Abstracts

Port Reflection Coefficient Method for Solving Multi-Port Microwave Network Problems

Z. Ma and E. Yamashita. "Port Reflection Coefficient Method for Solving Multi-Port Microwave Network Problems." 1995 Transactions on Microwave Theory and Techniques 43.2 (Feb. 1995 [T-MTT]): 331-337.

The port reflection coefficient method (PRCM) is proposed for the treatment of multi-port microwave network systems. The theory is meaningful because in combination with other available numerical techniques, it can provide several possible ways for simplifying and solving complicated multi-port problems. The PRCM also suggests an approach for the measurement of scattering parameters, since it requires only the measurement of reflection coefficients at partial ports of the system. The efficiency and versatility of the method are verified through various numerical examples, including waveguide H-plane right angle bend, E-plane T-junctions, and multi-port power dividers. A special case of this method yields the well-known transverse resonance approach.

❑ Return to main document.