# Abstracts

## The Virtues of Mixing Tandem and Cascade Coupler Connections

*E. Carpenter. "The Virtues of Mixing Tandem and Cascade Coupler Connections." 1971 G-MTT International Microwave Symposium Digest of Technical Papers 71.1 (1971 [MWSYM]): 8-9.*

The design of wideband coupled transmission line hybrids is complicated by the necessity of having the coupled lines in a close physical proximity to achieve the desired -3.01 dB coupling. The required coupling coefficient is particularly difficult to achieve for coupler designs covering greater than an octave. Several techniques have been used to overcome this limitation. The principal methods are the re-entrant coupler and the tandem coupler techniques. The re-entrant coupler employs a modification of the transmission line geometry of a single quarter-wave section to obtain the desired increase in coupling. The technique described in this paper is similar to the tandem coupler technique since a judicious connection of coupled quarter-wave line sections is employed to obtain the desired coupling enhancement rather than a modification of the line cross-section.

❑ Return to main document.