Abstract

A lumped constant line approximating system capable of approximating a distributed constant line with required accuracy. The system receives inputs of object circuit information and analysis conditions (Steps 310, 320), calculates a product γl of the propagation constant γ and the line length l (Step 340), and calculates cosh γl and sinh γl by using the product γl (Step 360) to obtain functions $a_n(\gamma l)$, $b_n(\gamma l)$ and $c_n(\gamma l)$. Then, absolute values δ_1, δ_2 and δ_3 of the differences between these functions and cosh γl or sinh γl are obtained, and compares the maximum δ among them with an error tolerance ε. If $\delta < \varepsilon$, the processing ends, while if $\delta < \varepsilon$ is not satisfied, the number of division is increased by 1, and the above processing is repeated, until the number n of division for approximation is determined (Step 370). Using the determined number of division, a ladder circuit is defined, for example, by cascading Π circuits (Step 380), and stored (Step 400).

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