



ENGINEERS DAY

Collaboration for Innovation

@Samsung

Thursday, September 26th 2019
13:00 – 17:00

Samsung DSR Tower Conference Hall C (1st Floor)

Agenda:

13:00 – 13:15 Registration

13:15 – 14:00 Three Tech Talks

- Future of Computing - Cryogenic Probing
- Emerging Memory – MRAM
- Advances in 5G RF Wafer Test

14:00 – 14:45 Breakout Session #1

14:45 – 15:00 Break

15:00 – 15:45 Three Tech Talks

- Heterogenous Integration/HBM and High Speed Wafer Test
- MEMS Innovation for High Temperature Applications
- Adaptive Test Cell Thermal Control

15:45 – 16:30 Breakout Session #2

16:30– 17:00 Wrap-up

Register now at:

<https://www.formfactor.com/engineers-day/samsung>

Session #1

5G will revolutionize our world, with faster and denser data transmission that enable previously-impossible new applications impacting nearly all aspects of modern life; FormFactor will provide an overview of 5G applications and the latest RF/millimeter-wave on-wafer test products. 5G will also fuel an unprecedented demand for data centers, which could consume 20% of the earth's power output by 2025; FormFactor will preview the technologies and ultra-cold test requirements of the superconducting logic and quantum computing proposed for high performance computing (HPC) energy and cost. FormFactor will also discuss new non-volatile memory (NVM) technology, such as Magnetic RAM (MRAM), which aims to supplement or replace today's DRAM and Flash products.

Session #2

Advanced packaging technologies for heterogenous integration (e.g., bumps, TSVs, and silicon interposers) are emerging as critical enablers of next-generation chip performance, increasing device functionality and speed/bandwidth for high-performance-computing. FormFactor's MEMS probe cards are optimized to deliver the lowest cost of test and the best KGS quality, including HBM2 at 40um fine pitch, 300mm full-wafer parallelism, and 1GHz and higher. Other new probe products deliver hybrid MEMS technology for increased current carrying capacity (CCC), and cards for testing above 175°C, for fewer burnt probe tips and more complete test coverage of demanding applications such as automotive, AI, and processors. Finally, recent FormFactor innovations include a new approach in adaptive test temperature regulation which can ensure device temperature (T_j) reflects the actual desired test temperature (T_c).

Breakout Sessions

In our breakout sessions, engineers can ask questions to speakers regarding presentation materials, or explore further on test challenges and ignite new ideas on potential solutions. Three concurrent sessions will be hosted by the speakers in each break out session. Attendees can pick and choose the topic of interest, and move around as desired. We welcome vibrant discussions on all topics. We look forward to inspired ideas as we collaborate together.

Presenters:

Tim Eichenseer, Vice President, Strategic and Product Management

Tim Eichenseer has served at the Vice President for Strategic and Product Management since January 2014. Prior to this, Tim served as the Vice President for Strategic and Product Management for the MicroProbe Product Group from October 2012 to January 2014. Before joining FormFactor, Tim was the Vice President for Strategic and Product Management at MicroProbe from July 2012 to October 2012. Mr. Eichenseer holds a B.S. in Marketing with a minor in Mathematics from San Jose State University. He is also a graduate of the Executives in Innovation and Product Management from the Haas School of Business at the University of California, Berkeley.

Amy Leong, Chief Marketing Officer and Senior Vice President, M&A

Amy Leong has been with FormFactor since October 2012. Prior to this, Amy was the VP of Marketing at MicroProbe from April 2010 through the October 2012 closing of FormFactor's acquisition of MicroProbe. Before joining MicroProbe, Ms. Leong worked at Gartner, Inc. as a Research Director from 2008 to 2010 and covered the ASSP system-on-chip and microcontroller markets. Prior to Gartner, Ms. Leong worked in a variety of semiconductor process engineering and product marketing roles. Ms. Leong holds an M.S. in Material Science and Engineering from Stanford University and a B.S. in Chemical Engineering from the University of California, Berkeley.

TM Kim, Manufacturing Engineering Fellow

TM is responsible for a range of manufacturing processes in the probe-head, VPS and full-wafer contactor lines at FormFactor. TM's 35-year career (Signetics/Philips Korea Semiconductor Assy/Test Packaging Engineering- 12 years and FormFactor- 23 years) spans innovations across many of our technologies, from wire-bonding posts on ceramic to packaging technologies attaching capacitors to ceramics (PH100/150 family, S1) and MLOs (Istari project) to dutlet dicing and welding (developer of "Tacky Flux") to probe alignment algorithms (developer of "MicroLign") to ATRE (advanced tester resource enhancement) component fabrication to single spring repair (developer of "RSR"). TM is at forefront of our relationship with our Korean customers and working closely with them, has been pivotal in solving many technical challenges.

Timothy McMullen, Sr. Director, Strategic Marketing

Timothy McMullen has over 20 years of experience in the semiconductor industry, having held a variety of engineering, marketing, and management roles in support of FormFactor's lineup of wafer-level and package-level reliability test equipment. Prior to joining the company, he was VP and GM of Aetrium's Reliability Test Products Division. As a Marketing Director for FormFactor, Timothy's current role includes exploring means of growing FormFactor's product portfolio through mergers and acquisitions, and working with FormFactor's network of industry partners to deliver proven application solutions to customers.

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Presenters (continued)

David Raschko, Principal Product Engineer

David Raschko joined Cascade Microtech in 2014 as a Test Engineer where he worked on improving manufacturing capability for mmW production probes along with introducing custom calibration substrates to production. After the FormFactor-Cascade Microtech acquisition he moved into a new Product Engineering group where he is responsible for supporting and developing 5G ATE Probe cards. David holds an M.S. in Applied Physics from the University of Oregon and a B.S. in Physics from Seattle University.

Quay Nhin, Sr Product Marketing Manager

Quay Nhin joined FormFactor in 2008 and is currently serving as the Technical Product Marketing Manager for the memory products with a focus on emerging high bandwidth memory (HBM) and high speed wafer-level test requirement. Quay had held various engineering positions in Technical Support and Field Applications. His areas of interest are in high frequency, signal integrity and power delivery network optimization in advanced packaging technologies.

Bong Cho, Product Specialist

Bong Cho joined FormFactor in 2014 as a Sales Applications Engineer. Specializing in high frequency probing, he is currently based in Korea and focuses on Systems and RFPC sales. Prior to FormFactor, Bong worked at TeraView where he provided terahertz spectroscopy, terahertz pulsed imaging and fault isolation of packaging solutions to various markets. He also worked at ESI for 10 years as an applications engineer and provided laser process solutions to the semiconductor backend markets.

Ashish Bhardwaj, Sr. Product Marketing Manager

Ashish Bhardwaj is a technical product marketing professional at FormFactor for SoC products. In this role, he supports the world's leading fabless companies and IDMs. Before migrating into the marketing role, he served as an Applications Engineer for FormFactor. He has been in the probe card industry for the last eight years. Ashish holds M.S. in Electrical Engineering from San Jose State University.



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