Abstracts

An in-circuit noncontacting measurement method for S-parameters and power in planar circuits

J. Stenarson, K. Yhland and C. Wingqvist. "An in-circuit noncontacting measurement method for S-parameters and power in planar circuits." 2001 Transactions on Microwave Theory and Techniques 49.12 (Dec. 2001 [T-MTT] (Special Issue on 2001 International Microwave Symposium)): 2567-2572.

A method for measuring the reflection coefficient and absolute power in the propagating waves from a circuit embedded in a planar circuit environment is presented. The method utilizes a pair of inductive and capacitive probes. The standard one-port vector-network-analyzer calibration is extended to allow the measurement of power in the forward and backward waves. Experimental results are presented for measurements between 700 MHz and 20 GHz. Good agreement between the new noncontacting method and a standard coaxial measurement method is demonstrated up to 12 GHz for power and up to 14 GHz for the reflection coefficient. The method is useful for in-circuit testing of open transmission-line structures, e.g., microstrip.

❑ Return to main document.