

## Uniplanar MMIC Hybrids--A Proposed New MMIC Structure

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*T. Hirota, Y. Tarusawa and H. Ogawa. "Uniplanar MMIC Hybrids--A Proposed New MMIC Structure." 1987 Transactions on Microwave Theory and Techniques 35.6 (Jun. 1987 [T-MTT]): 576-581.*

A new "uniplanar" circuit configuration for monolithic microwave integrated circuits (MMIC's) has been proposed. It uses a combination of coplanar waveguides and slotlines on one side of the substrate. The key components for the uniplanar structure are air bridges, which provide T junctions and transitions from coplanar waveguides to slotlines or vice versa. Novel hybrid circuits such as a magic T and a branch-line coupler have been fabricated and tested at K-band, and good performance has been achieved. This new circuit configuration is promising for applications in other microwave circuits.

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