Abstracts

Analysis of Wide-Band Microstrip Circulators by Point-Matching Technique

A.M. Khilla. "Analysis of Wide-Band Microstrip Circulators by Point-Matching Technique." 1981 MTT-S International Microwave Symposium Digest 81.1 (1981 [MWSYM]): 284-286.

An exact field theory treatment of microstrip Y-junction circulators for wideband operation is presented. Field expressions are written in each region of the junction in form of infinite summation of the corresponding region modes. Matching of the fields at the common boundaries, taking fringing fields in microstrip structures into account, leads to a set of infinite non-homogeneous equations in these mode-amplitudes. A wideband microstrip circulator, designed using the point-matching technique, is observed. The 20-dB isolation bandwidth is about 62% without using any external tuning elements.

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