Abstracts

On Voltage and Current Continuity in the Youla-Weissfloch Circuit (Correspondence)

L.J. Kaplan, D.J.R. Stock and D.C. Youla. "On Voltage and Current Continuity in the Youla-Weissfloch Circuit (Correspondence)." 1962 Transactions on Microwave Theory and Techniques 10.5 (Sep. 1962 [T-MTT]): 402-403.

Any lossless 2n-port can be represented as a cascade of three 2n-ports: an all-pass network, a set of n uncoupled ideal trans-formers, and another all-pass network. The 2n-port may be either a physical 2n-port [i.e., a device with an even number of ports considered as a device mapping the scattering (impedance) matrix of a device connected to one half of the ports into the input scattering (impedance) matrix], or it may be a multimode transmission line. In the latter case the network may be a set of uniform lines with a discontinuity, and there may be a condition that the mode voltages or currents are continuous across the discontinuity.

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