

# **Automotive Electronics Council**

## **Component Technical Committee**

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# **Agenda**

*(subject to change)*

**2017 - Nineteenth Annual  
Automotive Electronics  
Reliability Workshop**

**April 18, 19, & 20**

**Novi, MI  
Sheraton Detroit Novi Hotel**

<b>Tuesday, April 18, 2017</b>				
		7:30 AM - 8:00 AM	<b>Continental Breakfast (provided)</b>	
		8:00 AM - 8:30 AM	<b>Workshop Introductions</b>	
<b>Session 1: Passive &amp; Discrete Component Technology  8:30 AM - 10:00 AM</b>	<b>1.1</b>	8:30 AM - 9:00 AM	Peter Straub <i>Schurter AG</i>	Reliable SMD Fuses (Surface-Mounted Device) for Overcurrent Protection from 12VDC to 400VDC
	<b>1.2</b>	9:00 AM - 9:30 AM	V. Cavallaro <i>STMicroelectronics</i>	Experimental Reproduction of Copper Dendrite Growth with Standard H3TRB-Chamber
	<b>1.3</b>	9:30 AM - 10:00 AM	Kurt Smith <i>Transphorm, Inc.</i>	Gallium Nitride Power Switch Reliability
		10:00 AM - 10:30 AM	<b>BREAK: Coffee, drinks, snacks (provided)</b>	
<b>Workshop Session - W.1</b>		10:30 AM - 11:30 PM	<b>AEC-Q200 Document Revision Status &amp; Discussion</b> <i>Moderator: AEC Q200 Technical Committee</i>	
		11:30 PM - 1:00 PM	<b>LUNCH (on own)</b>	
<b>Workshop Session - W.2</b>		1:00 PM - 2:00 PM	<b>AEC-Q101 Document Status &amp; Discussion</b> <i>Moderator: AEC Q101 Technical Committee</i>	
<b>Workshop Session - W.3</b>		2:00 PM - 2:30 PM	Dr. Philipp Plathner <i>OSRAM</i>	Overview of LED-Related Standards
		2:30 PM - 3:30 PM	<b>AEC-Q102 LED Qualification Review &amp; Discussion</b> <i>Moderator: Ludger Kappius, Hella KGaA</i>	
		3:30 PM - 4:00 PM	<b>BREAK: coffee, drinks, snacks (provided)</b>	
<b>Workshop Session - W.4</b>		4:00 PM - 4:30 PM	<b>Microphone MEMs Activity Update</b> <i>Moderator: Bassel Atala, STMicroelectronics</i>	
		4:30 PM - 5:30 PM	<b>AEC-Q103-002 Pressure Sensor MEMs Qualification Update</b> <i>Moderator: Earl Fischer, Autoliv Electronics</i>	
<b>Workshop Session - W.5</b>		5:30 PM - 6:30 PM	<b>EOS Mitigation and Communication Procedures</b> <i>Moderators: Leon Masseus, Infineon &amp; Bob Knoell, NXP Semiconductors</i>	
		6:30 PM	<b>SESSION CLOSE</b>	

**Wednesday, April 19, 2017**

7:00 AM - 7:30 AM

**Continental Breakfast (provided)**

<p align="center"><b>Session 2: Reliability Improvements - Part 1 7:30 AM - 9:30 AM</b></p>	<b>2.1</b>	7:30 AM - 8:00 AM	Bob Knoell <i>NXP Semiconductors</i>	Juggling Knowledge Based and Standards Based Qualifications
	<b>2.2</b>	8:00 AM - 8:30 AM	Lieyi Sheng <i>ON Semiconductor</i>	Profound Incentives of Wafer-Level-Reliability (WLR) Monitoring for Ensuring High-Quality Manufacturing of Automotive-Grade ASIC Products
	<b>2.3</b>	8:30 AM - 9:00 AM	Robert Rathert <i>KLA-Tencor Corporation</i>	Best Known Methods for Latent Reliability Defect Control in 90nm – 14nm Semiconductor Fabs
	<b>2.4</b>	9:00 AM - 9:30 AM	Horst Lewitschnig <i>Infineon Technologies</i>	Guardbanding Based On Device Drift Behavior

**KEYNOTE**

9:30 AM - 10:00 AM

Werner Kanert  
*Infineon Technologies*

The Reliability Dilemma

10:00 AM - 10:30 AM

**BREAK: Coffee, drinks, snacks (provided)**

<p align="center"><b>Session 3: Reliability Improvements - Part 2 10:30 AM - 12:30 PM</b></p>	<b>3.1</b>	10:30 AM - 11:00 AM	Alan Righter <i>Analog Devices</i>	An IC Supplier Implementation of Automotive EIPD Customer Resolution Process
	<b>3.2</b>	11:00 AM - 11:30 AM	Rohith Sood <i>Lattice Semiconductor</i>	A Hybrid Methodology for Fault Grading A Low-Medium Density FPGA
	<b>3.3</b>	11:30 AM - 12:00 PM	Terry Chien <i>ISSI</i>	A Possible Latch-up Concern Induced by Active Layer Particles During FAB Process
	<b>3.4</b>	12:00 PM - 12:30 PM	John Perry & Teresa Rowe <i>IPC</i>	IPC Standards Development Efforts for Printed Board Performance and Assembly in Automotive Applications

12:30 PM - 2:00 PM

**LUNCH (on own)**

Wednesday, April 19, 2017 (continued)				
<b>Session 4:</b> <b>Emerging Technologies</b> <b>2:00 PM - 3:30 PM</b>	4.1	2:00 PM - 2:30 PM	Ulrich Abelein <i>Infineon Technologies</i>	E-Mobility and Autonomous Driving – New Functions, New Requirements To Automotive Electronics
	4.2	2:30 PM - 3:00 PM	Jan Schat <i>NXP Semiconductors</i>	Scan-Based Checksum Generation for High Diagnostic Coverage in Safety-Critical ICs
	4.3	3:00 PM - 3:30 PM	Peter Wurster <i>Daimler</i>	TRACE (Technology Readiness Process for Consumer Electronics) Enabling for Intelligent Mobility and Intelligent Infrastructure
		3:30 PM - 4:00 PM	<b>BREAK: Coffee, drinks, snacks (provided)</b>	
<b>Session 5:</b> <b>Zero Defect &amp; Functional Safety Initiatives</b> <b>4:00 PM - 5:30 PM</b>	5.1	4:00 PM - 4:30 PM	Reinhard Stadler <i>BMW Group</i>	Zero Defect Approach for Semiconductors, Used In BMW Vehicles - BMW Requirements
	5.2	4:30 PM - 5:00 PM	Ife Hsu <i>Intel</i>	Knowledge-Based-Qualification: A Winning and Robust Approach for ADAS and Internal/Cockpit Application
	5.3	5:00 PM - 5:30 PM	Dr. Viktor Tiederle <i>RELNETyX Consulting UG</i>	Handling of Hardware Components in Automotive Functional Safety Spec ISO26262
<b>Workshop Session - W.6</b>		5:30 PM - 6:30 PM	<b>Multi-Chip Module (MCM)/Hybrid Qualification Update</b> <i>Moderator: Tom Lawler, Lattice Semiconductor</i>	
		6:30 PM	<b>SESSION CLOSE</b>	

**Thursday, April 20, 2017**

7:30 AM - 8:00 AM      **Continental Breakfast (provided)**

<b>Session 6: Interconnect &amp; Assembly Advancements 8:00 AM - 10:00 AM</b>	6.1	8:00 AM - 8:30 AM	Andy Mackie <i>Indium Corporation</i>	Semiconductor Assembly, Modular and SMT Materials Reliability for Evolving Automotive Electronics Applications
	6.2	8:30 AM - 9:00 AM	T. Dambruoso <i>STMicroelectronics</i>	Multiple Reflow Test Analysis on Flip Chip BGA Packages for PPM Assessment at Post Assembly Step
	6.3	9:00 AM - 9:30 AM	Wentao Qin <i>ON Semiconductor</i>	Mechanism to Improve The Reliability of Cu Wire Bonding by Pd-Coating of The Wire
	6.4	9:30 AM - 10:00 AM	Dr. Mykola Blyzniuk <i>Melexis</i>	Bond Ball Lift Failure Mode Category - Criteria for Post Stress Assessment of WBP Tests

10:00 AM - 10:30 AM      **BREAK: Coffee, drinks, snacks (provided)**

<b>Session 7: Testing Methodology 10:30 AM - 12:00 PM</b>	7.1	10:30 AM - 11:00 AM	Robert Ashton <i>ON Semiconductor</i>	Procedure for Determining a Package Size Below Which CDM Testing Is Not Required
	7.2	11:00 AM - 11:30 AM	CC Hung <i>ISSI</i>	A Different Concept for Improvement of Wafer Testing A Memory Device
	7.3	11:30 AM - 12:00 PM	Alan Righter <i>Analog Devices</i>	AEC-Q100 and Q101 Implementation / Procedure Using the New JS-002 CDM Platform: A Document Overview

<b>Workshop Session - W.7</b>	12:00 PM - 1:00 PM	<b>AEC-Q100 Document Status &amp; New AEC Initiatives</b> <i>Moderator: AEC Q100 Technical Committee</i>		
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<b>WRAP-UP</b>	1:00 PM - 1:30 PM	AEC Technical Committee	Closing Statements & Workshop Adjourned
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