

Automotive Electronics Council
Component Technical Committee

Technical Session Agenda

(subject to change)

**2024 - Twenty-Second Annual
Automotive Electronics
Reliability Workshop**

April 23 - 25

**Novi, MI
Sheraton Detroit Novi Hotel**

Tuesday, April 23, 2024

7:30 AM - 8:15 AM

Continental Breakfast (provided)

8:15 AM - 9:00 AM

Workshop Opening & Chairman's Report

Session 1: Passive Components - Technology Improvements 9:00 AM - 11:00 AM	1.1	9:00 AM - 9:30 AM	Rosa Davilla <i>Yageo/KEMET</i>	AEC-Q200 Revision E Brings 105°C Rated Supercapacitors to Automotive Applications
	1.2	9:30 AM - 10:00 AM	James Emerick <i>Kyocera AVX</i>	Multi-Layer Varistor's Dual Role of Suppressing Transient Voltages & EMI within Electric Vehicles

10:00 AM - 10:30 AM

BREAK: Coffee, drinks, snacks (provided)

Session 1 (continued)	1.3	10:30 AM - 11:00 AM	Dem Lee <i>Integrated Service Technology (iST)</i>	A Corrosion Quantitation Technique Applied in Accelerated Stress and Active Sulfur Outgassing Tests
------------------------------	------------	---------------------	---	---

Workshop Session - W.1

11:00 AM - 11:30 AM

AEC-Q200 Activity Status & Discussion
Moderator: Saad Lambaz, Littelfuse & AEC Q200 Task Group

11:30 AM - 1:00 PM

LUNCH (on own)

Tuesday, April 23, 2024 (continued)

Session 2: Discrete & Optoelectronic Technology Improvements 1:00 PM - 2:30 PM	2.1	1:00 PM - 1:30 PM	David Price <i>KLA</i>	Key differences Between SiC vs. Si Inline Process Control Strategies
	2.2	1:30 PM - 2:00 PM	Richard Barnett <i>KLA</i>	Plasma Dicing - Can The Benefits of Plasma Dicing of Silicon Be Exploited for SiC Power Device Manufacturing
	2.3	2:00 PM - 2:30 PM	Markus Ritzer <i>ams OSRAM</i>	Qualification of Optoelectronic Multi-Chip Modules
		2:30 PM - 3:00 PM	BREAK: coffee, drinks, snacks (provided)	
Workshop Session - W.2		3:00 PM - 3:30 PM	AEC-Q101 Activity Status & Discussion <i>Moderator: Andreas Pinkernelle, Nexperia & AEC-Q101 Task Group</i>	
Workshop Session - W.3		3:30 PM - 4:00 PM	AEC-Q102 LED/Optoelectronic Activity Status & Discussion <i>Moderator: Uwe Berger, Hella KGaA & AEC-Q102 Task Group</i>	
Workshop Session - W.4		4:00 PM - 4:30 PM	Wide Band Gap Activity Status & Discussion <i>Moderator: Don Gajewski, Wolfspeed & WBG Task Group</i>	
		4:30 PM	SESSION CLOSE	

Wednesday, April 24, 2024

7:30 AM - 8:00 AM

Continental Breakfast (provided)

<p align="center">Session 3: Quality Improvements 8:00 AM - 10:00 AM</p>	3.1	8:00 AM - 8:30 AM	Sumit Tayal & Oliver Senftleben <i>Micron Semiconductor & BMW Group</i>	Challenges Within The E/E Value Chain
	3.2	8:30 AM - 9:00 AM	John Grogan & Warren Chen <i>Macronix</i>	Safe Launch Challenges (Planning, Execution, & Case study)
	3.3	9:00 AM - 9:30 AM	Scott Martin <i>Texas Instruments</i>	Quality Assurance Through Design: Applying The Physics of Fail Models in Design of Advanced Automotive ICs
	3.4	9:30 AM - 10:00 AM	Willie Chen <i>ISSI</i>	LANNR – An Alternative Statistical Method of Outlier Screening for Quality Improvement

10:00 AM - 10:30 AM

BREAK: Coffee, drinks, snacks (provided)

<p align="center">Session 4: Extended Mission Profiles 10:30 AM - 12:00 PM</p>	4.1	10:30 AM - 11:00 AM	Dr. Horst Lewitschnig & Denis Dutey <i>Infineon Technologies & STMicroelectronics</i>	From Auto-Grade to EV-Grade: New Concepts and Qualification Methods for Extended Mission Profiles
	4.2	11:00 AM - 11:30 AM	Rene Rongen <i>NXP Semiconductors</i>	AEC and Extended Mission Profiles
	W.5	11:30 AM - 12:00 PM	<p align="center">Workshop Session: Extended Mission Profiles Discussion <i>Moderator: Rene Rongen, NXP Semiconductors</i></p>	

12:00 PM - 1:30 PM

LUNCH (on own)

Wednesday, April 24, 2024 (continued)

Session 5: Testing Methodology 1:30 PM - 3:00 PM	5.1	1:30 PM - 2:00 PM	Martina Hommel <i>Robert Bosch GmbH</i>	Significance of ISO7637 Pulse 2a to Integrated Circuits
	5.2	2:00 PM - 2:30 PM	Jiaqi Tang <i>JACO Instruments</i>	Improving the Wire Bond Pull Test and Failure Analysis for Copper Wired Components
	5.3	2:30 PM - 3:00 PM	Nobuyuki Wakai <i>Toshiba Electronic Devices</i>	Harmonization to / Justification for a Common Industry / Automotive CDM Stress Procedure of Single Zap Per Pin Per Polarity
		3:00 PM - 3:30 PM	BREAK: Coffee, drinks, snacks (provided)	
Workshop Session - W.6		3:30 PM - 4:00 PM	AEC-Q004 Zero Defects Framework Activity Status & Discussion <i>Moderator: Rene Rongen, NXP Semiconductors & AEC-Q004 Task Group</i>	
Session 6: Board-Level Reliability 3:30 PM - 4:30 PM	6.1	4:00 PM - 4:30 PM	Ben Albiston <i>Micron Technology</i>	Best Practices for Statistical Analysis of Board-Level Reliability Test Data
	6.2	4:30 PM - 5:00 PM	Kevin Brennan <i>Indium Corporation</i>	Enabling Complex PCB Designs while Extending the Mission Profile of Automotive Electronics
Workshop Session - W.7		5:00 PM - 5:30 PM	Workshop Session: Status of AEC Q007 Board-Level Reliability Test Methodology <i>Moderator: Romuald Roucou, NXP Semiconductors & AEC-Q007 Task Group</i>	
		5:30 PM	SESSION CLOSE	

Thursday, April 25, 2024

7:30 AM - 8:00 AM

Continental Breakfast (provided)

Session 7: Materials & Failure Analysis Improvements 8:00 AM - 9:30 AM	7.1	8:00 AM - 8:30 AM	Raquel Fundan <i>STMicroelectronics</i>	Copper Alloy Wire Selection for High Reliability Automotive IC Packages
	7.2	8:30 AM - 9:00 AM	David Taraci <i>ZEISS</i>	Root-Cause Analysis and Failure Modality of a Fingerprint-Based Biometric Sensor WLP Via Nondestructive 3D X-ray Microscopy
	7.3	9:00 AM - 9:30 AM	Andrea Marcovoti <i>STMicroelectronics</i>	Failure Analysis: A Decisive Factor of the Semiconductor Reliability Flow

9:30 AM - 10:00 AM

BREAK: Coffee, drinks, snacks (provided)

Workshop Session - W.8	10:00 AM - 10:30 AM	AEC-Q006 Cu Wire Activity Status & Discussion <i>Moderator: Ulrich Abelein, Infineon Technologies & AEC-Q006 Task Group</i>		
Workshop Session - W.9	10:30 AM - 11:00 AM	AEC-Q100 Activity Status & Discussion <i>Moderator: Ulrich Abelein, Infineon Technologies & AEC-Q100 Task Group</i>		
Workshop Session - W.10	11:00 AM - 11:30 AM	AEC-Q104 Multi-Chip Modules (MCM) Activity Status & Discussion <i>Moderator: Steve Sibrel, Harman & AEC-Q104 Task Group</i>		
Workshop Session - W.11	11:30 AM - 12:00 PM	AEC-Q105 Touch Panel Displays Activity Status & Discussion <i>Moderator: Steve Sibrel, Harman & AEC-Q105 Task Group</i>		
WRAP-UP	12:00 PM - 12:30 PM	AEC Technical Committee	Closing Statements & Workshop Adjourned	