CLAIMS

1. A bubble pump circulating heat pipe radiator, characterized in that the bubble pump circulating heat pipe radiator comprises: a radiating body composed of two spliced parts, and a circulating heat pipe embedded into the radiating body; a cold neck for collecting non-condensable gas is disposed over the circulating heat pipe, a flat portion of the circulating heat pipe is exposed and flush with a substrate of the radiating body at a heat-receiving end, the circulating heat pipe is vacuum-tight and vertically disposed, and a liquid level of water therein is maintained at a U-shaped portion of the circulating heat pipe; and there are at least two circulating heat pipes, the rectangular widths of the circulating heat pipes are different, the circulating heat pipe with a large width is bent at an angle of 3 to 15° with respect to a direction of combined parting surfaces of the two spliced parts of the radiating body, and the circulating heat pipe with a small width is deflected at a corresponding angle with respect to the direction of combined parting surfaces of the two spliced parts of the radiating body, such that a distance between the circulating heat pipes, which is suitable for dimensions of heating elements, is formed on the substrate of the radiating body.

2. The bubble pump circulating heat pipe radiator according to claim 1, characterized in that at end surfaces of the two spliced parts of the radiating body, the substrate for radiating has an increased thickness on the periphery of cross section of the heat pipe according to the heat distribution condition, and correspondingly, fins have different heights and form a deformed profile by drawing process of aluminum material.

3. The bubble pump circulating heat pipe radiator according to claim 1, a flat heat-receiving portion of the circulating heat pipe forming a bubble pump, characterized in that non-condensable gas produced by very few bubbles in the circulating heat pipe is collected by a cold-neck reducer pipe connected with the circulating heat pipe, and an upper portion of the cold neck is in a shape of inverted cone so that the collected condensed water returns back to the circulating heat pipe.

4. The bubble pump circulating heat pipe radiator according to claim 1, characterized in that a circular radiate fin radiator is sleeved on the outside of the cold neck connected with the circulating heat pipe.

5. The bubble pump circulating heat pipe radiator according to claim 1, characterized in that the water at the U-shaped portion of the circulating heat pipe is used as a cooling fluid, and pure water, methanol, ethanol or chlorofluorocarbon may also be used as the cooling fluid.