THERMAL DISSIPATION DEVICE

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ABSTRACT

A thermal dissipation device includes a heat sink; and at least a heat pipe that pastes on the surface of the heat sink to conduct the thermal to the heat sink efficiently for thermal dissipation.
THERMAL DISSIPATION DEVICE

FIELD OF THE INVENTION

[0001] The present invention relates to a thermal dissipation device, especially to a thermal dissipation device used on the heating electrical components for thermal dissipation performance.

BACKGROUND OF THE INVENTION

[0002] Thermal dissipation devices are very popular in the electrical devices, such as a computer, which CPU has one thermal dissipation device (i.e. cooler) with a fan for increasing the heat conduction performance. If the performance of the thermal dissipation device is not good, CPU will be over heating and the processing speed of CPU will also be affected, or even forces this CPU burning out. Therefore, a good thermal dissipation device is a very important component for high efficiency electronic devices (such as a computer). FIG. 1 is the block diagram of the traditional thermal dissipation device. The upper side 11 of the thermal dissipation device usually connects with one fan, and the down side 12 usually connects with the heating electronic components (such as a CPU). The heat of the thermal dissipation device will be conducted outside when the fan runs. The kernel part of this thermal dissipation device is solid, the surface of this thermal dissipation device is implemented by several heat sink fins; when the fan runs, the thermal dissipation performance of these heat sink fins will be better, but the thermal of this thermal dissipation device is distributed from the solid kernel to the surface. At this situation, this solid kernel connects with the electronic components with most heat, but the thermal dissipated by the fan is the least. That is, the fan cannot conduct the thermal effectively for this design of heat sink fins.

[0003] FIG. 2 is a block diagram of another conventional thermal dissipation device. This thermal dissipation device is assembled with several heat sink fins 22, several heat pipe 21 and base site 23. It is not easy to implement this thermal dissipation device because heat pipe 21 has to be passed through every heat sink fin 22 with high cost, and takes larger space and inefficient thermal conduction.

SUMMARY OF THE INVENTION

[0004] An objective of the present invention is to provide a new thermal dissipation device able to conduct thermal efficiently, increase thermal dissipation area, enhance the thermal dissipation performance, decrease space and optimize the heat sink performance of the fan.

BRIEF DESCRIPTION OF THE INVENTION

[0005] According to the present invention, a thermal dissipation device includes a heat sink; and at least a heat pipe that pastes on the surface of the heat sink to conduct the thermal to the heat sink efficiently for thermal dissipation.

[0006] In accordance with one aspect of the present invention, the thermal dissipation device also includes a base site to be connected with a heating electronic component.

[0007] In accordance with one aspect of the present invention, the heat sink of the thermal dissipation device is used to connect with a fan.

[0008] In accordance with one aspect of the present invention, the heat sink of the thermal dissipation device is cylindrical that is implemented by several heat sink fins.

[0009] In accordance with one aspect of the present invention, the heat pipe of the thermal dissipation device is soldered up the surface of the heat sink.

[0010] The present invention may best be understood through the following description with reference to the accompanying drawings, in which:

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] FIG. 1 shows the traditional thermal dissipation device;

[0012] FIG. 2 shows another traditional thermal dissipation device;

[0013] FIG. 3 shows the thermal dissipation device according to the present invention; and

[0014] FIG. 4 shows the detailed of the thermal dissipation device according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0015] FIG. 3 shows the thermal dissipation device according to the present invention. The thermal dissipation device of the present invention includes a heat sink 31, a heat pipe 32, and a base site 33. Base site 33 can be connected with one heating electronic component (which is not shown in the diagram), the heat pipe 32 is able to conduct the thermal of the electronic component to the heat sink 31. Heat sink 31 can be cylindrical or any other shape, which is implemented by several heat sink fins. Due to the heat of electronic component is conducted from the base site to the heat sink fins of the heat sink by the heat pipe; the thermal distribution of the heat sink is from external to internal with more efficiently and easy to be fan out by the fan. Further more, this design is able to generate the largest thermal surface but with the smallest space to enhance the thermal performance. FIG. 4 shows the detailed component diagram of the thermal dissipation device according to the present invention.

[0016] To sum up, the thermal dissipation device of the present invention is a newly advantaged design to conduct thermal efficiently, increase thermal surface area, minimize the space, and enhance thermal performance of the heat sink and the fan. Any outlook modification, such as the number of heat pipe or the shape of the heat sink, is included in the present invention if the heat pipe pasted on the external surface of the heat sink.

[0017] While the invention has been described in terms of what are presently considered to be the most practical and preferred embodiments, it is to be understood that the invention need not be limited to the disclosed embodiment. On the contrary, it is intended to cover various modifications and similar arrangements included within the spirit and scope of the appended claims which are to be accorded with the broadest interpretation so as to encompass all such modifications and similar structures.
What is claimed is:

1. A thermal dissipation device including:
   a heat sink; and
   at least a heat pipe that pastes on the surface of said heat sink to conduct the thermal to said heat sink efficiently for thermal dissipation.

2. The device according to claim 1 wherein said thermal dissipation device further includes a base site to be connected with a heating electronic component.

3. The device according to claim 1 wherein said heat sink of said thermal dissipation device is used to connect with a fan.

4. The device according to claim 1 wherein said heat sink of said thermal dissipation device is cylindrical that is implemented by several heat sink fins.

5. The device according to claim 1 wherein said heat pipe of said thermal dissipation device is soldered up the surface of said heat sink.

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