Abstracts

Six-port self-calibration based on active loads synthesis

T. Yakabe, F.M. Ghannouchi, E.E. Eid, K. Fujii and H. Yabe. "Six-port self-calibration based on active loads synthesis." 2002 Transactions on Microwave Theory and Techniques 50.4 (Apr. 2002 [T-MTT]): 1237-1239.

An automatic method for self-calibrating six-port reflectometers is reported in this paper. It is based on the use of an active impedance synthesis system. This self-calibration method allows a completely autonomous operation, reduces measurement errors caused by the frequent connecting and disconnecting of calibration standards, and is suitable for low and high frequencies, where sliding shorts are difficult to manufacture. In addition, it simplifies operation of six-port reflectometers to nonspecialized users. The experimented impedance synthesis presented relies on an in-phase and quadrature vector modulator, and the entire system is computer controlled.

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