

Scanning Acoustic Microscopy

Eurofins | EAG Laboratories can provide you with the best imaging on the market, with advanced software, hardware and transducers

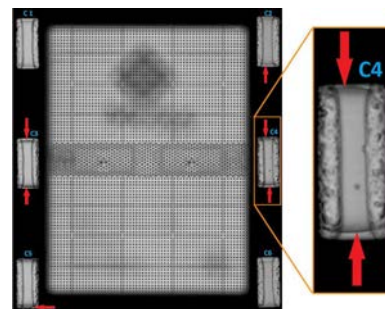
Scanning acoustic microscopy (SAM) uses sound waves to detect and identify internal delamination, voids, material density changes, defects and many other anomalies within devices, assemblies and materials.

SAM is highly sensitive to the presence of delamination and material density variations, which are difficult to detect using X-ray radiography, Infrared Imaging and other non-destructive techniques. It can detect sub-micron air gaps and has a defect resolution of $\sim 5\mu\text{m}$.

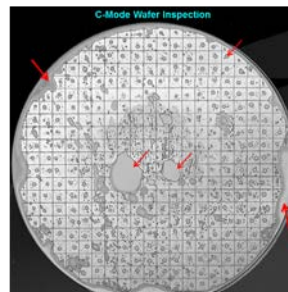
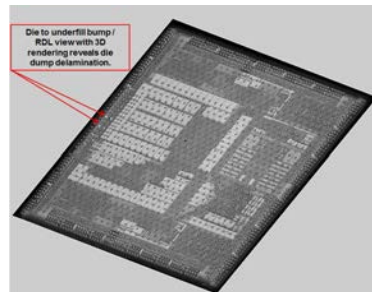
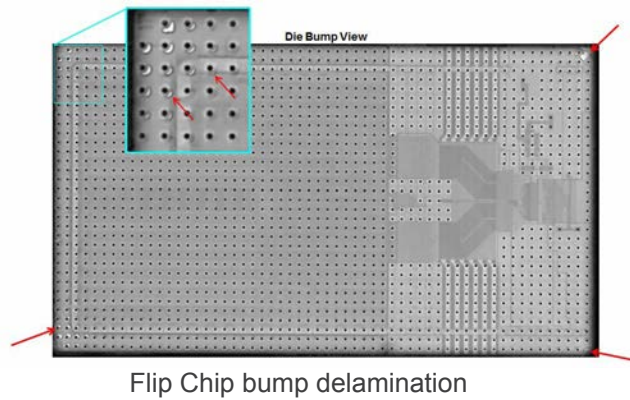
Eurofins | EAG Laboratories offers various imaging modes, allowing the operator to gain the optimal viewing perspective based on the orientation of the feature within the sample. In addition, our SAM systems incorporate advanced software, hardware features and a wide variety of transducers which allows Eurofins | EAG Laboratories to provide our customers with the best imaging on the market.

Ideal uses and key failure mechanisms

- Interfacial delamination
- Joint, bonding, and seal analysis
- Void detection
- Crack detection – wafer, die and package level
- Printed circuit board anomalies
- Imaging adhesion in films, brazing, soldering, and other interfaces



FCBGA with capacitors



Key inspection applications

- Failure analysis
- Product reliability
- IPC / JEDEC J-STD-020 (required for MSL classification)
- -Mil-STD 883, Method 2030, Method 2035
- -NASA, PEM-INST-001
- Chip Scale Package (CSP) inspection
- Stacked die imaging
- Plastic-encapsulated IC inspection
- Process validation
- Vendor qualification
- Product inspection
- Quality control
- Research and development

