

## A Universal Method of Accurate S-Parameter Extraction from FD-TD Simulations Applicable to Oblique Ports

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*M. Celuch-Marcysiak, A. Kozak and W.K. Gwarek. "A Universal Method of Accurate S-Parameter Extraction from FD-TD Simulations Applicable to Oblique Ports." 1996 MTT-S International Microwave Symposium Digest 96.2 (1996 Vol. II [MWSYM]): 593-596.*

A differential method for accurate extraction of the complete S-parameters from FD-TD simulations is proposed. In reciprocal circuits no a priori knowledge of reference impedances or field distribution in the ports is needed. The method is directly applicable to arbitrarily shaped and inhomogeneous transmission lines, oblique to the FD-TD grid.

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