FIB for Semiconductor Failure Analysis
Abbreviated* Application Training Syllabus.

1. Overview of FIB FA applications

2. Failure isolation

   a) Voltage Contrast (VC) techniques, passive and active VC;
   b) Probe points, reference to High Aspect Ratio (10:1) probe points;
   c) Cutting and connecting conductors;
   d) Resistive depositions;

3. Failure exposure, cross-sectioning

   a) Specifics of FIB cross-sections, economical and technical;
   b) Imaging and charging overview;
   c) Sputtering mechanism and angle-dependence;
   d) Coarse mill, currents and patterns;
   e) Fine mill, polish, high-current polish
   f) Drift correction;
   g) Tilted view;
   h) High-resolution imaging;
   i) Cross-section enhancements;
   j) Measurements;
   k) Saving and recovering results;

4. Practice

   a) Large cross-sections;
   b) Precision cross-sections (500 nm via 5 µm deep);
   c) Large precision cross-sections (2x500 nm 5 µm deep vias 10 µm apart)

*Detailed syllabus is available upon request sent to: info@partbeamsystech.com

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