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Optimal design of thermoelectric cooling system integrated heat pipes for electric devices

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Research Highlights

- A cooling system coupled with thermoelectric module and loop thermosyphon is built.
- A ε-NTU based theoretical module for optimization of the cooling system is proposed.
- Thermoelectric module coupled with thermosyphon can achieve high heat-transfer efficiency.
- The effects of thermal block, thermal conductance, and ratio of heat transfer have been conducted.
- The cooling capacity and the chip temperature of electric devices have been analyzed.

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