

Abstracts

On the Impulse Response of a Coupled-Mode System

C.W. Barnes. "On the Impulse Response of a Coupled-Mode System." 1965 Transactions on Microwave Theory and Techniques 13.4 (Jul. 1965 [T-MTT]): 432-435.

The impulse response is derived for a simple coupled-mode system in which two modes of propagation are passively coupled. It is found that if one mode is driven with an impulse, the response of the other mode consists of a sharply defined RF pulse, of constant maximum amplitude, whose length increases linearly with both time and distance of propagation. The energy of the coupled pulse is found to approach an equilibrium value as the time (or length) of interaction increases without limit.

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