Abstracts

Kuroda's Identity for Mixed Lumped and Distributed Circuits and Their Application to Nonuniform Transmission Lines

Kuroda's identities, which are used in analysis and synthesis of distributed transmision line circuits, may be applied to mixed lumped and distributed circuits. It is shown that circuits consisting of cascade connections of lumped reactances and uniform transmission lines are equivalent to circuits consisting of a cascade connection of nonuniform transmission lines, lumped reactances, and ideal transformers. Moreover, by using these equivalent transformations, network functions of some nonuniform transmisssion lines can be derived exactly.

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