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NEW SONIX™ FLEXIBLE TAMI™ FOR IMPROVED ULTRASONIC SEMICONDUCTOR INSPECTION

Springfield, VA - Sonix™[1], Inc., a leading designer and manufacturer of Scanning Acoustic Microscopes, introduces an enhancement to its industry leading Tomographic Acoustic Micro-Imaging (TAMI™), called Flexible TAMI™, for improved ultrasonic inspection accuracy, defect detection and reduced image file size. Sonix Flexible TAMI enables users to accurately place only the number of ultrasonic data capture gates required to inspect the interfaces of interest in semiconductor packages and wafers.

Traditional ultrasonic inspection data gate placement involves setting a data capture gate of a configurable width at a time-based location in the reflected ultrasonic signal, and then replicating that gate one immediately after the other for successive data collection. While this approach allows for capturing multiple levels within a sample under inspection in a single scan, it assumes that the interfaces of interest are equally spaced and require the same width gate, which is never the case in real world applications. To compensate for this, users will adjust the initial data gate width and placement to, "on average", capture all the interfaces of interest, with the result that most, or potentially all, of those gate placements are not optimal, negatively impacting image quality and defect detection. Further, the traditional approach requires setting up data gates all the way from the first to last interface of interest, often collecting intermediate data that is never used, resulting in larger than necessary image files. These larger size image files require more processing power and communications time to analyze and transfer, impacting machine and network performance.

Sonix Flexible TAMI allows users to set individual data gates of the optimal width precisely on the "half cycle" at each interface of interest. This is especially useful when inspecting multi-layer architectures built with different layer thicknesses and materials, each propagating the ultrasound at different speeds, and to compensate for die tilt. The ability to set individual data gates for the deeper interfaces of interest in a package also allows the user to increase their size to compensate for attenuation effects on the higher frequency content, which mimics a frequency downshift of the reflected ultrasound.

Flexible TAMI is available as an option on our Echo™, Echo VS™, Echo Pro™ and AutoWafer™ tools, and as a field retrofit on all Sonix Fusion™ and Vision™ tools.

Sonix, Inc. is a designer, developer, and manufacturer of scanning acoustic microscopes (SAM), for use in FA/QA laboratories, R&D and as part of the production process. All Sonix systems have the CE Mark and are Semi S2/S8 compliant.

For more information on the Sonix Flexible TAMI, or Sonix's complete product line, contact Sonix, Inc., 8700 Morrissette Drive, Springfield, VA 22152; call 703-440-0222, fax: 703-440-9512 or e-mail: info@sonix.com.

[1] Sonix, Echo, Echo LS, Echo VS, Echo Pro, Fusion, Vision, AutoWafer, AutoWafer Pro, Win IC, SDI, Dry Tray, TAMI, Flexible TAMI and MFCI are all trademarks of Sonix, Inc.