

Abstracts

Millimetric Nonreciprocal Coupled-Slot Finline Components

L.E. Davis and D.B. Sillars. "Millimetric Nonreciprocal Coupled-Slot Finline Components." 1986 Transactions on Microwave Theory and Techniques 34.7 (Jul. 1986 [T-MTT]): 804-808.

Promising preliminary results are presented for isolators and a four-port circulator in novel finline structures in the frequency range 26.5-40.0 GHz. The basic configuration is a ferrite-loaded coupled-slot finline with the ferrite magnetized parallel with the direction of propagation. The nonreciprocal effects of the odd mode propagating alone and of the odd and even modes propagating are described. All structures exhibit a 20-dB isolation bandwidth greater than 3.6 GHz. It is suggested that such structures would also be suitable for higher frequencies.

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