# Abstracts

## MM-Wave Confocal Resonators for Vertical Structure Profiling in Semiconducting and Superconducting Materials

*J.S. Martens, L. Lee, K. Char, R. Withers, D. Zhang, V.M. Hietala, C.P. Tigges and J. Zolper. "MM-Wave Confocal Resonators for Vertical Structure Profiling in Semiconducting and Superconducting Materials." 1993 MTT-S International Microwave Symposium Digest 93.3 (1993 Vol. III [MWSYM]): 1243-1246.*

The confocal resonator is a tool for quick, accurate, non-invasive and flexible surface impedance measurements. From the frequency dependence of surface impedance, the vertical conductivity/permittivity profiles have been determined for a variety of devices and device materials including implanted Si and GaAs wafers and superconductor-dielectric interfaces. The vertical spatial resolution can be as small as several nm and accuracy of the complex permittivity generally is better than 3 %.

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