CMSE 2010 PROGRAM

Tuesday, February 9, 2010

Welcome and Introduction 8:30am - 8:45am

Session 1: **OEM Experiences & Avoidance of Counterfeits** 8:45am - 12:00pm
Chairman: John Prymak, Kemet Electronics

1.1 ***Experiences Detecting Counterfeits & Controls Used on Independent Distributors;***
C. Mortimer, GE Fanuc
1.2 ***Counterfeit Electronics- Commercial & Mil-grade Electronics Case Studies;***
A. DerMarderosian Jr, K. Rispoly, Raytheon Company
1.3 ***Reducing Counterfeit and Trojan Horse Risk with a Secure Anchor Point;***
J. R. Kenny, S. Vorres, CPU Technology
1.4 ***Potential Issues with Re-balled BGAs;***
N. Leonardi, H. Rotchadl, Premier Semiconductor Services
1.5 ***DPA Practices and Experience with BGA and CGA Packages;***
T. Devaney, Hi Rel Labs
1.6 ***Enhanced Approach to Providing JANS (RHA) Devices;***
B. Triggs, Semicoa
1.7 ***X-Ray Inspection Systems for Counterfeit Detection;***
B. Cardoso, A. Nishimoto, Creative Electron

Buffet Lunch in the Exhibition Area 12:00 - 2:00pm

Session 2: **BGAs & Packaging Issues** 2:00 - 5:00pm
Chairman: Larry Harzstark, The Aerospace Corp.

INVITED SPEAKER

2.1 ***Packaging Concerns & Techniques for Large Devices;***
M. J. Sampson, K. A. LaBel, NASA
2.2 ***Characterization of High Reliability Flip Chip Technology Requirements;***
B. Bauer, S. Popelar, Aeroflex Colorado Springs
2.3 ***Ceramic Column Grid Array (CCGA) Packaging for Space/Mil Applications;***
R. Kuang, Actel Corp.
2.4 ***Area Array Package Trends & Assembly Reliability/Failures for Tin-lead and Lead-free Solders;***
R. Ghaffarian, JPL/NASA
2.5 ***Flip-Chip Bump Interface Failure Mechanisms in PBGAs;***
Z. Wang, International Rectifier Corp.
2.6 ***Dense Memory Product Line Results from Stacked Die Packaging Technology;***
R. Lake, Aeroflex Colorado Springs
2.7 ***Selection and Qualification of a New 4 Mb SRAM Basic Die for Space Qualified 3D Stacked SRAM Modules;***
P-E Berthet, M. Gil, N. Fiant, 3D Plus

Exhibits and Get Acquainted Reception with Refreshment 5:30 - 7:30pm

Wednesday, February 10

Session 3: **New Reliability Practices** 8:00 - 9:30am
Chairman: Trevor Devaney, Hi-Rel Labs

3.1 ***New Fast Method for Determining Product MTBF;***
M. Silverman, H. McLean, Ops A La Carte
3.2 ***Military-Scale ESD/TVS/EMI Protection for Hi-Reliability Military Electronics;***
A. Wang, University of California
3.3 ***Testing Solutions for PEM FPGAs in High Reliability Systems;***
M. Marshall, Integra Technologies
3.4 ***Observations on Active Device Screening and Evaluation Tests;***
C. O'Brien, BAE Systems, Inc.

Session 4: **Trusted Suppliers** 9:50am - 12:00pm
Chairman: Creigh Gordon, USAF AFRL

INVITED SPEAKER

4.1 ***Trusted Integrated Circuit Overview;***
S. Maynard, B. S. Cohen, D. Radack, Institute for Defense Analyses
4.2 ***Aeroflex Trusted Supply Chain Services;***
B. Bauer, Aeroflex Colorado Springs
4.3 ***The Trusted Supplier Perspective;***
A. J. Bent, National Semiconductor
4.4 ***Integrated Circuit Trusted Supplier Program;***
D. Chu, S. Wix, J. Marchiondo, Sandia National Laboratories

Buffet Lunch in the Exhibition Area 12:00 - 2:00pm

Session 5: **Rad-Hard and Tolerant Electronics** (parallel with 6)
Chairman: Dave Strobel, Space Micro Inc. 2:00 - 5:30pm

5.1 ***Approaches for Developing Rad-Hard Electronics";***
M. Owens, R. Pugh, Think Strategically, LLC
5.2 ***Future Memory Technologies for Space;***
C. Gordon, AFRL
5.3 ***Clock Network Manager Provides Timing Accuracy Needed for Advanced System Applications;***
R. Lake, Aeroflex Colorado Springs
5.4 ***Very High Density and Radiation Tolerant PROM for Space Systems***;
P. Wang, P-E Berthet, 3D Plus
5.5 ***The Need for a Radiation Tolerant Flash Solid State Drive for Space Applications;***
B. Gess, Trident Space & Defense
5.6 ***FPGAs and ASICs for Space Applications;***
R. Roosta, JPL

5.7 ***Leveraging the Availability of 32-bit Fault-Tolerant Processors Suitable for Radiation-Tolerant FPGA Devices;*** S. Habinc, J. Gaisler, Aeroflex Gaisler AB

5.8 ***Rad Hard by Design DRAM for Space & Interceptors;***
B. Vermeire, D. Czajkowski, D. Strobel, H. Bourdu, H. Cerna,
M. Fennell, V. Verma, T. Mozdzen, L. Clark, Space Micro Inc.

5.9 ***New High Speed and High Density Radiation Tolerant SRAM Modules for Space Applications;***
P-E Berthet, P. Wang, N. Fiant, 3D Plus

Session 6: **Component Applications & Reliability** (parallel with 5) 2:00 - 5:30pm
Chairman: Anthony Lai, Aitech Defense Systems

6.1 ***Review of Air Force Space Parts, Materials & Processes (PMP) Requirements;***
L. Harzstark, The Aerospace Corp.

6.2 ***NEPP Activities;***
M. Sampson, K. LaBel, NASA

6.3 ***Potential Impact of the Piezoelectric Effects in DC/DC Converter Applications;***
A. D. Pathak, L. Ou, International Rectifier

6.4 ***New Manufacturing and Testing Techniques for High Reliability Ta Capacitors;***
Y. Freeman, J. Prymak, E. Reed, Kemet

6.5 ***Stacked Multi-Layer Ceramic Capacitors for High Reliability Applications;***
J. Bultitude, J. McConnell, A. Gurav, T. Ashburn, J. Franklin, J. Zavala, L. Jones, R. Phillips, X. Xu, J. Magee, M. Laps, KEMET Electronics Corporation

6.6 ***Robust Reliability of BME Class-I High Temperature Capacitors;***
X. Xu, J. Franklin, T. Ashburn, A. Gurav, KEMET Electronics
Corporation; C. Randall, Pennsylvania State University

6.7 ***JAN/JANS Certification and Qualification of Diodes to Aid Military and Aerospace Future Roadmap Requirements;***
F. Kwan, P. Ciccarelli, Aeroflex Metelics

6.8 ***The End of Obsolescence. Managing End Of Life Electronic Components;***
L. Melatti, Channel One Intl.

Close of General Sessions