

Abstracts

Reconstruction of the S-Matrix for a 3-Port Using Measurements at Only Two Ports

M. Davidovitz. "Reconstruction of the S-Matrix for a 3-Port Using Measurements at Only Two Ports." 1995 Microwave and Guided Wave Letters 5.10 (Oct. 1995 [MGWL]): 349-350.

A complete S-parameter characterization of a 3-port device is extracted from vector network analyzer measurements made on only two of its ports. The third port is terminated with three known standards, appropriate to the associated transmission medium. Unique extraction of the 3-port matrix from the measured data sets is shown to be possible. This method is particularly useful for devices having incompatible ports, some of which cannot be directly connected to the analyzer.

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