

Abstracts

Conversion Between the TLM Solutions and Field Solutions (Short Papers)

Z. Chen and M.M. Ney. "Conversion Between the TLM Solutions and Field Solutions (Short Papers)." 1994 *Transactions on Microwave Theory and Techniques* 42.3 (Mar. 1994 [T-MTT]): 529-532.

The Transmission-Line Matrix (TLM) method uses a network of interconnected transmission lines to simulate electromagnetic wave propagation. Therefore, the TLM solutions are not exactly the field solutions, especially for two-dimensional cases. As a result, conversion between the TLM solutions and field solutions need to be described. This issue is addressed in this paper and boundary (interface) conditions for the two-dimensional (2D) TLM dual mode simulations are formally derived. Also, the correspondence between simulated constitutive parameters and those of the actual medium is formally established.

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