

Abstracts

Traveling Waves in Coupled Yagi Structures

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The propagating mode in a coupled Yagi-Uda array of cylindrical wires is studied. The current distribution in each element, the phase velocity; and the cutoff frequency of the propagating mode are found, firstly by a numerical method and secondly by a method based on an assumed current distribution. These two methods yield essentially the same results. Mutual coupling between the arrays is studied. The characteristics of the propagating waves in the coupled Yagi-Uda structure have been measured. The experimental K-beta diagram of the waves is obtained and is found to be in good agreement with the theory.

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