Abstracts

A Directional Coupler with a Readily Calculable Coupling Ratio

M.B. Hall and W.E. Little. "A Directional Coupler with a Readily Calculable Coupling Ratio." 1967 Transactions on Microwave Theory and Techniques 15.11 (Nov. 1967 [T-MTT]): 598-603.

A microwave (X-band) directional coupler consisting of two adjacent lengths of parallel waveguide with a common tantalum wall about for skin depths in thickness has been fabricated and studied. Coupling between the guides is effected through energy transfer via the electromagnetic fields penetrating the thin tantalum foil separating the guides. The coupling ratio of the device can be calculated by a straight-forward procedure to within experimental error (currently a few tenths of a decibel in over 70 decibels).

❑ Return to main document.