

External Electro-Optic Probing of Millimeter-Wave Integrated Circuits

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"External Electro-Optic Probing of Millimeter-Wave Integrated Circuits." 1989 MTT-S
International Microwave Symposium Digest 89.1 (1989 Vol. I [MWSYM]): 221-224.*

An external, non-contact electro-optic measurement system, designed to operate at the wafer level with conventional wafer probing equipment and without any special circuit preparation, has been developed. Measurements have demonstrated the system's ability to probe continuous and pulsed signals on microwave integrated circuits on arbitrary substrates with excellent spatial resolution. Experimental measurements on a variety of digital and analog circuits, including a GaAs selectively-doped heterostructure transistor prescaler, an NMOS silicon multiplexer, and a GaAs power amplifier MMIC are reported.

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