Abstracts

A new hybrid technology for millimeter-wave integrated circuits

A.V. Chenakin, A.E. Martynyuk and V.I. Skachko. "A new hybrid technology for millimeter-wave integrated circuits." 1997 MTT-S International Microwave Symposium Digest 2. (1997 Vol. II [MWSYM]): 921-924.

This paper presents an original hybrid technology for the production of millimeter-wave integrated circuits which does not require the use of a dielectric substrate as a principal element of the integrated circuit. We propose using a relatively thick perforated plate as a substrate. Thin metal-dielectric structure is deposited on the substrate surface to form effective wide-band bias circuits. This approach permits the realization of the high parameters of the modern solid state devices due both to the extremely low-loss in the matching and bias circuits as well as to the effective heat removal from the solid state devices. The advantages and application of this technology are also described.

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