Abstracts

Formulas of microstrip with a truncated substrate by synthetic asymptotes: a novel analysis technique

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A substrate is usually truncated far enough to avoid disturbing the microstrip-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. Truncation at both sides of a line is derived here with 3% average error. For the practical one-sided truncation at the edge of a chip or circuit board, the average error is only half at 1.5%.

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