

# Abstract

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## Comparison of Fin Design for Convective Cooling of Heat Sinks

This report aims to study the heat transfer between two heated blocks and water which flows around it. Three different shapes of fins are used in the study. The shapes used are square of 20 mm side, a trapezium of 20 mm height and 18 mm and 22 mm length for shorter and longer sides respectively. The flow is laminar and simulation type is 2D. OpenFOAM's conjugate heat transfer solver, *chtMultiRegionFoam*, is used for the study. The blocks are heated for 1 second. The temperature variation of each shape is plotted, compared and the efficient shape among those selected for this study is identified.

## References

[1] Ali, Hafiz & Ashraf, Muhammad & Giovannelli, Ambra & Irfan, Muhammad & Hamid, Muhammad & Hassan, Faisal & Arshad, Adeel. (2018). Thermal management of electronics: An experimental analysis of triangular, rectangular and circular pin-fin heat sinks for various PCMs. 10.13140/RG.2.2.29812.81285.