EPTC 2024

Final Program_v20241127

Interactive Presentation I (Dec 4th 3:15pm to 4:15pm)					
Poster ID	Title	Category	First Author	Affiliation	Country
1152	Effects of intense pulsed light energy on metallurgical properties of Cu pillar joints	Advanced Packaging	Eun Chae Noh	Chungbuk National University	South Korea
1158	High Aspect Ratio >10 TSV Design and Integration Challenges and Solutions for the Multi Memory Stacking	Advanced Packaging	Xiangyu Wang	Institute of Microelectronics (IME), Singapore	Singapore
1170	Low-loss Non-contact Interconnects based on 3D Heterogeneous Redistribution Layer for Millimeter Wave Phased Arrays	Advanced Packaging	Sha Xu	Guangdong University of Technology	China
1210	An Optical Engine with both EIC and PIC Embedded in Mold Compound in FOWLP	Advanced Packaging	Jiaqi Wu	Institute of Microelectronics (IME), Singapore	Singapore
1229	EM and channel simulations of BoW-based structures for advanced packaging technologies	Advanced Packaging	Tengiz Svimonishvili	Institute of Microelectronics (IME), Singapore	Singapore
1232	Electromagnetic Compatibility Advantages of Cellulose nano-fiber Composite doping carbon nanotubes for 6G telecommunications	Advanced Packaging	ICHIRO OTA	DAICEL Corporation	Japan
1237	Multi-RF chip module through FOWLP	Advanced Packaging	Serine Soh	Institute of Microelectronics (IME), Singapore	Singapore
1239	A Study on Improvement of Anisotropic Copper Wet Etching for Semiconductor Packaging	Advanced Packaging	Suyeon Park	Korea Aerospace University	South Korea
1266	Deeply Penetrating Multi-Modal Imaging for 3DI Overlay Non-destructive Measurements	Advanced Packaging	Shuyan Zhang	Tokyo Electron Limited	United States of America
1276	Delamination Firewall for Advanced Leadless Packages Through the Curing Process and Staging Time Control	Advanced Packaging	Mohd Rozaini Mohd Zali	Nexperia Malaysia Sdn Bhd	Malaysia
1299	The Influence of Cu Pad Dimensions on The Thermal Expansion of Cu in Cu/SiO2 Hybrid Bonding	Advanced Packaging	Siye Lee	Seoul National University of Science and Technology	South Korea
1303	Investigation of Plasma Treatment and Bonding Parameters in Cu/SiO2 hybrid bonding	Advanced Packaging	Injoo Kim	Seoul National University of Science and Technology	South Korea
1305	Power Integrity Optimization by DTC for 2.5D CoWoS Package	Advanced Packaging	Zhou Shengjuan	International Innovation Center of Tsinghua University	China
1311	Enhancement of Copper Filling in Micro-Vias Using UV Irradiation	Advanced Packaging	JOO-HYONG NOH	Kanto Gakuin University	Japan
1339	Assembly Process for 3D Stacked Heterogeneous Integration of RF Chiplets	Advanced Packaging	Sharon Pei Siang Lim	Institute of Microelectronics (IME), Singapore	Singapore
1372	High-thermal-conductivity Dummy Die and Finned Lid for Enhanced Liquid Cooling of 2.5D ICs	Advanced Packaging	Hsin-Cheng Lin	National Taiwan University	Taiwan
1308	Applicability of Flash Lamp Annealing (FLA) Method on Heat Treatment Cu Thin Film and Low Dielectric Resin Films	Advanced Packaging	NOH, JOO-HYONG (1,2)	Kanto Gakuin University, Japan (1)	Japan
1336	Process flow and requirements for fusion bonding of photonic interposers with ultra-thin dielectric layers	Advanced Optoelectronics and Displays	Ong, Edward Yong Xi	Institute of Microelectronics (IME), Singapore	Singapore
1382	A Chip on Borad Packaging Solution for 400G Photonic Engine	Advanced Optoelectronics and Displays	feng Xu Feng	Institute of Microelectronics (IME), Singapore	Singapore
1174	Effects of solder reflow peak temperature on Sn3.5Ag to Cu-OSP surface	Assembly and Manufacturing Technology	Jingjian Gan	NXP Semiconductors	China
1243	Package miniaturization through substrate design and assembly process optimization – A product cost reduction case study	Assembly and Manufacturing Technology	Kodavati Siva Sai Krishna	Texas Instruments	India
1300	The Use of Strip Chopping Cut Method for the Reduction of Blade Overloading in Wettable Flank QFN Half-Cut Singulation Process	Assembly and Manufacturing Technology	Rohn Kenneth Listangco Serapio	STMicroelectronics, Inc.	Philippines
1194	Packaging Design and Loss Analysis of RC-IGBT and SiC MOSFET Hybrid Module	Electrical Simulations & Characterization	kai zhang	Huaqiao Univeristy	China
1248	Electrical Design of High-Performance Through Silicon Interposer for RF Transceiver	Electrical Simulations & Characterization	Lin Zhou	Institute of Microelectronics (IME), Singapore	Singapore
1386	Novel PG IO Buses Architecture with Bond wires to reduce IO buses resistance and provide EMI Shield	Electrical Simulations & Characterization	Sonal Mongia	NXP Semiconductors India Pvt Ltd	India
1155	Low-temperature degradable and reuse technology of semiconductor liquid packaging materials	Emerging Technologies	Yi Chun Chen	Industrial Technology Research Institutes	Taiwan
1267	Design of a Compact Lumped Element based 4-Way Multiplexer for Cryogenic Applications	Emerging Technologies	Vignesh Shanmugam Bhaskar	Institute of Microelectronics (IME), Singapore	Singapore

EPTC 2024

Interactive Presentation II (Dec 5th 2:00pm to 3:00pm)

Poster ID	Title	Category	First Author	Affiliation	Country
1120	Fluxless Chip to Wafer Bonding with Ultra Fine Pitch (Below 20um) Micro-bump	Interconnection Technologies	LAI YEE CHIA	Institute of Microelectronics (IME), Singapore	Singapore
1133	Thermal Cycling Performance of Heterogeneous Sn-Ag-Cu Solder Joint with Minor Elements Addition	Interconnection Technologies	Joo Young Bae	Korean Electronics Technology Institute	South Korea
1169	Study on Mechanical Failure Forms of copper/tantalum Contact Interface in Through Silicon Via	Interconnection Technologies	Ziniu Yu	Huazhong University of Science and Technology	China
1275	Metal Thickness Measurement with PULSE™ Technology for Advanced Packaging Process Control	Interconnection Technologies	Cheolkyu Kim	Onto Innovation, Inc.	South Korea
1323	The UV Tape with excellent adhesion property for Die to Wafer (D2W) Hybrid Bonding	Interconnection Technologies	YU ZHANG	IMECAS	China
1330	Mechanical Response of CuMo Alloy Spacer in Double-sided Cooling Silicon Carbide Power Module based on Nano-Cu Paste	Interconnection Technologies	Weishan Lv	Huazhong University of Science and Technology	China
1379	Fabrication of Multi-RDL Layers with Polymeric ILD for RDL Interposer	Interconnection Technologies	Jinho Jang	Seoul National University of Science and Technology	South Korea
1409	Realizing Superconducting Interposer with Liner-less Indium in TSV-last Process with a One-Step Bump Technique	Interconnection Technologies	Norhanani Jaafar	Institute of Microelectronics (IME), Singapore	Singapore
1295	Analysis of SAC305/SnBi hybrid solder interface and comparison of the relationship between hardness and shear of solder	Interconnection Technologies	Sung, Minjae	Sungkyunkwan University	South Korea
1105	Characterization of Commercial Epoxy Molding Compounds (EMC) with High Thermal Conductivity	Materials and Processing	Yosephine Andriani	Infineon Technologies Asia Pacific Pte Ltd	Singapore
1196	MSL 1 Failure Mechanism and Solution for Silicon Carbide (SiC) Power Package with Pressure-less Sintering DA on bare Copper Lead frame	Materials and Processing	Heng Giap Ong	Tecore Synchem	Malaysia
1208	A critical review of hexagonal boron nitride manufacturing technology for electronics cooling applications	Materials and Processing	Yi xiao Wang	Shanghai Polytechnic University	China
1214	Polymer Materials for Temporary Bonding and Laser Debonding in 3D MEMS Assembly: An Evaluation	Materials and Processing	Chaki Roy, Sangita	Institute of Microelectronics (IME), Singapore	Singapore
1244	A novel graphene and titanium laminated composite film for electronics cooling applications	Materials and Processing	Yuxuan Fang	Shanghai Polytechnic University	China
1260	Aging and degradation behaviour of graphene-enhanced thermal interface materials	Materials and Processing	Yuanyuan Wang	Smart High Tech AB	Sweden
1264	HOW AI CAN ACCELERATE R&D FOR SOLDER PASTE FORMULATIONS	Materials and Processing	Mélanie MATHON	Inventec Performance Chemicals	France
1277	Printability Evaluation of Water-Soluble Type 7 Solder Paste for Fine pitch Advanced Package Interconnects	Materials and Processing	Sehoon Yoo	Korea Institute of Industrial Technology	South Korea
1318	Effect of Wafer Backside Thin Film Thickness on Wafer Stealth Dicing Performance	Materials and Processing	Nathaniel Simon George	Micron Semiconductor Asia Pte Ltd	Singapore
1325	STUDY OF DIE ATTACH EPOXY MATERIALS AND PROPERTIES AFFECTING SUBSTRATE TRACE CRACKS	Materials and Processing	Jasmine Lim	NXP Semiconductors	Malaysia
1333	Silicone Gel Filled Power Module for Harsh Environment Applications: A case study on the gel and case material interaction	Materials and Processing	Muhammad Ashraf Zainudin	onsemi	Malaysia
1145	Wafer Thickness Measurement by using Spectral Interferometry in Advanced package	Smart Manufacturing and Equipment Technology	Chia-Hung Cho	Industrial Technology Research Institute(ITRI)	Taiwan
1238	Wire Sweep Optimization with Mold Process Simulation (Virtual DoE)	Smart Manufacturing and Equipment Technology	Subrmanian N.R.	Infineon Technologies Asia Pacific Pte Ltd	Singapore
1319	Die Chipping Measurement using Computer Vision for Chip-to-Wafer Hybrid Bonding Application	Smart Manufacturing and Equipment Technology	Rahul Reddy Komatireddi	Applied Materials	India
1403	Development of Robot-supported Resin Dispensing and Hot Molding Process for Packaging Transparent LED Signage	Smart Manufacturing and Equipment Technology	Eun-Ji Gwak	Korea Institute of Machinery and Materials	South Korea
1102	Fabrication of c-Si Pillars on Glass Substrates for Terahertz Dielectric Metasurfaces using Glass-Silicon Direct Bonding	TSV/Wafer Level Packaging	Cheemalamarri, Hermanth Kumar	Institute of Microelectronics (IME), Singapore	Singapore
1143	Wafer Level Fabrication of Embedded Cooling Solution on Heating Device with TSV Interconnect	TSV/Wafer Level Packaging	Boon Long Lau	Institute of Microelectronics (IME), Singapore	Singapore
1191	Optimizing fabrication processes to improve resistance in Via-Last TSV for BSI applications.	TSV/Wafer Level Packaging	Ong Jun Wei Javier	Institute of Microelectronics (IME), Singapore	Singapore
1360	Investigation of Parasitic Surface Conduction Effect on Interposers for 2.5D/3D Heterogeneous Integration	TSV/Wafer Level Packaging	Ng Yong Chyn	Institute of Microelectronics (IME), Singapore	Singapore

EPTC 2024

Interactive Presentation III (Dec 6th 3:30pm to 4:30pm)					
Poster ID	Title	Category	First Author	Affiliation	Country
1283	Finite Element Analysis of the Effect of Structural Parameters and Misalignment on Bonding Strength in Fine-Pitch Hybrid Bonding	Mechanical Simulation & Characterization	Shi, Jingyu	Tsinghua University	China
1101	Stress prediction using deep learning with strategic sampling technique	Mechanical Simulation & Characterization	Kart-Leong Lim	Institute of Microelectronics (IME), Singapore	Singapore
1177	Study of Moisture Characteristic of Epoxy Molding Compound and Hygroscopic Swelling Warpage thru Bi-material Sample	Mechanical Simulation & Characterization	Yun-Ying Chen	Micron	Taiwan
1189	Analysis of substrate trace cracking in combined power and thermal cycling reliability test	Mechanical Simulation & Characterization	Manish Nayini	Micron Technology, India	India
1213	Package Design Optimization of ED-FCCSP with Different Die Aspect Comparison to Prevent Void Issue	Mechanical Simulation & Characterization	Freedman Yen	SPIL	Taiwan
1226	Finite Element Analysis of Interfacial Delamination in Double Side Molding Power Module SiP During Reflow	Mechanical Simulation & Characterization	Linjie Liao	Central South University	China
1270	Signal pin push test method calibration for soldering interconnection qualification in power packaging	Mechanical Simulation & Characterization	Yiming Liang	STMicroelectronics	China
1288	Simulation Study on Cu Trace Damage and Cu/Polyimide Interface Delam of RDLs in FOWLP under Hygro-Thermo-Mechanical Loads	Mechanical Simulation & Characterization	Ming-Sheng Luo	South China University of Technology	China
1301	Characterization of the Crack Driving Force of the Popcorn-type Failure in Mold-Underfilled Packages under Hygro-Thermo-Vapor Loads	Mechanical Simulation & Characterization	Guang-Chao Lyu	South China University of Technology	China
1353	Analysis of Stacked Overhang Die Stress During Wire Bonding	Mechanical Simulation & Characterization	Jing He	Western Digital	China
1406	Warpage Calculation Methodology for C2W Hybrid Bonded Wafers	Mechanical Simulation & Characterization	Vasarla Nagendra Sekhar	Institute of Microelectronics (IME), Singapore	Singapore
1294	The Influence of Pd Layer Thickness in ENEPIG on Solder Joint Morphology and Reliability	Quality, Reliability & Failure Analysis	Yoon, JaeJun	Sungkyunkwan University	South Korea
1117	The Optimum Conditions of Loose Particles Detection for Microelectronic Packaging	Quality, Reliability & Failure Analysis	Lei Su	Jiangnan University	China
1204	Strain Rate-Dependent Interface Characterization for Pad Cratering Failure Study	Quality, Reliability & Failure Analysis	Jiasheng HUANG	The Hong Kong University of Science and Technology	China
1222	Effect of Size-controlled Low-Melting-Point-Alloy Particle-on the Reliability of Transient Liquid Phase Epoxy Composite CA	Quality, Reliability & Failure Analysis	Yongjun Huo	Beijing Institute of Technology	China
1265	USE OF AI TO PREDICT THE COMPATIBILITY BETWEEN SOLDER PASTE RESIDUES AND COATINGS	Quality, Reliability & Failure Analysis	Mélanie MATHON	Inventec Performance Chemicals	France
1271	Reliability Study of Multi-chip GaN Device by Fan-out Panel Level Package	Quality, Reliability & Failure Analysis	Qingyuan Tang	Guangdong Fenghua Semiconductor Technology	China
1317	Electromigration Reliability Analysis of fine line RDL damascene Interconnects	Quality, Reliability & Failure Analysis	Hsiang Yao Hsiao	Institute of Microelectronics (IME), Singapore	Singapore
1321	Economical characterization of Cu/Dielectric hybrid bonded interfaces using ion milling method	Quality, Reliability & Failure Analysis	Kenneth Lee	Institute of Microelectronics (IME), Singapore	Singapore
1381	Physical information neural network-based solution for mechanical properties of sintered nanosilver materials	Quality, Reliability & Failure Analysis	Yutai Su	NWPU	China
1110	Live Thermal Simulation using Digital Twin for Efficient Semiconductor Layout Design	Thermal Management and Characterization	bin he	Institute of Microelectronics (IME), Singapore	Singapore
1112	Embedded Backside Cooling Solution for Two Stacked High-Power Chips	Thermal Management and Characterization	Xiaowu Zhang	Institute of Microelectronics (IME), Singapore	Singapore
1166	Impact of Die-Attach Voids on the Thermal Performances of Clip-Bonded Packages	Thermal Management and Characterization	Ilyas Dchar	Nexperia	United Kingdom
1249	Simulation, Verification, and Failure Analysis of Fast Recovery Diodes for the Surge Current Capability	Thermal Management and Characterization	Hao Guan	Fudan University	China
1302	Electro-Thermal-CFD Modeling for Joule Heating Analysis in Power Module	Thermal Management and Characterization	Qingming Feng	STMicroelectronics	China
1356	Three-dimensional Manifold Microchannel Integrated Heat Sink for High-performance Computing Chips	Thermal Management and Characterization	Guoran Lu	Institute of Microelectronics of the Chinese Academy of Sciences	China
1371	High-thermal-conductivity Dummy Die and Finned Lid for Enhanced Liquid Cooling of 2.5D ICs	Thermal Management and Characterization	Hsin-Cheng Lin	National Taiwan University	Taiwan
1351	Resolving Key Issues in Very Thin Die Package Manufacturing	Assembly and Manufacturing Technology	Talledo, Jefferson	STMicroelectronics	Philippines
1366	Elimination of Compromised Wirebonding on Ceramic MEMS Package through Improved Process and Tooling Design	Assembly and Manufacturing Technology	Bamba, Behra Esposo	STMicroelectronics	Philippines