Abstracts

Millimeter Wave Three-Port Finline Circulator Using Distributed Coupling Effect (Short Papers)

J. Mazur. "Millimeter Wave Three-Port Finline Circulator Using Distributed Coupling Effect (Short Papers)." 1993 Transactions on Microwave Theory and Techniques 41.6 (Jun./Jul. 1993 [T-MTT]): 1067-1070.

The design and experimental results for a novel three-port finline circulator are presented for the frequency range 26-40GHz. The circulator consists of a T/sup E/ -junction cascaded with the section of ferrite coupled slot finlines magnetized in the propagation direction. The T/sup E/ -junction structure refers to a transition from unilateral single slot finline taper into coplanar line region via a tapered center conductor. The design procedure of the structure confirmed by experimental results is described. The proposed structure adjoins to the family of the distributed coupled ferrite line nonreciprocal devices suitable for application in the millimeter-wave range.

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