IC & Technology Assessment

Integrated Circuit and Process Technology Assessment

As part of any ongoing product and process development, you need in-depth information concerning process quality, geometric issues, diffusions and other layer specific details that impact on product performance. We have the equipment, skills and expertise to provide you with that information.

Example of a targeted technology analysis of a 0.35µm analogue process.

You also need to maximize your understanding of your competitor’s products and technology, to enable you design products that are better than theirs. We can analyse open market products for you to determine all relevant technology and design information to help steer your product and process improvements.

Example of EDX confirmation of elements.

We use a combination of analytical techniques to extract technology information. We use both FIB and conventional cross-sectioning techniques; coupled with SEM, EDX, TEM, SIMS (ext), SRP doping profile (ext) and material analysis techniques, to provide a highly informative and confidential report. We have developed some of the best technology feature delineation techniques in the industry. So if there is a technology feature to analyse, we will be able to see it.

As well as process technology assessment, we extract circuit schematic and assembly information; thus providing you with comprehensive product benchmarking information. We acquire extremely accurate technical information and fully document the IC design and technology, to help you recognise functional circuit blocks and specific technology features. We perform either full or partial circuit extraction depending on your requirement. We analyse MEMS products and every type of ‘sensor’ technology and their circuit design. Our circuit analysis reports include transistor level schematics, device sizes, block level description and a plan view plot. When needed, we complement our reports with selected transistor or other device electrical performance measurement and parameter extraction.

Example of ‘voltage reference’ process technology analysis.

We also analyse undisclosed manufacturing changes, inherent reliability issues and new IC design problems.
Contact enquiry (at) tyndall (dot) ie for all Business Development enquiries