Automotive Electronics Council

Component Technical Committee

Agenda

(subject to change)

2015 - Seventeenth Annual

Automotive Electronics

Reliability Workshop

April 28, 29, & 30

Novi, MI

Sheraton Detroit Novi Hotel

Tuesday, April 28, 2015				
		7:30 AM - 8:00 AM	**Continental Breakfast (provided)**	
		8:00 AM - 8:30 AM	**Workshop Introductions**	
Session 1: Passive Component Technology 8:30 AM - 10:30 AM	**1.1**	8:30 AM - 9:00 AM	Ron Demcko *AVX*	Automotive Transient Voltage Control Update: Emergence of Integration MLCCs and New Families of Multi-Layer Varistors
	1.2	9:00 AM - 9:30 AM	Victor Andoralov *KEMET Electronics AB, Sweden*	High Performance Axial Capacitors for Automotive Electronics
	1.3	9:30 AM - 10:00 AM	Ron Demcko *AVX*	Automotive Grade RF Devices Update
	1.4	10:00 AM - 10:30 AM	John Bultitude *KEMET Electronics*	Miniaturization of High Voltage BME X7R Multi-Layer Ceramic Capacitors for Use in Automotive Applications
		10:30 AM - 11:00 AM	**BREAK: Coffee, drinks, snacks (provided)**	
Session 2: Discrete Semiconductor Technology 11:00 AM - 12:00 PM	**2.1**	11:00 AM - 11:30 AM	Rick Chu *Vishay Diode*	Solderability Test Specification on Exposed Pad (EP) Discrete Products
	2.2	11:30 AM - 12:00 PM	F. Pintacuda *STMicroelectronics*	Relative Humidity Effect on High Voltage power MOSFET HAST Performances
	2.3	*Withdrawn*		
		12:00 PM - 1:30 PM	**LUNCH (on own)**	
Workshop Session - W.1		1:30 PM - 2:30 PM	**AEC-Q102 LED Qualification Review & Discussion** *Moderator: Ludger Kappius, Hella KGaA*	
		2:30 PM - 3:00 PM	**BREAK: coffee, drinks, snacks (provided)**	
Workshop Session - W.2		3:00 PM - 4:00 PM	**Q200 Document Revision Status & Discussion** *Moderator: AEC Q200 Technical Committee*	
Workshop Session - W.3		4:00 PM - 5:00 PM	**Q101 Document Status & Discussion** *Moderator: AEC Q101 Technical Committee*	
		5:00 PM	**SESSION CLOSE**	

Wednesday, April 29, 2015				
		7:30 AM - 8:00 AM	**Continental Breakfast (provided)**	
Session 3: Cu Wire / Interconnect Technology 8:00 AM - 10:00 AM	**3.1**	8:00 AM - 8:30 AM	Rene Rongen *NXP Semiconductors*	Cu-Wire Bonding Process Control for Automotive Electronics
	3.2	8:30 AM - 9:00 AM	Alberto Mancaleoni *STMicroelectronics*	Extended Lifetime Study of Copper and Copper-Palladium Bonding Wires
	3.3	9:00 AM - 9:30 AM	Zhongning Liang *NXP Semiconductors*	Impact of Particles on Cu Wire Bonding Reliability
	3.4	9:30 AM - 10:00 AM	R. Enrici Vaion *STMicroelectronics*	Metal Fatigue in Copper Pillar Flip Chip BGA: A Refined Acceleration Model for the Aluminum Pad Cracking Failure Mode
		10:00 AM - 10:30 AM	**BREAK: Coffee, drinks, snacks (provided)**	
Session 4: Reliability Improvements 10:30 AM - 12:30 PM	**4.1**	10:30 AM - 11:00 AM	Reynaldo Ramirez Jr. AMS AG, Austria	Influence of Scribe Line Structures and Incomplete Polyimide Coverage to Temperature Cycle Performance of Encapsulated Integrated Circuits
	4.2	11:00 AM - 11:30 AM	Mykola Blyzniuk *Melexis*	Post Stress Assessment of Wire-Bond Pull Tests
	4.3	11:30 AM - 12:00 PM	Warren Chen Macronix International Co.	NOR Flash Management Methods for high Reliability Applications
	4.4	12:00 PM - 12:30 PM	Lieyi Sheng *ON Semiconductor*	The Physical Interpretations and Reliability Challenges of Interfacial Roughness in Poly-Oxide-Poly Capacitors for Voltage-Elevated Automotive Electronics
		12:30 PM - 2:00 PM	**LUNCH (on own)**	

Wednesday, April 29, 2015 (continued)				
Session 5: **Zero Defects & Mission Profile Initiatives** **2:00 PM - 5:40 PM**	**5.1**	2:00 PM - 2:30 PM	Thomas Jost *AMS*	Gaining Knowledge of Integrated Semiconductor Design Margin by Concept of Functional Robustness Validation
	5.2	2:30 PM - 3:00 PM	Wes Smith *Galaxy Semiconductor / Micronas*	Multi-Variate Part Average Testing Finds Hidden Outliers: A Case Study of Field Returns at Micronas
	5.3	3:00 PM - 3:30 PM	Joy Gandhi *Qualicent Analytics*	Advanced Analytics for Zero Defects: Pre-prototype and Beyond
		3:30 PM - 3:50 PM	**BREAK: Coffee, drinks, snacks (provided)**	
Session 5: (Continued)	**5.4**	3:50 PM - 4:20 PM	Anil Gandhi *Qualicent Analytics*	Prediction and Screening of Field Failures with Advanced Analytics
	5.5	4:20 PM - 4:50 PM	Dr. Horst Lewitschnig *Infineon Technologies*	New Methods for Calculating Early Life Failure Probabilities
	5.6	4:50 PM - 5:40 PM	Werner Kanert, Bob Knoell, Rene Rongen *Infineon Technologies & NXP Semiconductors*	Understanding The Relationship Between Failure Mechanism-Driven Stress Test and Application-Specific (Robustness Validation) Test Qualification Methods
Workshop Session - W.4		5:40 PM - 6:30 PM	**Multi-Chip Module (MCM)/Hybrid Qualification Update** *Moderator: Tom Lawler, Lattice Semiconductor*	
		6:30 PM	**SESSION CLOSE**	

Thursday, April 30, 2015				
		7:30 AM - 8:00 AM	**Continental Breakfast (provided)**	
Session 6: **EOS/ESD Developments** **8:00 AM - 9:30 AM**	**3.1**	8:00 AM - 8:30 AM	Alan Righter *Analog Devices*	The New JS-002 Joint JEDEC/ESDA CDM Standard: Towards A Single CDM Test Platform for AEC Harmonization
	3.2	8:30 AM - 9:00 AM	Sandy Yen *ISSI*	Various Methods To Enhance Device Robustness Against EOS/ESD
	3.3	9:00 AM - 9:30 AM	Alan Righter *Analog Devices*	Industry Council Update: Understanding Electrical Overstress - EOS
		9:30 AM - 10:00 AM	**BREAK: Coffee, drinks, snacks (provided)**	
Workshop Session - W.5		10:00 AM - 11:00 AM	**MEMs Qualification Update** *Moderator: Earl Fisher, Autoliv Electronics*	
Workshop Session - W.6		11:00 AM - 12:00 PM	**Q100 Rev H Document Overview & New AEC Initiatives** *Moderator: AEC Q100 Technical Committee*	
WRAP-UP		12:00 PM - 12:30 PM	AEC Technical Committee	Closing Statements & Workshop Adjourned