Abstracts

Design and Characterization of Integrated Probes for Millimeter Wave Applications in Scanning Probe Microscopy

C. Bohm, M. Otterbeck, S. Lipp, L. Frey, R. Reuter, A. Leyk, W. Mertin, F.J. Tegude and E. Kubalek. "Design and Characterization of Integrated Probes for Millimeter Wave Applications in Scanning Probe Microscopy." 1996 MTT-S International Microwave Symposium Digest 96.3 (1996 Vol. III [MWSYM]): 1529-1532.

Scanning probe microscopy has developed to a powerful tool in surface topography and is going to become a characterization method for electrical potentials of monolithic microwave integrated circuits. Measurement bandwidths above 100 GHz force the development of optimized millimeter wave proximal probes with simultaneously nanometer spatial resolution. We present the design, production and characterization of such proximal probes using integrated planar waveguides well suited for the millimeter wave range keeping the nanometer spatial resolution of the tip for topography measurements.

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