

MODELING HYPERBOLIC HEAT CONDUCTION IN TWO LAYER SLAB BASED ON ELECTRICAL SIMULATION METHOD

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SUMMARY: In this paper, hyperbolic heat conduction in two-layer finite slab under the periodic boundary condition is investigated by using the electrical network simulation method. With this new proposed model and using the electrical circuit solver program SPICE, transient temperature and heat flux profiles at slab can be obtained. The results are compared with analytical solutions and clearly demonstrate the wave character of the heat propagation and the analogy with RLC transmission lines.