

Abstracts

Multi-port scattering matrix measurement using a reduced-port network analyzer

Hsin-Chia Lu and Tah-Hsiung Chu. "Multi-port scattering matrix measurement using a reduced-port network analyzer." 1999 MTT-S International Microwave Symposium Digest 99.4 (1999 Vol. IV [MWSYM]): 1877-1880 vol.4.

A novel method to acquire the scattering matrix of an n -port network from the measurements using a reduced-port network analyzer is developed. This method can obtain the scattering matrix of a nonreciprocal or reciprocal n -port network with the use of a three-port or two-port network analyzer. The formulation of this method considers the imperfection of terminators used in the measurement, and only two of the terminators are required to be known. Experimental results of a four-port microstrip circuit show the good accuracy using the developed method.

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