Abstracts

Theory and Design of Transmission Line All-Pass Equalizers

A general theory of transmission line all-pass equalizers operating in either TEM, TE, or TM modes is presented. Application of the theory to practical problems is straightforward, and circuit realizations of the equalizers are often simply related to easily computed design curves. Although the theory, strictly speaking, is for commensurate transmission line networks, it is not essential that the network being equalized, or in narrow-band cases the equalizer itself, be of commensurate length lines. Design formulas for narrow-band equalizers of up to two cavities are presented, and a method for extending the design to a greater number of cavities is described. The effect of equalizer dissipation loss is investigated and briefly described. Two example designs are presented.

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