Abstracts

A new technique for in-fixture calibration using standards of constant length

Changhua Wan, B. Nauwelaers, D. Schreurs, W. De Raedt and M. Van Rossum. "A new technique for in-fixture calibration using standards of constant length." 1998 Transactions on Microwave Theory and Techniques 46.9 (Sep. 1998 [T-MTT]): 1318-1320.

This paper presents a new technique for in-fixture calibration using standards of constant length. The technique uses a through line, reflective load, symmetric two-port at a reference position, and the same two-port at a different position, all produced on substrates of the same electrical properties and physical length. When compared with the through-reflect line (TRL) technique, this one eliminates the need for a length change during calibration and device measurements while retaining comparable accuracy. Moreover, in contrast with the line-network network (LNN) technique, it provides easy resolution of all error coefficients without ambiguities and does not require physical movement of a reference two-port, but reproduction of a reference two-port on microwave integrated circuit (MIC) substrates, which is easy to realize. All these features make the new technique useful for in-fixture measurements requiring a constant distance between input and output connections. The validity of the proposed technique is illustrated by experimental results.

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