

ADVANCE PROGRAM

2007 ROCS Workshop

SUNDAY October 14, 2007, Room TBA, Hilton Portland & Executive Tower

Preceding the Compound Semiconductor IC Symposium. 921 SW Sixth Avenue, Portland, Oregon

SPONSORED BY JEDEC COMMITTEE JC-14.7, EIA, and in cooperation with the IEEE.

Registration (Cost of Workshop is \$200 at the door, make checks payable to JEDEC) **7:30 AM**

Welcome, Opening Remarks, Introductions, Start Anthony Immerlica, Workshop Chairman . . . **8:15 AM**

SESSION 1 – Accelerated Lifetest Techniques Bill Roesch, Session Chair **8:30 – 9:45 AM**

1. **Method for Accelerated Determination of PHEMT Power Slump Reliability**, Bob Yeats, Agilent.
2. **Wafer-level Accelerated Lifetesting of Individual Devices**, Dorothy J.M. Hamada & Bill Roesch, TriQuint.
3. **Acceleration Factors for THB Induced Degradation of AlGaAs/InGaAs PHEMT Devices**, Leslie Marchut & Charles S. Whitman, RFMD.

SESSION 2 - Reliability Studies of Advanced HEMTs Roberto Menozzi, Session Chair **10:15 – 11:55AM**

1. **Reliability Evaluation of 0.1 mm AlSb/InAs HEMT Low Noise Amplifiers for Ultralow-Power Applications.** Y. C. Chou, D. L. Leung, W-B. Luo, J. M. Yang, C. H. Lin, M. D. Lange, D. S. Farkas, A. L. Gutierrez, D. C. Eng, M. Wojtowicz, and A. K. Oki. Northrop Grumman Corporation, Redondo Beach, CA.
2. **Reliability Study of 0.15um MHEMT with $V_{ds} > 3V$ Bias for Amplifier Application.** H.C.Chou, F.Chou, S.Chen, D. Tu, Y. Wang, C. Wu, and S. Nelson* WIN Semiconductors Corporation. *REMEC Defense & Space.
3. **Intrinsic Reliability of a 12 volt Field Plate pHEMT measured using Conventional and Step Stress Methods.** Craig Gaw, Thomas Arnold & Karen Moore, Freescale Semiconductor.
4. **48V Reliability Testing of GaN HEMT Amplifiers,** Dan S. Green, S. Lee, W, Cai, J. Sun, S.R. Gibb, J.D. Brown, D. Hepper, R. Vetury, J. B. Shealy. RFMD.

Lunch Room TBA **Noon – 1:00 PM**

SESSION 3A - Reliability and Failure Analysis Tools Sammy Kayali, Session Chair **1:00 – 2:15 PM**

1. **Physics and Chemistry of Electronics.** Christopher Bozada, AFRL/SND, Wright-Patterson AFB.
2. **Method to Estimate the Channel Temperature of GaN High Electron Mobility Transistors.** J. Joh¹, U. Chowdhury², T.M. Chou², H.Q. Tserng² and J.L. Jimenez² 1.Massachusetts Institute of Technology, 2.TriQuint.
3. **Physical Degradation Characterization of Thin Film Resistors.** Bill Roesch, TriQuint Semiconductor.
4. **48V Reliability Testing of GaN HEMT Amplifiers,** Dan S. Green, S. Lee, W, Cai, J. Sun, S.R. Gibb, J.D. Brown, D. Hepper, R. Vetury, J. B. Shealy. RFMD.

SESSION 3B - Reliability and Failure Analysis Tools Bob Ferro, Session Chair **2:45 – 4:00 PM**

1. **Estimating Effective Dielectric Thickness for Capacitors with Extrinsic Defects by a Statistical Method.** Charles S. Whitman, RFMD.
2. **ESD Protection Capabilities of GaAs Schottky Diodes.** Peter Ersland and Rajiv Somisetty, Tyco Electronics.
3. **Waferside Analysis Technique for GaAs-Based Circuits.** Dave Littleton & Dorothy J.M. Hamada, TriQuint.

SESSION 4 - Rump Session & Late Breaking News Yi-Jen Chan, Peter Ersland Session Chair **4:15 – 5:00 PM**

All workshop attendees are encouraged to bring along a 5 - 10 minute presentation (3 - 5 PowerPoint slides) that introduce a reliability issue or topic they are currently investigating. This material would not appear in the digest, either as a paper or as slides – but would provide for discussion at the Workshop.

Website: <http://www.jedec.org/home/gaas/>