

Title (en)
SEMICONDUCTOR COOLING REFRIGERATOR

Title (de)
HALBLEITERKÜHLANLAGE

Title (fr)
RÉFRIGÉRATEUR DE REFROIDISSEMENT À SEMI-CONDUCTEUR

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Application
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Abstract (en)
The present invention is related to a semiconductor refrigerator. The semiconductor refrigerator comprising a semiconductor cooling plate and a hot end heat radiating device, wherein the hot end heat radiating device comprises multiple sintered heat pipes, each having a main pipe with both ends closed, wherein the main pipe comprises a first pipe segment thermally connected with a hot end of the semiconductor cooling plate, and a second pipe segment, which is located above the first pipe segment, and from whose one or more portions extend one or more manifolds to radiate heat from the hot end of the semiconductor cooling plate to an ambient environment. In the semiconductor refrigerator of the present invention, as multiple manifolds for radiating heat or transferring cold extend from the second pipe segment of the main pipe of each sintered heat pipe, the heat radiating or cold transferring efficiency of the semiconductor refrigerator is considerably improved, enabling the sintered heat pipe to adapt to heat sources of a high heat flow density, such as semiconductor cooling plates, for radiating heat, and enabling the semiconductor refrigerator of the present invention to have higher energy efficiency.

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