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Author

Nikawa K. Yamashita M. Matsumoto T. Miura K. Midoh Y. Nakamae K. Author Unabbreviated

Nikawa Kiyoshi; Yamashita Masatsugu; Matsumoto Toru; Miura Katsuyoshi; Midoh Yoshihiro; Nakamae Koji

Author/Editor Affiliation

Nikawa K. Miura K. Midoh Y. Nakamae K. : Graduate School of Information Science and Technology, Osaka University, Suita 565-0871, Japan

Yamashita M. : Terahertz Sensing and Imaging Laboratory, RIKEN Sendai, 519-1399 Aoba, Aramaki, Aoba, Sendai, Miyagi 982-0036, Japan

Matsumoto T. : Hamamatsu Photonics, Hamamatsu 431-3196, Japan

## Title

The combinational or selective usage of the laser SQUID microscope, the non-bias laser terahertz emission microscope, and fault simulations in non-electrical-contact fault localization Source

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Abstract

Recently, in the field of fault localization of LSI chips, several non-electrical contact techniques have been proposed. The techniques include the laser SQUID microscope (L-SQ) and the non-bias laser terahertz emission microscope (NB-LTEM). Both techniques have pros and cons. The L-SQ, for examples, can localize open defects in some cases, but it requires closed circuit. The NB-LTEM can localize open defects and short defects, and not requires closed circuit. The NB-LTEM, however, cannot localize open defects in some cases. The fault simulation specially designed for the L-SQ or the NB-LTEM makes it precise or efficient to localize defects. The combinational or selective usage of the L-SQ, the NB-LTEM and the related simulations makes it possible to localize defects in many cases. In this paper, we would like to review our results and organize them from the viewpoint of failure mode and defect sites. [All rights reserved Elsevier]. (13 References).