Abstracts

New calibration method in electrooptic probing due to wavelength control and Fabry-Perot resonance

P.O. Muller, D. Erasme and B. Huyart. "New calibration method in electrooptic probing due to wavelength control and Fabry-Perot resonance." 1999 Transactions on Microwave Theory and Techniques 47.3 (Mar. 1999 [T-MTT]): 308-314.

The use of the Fabry-Perot resonance in direct internal electrooptic probing reveals a new calibration method. Substrate resonances modulated by the Pockels effect results in a direct amplitude modulated electrooptic signal. The relation between this signal amplitude and wavelength-derivative of the reflected average probe-beam intensity describes the absolute potential on the device-under-test (DUT). A fibered electrooptic probing system has been developed containing a fiber reinjection probing head. A confocal arrangement optimizes the spatial resolution on the DUT while respecting the Fabry-Perot resonance limit. The direct AM electrooptic probing under wavelength optimization has been demonstrated experimentally by two-dimensional scanning of a monolithic-microwave integrated-circuit section.

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