conductive Properties**
  A. Mościcki, T. Faat, A. Kinart, A. Smolarek and E. Merten

- **Microbumping Technology for Hybrid IR Detectors, 10µm Pitch and Beyond**
  B. Majeed, P. Soussan, P. Le Boterf and P. Bouillon

Session	**E5: Interconnection Technologies 3**
Date/Time	Friday, 5th December 2014 / 10:40 – 12:20hrs
Venue	Orchard Main Ballroom 4203
Chair(s)	**Liming Shen**

- **Sinter Paste for Power Packages**
  Yong Ling Xin

- **Application and High Temperature Storage Test on Zn-Al-Ge High Temperature Solder for Die Attach**
  Pan Wei Chih, Baquiran Joseph Aaron Mesa, Xie Hong and Goh Min Hao

- **A 24 GHz Microstrip Grid Array Antenna Excited by Coaxial-Fed Slot**
  Zihao Chen and Yue Ping Zhang

- **Study of 0.6mil Silver Alloy Wire in Challenging Bonding Processes**
  Jie Wu, Jeong-Ho Yang, Oranna Yauw, Ivy Qin, Tom Rockey and Bob Chylak

- **Highly Efficient Packaging Processes by Reactive Multilayer Materials for Die-Attach in Power Electronic Applications**
  Martin Mueller and Joerg Franke

Session	F1: Advanced Packaging 6
Date/Time	Friday, 5th December 2014 / 14:10 – 15:30hrs
Venue	Orchard Main Ballroom 4301AB
Chair(s)	**En-Xiao Liu**

- **Chip Package Interaction Induced ILD Integrity Issues in Fine Pitch Flip Chip Packages**
  Vikas Gupta, Shawn O'Connor and Charles Pilch

- **Gold-Germanium Laser Jetting for High Temperature (300°C) Flip Chip Application**
  Hwang How Yuan, Ding Mian Zhi and Daniel Rhee Min Woo

- **Advanced Thermocompression Flip Chip Bonding**
  Horst Clauberg, Alireza Rezvani, Evan Galipeau, Matt Wasserman, Tom Colosimo, Guy Frick, Daniel Buergi and Bob Chylak

- **Package characterization of UTAC's Grid Array Package (GQFN) and Performance Comparison over Standard Laminate Packages**
  Daniel Ting Lee The, Carolyn Epino Tubillo, Kyaw Ko Lwin, Gu Bin, Ang Choon Ghee, Jun Dimaano, Saravuth Sirinorakul and Nathapong Suthiwongsunthorn

Session	F2: Quality & Reliability 5
Date/Time	Friday, 5th December 2014 / 14:10 – 15:30hrs
Venue	Orchard Main Ballroom 4302
Chair(s)	James How

- **Thermal Cycling Reliability of SnAgCu Solder Joints in WLCSP**
  Kejun Zeng and Amit Nangia

- **An Automatic Visual System to Identify and Estimate Ionic Contamination in Printed Circuit Boards Using Electrochemical Migration Patterns**
  Helen S. Villanueva, Manolo G. Mena and Prospero C. Naval

- **The IMC Formation and Progress in the Copper Pillar Cu/Sn1.8Ag /OSP-Cu Microbump Structure upon Current Stressing**
  Chiao-Wen Chen, Kwang-Lung Lin, Ying-Ta Chiu, Chin-Li Kao, Chiu-Wen Lee and Ping-Feng Yang

- **Leadfree Solder Joint Improvement Study**
  Anocha Sriyarunya AND Jiraporn Tondtan

Session	F3: Interconnection Technologies 4
Date/Time	Friday, 5th December 2014 / 14:10 – 15:30hrs
Venue	Orchard Main Ballroom 4303
Chair(s)	Mohandass Sivakumar

- **Basic Evaluation of Au Micro-Bumps Formed by Cyanide-Free Electroless Au Plating Process**
  Naoya Watanabe, Shunsuke Nemoto, Katsuya Kikuchi, Masahiro Aoyagi, Tomoaki Tokuhisa, Takuo Owada and Masaru Kato

- **Electrical Performance of Isotropic Conductive Adhesives with Copper and Copper Coated Iron Fillers**
  Junpeng Liu, Richard Redei, Siyuan Qi, David A. Hutt and David Whalley

- **Fabrication of VGA Size Near-Infrared Image Sensor Using Room-Temperature Flip-Chip Bonding Technology**
  Takanori Shuto, Keiichiro Iwanabe, Mutsuo Ogura, Katsuhiko Nishida and Tanemasa Asano

- **Magnetically Responsive SAC305 Solder for Precison Melting Applications**
  Gopala Krishnan R.. Yiteng Lin, Xu Ke, Justin Zhou Yong, Eng Soon Tok, Yaadhav Raaj and Srayes G

Session	**F4: Materials & Processes 5**
Date/Time	Friday, 5th December 2014 / 14:10 – 15:30hrs
Venue	Orchard Main Ballroom 4202
Chair(s)	**Lau Boon Long**

- **Laminating Thin Glass Onto Glass Carrier to Eliminate Grinding and Bonding Process for Glass Interposer**
  Leon Tsai, Bor Kai Wang, Aric Shorey, Alvin Lee, Jay Su, Baron Huang, Wen-Wei Shen, Hsiang-Hung Chang and C. H. Chien

- **Influence of Mold Compound Type Towards Palladium Doped and Copper Doped 2N Au wire**
  Goh Chen Liew, Khoo Ju Lee and Manantan Soriano Aileen

- **Characterization of Dicing Tape Adhesion for Ultra-thin Die Pick-up Process**
  Jun Dimaano, Saravuth Sirinorakul and Nathapong Suthiwongsunthorn

- **Novel Smart Ferroelectric Functional Material for Application in Transducers**
  R. Islam, M. A. Matin, R. Mahbub, M. A. Hakim and M. F. Islam

Session	**F5: Advanced Packaging 7**
Date/Time	Friday, 5th December 2014 / 14:10 – 15:30hrs
Venue	Orchard Main Ballroom 4203
Chair(s)	**Han Yong**

- **Advanced Interconnect Equipment and Process Development**
  Tao Xu, Todd Walker, Raymond Chen, Jason Fu and Christoph Luechinger

- **Power QFN Down Bond Lift and Delamination Study**
  Hanmin Zhang, M. Hu, Sonder Wang, Schmadlak Ilko, B. G. Yin, Q. C. He and D. H. Ye

- **Thermo-Compression Bonding Assembly Process and Reliability Studies of Cu Pillar Bump on Cu/Low-K Chip**
  K. Y Au, F. X Che, Jie Li Aw, Jong-Kai Lin, Bjoern Boehme and Frank Kuechenmeister

- **Room Temperature and Zero Pressure High Quality Oxide Direct Bonding for 3D Self-Aligned Assembly**
  Vikas Dubey , Stefaan Van Huylenbroeck, Nina Tutunjyan, John Slabbekoorn, Ingrid De Wolf ,Kenneth June Rebibis, Andy Miller, Jean Pierre Celis and Eric Beyne

Session	**G1: Quality & Reliability 6**
Date/Time	Friday, 5th December 2014 / 16:00 – 17:20hrs
Venue	Orchard Main Ballroom 4301AB
Chair(s)	**Ho Xininig**

- **Aging Effect on Creep Properties of SnBi Solders**
  Masao Sakane, Kota Yagi, Takamoto Itoh, Mitsuo Yamashita and Hiroaki Hokazono

- **Alternative Flip Chip Sample Preparation Technique Using Triple Ion Beam Milling**
  W. Qiu, B. Zee, F. J. Foo and W. Grünewald

- **Accelerated Testing of Multi-Walled CNT Composite Electrical Contacts for MEMS Switches**
  Adam P. Lewis, John W. McBride, Suan Hui Pu and Liudi Jiang

Session	G2: Advanced Packaging 8
Date/Time	Friday, 5th December 2014 / 16:00 – 17:20hrs
Venue	Orchard Main Ballroom 4302
Chair(s)	David Hutt

- **Development of Low Profile Fan Out PoP Solution with Embedded Passive**

  Boo Yang Jung, David Soon Wee Ho, Dexter Velez Sorono, Sharon Pei Siang Lim, Zhaohui Chen, Han Yong, Bu Lin and Chai Tai Chong

- **Performance and Reliability Study of TGV Interposer in 3D Integration**

  Tiwei Wei, Qian Wang, Jian Cai, Le Chen, Jones Huang, Lu Wang, Long Zhang and Cheng Li

- **Development of Ruggedized Timer and Temperature Sensor Packaging for 300°C/30kpsi Downhole Environment**

  Hwang How Yuan, Haridas Kuruveettil, Eva Wai Leong Ching, Eric Phua Jian Rong, Gan Chee Lip and Daniel Rhee Min Woo

- **Insulated PdCu Wire Bond Challenges and Resolution for HVM Robustness**

  Siong Chin Teck, Eu Poh Leng, Tan Lan Chu, Mohd Rusli Ibrahim, Au Ying Kheng, Yow Kai Yun, Zhang Xi, Cheryl Lee, Su Dan, Tok Chee Wei, Sarangapani MuraliRobert Lyn

Session	G3: Thermal Characterization & Cooling Solutions 2
Date/Time	Friday, 5th December 2014 / 16:00 – 17:20hrs
Venue	Orchard Main Ballroom 4303
Chair(s)	**Marta Rencz**

- **Thermal Modeling and Characterization of SiC Power Module Under Both Air Cooling and Liquid Cooling Conditions**
  Hengyun Zhang, How Yuan Hwang, Lin Bu, Jerry Jie Li Aw and Daniel Min Woo Rhee

- **Processing of Metallic Thermal Interface Materials Using Liquid Phase Sintering Followed by Accumulative Roll-Bonding**
  Rajesh Kumar Tiwari, Deepak Sharma, Rohan Sharma and Praveen Kumar

- **Methodology for More Accurate Assessment of Heat Loss in Microchannel Flow Boiling**
  Mrinal Jagirdar and Poh Seng Lee

Session	G4: Materials & Processes 6
Date/Time	Friday, 5th December 2014 / 16:00 – 17:20hrs
Venue	Orchard Main Ballroom 4202
Chair(s)	**Melvin Tan Siow Pin**

- **Interfacially Engineered Micro and Nano-Scale Cu-In Composites as High Performance Thermal Interface Materials for Advanced Electronics**
  I. Dutta, J. Liu, K. Mireles, P. Kumar and L. Meinshausen

- **Inter-Connecting Process Investigation to Resolve Delamination**
  Bob Lee and Stanley Chou

- **Enhanced Stitch Bonding Concept for QFN Package's Cu Wirebonding Process**
  Allen M. Descartin, Zhang XiaoLong, Sun Deguo, Li Jun and Yan BeiYue

Session	**G5: Quality & Reliability 7**
Date/Time	Friday, 5th December 2014 / 16:00 – 17:20hrs
Venue	Orchard Main Ballroom 4203
Chair(s)	**Zhao Huapeng**

- **Analysis of Concurrent Failure Mechanisms in IGBT Structures During Active Power Cycling Tests**
  Zoltan Sarkany, Andras Vass-Varnai and Marta Rencz

- **Test Methods and Influencing Factors for the Adhesion Strength Measurement of Metallized Structures on Thermoplastic Substrates**
  Thomas Kuhn and Joerg Franke

Poster Session 2

- **A Robust Chip Capacitor for Video Band Width in RF Power Amplifiers**
  Aznita Abdul Aziz, Frank Danaher and Aniqah Hashim

- **Comparison of Aluminum Post Etch Cleaning on MEMS Structures Using Formulated Organic Solvent Cleaners**
  Lee Hou Jang Steven, Vladimir Bliznetsov, Deng Wei, Tham Dexian and Sunil Wickramanayaka

- **Optimization Studies of Lift-Off Methods and its Application in Electrochemical Biosensors**
  Leong Yew Wing, Zhang ShiYun, Christopher Pang, Mohammad Hazren, Sunil Arya Kumar and Wong Chee Chung

- **Considerations for Package Routing for DRAM and NAND Flash Memory**
  Wang Ai-Chie and Chong Chin Hui

- **Effect of Temperature on Tensile Properties of High-melting Point Bi System Solder**
  Haidong Zhang, Ikuo Shohji, Masayoshi Shimoda and Hirohiko Watanabe

- **Mechanical Properties of Low-Silver Sn-1.0Ag-0.7Cu-1.6Bi-0.2In Solder**
  Yuki Takahashi and Ikuo Shohji

- **Tensile Properties of Low-melting Point Sn-Bi-Sb Solder**
  Yuto Kubota, Ikuo Shohji, Tetsuyuki Tuchida and Kiyotomo Nakamura

- **Effect Of Copper Roughness On Dielectric Adhesion**
  Serine Soh Siew Boon, David Ho SW, Ding Liang and Sek Soon Ann

- **Experimental Results Versus Numerical Simulations of In/Cu Intermetallic Compounds Growth**
  Tomasz Faat, Bartosz Patek, Przemysaw Matkowski, Jan Felba, Carl Zendén, Li-lei Ye and Johan Liu

- **Influence of Sintering Process Parameters on Mechanical Strength of Joints Based on Silver Nano Particles**
  Tomasz Faat, Krzysztof Stojek, Przemysaw Matkowski, Bartosz Patek, Jan Felba and Andrzej Mościcki

- **Power Noise Isolation in a Silicon Interposer with Through Silicon Vias**
  Myunghoi Kim, Dong-Hwan Shin, Man-Seok Um and In-Bok Yom

- **Embedded Filter Based on the BaTiO 3 -epoxy Composite Film**
  Wenhu Yang, Shuhui Yu, Wei-Hsin Liao and Rong Sun

- **Thermo-mechanical Reliability Study on Package on Package (PoP) with Embedded Wafer Level Package (eWLP)**
  Zhaohui Chen, Boo Yang Jung, Sharon Pei Siang Lim, Sorono Velez Dexter, David Soon Wee Ho and Xiaowu Zhang

- **MoldFlow Simulation Study on Void Risk Prediction for FCCSP with Molded Underfill Technology**
  Freedman Yen, Leo Hung, Nicholas Kao and Don Son Jiang

- **Mechanical Modeling and Characterization of Silicon Micro Cooler**
  F. X. Che, Yong Han, Boon Long Lau, Hengyun Zhang, Lu Zhang and Xiaowu Zhang

- **Application of Transmission EBSD on High Topography Surface Aluminum Thin Film**
  S. Y. Zhang, Y. J. Zhang, W. M. Kwek, L. S.Goi, A. D. Trigg and L. J. Tang

- **Heat Conduction Study Across Metal/graphene Interface by Molecular Dynamics**
  Fulong Zhu, Kai Tang, Ying Li, Ke Duan, Sheng Liu and Yanming Chen

- **Thermal Analyses of Package-on-Package (PoP) Structure for Tablet Application**
  Miaowen Chen, Leo Huang, George Pan, Nicholas Kao and Don Son Jiang

- **Study of Electromigration Behavior of Cu Pillar with Micro Bump on Fine Pitch Chip-To-Substrate Interconnect**
  Hsiao Hsiang Yao , Alastair David Trigg and Chai Tai Chong

- **Improving Performance and Reliability of 3D Wafer Level Packaging with Unique Polymer Coating Process**
  Antun Peic., Felix Massa, Johanna Bartel, Thorsten Matthias, Markus Wimplinger, Thomas Uhrmann and Paul Lindner

- **Effect of Process Pressure on PVD AlN Thin Film**
  J.L. Xie and Sunil Wickramanayaka

- **50-Gb/s Silicon Mach-Zehnder Interferometer-based Optical Modulator with only 1.3 V pp Driving Voltages**
  Xiaoguang Tu, Tsung-Yang Liow, Junfeng Song, Xianshu Luo, Lian-Xi Jia, Qing Fang, Mingbin Yu and Guo-Qiang Lo