Abstracts

Berenger and leaky modes in microstrip substrates terminated by a perfectly matched layer

H. Rogier and D. De Zutter. "Berenger and leaky modes in microstrip substrates terminated by a perfectly matched layer." 2001 Transactions on Microwave Theory and Techniques 49.4 (Apr. 2001, Part I [T-MTT]): 712-715.

In this paper, it is shown that the dispersion relation of a microstrip substrate terminated by a perfectly matched layer (PML) allows two sets of zeros. For a strongly absorbing PML, the first set does not depend on the characteristics of that layer. Within a good approximation, it corresponds to the leaky modes of the microstrip substrate. The second set is not influenced by the microstrip substrate. Since it mainly depends on the characteristics of the PML, this set of modes are called the Berenger modes. Analytic expressions are derived for these two sets of zeros in the quasi-static limit.

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