Abstracts

Experimental Characterization of External Electrooptic Probes

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The accuracy and invasiveness of various external LiTaO/sub 3/ electrooptic probe geometries is investigated experimentally. Such probes are an integral part of external electrooptic sampling systems used for the measurement of high bandwidth electrical signals in microwave integrated circuits. The experimental results indicate that for optimum measurement accuracy and minimum invasiveness of the probe, the electrooptic crystal should be no thicker than the extent of the microwave coplanar transmission line guided mode. Thinned crystals possess additional advantages of reduced thermal drift and reduced stray signal pickup from adjacent signal lines.

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