

Application of genetic algorithms for electronic devices placement

by M. Felczak and B. Więcek

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Numerical model for the electronic devices placement optimization on the PCB including a genetic algorithm and a thermal solver is presented. The genetic algorithm searches arrangements that are checked by the thermal solver if they satisfy requirements of the designer. Two optimizing problems are considered. The first one is optimization of nine devices placement on a surface of a PCB with assumption that devices can be placed in nine specified positions on the PCB. The second one is optimization of nine devices placement with assumption that devices can be placed on whole board. Thermographic measurements in a specially designed wind tunnel were performed to confirm obtained results.

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