General Flow Chart of SROPEE Algorithm

(1) Full synthesis

S_par.snp → vector fitting

poles/residues → Circuit parameter calculator

Fitted Transfer Function

R_a, L, R_b, C

Full-order Netlist Generator

SPICE full-order netlist

SPICE full-order netlist

(2) Passive MOR

SPICE full-order netlist

General MNA

C, G, Γ, B → Block SAPOR

Full-order Transfer Function

$\tilde{C}, \tilde{G}, \tilde{\Gamma}, \tilde{B}$

Reduced-order Transfer Function

(3) Reduced synthesis

$\tilde{C}, \tilde{G}, \tilde{\Gamma}, \tilde{B}$

Reverse MNA

$\tilde{R}_a, \tilde{L}, \tilde{R}_b, \tilde{C}$ → Reduced-order Netlist Generator

SPICE reduced-order netlist