ACB Technology Seminar

(English spoken)

25/04/2012

Location : Verbeke Foundation

Westakker - 9190 Kemzeke (BE)

www.verbekefoundation.com

… Eyes on the future, feet on the ground ...

12h00 Doors open

12h30 Start of the optional guided tour through the art gallery

13h30 Start seminar

Welcome and introduction

Gilles Rigon - CEO - ACB

13h45 Design and reliability considerations on stacked filled µvias

Arnaud Grivon - PCB/PCBA Technology Expert
Thales Global Services - EPM

Stacked, filled µvias are frequently used in harsh environments. Design rules and possible failure modes will be presented, together with the results of the reliability evaluation of complex 3+10+3 pcb build-ups with different µvia sizes. Advantages for signal integrity are also clarified.

14h15 ACB & IPC class 3

Wim Perdu - CTO - ACB

The IPC class 3 specifications are today's most commonly used pcb specifications in the high reliability market. Unfortunately many users are not fully aware of the implications this has for the manufacturer. Furthermore, users are often not aware that they rarely get what they specify. ACB proposes a 'feet on the ground' approach that guarantees product quality in combination with affordable costs.

14h45 Flexible and stretchable circuits for randomly shaped electronics

Jan Vanfleteren - Project Manager - Centre for Microsystems Technology (CMST),
Imec - Ghent University

Non-flat electronic and sensor circuits are required for many applications, in which the circuit preferably should take the shape of the object or body part onto or into which it is integrated. This contribution will present two technologies, enabling randomly shaped electronics : the Ultra-Thin Chip Package (UTCP), enhancing circuit miniaturisation and mechanical flexibility, and the Moulded Interconnect Device (MID) technology, a technology for stretchable circuits, enabling elastic and thermoplastically deformable electronics.

15h15 Design for manufacturing, the tool to reduce cost and increase reliability

Wim Huwel - Product Engineer - ACB

With the increasing circuit complexity, density and miniaturisation, DFM becomes more and more important. Many designers are struggling with choosing the optimal design rules for their application. ACB is a strong believer of supplier early involvement, which can be beneficial for all parties. Examples of the ACB NPI approach and manufacturability improvements will be shown.

15h45 Pause

16h30 Via reliability: stresses and strains explained

Steven Thijs, Geert Willems - Imec -
Electronic Design & Manufacturing program

The thermal mismatch between the via barrel copper and the surrounding epoxy laminate material leads to strains in the via barrel during thermal excursions. This may lead to via barrel cracking during lead-free soldering and limited PCB lifetime under operational conditions. Based on finite element analysis and analytical modelling the relationship between barrel strain, via lifetime, material and design parameters are revealed. An improved strain model (w.r.t. IPC-D-279) will be presented.

17h00 Cu fill process and µ BGA fan out

Wim Christiaens - Product Engineer - ACB

More and more applications require Cu filled µvias, as this technology offers clear advantages in terms of smaller foot prints, higher reliability and better signal integrity. ACB's second generation µvia Cu filling process will be presented. This process achieves a "zero dimple" result whilst remaining design independent. µ BGA structures are a key application which require Cu Via filling.The technology and design rules for BGA pitches down to 300 µm will be discussed.

17h30 Electronic components embedded in printed circuit boards

Johan De Baets, R&D Manager, Centre for Microsystems Technology (CMST),
Imec - Ghent University

The continuous demand for miniaturisation and better performance in electronics, drives the electronic packaging industry to develop innovative solutions. Embedding of bare silicon components into printed circuit board layers is one of the solutions for increasing the density of electronic systems. In this presentation the final results of the EC-FP7 project "Hermes" on component embedding, will be shown.

18h00 Q & A

All

19h00 Dinner

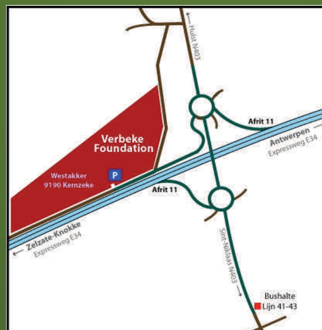
22h00 End of the evening

Participation fee : 50 euro per person **(VAT not included)**

Please inscribe as soon as possible, and latest on the 2nd of April by sending a mail confirming your name, company details, tel. number and indicate if you will participate the seminar only or also the guided tour and/or the dinner.
Participation is final the moment we receive the fee of 50 euro per person on our account IBAN BE76 6451 2523 3095 and BIC/SWIFT JVBA BE22

We invite you to join us during this special event held in an extraordinary location where art and technology have joined each other.

To experience the art of technology, you can start with a guided tour through this unique place.
at 12.30 PM exactly



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