Abstracts

Formulas of microstrip with truncated substrate by synthetic asymptote-a novel analysis technique

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The substrate is usually truncated far enough from a microstrip line to avoid disturbing the line characteristics. Such uneconomical practice is not necessary if the disturbances as a function of truncation are known in formulas and therefore are easily compensated. This paper derives the desired formulas from the novel technique of synthetic asymptotes. The formulas cover the full truncation range. The worst error found is about 6% for the line in the two-sided truncation case, but only 3%, i.e., half as much, for the line in the one-sided case at the edge of a large substrate. Their average errors should be only half again.

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