ADVANCE PROGRAM

2008 ROCS Workshop

SUNDAY October 12, 2008, Room: De Anza III, Portola Plaza Hotel

Preceding the Compound Semiconductor IC Symposium; Monterey, CA

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 Immorlica, Workshop Chairman . . **8:00 AM**

SESSION 1 – GaN Modeling and Failure Analysis

Sammy Kayali, Session Chair **8:10 – 9:45 AM**

1. **Electrical and Thermal Modeling of AlGaN/GaN HEMTs on Diamond Silicon Substrates**, McGlone[1], Weatherford[1], Wang[1], Yannuzzi[2], Gillespie[2], Via[2], and Zimmer[3]; [1] Naval Post Graduate School, [2] Air Force Research Laboratory, [3] sp3 Inc..
2. **Finite-Element Thermal Modeling of GaN-based HEMT Structures,** Costi, Bertoluzza, Delmonte, Sozzi, and Menozzi; Univ. of Parma
3. **Reliability and Degradation Mechanisms Of AlGaN/GaN HEMTs for Next Generation Mobile Communication Systems,** Dammann[1], Pletschen[1], Waltereit[1], Bronner[1], Quay[1], Müller[1], Mikulla[1], Ambacher[1], van der Wel[2], Rödle[2], Behtash[3], Bourgeois[3], Riepe[3], Fagerlind[4], and Sveinbjörnsson[4]; [1]Fraunhofer Institute for Applied Solid State Physics, [2]NXP Semi., [3]United Monolithic Semi., [4]Chalmers Univ. of Technology
4. **Physical Degradation of GaN HEMT Device Observed in TEM during Reliability Test,** Park[1], Floresca[1], Kim[1], Chowdhury[2], Jimenez[2], Lee[2], Beam[2], Saulnier[2], and Balistreri[2]; [1]Univ. of Texas at Dallas, [2]TriQuint

SESSION 2 - Passive Structures and Packaging

Roberto Menozzi, Session Chair **10:15 – 11:50AM**

1. **Reliability Studies on Thin Metal-Insulator-Metal (MIM) Capacitors,** Hamada and Roesch; TriQuint
2. **Prediction of Transmission Line Lifetimes over Temperature and Current Density,** Whitman; RFMD
3. **Reliability Evaluation of Wafer-Level-Packaging AlSb/InAs HEMT Receivers for Light-Weight and Ultralow-Power Applications,** Chou, Chien, Leung, Nishimoto, Yang, Hennig, Zeng, Parlee, Lin, Lange, Eng, Farkas, Wojtowicz, Oki, and Block; Northrop Grumman Corp.
4. **Degradation Mechanism of GaAs PHEMTs under operation in high humidity conditions,** Hisaka, Sasaki, Nogami, Hosogi, and Yoshida; Mitsubishi Electric Corp.

Lunch Room TBA . . . . . **Noon – 1:00 PM**

SESSION 3 - Reliability Under Application Conditions

Bill Roesch, Session Chair **1:10 – 2:45 PM**

1. **Use of a Transistor Array to Predict Infant Transistor Mortality Rate in InGaP/GaAs HBT Technology,** Alt, Shirley, Hutchinson, Iwamoto, Yeats, Gierhart, Bonse, Shimon, Kellert, D'Avanzo; Agilent technologies, Inc.
2. **HBT Lifetime Prediction as a function of Temperature,** Henderson; TriQuint
3. **Acceleration Parameters and Reliability of SiGe HBTs during Long-Term High Vce Operation,** Rosenthal and Paine; Boeing
4. **Method for Determining DC/RF Survivability Limits of Semiconductor Circuits,** Gil, Ersland, Li; M/A-COM

SESSION 4 - GaN Lifetests

Bob Ferro, Session Chair **3:15 – 4:20 PM**

1. **Effect of Stress Voltage on Reliability of GaN HEMTs,** Pazirandeh, Würfl, and Tränkle; Ferdinand Braun Institute.
2. **Correlation between RF and DC Reliability in GaN HEMTs,** Joh[1], del Alamo[1], Chowdhurry[2], and Jimenez[2]; [1]MIT, [2]TriQuint TX
3. **RF Arrhenius Life Testing of X-band GaN HEMTs,** Mittereder[1], Binari[1], Via[2], Roussos[1], Caldwell[1], and Calame[1]; [1]Naval Research Laboratory, [2]Air Force Research Laboratory

Late Papers/ Open Topic Discussion **Peter Ersland, Session Chair** **4:30 – 5:00 PM**

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