Abstracts

Arbitrary termination impedances, arbitrary power divisions and small-sized ring hybrids (1997 Vol. I [MWSYM])

Hee Ran Ahn, I. Wolff and Ik-soo Chang. "Arbitrary termination impedances, arbitrary power divisions and small-sized ring hybrids (1997 Vol. I [MWSYM])." 1997 MTT-S International Microwave Symposium Digest 1. (1997 Vol. I [MWSYM]): 285-288.

If a ring hybrid is terminated by arbitrary impedances, design equations can not be derived with conventional methods because symmetry planes for even and/or odd symmetries are not available. Therefore, under these conditions new design equations for ring hybrids have been derived. They can be applied to both ring hybrids with arbitrary termination impedances and arbitrary power division ratios. Also, new design equations for small sized ring hybrids have been developed. They allow that arbitrary power divisions, arbitrary termination impedances and specially small sized ring hybrids can be designed. On the basis of these derived design equations, a simulation of ring hybrids with 4 arc lengths of 75/spl deg/, arbitrary termination impedances and a power split ratio of 4 dB was performed using ideal CPS crossover.

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