# Article information:

A Review of Recent Developments in Pumped Two-Phase Cooling Technologies for Electronic Devices | IEEE Journals & Magazine | IEEE Xplore  
<https://ieeexplore.ieee.org/document/9558861>

# Article summary:

1. This review examines the heat transfer characteristics of several pumped two-phase electronic cooling technologies and compares them on the basis of heat flux, coolant temperatures, heat source area, base temperature, and coolant type.

2. Different surface modification techniques used to enhance heat transfer in all four technologies are also presented.

3. Various coolants used in two-phase cooling applications are quantitatively compared in terms of heat transfer coefficient (HTC), wall temperature, and heat source area.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article is a comprehensive review of recent developments in pumped two-phase cooling technologies for electronic devices. The article provides an overview of the different types of cooling technologies available and their respective advantages and disadvantages. It also provides a comparison between various coolants used in two-phase cooling applications in terms of their HTCs, wall temperatures, and heat source areas. The article is well written and provides detailed information about each technology discussed as well as potential research topics related to two-phase cooling.

The article does not appear to be biased or one-sided; it presents both sides equally by providing an overview of the different types of cooling technologies available as well as their respective advantages and disadvantages. Furthermore, it does not contain any promotional content or partiality towards any particular technology or coolant type. Additionally, the article does not appear to be missing any points of consideration or evidence for its claims; it provides detailed information about each technology discussed as well as potential research topics related to two-phase cooling.

In conclusion, this article appears to be reliable and trustworthy due to its comprehensive coverage of recent developments in pumped two-phase cooling technologies for electronic devices without any bias or partiality towards any particular technology or coolant type.

# Topics for further research:

* Two-phase cooling applications
* Heat transfer coefficient (HTC)
* Wall temperature
* Heat source area
* Coolant selection criteria
* Two-phase cooling system design

# Report location:

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