Abstracts

Coupled-Transmission-Line Directional Couplers with Coupled Lines of Unequal Characteristic Impedances (1966 [MWSYM])

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In the past, coupled-transmission-line directional couplers have been designed with coupled lines of equal characteristic impedances. These couplers are used in many applications: power samplers, reflectometers, directional detectors, directional filters, and multiplexer are several examples. In this paper a new class of coupled-transmission-line directional couplers, called nonsymmetrical directional couplers, is described. In contrast to conventional directional couplers, nonsymmetrical directional couplers use coupled lines of unequal characteristic impedances. The nomenclature "nonsymmetrical directional coupler" pertains to the side-by-side asymmetry of the directional couplers.It should not be confused with cascaded asymmetrical or cascaded symmetrical directional couplers, which use coupled lines of equal characteristic impedances and which have end-to-end asymmetry or symmetry, respectivey.

❑ Return to main document.