Abstracts

Three-port 3-dB power divider terminated by arbitrary impedances

Hee-Ran Ahn and I. Wolff. "Three-port 3-dB power divider terminated by arbitrary impedances." 1998 MTT-S International Microwave Symposium Digest 98.2 (1998 Vol. II [MWSYM]): 781-784.

The three-port power divider terminated by arbitrary impedances considered in this paper is very useful for small-sized circuit design. New design equations for three-port power divider are derived. They can be applied to the three-port power dividers with both arbitrary termination impedances and especially a 3-dB power division. On the basis of these design equations, simulations for the three port 3-dB power divider terminated by 45, 30 and 50 /spl Omega/ were made using ideal transmission lines. Also, a microstrip three-port 3-dB power divider terminated by 30, 53 and 47 /spl Omega/ was fabricated on an Al/sub 2/O/sub 3/ substrate (/spl epsiv//sub r/=10 and h=635 /spl mu/m) and it shows good agreement between experimental results and theoretical results.

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