

Scanning Acoustic Microscope

Uncover Hidden Defects

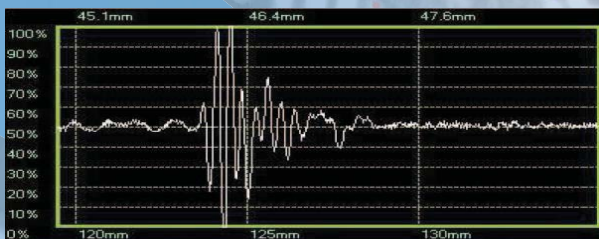


**KSI SAM-300 - robust design,
low cost, easy to operate**

KSI SAM-300

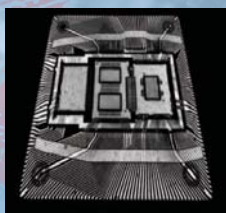
The KSI SAM-300 is a popular scanning acoustic tool designed for economical application in research, production- and process-control. It enables detailed acoustic investigations through longtime approved rf- and transducer-technologies of up to 400 MHz. A "user friendly" graphical user interface ensures that the functionality of the KSI SAM-300 is easily applied. Built for the economical inspection of small and medium sized samples in labs, research and quality control, KSA SAM-300 is a finished product for the nondestructive failure diagnosis. The KSI SAM-300 is also available as KSI SAM-duo with two transducers for faster inspection. Built to semiconductor industry standards, around a core platform that utilises production and research technology, the KSI SAM-300 can accurately handle samples up to 320 mm x 320 mm x 45 mm (w/l/h).

- Plug and play concept, no installation or assembly required
- Easy manipulation
- Compact desktop unit
- 1000 mm/s maximum scanning speed
- Robust construction with granite platform
- Multi-language graphical user interface KSI Vision™ software
- Scanfield up to 320 mm x 320 mm
- Image resolution up to 32000 x 32000 pixel
- Pulse-Echo, A-, B-, HQ-, C-, D-, G-, 3D-, X-, tray-, profile-, sequence-, Z-, auto-scan
- 15 MHz and 30 MHz Transducer included



A-Scan of an integrated circuit (IC)

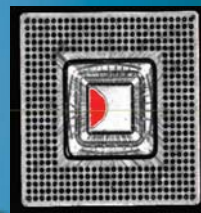
With new KSI Vision™ user-software



C-scan,
inside of IC



X-scan,
layers inside of IC



C-scan,
delamination
at die attach



B-Scan, die tilt and
delamination



KSI SAM-300 SPECIFICATION

Electronics, rf- and scanning system

High performance RF-interface 500 MHz bandwidth
High Resolution ADC Interface
0.001 mm length encoder resolution
All components mounted in lower enclosure
Direct multi axis drive linear motion system
Scanning range from 250 μm x 250 μm to 320 mm x 320 mm ^{*(1)}
625 x magnification
Maximum scanning speed: 1000 mm/s
Maximum Acceleration 9000 mm/s²
Motorized z-drive with autofocus
Sample trunk 590 x 580 x 70 (w/l/h) ^{*(1)}
Adjustable sample stage

Scanning modes and software features

A-, B-, C-, D-, G-, 3D-, P-, X-, HQ-, Auto-, Tray-, and Sequence-scan
Multi language user interface (for example german, english, chinese, taiwanese, indonesian, spain, ...)
A-scan real time display with time of flight measurement function
Mean-, Peak-, Time-detection
Combo- and meander scan mode
FFT Analysis
Autofocus system
Sample thickness calculation
Reset-Function for easy image reconstruction
Free selectable color coding
Image export in ".jpg" and ".bmp" - format
Storage of all instrument settings with every image
Variable gain, gate width and gate delay setting during scanning
Thresholding, positive-negative peak phase detection: amplitude, mean, bipolar
Phase measurement with automatic delamination detection (selectable)
Length measurement, zoom mode
Impedance measurement with histogram and calibration curve
Automatic acoustic impedance colour set up
Image cascade display
Text overlay in A-Scan and all recorded pictures
A-Scan Storage in .bmp format

Options

Transmission scan package	(contains hard- and software)
Simultaneous scan package	(contains hard- and software)
Scandium® Image Analysis Package	(software)
KSI VISION VIEW™ Image Analysis Package	(Software)
Working table (for screen, keyboard and mouse)	
2nd monitor for PC workstation	

PC Workstation ^{*(2)}, ^{*(3)}

High performance industrial PC workstation with Intel Core2Duo E4600 (2 x 2,6 GHz)
Operating system: Windows 7 multilingual
LCD flat screen monitor 22"
320 GB hard disc
4096 MB RAM
DVD-RW drive

^{*(1)} other dimensions on request

^{*(2)} customer specifications on request

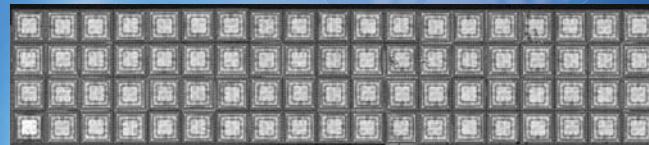
^{*(3)} technical changes to higher specifications without notice

The innovator of scanning acoustic microscopy

Our success factor is our willingness to listen to industry's ever changing requirements for high-resolution failure diagnosis, high-throughput production screening of large sample volume or ultra-high resolution research environment

This has positioned KSI product portfolio in unequal advantage for our customers

- High resolutions
- Solution ready with affordable cost of ownership
- Modular design concept
- Proven after-sales service and application supports



Production line screening



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