EBIC Amplifier

Our easy-to-use EBIC amplifier is capable of a number of analysis methods including RCI, EBAC, EBIV, and EBIRCH. The EBIC amplifier works in conjunction with one or two micromanipulators: Either MM3A-EMs equipped with low-current measurement kits (LCMK-EM) or MM4 micromanipulators integrated into one of our Prober Shuttle platforms.



The system is connected to the microscope's video input.

Primary applications are open detection in integrated circuits, visualization of p-n junctions and localization of resistivity changes in via chains, but this tool can also be used for any application that requires the accurate measurement of low currents.

Applications

- Non-destructive failure analysis
- Open detection in integrated circuits
- Visualization of p-n junctions
- Localization of resistivity changes

Operation modes

- EBIC electron beam induced current
- EBAC electron beam absorbed current
- RCI resistive contrast imaging
- EBIV electron beam induced voltage
- EBIRCH electron beam induced resistivity change

Technical specifications

- Current measurement limit 15 fA
- Gain 10⁵ to 10¹² V/A
- Bandwidth up to 1 MHz
- Video output 1 V / 50 Ω
- External voltage input (triax)
- Large offset range
- AC and DC amplification modes
- Input current compensation
- Quantitative EBIC/EBAC
- Image inversion mode

Further information

- Contact us at info@kleindiek.com
- Find your local agent at www.kleindiek.com







Analysis of p- and n-wells on 14 nm devices



EBIRCH on a via chain with 180 elements

All technical specifications are approximate. Due to continuous development, we reserve the right to change specifications without notice. Version 8.11. @ Kleindiek Nanotechnik GmbH.

EBAC on a semiconductor sample



ED RCI for detecting opens